VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

BOARD OF RETIREMENT

BUSINESS MEETING

MARCH 29, 2021

AGENDA

PLACE: In Accordance with the Governor's Executive Order N-29-20 (3), the Members of the Board will be participating via teleconference. Pursuant to Government Code §54954.3, members of the public, to the extent required by law, will have the opportunity to directly address the Board concerning the below mentioned business.

The public may listen to the Public Session and offer comments by calling: +1 213-338-8477, using Meeting ID: 984-0777-0849. Persons may also submit written comments to publiccomment@vcera.org prior to and during the Board meeting. Please include your name, agenda item, the last 4 numbers of the telephone number that will be used to call in, and your comment. Public comment emails will be read into the record or summarized if lengthy.

TIME: 9:00 a.m.

ITEM:

			Master Page No.
I.	**CALL TO ORDER**		
II.	**APPROVAL OF AGENDA**		1 – 4
III.	**CONSENT AGENDA**		
	A.	Approve Regular and Deferred Retirements and Survivors Continuances for the Month of February 2021.	5 – 6
	B.	Receive and File Report of Checks Disbursed in February 2021.	7 – 10
	C.	Receive and File Budget Summary Admin. – Disability for FY 2020-21 Month Ending January 31, 2021.	11
	D.	Receive and File Budget Summary Combined for FY 2020-21 Month Ending January 31, 2021.	12 – 13
	E.	Receive and File Budget Summary Admin. – Disability for FY 2020-21 Month Ending February 28, 2021.	14
	F.	Receive and File Budget Summary Combined for FY 2020-21 Month Ending February 28, 2021.	15 – 16
	G.	Receive and File Statement of Fiduciary Net Position, Statement of Changes in Fiduciary Net Position, Schedule of Investments, Cash, and Cash Equivalents, and Schedule of Investment Management Fees for the Period Ending January 31, 2021.	17 – 22

III. <u>CONSENT AGENDA</u> (continued)

H. Receive and File Statement of Fiduciary Net Position, Statement of Changes in Fiduciary Net Position, Schedule of Investments, Cash, and Cash Equivalents, and Schedule of Investment Management Fees for the Period Ending February 28, 2021. 23 – 28

IV. <u>INVESTMENT MANAGER PRESENTATIONS</u>

A. Receive Annual Investment Presentation from Harbourvest: Brett Gordon, Jackie Peradotto, and Abigail Rayner. 29 – 53

B. Receive Annual Investment Presentation from Pantheon: Rudy Scarpa and Iain Jones. 54 – 81

V. <u>INVESTMENT INFORMATION</u>

VCERA – Dan Gallagher, Chief Investment Officer.
NEPC – Allan Martin.

A. $30 Million Investment in CarVal Investors Credit Value Fund V.
RECOMMENDED ACTION: Approve.

1. Staff Letter by Chief Investment Officer. 82 – 83

2. Investment Due Diligence Report from NEPC: Allan Martin and Bradley Rowbotham. 84 – 107

3. CarVal Investors Credit Value Fund V Presentation Material: Kerry Fauver, Chris Hedberg, and Lucas Detor. 108 – 149

B. VCERA Asset/Liability Study by NEPC.
RECOMMENDED ACTION: Receive and File.

1. Staff Letter by Chief Investment Officer. 150

2. Asset/Liability Study Presentation: Allan Martin and Lynda Costello. 151 – 200

C. Preliminary Performance Report Month Ending February 28, 2021: Allan Martin 201 – 219
RECOMMENDED ACTION: Receive and File.

VI. <u>OLD BUSINESS</u>

A. Update on Progress of Declaratory Relief Action Re: Alameda Decision.

VII. <u>NEW BUSINESS</u>

A. Recommendation to Approve Technology Use & Mobile Device Policy and Surplus Property Policy.
RECOMMENDED ACTION: Receive and File.

VII. <u>NEW BUSINESS</u> (continued)

1. Staff Letter. 220

2. VCERA Mobile Device Policy (Current). 221 – 223

3. Trustee Technology Use and Mobile Device Policy (Proposed). 224 – 227

4. Staff Technology Use and Mobile Device Policy (Proposed). 228 – 232

5. Proposed VCERA Surplus Property Policy. 233 – 234

B. Request for Authorization to Purchase Prepaid Block of 2,500 Vitech Support Hours.
RECOMMENDED ACTION: Approve.

1. Staff Letter by Chief Technology Officer. 235 – 236

C. Request for Approval of Proposed Finance Committee Charter.
RECOMMENDED ACTION: Approve.

1. Letter from Trustee Goulet. 237

2. Proposed Finance Committee Charter. 238 – 241

D. Request for Authorization to Execute Contract Extension with Brown Armstrong for Auditing Services.
RECOMMENDED ACTION: Approve.

1. Staff Letter. 242

2. Renewal of Audting Services Agreement. 243

VIII. <u>CLOSED SESSION</u>

A. PUBLIC EMPLOYEE PERFORMANCE EVALUATION
Title: Retirement Administrator
(Government Code section 54957(b)(1))

B. PUBLIC EMPLOYEE PERFORMANCE EVALUATION
Title: General Counsel
(Government Code section 54957(b)(1))

C. PUBLIC EMPLOYEE PERFORMANCE EVALUATION
Title: Chief Investment Officer
(Government Code section 54957(b)(1))

IX. <u>INFORMATIONAL</u>

X. <u>PUBLIC COMMENT</u>

XI. <u>STAFF COMMENT</u>

XII. BOARD MEMBER COMMENT

XIII. ADJOURNMENT

VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
REPORT OF REGULAR AND DEFERRED RETIREMENTS AND SURVIVORS CONTINUANCES

February 2021

FIRST NAME	LAST NAME	G/S	DATE OF MEMBERSHIP	BENEFIT SERVICE	*	DEPARTMENT	EFFECTIVE DATE
REGULAR RETIREMENTS:							
JUANA ALEJOS	ALVAREZ	G	12/18/1994	26.01		RESOURCE MANAGEMENT AGENCY	01/08/2021
STEPHEN A	BENNETT	G	01/08/2001	19.91		BOARD OF SUPERVISORS	12/29/2020
IRMA	BERNEATHY	G	06/12/2005	19.89		SUPERIOR COURT	01/23/2021
BARBARA JEAN	BONSIGNORI	G	10/01/2002	18.14		HEALTH CARE AGENCY	01/16/2021
STEVEN WILLIAM	BUCKLEY	S	03/18/1990	34.77		SHERIFF'S OFFICE	12/24/2020
CYNTHIA S	CANTLE	G	02/01/2015	5.90	*	BOARD OF SUPERVISORS	12/31/2020
ZENAIDA C	CORTEZ	G	05/02/1999	21.50		HEALTH CARE AGENCY	12/31/2020
MICHAEL JOHN	FERGUSON	S	09/24/1995	29.31	*	SHERIFF'S OFFICE	01/08/2021
ROBERT ANTHONY	GARCIA	G	10/14/1990	35.73		SHERIFF'S OFFICE	01/01/2021
EDWARD M	GAVIRATI	S	05/18/1986	35.25		FIRE PROTECTION DISTRICT	01/09/2021
MARIA LORNA S	GEMINO	G	10/29/2000	17.24		HEALTH CARE AGENCY	01/04/2021
JOSEPH A	GUTIERREZ	G	03/09/1986	35.07		SUPERIOR COURT	12/31/2020
MALLORY J	HAM	G	02/23/1997	25.01		AIR POLLUTION CONTROL DISTRICT	01/08/2021
JAN	HIESTER	G	10/11/1981	38.22		HEALTH CARE AGENCY	01/23/2021
RADFORD	JACKSON	G	03/28/1982	38.70		GENERAL SERVICES AGENCY	12/16/2020
CHRYSTINA DEE	JENSON	G	04/21/1996	24.37		DISTRICT ATTORNEY (DEFERRED)	01/18/2021
JOHN STEVEN	LANDA	G	12/30/2007	12.31		HEALTH CARE AGENCY (DEFERRED)	01/13/2021
LORNA	MARKEY	G	01/06/2003	17.94		HEALTH CARE AGENCY	01/06/2021
EDWARD ROBERT	MARTINEZ	G	04/29/2012	5.47		GENERAL SERVICES AGENCY	02/05/2021
RAFAEL J	MARTINEZ	S	05/13/2007	13.62	*	DISTRICT ATTORNEY	12/27/2020
MICHAEL BRITT	MC DANIELS	S	06/27/1988	32.25		FIRE PROTECTION DISTRICT	01/17/2021
JOHN M	MC KINLEY	S	01/22/1989	32.07		PROBATION AGENCY	01/20/2021
ELIZABETH ANN	MESA	G	08/27/2001	6.33	*	SUPERIOR COURT (DEFERRED)	12/05/2020
JACK W	NOSCO	S	02/26/1984	37.36		FIRE PROTECTION DISTRICT	12/22/2020
PATRICIA A	O'DONNELL	G	02/05/2006	14.80		DISTRICT ATTORNEY	01/05/2021
PETER HOLMES	OWEN	G	02/14/2010	10.06		HEALTH CARE AGENCY	01/09/2021
THERESA CHRISTINA	PACHECO WHITE	G	12/18/2000	18.08		RESOURCE MANAGEMENT AGENCY	12/12/2020
PAMELA HELEN	POTTER	G	06/30/1985	34.96		DISTRICT ATTORNEY	01/09/2021
RICHARD J	REESE	S	09/20/1998	35.40		FIRE PROTECTION DISTRICT	01/02/2021
INGUS ARNIS	RICHTERS	G	04/15/2002	13.99		AGRICULTURAL COMMISSIONER	01/01/2021
OPHELIA JENNIE	ROJO	G	12/15/1996	24.08		COUNTY EXECUTIVE OFFICE	12/12/2020
WAYNE	RUTZEN	G	01/10/1999	21.96		ASSESSOR	12/31/2020
ARTHUR	SIMERI	G	12/12/2010	10.09		INFORMATION TECHNOLOGY SERVICES	01/16/2021
GREGORY DONALD	TOTTEN	G	09/26/1982	36.04		DISTRICT ATTORNEY	01/09/2021
CATHERINE E	WASSIL	G	09/21/1997	22.83		HUMAN SERVICES AGENCY	01/09/2021
PATRICIA	WIGGINS	S		8.98		SHERIFF'S OFFICE (DRO NON-MEMBER)	02/01/2021
ELENIDA G	WILLIAMS	G	10/06/1996	24.21		VC EMPLOYEES' RETIREMENT ASSOCIATION	01/08/2021
GARY	ZOPPO	G	06/06/1988	0.99	*	AIR POLLUTION CONTROL DISTRICT	12/19/2020
DEFERRED RETIREMENTS:							
NAYELY A	ALFARO	G	11/19/2017	3.00		SUPERIOR COURT	01/08/2021
MOISES M	ARROYO	G	02/09/2020	0.83		HUMAN SERVICES AGENCY	12/19/2020
DOUGLAS W	AUSTIN	G	09/08/2020	0.27		HEALTH CARE AGENCY	12/21/2020
TONIA	BELLGRAPH	S	10/12/2014	5.01		SHERIFF'S OFFICE	12/17/2020
ENRICO G	BROCCOLI-KELLNER	G	01/26/2020	0.87		PUBLIC WORKS AGENCY	12/25/2020
KEVIN T	BROCK	G	10/04/2020	0.15		SHERIFF'S OFFICE	11/30/2020
DEEPAK K	CASTORENA	G	08/27/2006	10.91		HEALTH CARE AGENCY	12/14/2020
CELYSA I	CAVAZOS	G	11/17/2019	0.88		HEALTH CARE AGENCY	12/12/2020
CHERYL	COBB	G	08/31/2020	0.26		AUDITOR-CONTROLLER	12/05/2020
JASON M	CONRAD	S	02/16/2014	6.79		PROBATION AGENCY	12/05/2020
SAM M	ENGLAND	G	04/05/2020	0.52		AREA AGENCY ON AGING	11/29/2020
ANDREW S	EVANS	G	08/02/2015	5.40	**	RESOURCE MANAGEMENT AGENCY	01/02/2021
KATHRYN AIMEE	FULLER	G	09/21/2014	8.59		COUNTY EXECUTIVE OFFICE	12/03/2020
CRYSTAL C	GARIBAY	G	08/18/2013	6.19		HUMAN SERVICES AGENCY	12/14/2020
JONATHAN H	GIN	S	01/12/2020	0.87		FIRE PROTECTION DISTRICT	12/06/2020
DOUGLAS J	HOOPER	G	11/17/2020	0.04		ASSESSOR	12/03/2020
ELIZABETH W	HUTSON	G	05/06/2007	12.56	**	HEALTH CARE AGENCY	01/05/2021
JENNIFER CLAIRE B	JACINTO	G	02/09/2020	0.29		HEALTH CARE AGENCY	01/07/2021
ELIZABETH	JIMENEZ	G	09/25/2016	3.56		HEALTH CARE AGENCY	12/17/2020
JENNIFER D	KELLEY	G	07/04/1993	8.57		SHERIFF'S OFFICE	12/21/2020
PATRICIA A	KINGMAN	G	09/22/2019	1.25		SUPERIOR COURT	01/08/2021
LAUREN N	LARA	G	03/29/2015	4.72		HUMAN SERVICES AGENCY	12/01/2020
STEPHANIE M	LLAMAS ANGEL	G	11/01/2020	0.07		HEALTH CARE AGENCY	12/02/2020
ERIC C	LUCERO	G	06/03/2018	2.21	**	SUPERIOR COURT	10/15/2020
FRANZLORD D	LUMBAD	G	01/27/2008	12.86		HUMAN SERVICES AGENCY	12/12/2020
PERRIN R	MCCAFFERTY	S	02/24/2019	1.77		FIRE PROTECTION DISTRICT	12/09/2020
NAHIDEH	NAGHAVI	G	01/07/2002	2.99	*	HEALTH CARE AGENCY	01/19/2021
CATHY A	O'CONNOR	G	05/25/2014	6.53		FIRE PROTECTION DISTRICT	12/12/2020
DEANNA L	OLIVE	G	07/16/2017	3.39		PROBATION AGENCY	12/12/2020
STEPHANIE I	RILEY STAI	G	06/04/2015	3.60	**	HEALTH CARE AGENCY	12/31/2020
CYNTHIA P	SANDOVAL	G	01/02/2018	2.69		HEALTH CARE AGENCY	12/26/2020
MATTHEW L	STANDSBERRY	G	02/24/2019	1.74		PUBLIC WORKS AGENCY	12/03/2020
JESSE J	STONE	G	11/09/2014	6.11		PUBLIC WORKS AGENCY	12/25/2020
DAVID L	TOVAR	G	10/11/2015	5.14		HEALTH CARE AGENCY	12/06/2020
TRICIA A	TUCKER	G	02/03/2013	7.71		SHERIFF'S OFFICE	12/01/2020
JOHN A	WARD	S	01/12/2020	0.95	**	FIRE PROTECTION DISTRICT	01/07/2021

VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

REPORT OF REGULAR AND DEFERRED RETIREMENTS AND SURVIVORS CONTINUANCES

February 2021

FIRST NAME	LAST NAME	G/S	DATE OF MEMBERSHIP	BENEFIT SERVICE	*	DEPARTMENT	EFFECTIVE DATE
ELIZABETH A	WHITE	G	09/02/2014	6.16		HEALTH CARE AGENCY	12/03/2020
MATTHEW J	WILKINS	G	03/30/2014	6.68		FIRE PROTECTION DISTRICT	12/27/2020

SURVIVORS' CONTINUANCES:	
SANDRA KATHLEEN	CHAPMAN
DENE R	CHASE
ROBERTA J	COOKSON
KATHERINE P	KINNEAR
NORBERT M	ZAREMBA

*** = Excludes reciprocal service or service from previous retirements**
**** = Member establishing reciprocity**

Date: Thursday, March 25, 2021
Time: 11:51AM
User: 101602

Ventura County Retirement Assn

Check Register - Standard

Period: 08-21 As of: 3/25/2021

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Report: 03630.rpt
Company: VCERA

Check Nbr	Check Type	Check Date	Vendor ID / Vendor Name	Period To Post	Period Closed	Ref Nbr	Doc Type	Invoice Number	Invoice Date	Discount Taken	Amount Paid
Company:	**VCERA**										
Acct / Sub:	10300		000000								
028876	CK	2/3/2021	COMPUWAVE COMPUWAVE	08-21		001682	VO	IT	2/3/2021	0.00	2,109.75
028877	CK	2/3/2021	FLORESHUMB HUMBERTO FLORES	08-21		001683	VO	DISABILITY EXP	2/3/2021	0.00	6,125.00
028878	CK	2/3/2021	HARTLEYDOR DOROTHEA W. HARTLEY & ASS(	08-21		001684	VO	DISABILITY EXP	2/3/2021	0.00	1,693.25
028879	CK	2/3/2021	ICEMILLER ICE MILLER LLP	08-21		001685	VO	LEGAL FEES	2/3/2021	0.00	917.00
028880	CK	2/3/2021	MEGAPATH FUSION CLOUD COMPANY, LLC	08-21		001686	VO	IT	2/3/2021	0.00	615.40
028881	CK	2/3/2021	NOSSAMAN NOSSAMAN LLP	08-21		001687	VO	INVESTMENT EXP	2/3/2021	0.00	15,948.90
028882	CK	2/3/2021	PENSIONREA PENSION REAL ESTATE ASSOCI	08-21		001688	VO	INVESTMENT EXP	2/3/2021	0.00	330.00
028883	CK	2/3/2021	REAMSASSET SCOUT INVESTMENTS, INC	08-21		001689	VO	INVESTMENT FEES	2/3/2021	0.00	2,311.00
028884	CK	2/3/2021	STAPLESADV STAPLES	08-21		001690	VO	ADMIN EXP	2/3/2021	0.00	153.92
028885	CK	2/3/2021	TEAMLEGAL TEAM LEGAL, INC.	08-21		001691	VO	DISABILITY EXP	2/3/2021	0.00	161.40
028886	CK	2/3/2021	STAPLESKAR KAREN J. STAPLES	08-21		001692	VO	PENSION PMT	2/3/2021	0.00	15,536.49
028887	CK	2/10/2021	ABBOTTCAPI ABBOTT CAPITAL MANAGEMENT	08-21		001693	VO	INVESTMENT FEES	2/9/2021	0.00	302,062.00
028888	CK	2/10/2021	ACCESSINFO ACCESS INFORMATION PROTEC	08-21		001694	VO	ADMIN EXP	2/9/2021	0.00	426.59

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Company:	VCERA

Check Nbr	Check Type	Check Date	Vendor ID / Vendor Name	Period To Post	Period Closed	Ref Nbr	Doc Type	Invoice Number	Invoice Date	Discount Taken	Amount Paid
028889	CK	2/10/2021	AYALAIRENE IRENE P. AYALA	08-21		001695	VO	DISABILITY EXP	2/9/2021	0.00	16,297.50
028890	CK	2/10/2021	BANKOFAMER BUSINESS CARD	08-21		001696	VO	IT/ADMIN EXP	2/9/2021	0.00	1,813.45
028891	CK	2/10/2021	COMPUWAVE COMPUWAVE	08-21		001697	VO	IT	2/9/2021	0.00	707.92
028892	CK	2/10/2021	HARRISWATE HARRIS WATER CONDITIONING	08-21		001698	VO	ADMIN EXP	2/9/2021	0.00	64.50
028893	CK	2/10/2021	PENSIONBEN PENSION BENEFIT INFORMATIO	08-21		001699	VO	ADMIN EXP	2/9/2021	0.00	1,307.53
028894	CK	2/10/2021	TEAMLEGAL TEAM LEGAL, INC.	08-21		001700	VO	DISABILITY EXP	2/9/2021	0.00	932.90
028895	CK	2/10/2021	THOMSONREU THOMSON REUTERS- WEST	08-21		001701	VO	ADMIN EXP	2/9/2021	0.00	508.25
028896	CK	2/10/2021	WESTERNASS WESTERN ASSET MANAGEMEN	08-21		001702	VO	INVESTMENT FEES	2/9/2021	0.00	256,739.22
028897	CK	2/19/2021	ATTMOBILIT AT&T MOBILITY	08-21		001703	VO	IT	2/19/2021	0.00	370.56
028898	CK	2/19/2021	HARTLEYDOR DOROTHEA W. HARTLEY & ASS	08-21		001704	VO	DISABILITY EXP	2/19/2021	0.00	852.00
028899	CK	2/19/2021	LINEASOLUT LINEA SOLUTIONS	08-21		001705	VO	ADMIN EXP	2/19/2021	0.00	11,604.04
028900	CK	2/19/2021	SHREDITUSA SHRED-IT	08-21		001706	VO	ADMIN EXP	2/19/2021	0.00	197.16
028901	CK	2/19/2021	SOFTWAREON SOFTWARE ONE	08-21		001707	VO	IT	2/19/2021	0.00	34.97

Ventura County Retirement Assn

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Period: 08-21 As of: 3/25/2021

Check Nbr	Check Type	Check Date	Vendor ID / Vendor Name	Period To Post	Period Closed	Ref Nbr	Doc Type	Invoice Number	Invoice Date	Discount Taken	Amount Paid
028902	CK	2/19/2021	STATESTREE STATE STREET BANK AND TRUS	08-21		001708	VO	CUSTODIAL FEES	2/19/2021	0.00	82,373.24
028903	CK	2/19/2021	VSGHOSTING VSG HOSTING, INC.	08-21		001709	VO	IT	2/19/2021	0.00	67,013.04
028904	CK	2/25/2021	ADP ADP, INC	08-21		001711	VO	ADMIN EXP	2/24/2021	0.00	2,770.02
028905	CK	2/25/2021	BLACKROCKI BLACKROCK INSTITUTIONAL TR	08-21		001712	VO	INVESTMENT FEES	2/24/2021	0.00	271,923.64
028906	CK	2/25/2021	BRENTWOODI BRENTWOOD IT	08-21		001713	VO	IT	2/24/2021	0.00	675.00
028907	CK	2/25/2021	DIGITALDEP DIGITAL DEPLOYMENT	08-21		001714	VO	IT	2/24/2021	0.00	650.00
028908	CK	2/25/2021	HARTLEYDOR DOROTHEA W. HARTLEY & ASS(	08-21		001715	VO	DISABILITY EXP	2/24/2021	0.00	500.00
028909	CK	2/25/2021	MEGAPATH FUSION, LLC	08-21		001717	VO	IT	2/24/2021	0.00	615.40
028910	CK	2/25/2021	MFDAILYCOR M.F. DAILY CORPORATION	08-21		001716	VO	ADMIN EXP	2/24/2021	0.00	21,092.45
028911	CK	2/25/2021	NOSSAMAN NOSSAMAN LLP	08-21		001718	VO	LEGAL FEES	2/24/2021	0.00	8,083.34
028912	CK	2/25/2021	NPEA NPEA	08-21		001719	VO	ADMIN EXP	2/24/2021	0.00	750.00
028913	CK	2/25/2021	SEGALCONSU SEGAL CONSULTING	08-21		001720	VO	ACTUARY FEE	2/24/2021	0.00	26,468.00
028914	CK	2/25/2021	TEAMLEGAL TEAM LEGAL, INC.	08-21		001721	VO	DISABILITY EXP	2/24/2021	0.00	272.20

Date: Thursday, March 25, 2021
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Ventura County Retirement Assn

Check Register - Standard

Period: 08-21 As of: 3/25/2021

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Report: 03630.rpt
Company: VCERA

Check Nbr	Check Type	Check Date	Vendor ID / Vendor Name	Period To Post	Period Closed	Ref Nbr	Doc Type	Invoice Number	Invoice Date	Discount Taken	Amount Paid

Check Count: 39

Acct Sub Total: **1,123,007.03**

Check Type	Count	Amount Paid
Regular	39	1,123,007.03
Hand	0	0.00
Electronic Payment	0	0.00
Void	0	0.00
Stub	0	0.00
Zero	0	0.00
Mask	0	0.00
Total:	**39**	**1,123,007.03**

Company Disc Total **0.00** **Company Total** **1,123,007.03**

Ventura County Employees' Retirement Association
Budget Summary Fiscal Year 2020 -2021
For the Seven Months Ended January 31, 2021 and Year-To-Date - 58.33% of Fiscal Year
Admin - Disability (CAP)

	Adopted 2021 Budget	Adjusted 2021 Budget	January 2021	Expended Fiscal Year to Date	Available Balance	Percent Expended
Salaries and Benefits						
Regular Salary	$274,600.00	$274,600.00	$21,755.82	$143,022.93	$131,577.07	52.08%
Supplemental Payments	12,500.00	12,500.00	761.44	5,016.15	7,483.85	40.13%
Vacation Redemption	4,300.00	4,300.00	0.00	4,486.93	(186.93)	104.35%
Retirement Contributions	47,000.00	47,000.00	3,644.60	24,469.20	22,530.80	52.06%
OASDI Contribution	20,600.00	20,600.00	1,355.20	9,474.10	11,125.90	45.99%
FICA-Medicare	4,800.00	4,800.00	316.95	2,215.73	2,584.27	46.16%
Medical Insurance	39,500.00	39,500.00	3,512.00	20,559.00	18,941.00	52.05%
Life Insurance	100.00	100.00	9.30	62.89	37.11	62.89%
Unemployment Insurance	100.00	100.00	10.93	75.10	24.90	75.10%
Mgmt Disability Insurance	2,000.00	2,000.00	161.22	1,024.07	975.93	51.20%
Workers Compensation Insurance	7,400.00	7,400.00	605.46	4,109.97	3,290.03	55.54%
401K Plan Contribution	5,000.00	5,000.00	389.92	2,414.98	2,585.02	48.30%
Total Salaries & Benefits	$417,900.00	$417,900.00	$32,522.84	$216,931.05	$200,968.95	51.91%
Services & Supplies						
Other Professional Services	78,500.00	78,500.00	3,411.15	15,312.64	63,187.36	19.51%
Hearing Officers	56,000.00	56,000.00	0.00	7,000.00	49,000.00	12.50%
Legal	17,300.00	17,300.00	0.00	0.00	17,300.00	0.00%
Postage	500.00	500.00	0.00	120.03	379.97	24.01%
Training/Travel-Staff	1,100.00	1,100.00	0.00	0.00	1,100.00	0.00%
Facilities-Meeting Room Rental	0.00	0.00	0.00	44.00	(44.00)	0.00%
Office Supplies	0.00	0.00	0.00	2.16	(2.16)	0.00%
Total Services & Supplies	$153,400.00	$153,400.00	$3,411.15	$22,478.83	$130,921.17	14.65%
Total Sal, Ben, Serv & Supp	$571,300.00	$571,300.00	$35,933.99	$239,409.88	$331,890.12	41.91%
Total Current Year	$571,300.00	$571,300.00	$35,933.99	$239,409.88	$331,890.12	41.91%

Ventura County Employees' Retirement Association
Budget Summary Fiscal Year 2020 -2021
For the Seven Months Ended January 31, 2021 and Year-To-Date - 58.33% of Fiscal Year
Combined

	Adopted 2021 Budget	Adjusted 2021 Budget	January 2021	Expended Fiscal Year to Date	Available Balance	Percent Expended
Salaries and Benefits						
Regular Salary	$3,748,400.00	$3,748,400.00	$271,883.69	$1,943,094.51	$1,805,305.49	51.84%
Extra-Help/Temporary Services	166,300.00	166,300.00	9,872.36	86,667.72	79,632.28	52.12%
Overtime	0.00	0.00	163.60	163.60	(163.60)	0.00%
Supplemental Payments	80,100.00	80,100.00	5,203.78	44,080.99	36,019.01	55.03%
Vacation Redemption	166,600.00	166,600.00	0.00	123,480.30	43,119.70	74.12%
Retirement Contributions	599,700.00	599,700.00	44,454.11	293,213.66	306,486.34	48.89%
OASDI Contribution	228,500.00	228,500.00	17,128.43	92,517.21	135,982.79	40.49%
FICA-Medicare	63,500.00	63,500.00	4,005.84	30,514.19	32,985.81	48.05%
Medical Insurance	435,200.00	435,200.00	31,900.00	215,784.84	219,415.16	49.58%
Retiree Health Insurance	26,700.00	26,700.00	2,514.46	15,852.10	10,847.90	59.37%
Life Insurance	1,300.00	1,300.00	93.00	678.96	621.04	52.23%
Unemployment Insurance	1,900.00	1,900.00	138.12	992.34	907.66	52.23%
Mgmt Disability Insurance	27,800.00	27,800.00	1,745.65	12,118.56	15,681.44	43.59%
Workers Compensation Insurance	101,800.00	101,800.00	7,692.37	(26,180.33)	127,980.33	-25.72%
401K Plan Contribution	90,400.00	90,400.00	6,594.87	46,469.74	43,930.26	51.40%
Total Salaries & Benefits	$5,738,200.00	$5,738,200.00	$403,390.28	$2,879,448.39	$2,858,751.61	50.18%
Services & Supplies						
Board Member Stipend	$13,200.00	$13,200.00	$0.00	$1,600.00	$11,600.00	12.12%
Other Professional Services	156,900.00	156,900.00	10,612.78	42,029.24	114,870.76	26.79%
Auditing	101,400.00	101,400.00	4,930.00	45,820.25	55,579.75	45.19%
Hearing Officers	56,000.00	56,000.00	0.00	7,000.00	49,000.00	12.50%
Legal	442,300.00	442,300.00	31,571.74	274,203.70	168,096.30	61.99%
Election Services	40,000.00	40,000.00	2,406.89	10,742.18	29,257.82	26.86%
Actuary-Valuation	63,000.00	63,000.00	31,500.00	63,000.00	0.00	100.00%
Actuary-GASB 67	13,000.00	13,000.00	0.00	0.00	13,000.00	0.00%
Actuary-Assump/Exp	48,000.00	48,000.00	0.00	0.00	48,000.00	0.00%
Actuary-415 Calculation	15,000.00	15,000.00	0.00	6,228.00	8,772.00	41.52%
Actuary-Misc Hrly Consult	16,000.00	16,000.00	0.00	3,993.00	12,007.00	24.96%
Printing	45,000.00	45,000.00	0.00	10,253.72	34,746.28	22.79%
Postage	68,000.00	68,000.00	1,747.17	17,692.86	50,307.14	26.02%
Copy Machine	4,000.00	4,000.00	0.00	1,933.00	2,067.00	48.33%
General Liability	15,800.00	15,800.00	0.00	7,876.50	7,923.50	49.85%
Fiduciary Liability	86,000.00	86,000.00	0.00	83,609.00	2,391.00	97.22%
Cost Allocation Charges	42,000.00	42,000.00	0.00	20,997.00	21,003.00	49.99%
Education Allowance	4,000.00	4,000.00	0.00	0.00	4,000.00	0.00%
Training/Travel-Staff	62,900.00	62,900.00	0.00	10,750.00	52,150.00	17.09%
Training/Travel-Trustee	33,200.00	33,200.00	0.00	1,640.00	31,560.00	4.94%
Travel-Due Diligence-Staff	12,800.00	12,800.00	0.00	0.00	12,800.00	0.00%
Travel-Due Diligence-Trustee	22,600.00	22,600.00	0.00	0.00	22,600.00	0.00%
Mileage-Staff	4,500.00	4,500.00	0.00	0.00	4,500.00	0.00%
Mileage -Trustee	4,500.00	4,500.00	0.00	0.00	4,500.00	0.00%
Mileage-Due Diligence-Staff	700.00	700.00	0.00	0.00	700.00	0.00%
Mileage-Due Diligence-Trustee	700.00	700.00	0.00	0.00	700.00	0.00%
Auto Allowance	6,900.00	6,900.00	575.00	4,025.00	2,875.00	58.33%
Facilities-Meeting Room Rental	0.00	0.00	0.00	44.00	(44.00)	0.00%
Facilities-Security	2,700.00	2,700.00	0.00	230.00	2,470.00	8.52%
Facilities-Maint & Repairs	3,300.00	3,300.00	125.00	910.56	2,389.44	27.59%
Equipment-Maint & Repairs	2,000.00	2,000.00	0.00	909.73	1,090.27	45.49%
General Office Expense	10,400.00	10,400.00	34.51	1,104.52	9,295.48	10.62%
Books & Publications	9,000.00	9,000.00	1,275.49	13,765.87	(4,765.87)	152.95%
Office Supplies	15,000.00	15,000.00	0.00	2,025.89	12,974.11	13.51%
Memberships & Dues	17,900.00	17,900.00	915.00	15,150.00	2,750.00	84.64%
Offsite Storage	5,200.00	5,200.00	405.46	2,859.15	2,340.85	54.98%
Rents/Leases-Structures	258,000.00	258,000.00	21,092.45	147,647.15	110,352.85	57.23%
Non-Capital Furniture	15,800.00	15,800.00	0.00	1,911.65	13,888.35	12.10%
Depreciation /Amortization	1,562,700.00	1,562,700.00	129,313.62	935,585.18	627,114.82	59.87%
Total Services & Supplies	$3,280,400.00	$3,280,400.00	$236,505.11	$1,735,537.15	$1,544,862.85	52.91%
Total Sal, Ben, Serv & Supp	$9,018,600.00	$9,018,600.00	$639,895.39	$4,614,985.54	$4,403,614.46	51.17%

Ventura County Employees' Retirement Association
Budget Summary Fiscal Year 2020 -2021
For the Seven Months Ended January 31, 2021 and Year-To-Date - 58.33% of Fiscal Year

	Adopted 2021 Budget	*Combined Adjusted 2021 Budget*	*January 2021*	*Expended Fiscal Year to Date*	*Available Balance*	*Percent Expended*
Technology						
Technology Hardware	$98,000.00	$98,000.00	$3,696.27	$41,011.67	$56,988.33	41.85%
Technology Hardware Support	10,000.00	10,000.00	1,149.00	1,149.00	8,851.00	11.49%
Technology Software Lic & Maint.	75,400.00	75,400.00	972.97	36,739.85	38,660.15	48.73%
Technology Software Suppt & Maint.	41,500.00	41,500.00	0.00	43.75	41,456.25	0.11%
Technology Cloud Services	6,100.00	6,100.00	503.88	2,583.80	3,516.20	42.36%
Technology Website Services	8,900.00	8,900.00	650.00	5,349.96	3,550.04	60.11%
Technology Infrastruct Support	186,100.00	186,100.00	6,218.59	51,895.09	134,204.91	27.89%
Technology V3 Software & VSG	747,000.00	747,000.00	0.00	334,026.08	412,973.92	44.72%
Technology Data Communication & Cyber Security	88,000.00	88,000.00	3,103.06	31,336.48	56,663.52	35.61%
Total Technology	$1,261,000.00	$1,261,000.00	$16,293.77	$504,135.68	$756,864.32	39.98%
Capital Expenses						
Capitalized Structures	$0.00	$0.00	$0.00	$12,109.95	($12,109.95)	0.00%
Total Capitalized Expenses	$0.00	$0.00	$0.00	$12,109.95	($12,109.95)	0.00%
Contingency	$845,000.00	$845,000.00	$0.00	$0.00	$845,000.00	0.00%
Total Current Year	$11,124,600.00	$11,124,600.00	$656,189.16	$5,131,231.17	$5,993,368.83	46.13%

Ventura County Employees' Retirement Association
Budget Summary Fiscal Year 2020 -2021
For the Eight Months Ended February 28, 2021 and Year-To-Date - 66.67% of Fiscal Year
Admin - Disability (CAP)

	Adopted 2021 Budget	Adjusted 2021 Budget	February 2021	Expended Fiscal Year to Date	Available Balance	Percent Expended
Salaries and Benefits						
Regular Salary	$274,600.00	$274,600.00	$21,897.77	$164,920.70	$109,679.30	60.06%
Supplemental Payments	12,500.00	12,500.00	766.42	5,782.57	6,717.43	46.26%
Vacation Redemption	4,300.00	4,300.00	0.00	4,486.93	(186.93)	104.35%
Retirement Contributions	47,000.00	47,000.00	3,666.39	28,135.59	18,864.41	59.86%
OASDI Contribution	20,600.00	20,600.00	1,364.31	10,838.41	9,761.59	52.61%
FICA-Medicare	4,800.00	4,800.00	319.05	2,534.78	2,265.22	52.81%
Medical Insurance	39,500.00	39,500.00	3,512.00	24,071.00	15,429.00	60.94%
Life Insurance	100.00	100.00	9.30	72.19	27.81	72.19%
Unemployment Insurance	100.00	100.00	11.00	86.10	13.90	86.10%
Mgmt Disability Insurance	2,000.00	2,000.00	162.27	1,186.34	813.66	59.32%
Workers Compensation Insurance	7,400.00	7,400.00	609.25	4,719.22	2,680.78	63.77%
401K Plan Contribution	5,000.00	5,000.00	394.32	2,809.30	2,190.70	56.19%
Total Salaries & Benefits	$417,900.00	$417,900.00	$32,712.08	$249,643.13	$168,256.87	59.74%
Services & Supplies						
Other Professional Services	$78,500.00	$78,500.00	$4,411.75	$19,724.39	$58,775.61	25.13%
Hearing Officers	56,000.00	56,000.00	22,422.50	29,422.50	26,577.50	52.54%
Legal	17,300.00	17,300.00	0.00	0.00	17,300.00	0.00%
Postage	500.00	500.00	0.00	120.03	379.97	24.01%
Training/Travel-Staff	1,100.00	1,100.00	0.00	0.00	1,100.00	0.00%
Facilities-Meeting Room Rental	0.00	0.00	0.00	44.00	(44.00)	0.00%
Office Supplies	0.00	0.00	0.00	2.16	(2.16)	0.00%
Total Services & Supplies	$153,400.00	$153,400.00	$26,834.25	$49,313.08	$104,086.92	32.15%
Total Sal, Ben, Serv & Supp	$571,300.00	$571,300.00	$59,546.33	$298,956.21	$272,343.79	52.33%
Total Current Year	$571,300.00	$571,300.00	$59,546.33	$298,956.21	$272,343.79	52.33%

Ventura County Employees' Retirement Association
Budget Summary Fiscal Year 2020 -2021
For the Eight Months Ended February 28, 2021 and Year-To-Date - 66.67% of Fiscal Year
Combined

	Adopted 2021 Budget	Adjusted 2021 Budget	February 2021	Expended Fiscal Year to Date	Available Balance	Percent Expended
Salaries and Benefits						
Regular Salary	$3,748,400.00	$3,748,400.00	$261,023.04	$2,204,117.55	$1,544,282.45	58.80%
Extra-Help/Temporary Services	166,300.00	166,300.00	11,604.04	98,271.76	68,028.24	59.09%
Overtime	0.00	0.00	0.00	163.60	(163.60)	0.00%
Supplemental Payments	80,100.00	80,100.00	5,823.02	49,904.01	30,195.99	62.30%
Vacation Redemption	166,600.00	166,600.00	45,155.83	168,636.13	(2,036.13)	101.22%
Retirement Contributions	599,700.00	599,700.00	42,575.94	335,789.60	263,910.40	55.99%
OASDI Contribution	228,500.00	228,500.00	19,202.81	111,720.02	116,779.98	48.89%
FICA-Medicare	63,500.00	63,500.00	4,490.97	35,005.16	28,494.84	55.13%
Medical Insurance	435,200.00	435,200.00	30,484.00	246,268.84	188,931.16	56.59%
Retiree Health Insurance	26,700.00	26,700.00	2,514.46	18,366.56	8,333.44	68.79%
Life Insurance	1,300.00	1,300.00	88.35	767.31	532.69	59.02%
Unemployment Insurance	1,900.00	1,900.00	132.34	1,124.68	775.32	59.19%
Mgmt Disability Insurance	27,800.00	27,800.00	1,665.17	13,783.73	14,016.27	49.58%
Workers Compensation Insurance	101,800.00	101,800.00	8,572.42	(17,607.91)	119,407.91	-17.30%
401K Plan Contribution	90,400.00	90,400.00	6,373.83	52,843.57	37,556.43	58.46%
Total Salaries & Benefits	$5,738,200.00	$5,738,200.00	$439,706.22	$3,319,154.61	$2,419,045.39	57.84%
Services & Supplies						
Board Member Stipend	$13,200.00	$13,200.00	$1,600.00	$3,200.00	$10,000.00	24.24%
Other Professional Services	156,900.00	156,900.00	8,686.46	50,715.70	106,184.30	32.32%
Auditing	101,400.00	101,400.00	0.00	45,820.25	55,579.75	45.19%
Hearing Officers	56,000.00	56,000.00	22,422.50	29,422.50	26,577.50	52.54%
Legal	442,300.00	442,300.00	24,949.24	299,152.94	143,147.06	67.64%
Election Services	40,000.00	40,000.00	0.00	10,742.18	29,257.82	26.86%
Actuary-Valuation	63,000.00	63,000.00	0.00	63,000.00	0.00	100.00%
Actuary-GASB 67	13,000.00	13,000.00	13,000.00	13,000.00	0.00	100.00%
Actuary-Assump/Exp	48,000.00	48,000.00	0.00	0.00	48,000.00	0.00%
Actuary-415 Calculation	15,000.00	15,000.00	2,727.00	8,955.00	6,045.00	59.70%
Actuary-Misc Hrly Consult	16,000.00	16,000.00	10,741.00	14,734.00	1,266.00	92.09%
Printing	45,000.00	45,000.00	0.00	10,253.72	34,746.28	22.79%
Postage	68,000.00	68,000.00	432.30	18,125.16	49,874.84	26.65%
Copy Machine	4,000.00	4,000.00	0.00	1,933.00	2,067.00	48.33%
General Liability	15,800.00	15,800.00	0.00	7,876.50	7,923.50	49.85%
Fiduciary Liability	86,000.00	86,000.00	0.00	83,609.00	2,391.00	97.22%
Cost Allocation Charges	42,000.00	42,000.00	0.00	20,997.00	21,003.00	49.99%
Education Allowance	4,000.00	4,000.00	0.00	0.00	4,000.00	0.00%
Training/Travel-Staff	62,900.00	62,900.00	900.00	11,650.00	51,250.00	18.52%
Training/Travel-Trustee	33,200.00	33,200.00	0.00	1,640.00	31,560.00	4.94%
Travel-Due Diligence-Staff	12,800.00	12,800.00	0.00	0.00	12,800.00	0.00%
Travel-Due Diligence-Trustee	22,600.00	22,600.00	0.00	0.00	22,600.00	0.00%
Mileage-Staff	4,500.00	4,500.00	0.00	0.00	4,500.00	0.00%
Mileage -Trustee	4,500.00	4,500.00	0.00	0.00	4,500.00	0.00%
Mileage-Due Diligence-Staff	700.00	700.00	0.00	0.00	700.00	0.00%
Mileage-Due Diligence-Trustee	700.00	700.00	0.00	0.00	700.00	0.00%
Auto Allowance	6,900.00	6,900.00	575.00	4,600.00	2,300.00	66.67%
Facilities-Meeting Room Rental	0.00	0.00	0.00	44.00	(44.00)	0.00%
Facilities-Security	2,700.00	2,700.00	2,048.00	2,278.00	422.00	84.37%
Facilities-Maint & Repairs	3,300.00	3,300.00	0.00	910.56	2,389.44	27.59%
Equipment-Maint & Repairs	2,000.00	2,000.00	0.00	909.73	1,090.27	45.49%
General Office Expense	10,400.00	10,400.00	1,405.49	2,510.01	7,889.99	24.13%
Books & Publications	9,000.00	9,000.00	518.24	14,284.11	(5,284.11)	158.71%
Office Supplies	15,000.00	15,000.00	212.08	2,237.97	12,762.03	14.92%
Memberships & Dues	17,900.00	17,900.00	330.00	15,480.00	2,420.00	86.48%
Offsite Storage	5,200.00	5,200.00	426.59	3,285.74	1,914.26	63.19%
Rents/Leases-Structures	258,000.00	258,000.00	21,092.45	168,739.60	89,260.40	65.40%
Non-Capital Furniture	15,800.00	15,800.00	0.00	1,911.65	13,888.35	12.10%
Depreciation /Amortization	1,562,700.00	1,562,700.00	129,313.62	1,064,898.80	497,801.20	68.14%
Total Services & Supplies	$3,280,400.00	$3,280,400.00	$241,379.97	$1,976,917.12	$1,303,482.88	60.26%
Total Sal, Ben, Serv & Supp	$9,018,600.00	$9,018,600.00	$681,086.19	$5,296,071.73	$3,722,528.27	58.72%

Ventura County Employees' Retirement Association
Budget Summary Fiscal Year 2020 -2021
For the Eight Months Ended February 28, 2021 and Year-To-Date - 66.67% of Fiscal Year
Combined

	Adopted 2021 Budget	Adjusted 2021 Budget	February 2021	Expended Fiscal Year to Date	Available Balance	Percent Expended
Technology						
Technology Hardware	$98,000.00	$98,000.00	$3,038.98	$44,050.65	$53,949.35	44.95%
Technology Hardware Support	10,000.00	10,000.00	0.00	1,149.00	8,851.00	11.49%
Technology Software Lic & Maint.	75,400.00	75,400.00	959.76	37,699.61	37,700.39	50.00%
Technology Software Suppt & Maint.	41,500.00	41,500.00	0.00	43.75	41,456.25	0.11%
Technology Cloud Services	6,100.00	6,100.00	34.97	2,618.77	3,481.23	42.93%
Technology Website Services	8,900.00	8,900.00	650.00	5,999.96	2,900.04	67.42%
Technology Infrastruct Support	186,100.00	186,100.00	4,602.84	56,497.93	129,602.07	30.36%
Technology V3 Software & VSG	747,000.00	747,000.00	67,013.04	401,039.12	345,960.88	53.69%
Technology Data Communication & Cyber Security	88,000.00	88,000.00	6,300.15	37,636.63	50,363.37	42.77%
Total Technology	$1,261,000.00	$1,261,000.00	$82,599.74	$586,735.42	$674,264.58	46.53%
Capital Expenses						
Capitalized Structures	$0.00	$0.00	$0.00	$12,109.95	($12,109.95)	0.00%
Total Capitalized Expenses	$0.00	$0.00	$0.00	$12,109.95	($12,109.95)	0.00%
Contingency	$845,000.00	$845,000.00	$0.00	$0.00	$845,000.00	0.00%
Total Current Year	$11,124,600.00	$11,124,600.00	$763,685.93	$5,894,917.10	$5,229,682.90	52.99%

Ventura County Employees' Retirement Association
Statement of Fiduciary Net Position
As Of January 31, 2021 (Unaudited)

Assets		
Cash & Cash Equivalents		$210,075,139
Receivables		
Interest and Dividends	4,238,496	
Securities Sold	28,505,802	
Miscellaneous	21,656	
Total Receivables		32,765,954
Investments at Fair Value		
Domestic Equity	1,979,827,424	
Non U.S. Equity	1,090,709,091	
Global Equity	777,516,422	
Private Equity	713,748,308	
Fixed Income	1,059,350,779	
Private Credit	150,036,866	
Real Assets	899,293,724	
Cash Overlay	118,365	
Total Investments		6,670,600,978
Capital Assets, Net of Accumulated Depreciation & Amortization		10,159,203
Total Assets		6,923,601,274
Liabilities		
Securities Purchased	55,669,620	
Accounts Payable	1,282,274	
Tax Withholding Payable	3,639,427	
Deferred Revenue (PrePaid Contributions)	54,013,510	
Total Liabilities		114,604,831
Net Position Restricted for Pensions		$6,808,996,443

Ventura County Employees' Retirement Association
Statement of Changes in Fiduciary Net Position
For the Seven Months Ending January 31, 2021 (Unaudited)

ADDITIONS		
Contributions		
Employer	$100,921,222	
Employee	44,994,209	
Total Contributions		**145,915,431**
Investment Income		
Net Appreciation (Depreciation) in Fair Value of Investments	929,591,423	
Interest Income	11,107,952	
Dividend Income	4,190,915	
Other Investment Income	4,005,455	
Real Estate Operating Income, Net	8,083,216	
Security Lending Income	181,797	
Total Investment Income	**957,160,758**	
Less Investment Expenses		
Management & Custodial Fees	13,128,493	
Other Investment Expenses	232,631	
Securities Lending Borrower Rebates	33,366	
Securities Lending Management Fees	50,252	
Totat Investment Expenses	**13,444,742**	
Net Investment Income/(Loss)		**943,716,016**
Total Additions		**1,089,631,447**
DEDUCTIONS		
Benefit Payments	188,656,449	
Member Refunds and Death Benefit Payments	1,932,026	
Administrative Expenses	3,241,047	
Other Expenses	1,657,553	
Total Deductions		**195,487,075**
Net Increase/(Decrease)		**894,144,372**
Net Position Restricted For Pensions		
Beginning of Year		**5,914,852,071**
Ending Balance		**$6,808,996,443**

Ventura County Employees' Retirement Association
Investments, Cash, and Cash Equivalents
As of January 31, 2021 (Unaudited)

	Investments	Cash & Cash Equivalents
Equity		
Domestic Equity		
Blackrock - Russell 1000	1,614,780,395	0
Blackrock - Russell 2500	86,801,281	0
Western Asset Enhanced Equity Index Plus	278,245,747	21,040,362
Total Domestic Equity	**1,979,827,424**	**21,040,362**
Non U.S. Equity		
Blackrock - ACWI ex - US	569,481,905	0
Hexavest	92,804,154	0
Sprucegrove	249,764,822	0
Walter Scott	178,658,210	0
Total Non U.S. Equity	**1,090,709,091**	**0**
Global Equity		
Blackrock - ACWI Index	777,516,422	0
Total Global Equity	**777,516,422**	**0**
Private Equity		
Abry Partners	5,153,457	0
Abbott Secondaries	15,916,673	0
Adam Street	213,786,428	0
CapVest Equity Partners	842,026	0
Advent Int'l	4,099,736	0
Astorg	2,867,026	0
Battery Ventures	22,489,932	0
Buenaventure One	70,689,185	0
Buenaventure Two	611,227	0
Clearlake Investors	19,669,005	0
GGV Capital	10,657,172	0
Drive Capital	29,779,476	0
Flexpoint	1,601,340	0
ECI 11 GP LP	5,150,251	0
Genstar Capital	5,219,354	0
Great Hill	2,137,139	0
Green Equity Investors	2,023,598	0
GTCR Fund XII	20,300,654	0
Harbourvest	142,269,065	0
Hellman & Friedman	9,471,726	0
Insight Ventures	38,814,840	0
MC Partners	2,653,349	0
Oak/HC/FT	10,547,335	0
Pantheon	47,680,000	0
Resolute Fund IV LP	20,090,439	0
The Riverside Fund V LP	3,251,673	0
TA XIII-A	5,699,260	0
Vitruvian IV	276,941	0
Total Private Equity	**713,748,308**	**0**

Ventura County Employees' Retirement Association
Investments, Cash, and Cash Equivalents
As of January 31, 2021 (Unaudited)

	Investments	Cash & Cash Equivalents
Fixed Income		
Blackrock - Bloomberg Barclays Aggregate Index	178,096,988	0
Loomis Sayles Multi Sector	86,842,074	1,238,286
Loomis Sayles Strategic Alpha	48,408,923	0
Reams	344,577,116	451
Reams - US Treasury	90,661,410	73,308
Western Asset Management	310,764,269	12,619,033
Total Fixed Income	1,059,350,779	13,931,078
Private Credit		
Arcmont	9,552,906	0
Bridge Debt Strategies	23,529,184	0
Carval	27,819,343	0
Monroe Capital	21,258,604	0
Pimco Corporate Opportunities	65,376,829	0
Torchlight Debt Fund	2,500,000	0
Total Private Credit	150,036,866	0
Real Assets		
Bridgewater All Weather	381,184,451	0
Brookfield Infrastructure	23,936,811	0
HarbourVest Real Assets	3,855,893	0
LaSalle	17,141,238	0
Prudential Real Estate	168,998,678	0
Tortoise (MLPs)	60,582,316	179,845
UBS Realty	243,594,337	0
Total Real Assets	899,293,724	179,845
Parametric (Cash Equitization)	118,365	87,768,064
State Street Bank and Trust	0	83,455,462
County of Ventura Treasury		3,700,328
Total Investments, Cash, and Cash Equivalents	$6,670,600,978	$210,075,139

Ventura County Employees' Retirement Association
Schedule of Investment Management Fees
For The Seven Months Ending January 31, 2021 (Unaudited)

Equity Managers	
Domestic Equity	
Blackrock - Russell 1000	$77,922
Blackrock - Russell 2500	5,421
Western Asset Enhanced Equity Index Plus	237,853
Total Domestic Equity	321,195
Non U.S. Equity	
Blackrock - ACWI ex - US	254,450
Hexavest	201,413
Sprucegrove	380,673
Walter Scott	540,817
Total Non U.S. Equity	1,377,354
Global Equity	
Blackrock - ACWI Index	141,987
Total Global Equity	141,987
Private Equity	
Abbott Secondary Opportunities	114,773
Abry Partners	106,000
Adams Street	950,307
Advent Int'l	75,000
Astorg	84,289
Battery Ventures	260,394
Clearlake	46,412
Drive Capital	207,709
ECI 11 GP LP	96,757
Flexpoint	106,500
Genstar Capital	3,686
GGV Capital	153,250
Great HIlls Partners	
GTCR XII/A & B	222,920
Harbourvest	2,264,117
Hellman & Friedman	43,808
Insight Venture Partners	185,852
Oak/HC/FT	185,926
Pantheon	273,184
Resolute Fund	137,967
Riverside	162,002
TA XIII-A	
Total Private Equity	5,680,854

Ventura County Employees' Retirement Association
Schedule of Investment Management Fees
For The Seven Months Ending January 31, 2021 (Unaudited)

Fixed Income Managers	
Blackrock Bloomberg Barclays Aggregate Index	45,975
Loomis Sayles Multi Sector	168,451
Loomis Sayles Strategic Alpha	93,506
Reams Asset Management	291,374
Reams US Treasury	4,127
Western Asset Management	268,206
Total Fixed Income	871,640
Private Credit	
Arcmont	124,192
Bridge Debt Strategies	125,000
Carval Investors	168,300
Monroe Capital	
Pimco	303,814
Total Private Credit	721,306
Real Assets	
Bridgewater All Weather	322,811
Brookfield Infrastructure	372,321
HarbourVest Real Assets	116,986
LaSalle	450,000
Prudential Real Estate Advisors	702,544
Tortoise (MLPs)	189,740
UBS Realty	838,014
Total Real Assets	2,992,415
Cash Overlay (Parametric)	125,825
Securities Lending	
Borrower's Rebate	33,366
Management Fees	50,252
Total Securities Lending	83,618
Other	
Investment Consultant (NEPC)	155,000
Investment Consultant (Abbott Capital)	575,941
Investment Custodian (State Street)	164,976
Total Other Fees	895,917
Total Investment Management Fees	$13,212,112

Ventura County Employees' Retirement Association
Statement of Fiduciary Net Position
As Of February 28, 2021 (Unaudited)

Assets		
Cash & Cash Equivalents		$164,353,683
Receivables		
Interest and Dividends	3,747,483	
Securities Sold	28,910,750	
Miscellaneous	21,359	
Total Receivables		32,679,591
Investments at Fair Value		
Domestic Equity	2,042,968,930	
Non U.S. Equity	1,110,865,836	
Global Equity	795,737,787	
Private Equity	719,716,866	
Fixed Income	1,055,792,183	
Private Credit	150,017,771	
Real Assets	891,887,148	
Cash Overlay	3,273	
Total Investments		6,766,989,793
Capital Assets, Net of Accumulated Depreciation & Amortization		10,029,889
Total Assets		6,974,052,957
Liabilities		
Securities Purchased	52,378,931	
Accounts Payable	374,608	
Tax Withholding Payable	3,661,762	
Deferred Revenue (PrePaid Contributions)	40,390,135	
Total Liabilities		96,805,436
Net Position Restricted for Pensions		$6,877,247,520

Ventura County Employees' Retirement Association
Statement of Changes in Fiduciary Net Position
For the Eight Months Ending February 28, 2021 (Unaudited)

ADDITIONS		
Contributions		
Employer	$114,554,463	
Employee	51,232,767	
Total Contributions		**165,787,230**
Investment Income		
Net Appreciation (Depreciation) in Fair Value of Investments	1,004,437,568	
Interest Income	12,512,007	
Dividend Income	4,915,787	
Other Investment Income	4,077,230	
Real Estate Operating Income, Net	8,083,216	
Security Lending Income	215,691	
Total Investment Income	**1,034,241,500**	
Less Investment Expenses		
Management & Custodial Fees	13,129,616	
Other Investment Expenses	274,908	
Securities Lending Borrower Rebates	35,255	
Securities Lending Management Fees	63,097	
Totat Investment Expenses	**13,502,876**	
Net Investment Income/(Loss)		**1,020,738,624**
Total Additions		**1,186,525,854**
DEDUCTIONS		
Benefit Payments	216,122,974	
Member Refunds and Death Benefit Payments	2,387,421	
Administrative Expenses	3,678,426	
Other Expenses	1,941,583	
Total Deductions		**224,130,404**
Net Increase/(Decrease)		**962,395,449**
Net Position Restricted For Pensions		
Beginning of Year		**5,914,852,071**
Ending Balance		**$6,877,247,520**

Ventura County Employees' Retirement Association
Investments, Cash, and Cash Equivalents
As of February 28, 2021 (Unaudited)

	Investments	Cash & Cash Equivalents
Equity		
Domestic Equity		
Blackrock - Russell 1000	1,661,761,358	0
Blackrock - Russell 2500	92,483,716	0
Western Asset Enhanced Equity Index Plus	288,723,856	9,808,151
Total Domestic Equity	2,042,968,930	9,808,151
Non U.S. Equity		
Blackrock - ACWI ex - US	581,930,480	0
Hexavest	93,232,628	0
Sprucegrove	259,934,645	0
Walter Scott	175,768,082	0
Total Non U.S. Equity	1,110,865,836	0
Global Equity		
Blackrock - ACWI Index	795,737,787	0
Total Global Equity	795,737,787	0
Private Equity		
Abbott Secondaries	15,916,673	0
Abry Partners	5,512,312	0
Adam Street	205,630,212	0
Advent Int'l	4,299,695	0
Astorg	2,867,026	0
Battery Ventures	22,489,932	0
Buenaventure One	75,639,185	0
Buenaventure Two	661,227	0
CapVest Equity Partners	842,026	0
Clearlake Investors	21,481,927	0
CRV XVIII	750,000	0
Drive Capital	29,779,476	0
ECI 11 GP LP	5,150,251	0
Flexpoint	1,601,340	0
Genstar Capital	5,219,354	0
GGV Capital	11,697,572	0
Great Hill	2,610,553	0
Green Equity Investors	2,023,598	0
GTCR Fund XII	21,044,654	0
Harbourvest	138,397,168	0
Hellman & Friedman	14,238,834	0
Insight Ventures	39,458,212	0
MC Partners	3,582,717	0
Oak/HC/FT	10,547,335	0
Pantheon	47,680,000	0
Resolute Fund IV LP	20,090,439	0
TA XIII-A	5,699,260	0
The Riverside Fund V LP	4,528,947	0
Vitruvian IV	276,941	0
Total Private Equity	719,716,866	0

Ventura County Employees' Retirement Association
Investments, Cash, and Cash Equivalents
As of February 28, 2021 (Unaudited)

	Investments	Cash & Cash Equivalents
Fixed Income		
Blackrock - Bloomberg Barclays Aggregate Index	180,690,684	0
Loomis Sayles Multi Sector	87,679,630	1,889,709
Loomis Sayles Strategic Alpha	48,476,298	0
Reams	345,614,979	451
Reams - US Treasury	87,737,580	368,621
Western Asset Management	305,593,012	9,258,415
Total Fixed Income	1,055,792,183	11,517,195
Private Credit		
Arcmont	9,552,906	0
Bridge Debt Strategies	23,529,184	0
Carval	27,819,343	0
Monroe Capital	21,258,604	0
Pimco Corporate Opportunities	65,357,734	0
Torchlight Debt Fund	2,500,000	0
Total Private Credit	150,017,771	0
Real Assets		
Bridgewater All Weather	371,285,856	0
Brookfield Infrastructure	23,936,811	0
HarbourVest Real Assets	3,855,893	0
LaSalle	17,141,238	0
Prudential Real Estate	168,998,678	0
Tortoise (MLPs)	63,074,335	1,854,968
UBS Realty	243,594,337	0
Total Real Assets	891,887,148	1,854,968
Parametric (Cash Equitization)	3,273	83,140,289
State Street Bank and Trust		54,423,877
County of Ventura Treasury		3,609,203
Total Investments, Cash, and Cash Equivalents	$6,766,989,793	$164,353,683

Ventura County Employees' Retirement Association
Schedule of Investment Management Fees
For The Eight Months Ending February 28, 2021 (Unaudited)

Equity Managers	
Domestic Equity	
Blackrock - Russell 1000	$77,922
Blackrock - Russell 2500	5,421
Western Asset Enhanced Equity Index Plus	237,853
Total Domestic Equity	321,195
Non U.S. Equity	
Blackrock - ACWI ex - US	254,450
Hexavest	201,413
Sprucegrove	380,673
Walter Scott	540,817
Total Non U.S. Equity	1,377,354
Global Equity	
Blackrock - ACWI Index	141,987
Total Global Equity	141,987
Private Equity	
Abbott Secondary Opportunities	114,773
Abry Partners	106,000
Adams Street	950,307
Advent Int'l	75,000
Astorg	84,289
Battery Ventures	260,394
Clearlake	46,412
Drive Capital	207,709
ECI 11 GP LP	96,757
Flexpoint	106,500
Genstar Capital	3,686
GGV Capital	153,250
Great HIlls Partners	
GTCR XII/A & B	222,920
Harbourvest	2,264,117
Hellman & Friedman	43,808
Insight Venture Partners	185,852
Oak/HC/FT	185,926
Pantheon	273,184
Resolute Fund	137,967
Riverside	162,002
TA XIII-A	
Total Private Equity	5,680,854

Ventura County Employees' Retirement Association
Schedule of Investment Management Fees
For The Eight Months Ending February 28, 2021 (Unaudited)

Fixed Income Managers	
Blackrock Bloomberg Barclays Aggregate Index	45,975
Loomis Sayles Multi Sector	168,451
Loomis Sayles Strategic Alpha	93,506
Reams Asset Management	291,374
Reams US Treasury	4,127
Western Asset Management	268,206
Total Fixed Income	871,640
Private Credit	
Arcmont	124,192
Bridge Debt Strategies	125,000
Carval Investors	168,300
Monroe Capital	
Pimco	303,814
Total Private Credit	721,306
Real Assets	
Bridgewater All Weather	322,811
Brookfield Infrastructure	372,321
HarbourVest Real Assets	116,986
LaSalle	450,000
Prudential Real Estate Advisors	702,544
Tortoise (MLPs)	189,740
UBS Realty	838,014
Total Real Assets	2,992,415
Cash Overlay (Parametric)	125,825
Securities Lending	
Borrower's Rebate	35,255
Management Fees	63,097
Total Securities Lending	98,352
Other	
Investment Consultant (NEPC)	155,000
Investment Consultant (Abbott Capital)	575,941
Investment Custodian (State Street)	166,099
Total Other Fees	897,040
Total Investment Management Fees	$13,227,968

HARBOURVEST

Ventura County Employees' Retirement Association

March I 2021

access OPPORTUNITY

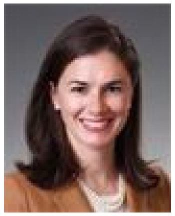
HarbourVest representatives

HARBOURVEST

BRETT GORDON

Managing Director, HarbourVest Partners, LLC (Boston)

Brett Gordon manages HarbourVest's Solutions practice globally, focusing on custom solutions and separately managed accounts for clients and prospects as well as new fund and product development. He also plays a leadership role in the firm's secondary business. He joined HarbourVest in 1998 after receiving his MBA. Brett currently serves on a number of advisory boards and valuation committees. He also serves on the Babson College Board of Trustees. Brett's previous experience includes serving as a vice president for The Princeton Review of Boston, Inc., where he managed all operational functions of the organization and was responsible for long range strategic planning. He received a BS (magna cum laude) in Management from Boston University in 1990 and an MBA (summa cum laude) from Babson College in 1998.



JACKIE PERADOTTO

Principal, HarbourVest Partners, LLC (Boston)

Jackie Peradotto joined HarbourVest in 2009. She left the Firm to attend business school and rejoined HarbourVest's direct investment team in 2014 after completing her MBA. Jackie focuses on sourcing, reviewing, executing, and monitoring direct co-investments, primarily in the healthcare industry. She serves as a board member at Comprehensive Pharmacy Services (CPS) and Dentistry for Children (D4C), and formerly served as a board member of Five Star Food Service. Jackie has played a key role on several deals including Advance Health, Aldevron, Cambrex, CareCentrix, MedOptions, MultiPlan, Press Ganey, and Vetsource. Jackie's previous experience includes three years with Morgan Stanley, where she was an investment banking analyst in the Global Power & Utility Group in New York and the Corporate Finance Group in San Francisco. Her prior experience also includes a position at McKesson Corporation. She received an AB in Molecular Biology from Princeton University in 2006 and an MBA in Health Care Management (with honors) from the Wharton School at the University of Pennsylvania in 2014.

ABIGAIL RAYNER

Principal, HarbourVest Partners (Canada) Limited

Abigail Rayner joined the HarbourVest team in 2018 as a product specialist focused on global real assets investments and works closely with the investor relations team. Abigail joined the Firm from Octopus Investments, a UK focused renewable energy manager. Prior to that, Abigail was with Canada Pension Plan Investment Board in Toronto and London, where she invested in global infrastructure and power assets. Abigail received an HBA (Bachelor of Arts in Business Administration) from Ivey Business School at the University of Western Ontario in 2008 and an MBA from the London Business School in 2014.

Table of contents

HarbourVest

HARBOURVEST

HARBOURVEST FIRM OVERVIEW

HarbourVest at-a-glance

HARBOURVEST

$71.7 billion
total AUM across all strategies*

Private markets
specialists in equity, credit, and real assets

Expertise
in primary, secondary, direct co-investments, credit, and real assets

600+
colleagues
150+
investment professionals

25 years
average industry experience of managing directors

800+
advisory board seats

Strong track record
35+ years

950+
Managers tracked

As of December 31, 2020

*Reflects committed capital from LPs for all active funds/accounts; excludes any funds/accounts in extension, liquidation, and those that have been fully liquidated.

Independent – A deep and skilled organization

HARBOURVEST

Independence, alignment, and collaboration drive client focus across teams

Leadership

- Owned by members
- 55 managing directors
- Culture of diversity and excellence

Investments

- 150+ professionals
- 15 nationalities, 16 languages
- Resources and insight across regions and sectors
- Embedded investment risk process

Investor Relations

- 125+ Investor Relations, Client Service, and Marketing professionals
- Locally accessible
- Valuable insight and timely communications

Operations

- 300+ Operations, IT, Portfolio Analytics, HR, Accounting, Tax, Treasury, and Administration professionals
- Controls, policies, and procedures for each division

As of January 2, 2021

Global Scale – Our market coverage is broad and deep

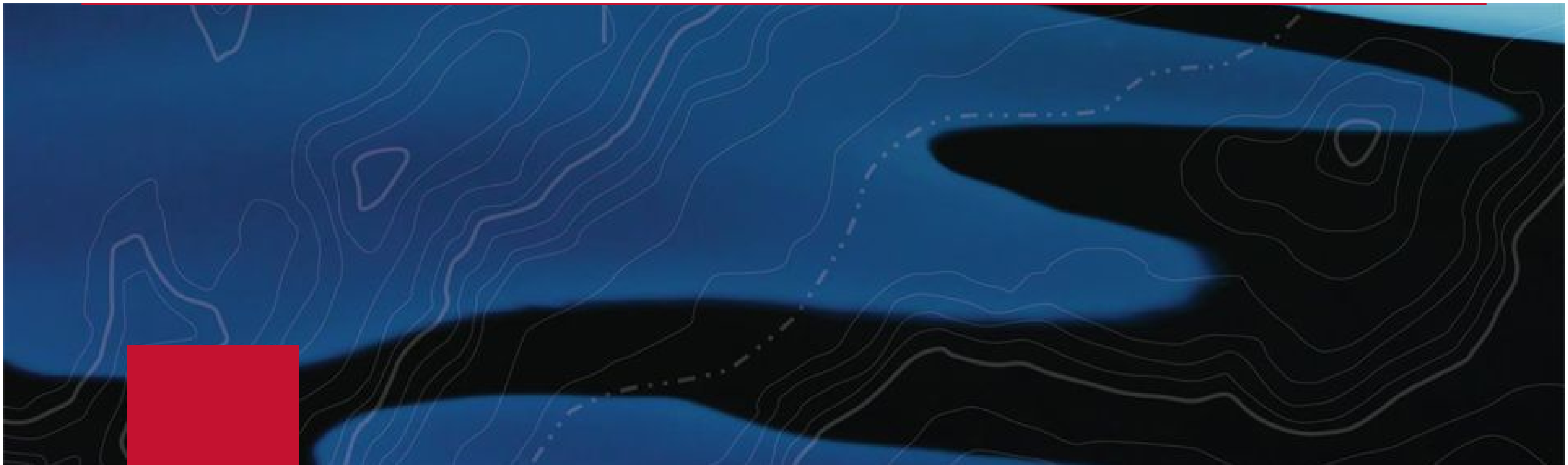
HARBOURVEST

Americas		EMEA		Asia Pacific	
106 Investment Professionals	**$58.3** Billion Committed	**29** Investment Professionals	**$27.4** Billion Committed	**18** Investment Professionals	**$9.3** Billion Committed

Expertise Across Capital Structure (Equity and Debt) and Investment Types		
PRIMARY INVESTMENTS	**SECONDARY & REAL ASSETS**	**DIRECT – EQUITY & CREDIT**
$45.6 billion committed	**$28.2 billion committed**	**$21.2 billion committed**

As of December 31, 2020. Based on primary, secondary, and direct commitments made by HarbourVest since inception. ◯ Indicates HarbourVest team location

HARBOURVEST



CLIENT UPDATE

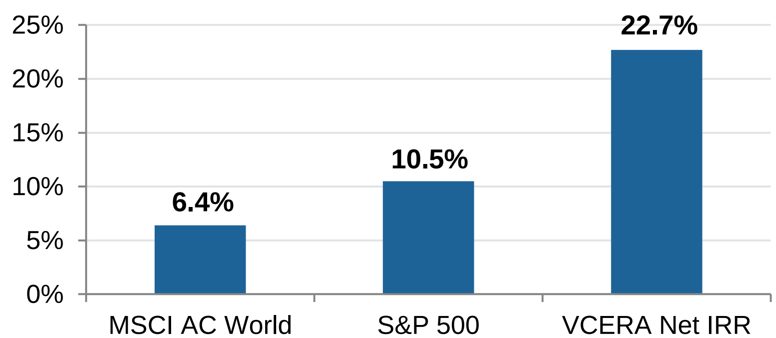
Investments managed by HarbourVest

HARBOURVEST

Ventura County Employees' Retirement Association Summary as of September 30, 2020

Fund	NAV Date	Vintage Year	Committed Capital	Contributed Capital	Cumulative Distribution	Transfer of Interest	NAV	Total Value	TV/C	Investor IRR
Dover VIII	09/30/20	2012	$ 67,500,000	61,425,000	75,342,689	0	24,805,651	100,148,340	1.6x	20.3%
Dover IX	09/30/20	2016	$ 60,000,000	47,400,000	19,158,174	0	50,049,781	69,207,955	1.5x	26.5%
Co-Investment IV	09/30/20	2016	$ 30,000,000	24,267,648	4,951,347	0	32,063,451	37,014,798	1.5x	17.1%
Co-Investment V	09/30/20	2019	$ 35,000,000	15,750,000	0	0	22,677,504	22,677,504	1.4x	69.1%
Dover X Fund	09/30/20	2020	$ 40,000,000	4,000,000	0	0	6,256,454	6,256,454	1.6x	NM
Real Assets IV Fund	09/30/20	Unfunded	$ 100,000,000	0	0	0	3,855,892	3,855,892	0.0x	NM
	Subtotal:		332,500,000	152,842,648	99,452,210	0	139,708,734	239,160,944	1.6x	22.7%
	Grand Total:		332,500,000	152,842,648	99,452,210	0	139,708,734	239,160,944	1.6x	22.7%

Performance Highlights*



As of September 30, 2020.

Grand Totals are based on historic exchange rates on date of actual cash flow. All funds include related AIVs. NAV and Total Value reflect values as of NAV Date, updated for capital calls and distributions through the As of Date. Investor IRRs are as of NAV Date. Grand Total IRR: Since Inception includes each fund as of its NAV Date. 1 year, 3 year and 5 year IRRs are based on the earliest NAV Date.

* Public market comparison represents performance if the respective index had been purchased and sold at the time of the limited partners' capital calls and distributions, with the remainder held at the date noted. Dividends are not reinvested. Using this methodology, the capital calls for the purchase of the public market index are the same as the capital calls for the HarbourVest fund. The distributions for the sales of the public market index are scaled to represent the same proportion of the fund's NAV at the time of the distribution. (For example, if the fund distributes 5% of NAV, then 5% of the index NAV is distributed.) The securities comprising the public market benchmarks have substantially different characteristics than the investments held by the HarbourVest funds, and accordingly a direct comparison may not be meaningful. Net L.P. IRR are the returns to Ventura County Employees' Retirement Association ("Ventura County") after all fees, operating expenses, and carried interest, and is calculated using daily cash flows to and from Ventura County. In this calculation, the final cash flow is the fair market value of Ventura County's capital account at the applicable date as determined by the general partner of the respective HarbourVest fund in accordance with the valuation policy. Past performance is not a reliable indicator of future results.

Leader in building co-investment portfolios

HARBOURVEST

Strong, demonstrated model track record*

19.3%
gross model 10-year IRR for realized co-investments

$11.3 billion
proceeds generated since inception

Active deal-sourcing platform**

730
deals sourced in LTM

68%
small/mid-market deals reviewed in LTM

HARBOURVEST STRENGTHS

Focus on creating solutions for GPs

40+
GP partners§

Large, experienced global team

49
investment professionals globally ††

21
average years of MD experience

As of September 30, 2020, unless otherwise noted.

* As of September 30, 2020. Past performance is not a reliable indicator of future results. Gross model IRR is presented on a gross basis and reflects the performance of all realized co-investments made by the HarbourVest team in the last 10 years across all HarbourVest-managed funds and accounts. The gross model realized IRR since inception (1989) is 13.8%. No investor received the gross model IRR. Actual performance may differ substantially from the gross model IRR presented. Proceeds generated reflect gross realized proceeds from all partially and realized co-investments in this same universe. See 'Additional Important Information' at the end of the presentation, including important disclosures related to Gross Performance Returns, Model Performance, and Fees and Expenses, and does not reflect the management fees, carried interest, and other expenses borne by investors, which would reduce returns. There can be no assurance that the actual investment activity of the Fund will be consistent with these assumptions.

** As of December 31, 2020. Small/mid-market deals statistic represents percentage of deals reviewed in depth that has an enterprise value of $1.5 billion or less at the time of our review.

§ As of September 30, 2020 and includes all GPs in Co-Investment Fund III – Co-Investment Fund V where HarbourVest provided a solution to the lead GP.

†† As of December 31, 2020.

HarbourVest Partners Co-Investment Fund V

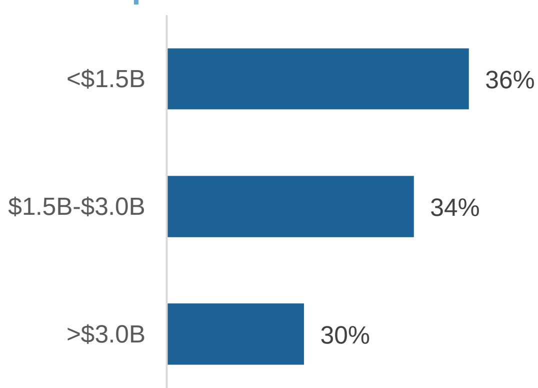
HARBOURVEST

- Commitment period from 2018 – 2021
- Co-investments principally in leveraged buyouts, recapitalizations, growth equity and special situations
- $1.9 billion (including unfunded) committed to global co-investments at September 30, 2020

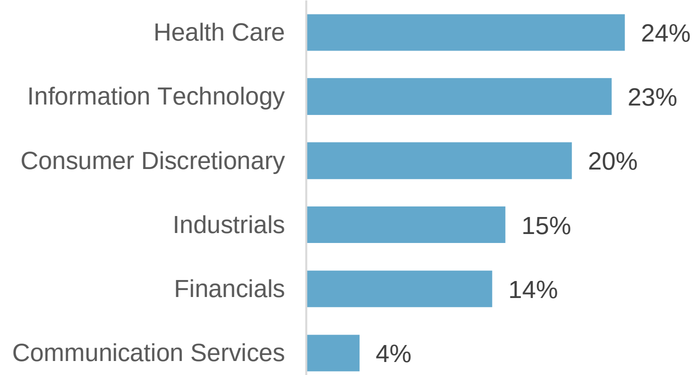
$ Millions

As of	Sep-30 ‘20	Dec-31 ‘20
Fund Size	$3,030.3	$3,030.3
Committed to Investments	63%	84%
Paid-In Capital	**$1,390.0**	**$1,899.9**
% Called	**46%**	**63%**
Distributions	**$0.0**	**$0.0**
Net DPI	**0.0x**	**0.0x**
Total Value	$1,977.8	
Net TVPI	1.4x	
Net IRR	69.9%	

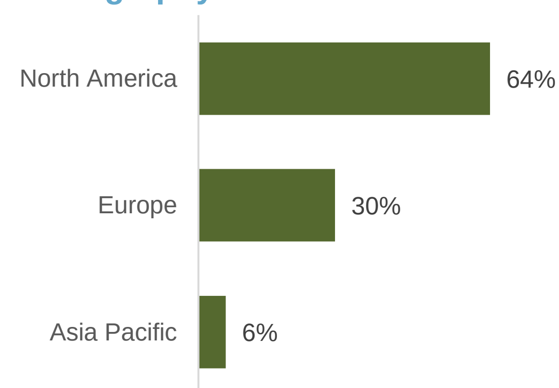
Enterprise Value



Industry



Geography



Charts are based on cumulative cost and commitments of company investments as of September 30, 2020. HCF V performance also includes the performance of any AIF-related funds. A complete list of the fund’s portfolio holdings and performance may be found elsewhere in this presentation. This performance is intended for distribution with the annual performance information in ‘Additional Track Record Detail’. See ‘Additional Important Information’ at the end of the presentation, including important disclosures on Gross / Net Performance Returns and Fees and Expenses. This page summarizes the activity and performance of a HarbourVest fund or account. While the investments and relationships referenced may be in a HarbourVest portfolio, there is no guarantee that they will be in a future portfolio. A reference to a specific GP or company does not constitute a recommendation to invest nor an indication that HarbourVest funds or accounts hold any specific GP or company. Past performance is not indicative of future results.

HarbourVest Partners Co-Investment Fund IV

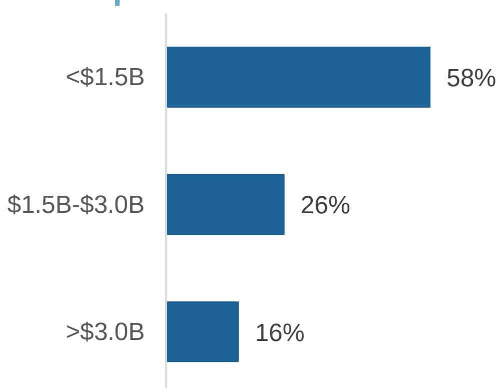
HARBOURVEST

- Commitment period from 2016 – 2019
- Co-investments principally in leveraged buyouts, recapitalizations, growth equity, and special situations
- $1.8 billion committed to 40 global co-investments

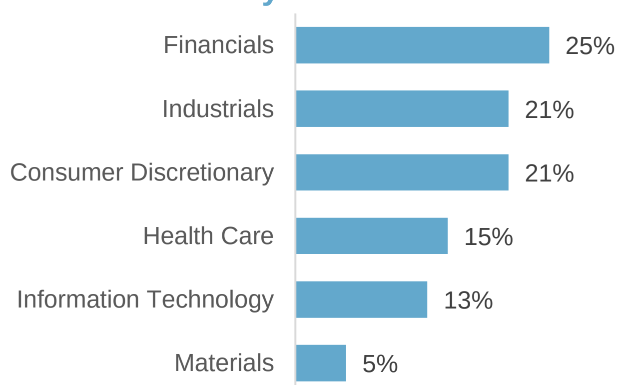
$ Millions

As of	Sep-30 '20	Dec-31 '20
Fund Size	$1,767.7	$1,767.7
Committed to Investments	101%	101%
Paid-In Capital	**$1,467.3**	**$1,467.3**
% Called	**84%**	**84%**
Distributions	**$279.8**	**$360.6**
Net DPI	**0.2x**	**0.2x**
Total Value	$2,224.8	
Net TVPI	1.5x	
Net IRR	16.6%	

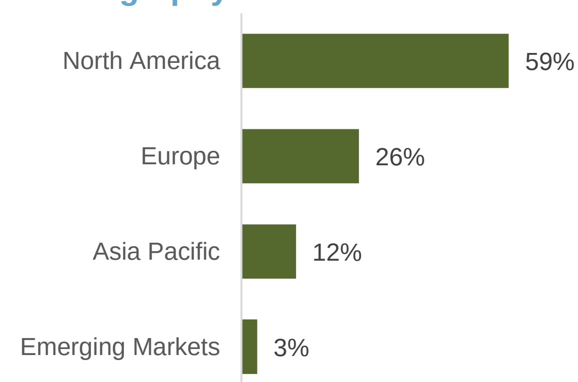
Enterprise Value



Industry



Geography



Charts are based on cumulative cost and commitments of company investments as of September 30, 2020. HCF IV performance also includes the performance of any AIF-related funds. A complete list of the fund's portfolio holdings and performance may be found elsewhere in this presentation. This performance is intended for distribution with the annual performance information in 'Additional Track Record Detail'. See 'Additional Important Information' at the end of the presentation, including important disclosures on Gross / Net Performance Returns and Fees and Expenses. This page summarizes the activity and performance of a HarbourVest fund or account. While the investments and relationships referenced may be in a HarbourVest portfolio, there is no guarantee that they will be in a future portfolio. A reference to a specific GP or company does not constitute a recommendation to invest nor an indication that HarbourVest funds or accounts hold any specific GP or company. Past performance is not indicative of future results.

Established investment strategy

HARBOURVEST

Real assets selection framework used to manage risk while harnessing alpha potential

Acquire high quality assets with conservative capital structures

- Focus on **high quality assets** with strong management teams
- Acquire assets with conservative capital structures, providing **resiliency in down markets**
- Identify **strong barriers to entry** due to attractive locations or inelastic demand

Acquire at discounts and utilize structuring

- Typically acquiring at a **discount to intrinsic value and/or market value**
- **Utilize structuring** to generate preferred economics, providing potential **downside protection**
- Do not underwrite commodity price movements

Invest with a path to liquidity

- Focus on acquiring assets with **near-term liquidity**
- **3- 5 year targeted hold** period

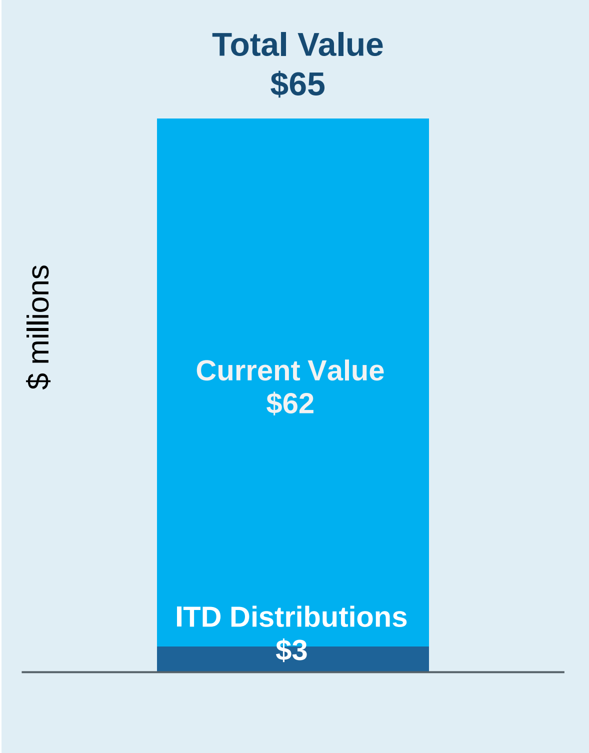
Generate alpha through value creation opportunities

- Acquire assets with a **near-term value creation plan,** organic / acquisitive growth opportunities, or operational improvements
- Ensure strong **GP alignment**

Real Assets Fund IV – Significant momentum

HARBOURVEST

Portfolio Total Value



Project / Deal	Size ($m)	NAV ($m)	D/F	TV/F
Project Burton	$25	$38	0.1x	1.6x
Mesa Natural Gas	15	22	0.0x	1.5x
Project Caballo	13	2	0.0x	1.4x
Project Kamara[1]	8	N/A	N/A	N/A
H-Line Shipping[1]	7	N/A	N/A	N/A
Total	**$67**	**$62**	**0.1x**	**1.6x**
iCON Infrastructure Partners V, L.P.*	5	N/A	N/A	N/A
SDC Digital Infrastructure Opportunity Fund II, L.P.*	5	N/A	N/A	N/A
Arroyo Energy Investors Fund III, L.P.*	5	N/A	N/A	N/A
Stonepeak Infrastructure IV, L.P.*	5	N/A	N/A	N/A
Grand Total**	**$87**	**$62**	**0.1x**	**1.6x**

GFP GLOBAL FOREST PARTNERS LP · MESA SOLUTIONS · NGP · bp ENERGY PARTNERS · H-LINE SHIPPING

[1] Closed post-September 30, 2020. * Strategic primary investments. ** Total as of December 31, 2020; D/F and TV/F does not include deals closed post-September 30, 2020.
Performance data as of September 30, 2020. General partners / managers listed above represent the largest manager by NAV in each listed deal and are intended for illustrative purposes only. While this is an actual investment or relationship in the portfolio, there is no guarantee it will be in a future portfolio. This information is presented on a gross basis. These returns do not reflect the management fees, carried interest, and other expenses borne by investors in the HarbourVest-managed funds/accounts, which will reduce returns. See 'Additional Important Information' at the end of the presentation, including important disclosures related to Gross Performance Returns and Fees and Expenses. Past performance is not a reliable indicator of future results.

HarbourVest secondary investment capabilities

HARBOURVEST

Building high-quality, diversified portfolios that seek outperformance and j-curve mitigation

Differentiated Approach

Focus on **less efficient** segments of the market

Act as a **solutions provider** to general partners and sellers

Highly selective strategy with emphasis on market-leading **complex deals**

Experienced, Stable Team

Decades of collaboration and industry experience

34 years of secondary investing

500+ transactions executed

18 average years of MD tenure

HarbourVest Platform

Deep relationships and information advantage

18,000 partnerships tracked

800+ advisory board seats

150+ investment professionals

As of September 30, 2020

Dover Street X

HARBOURVEST

Key Fund Highlights

$8.1b
FUND SIZE

2,000 - 3,000
EXPECTED NUMBER OF UNDERLYING COMPANIES

3 - 4 years
EXPECTED INVESTMENT PERIOD

22.5%
CALLED AS OF December 31, 2020

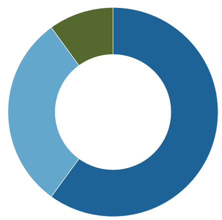
October 2020
FIRST DISTRIBUTION

1.6x
Net TVPI AS OF September 30, 2020

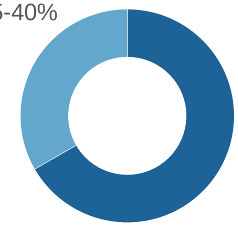
0.1x
Net DPI AS OF December 31, 2020

Illustrative Portfolio Construction[1]

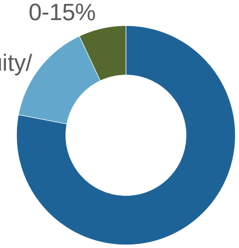
Geography



Transaction Type



Stage



Current Portfolio

Deployment[2]

Largest Managers[3]

AEA
Bridgepoint
COURT SQUARE
IDG资本
IDG Capital Partners
INSIGHT PARTNERS
PAI PARTNERS
VISTA EQUITY PARTNERS

[1] These amounts reflect the current expectations for the allocation of the Fund. The ultimate allocation will differ based upon market conditions and available investment opportunities over the life of the Fund. Additionally, these are not prescriptive guidelines. The investment guidelines of the Fund are contained in the offering memorandum and the limited partnership agreement. Portfolio characteristics are subject to change and may be significantly different than those shown here. There is no guarantee the Fund will achieve its investment objectives. [2] As of December 31, 2020. [3] The general partners listed above are the four largest managers by commitment and are shown for illustrative purposes only. While these are actual investments in a HarbourVest portfolio, there is no guarantee they will be in a future portfolio. A reference to a specific general partner or company does not constitute a recommendation to invest nor an indication that HarbourVest funds or accounts hold any specific General Partner or company. It should not be assumed that an investment in the companies identified was or will be profitable. General Partners shown represent the largest by company value as of September 31, 2020 in the Dover X portfolio. See 'Additional Information' at the end of the presentation for important disclosures.

Dover Street IX

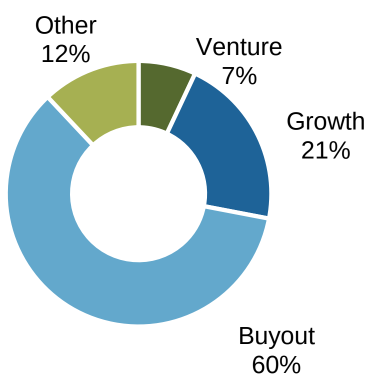
HARBOURVEST

- Commitment period from 2016 – 2019
- 109% committed to 45 deals since inception
- Well diversified portfolio of 45 deals constructed in line with stated strategy
- Final investment completed in July 2019
- $620 million distributed to LPs in 2020

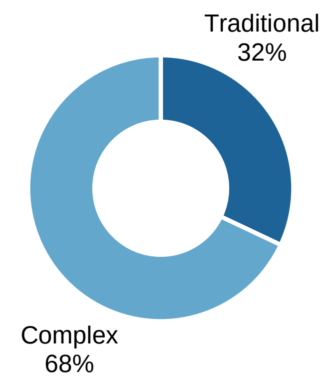
$ Millions

As of	Sep-30 '20	Dec-31 '20
Fund Size	$4,777.0	$4,777.0
Committed to Investments	109%	109%
Paid-In Capital	**$3,717.2**	**$3,764.3**
% Called	**79%**	**80%**
Distributions	**$1,502.4**	**$1,846.8**
DPI	**0.4x**	**0.5x**
Total Value	$5,437.7	
TVPI	1.5x	
Net IRR	26.6%	

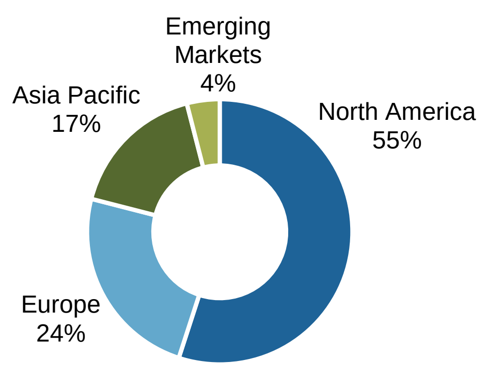
Stage



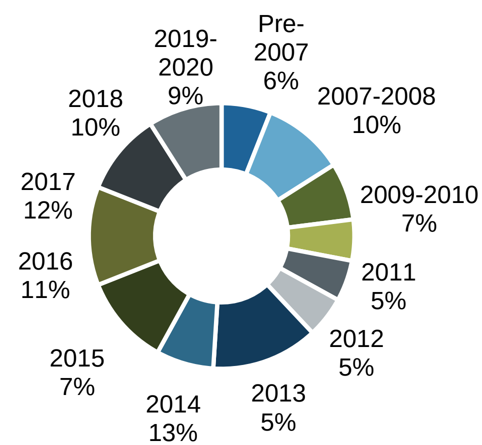
Transaction Type



Geography



Investment Year



Pie charts are based on cumulative cost of company investments as of September 30, 2020. Transaction Type based on transaction level commitments.

See final pages for additional notes. This page summarizes the activity and performance of a HarbourVest fund or account. There is no guarantee the investments and relationships referenced will be in a future portfolio. Past performance is not a reliable indicator of future results.

Dover Street VIII

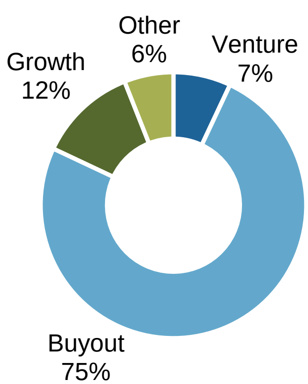
HARBOURVEST

- Committed from 2012-2016
- 97% committed to 37 deals since inception
- Well diversified portfolio constructed in line with stated strategy
- Portfolio performing ahead of plan
- $201 million distributed to LPs in 2020

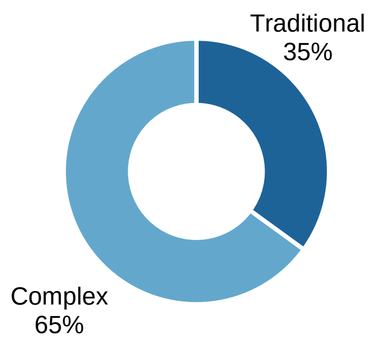
$ Millions

As of	Sep-30 ‘20	Dec-31 ‘20
Fund Size	$3,591.5	$3,591.5
Committed to Investments	97%	97%
Paid-In Capital	**$3,219.2**	**$3,219.2**
% Called	**91%**	**91%**
Distributions	**$3,948.6**	**$4,027.4**
DPI	**1.2x**	**1.3x**
Total Value	$5,248.6	
TVPI	1.6x	
Net IRR	20.0%	

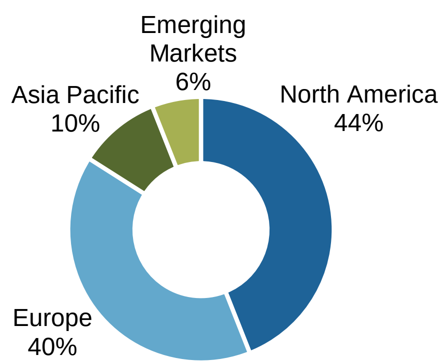
Stage



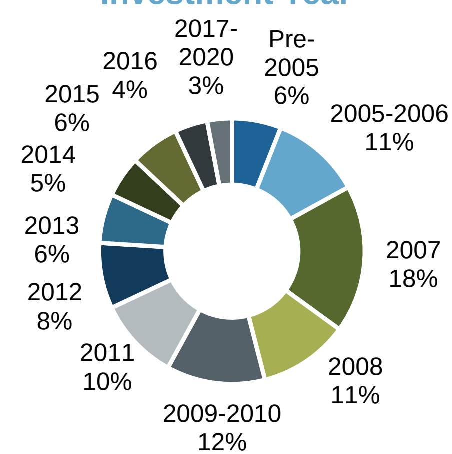
Transaction Type



Geography



Investment Year



Pie charts are based on cumulative cost of company investments as of September 30, 2020. Transaction type based on transaction level commitments.

See final pages for additional notes. This page summarizes the activity and performance of a HarbourVest fund or account. There is no guarantee the investments and relationships referenced will be in a future portfolio. Past performance is not a reliable indicator of future results.

HARBOURVEST

ADDITIONAL IMPORTANT INFORMATION

Additional important information

HARBOURVEST

Any data presented about investments prior to 1998 is related to transactions that occurred when the HarbourVest team was affiliated with Hancock Venture Partners, Inc.

HarbourVest's founders began making venture capital investments for John Hancock Financial Services in late 1970s. In 1982 they formed Hancock Venture Partners, Inc, which was fully owned by John Hancock Mutual Life Insurance Company, to independently develop and manage third-party private equity capital. In January 1997, the Hancock Venture Partners management team formed a new independent management company, HarbourVest Partners, LLC. All then-employees of Hancock Venture Partners became owners and/or employees of HarbourVest Partners, LLC. As of January 1, 2021 all employees of HarbourVest Partners, LLC hired prior to 1997 are still affiliated with HarbourVest and serve either as a Managing Director or in a Senior Advisor capacity. HarbourVest Partners, LLC has no affiliation with John Hancock Financial Services.

The source of the performance information is HarbourVest. In considering the performance information contained herein, prospective investors should bear in mind that past performance is not a reliable indicator of future results, and there can be no assurance that an investment sponsored (or an account managed) by HarbourVest will achieve comparable results or be able to implement its investment strategy or meet its performance objectives. The funds that made these investments may have had different terms and investment objectives than those proposed or modeled herein.

The foregoing performance information includes realized and unrealized investments. Unrealized investments are valued by HarbourVest in accordance with the valuation guidelines contained in the applicable partnership agreement. Actual realized returns on unrealized investments will depend on, among other factors, future operating results, the value of the assets and market conditions at the time of disposition, any related transaction costs, and the timing and manner of sale, all of which may differ from the assumptions on which the valuations used in prior performance data contained herein are based. Accordingly, the actual realized returns on these unrealized investments may differ materially from returns indicated herein.

In certain cases, a HarbourVest fund or account, or the partnerships in which it invests, may utilize a credit facility or other third-party financing. This is generally to bridge capital calls from limited partners or to fund a portion of an investment and may also be used to facilitate transactions involving the recapitalization of portfolio investments. This may make the resulting IRR and multiples higher or lower than the IRR or multiples that would have been presented had drawdowns from partners or available cash been initially used to acquire or pay for the investment.

IRRs are calculated from the date of a fund's first cash flow from a limited partner, which may include capital contributions in connection with fund formation, as may occur with certain AIF-Related Funds (as defined below), and therefore can be earlier than the date of the first capital call from a limited partner for the purpose of investment. The start date for IRR calculations can also be later than the date of initial investment when a credit facility or other third-party financing is used to fund such investment.

Performance is expressed in US dollars, unless otherwise noted. Returns do not include the effect of any withholding taxes. Cash flows are converted to US dollars at historic daily exchange rates, unless otherwise indicated. The return to investors whose local currency is not the US dollar may increase or decrease as a result of currency fluctuations.

1. **Net Performance Returns** - DPI (Distributions / Paid-In Capital), TVPI (Total Value / Paid-In Capital), and Net IRR (Internal Rate of Return) through the applicable date are the returns to limited partners after all management fees, commissions, fund operating expenses, and carried interest. These returns reflect the combined return for all limited partners in a fund and may not reflect an individual limited partner's actual return. The Net IRR is calculated using daily cash flows to and from limited partners. In this calculation, the final cash flow to limited partners is the fair market value of all limited partners' capital accounts at the applicable date as determined by the general partner of the respective HarbourVest fund or account in accordance with the valuation policy. The net multiples (DPI and TVPI) are calculated based on the same cash flows. See note 8 below for additional disclosures related to fees and expenses of a fund.

Notes continued on next page.

Additional important information

HARBOURVEST

2. **Gross Performance Returns** – This information (Distributed / Funded, Total Value / Funded, TV/TC (Total Value / Total Cost), Gross Portfolio IRR, and Gross IRR), if shown, is presented on a gross basis and reflects the performance of the investment portfolio, including primary fund investments, secondary investments, and/or direct co-investments. Gross Portfolio IRR represents the annual return calculated using daily cash flows from the Fund(s) to and from the various partnerships or companies, either directly or through a special purpose vehicle in which the Fund(s) invested during the period specified. These returns reflect the fees, expenses, and carried interest of the underlying fund investments (where applicable), certain expenses of any special purpose vehicle that held an interest in the underlying fund, as applicable, but do not reflect the management fees, carried interest, and other expenses borne by investors in the Fund(s), which will reduce returns. See note 8 below for additional disclosures related to fees and expenses of a Fund.

3. **Portfolio Company Performance** – This information, if shown, is based on the cost and value of underlying company investments within the primary and secondary investment portfolios of the Fund(s). These returns do not reflect the fees, expenses, and carried interest of the partnership investments of the Fund(s), which will reduce returns. Performance may be aggregated when a company is held through multiple primary and secondary investments. These returns do not represent the performance of any specific Fund or the return to limited partners of any specific Fund. As a result, portfolio company performance returns are considered model performance. See notes 6 and 8 below for additional disclosures related to model performance and fees and expenses of a Fund, respectively.

4. **Public Market Comparison** – This information, if shown, represents adjusted model performance of each index as if the respective index had been purchased and sold at the time of the limited partners' capital calls and distributions, with the remainder held at the date noted. The indices used assume reinvestment of all dividends. Under this methodology, the capital calls for the purchase of the public market index are the same as the capital calls for the Fund(s). The distributions for the sales of the public market index are scaled to represent the same proportion of the Fund's NAV at the time of the distribution. For example, if the Fund distributes 5% of NAV, then 5% of the index NAV is distributed. Thus, the index returns presented are not gross actual index returns, but adjusted model returns. See note 6 for additional disclosures related to model performance.

   The MSCI AC Asia Pacific® Index captures large and mid cap representation across 5 Developed Markets countries (Australia, Hong Kong, Japan, New Zealand and Singapore) and 9 Emerging Markets countries (China, India, Indonesia, Korea, Malaysia, Pakistan, the Philippines, Taiwan and Thailand) in the Asia Pacific region. With 1,573 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

   The MSCI AC World® Index (ACWI) is designed to measure the performance of publicly-traded large and mid-capitalization equity securities in global developed and emerging markets. The MSCI ACWI Index is maintained by Morgan Stanley Capital International ("MSCI") and has historically captured approximately 85% coverage of the free float-adjusted market capitalization of its publicly-traded global equity opportunity set.

   The MSCI AC World® (ACWI) Ex-US Index is designed to measure the performance of publicly-traded large and mid-capitalization equity securities in global developed and emerging markets excluding the US. The MSCI ACWI Ex-US Index is maintained by MSCI and has historically captured approximately 85% coverage of the free float-adjusted market capitalization of its publicly-traded global equity opportunity set outside the US.

   The MSCI EAFE® Index is designed to measure the performance of publicly-traded large and mid-capitalization equity securities across developed markets, including countries in Europe, Australasia, Israel and the Far East, and excluding the US and Canada. The MSCI EAFE Index is maintained by MSCI and has historically captured approximately 85% coverage of the free float-adjusted market capitalization of publicly-traded equities in each included country.

   The S&P 500® Index is designed to measure the performance of publicly-traded equity securities of the large capitalization sector of the US market and includes 500 large companies having common stock listed on eligible U.S. exchanges. The S&P 500 Index is maintained by Standard & Poors ("S&P") and has historically captured approximately 80% coverage of available market capitalization of publicly-traded equities in the US market.

Notes continued on next page.

Additional important information

HARBOURVEST

The Russell 2000® Index is designed to measure the performance of publicly-traded equity securities of the small capitalization sector of the US market and includes the 2,000 smallest companies in the Russell 3000® Index. These indexes are maintained by FTSE Russell, a subsidiary of the London Stock Exchange Group. The Russell 3000 Index consists of the 3,000 largest publicly-listed US companies, and has historically captured approximately 98% coverage of the total capitalization of the entire US stock market.

The adjusted public market indices shown are not intended to, and do not, parallel the risk, investment strategy, or investment characteristics of a Fund. The securities comprising the public market indices have substantially different characteristics than the investments held by a Fund, and accordingly, a direct comparison may not be meaningful. The public market comparison is shown for illustrative purposes only. The adjusted indices are shown to demonstrate the approximate returns an investor may have received had the investor invested in certain publicly-traded equity securities in lieu of a Fund or the investments made by HarbourVest. An investor is not able to directly invest in a benchmark index.

Bloomberg is the source of the index data contained or reflected in this material. MSCI, S&P, and FTSE Russell are the owners of the index data contained or reflected in this material and all trademarks and copyrights related thereto. This is HarbourVest's presentation of the data. Bloomberg, MSCI, S&P, and FTSE Russell are not responsible for the calculations conducted by HarbourVest, the formatting or configuration of this material, or for any inaccuracy in presentation thereof.

5. **Vintage Years** - HarbourVest vintage classification is based on the year in which capital was first funded to each underlying fund (for primary fund investments) or the year of HarbourVest's purchase (for secondary investments).

6. **Monte Carlo Simulations** - These model (hypothetical) portfolios, if shown, are intended for illustrative purposes only. Performance information for each hypothetical portfolio utilized a Monte Carlo Simulation and are based on the actual cash flows of a proprietary data set that includes partnership investments made by Funds, along with partnership data from external sources. The capital calls and distribution data is based on historic partnership investment cash flows, but does not represent the actual experience of any investor or Fund. The results of the simulation are impacted by an uneven representation of funds with different vintage years, sizes, managers, and strategies, and a limited pool of investment cash flow data. The actual pace and timing of cash flows is likely to be different and will be highly dependent on the underlying partnerships' commitment pace, the types of investments made by the Fund(s), market conditions, and terms of any relevant management agreements. The results presented are based entirely on the output from numerous mathematical simulations. The simulations are unconstrained by the fund size, market opportunity, and minimum commitment amount, and do not take into account the practical aspects of raising and managing a fund. The simulated hypothetical portfolio results should be used solely as a guide and should not be relied upon to manage your investments or make investment decisions.

7. **Model Performance** - Model performance results are inherently limited and should not be relied upon as indicators of future performance. Individual fund and strategy performance can be better or worse than the model. **No investor received the indicated model performance.** Certain assumptions have been made for modeling purposes. No representation or warrant is made as to the reasonableness of the assumptions made. Changes in the assumptions may have a material impact on the hypothetical returns presented.

   Different model scenarios will provide different results. While the model portfolio may consist of investments made by HarbourVest during the relevant period(s), it does not reflect an actual portfolio managed by HarbourVest during the relevant period(s) and does not represent the impact that material economic and market factors might have had on HarbourVest's decision making if HarbourVest had been managing a fund that incorporated the investment strategy shown during the specified period(s).

Notes continued on next page.

Additional important information

HARBOURVEST

In addition, the HarbourVest fund(s) had investment results materially different from the results portrayed in the model portfolio during the relevant period(s). The fund(s)' actual investments may have substantially different terms than those reflected in the model portfolio. No representation is made that any Fund will or is likely to achieve returns similar to those presented, and there can be no assurance that the fund(s) or HarbourVest will achieve profits or avoid incurring substantial losses. Other periods selected for the model portfolios may have different results, including losses. Current model performance may differ from that shown.

Model may assume each portfolio participates in every investment opportunity on a pro rata basis based on actual aggregate HarbourVest commitments for each vintage year. Actual investment opportunities may be limited due to scarcity and desired portfolio construction; creating a more concentrated portfolio in comparison to the model. The incremental benefit of portfolio diversification may become limited at the higher range of underlying partnerships / investments.

The following is the criteria used when showing model portfolio performance that includes the following investment types:

Primary Investments – Based on the cash flows of all primary investments (or a subset as noted) made by fund(s) during the period(s) specified, with the exception of custom accounts that made investments primarily in emerging venture capital managers, emerging managers, diverse managers, or state-focused managers, as these strategies are outside of HarbourVest's core focus.

Secondary Investments – Based on the cash flows of all secondary investments (or a subset as noted) made by fund(s) during the period(s) specified.

Direct Co-Investments – Based on the cash flows of all direct co-investments (or a subset as noted) made by fund(s) during the period(s) specified. This performance excludes custom accounts that may make investments outside of HarbourVest's core co-investment strategy (e.g., industry, sourcing, return profile). Direct co-investments are generally defined as: (i) buyout, recapitalization, and special situation investments; (ii) expansion capital, growth equity, or other venture capital investment in companies with greater than $7.5 million in trailing 12-month revenues at the time of investment; or (iii) mezzanine investments. Early stage investments, generally defined as those companies with revenues less than $7.5 million at the time of initial investment, which are outside the focus of the fund, are also not included in the model portfolio returns shown. If early stage investments were included in the model portfolio, returns would be lower.

8. **Fees and Expenses** - Actual management fees and carried interest will vary and are established in negotiations with the limited partners of a Fund or separate account client. Management fees may range from an average of 0.1% to 1.25% per year of committed, called, or invested capital over the expected life of the Fund, pursuant to the limited partnership agreement or investment management agreement. Fees for Funds in extension years may be reduced, including to nil. Fund investors will typically bear all the costs and expenses relating to the operations of a Fund and its general partners (or similar managing fiduciary). A Fund shall bear its pro rata share of any such expenses incurred in connection with any portfolio investment to the extent the same portfolio investment is being made by other Funds. Organization expenses of a Fund will also typically be borne by Fund investors. When a Fund is generally expected to invest alongside a Fund primarily intended for European-based investors, which takes into account the regulatory requirements of the Alternative Investment Fund Managers Directive (an "AIF Related Fund"), organization expenses may be aggregated and allocated pro-rata between a Fund and its AIF Related Fund based on the relative commitments of the partners of the Fund and the partners of its AIF Related Fund (unless HarbourVest, as general partner, determines in good faith that a different share is appropriate). The specific payment terms and other conditions of the management fees, carried interest, and other expenses of a Fund are set forth in the governing documents of the Fund. Fees and expenses are also described in HarbourVest's Form ADV, Part 2A brochure.

Notes continued on next page.

Additional important information

HARBOURVEST

Gross performance returns, if shown, are presented before management fees, carried interest, and other expenses borne by investors in the Fund(s). An actual portfolio would bear such fees and expenses. If such fees and expenses were deducted from performance, returns would be lower. For example, if a fund appreciated by 10% a year for five years, the total annualized return for five years prior to deducting fees and expenses at the end of the five year period would be 10%. If total fund fees and expenses were 1% for each of the five years, the total annualized return of the fund for five years at the end of the five-year period would be 8.90%.

9. **Private Equity Index Data** - Unless otherwise indicated, all private equity fund benchmark data reflects the fees, carried interest, and other expenses of the funds included in the benchmark. Please note that Fund returns would be reduced by the fees, carried interest, and other expenses borne by investors in the Fund. Such fees, carried interest, and other expenses may be higher or lower than those of the funds included in the benchmark. Burgiss (unless otherwise noted) is the source and owner of any private equity index data contained or reflected in this material and all trademarks and copyrights related thereto. The material may contain confidential information and unauthorized use, disclosure, copying, dissemination, or redistribution is strictly prohibited. This is HarbourVest's presentation of the data. Burgiss is not responsible for the calculations conducted by HarbourVest, the formatting or configuration of this material, or for any inaccuracy in presentation thereof.

COVID-19 & Track Record & Performance

Unless otherwise specified, the investment performance of HarbourVest funds, accounts or investments herein is presented as of September 30, 2019. Subsequent to September 30, 2019, the global financial markets have experienced considerable volatility, and economic and financial market conditions have significantly deteriorated. Investors should consider the risks summarized in "Epidemics, Pandemics and Other Health Risks" below. The investment performance presented herein does not take into account these subsequent events, the effects of which are likely to be adverse on the aggregate investment performance of the HarbourVest funds and the effects of which may be particularly adverse with respect to the investment performance of certain individual investments. Past performance of any HarbourVest fund, account or investment is not indicative of future results of the Fund, and prospective investors should consider these subsequent events in evaluating any investment performance information contained herein.

Epidemics, Pandemics and Other Health Risks

Many countries have experienced infectious illnesses in recent decades, including swine flu, avian influenza, SARS and 2019-nCoV (the "Coronavirus"). In December 2019, an initial outbreak of the Coronavirus was reported in Hubei, China. Since then, a large and growing number of cases have been confirmed around the world. The Coronavirus outbreak has resulted in numerous deaths and the imposition of both local and more widespread "work from home" and other quarantine measures, border closures and other travel restrictions causing social unrest and commercial disruption on a global scale. The World Health Organization has declared the Coronavirus outbreak a pandemic. The ongoing spread of the Coronavirus has had and will continue to have a material adverse impact on local economies in the affected jurisdictions and also on the global economy as cross-border commercial activity and market sentiment are increasingly impacted by the outbreak and government and other measures seeking to contain its spread. In addition to these developments having potentially adverse consequences for underlying portfolio investments of the Fund and the value of the Fund's investments therein, the operations of HarbourVest and the Fund have been, and could continue to be, adversely impacted, including through quarantine measures and travel restrictions imposed on HarbourVest personnel or service providers based around the world, and any related health issues of such personnel or service providers. Any of the foregoing events could materially and adversely affect the Fund's ability to source, manage and divest its investments and its ability to fulfill its investment objectives. Similar consequences could arise with respect to other comparable infectious diseases.

Notes continued on next page.

Additional important information

HARBOURVEST

The information contained herein is highly confidential and is being provided to you at your request for informational purposes only and is not, and may not be relied on in any manner as, legal, tax, or investment advice or as an offer to sell or a solicitation of an offer to buy an interest in any fund or any other investment product sponsored by HarbourVest (the “Fund”). Any offering of interests in the Fund will be made by means of delivery of a confidential Private Placement Memorandum or similar materials (the “Memorandum”) that contain a description of the material terms of such investment and subscriptions will be accepted solely pursuant to definitive documentation. These materials do not purport to contain all the information relevant to evaluating an investment in the Fund. The information contained herein will be superseded by, and is qualified in its entirety by reference to, the Memorandum, which will contain information about the investment objective, terms, and conditions of an investment in the Fund and will also contain tax information and risk disclosures that are important to any investment decision regarding the Fund. No person has been authorized to make any statement concerning the Fund other than as will be set forth in the Memorandum and any such statements, if made, may not be relied upon. No sale will be made in any jurisdiction in which the offer, solicitation, or sale is not authorized or to any person to whom it is unlawful to make the offer, solicitation, or sale. Offers and sales of interests in the Fund will not be registered under the laws of any jurisdiction and will be made solely to “qualified purchasers” as defined in the U.S. Investment Company Act of 1940, as amended. The information contained herein must be kept strictly confidential and may not be reproduced or redistributed in any format without the express written approval of HarbourVest.

An investment in the Fund will involve significant risks, including loss of the entire investment. Before deciding to invest in the Fund, prospective investors should pay particular attention to the risk factors contained in the Memorandum. Prospective investors should make their own investigations and evaluations of the information contained herein. Prior to the closing of a private offering of interests in the Fund, HarbourVest will give investors the opportunity to ask questions and receive additional information concerning the terms and conditions of such offering and other relevant matters. Each prospective investor should consult its own attorney, business advisor, and tax advisor as to legal, business, tax, and related matters concerning the information contained herein and such offering.

Certain information contained herein (including financial information and information relating to investments) has been obtained from published and non-published sources. Such information has not been independently verified by HarbourVest. Except where otherwise indicated herein, the information provided herein is based on matters as they exist as of the date of preparation and not as of any future date, and will not be updated or otherwise revised to reflect information that subsequently becomes available, or circumstances existing or changes occurring after the date hereof. Any forecast provided herein is based on HarbourVest’s opinion of the market as of the date of preparation and is subject to change, dependent on future changes in the market.

In considering any performance data contained herein, you should bear in mind that past performance is not a reliable indicator of future results. Certain information contained herein constitutes forward-looking statements, which can be identified by the use of terms such as “may”, “will”, “should”, “expect”, “anticipate”, “project”, “estimate”, “intend”, “continue”, or “believe” (or the negatives thereof) or other variations thereof. Due to various risks and uncertainties, including those discussed above, actual events or results or actual performance of the Fund may differ materially from those reflected or contemplated in such forward-looking statements. As a result, investors should not rely on such forward-looking statements in making their investment decisions.

None of the information contained herein has been filed with the Securities and Exchange Commission, any securities administrator under any state securities laws, or any other governmental or self-regulatory authority. No governmental authority has passed on the merits of the offering of interests in the Fund or the adequacy of the information contained herein. Any representation to the contrary is unlawful.

U.S. | Europe | Asia | Private Equity | Infrastructure & Real Assets | Debt | Primaries | Secondaries | Co-investment

Presentation to Ventura County Employees' Retirement Association: Portfolio Update

March 2021

PRIVATE & CONFIDENTIAL

Presenting to you…

VCERA

Rudy Scarpa, Partner (joined 2007, 26 years of private markets experience)

Rudy is a Partner and Co-Head of Pantheon's Global Secondaries Team, leading Pantheon's secondaries presence in the U.S. He is a member of the International Investment Committee and Global Secondary Investment Committee. Rudy was previously a partner at Coller Capital where he was a key member of the senior team. Prior to Coller Capital, Rudy worked at Thomas H. Lee Putnam Ventures, Merrill Lynch and Skadden Arps. Rudy received his BS at Indiana University and his JD from New York University School of Law. Rudy is based in New York.

rudy.scarpa@pantheon.com

Iain Jones, Principal (joined 2012, 10 years of private markets experience)

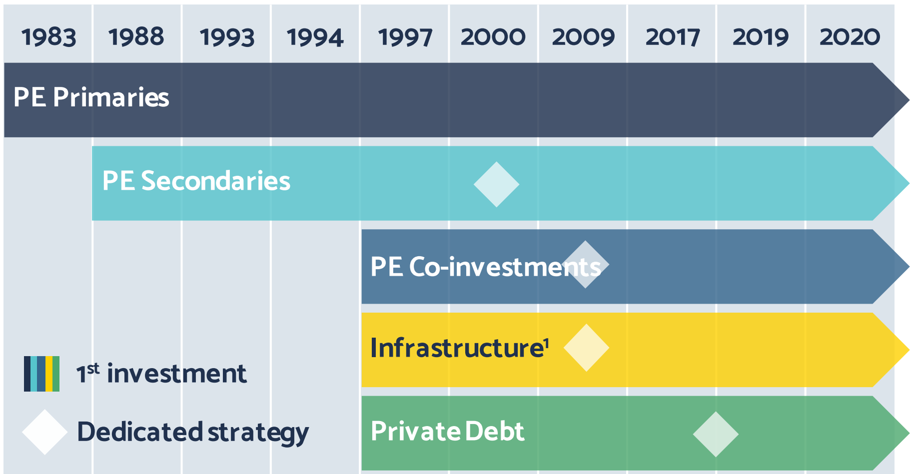
Iain is a member of Pantheon's U.S. Investor Relations Team focused on existing relationships and business development in North America. Previously, Iain provided client service and fundraising support across the UK market, as well Asia and Australia, from Pantheon's London office. Prior to joining Pantheon, he worked for Preqin in the Infrastructure research team in London. He has a BSc in economics from the University of Bristol. Iain is based in San Francisco.

iain.jones@pantheon.com

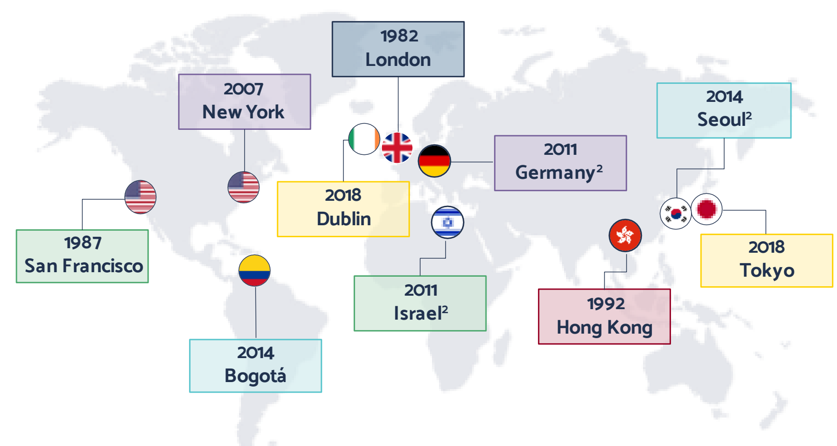
Agenda

Pantheon Update

Investing in private markets for over 35 years



Pantheon Offices



104
Investment professionals[3]

$58.4bn
Funds under management[4]

52 / 48
% of FUM in commingled / customized accounts

>670
Institutional investors globally

>470
Advisory board seats

~9,500
GPs in Pantheon's database

~2,000
Funds invested in

2007
Became a signatory to UNPRI

[1] Includes real assets.
[2] Represents countries from which executives of the Pantheon Group perform client service activities but does not imply an office.
[3] As of December 31, 2020. Please note this includes 24 professionals who support the deal teams through investment structuring, portfolio strategy, research and treasury.
[4] As of September 30, 2020. This figure includes assets subject to discretionary or non-discretionary management or advice. Pantheon made a change to the calculation of our Assets Under Management (AUM) from September 30, 2020 onwards. Any client assets that are limited to a reporting or monitoring function are now excluded from our AUM.

23 member global secondary investment team

Global Secondary Investment Committee

Private Markets years | Pantheon years | Recently promoted

Private Markets
Average 22 years experience

Pantheon Tenure
Average 16 years with Pantheon

Co-Heads of Global Secondary Team

			Private Markets years	Pantheon years
Matt Jones	Partner	London	19	19
Rudy Scarpa	Partner	New York	26	13
Petra Bukovec (recently promoted)	Partner	London	14	14
Kevin Dunwoodie	Partner	San Francisco	14	12
Matt Garfunkle	Partner	San Francisco	22	21
Elly Livingstone	Partner	London	23	19
Dennis McCrary	Partner	San Francisco	41	13

Francesco di Valmarana[1]
Partner
London

Alex Wilmerding[1]
Partner
Hong Kong

Tanu Chita[1]
Principal
London

Charlotte Morris
Principal
London

Bing Wong
Principal
San Francisco

Simon Greenway
Vice President
London

Alex Laird
Vice President
New York

Morten Lundin
Vice President
London

Tom Gordon (recently promoted)
Senior Associate
San Francisco

Michelangelo Malamisura (recently promoted)
Senior Associate
London

Mikael Meyer (recently promoted)
Senior Associate
London

Alexander Valtchev
Senior Associate
London

Naomi Karlin (recently promoted)
Associate
New York

Andrew Pulsipher
Associate
San Francisco

Dillon Schriver
Associate
New York

Doug Turner (recently promoted)
Associate
London

Supported by additional investment team members

U.S.
8 Partners
4 Principals
4 VPs

Europe
10 Partners
4 VPs

Asia & RoW
2 Partners
2 Principals

25 Senior Associates, Associates and Analysts

23 Investment Structuring & Strategy Team

[1] Denotes investment professionals not dedicated to secondaries. As of December 31, 2020.

VCERA's Pantheon Portfolio Update

VCERA existing Pantheon program

As of September 30, 2020

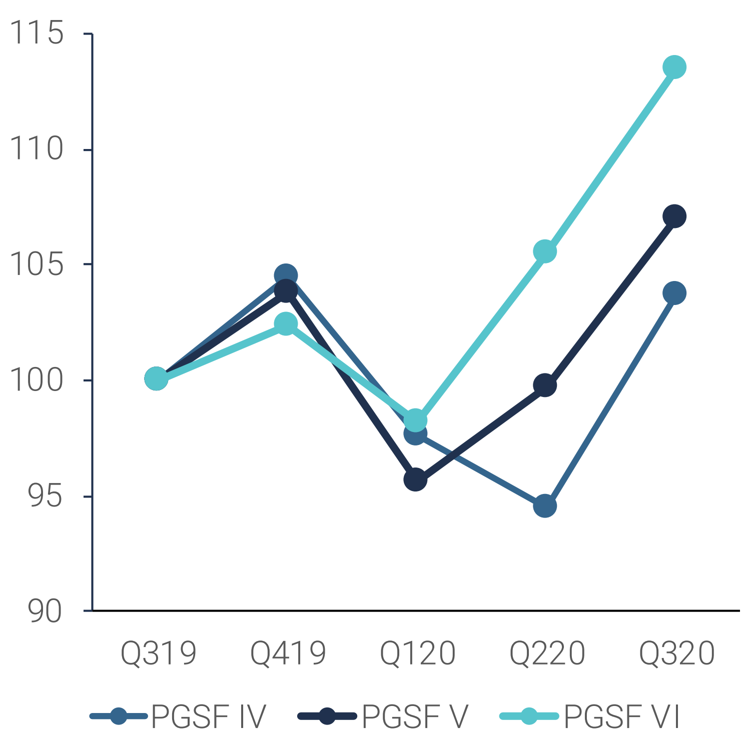
Program	Vintage	Commitments (USD m)	Committed to Investment (USD m)	Contributions since inception (USD m)	Distributions since inception (USD m)	NAV (USD m)	Net Multiple	Net IRR
PGSF IV L.P.	2010	15.0	16.1	10.0	13.4	2.3	1.58x	13.1%
PGSF V L.P.	2014	50.0	63.1	35.6	14.6	34.5	1.38x	12.1%
PGSF VI L.P.	2018	25.0	19.2	8.2	-	10.1	1.24x	66.4%
Total investments		90.0	98.4	53.7	28.0	47.0	1.40x	13.1%

Note: The figures in this table are subject to rounding. The above IRRs are derived by Pantheon from cash flows and calculated asset values and may not correspond to the returns published by the underlying funds. Interim IRRs may not be an accurate indication of the final performance of a fund, particularly during the early years of the fund's life. Past performance is not necessarily indicative of future results, future returns are not guaranteed and loss of principal may occur.

Pantheon secondaries performance update

Existing portfolios have shown resilience to Covid-19

Value progression of PGSF IV to VI[1]



Value drivers[2]

Sector Exposure

Largest exposures in defensive sectors, e.g. technology and healthcare

Lower Leverage[3]

Average debt levels in PGSF VI portfolio companies 4.6x – lower than buyout market averages

Valuation Discipline[4]

Average EV to EBITDA across PGSF VI portfolio 11.5x – compared to 14.9x for the S&P 500

Growth Potential[5]

~20% underwritten revenue growth at entry for top 20 companies in PGSF VI

Loss Ratio[8]

1.3% loss ratio for PGSF VI

Net Returns Q319-Q320

18.4%
Pantheon Global Secondaries VI[6]

8.7%
MSCI AC World[7]

+10.0%
Premium to public markets

[1] As of September 2020, the chart shows the quarterly value change of investments made by PGSF IV - VI on a time-weighted return basis. [2]Pantheon opinion. [3]Pitchbook data. Data range: 2018 to Q3 2020. All LBO and MM LBO entry multiples are reflective of average (median) entry multiples for all buyout transactions in North America & Europe. Pantheon internal data as of September 2020. [4]Pitchbook as of September 2020. Pantheon internal data as of September 2020.[5]PGSF VI underwritten revenue growth based on original general partner base case revenue projections at time of investment. Projected CAGR revenue growth at entry over three-year period, weighted by Q3 2020 NAV for the top 20 companies in PGSF VI, accounting for 54% of NAV as of Q3 2020. There is no guarantee that the underwritten revenue projections will be achieved [6]Net returns have been calculated on a 1-year horizon IRR basis. The horizon IRR is calculated using the aggregate NAV as a negative outflow at the start of the period, with any calls and distributions during the period and the aggregate residual NAV used as a positive inflow at the end of the period. [7]The horizon IRR for the MSCI All Country World Index is calculated using the Public Market Equivalent (PME) methodology, whereby the Pantheon cashflows are hypothetically invested in the index, assuming zero cost. The MSCI All Country Index assumes reinvestment of all dividends after tax. Past performance is not indicative of future results. Future performance is not guaranteed, and loss of principal may occur. [8] As of September 30, 2020.

PGSF VI key highlights[1]

Strategy description	Target concentrated positions in high quality and mature funds where Pantheon has an information and access advantage
Disciplined underwriting	Maintained pricing discipline and overweight to businesses and portfolios alongside core GPs
Strong deployment pacing in diversified portfolio	As of January 2021, PGSF VI is over 90% committed to investments[2,4]
Performance	Strong early performance, PGSF VI at a 1.3x net multiple and 27% net IRR as of September 2020[3]
PGSF VII	Based on deployment we will be pre-marketing in Q1 2021 with a first close scheduled for June 2021[4]

Past performance is not indicative of future results. Future performance is not guaranteed, and a loss of principal may occur.
[1] Pantheon opinion. [2] Total committed to investments includes closed deals and deals in legal closing for PGSF VI as of December 2020. Please refer to the slide titled '*PGSF VI Update: >90% deployed as of 'MM/YYYY'* towards the back of this presentation for a list of all investments in PGSF VI. [3] Net multiple/ net IRR measures presented for PGSF VI is net of Pantheon management fees and administrative costs and expenses of the fund. PGSF VI is permitted but is not obligated to undertake borrowing which may or may not include a credit facility. Any borrowing by PGSF VI would affect its performance results. [4] May be subject to change based on prevailing market conditions.

PGSF VI progress report

PGSF VI objectives		PGSF VI progress
Deployment	Deploy fund in 3 to 4 years	On pace to full deployment in ~3.5 years[1]
Concentration	Build a high conviction portfolio	80% of NAV in 20 funds[2] 80% of NAV in 74 companies[2]
GP Quality	Invest with GPs Pantheon knows well	~95% of exposure with GPs Pantheon invests / closely tracks[3]
Stage Bias	Overweight small/mid-buyout & growth	60% committed to small/mid-buyout & growth[2]
Embedded Value	Identify embedded value	12% NAV increase over the last 12 months[4]
Sourcing	Focus on less competitive opportunities	~65% of completed deals were proprietary or restricted processes[5]

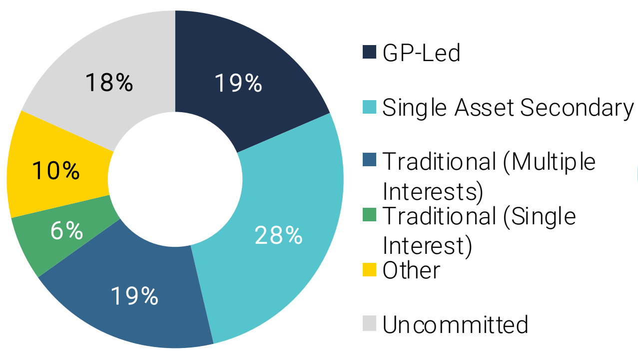
Pantheon opinion. Based on all PGSF VI deals closed as of September 2020.
[1] Full deployment may be subject to change based on prevailing market conditions. [2] As of September 2020. [3] As of September 2020, based off committed capital. [4] From period Q3 2019 to Q3 2020. [5] Based on count of deals. Restricted processes include deals that have been offered to a limited number of GPs. Past performance is not indicative of future results. Future performance is not guaranteed, and a loss of principal may occur.

PGSF VI: Portfolio Composition

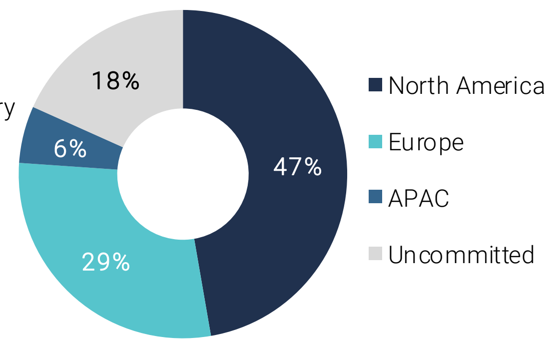
As of December 2020

Program Size[1]	Committed %[2]	# of Investments[2]	A & B Managers[3]	Effective discount[4]
$2.2bn	~95%	32	~95%	15.3%

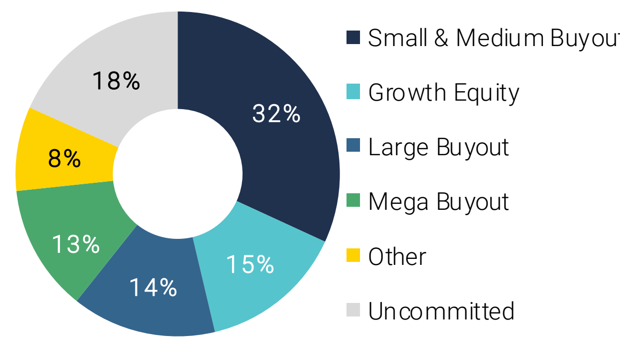
Deal Type Diversification[5]



Geographic Diversification[5]



Stage Diversification[5]



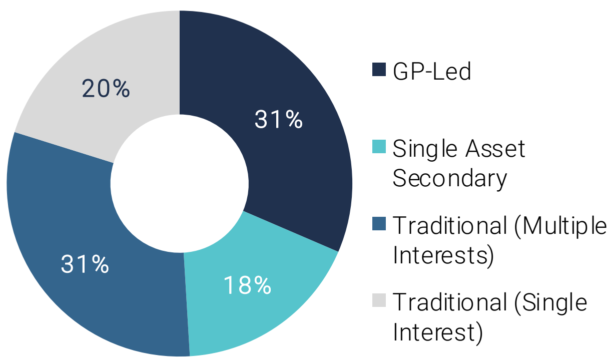
[1] Program size includes $1,334m into the fund and all secondary waterfall clients investing alongside PGSF VI accounting for $822m of the overall program size.[2] As of December 2020, includes deals closed and in legal closing, there is no guarantee that deals in legal closing will close. Representative of PGSF VI fund only. [3] Based on closed commitments as of September 2020. Pantheon Internal Rating: 'A' managers are those targeted for Pantheon's primary programs, which are chosen based on track record and a qualitative assessment of manager quality; 'B' managers are defined as: alternates to 'A' managers for Pantheon's primary programs, managers that Pantheon has previously invested in and/or alongside, or institutional quality managers that Pantheon has considered for a primary investment. There can be no guarantee that investments with identical or similar characteristics to those referenced here will be available for investment in PGSF VI. [4] As of September 2020. Includes 22 investments and is based on the first available capital accounts 3 months after closing including interim cash flows. This figure reflects the discount/(premium) to value at the time of deal closing. Please note this does not include co-investments and strategic primary investments. [5] Pie charts represent fund level exposures weighted by Total Commitments as of December 2020 including pending deals. Representative of Pantheon's ability to overcommit by 120%.

PGSF V: Portfolio Composition

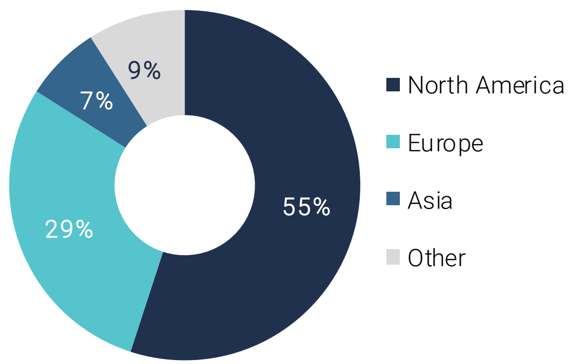
As of December 2020

Program Size	Committed %[1]	# of Investments[1]	A & B Managers[2]	Effective discount[3]
$2.1bn	126%	23	96%	11%

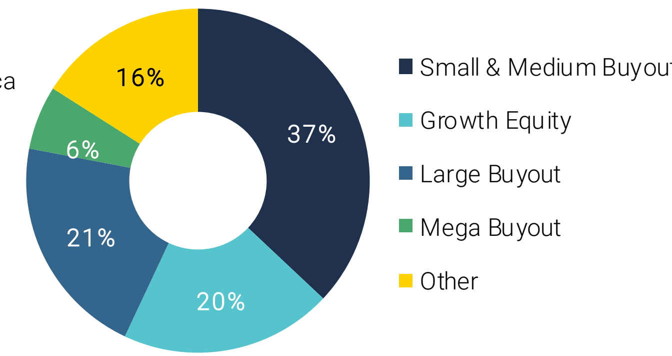
Deal Type Diversification[4]



Geographic Diversification[5]



Stage Diversification[5]



[1] Includes closed investments and investments in legal closing as of December 2020. Investment count excludes strategic primaries and co-investments. [2] Based on closed commitments as of September 2020. Pantheon Internal Rating: 'A' managers are those targeted for Pantheon's primary programs, which are chosen based on track record and a qualitative assessment of manager quality; 'B' managers are defined as: alternates to 'A' managers for Pantheon's primary programs, managers that Pantheon has previously invested in and/or alongside, or institutional quality managers that Pantheon has considered for a primary investment. There can be no guarantee that investments with identical or similar characteristics to those referenced here will be available for investment in PGSF VI. [3] As of September 2020. Based on the first available capital accounts 3 months after closing including interim cash flows. This figure reflects the discount/(premium) to value at the time of deal closing. Please note this does not include co-investments and strategic primary investments. A list of all investments is available upon request. [4] Based off capital commitments, excludes primaries and co-investments. [5] Based off capital commitments as of December 2020. Please refer to the slide titled '*Disclosure 1 – case studies*' towards the back of this presentation regarding deals completed by Pantheon. Past performance is not indicative of future results. Future performance is not guaranteed, and a loss of principal may occur.

PGSF IV: Portfolio Composition

As of December 2020

Program Size
$2.2bn

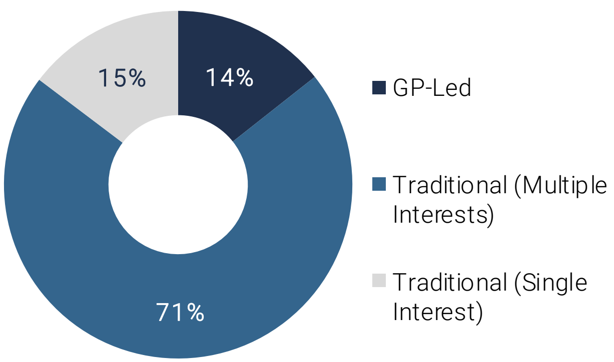
Committed %[1]
108%

# of Investments[1]
43

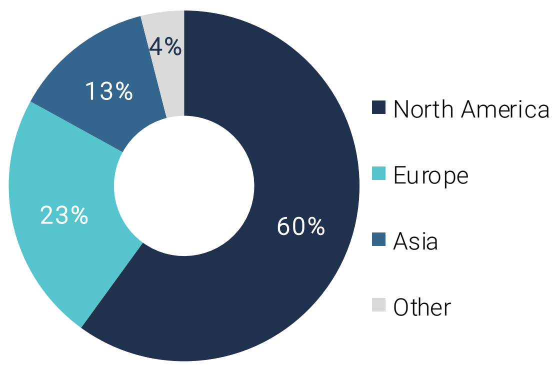
A & B Managers[2]
91%

Effective discount[3]
19%

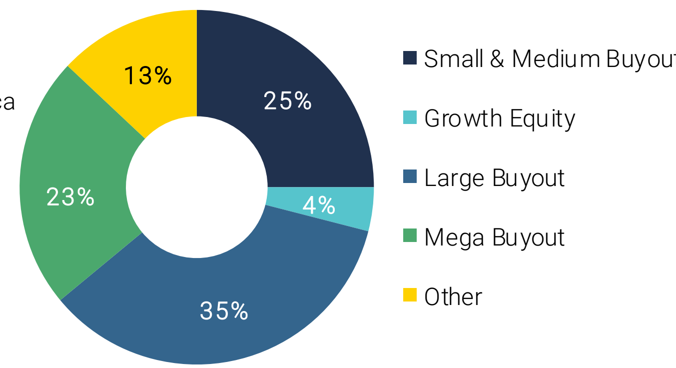
Deal Type Diversification[4]



Geographic Diversification[5]



Stage Diversification[5]



[1] Includes closed investments and investments in legal closing as of December 2020. Investment count excludes strategic primaries and co-investments. [2] Based on closed commitments as of September 2020. Pantheon Internal Rating: 'A' managers are those targeted for Pantheon's primary programs, which are chosen based on track record and a qualitative assessment of manager quality; 'B' managers are defined as: alternates to 'A' managers for Pantheon's primary programs, managers that Pantheon has previously invested in and/or alongside, or institutional quality managers that Pantheon has considered for a primary investment. There can be no guarantee that investments with identical or similar characteristics to those referenced here will be available for investment in PGSF VI. [3] As of September 2020. Based on the first available capital accounts 3 months after closing including interim cash flows. This figure reflects the discount/(premium) to value at the time of deal closing. Please note this does not include co-investments and strategic primary investments. A list of all investments is available upon request. [4] Based off capital commitments, excludes primaries and co-investments. [5] Based off capital commitments as of December 2020. Please refer to the slide titled '*Disclosure 1 – case studies*' towards the back of this presentation regarding deals completed by Pantheon. Past performance is not indicative of future results. Future performance is not guaranteed, and a loss of principal may occur.

Appendices

Appendix I: Secondary market update

Private equity secondaries
A market continuing to evolve

Market share by transaction type ($bn)[1]

GP-led secondaries market continues to broaden and evolve[2]

Deal Attributes

Opportunistic direct deals (pre-2009)
- Bank spinouts
- Hedge fund liquidations
- Corporate venture spinouts

Market formation (2010-2013)
- Solutions typically involved solving a "franchise issue"

Market establishment (2014)
- GPs began proactively accessing the secondary market to create liquidity options for LPs

Market expansion (2015-2018)
- Wider deal spectrum:
  - Tender offers
  - GP recaps
  - Preferred equity
- Deal size and complexity grew - and GP quality continued to improve

Market Evolution (2018+)
- Surge in single company secondaries as GPs aim to solve for the liquidity horizon mis-match with continuation vehicles, which facilitate longer hold periods

[1] Source: Greenhill Cogent – Secondary Market Trends and Outlook, Jan 2021. There is no guarantee these trends will continue. [2] Pantheon opinion.

Covid-19 impact

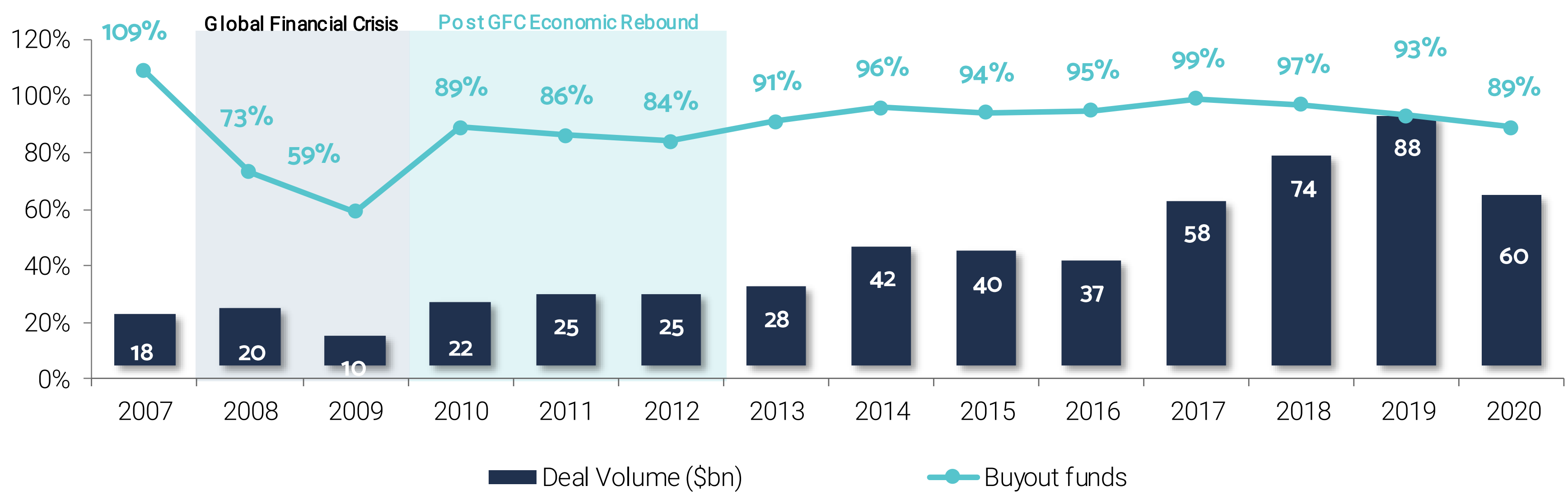
Transitional period in H1 2020, marked by lower volumes and pricing…

1 Slowdown of traditional LP transactions

2 Slower distributions to LPs

3 Widening of the bid/ask spread

Secondary Market Volumes & Pricing ($bn, 2007 – 2020)[1]



[1] Source: Greenhill, Lazard data. In the last economic downturn, secondary market discounts for buyout interests became more attractive and increased to 27% and 41% in a lower valuation environment in 2008 and 2009, respectively. Discounts remained between c.10-15% for the subsequent three years. Past performance is not indicative of future results. Future performance is not guaranteed, and a loss of principal may occur.

Covid-19 impact

…but there has since been a meaningful uptick in activity

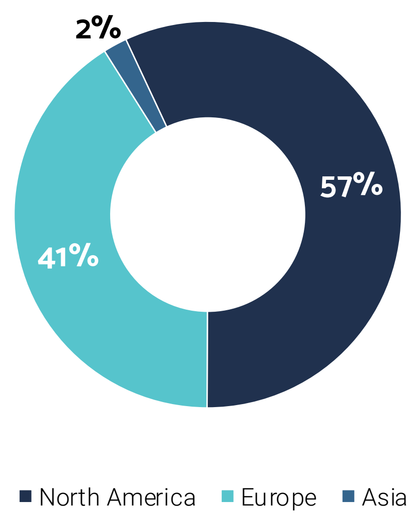
Current GP-led deal flow[3] is strongest we have ever seen (July-December 2020)

83 Transactions worth $41.9 bn[1]

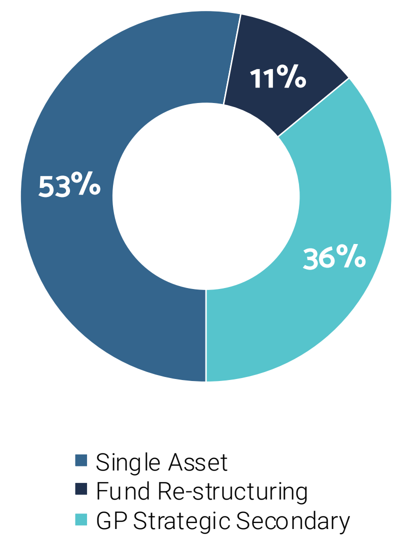
$22bn

Across 40 single-asset secondaries

By Geography[2]



By Type of GP-led Deal[3]

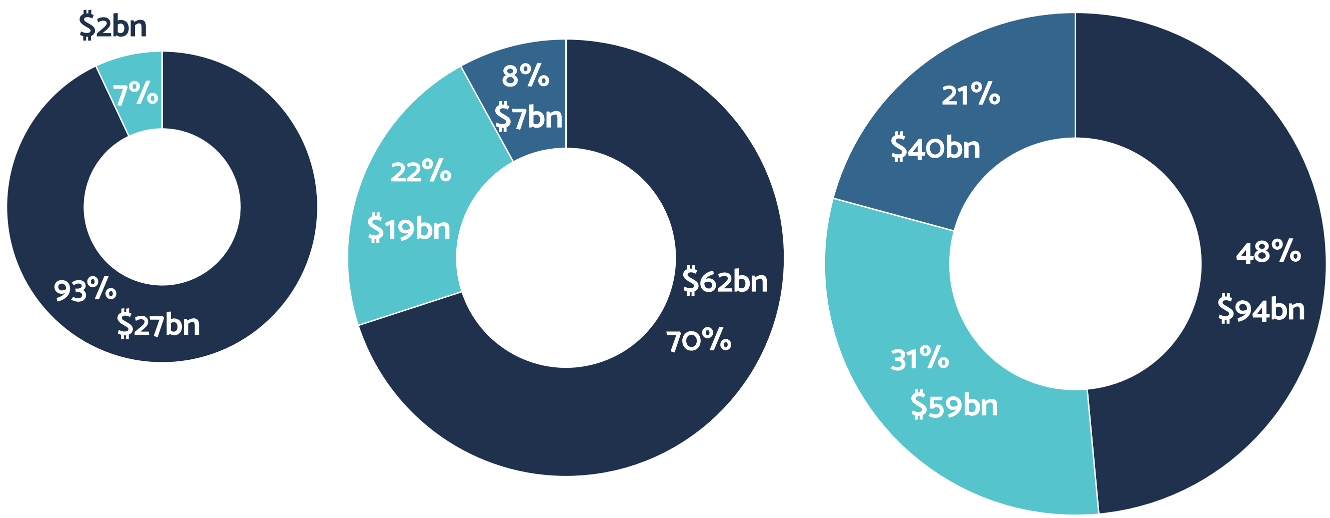


[1] Includes deals sourced over from June 30, 2020 until December 16, 2020. [2] Geography is defined by the location of the Pantheon office where the deal was sourced. Percentages are by value. [3] The Complex Secondaries category includes the following deal types: Single Asset Secondary, Fund Restructurings, GP Strategic Secondary, Hybrid Secondary, Direct Assets, Secondary MBI and Secondary MBO. Percentages are by value.

GP-led deal segment is driving growth

Rapid growth of single-company transactions expected

2013	2019	Market Potential (~3 years)



54%
Historical CAGR in overall GP-led market from 2013 to 2019

~80%
CAGR for single-asset deals anticipated over the next 3 years

~45%
CAGR for other GP-led deals anticipated over the next 3 years

Market share

- LP deals
- Other GP-led deals
- Single-asset deals

Pantheon opinion. Source: Greenhill Global Secondary Market Trends & Outlook, January 2020. Campbell Lutyens 2020 Secondary Market Overview, March 2020. Preqin fundraising data as of July 2020. There is no guarantee these expectations will be realized.

Appendix II: Track record

Track record and disclosures since inception

As of September 30, 2020

	PGSF 88-99[1,2]	PGSF I	PGSF II	PGSF III	PGSF IV	PGSF V	PGSF VI
Vintage	1988-1999	2000	2004	2006	2010	2014	2018
Size (US$ m)[3]	320	418	909	2,020	2,157	2,111	1,334
Committed (US$ m)[3]	320	409	874	1,962	2,321	2,664	1,022
Drawn down (% of committed)[3]	100%	99%	97%	98%	93%	89%	78%
Returned (% of drawn capital)[3]	189%	182%	138%	122%	139%	61%	5%
Gross multiple[4]	1.89x	1.82x	1.38x	1.25x	1.54x	1.35x	1.23x
Net multiple[5]	1.71x	1.68x	1.23x	1.12x	1.58x	1.38x	1.25x
Net Cash on Cash multiple[6]	2.12x	1.86x	1.35x	1.15x	1.80x	1.55x	1.38x
Net multiple of Capital at Risk[7]	7.99x	2.46x	2.35x	1.46x	2.23x	2.05x	1.92x
Gross IRR[4]	24.0%	18.9%	9.8%	4.4%	14.4%	13.0%	20.8%
Net IRR[5]	20.5%	15.1%	5.7%	2.0%	13.1%	12.1%	27.7%

[1] PGSF 88–99. Prior to 2000, Pantheon made secondary investments via discretionary separately-managed accounts, regional primary funds, and other Pantheon vehicles rather than via dedicated secondary investment funds. For periods prior to 2000, Pantheon has created model portfolios, each representing a three-year time period to replicate the commitment period of a Pantheon secondaries fund, and comprising the secondary investments made by Pantheon on behalf of its discretionary investment management clients, regional primary funds and other Pantheon vehicles during such period, measured by date of purchase, excluding single fund secondaries. As a result, PGSF 88–99 is a composite that represents the combined hypothetical performance of these nominal three year funds for investments made by discretionary separately-managed accounts, regional primary funds, and other Pantheon vehicles during the years 1988–1999, as well as pre-PGSF I deals which took place in 2000. The three year model portfolios provided representing the pre-2000 performance of investments made by Pantheon, as well as the PGSF 88-99 composite, have certain limitations. These models and the PGSF 88-99 composite are hypothetical, do not represent the actual investments made by an actual fund or separately-managed account, and consequently may not reflect material economic and market factors, such as liquidity constraints or investment restrictions, that may have had an impact on Pantheon's actual decision-making. These model portfolios and the PGSF 88-99 composite shown are for illustrative purposes only, and are intended to provide an illustration of Pantheon's investment performance for the period pre-dating 2000. It does not purport to show the investment holdings or performance of an actual account. The figures presented for PGSF 88-99 above further do not represent the actual historical results achieved by any client or investor. The exposures for each of the model portfolios and for the PGSF 88-99 composite shown will differ from the exposures for an actual Pantheon discretionary separately-managed account or investment fund, given specific client guidelines, objectives, or restrictions. [2] As the fee structures varied among clients during these periods, net IRR and net multiple is calculated by applying a model fee structure that is intended to reflect the fee structure applicable to PGSF VI, which is detailed in Section IX, "Key Terms". PGSF 88–99 results are illustrative and do not represent actual historical results achieved by any client. Pro-forma net performance has been calculated without taking into account fund organizational and administrative expenses. Please note that an investor's net return may differ significantly due to differences in fees, the timing of investments, and the application of fund-level organizational and administrative expenses. [3] Reflects capital invested, drawn or returned by underlying portfolio funds. With respect to PGSF 88-99, which is a composite of model portfolios representing the different investments made by discretionary separately-managed accounts prior to 2000 and not an actual fund, "size" and "committed" represent the amount of capital invested by Pantheon on behalf of its separately-managed account clients to underlying portfolio funds. [4] Gross Multiple and Gross IRR. The calculation of gross cumulative IRR and multiple is based upon the performance of each PGSF fund's (or for PGSF 88-99, composite's) investments and does not take into account the effect of Pantheon fees and other organizational and operational expenses, which will reduce returns. The gross IRR and multiple figures reflect the deduction of fees and expenses of the underlying portfolio funds. [5] Net multiple/ net IRR measures presented for each of the funds (other than PGSF 88–99) are net of Pantheon management fees and administrative costs and expenses of the fund. The pro forma results of PGSF 88–99 do not fully account for administration costs or any expenses of the fund, as discussed above. Each of PGSF IV and PGSF V has a credit facility in place pursuant to which amounts may be outstanding from time to time. Each credit facility is secured on the undrawn commitments of investors in the relevant fund. The timing of the re-payment of each loan and the manner in which the loan is re-paid (i.e. by calling capital from investors in the relevant fund or by applying proceeds received from portfolio investments of the relevant fund) may affect the performance of the relevant fund. It is presently expected that some or all of the relevant facility will be repaid by applying proceeds from distributions in lieu of calling capital from investors. PGSF VI is permitted but is not obligated to undertake borrowing which may or may not include a credit facility. Any borrowing by PGSF VI would affect its performance results. **Please note PGSF VI employs a credit facility, which is generally used to bridge capital calls from limited partners and/or to pay for a portion of an investment. This causes the resulting Net IRR and multiples to appear higher than the Gross IRR, on an interim basis, particularly in the early life cycle of the fund. The Net IRR will lessen as investors capital is drawn down to repay the credit facility.**
[6] Cash-on-cash multiple reflects the net cash amounts which actually occur between Pantheon and our investors. For instance, when a call and distribution take place on the same day, only the net amount is included in the calculation (as a call if the net amount is a negative number, or as a distribution if the net amount is a positive number). Investment level cash flows are netted on a monthly basis to generate the actual cash flow profile that an investor would experience. [7] Multiple of net capital at risk is calculated as (NAV + distributions) / maximum drawdown, where maximum drawdown is the point at which the cumulative cash flow amount drawn reaches its most negative position. Past performance is not indicative of future results. Future performance is not guaranteed and a loss of principal may occur.

Disclosure 1 – case studies

These case studies are examples of specific private transactions made by Pantheon funds / clients and are designed to assist prospective investors / clients to understand Pantheon's investment management style / strategy. It should NOT be regarded as a recommendation. Pantheon makes no representation or forecast about the performance, profitability or success of such transaction. Information concerning the performance of portfolio investments is available upon request, subject to confidentiality requirements. You should not assume that future recommendations will be profitable or will equal the performance of past recommendations. The statements above reflect the views and opinions of Pantheon as of the date of the investment analysis.

Please also note that all performance numbers quoted in these case studies are net of underlying fund fees, carry and expenses and gross of Pantheon fund fees, carry and expenses. Pantheon does not calculate performance net of Pantheon fund fees, carry and expenses at the underlying fund investment level. Past performance is not indicative of future results. Future performance is not guaranteed, and a loss of principal may occur.

A list of all investments is available upon request.

Disclosure 2 – case studies

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A list of all investments is available upon request.

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- An investment in a fund investing in alternative investments involves a high degree of risk. Such investments are speculative, subject to high return volatility and will be illiquid on a long-term basis. Investors may lose their entire investment.
- Managers of funds investing in alternative assets typically take several years to invest a fund's capital. Investors will not realize the full potential benefits of the investment in the near term, and there will likely be little, or no near-term cash flow distributed by the fund during the commitment period. Interests may not be transferred, assigned or otherwise disposed of without the prior written consent of the manager or general partner.
  - Funds investing in alternative assets are subject to significant fees and expenses, typically, management fees and a 20% carried interest in the net profits generated by the fund and paid to the general partner, manager or an affiliate thereof. Investments in such funds are affected by complex tax considerations.

Important Disclosure

- Funds investing in alternative assets may make a limited number of investments. These investments involve a high degree of risk. In addition, funds may make minority investments where the fund may not be able to protect its investment or control or influence effectively the business or affairs of the underlying investment. The performance of a fund may be substantially adversely affected by a single investment. Private fund investments are less transparent than public investments and private fund investors are afforded fewer regulatory protections than investors in registered funds or registered public securities.
- Investors in funds investing in alternative assets are typically subject to periodic capital calls. Failure to make required capital contributions when due will cause severe consequences to the investor, including possible forfeiture of all investments in the fund made to date. A material number of investors failing to meet capital calls could also result in the fund failing to meet a capital call applicable to participating in an investment. Such a default by the fund could lead to the permanent loss of all or some of the applicable fund's investment, which would have a material adverse effect on the investment returns for non-defaulting investors participating in such investment.
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Description of commonly used indices

This list may not represent all indices used in this material.

MSCI World Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed markets. The MSCI World Index consists of the following 23 developed market country indexes: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom, and the United States.

S&P 500 Index is a widely recognized gauge of the U.S. equities market. This index is an unmanaged capitalization-weighted index consisting of 500 of the largest capitalization U.S. common stocks. The returns of the S&P 500 include the reinvestment of dividends.

MSCI Europe Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of the developed markets in Europe. The MSCI Europe Index consists of the following 15 developed market country indexes: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

MSCI AC Asia Pacific Index captures large and mid-cap representation across 5 Developed Markets countries and 9 Emerging Markets countries in the Asia Pacific region. With 1,559 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country. Developed Markets countries in the index include Australia, Hong Kong, Japan, New Zealand, and Singapore. Emerging Markets countries include: China, India, Indonesia, Korea, Malaysia, Pakistan, the Philippines, Taiwan, and Thailand.

MSCI Emerging Markets Index is a free float-adjusted market capitalization index that is designed to measure equity market performance of emerging markets. The MSCI Emerging Markets Index consists of the following 27 emerging market country indexes: Argentina, Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Kuwait, Malaysia, Mexico, Pakistan, Peru, Philippines, Poland, Qatar, Russia, Saudi Arabia, South Africa, Taiwan, Thailand, Turkey and United Arab Emirates.

Important Disclosure

FTSE Europe Index is one of a range of indices designed to help investors benchmark their European investments. The index comprises Large and Mid-cap stocks providing coverage of the Developed markets in Europe. The index is derived from the FTSE Global Equity Index Series (GEIS), which covers 98% of the world's investable market capitalization.

MSCI USA Index is designed to measure the performance of the large and mid-cap segments of the US market. With 621 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in the US.

FTSE Asia-Pacific Index is part of a range of indices designed to help Asia Pacific investors to benchmark their investments. The index comprises Large (40%) and Mid (60%) Cap stocks providing coverage of 14 markets. The index is derived from the FTSE Global Equity Index Series (GEIS), which covers 98% of the world's investable market capitalization.

FTSE All World Index is a market-capitalization weighted index representing the performance of the large and mid-cap stocks from the FTSE Global Equity Index Series and covers 90-95% of the investable market capitalization. The index covers Developed and Emerging markets and is suitable as the basis for investment products, such as funds, derivatives, and exchange-traded funds.

The Thomson One Global All Private Equity Index is based on data compiled from 5,281 global private equity funds (buyout, growth equity, private equity energy, subordinated capital funds and venture capital), including fully liquidated partnerships, formed between 1988 and 2019. The Thomson One Global All Private Equity Index has limitations (some of which are typical to other widely used indices) and cannot be used to predict performance of the Fund. These limitations include survivorship bias (the returns of the index may not be representative of all private equity funds in the universe because of the tendency of lower performing funds to leave the index); heterogeneity (not all private equity are alike or comparable to one another, and the index may not accurately reflect the performance of a described style); and limited data (many funds do not report to indices, and the index may omit funds, the inclusion of which might significantly affect the performance shown).

Preqin's database provides information on 7,468 active Private Equity funds from 2,030 different GPs with over $7.75tn combined fund size.

Thomson One (Infrastructure) is comprised of data extracted in fund currency from Private Equity and Venture Capital index based on funds classified as Infrastructure by Cambridge Associates. Cambridge Associates defines Infrastructure as funds that primarily invest in companies and assets that provide an essential service that contributes to the economic or social productivity of an organization, community, or society at large, with real assets in the water, transportation, energy, communication, or social sector. Investments must also have one or more of the following structural features: a monopolistic or oligopolistic market position with high barriers to entry; a low elasticity of demand due to their essential functions; stable, predictable, and long-term revenue contracts; or inflation protection through inflation adjustment mechanisms in underlying contracts. These indexes have limitations (some of which are typical to other widely used indices) and cannot be used to predict performance of the fund. These limitations include survivorship bias (the returns of the index may not be representative of all private equity funds in the universe because of the tendency of lower performing funds to leave the index); heterogeneity (not all private equity are alike or comparable to one another, and the index may not accurately reflect the performance of a described style); and limited data (many funds do not report to indices, and the index may omit funds, the inclusion of which might significantly affect the performance shown).

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PVL 13892

VCERA
VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

March 29, 2021

Board of Retirement
Ventura County Employees' Retirement Association
1190 South Victoria Avenue, Suite 200
Ventura, CA 93003

SUBJECT: $30 MILLION INVESTMENT IN CARVAL INVESTORS CREDIT VALUE FUND V

Dear Board Members:

NEPC and I jointly recommend a $30 million investment in the Carval Investors Credit Value Fund V (CarVal V).

Background

The Board's adopted asset allocation of June 2020 increased the target allocation to private credit from 3% to 5% for a globally diversified private credit program over three years. At the May Board meeting, the Board approved a Private Debt Pacing Plan that called for an additional $100 million to be committed to Private Debt strategies in both 2020 and in 2021. By the end of 2020 the Board had approved staff and consultant recommendations enabling VCERA to successfully complete its 2020 Private Debt Pacing Plan objective.

Carval Investors Credit Value Fund V

In 2017 the Board committed $30 million to CarVal IV. CarVal Fund V would represent VCERA's investment in the follow-on fund. As described in greater detail in the attached NEPC investment report, CarVal V targeted $2.5 billion ($3.75 billion hard cap) in total commitments for the Fund. To date, CarVal has approximately $3.4 billion in commitments with investor demand likely exceeding the fund's hard cap prior to the final close. CarVal V is targeting a 1.7x-2.0x net equity multiple on invested capital (TVPI), and a net 15%-20% net internal rate of return (IRR). As permitted in its predecessor fund, CarVal V may employ leverage of up to 100% of net asset value of the fund through the investment period.

CarVal V is targeting investments in market dislocations and credit-intensive assets, specifically in loan portfolios, corporate securities, structured credit, hard assets, and special opportunities.

From an additional investment performance perspective, CarVal's closed funds have been ranked first or second quartile in **Prequin's** universe, calculated by equally weighting rankings of the net IRR and the net TVPI multiple of each constituent fund to determine the overall rank. For a preliminary view of Fund V with approximately 15% of the fund invested, investments to-date are showing a 25% gross IRR and 1.05x TVPI multiple.

Carval V has a closed-end structure with an initial six-year fund life from the date of the final close, subject to two one-year extensions. The Fund has a three-year investment period from the date of the final close.

The fund is targeting private credit exposures that are globally diversified, which will further diversify VCERA's private credit portfolio.

Terms include stated management fees of 1.5% on *invested* capital, 20% carried interest with an 8% preferred return to the limited partners, a standard European waterfall, subject to a 20% holdback.

CarVal Investors Credit Value Fund V has been rated "1" by NEPC.

THEREFORE, IT IS RECOMMENDED THAT THE BOARD:

1. **Approve an allocation of $30 million to the CarVal Investors Credit Value Fund V, and direct staff and counsel to negotiate the necessary legal documents; and,**

2. **Authorize the Board Chair or the Retirement Administrator, or if both unavailable, the Chief Investment Officer to approve and execute the required documentation.**

Respectfully submitted,

Daniel P. Gallagher

Dan Gallagher
Chief Investment Officer

NEPC Private Markets Investment Due Diligence Report

CarVal Investors

CVI Credit Value Fund V

Rated by NEPC's Alternative Asset Committee: March 30, 2020
Updated March 2021

Product Rating: 1

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CVI Credit Value Fund V

Distressed Debt & Opportunistic Credit

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Executive Summary

CarVal Investors ("CarVal" or "the Firm") is raising CVI Credit Value Fund V (the "Fund" or "CVF V") to invest in market dislocations and credit-intensive assets, specifically in loan portfolios, corporate securities, structured credit, hard assets and special opportunities. The Fund will invest globally but will be primarily focused on North America and Europe. CVF V is targeting $2.5 billion in commitments with a hard cap of $3.75 billion. The Fund is expected to make 80-120 investments during the investment period and is targeting a net internal rate of return ("IRR") of 13%-17% and a 1.5x-1.7x net multiple on invested capital.

CarVal was founded by Cargill in 1987 as an arm of Cargill's proprietary financial trading operation. CarVal became an independent, wholly-owned subsidiary of Cargill in 2006, and the Firm became fully independent in 2019 following a management buyout of Cargill's stake. Today, CarVal has approximately $10 billion in assets under management and invests on behalf of over 300 institutional investors. CarVal employs approximately 165 people worldwide, including 70 investment professionals and over 90 professionals dedicated to legal, tax, operational, accounting and administrative functions. The senior investment professionals average over 12 years of service with CarVal and its predecessor and 25 years in the industry.

Positives:

- **Organization** – CarVal's large investment team, of 70 professionals, has a global footprint with offices across Europe, North America and Asia. The investment team is broken into several sub-groups that work synergistically to thoroughly cover the different segments of the global credit and hard assets landscape. Additionally, the investment team is supported by a large staff of over 90 middle and back office professionals co-located with investment professionals across the various CarVal offices. In total, the Firm manages ~$10 billion in assets in closed-ended funds, evergreen funds, and separate accounts.

- **Flexible Mandate –** The Fund's flexible and opportunistic strategy allows for investment in an assortment of securities, assets, and situations; the result of which allows CarVal to remain an active investor in a variety of transactions irrespective of market conditions. Additionally, CarVal's ability to invest globally allows the Fund to focus its efforts on the most attractive geographies at any given point in time.

- **Track Record** – The Firm's prior funds rank above median in terms of TVPI and DPI, with half ranking in the first quartile, relative to vintage year peers in the CA Global Distressed benchmark. Additionally, two of the Firm's prior funds have generated a net TVPI greater than 2.0x.

- **Favorable Market Environment –** The COVID-19 pandemic continues to impact numerous industries and will have lasting impacts. On the surface, markets currently look benign, but many opportunities remain, and additional ones are expected to play out during the investment period of the Fund.

- **Favorable Management Fee Structure –** The standard Fund fee structure calls for an annual management fee of 1.5% on called capital. However, should NEPC's clients' aggregate commitments meet or exceed negotiated thresholds, a management fee discount will be given to NEPC clients.

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Negatives:

- **Recent Fund IRR's –** CarVal's three most recent funds (CVF II-IV) are currently generating single digit net IRR's which are underwhelming on an absolute basis, but also rank in the second or third quartile of the CA Global Distressed benchmark. However, the current opportunity set is more robust than those during the investment periods of CVF II-IV, which should serve as a tailwind in CarVal's efforts to achieve double digit net IRRs and meet the return targets of CVF V.

- **Strategy AUM –** CVF V's target size and hard cap are reasonably sized on an absolute basis and relative to its predecessor fund, CVF IV, which closed on approximately $3 billion. However, CVF IV will continue to invest alongside CVF V until April 2022, and the Firm also manages separately managed accounts that will invest alongside CVF IV & V. If elements of distress and market volatility persist in the near term, and further into the investment period of the Fund, the Firm should be able to effectively invest these pools of capital simultaneously. In a more benign environment putting that amount of capital to work could prove difficult and may result in lower returns.

- **GP Commitment –** CarVal's commitment to CVF V is set at 1.5% of the target fund size. The typical GP commitment in this asset class is generally 2% of total commitments. However, CarVal had set a similar target commitment in CVF IV but ultimately committed 2%.

- **CVF V Carried Interest Rate –** CVF V's carried interest is set at 20% which is very common amongst funds with similar strategies; however, noting the fairly lackluster IRRs of recent funds, this rate/flat rate structure does not seem commensurate with performance.

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Fund Characteristics

Investment Vehicle	3 vehicles: a Delaware limited partnership, a Cayman Island exempted limited partnership and a Luxembourg SCSp
Investment Manager	CarVal Investors
Target Size/Max Size	$2.5 billion / $3.75 billion
Amount Raised	$3.4 billion
Minimum Investment	$10 million (less may be accepted at GP discretion)
Target Final Close Date	May 31, 2021
Investment Period	Three years from Fund's final closing date
Fund Term	Six years from the final closing date subject to two one-year extensions
Sponsor's Investment	1.5% of the target fund size
Assets Under Management	~$10 billion
Investment Focus	Liquidations, whole loan portfolios, leveraged credit, corporate restructurings, structured credit and hard assets
Geographic Focus	North America, Europe, and to a lesser extent Emerging Markets
Projected # of Investments	80-120
Deal Size	$20 million to $75 million
Target Fund Return	1.5-1.7x net multiple and 13-17% net IRR
Leverage	Maximum of 100% of NAV of the Fund during the investment period
Annual Management Fee	1.5% on called (invested) capital; NEPC clients will receive a fee discount that is variable based on the total aggregate amount of NEPC client commitments
Other Fees	See Fund documents
Organizational Costs	Up to $2.5 million
Carried Interest	20%
Preferred Return	8%
Distribution Waterfall	Each Partner's proportionate share of proceeds will be distributed as follows: (i) First, 100% to LPs until the cumulative distributions to LPs equal the sum of their prior contributions; (ii) Second, 100% to LPs until the cumulative distributions are sufficient to provide LPs with an 8% annualized effective internal rate of return on their contributions; (iii) Third, 100% to the GP until the GP has received, 20% of the net cumulative prior distributions and prior contributions; and (iv) Thereafter, 80% to the LPs and 20% to the GP, subject to a 20% holdback
ERISA Fiduciary	N/A
Fund Auditor	KPMG
Fund Legal Counsel	Schulte, Roth & Zabel
Placement Agents	N/A
Website	www.carvalinvestors.com

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Firm Description

Firm Overview

CarVal was founded by Cargill Inc. ("Cargill") in 1987 as an arm of Cargill's proprietary financial trading operation. As a value investor, CarVal grew rapidly in the wake of the United States' financial crisis of the early 1990s. In the years that followed, CarVal expanded to Europe (1993) and Asia (1997).

CarVal became an independent, wholly owned subsidiary of Cargill in 2006, which enabled the Firm to expand more broadly as a fund manager while still benefiting from Cargill's expertise, governance and local presence as one of the world's largest operating companies.

In October 2019, Cargill sold its ownership interest in CarVal to CarVal's senior management team, making CarVal an employee-owned firm. Following the closing of this transaction, CarVal continues to manage all of the same funds and investment pools it managed while it was owned by Cargill.

CarVal has approximately $10 billion in assets under management and invests on behalf of approximately 300 institutional investors. CarVal invests globally with distinct teams covering North America, Europe and the Emerging Markets. It operates out of offices in Minneapolis, London, Luxembourg, New York and Singapore. CarVal employs approximately 165 people worldwide, including 70 investment professionals and over 90 professionals dedicated to legal, tax, operational, accounting and administrative functions. The senior investment professionals (managing principals, principals and managing directors) average 12 years of service with CarVal and its predecessor and 25 years in the industry.

Team Overview

The Firm's Executive Team is comprised of the three Managing Principals: Lucas Detor, James Ganley and Jody Gunderson (the "Senior Leadership Team"). The Senior Leadership Team averages 27 years of experience in the industry and is supported by 21 Principals and Managing Directors, who collectively lead the investment strategies and geographic locations for the Firm. In total, CarVal has approximately 165 employees which includes 70 investment professionals.

Recent Turnover/Key Departures

In the last five years the Firm has had the following turnover at the senior professional (managing principals, principals, and managing directors) level:

Name / Departure Date	Title*	Years with Firm	Reason for Departure	Employee at Firm who Filled Position
Tom Bauwens July 2020	Principal, European Corporate Securities	8	Personal matters	Absorbed by Corporate Securities team
Joseph Graf December 2019	Principal, Emerging Markets	14	Retirement	Absorbed by Emerging Markets team
Ben Ramli March 2019	Managing Director, Emerging Markets	20	To pursue other opportunities	Absorbed by Emerging Markets team
Andrea Zambelli June 2018	Managing Director, Corporate Securities	10	To pursue other opportunities	Absorbed by Corporate Securities team
Patrick Cooley March 2017	CFO	20	To pursue other opportunities	Chris Hedberg (existing employee)
John Brice June 2016	President and CIO	20	Terminated	CarVal Executive Team

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Peter Vorbrich May 2016	CFO	22	To pursue other opportunities	Patrick Cooley (existing employee)
David Chene May 2016	Managing Director, Corporate Securities	4	To pursue other opportunities	Jerry Keefe (existing employee)
Nicholas Weber April 2016	Managing Director, Corporate Securities	13	To pursue other opportunities	Gerardo Bernaldez (existing employee)

Given the size of the CarVal investment team, turnover is expected to occur.

Succession Planning

The Firm had a succession event in 2016, when John Brice was terminated by Cargill and replaced by James Ganley, Jody Gunderson and Lucas Detor. These three leaders are fairly young and have a good deal of runway in their professional careers. That said, the Firm also has a stable roster of senior professionals, who each lead or co-lead coverage of specific investment segments. Over time, it is expected that the most talented Principals will take on larger roles. In addition, CarVal will continue to hire top talent externally when it feels the need to fill roles.

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Fund Investment Strategy

Investment Strategy

The Fund's investment focus will be on identifying market dislocations and credit-intensive assets, specifically in loan portfolios, corporate securities, structured credit, hard assets and special opportunities.

The loan portfolios strategy centers on investments in portfolios of whole loans including consumer receivables, residential mortgages, small business loans, and other consumer, commercial and industrial obligations. This strategy also includes investments in performing residential solar loan portfolios, where the underlying borrowers are homeowners with a strong credit history and the loans are secured by the homeowner's renewable energy assets. The strategy may also include investments in commercial real estate loan transactions, as well as real estate-related public debt and equity securities. In executing this strategy, CarVal partners with a network of servicing and collections specialists, seeking to pair each portfolio with the servicing partner that is best positioned to maximize collections given the type and location of the obligations. CarVal pursues loan portfolio opportunities globally and expects to find deals for the Fund in jurisdictions including the U.S., U.K., Italy, the Netherlands, Greece, Spain and perhaps Emerging Markets such as China, where CarVal has historical expertise. The average deal size in loan portfolios varies by transaction. Equity investments may be as small as $20 million or as large as $500 million. Diversification is inherent in these portfolios, as each transaction may be comprised of hundreds to thousands of individual borrowers. In the case of loan portfolios, CarVal generally receives its principal back within 18 months of investment.

The corporate securities strategy centers on investments in obligations of leveraged and/or financially stressed and distressed corporations. These investments typically extend to mispriced or undervalued bonds, bank debt, credit default swaps and equities, but may also extend to other similar investment types or assets. Investments in this strategy will also include opportunistically investing in high yield loans or debtor-in-possession financings to obligors, including, but not limited to, those who need cash quickly, are asset rich and liquidity poor, or are in bankruptcy. This strategy may also include performing debt secured by assets in or related to clean or renewable energy or providing energy usage efficiencies. Further, CarVal is an issuer of CLOs and will purchase secondary CLO equity opportunistically.

The structured credit strategy centers on investments in asset-backed securities including residential and commercial mortgage-backed securities, collateralized loan obligations and other asset-backed securities. CarVal believes its capabilities and experience in whole loans, leveraged loans and commercial real estate provide a competitive advantage in investing in RMBS, CMBS, and CLO securities. Multiple CarVal teams routinely collaborate to evaluate investment opportunities in different structured credit securities where cross-asset class expertise may provide a competitive advantage. As well, CarVal is an active issuer of asset-backed securities across a number of its different strategies including re-performing residential mortgages, aviation assets, residential solar loans and commercial real estate loans.

Within hard assets these investments have historically included investments in aviation assets, vessel assets, and oil and gas related assets. The strategy may also include performing solar power assets (commercial and industrial solar and storage) that are small in size and held by a fragmented group of developers and investors with long-term contractual cash flows. Specific to the investments in aviation assets, CarVal will partner with platform company, Aergo Capital, for sourcing, due-diligence and technical assistance and leasing expertise. Aergo is owned by the funds, not the General Partner.

Special opportunities center on identifying undervalued situations across a broad range of asset categories, industries and markets that utilize CarVal's core competencies, skills and methods to identify and make investments in non-traditional asset categories. Recently this has included investments in some renewable energy sub-strategies in North America where rapid growth, together with a fragmented financing market, has created a compelling opportunity.

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Target Return

The Fund is targeting a net multiple of 1.5-1.7x and a net IRR of 13-17%.

Target Fund Size

CVF V is seeking to raise $2.5 billion, with a hard cap of $3.75 billion. The Fund's initial hard cap was set at $3.5 billion but was increased to $3.75 billion in late 2020.

Target Geographic Focus

The Fund will primarily invest in North America, Europe, and to a lesser extent Emerging Markets.

Target Deal Size

Based on a CVF V fund size of $2.5 billion the Firm would expect the following average transaction sizes per strategy:

- Corporate Securities: $25 million
- Loan Portfolios: $75 million
- Structured Credit: $25 million
- Hard Assets: $20 million

Those amounts are averages and the typical ranges can be quite wide especially in loan portfolios. The average deal size in loan portfolios varies by transaction; equity investments may be as small as $20 million or as large as $500 million. That said, diversification is inherent in these portfolios, as each transaction may be comprised of hundreds to thousands of individual borrowers.

Use of Leverage

CarVal will utilize a subscription line to manage the frequency of capital calls. Additionally, the Firm may employ leverage at the Fund level. The Fund's terms allow for leverage of up to 100% of the NAV of the Fund, during its investment period. However, the Firm expects that Fund leverage would not exceed 10% of NAV. Additionally, leverage may be employed at the deal level; the Firm expects that on average this leverage will be 25%-35% LTV.

Recycling of Capital

The Fund is expected to recycle all proceeds during the investment period. During the harvest period, the Fund will recycle cash to trade around current positions or positions previously held in the Fund in accordance with the terms of the LPA.

Manager's View of Current Market Conditions

CarVal views the current market as a uniquely challenging environment as COVID-19 has placed unprecedented strain on society and financial markets. Unprecedented monetary and fiscal stimulus are supporting financial assets but risk creating their own stress, and there is increasing tension between financial markets and the real economy in both the U.S. and Europe.

Within corporate securities the Firm believes that high yield, leveraged loans, financials and distressed are presenting very different opportunities in response to low rates, QE and a slowing real economy. Default rates are rising but lax covenants and low rates are delaying the inevitable while recovery rates for secured and unsecured debt are at record lows. Investing when recoveries are low requires patience and a high degree of selectivity. Value flowing to new money providers can be significant. CarVal expects to have fewer and larger positions than in previous cycles. As such, the Firm is selectively building positions where it can be influential and where entry prices appropriately reflect timing and recovery risk. Sectors of focus in this space include leisure and entertainment, energy, telecoms.

In terms of loan portfolios, the Firm has observed that the COVID-19 pandemic has already resulted in a build-up of bad loans. Current regulations (IFRS 9) requires early recognition of impairment and provisions against losses. Loans with credit impairment (IFRS 9 stage 2 loans) among Eurozone banks increased 58% in the first half of 2020, reaching €1.22 trillion, comparable to the post GFC peak.

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Despite government support programs, CarVal anticipates high levels of corporate and SME defaults, and that an abrupt spike in unemployment has the potential to impact residential markets when payment holidays end. The Firm believes that loan portfolio sales will come earlier in this cycle and with less competition. Banks are generally better capitalized than going into the GFC and have the infrastructure in place to execute loan portfolio sales. Concurrent hits to global GDP are likely to bring assets to market in a consistent window creating opportunities to source assets with limited competition. Reperforming and sub-performing (occasional payers) portfolios are particularly attractive. Stable cashflows and high payrate are attractive to investors but credit impairment leads to capital inefficiency on bank balance sheets. Additionally, capital vacuums present new lending opportunities.

In the hard assets space, the Firm sees a variety of opportunities in aviation. The immense decrease in demand for global air travel has resulted in drops in the value of both new and older aircraft. The COVID-19 pandemic is having a deeper and more prolonged impact on the aviation sector than many expected, which is creating attractive opportunities for investors like CarVal that have a long-term view. Additionally, the space is presenting opportunities in the form of bankruptcies and liquidations.

Within structured credit the Firm currently sees opportunities in aircraft ABS, U.S. and European CMBS, as well as U.S. reperforming mortgage loan securitizations.

Lastly, the Firm continues to look at a variety of investments in the renewable energy space like project finance bonds or loans secured by renewable assets, solar ABS, financing of energy efficiency improvements (including Commercial Property Assessed Clean Energy loans), C&I solar and storage, and residential solar loans.

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Expected Fund Investor Base

Historically, CarVal has received commitments from a large base of institutional and high net worth investors including public pensions, private pensions, the Cargill Corporation, insurance companies, family offices, fund of funds, endowments, foundations and the senior professionals at CarVal. CVF V is expected to have a LP composition similar to that of prior funds with the exception of Cargill, which will not be investing.

Current Fund Investments

As of January 31, 2021, CVF V had invested approximately $580 million across a variety of investments types including corporate securities (54%), structured credit (29%), loan portfolios (13%), and hard assets (4%).

Example of a Prior Investment

In early 2013 the value of the Royal Bank of Scotland's ("RBS" or the "Bank") hybrid securities dropped meaningfully due to a concern over the Bank's strategy following the departure of its CEO, the potential for the UK government to force a good/bad bank split, and regulatory concerns around the UK's Capital Requirements Directive IV implementation and its effect on capital securities.

CarVal invested approximately $136 million from CVF II into the hybrid securities of RBS at that time. The investment thesis was based on the fact that RBS had met Prudential Regulatory Authority capital and leverage targets and the Bank's earnings were recovering. Additionally, CarVal believed that the good bank/bad bank fears driving price movements were out of proportion due to the complexity, costs, and legal challenges that would result from the UK government pursing overly aggressive actions and a regulatory capital phase-out of older instruments, like the RBS hybrid securities.

On November 1, 2013 RBS and the UK Treasury created an internal bad bank with no adverse action to the Bank's creditors. In January 2014 RBS announced a tender offer for the hybrid securities, as these securities ceased to count as regulatory capital as expected. Ultimately, CarVal was able to fully realize its CVF II investment in RBS in August of 2017 which resulted in a 1.9x TVPI and IRR of 55.9%.

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Fund Investment Process

Deal Sourcing

CarVal relies on its asset class specialists source investments directly, with each team organizing the sourcing function as most appropriate for that specific strategy. Summaries of each sourcing approach are below.

Loan Portfolios – Investments are sourced through CarVal's local presence in markets around the world and the deep relationships CarVal has cultivated with global and local banks, local corporate executives, lending and bankruptcy officers, advisors, accountants and attorneys. CarVal believes that its network of servicing and collection specialists will also serve as valuable resources in identifying and assessing new investment opportunities. CarVal expects approximately 70% of deal flow to be generated from bank sellers via competitive and directly originated negotiated transactions and the remainder from other sources.

Corporate Securities – Investments are sourced through CarVal's extensive global network of contacts, including traders, corporate executives, attorneys, accountants and other distressed investors. CarVal expects 50% of deal flow to come from dealers, 25% from restructuring advisors and 25% from consultants and other professionals in CarVal's network.

Structured Credit – CarVal has been actively investing in securitized products for years and has established strong relationships across the dealer spectrum, from primary to regional dealers. CarVal actively participates in BWICs (Bids Wanted In Comp), as well as working on offerings from dealers. CarVal expects 80% of deal flow to come from primary brokers and the remainder from regional brokers.

Hard Assets – In the Firm's aviation business, CarVal works closely with its leasing partner, Aergo Capital, to source deals. CarVal carefully aggregates all deal flow and pricing data, which feeds back into its bidding process. The Firm actively seeks deal complexity in the form of deal size and structure and deploys a value chain focus. CarVal's sourcing efforts tend to be relationship-driven; it seeks deals that are narrowly distributed. This approach removes several fee levels, facilitates better quality and exchange of information and builds reliable counterparties.

Investment Process

At the core of CarVal's investment strategy is a rigorous investment selection and investment decision process which combines a top-down perspective and portfolio construction discipline with a bottom-up sourcing and fundamental analytical approach. Considerable emphasis is also placed on monitoring and reporting the performance of the ongoing investment portfolio.

Sourcing: As noted above, CarVal will generally source investments within the distressed strategy through its global network of contacts, including banks, brokers, traders, corporate executives, attorneys, accountants, other distressed investors and both its proprietary and third-party servicing partners.

Due Diligence: After utilizing its "top-down" research for investment screening, CarVal will engage in an extensive due diligence process, including a thorough analysis of the potential investment and an evaluation of the risk/return profile for each potential investment. The CarVal team reviews each potential transaction, employing a proprietary, time-tested and detailed investment process which includes industry and market analysis, comparable company/transaction analysis, site visit and management discussions, fundamental financial analysis (financial statements, capital structure, cash flow, ratios and scenario modeling) and complete regulatory, legal and business practice review. CarVal's information sources may include publicly available information, access to management (when available), industry contacts and company references. A combination of financial and operational due diligence is performed prior to any investment in the Fund.

Portfolio Construction: CarVal will not be dependent on any one particular asset class or geography, enabling capital to move to the perceived best opportunities. The senior investment team will utilize

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its global perspective, along with proprietary performance information generated by CarVal's existing investment portfolios, to assess absolute and relative returns and risks. Attention will be given to construct a portfolio that provides exposure across asset classes and geographies, and balances investments with different risk, volatility, liquidity, correlation and income producing attributes. In evaluating potential investments, CarVal performs an extensive quantitative and qualitative analysis based on, among other things, extensive legal and financial due diligence (which may include reliance on third-party due diligence) and the experience and judgment of its investment professionals.

Decision Making: The process will commence with an investment review by CarVal’s immediate deal team and a transaction summary memorandum is completed for each potential transaction. Depending on the size of the potential investment, additional senior investment professionals are brought into the approval process when expertise is needed. The Portfolio Investment Committee meets formally on at least a monthly basis and often informally on a more frequent basis to discuss portfolio construction, risk management as well as to approve new investments and discuss investment exits.

Post-Transaction Monitoring: CarVal continues to evaluate an investment once it is made. This includes continued liquidity analysis, assessment of return profile, and further development or revision of potential exit opportunities. CarVal’s investment professionals are expected to maintain responsibility for an investment from acquisition through disposition. This continuity of investment management enables the Firm, when necessary, to alter direction in approach or strategy to maximize return. In cases where an asset management partner is used, CarVal works with that partner to oversee the implementation of each investment’s business plan. CarVal uses a distinct set of checks and balances in its portfolio management. Included in this are frequent portfolio-level reviews that consider variances in specific capital markets, geographic diversification, economic and credit mix, asset management partner exposure and a comparison of current results to pro forma.

Exit Analysis: Consideration is given to targeted investment goals as well as existing market conditions in determining whether to continue to hold, grow or sell a position or asset. CarVal continuously evaluates these factors to determine the appropriate timing for the disposition of any asset or group or category of assets. The disposition of a Fund investment does not require specific Portfolio Investment Committee approval, as the initial approval of an investment by the Portfolio Investment Committee constitutes approval of a business plan, which includes the appropriate disposition of investments. However, all investments and recommended changes to positions are closely monitored by the three Managing Principals and Chief Risk Officer, as well as other members of the Portfolio Investment Committee, before action is taken. The principal or managing director overseeing the investment continuously updates the business plan and exit strategies for each investment over the holding period to reflect on and take advantage of market conditions. As business plans evolve and projections are analyzed, the principal or managing director overseeing an investment is responsible for recommending any changes in a position.

The Portfolio Investment Committee consists of Lucas Detor, James Ganley, Jody Gunderson, David Fry and Matthew Bogart.

Value Creation

CarVal pursues investment opportunities with a potential for value enhancement, such as situations of prior mismanagement, market inefficiencies, and/or poorly devised capital structures. Techniques used to add value to investments may include capital restructuring, repositioning/redevelopment and servicing, securitization and leasing. In addition, CarVal will seek out opportunities for superior risk-adjusted returns focused on credit-related securities including portfolios of loans and securities resulting from complex or distressed situations.

In addition, CarVal aims to generate alpha or value by constructing and managing the portfolio in such a way that it is able to seek the best absolute returns versus relative returns. As well, the Firm aims to size its funds in such a way that it can be a competitive buyer in each of its target markets yet is not forced to put capital to work.

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Risk Mitigation

The Fund's performance is most dependent on the management of credit risk at the investment level. The focus of the Fund's strategy and investment process revolves around the accuracy and completeness of the Firm's underwriting of individual assets, credits, securities and claims. While key exposures may be hedged, CarVal mitigates risk primarily through investment due diligence and portfolio construction based on risk and return attributes.

Risk monitoring at both the asset and portfolio level takes place through daily, monthly and ad-hoc portfolio reporting, including stratification of the portfolio, calculation of interest rate and credit spread sensitivities, review of key exposure concentrations, and performance back-testing.

Additionally, the Fund has the following investment limitations:

- Limitation of 15% in a single issuer
- Limitation of 15% in mainland China and Hong Kong
- Limitation of 15% in the Americas excluding the United States and Canada

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Fund Economics

Management Fee

During the investment period the management fee will be 1.50% (per annum) on funded capital commitments. After the conclusion of the investment period, the management fee will be 1.50% (per annum) on the lesser of NAV at the beginning of quarter or capital contributions less distributions.

Should NEPC clients' aggregate commitments reach certain negotiated thresholds, NEPC clients will receive a management fee discount.

Distribution Waterfall

Each Partner's proportionate share of proceeds will be distributed as follows:

- First, 100% to LPs until the cumulative distributions to LPs equal the sum of their prior contributions;
- Second, 100% to LPs until the cumulative distributions are sufficient to provide LPs with an 8% annualized effective internal rate of return on their contributions;
- Third, 100% to the GP until the GP has received, 20% of the net cumulative prior distributions and prior contributions; and
- Thereafter, 80% to the LPs and 20% to the GP, subject to a 20% holdback

Other Fees and Expenses

The General Partner will be responsible for all its routine expenses associated with providing investment management services to the Fund, including overhead, rent, salaries and associated employee benefits. The Fund will be responsible for all other expenses incurred in connection with the operation of the Fund, including the following:

- All expenses incurred in connection with the operations, investment activity or trading activity of the Fund, including all due diligence, travel-related expenses, broken deal expenses, other third party expenses, expenses (whether internal or external) of consultants custodians, paying agents, registrars, bank service fees, accountants, brokers, servicers, financial advisors, investment bankers, legal, tax, accounting and other advice and administration of investor capital accounts, distributions, fees and expenses relating to data and pricing services (e.g. Bloomberg) and related record keeping;
- Internal Fund Operating expenses relating to the administration and operation of the Fund with regard to functions such as auditing, accounting, legal and tax personnel, distribution of annual reports, statements and other communications and/or functions that are housed within CarVal but would otherwise be outsourced (capped at 30 bps of the average annual Net Asset Value of the Fund);
- Principal, interest and other expenses associated with any borrowing or other financing by the Fund; and
- All organizational expenses of the Fund and the General Partner, up to $2,500,000, the excess, if any, of which will be borne by the General Partner.

The GP will credit 100% of any placement agent fees paid by the Fund as a reduction of Limited Partners' management fees.

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Fund Administration, Structure and Policies

Fund Structure
CVF V will utilize a master-feeder structure, with onshore and offshore feeder funds. There is a third parallel vehicle for European investors that is a Luxembourg SCSp structure.

ERISA Provisions
ERISA investors will be limited to less than 25% of each feeder fund. Therefore, the Fund is not intended to be managed as a plan asset fund under the Employee Retirement Income Security Act of 1974 and CarVal is therefore not intending for the Fund to operate under the fiduciary obligations required of plan asset fund managers.

UBTI Considerations
CVF V will generate Unrelated Business Taxable Income ("UBTI") at the Fund level through the use of leverage. US tax-exempt investors that are sensitive to UBTI reporting should invest through CVI Credit Value B LP to protect against any incurring any UBTI.

Environmental, Social and Governance Considerations
CVF V has received a rating of 3 based on NEPC's proprietary ESG Ratings system, where 5 indicates no integration and 1 indicates a best in class approach. The Firm does have a formal ESG policy, but the procedures in place are primarily at the Firm's discretion. When NEPC first underwrote CVF V (March 2020), the Firm and the team did not have a clear sense of all material ESG issues but was in the midst of implementing more integrated procedures within its process. Moreover, while ESG factors were considered during the investment process, ESG impact was not itself a mandate of the investment strategy. At that time there was no indication of becoming a UNPRI signatory in the future.

However, since that time the Firm has continued its efforts and dedication towards ESG considerations and implementation. Today, the Firm has policies and procedures to foster ESG integration into its investment strategies. The Firm implemented a Responsible Investing policy in 2017 and since then has continued to increase its efforts around ESG. In 2019 the Firm began using third-party data/services to augment its internal ESG analysis during the investment process, and more recently in 2021, the Firm became a signatory of the UNPRI. NEPC is currently in the process of formally re-evaluating CVF V's ESG rating given its progress and efforts since the initial underwriting of CVF V.

Labor Policy
CarVal does not have a labor policy as the Firm generally does not invest in controlling stakes in operating companies. In those few instances where the funds do have controlling stakes in operating companies, CarVal maintains close oversight of those companies including conducting regular review of their controls and practices.

Key Person Provision
The Fund has an adequate key person provision in place; specific terms of the provision are available upon request.

GP Removal Provisions
The Fund has a GP removal provision in place; specific terms of the provision are available upon request.

LP Advisory Committee
At the time of the Fund's final close, CarVal will form an Investor Advisory Committee ("IAC") made up of certain limited partners in the Fund.

Reporting
CarVal will provide Fund investors with monthly, quarterly, and annual reports detailing the performance of the Fund and its activities. Additional details on reporting are available upon request.

CVI Credit Value Fund V

Distressed Debt & Opportunistic Credit

Valuation Policy

CarVal's Valuation Policy outlines a framework to be used in accordance with applicable generally accepted accounting principles (GAAP). More details on the full policy are available upon request.

CVI Credit Value Fund V

Distressed Debt & Opportunistic Credit

Litigation, Regulation and Compliance

Current Litigation

The Firm is not currently involved in any material litigation.

Compliance Staff and Philosophy

CarVal has a full compliance program that is designed to address regulatory and best practices requirements for its different business activities. The program includes written policies and procedures reasonably designed to prevent violations of federal securities laws and to ensure adherence to CarVal's guiding principles. All CarVal employees attend compliance training on an annual basis. Additional training is provided to specific employee groups on specific compliance issues such as data privacy, insider trading and marketing. Employees also sign off on CarVal's Code of Ethics annually. CarVal's compliance department conducts periodic testing of the compliance policies and in addition uses the services of a third party for periodic testing assignments.

CarVal's chief compliance officer, Matt Bogart, is responsible for all compliance matters globally.

SEC Oversight

CarVal is registered with the US Securities and Exchange Commission (SEC) as an investment adviser under the Investment Advisers Act of 1940. The Firm was subject to an exam by the SEC in 2012. The GP reports that there were no deficiencies identified by the SEC during the course of their examination.

The Firm's Form ADV was reviewed. There was no disciplinary history disclosed in Part 1A Item 11 (Disclosure Information) and there were no DRP (Disclosure Reporting Page) filings.

Other Regulators

CarVal is registered with the FCA (U.K.) and MAS (Singapore). There have been no examinations in relation to these registrations.

Personal Trading

CarVal has a personal trading policy in place which includes a restricted list of securities for which CarVal may have insider information. Further details on the full policy are available upon request.

CVI Credit Value Fund V

Distressed Debt & Opportunistic Credit

Firm Infrastructure

Office Locations

CarVal's main office is in Minneapolis, Minnesota. CarVal has additional offices in London, New York, Luxembourg and Singapore.

Technology Resources and Systems

The Firm uses a variety of technology resources and systems through the course of regular business. These resources and systems aid and facilitate regular tasks like sourcing, evaluating, and monitoring investments, and operation functions as well such as those related to compliance oversight. More details on specific systems are available upon request.

Business Continuity Planning

CarVal's Business Continuity and Disaster Recovery Policy is designed to account for a worst-case scenario disaster and covers three specific scenarios:

- Primary data center outage
- Primary workspace unavailable
- Limited staff availability

CarVal's plan is tested periodically.

Fund Administration/Back Office Resources

CarVal's back office resources include Risk Management, Fund Operations, Deal Operations, Legal, Compliance, Tax, IT, Accounting, HR and Investor Relations/Marketing. There are over 90 people in CarVal's back office that are dedicated to the global credit business.

CVI Credit Value Fund V

Distressed Debt & Opportunistic Credit

Firm Track Record

Prior Fund Track Record

Fund Name	Vintage	Commitments	Invested Capital	Reported Value	Distributions	Total Value	Net TVPI	Net DPI	Net IRR
Global Value Fund I	2007	$5,777.4	$5,554.6	$8.3	$8,013.8	$8,022.1	1.44x	1.44x	6.9%
Global Value Fund II	2008	$1,956.2	$1,897.1	$2.1	$3,812.0	$3,814.1	2.01x	2.01x	17.5%
Credit Value Fund I	2011	$844.3	$812.7	$13.2	$1,820.3	$1,833.5	2.26x	2.24x	19.4%
Credit Value Fund II	2013	$2,306.7	$2,201.9	$32.1	$3,057.8	$3,089.9	1.40x	1.39x	8.2%
Credit Value Fund III	2015	$3,024.5	$2,883.3	$1,240.0	$2,428.8	$3,668.7	1.27x	0.84x	8.0%
Credit Value Fund IV	2018	$3,014.0	$2,922.9	$3,162.5	$3.1	$3,165.7	1.08x	0.00x	5.2%

Note: $ in millions. All data as of December 31, 2020. *As of 2/28/21, CVF IV has improved to a net TVPI of 1.13x, net DPI of 0.07x, and net IRR of 7.5%

CVI Credit Value Fund V

Distressed Debt & Opportunistic Credit

Track Record Benchmarking

Prior fund performances compared against the Global Distressed Debt benchmark from Thomson One/Cambridge Associates:

Net TVPI Multiple					Global Distressed			
Fund Name	Vintage	Net TVPI	Quartile Rank	Out (Under) Performance vs. Median	# of Funds	1st Quartile	Median	3rd Quartile
Global Value Fund I	2007	1.44x	2	0.04x	22	1.66x	1.40x	1.21x
Global Value Fund II	2008	2.01x	1	0.43x	28	1.90x	1.59x	1.42x
Credit Value Fund I	2011	2.26x	1	0.96x	27	1.49x	1.29x	1.11x
Credit Value Fund II	2013	1.40x	1	0.15x	22	1.36x	1.26x	1.14x
Credit Value Fund III	2015	1.27x	2	0.02x	31	1.37x	1.25x	1.18x
Credit Value Fund IV	2018	1.08x	2	0.02x	18	1.13x	1.07x	1.02x

Net DPI Multiple					Global Distressed			
Fund Name	Vintage	Net DPI	Quartile Rank	Out (Under) Performance vs. Median	# of Funds	1st Quartile	Median	3rd Quartile
Global Value Fund I	2007	1.44x	2	0.10x	22	1.61x	1.35x	1.11x
Global Value Fund II	2008	2.01x	1	0.48x	28	1.77x	1.53x	1.39x
Credit Value Fund I	2011	2.24x	1	1.24x	27	1.24x	1.00x	0.70x
Credit Value Fund II	2013	1.39x	1	0.64x	22	1.02x	0.75x	0.51x
Credit Value Fund III	2015	0.84x	2	0.45x	31	0.89x	0.39x	0.20x
Credit Value Fund IV	2018	0.00x	3	(0.03x)	18	0.27x	0.03x	0.00x

Net IRR					Global Distressed			
Fund Name	Vintage	Net IRR	Quartile Rank	Out (Under) Performance vs. Median	# of Funds	1st Quartile	Median	3rd Quartile
Global Value Fund I	2007	6.9%	3	(1.0%)	22	13.3%	7.9%	2.8%
Global Value Fund II	2008	17.5%	1	4.2%	28	16.6%	13.2%	8.5%
Credit Value Fund I	2011	19.4%	1	12.6%	27	10.3%	6.7%	2.3%
Credit Value Fund II	2013	8.2%	2	0.6%	22	9.6%	7.6%	2.9%
Credit Value Fund III	2015	8.0%	3	(0.3%)	31	12.0%	8.3%	5.7%
Credit Value Fund IV	2018	5.2%	3	(2.6%)	18	12.5%	7.8%	1.9%

Note: **GREEN** shaded cells indicate that the fund outperformed the respective quartile of the benchmark while **RED** shaded cells indicate that the fund under-performed the respective quartile of the benchmark. Amounts are net of fees, carried interest and expenses. Fund performance is as of December 31, 2020. Thomson One/Cambridge Associates benchmark data is as of September 30, 2020. *As of 2/28/21, CVF IV has improved to a net TVPI of 1.13x, net DPI of 0.07x, and net IRR of 7.5%

CVI Credit Value Fund V

Distressed Debt & Opportunistic Credit

Key Fund Professionals

Name	Title	Age	Investment Committee	Years with Firm
Lucas Detor	Managing Principal	48	Yes	7
James Ganley	Managing Principal	52	Yes	11
Jody Gunderson	Managing Principal	57	Yes	26
Matthew Bogart	General Counsel & Chief Compliance Officer	58	Yes	13
David Fry	Principal, Chief Risk Officer	50	Yes	23

Detailed Biographies

Lucas Detor, Managing Principal
Mr. Detor is a managing principal and member of the Investment Committee for CarVal Investors, responsible for leading the Firm's investment strategy and management. He also leads the Firm's high yield and transportation investments and oversees capital formation and emerging markets for the Firm. Mr. Detor joined CarVal from Morgan Stanley, where he most recently served as managing director and co-head of the global distressed and U.S. leveraged loan business. Mr. Detor has also served the U.S. government as a Special Agent with the United States Secret Service, as well as serving in the U.S. Army Reserves and New York National Guard.

Mr. Detor received his MBA from NYU's Stern School of Business and his B.S. in Accounting from SUNY Albany.

James Ganley, Managing Principal
Mr. Ganley is a managing principal and member of the Investment Committee for CarVal Investors, responsible for leading the Firm's investment strategy and management, as well as distressed corporate credit investments in the U.S. and Europe. In addition, he leads risk and portfolio management across CarVal's credit funds and investments globally. Prior to joining CarVal in 2009, Mr. Ganley was a managing director for the Special Situations Group at Goldman Sachs in Europe where he focused primarily on corporate credit investments including distressed credit, high-yield credit, event-driven investing and liquidations.

Mr. Ganley received his MBA from the University of Chicago and his B.S. in finance and accountancy from Villanova University.

Jody Gunderson, Managing Principal
Ms. Gunderson is a managing principal and member of the Investment Committee for CarVal Investors, responsible for leading the Firm's investment strategy and management, as well as its global loan portfolios and real estate businesses. In addition, Ms. Gunderson manages investments in asset-backed securities globally, including residential mortgage-backed securities, commercial mortgage-backed securities and collateralized loan obligations. Prior to joining CarVal Investors in 1994, Ms. Gunderson was a manager in the financial services practice of PricewaterhouseCoopers where she served investment fund, commercial banking and thrift clients.

Ms. Gunderson received her B.S. in business from the University of Minnesota and is a Certified Public Accountant (inactive).

Matthew Bogart, General Counsel & Chief Compliance Officer
Mr. Bogart is the general counsel and chief compliance officer for CarVal Investors. He oversees all of CarVal Investors' legal and compliance matters across the globe. Prior to joining CarVal in 2007, Mr. Bogart was a partner at Faegre & Benson in Minneapolis where he practiced for 16 years, specializing in real estate, finance and joint venture law.

CVI Credit Value Fund V

Distressed Debt & Opportunistic Credit

Mr. Bogart received his J.D. from the University of Iowa College of Law, graduating with highest honors, and his B.S. degree in marketing and accounting from the University of Colorado.

David Fry, Principal, Chief Risk Officer
Mr. Fry is a principal and chief risk officer for CarVal Investors. He is responsible for oversight of the portfolio and identification, quantification and communication of material risks. Prior to joining CarVal in 1997, Mr. Fry was employed in London in the risk measurement function of Credit Suisse Financial Products, a major derivatives dealer, and in the financial risk management practice of Deloitte.

Mr. Fry received his B.Sc. in mathematics, operational research, statistics and economics from the University of Warwick, UK and qualified as a UK Chartered Accountant.

CVI Credit Value Fund V

Distressed Debt & Opportunistic Credit

Disclaimers and Disclosures

- Past performance is no guarantee of future results.
- The opinions presented herein represent the good faith views of NEPC as of the date of this report and are subject to change at any time.
- Information used to prepare this report was obtained directly from the investment manager, and market index data was provided by other external sources. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.
- NEPC may provide background information on fund structures or the impact of taxes but you should contact your legal counsel or tax professional for specific advice on such matters.
- This report may contain confidential or proprietary information and may not be copied or redistributed to any party not legally entitled to receive it.

In addition, it is important that investors understand the following characteristics of non-traditional investment strategies including hedge funds, real estate and private equity:

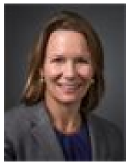
1. Performance can be volatile and investors could lose all or a substantial portion of their investment
2. Leverage and other speculative practices may increase the risk of loss
3. Past performance may be revised due to the revaluation of investments
4. These investments can be illiquid, and investors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

CVI CREDIT VALUE FUND V

PRESENTING TODAY

Lucas Detor - Mr. Detor is a managing principal and member of the Investment Committee for CarVal Investors, responsible for leading the firm's investment strategy and management. He also leads the firm's transportation investments and oversees capital formation, emerging markets and real estate investments for the firm. Mr. Detor joined CarVal from Morgan Stanley, where he most recently served as managing director and co-head of the global distressed and U.S. leveraged loan business. Mr. Detor has also served the U.S. government as a Special Agent with the United States Secret Service, as well as serving in the U.S. Army Reserves and New York National Guard. Mr. Detor received his M.B.A. from NYU's Stern School of Business and his B.S. in accounting from SUNY Albany and is a Certified Public Accountant (inactive).

Christopher Hedberg - Mr. Hedberg is chief financial officer for CarVal Investors. In addition to leading finance and operations globally for the firm, Mr. Hedberg also manages capital formation activities, including investor relations and fund financing strategy. Mr. Hedberg joined Cargill in 1996 and has held a variety of financial management positions, including serving as global controller for CarVal's corporate credit business and manager in Cargill's internal audit department. Prior to joining Cargill, Mr. Hedberg was with Dain Bosworth. Mr. Hedberg received his M.B.A. from the University of St. Thomas and his B.S. in finance, magna cum laude from the University of Colorado.



Kerry Fauver - Ms. Fauver is a managing director for CarVal Investors, responsible for global fundraising and investor relations. Prior to joining CarVal in 2006, Ms. Fauver was a marketing specialist at HarbourVest Partners in Boston. Ms. Fauver also served as director of marketing and business development for DSFX, a corporate investigations and security firm. Ms. Fauver began her career in consumer marketing for public relations firms Hill & Knowlton and LaForce & Stevens. She earned a B.A. from Hamilton College with honors in American studies.

CARVAL INVESTORS®

CVI CREDIT VALUE FUND V

COVID-19 Crisis is leading to a Global Recession

CVI Credit Value Fund V (CVF V)	**Distressed and Opportunistic Credit** • Targeting 15% -20% net IRR* • Targeting 1.7x – 2.0x net equity multiple* • All-weather, multi-asset approach
Government support benefitting financial assets	**Uniquely challenging environment** • COVID-19 has placed unprecedented strain on society and financial markets • Unprecedented monetary and fiscal stimulus are supporting financial assets but risk creating their own stress • Increasing tension between financial markets and the real economy in the U.S. and Europe
Experienced Team	**Experienced Team, Proven Investment Process, Disciplined control environment** • CarVal's 2008 and 2011 vintage funds delivered more than 17% net and 2x money multiple • 70 investment professionals; Senior team averages 25 years investment experience and 12 years with CarVal • Team has invested through the GFC and Tech Crisis - down cycles as well as bull markets
Proven Strategy	**Value Investing** • Dislocations and market crises begin in liquid markets. CarVal has deep experience in the high yield and loan markets. • Quality assets at distressed prices, not distressed assets with unpredictable values • Capital vacuums, orphaned asset sales and distressed restructurings only when the path to recovery is clear

**There is no guarantee that target returns will be achieved. See disclaimer regarding Targeted Returns.*

CARVAL INVESTORS®

CARVAL INVESTORS: FIRM OVERVIEW

As of December 31, 2020

Global Alternative Investment Manager

- 100% employee-owned firm with approximately 185 employees
- $10 billion in assets under management
- 33-year global track record in opportunistic and distressed credit
- Invested $126 billion in 5,510 transactions in 82 countries
- Responsible Investing Policy, UNPRI signatory

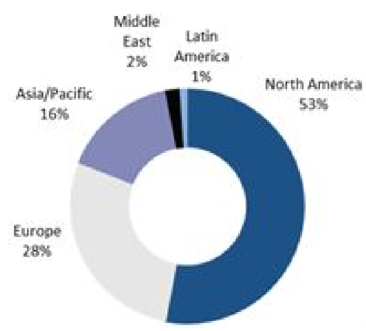
Specialists in Complex Credit

- Approximately 70 investment professionals in the U.S., Europe and Asia
- Ability to capitalize on traded and private market opportunities across the full credit spectrum – performing, stressed, distressed
- Sourcing and origination – We estimate that approximately 80% of deals are completed on a negotiated or lightly competitive basis*

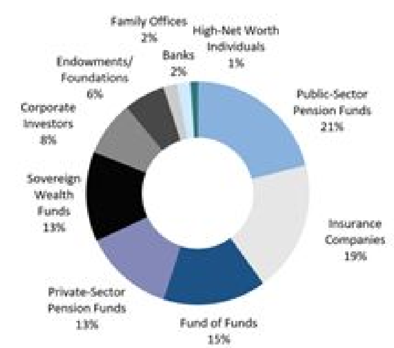
Diverse and Stable Investor Base

- Over 300 institutional investors
- Most recent three flagship funds oversubscribed; returning investors represented more than 80% of capital in CVF IV

Investors by Geography



Investors by Type



**Measured during the period from January 2020 – December 2020. Includes invested equity for hard asset, loan portfolios, and renewable deals.*

CARVAL INVESTORS®

CAPITALIZING ON MARKET DISTRESS FOR 34 YEARS

Black Monday **Japan asset bubble collapse** **U.S. Savings and Loan crisis**	**Scandinavian banking crisis** **Tequila Crisis, Mexico** **Russian crisis**	**Argentine Crisis** **Dot-com bubble and collapse**	**Global Financial Crisis** **European sovereign debt crisis**	**Post-Crisis Reform** **Bank deleveraging** **QE**
1987-1992	1993-1998	1999-2006	2007-2013	2014-2019
Started business in U.S. Focused on loan portfolios from the Resolution Trust Corporation	**Opened offices in London, Paris and Tokyo** Loan portfolios in the U.S. and Europe Distressed Japan assets Distressed LatAm debt Liquidation claims	**Opened offices in Singapore and Shanghai** Enron, Merchant energy U.S. consumer loans U.S. C&I/SME loans European loan portfolios Aviation assets Liquidations claims	**Developed structured credit capabilities in U.S. & Europe** Invested over $2 billion globally in Lehman assets and claims Invested over $1 billion in U.K. and U.S. loan portfolios from deleveraging banks	**Unprecedented growth of loan portfolios and opportunities in energy and petroleum, emerging markets, high yield and aviation** Loan portfolios in Europe and the U.S.

COVID-19 Pandemic

Oil Price War

Global Recession

2020-2023

2020 – a more serious technical and fundamental dislocation than any in recent times

CARVAL INVESTORS®

OPPORTUNISTIC CREDIT INVESTORS FOCUSED ON FOUR CORE ASSET CLASSES

INTEGRATED APPROACH WITH CROSS-DESK COLLABORATION

- Distressed Securities
- Bankruptcies and Liquidations
- Leveraged Loans
- High Yield Bonds
- CLOs

- Residential Mortgages
- Consumer
- Small Business
- CRE-backed Mezzanine Debt

- Issuer of Mortgage-Backed Securities
- Buyer of Asset-Backed Securities

- Aviation
- Shipping
- Renewable Energy

Active management of investments across our four boxes allows us the opportunity to achieve a balanced portfolio and targeted returns with less risk

CARVAL INVESTORS®

DEEP-SECTOR EXPERTISE AMONG SENIOR INVESTMENT TEAM

CORPORATE LOANS, EMERGING MARKETS, HARD ASSETS, REAL ESTATE					U.S. AND EUROPE, CORPORATE SECURITIES		LOAN PORTFOLIOS, STRUCTURED CREDIT, CLEAN ENERGY		
LUCAS DETOR Managing Principal 25 years					**JAMES GANLEY** Managing Principal 30 years		**JODY GUNDERSON** Managing Principal 27 years		
AVIATION	**SHIPPING & WORKOUT**	**CORPORATE LOAN BUSINESS**	**EMERGING MARKETS CORPORATE SECURITIES**	**U.S. CRE CREDIT**	**U.S. CORPORATE SECURITIES**	**EUROPE CORPORATE SECURITIES**	**LOAN PORTFOLIOS**	**STRUCTURED CREDIT**	**CLEAN ENERGY**
Justin Bradburn Principal 24 years	**Greg Belonogoff** Principal 23 years	**Chris Mawn** Managing Director 20 years	**Gerardo Bernáldez** Principal 31 years	**Seth Cohen** Principal 21 years **Dave Pelka** Principal 18 years **Paul Mullaney** Managing Director 34 years	**Jerry Keefe** Principal 31 years **John Withrow** Principal 20 years	**Bryan Simpson** Managing Director 21 years	**Seth Cohen** Principal 21 years **Stuart Lammin** Principal 33 years **Dave Pelka** Principal 18 years **James Sackett** Principal 26 years **Angie Fenske** Managing Director 20 years	**Neil Hepworth** Managing Director 18 years **Shane Huether** Executive Adviser 26 years	**Jerry Keefe** Principal 31 years **Stuart Lammin** Principal 33 years **Angie Fenske** Managing Director 20 years

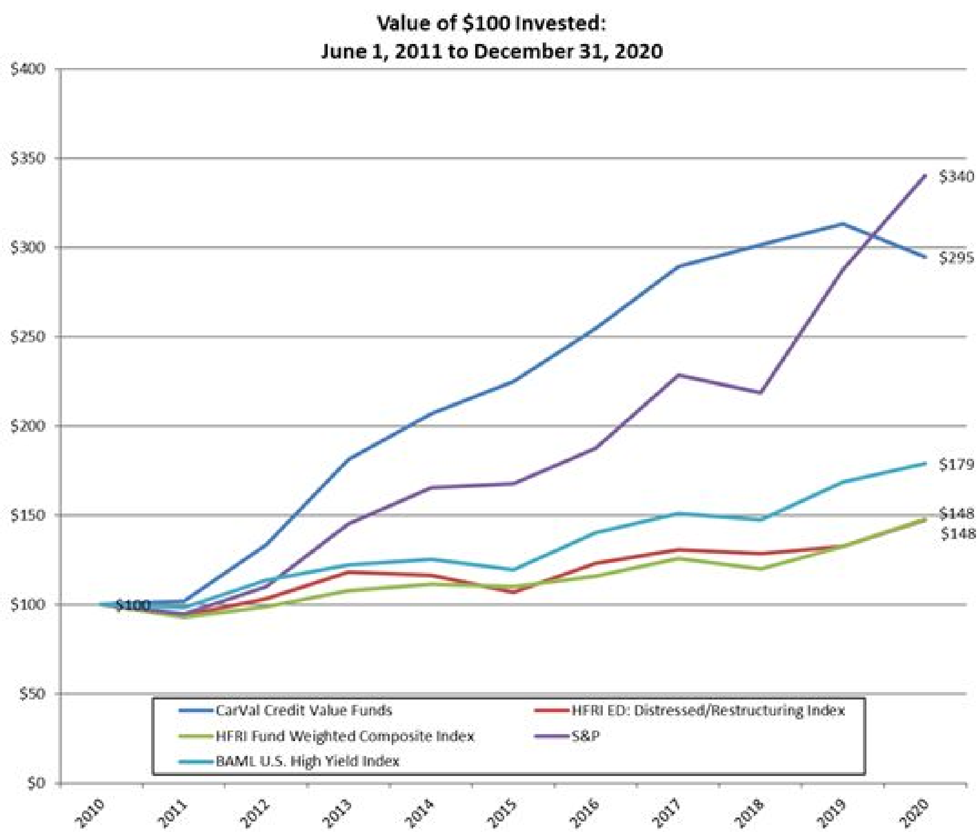
RISK
David Fry Chief Risk Officer 30 years

The senior credit investment team averages 25 years investment experience and 12 years with CarVal

Note: Years denote industry experience. This slide does not represent an official CarVal organizational chart.

CARVAL INVESTORS®

INVESTING THROUGH THE CYCLES



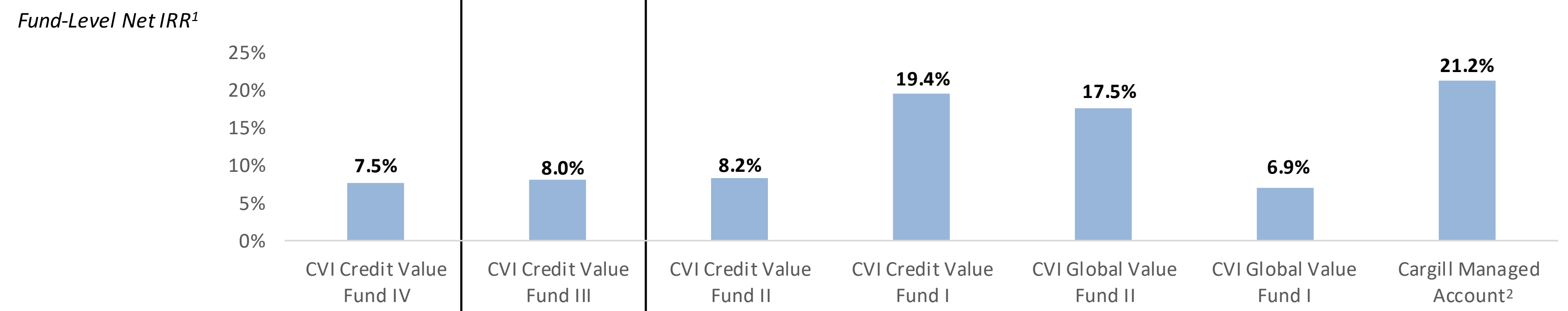
Value of $100	
CarVal Credit Value Funds*	$295
S&P 500	$340
BAML U.S. High Yield Index	$179
HFRI Fund Weighted Composite Index	$148
HFRI ED: Distressed/Restructuring Index	$148

**The CarVal Credit Value Funds net return is calculated using an average return for each presented year (as of December 31, 2020) assuming an equally weighted allocation of capital across all CarVal Credit Value Funds (CVF I, II, III and IV) as of such year. The CarVal Credit Value Funds model net return does not represent the experience of any individual investor because it is a model net rate of return for credit investments managed by CarVal in multiple funds and investment pools each with its own separate fees and expense structures. Further, the liquidity provisions of the CarVal Credit Value Funds would not allow capital to be reallocated in the fashion presented in the table. The graph starts in June 2011, as the final close for CVF I occurred on June 30, 2011. CarVal also manages other funds, which are excluded from the above data. The performance of those funds is available upon request. Past performance is not indicative of future results. See disclaimer regarding Indices.*

34-YEAR HISTORY OF STABLE RETURNS ACROSS MARKET CYCLES

Fund data as of February 28, 2021 (estimate)

STAGE	INVESTING	DISTRIBUTING	MATURED				



Vintage	2018	2015	2013	2011	2008	2007	1987-2007
Committed Capital ($bn)	$3.0	$3.0	$2.3	$0.8	$2.0	$5.8	-
IRR (ITD)[1]	7.5%	8.0%	8.2%	19.4%	17.5%	6.9%	21.2%
TVPI (ITD)	1.13x	1.28x	1.40x	2.26x	2.01x	1.44x	-
DPI (ITD)	0.07x	0.88x	1.39x	2.24x	2.01x	1.44x	-
Preqin Quartile Ranking	-	First	Second	First	First	Second	-
2021 (YTD)[1]	4.9%	1.6%	n.m.[3]	n.m.[3]	n.m.[3]	n.m.[3]	-

The Preqin Quartile Ranking is sourced from Preqin data as of February 2021. The data is comprised of various sources and various "as of dates." Completeness and accuracy is not guaranteed. Preqin's Quartile Ranking Methodology: The net IRR and multiple of each constituent fund is used to determine the fund's overall quartile rank, with equal weighting. The ranking applies to funds that have reported data within the past two years. Eight funds must report in order to constitute a benchmark. Each vintage must season for three years before quartile rankings are assigned.

[1]2021 figures are YTD (not annualized) net time-weighted returns of CVF III-IV for stated time periods, inclusive of realized and unrealized results. IRRs: CVF I-IV= actual Net IRRs for those investment vehicles. GVF I-II = actual Net IRRs for those investment vehicles, exclusive of those investors that elected to redeem, performance for hedge-fund style (H Class) investors, Cargill's investment performance and employee coinvestment. Employees do not pay management or performance fees to CarVal, and Cargill, as both investor and former owner of the Management Company, bears certain taxes that are not borne by third party investors. Consequently, showing the Fund return exclusive of these investors is more representative of the performance of third-party investors in the Fund. In addition, limiting the return to private-equity style (P Class) investors more accurately portrays the return experience for a private equity investor within the hybrid fund structure. CMA = a modeled Net IRR, excluding direct real estate investment.
[2]Separate account managed for Cargill; track record does not include real estate (see disclaimer regarding CMA track record).
[3]n.m. YTD return information is not provided for funds after the end of the initial harvest period (not including any extensions), as only a small proportion of a Fund's assets generally remain at this stage. Additional information is available upon request.
Note: CarVal also manages multiple single investor funds, open-ended funds and single-strategy focused funds. The track records for those funds are not included here but are available upon request. Past performance is not indicative of future results.

CARVAL INVESTORS®

HIGH SUCCESS RATE, QUICK DEPLOYMENT PACE

90.1% success rate on 978 credit investments made since 2011[1]

86% of commitments deployed in first 24 months, on average[2]

81% of contributed capital distributed back to investors in first 21 months of harvest, on average[3]

89.5% SUCCESS RATE AND 1.0% LOSS RATIO ON 2011 VINTAGE FUND[4]

[1] As of December 31, 2020. Success rate is the number of deals which returned a profit divided by the total deal count. Includes both realized and unrealized investments in all CarVal Credit Value Funds (CVF I, II, III and IV). The complete track record is available upon request. For additional detail, see disclaimer regarding Success Rates. [2] Reflects investment activity for all CarVal Credit Value Funds (CVF I, II, III and IV). Calculated from final close date based on aggregate investor commitments to the fund. [3] Reflects distributions by CarVal Credit Value Funds that have reached 21 months or more from the start of the harvest period (CVF I, II and III). CarVal also manages other funds, which are excluded from the above data. The performance of those funds is available upon request. Past performance is not indicative of future results. Source: CarVal Investors.

[4] The 2011 Vintage Fund refers to CVF I. See disclaimer regarding Success rates.

CARVAL INVESTORS®

CVI CREDIT VALUE FUND V

Anticipated Fund Terms

Maximum Fund Size:	$3.75 billion
First Close:	May 31, 2020
Expected Final Close:	May 2021
Fund Term:	Three-year investment period; three-year harvest period
Management Fee:	1.5% per annum, paid quarterly on contributed capital
	(Fee discounts for larger commitments)
Carried Interest:	Cumulative 8% portfolio-level preferred return
	100% catch-up thereafter until GP has received 20%
	Profits are shared 80%/20% LP/GP split thereafter
GP Contribution:	1.5% of target commitments
Target Returns:	15% net

See disclaimers regarding Projections, Targeted Returns and Risk of Loss.

CARVAL INVESTORS

INVESTMENT STRATEGY

CARVAL INVESTORS®

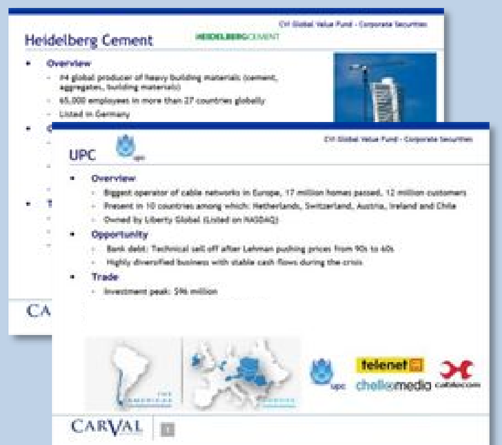
INVESTMENT STRATEGY IN A CRISIS: CARVAL'S LESSONS FROM OVER THREE DECADES INVESTING

Stage 1: TRADING

- Extreme volatility as fund flows overwhelm dealer capital
- Margin calls lead to rapid deleveraging
- Good assets sold to generate cash

Stage 2: DISTRESSED ASSETS

- Financial restructuring of impaired balance sheets
- Focus on COVID-sensitive sectors – transportation, leisure, entertainment, retail



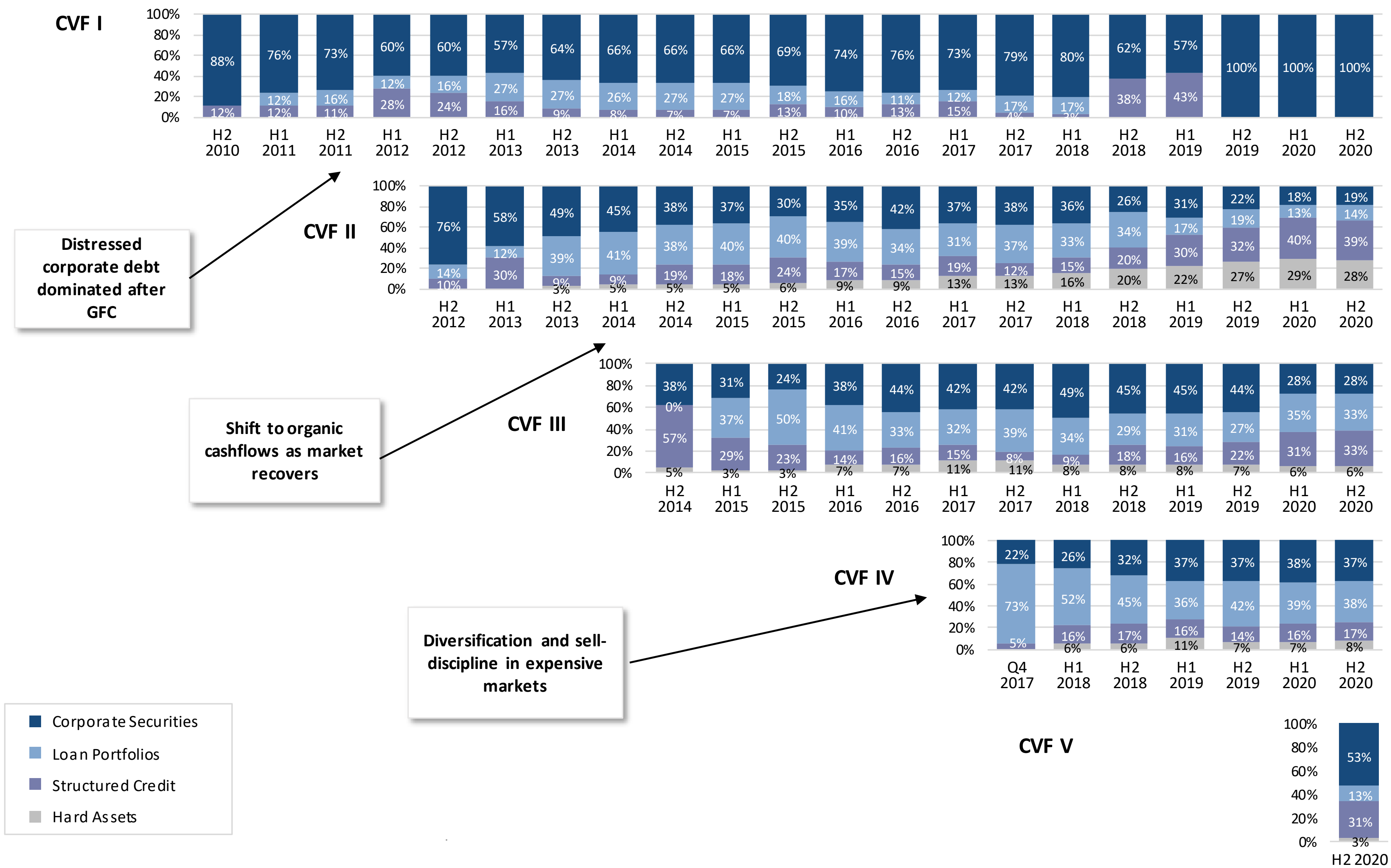
Stage 3: CAPITAL VACUUMS/ORPHANED ASSETS

- New capital structures required by viable assets
- Strategic disposals/repositioning
- Capital returns to recovering asset classes

CARVAL INVESTORS

PORTFOLIO EVOLUTION: MOVING CAPITAL TO THE OPPORTUNITIES

As of December 31, 2020



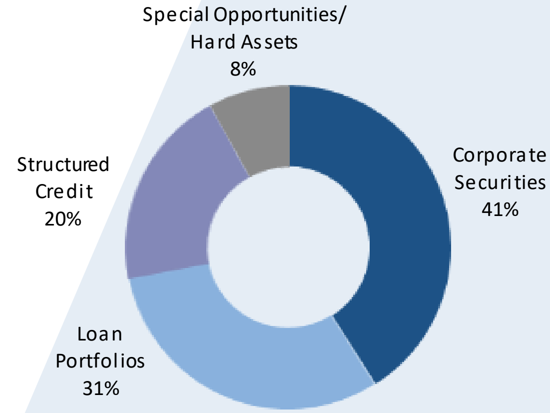
Figures based on Portfolio Composition which includes carrying value and recourse third-party debt.

CVF IV PORTFOLIO COMPOSITION

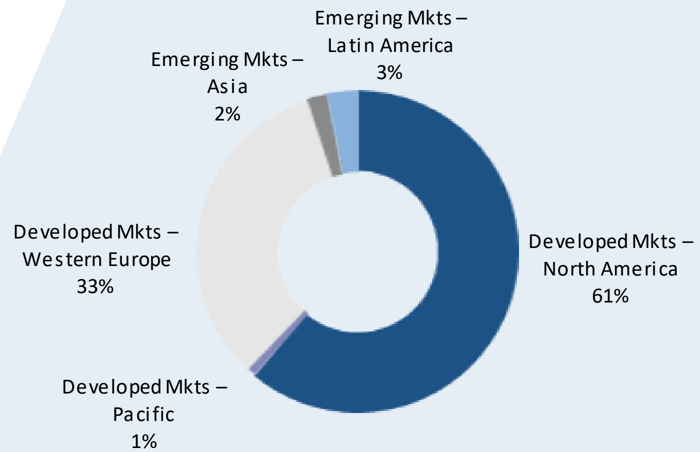
As of February 28, 2021 (estimate)
($ millions)

Investment Strategy	Portfolio Composition*	
	$	%
Structured Credit - RMBS	$383.1	$12.0%
U.S. Corporate Credit - Communications	306.6	9.6%
U.S. Loan Portfolios - Consumer	229.0	7.1%
U.S. Loan Portfolios - Residential	221.9	6.9%
Hard Assets - Aircraft Leasing	205.6	6.4%
U.S. Corporate Credit - Alternative Energy	197.0	6.1%
European Loan Portfolios - Commercial	194.1	6.1%
Commercial Real Estate Debt	126.0	3.9%
European Corporate Credit - Financial Services	112.4	3.5%
Structured Credit - CLO	107.6	3.4%
Top 10 Strategies	**$2,083.3**	**65.0%**
Other Strategies	1,122.4	35.0%
CVF IV Grand Total	**$3,205.7**	**100.0%**

CVF IV Portfolio by Asset Class*



CVF IV Portfolio by Region*



*Figures based on Portfolio Composition which includes carrying value and recourse third-party debt.

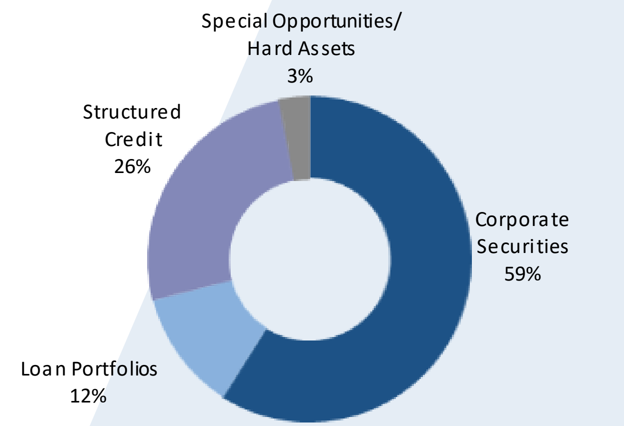
CARVAL INVESTORS

CVF V PORTFOLIO COMPOSITION

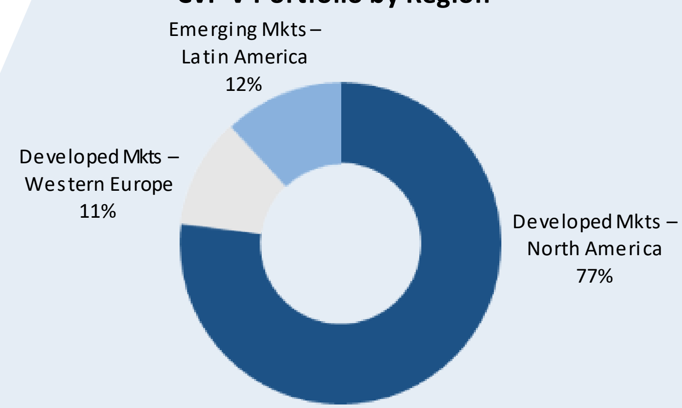
As of February 28, 2021 (estimate)
($ millions)

Investment Strategy	Portfolio Composition*	
	$	%
Structured Credit - RMBS	$140.1	21.2%
U.S. Corporate Credit - Communications	124.6	18.9%
Emerging Markets Corporate Credit - Transportation (non-auto)	79.6	12.0%
U.S. Loan Portfolios - Residential	49.5	7.5%
U.S. Corporate Credit - Mining/Metals	41.6	6.3%
U.S. Corporate Credit - Alternative Energy	34.5	5.2%
European Corporate Credit - Auto/Motor Carrier	31.8	4.8%
U.S. Corporate Credit - Retailing	23.7	3.6%
Structured Credit - Other	23.4	3.5%
Structured Credit - CLO	21.2	3.2%
Top 10 Strategies	**$570.0**	**86.2%**
Other Strategies	91.4	13.8%
CVF V Grand Total	**$661.4**	**100.0%**

CVF V Portfolio by Asset Class*



CVF V Portfolio by Region*



**Figures based on Portfolio Composition which includes carrying value and recourse third-party debt.*

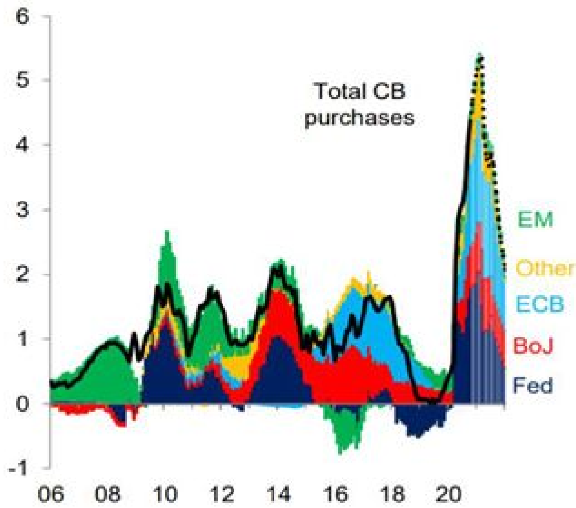
CARVAL INVESTORS

CVF V MARKET OPPORTUNITY

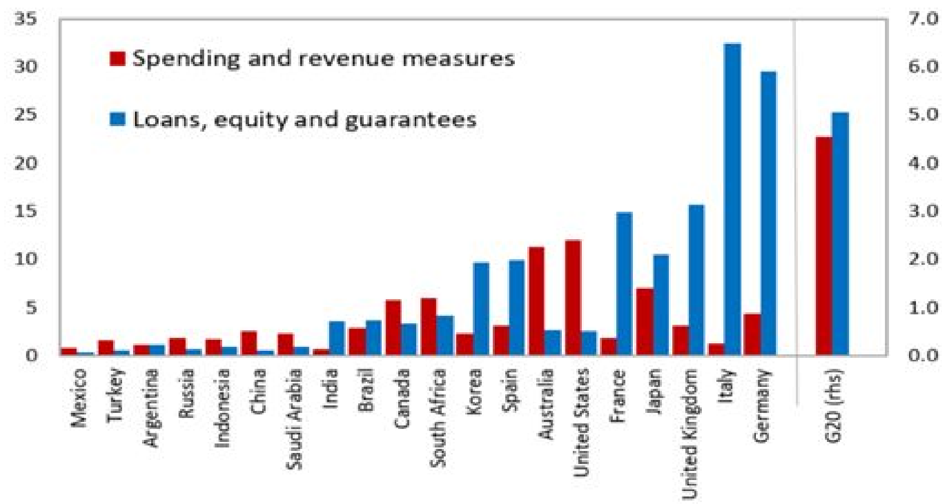
CARVAL INVESTORS®

UNPRECEDENTED MONETARY AND FISCAL SUPPORT

Major Central Bank Open Market Purchases



$9 trillion of Global Fiscal Support as of May 2020



Monetary stimulus 5X as large versus GFC

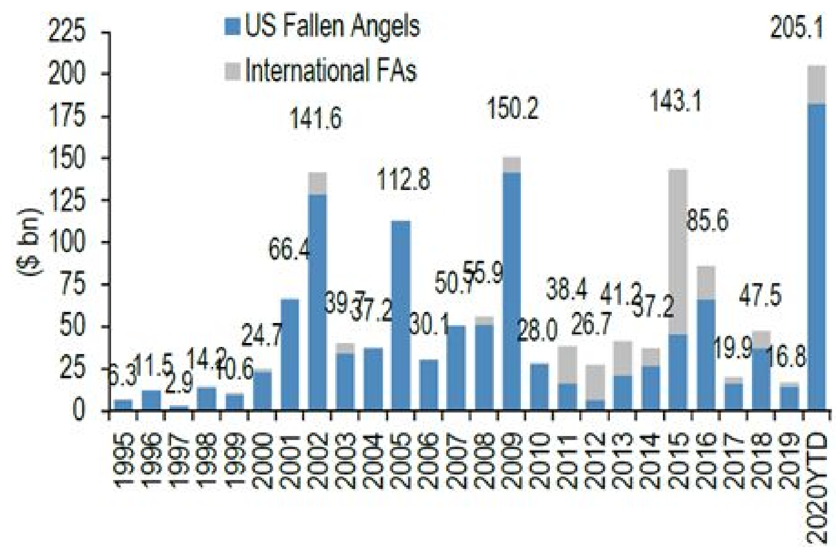
Fiscal stimulus 3X as large versus GFC

Source: Citi Research, National central bank
Sources: National Authorities, IMF, BIS Bulletin 23s: As of May 13, 2020

CREDIT CRISIS: WHAT YOU EXPECT

Corporate Default Rates

Fallen Angel Volumes



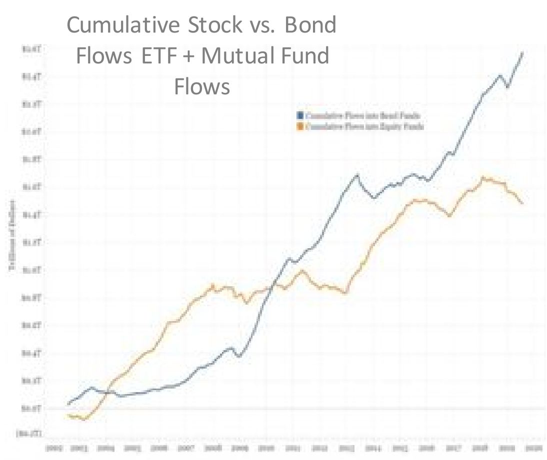
The COVID crisis has caused defaults and credit downgrades

Source: Rosenberg Research, Havee Analytics; JPM

CARVAL INVESTORS

MASSIVE STIMULUS HAS CHANGED THE CREDIT CRISIS PLAYBOOK

Capital Flows into Risk Assets Following QE…

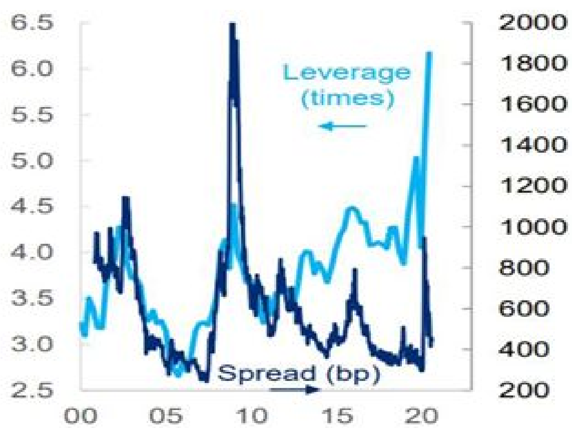


Corp Bonds Outstanding Grow Rapidly…

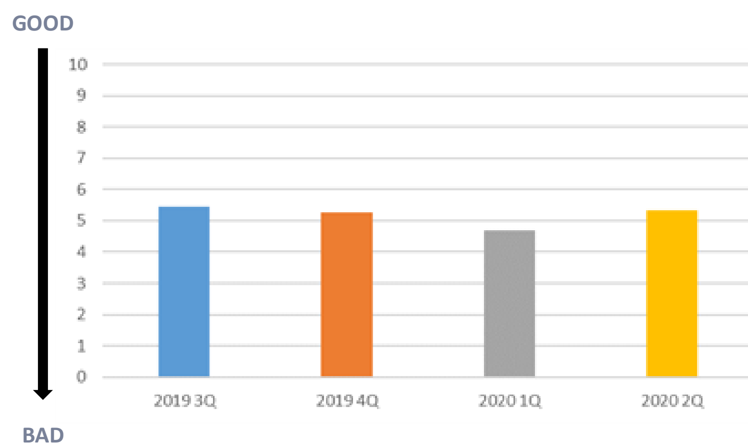
Corp Bonds Outstanding $/Eur +17% y/y

Leverage increased and spreads tightened…

U.S. HY market ex-energy net debt/EBITDA vs. Spread



Creditor protections largely unchanged…



Average Covenant Score of Sponsor-Backed Deals

Source: Bianco Research, CS Research; JP Morgan; Citi, Factset, FTSE, Federal Reserve, Robert Shiller, GS Research Xtract Research August 2020

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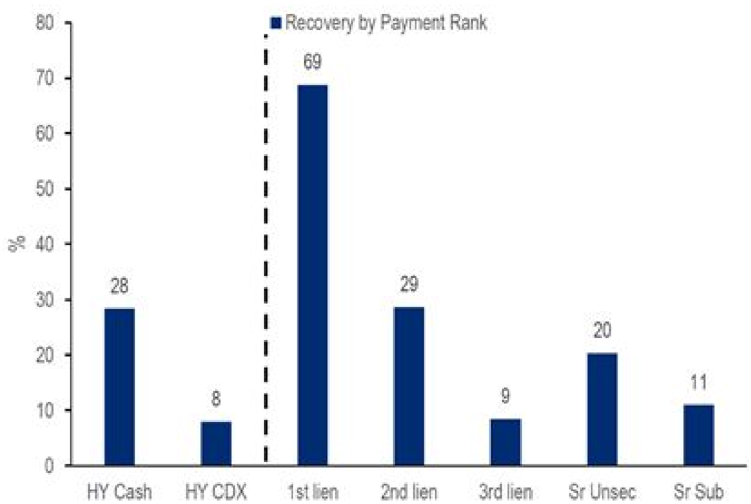
LENDER FRIENDLY ERA = LOWER RECOVERIES FOR CREDITORS

Creditor Recovery Payment Rank

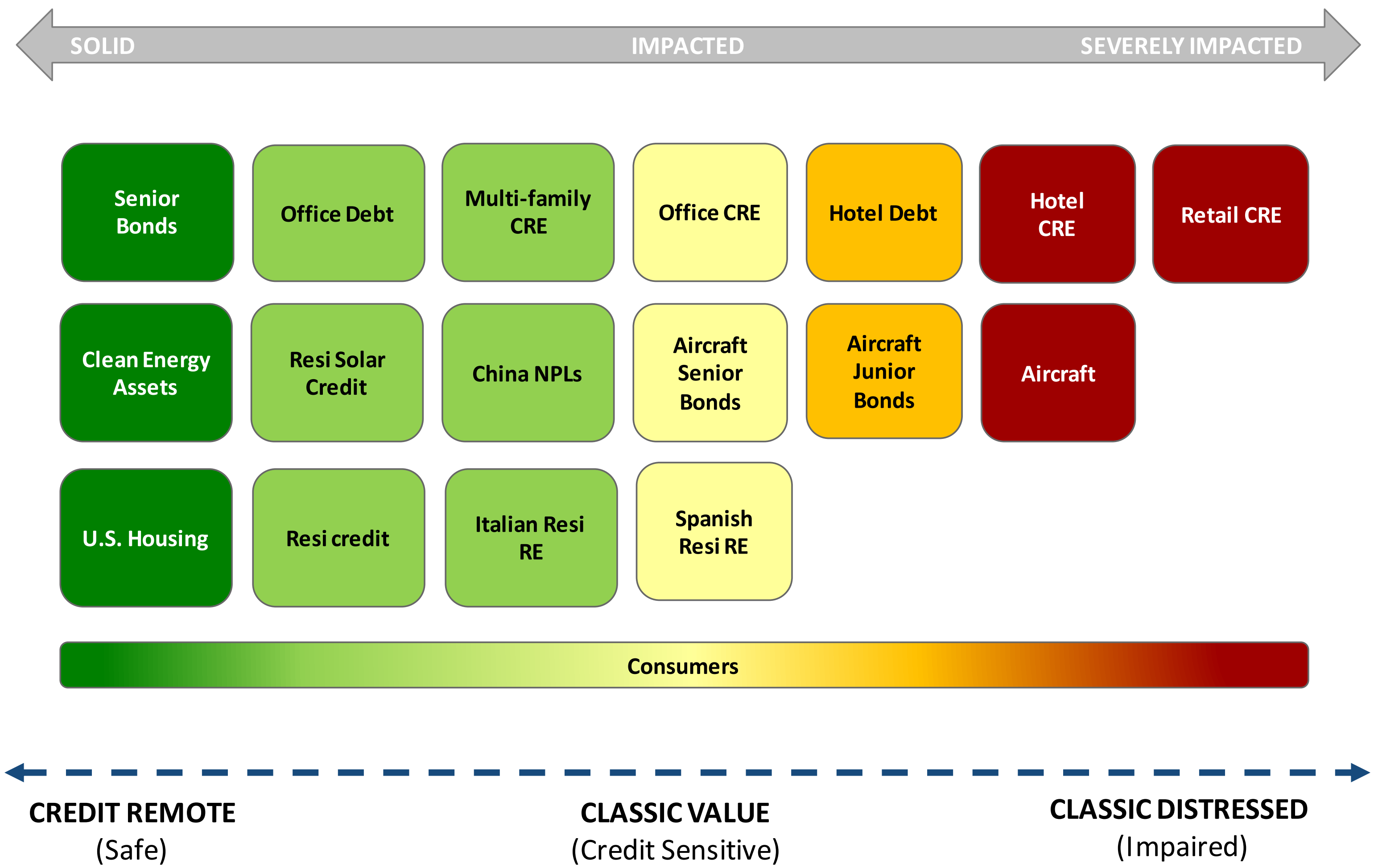


Loan Recovery Distributions

QE enabling weaker covenants today but higher leverage and weaker credit quality means lower recoveries and higher trading volatility tomorrow

Source: Citi Research, Bloomberg, Markit

CRISIS CREATES OPPORTUNITIES TO BUY VALUE AS WELL AS A PIPELINE OF DISTRESS



Based on CarVal's general view of the market and subject to change.

USING THE FULL TOOLBOX THROUGH CYCLE

COVID Market Dislocation Mar-June 2020	COVID "Honeymoon" & Correction June – Sept 2020	Recovery Reality Check Q4 '20- Q1 '21	Economic & Market Uncertainty 2021 - ?

Activity Since March

Pipeline and Opportunity Set

Liquid

- Buy HY Dislocation
- Buy European Financials
- Buy IG Energy
- Buy Dislocated ABS/RMBS

- Sell HY Dislocation
- Sell European Financials
- Sell IG Energy
- Buy IG Compression
- Buy ABS Compression
- Buy HY Basis/Decompression

- Corporate Airline Distressed
- Corporate DM Distressed
- Corporate EM Stressed
- Stressed to Compressed

Illiquid

- Buy Initial Aviation Investments
- Buy Initial European LPs
- Buy Solar Assets

- CRE Debt
- Aviation Assets
- European Loan Portfolios
- U.S. Consumer Assets
- Solar Assets

The investment opportunities are for illustrative purposes only. The pipeline changes frequently. CarVal makes no representation that any CarVal-managed investment vehicle has or will participate in these investment opportunities. See disclaimer regarding risk of loss and investment objectives.

CARVAL INVESTORS®

CVF V INVESTMENT FOCUS TODAY ACROSS FOUR BOXES

- Financials
- Restructurings
- Energy and Renewables
- Bankruptcies and liquidations
- High yield bonds
- Retail

- Aircraft ABS
- U.S. and European CMBS
- U.S. reperforming mortgage loan securitizations

- $68 billion Illiquid annual opportunity set[1]
- Newer, higher quality aircraft
- EETCs
- Bankruptcies and liquidations

- European loan portfolios (estimated €1.22 trillion in NPLs[2])
- U.S. commercial real estate debt with focus on hospitality (hospitality debt outstanding estimated to be $300 billion today[3])
- Secondary debt on REITs (large universe of CUSIPS, with $68 billion of issuance in 2019 and $20 billion in 2020 YTD[3])
- Renewable energy
- U.S. consumer
- Re-performing loans
- Chinese NPLs (approximately $0.4 trillion of NPLs in banking system[4])

[1]Source: Ascend and CarVal Investors data; as of January 2019
[2]Source: Morgan Stanley, SNL Financial, FitchConnect, ESM calculations, Deutsche Bank
[3]Sources: Mortgage Bankers Association Q2 2020; Trepp October 2020 Delinquency Report
[4]Source: Pepper China NPL – Market Report; 2020 H1

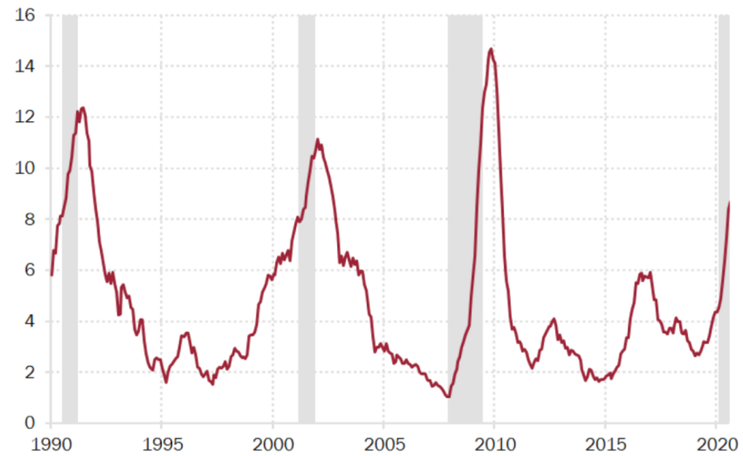
MARKET OPPORTUNITIES

CARVAL INVESTORS®

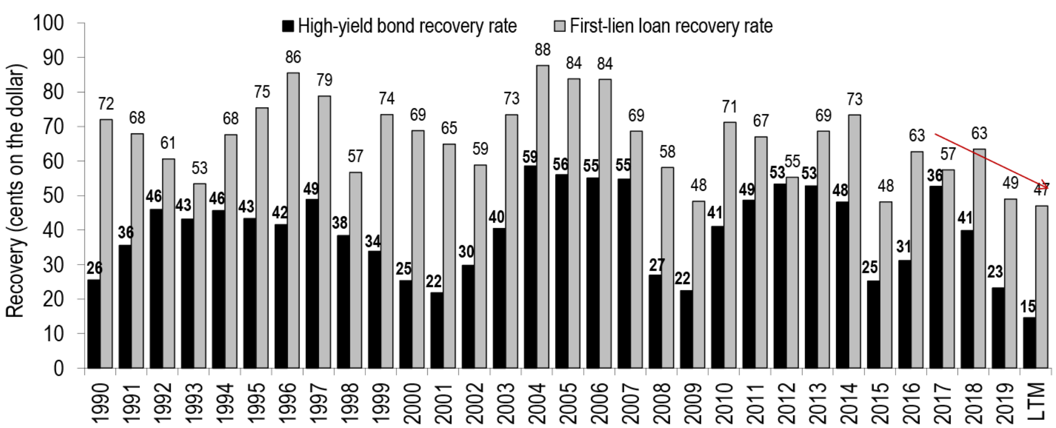
CORPORATE SECURITIES

- High Yield, Leveraged Loans, Financials and Distressed are presenting very different opportunities in response to low rates, QE and a slowing real economy
- Default rates are rising but lax covenants and low rates are delaying the inevitable - recovery rates for secured and unsecured debt are at record lows
- CarVal is selectively building positions where it can be influential and where entry prices appropriately reflect timing and recovery risk. Sectors include leisure and entertainment, energy, telecoms.
- CarVal continues to be an established investor in European financials. Q1 2020 provided an opportunity to rebuild positions that have largely been sold into the recovery. Increasing loan loss provisions and low profitability present challenges over the medium term.
- QE is creating opportunities in performing credit as the Fed-induced rally has narrowed the spread between unsecured and secured debt. This anomaly creates basis trades in High Yield that carry positively but with option upside on default.

High Yield default rates are still rising



Recovery rates are at record lows



- Average recovery rates for U.S. high yield bonds were 15c and those for first lien debt were 47c for the year to September 2020.
- Recovery rates were depressed by the large number of defaults in the energy sector including several borrowers restructuring for the second time – "Chapter 22"
- Investing when recoveries are low requires patience and a high degree of selectivity. Value flowing to new money providers can be significant. CarVal expects to have fewer and larger positions than in previous cycles.

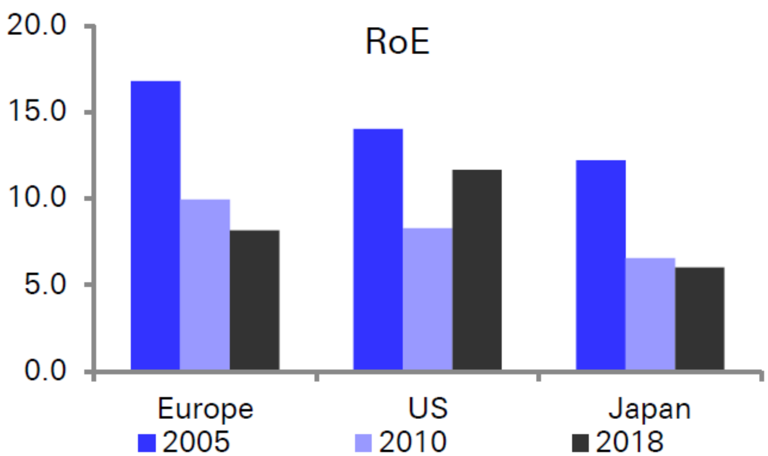
Source: ICAO, IATA and CarVal estimates

CARVAL INVESTORS®

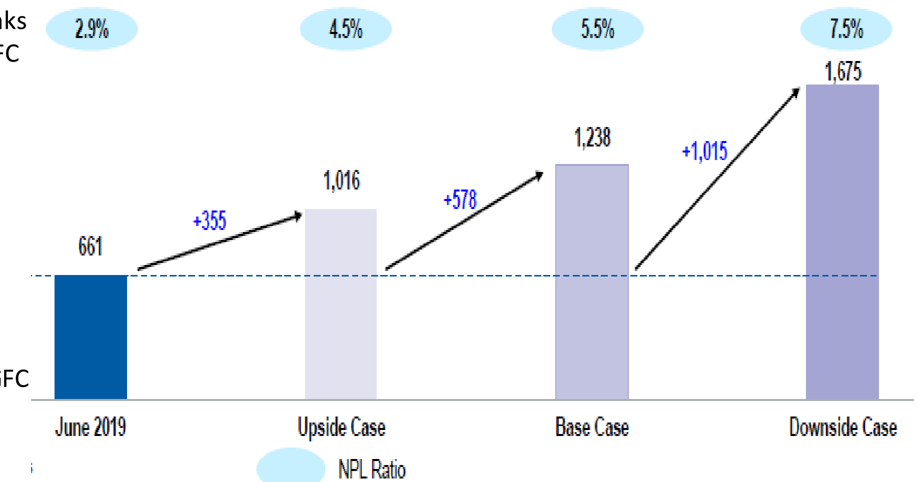
LOAN PORTFOLIOS

- The COVID-19 Crisis has already resulted in a build up of bad loans. IFRS 9 requires early recognition of impairment and provisions against losses. Loans with credit impairment (IFRS 9 stage 2 loans) among Eurozone banks increased 58% in 20H1 reaching €1.22 trillion, comparable to the post GFC peak.
- CarVal has been one of the top four buyers of European loan portfolios since the GFC investing across secured, sub-performing and non-performing.
- Despite government support programs, CarVal anticipates high levels of corporate and SME defaults. An abrupt spike in unemployment has the potential to impact residential markets when payment holidays end.
- Loan portfolio sales will come earlier in this cycle and with less competition. Banks are generally better capitalized than going into the GFC and have the infrastructure in place to execute loan portfolio sales. Concurrent hits to global GDP are likely to bring assets to market in a consistent window creating opportunities to source assets with limited competition.

European Bank profitability has been under pressure since the GFC



Gross stage two loans among Eurozone banks increased 58% in H1 2020 to Euro 1.22 trillion

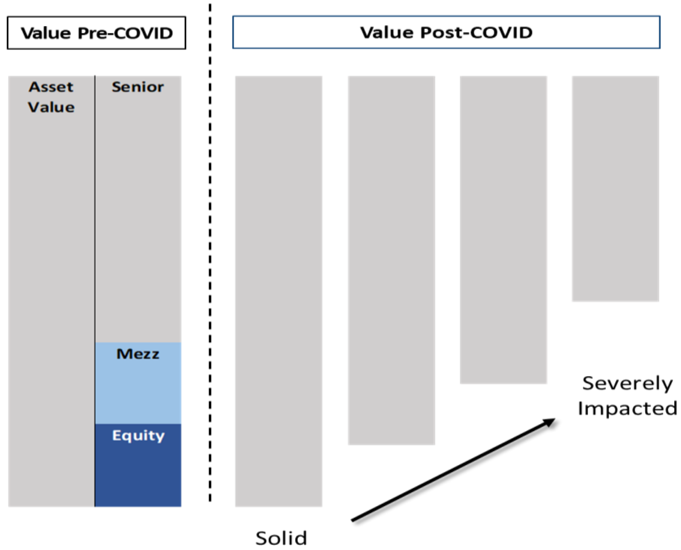


- Falling net interest margin and subdued net new lending growth has depressed return on equity for European banks since the Global Financial Crisis.
- Banks are responding to falling return on equity by active management of RWAs:
  - Full capstack securitization (originate to sell)
  - Credit risk transfer
  - Portfolio sales
- Reperforming and sub-performing (occasional payers) portfolios are particularly attractive. Stable cashflows and high payrate are attractive to investors but credit impairment leads to capital inefficiency on bank balance sheets.
- Capital vacuums present new lending opportunities

Source: Morgan Stanley, SNL Financial, FitchConnect, ESM calculations, Deutsche Bank

COMMERCIAL REAL ESTATE DEBT

Falling real estate values impair equity and potentially debt



- Commercial mortgage-backed securities represent approximately 16% of U.S. commercial real estate debt and provide the most contemporaneous data for real estate values
- Re-appraisal of 153 properties since COVID points to changes in value that have the potential to impact equity and mezzanine

Status of U.S. CMBS loans as of August 31, 2020

Status of CMBS Loans	%	Amount
Watchlist	19.7%	$74.2 billion
Delinquent loans	7.9%	$29.7 billion
Specially serviced loans	8.8%	$33.1 billion

Source: Morgan Stanley

- Falling asset values, financing structures and sponsor support lead to a wide range of post-COVID outcomes
- Work from home and travel shutdowns have resulted in deep reductions in income. U.S. Hotel RevPar down 2x GFC, 3x 9/11. Inability to cover operating income forces early action.
- CarVal is sourcing new lending for hospitality, multi-family and secondary loan sales for stressed and non-performing assets where entry basis reflects post-COVID valuation and asset recovery base case is three years.

Result of 153 re-appraisals across U.S. CMBS

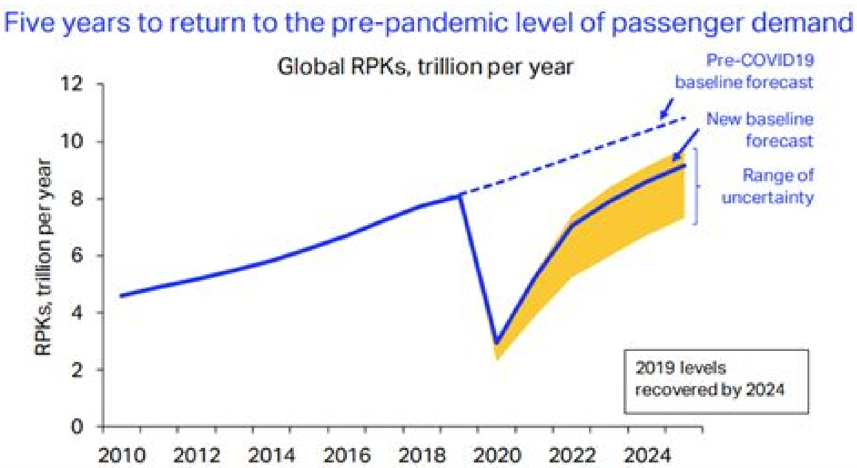
Property type	Average % Change in Value Since Origination
Retail	- 25.7%
Hotel	- 40.7%
Multifamily	- 31.1%
Office	- 13.2%
Industrial	+ 55.9%

Source: Intex

- Approximately $3.5 trillion of U.S. commercial real estate debt outstanding
- 19.7% of U.S. CMBS loans delinquent or in special servicing as of August 31, 2020
- Read across suggests as much as $750 billion of distressed debt for the market as a whole

Sources: Mortgage Bankers Association Q2 2020; Trepp October 2020 Delinquency Report

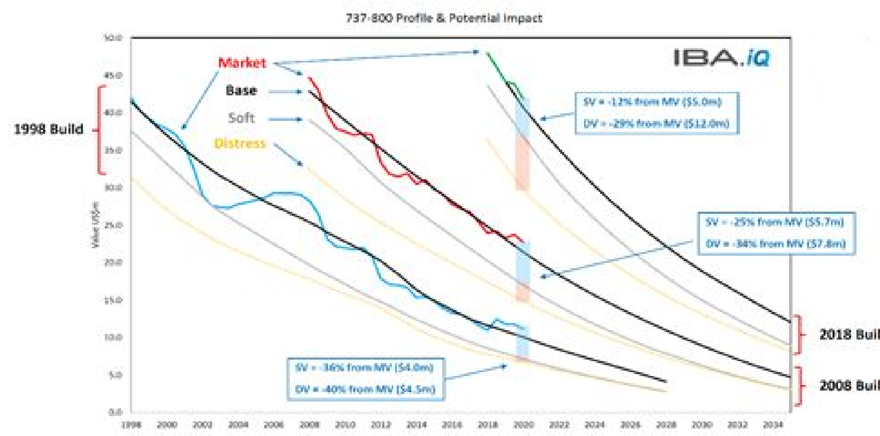
HARD ASSETS: AVIATION



Source: IATA/Tourism Economics Air Passenger Forecasts

- We expect new aircraft values to drop 10 – 15%
- Older aircraft values to drop 25 – 50%
- Over a 4-5 year time frame we would expect aircraft values revert to long term trends

- IATA is now predicting a -68% fall in traffic in 2020
- COVID-19 crisis is deeper and more prolonged than previous pandemics….and the market is still not sure how long it will last
- Recovery will depend on:
  - — Global health management regime
  - — Traveler confidence returning and
  - — Supportive business environment
- IATA is predicting it takes five years to return to 2019 traffic levels



Source: IBA

- Airline daily cash burn creating liquidity issues
- Lessee delinquencies and payment holidays creating liquidity issues for lessors
- Airline cancellations creating white tail opportunities with original equipment manufacturers

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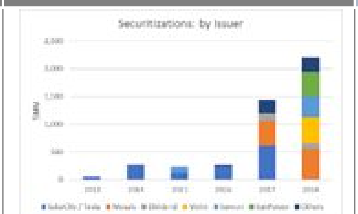
AIRLINE BALANCE SHEETS UNDER PRESSURE

Source: IBA as of November 18, 2020

RENEWABLE ENERGY

CARVAL INVESTORS

Renewable Energy and Sustainability Projects

Secured Debt	Solar ABS	C-PACE / Efficiency	C&I Solar & Storage	Residential Solar Loans
				
Project finance bonds or loans secured on renewables assets	Asset–backed securities where underlying assets are residential solar loans or other renewables	Financing energy efficiency improvements, including Commercial Property Assessed Clean Energy loans	Acquisition of mid-scale solar facilities with long term contractual cashflows	Newly originated loans to homeowners installing residential solar
Levered Gross Returns: **12% - 15%**	Levered Gross Returns: **12% - 15%**	Levered Gross Returns: **15% - 20%**	Levered Gross Returns: **14% - 16%**	Levered Gross Returns: **12% - 14%**
Traded	**Traded**	**Private**	**Private**	**Private**
Market Size **$20B+**	Market Size: **$10B+**	Market Size: **$10B+**	Market Size: **$20B+**	Market Size **$10B+**

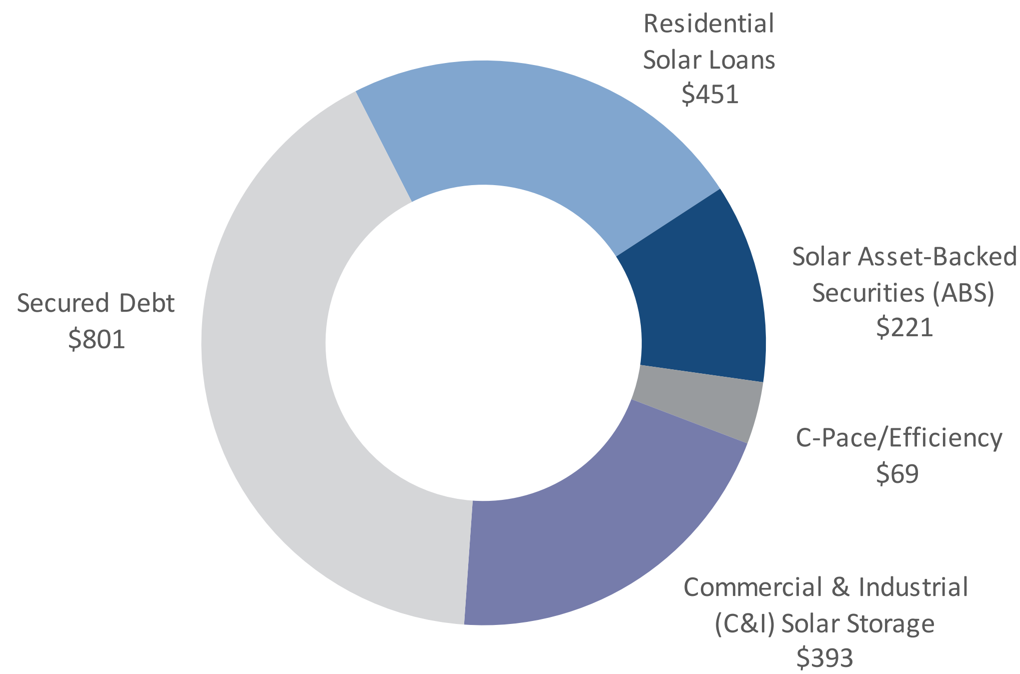
Each return shown herein is the gross investment return and does not include a deduction for fund-level costs, expenses, or performance or management fees. These are targets based on CarVal's current understanding on the market. No guarantee targets will be achieved. See disclaimer regarding Targeted Returns.

CARVAL HAS INVESTED OVER $2 BILLION IN CLEAN ENERGY

Clean Energy Investments by Asset Type*

As of February 28, 2021 (estimate)

($ millions)



*Gross investment is the total equity plus debt funded ITD

APPENDIX

CARVAL INVESTORS®

RESPONSIBLE INVESTING

CarVal's Responsible Investing Policy in brief:

- We will incorporate ESG issues into investment analysis and decision making process
- Except where the UN Principles are in conflict CarVal's broader fiduciary responsibilities they form the basis of CarVal's commitment to RI
- CarVal has established a Responsible Investing Committee headed by the Chief Financial Officer to monitor the effectiveness and implementation of this policy

CarVal is a member of SASB, Sustainability Accounting Standards Board

CarVal is a UNPRI signatory

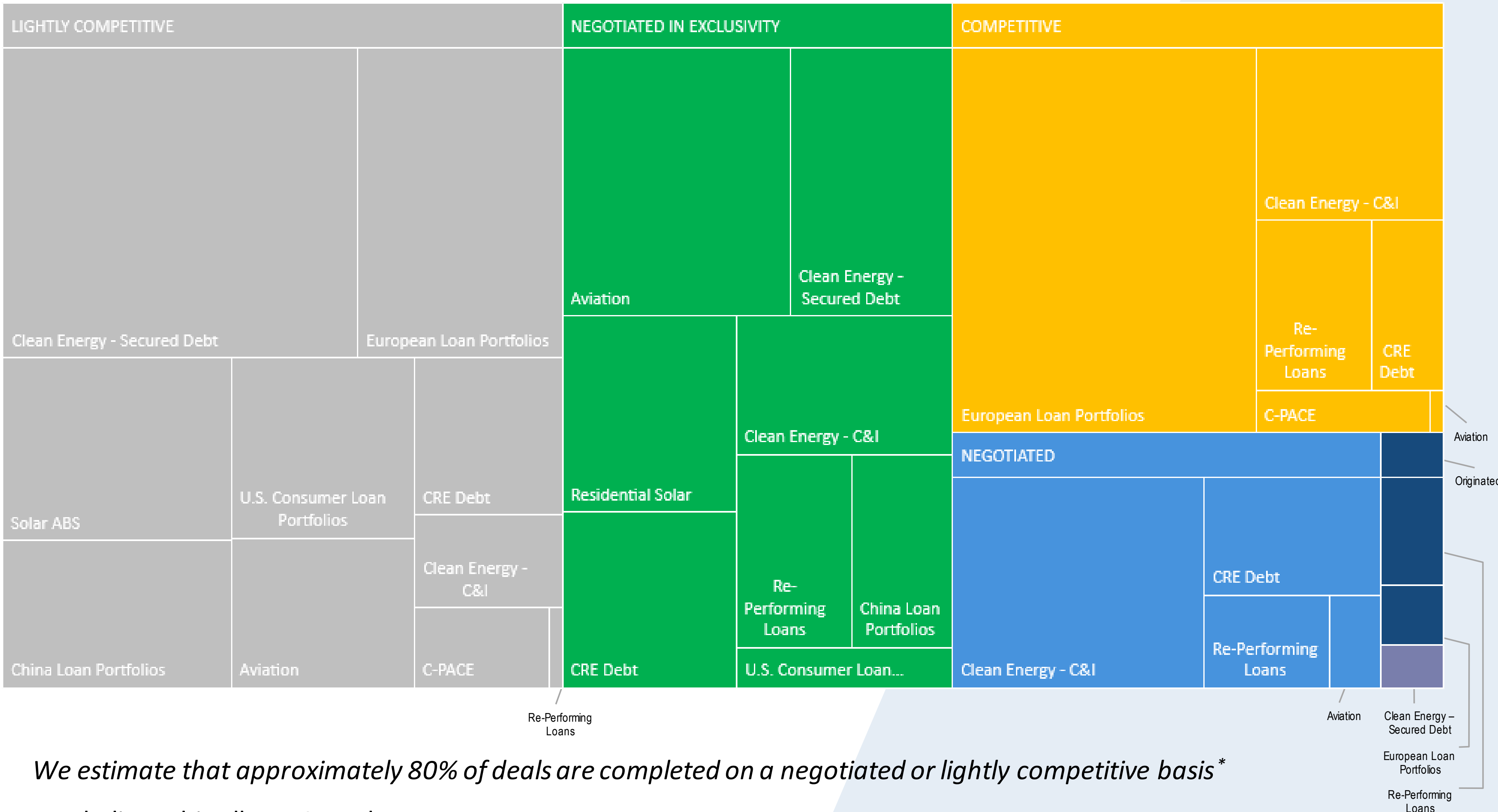
CVF V will incorporate CarVal's Responsible Investing Policy

- Since the business' origins in 1987, CarVal has adhered to strict investment discipline and strong ethics and compliance.
- In 2017, CarVal built on this discipline by adopting a formal Responsible Investing Policy based on the United Nations Principles for Responsible Investment.
- In 2020, CarVal committed to join UNPRI
- The investment team and the Portfolio Investment Committee will incorporate Environmental, Social and Governance (ESG) issues into all investment analysis and decision making. While ESG issues may not be the determinant of an investment decision, they will be incorporated into investment analysis and will be considered by the Portfolio Investment Committee on every investment.
- CarVal screens and excludes a limited set of industries, including certain types of weapons manufacturing – e.g. nuclear weapons, landmines and cluster munitions


CARVAL
Responsible Investing Policy
POLICY
POLICY OBJECTIVES
POLICY OVERVIEW

ALLIANCE
ORGANIZATIONAL MEMBER

CARVAL'S SOURCING EDGE



*We estimate that approximately 80% of deals are completed on a negotiated or lightly competitive basis**

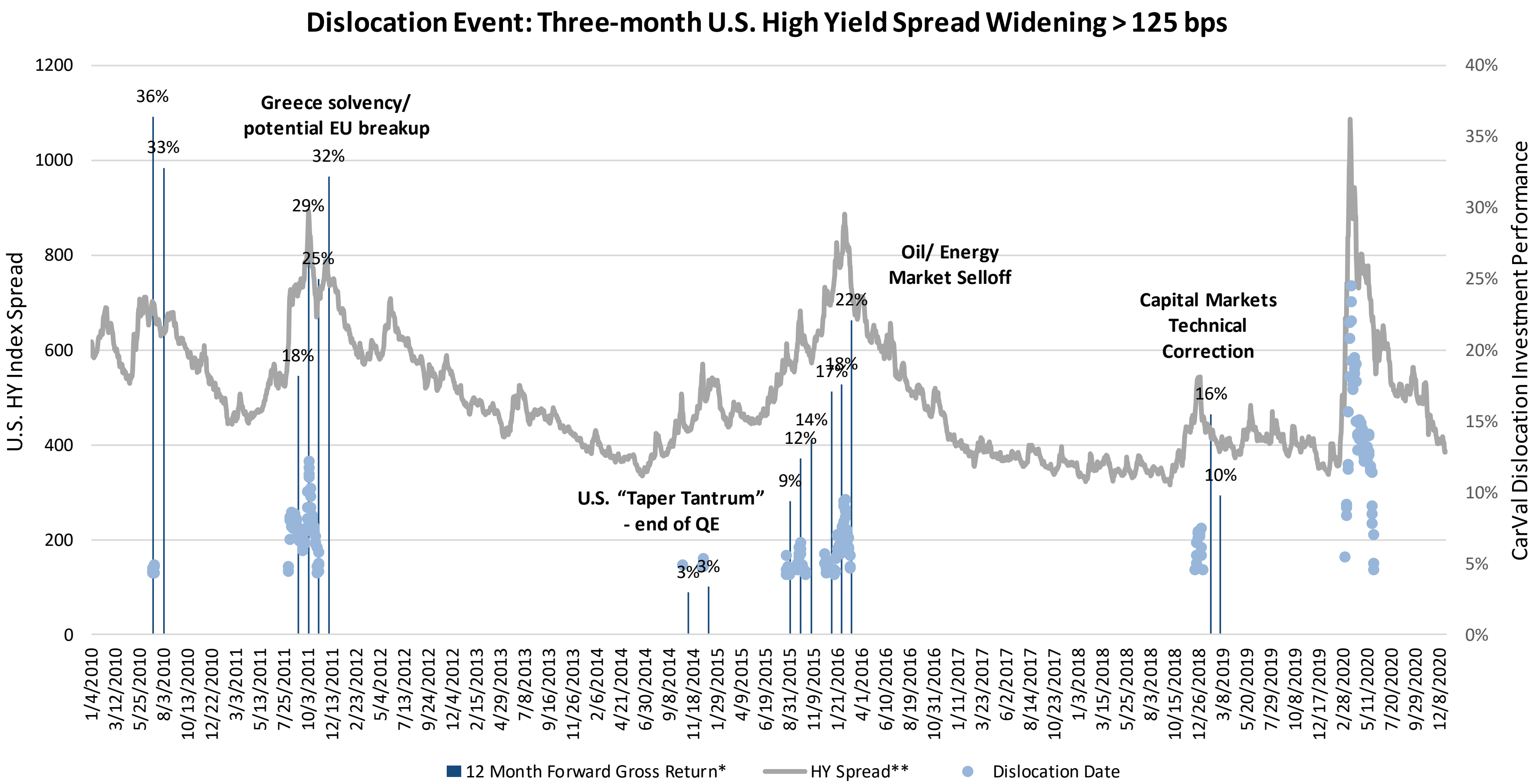
We believe this allows CarVal to:

- Be more selective about the types of assets we acquire
- Negotiate protective provisions

The chart above is a snapshot that illustrates what CarVal believes is its sourcing edge across opportunistic credit strategies.
**Measured during the period from January 2020 – December 2020*

CARVAL INVESTORS®

CARVAL: CREDIT MARKET DISLOCATION INVESTING 2010-2020



CarVal's corporate investment 12-month performance following a dislocation event

2010 is used as a starting point in order to provide an adequate number of years to show multiple periods of dislocation dates. The period surrounding the financial crisis of 2008 is not shown due to the extremes in the number and size of dislocations in that period.

**The 12-month Forward Gross Return ("Gross Return") is calculated for the 12-month period starting with the first day of the month immediately following a dislocation date. The Gross Returns reflect the aggregate gross performance in all corporate investments held at any time in the relevant 12-month period by one or more funds managed by CarVal. Gross Return used herein means the gross investment return and does not include a deduction for fund-level costs, expenses, or performance or management fees, which will reduce the returns. The funds have also invested in other asset classes that are not represented here. Fund-specific returns differ from those shown here, and such differences may be material. The returns shown above do not represent the actual investment return experienced by any investor.*

***The High Yield Spread ("HY Spread") refers to the difference in yield between high yield bonds and U.S. Treasuries, as measured by the ICE BofAML US High Yield Index (H0A0), which tracks the performance of U.S. dollar-denominated below-investment-grade corporate debt publicly issued in the U.S. domestic market. The HY Spread is provided here for information only, as an indicator of market dislocation. However, the Gross Returns shown incorporate instruments that are not part of the H0A0 index, including but not limited to bonds that do not meet the index's definition of high yield, liquidation claims, and securities denominated in currencies other than U.S. dollars*

This chart reflects trading in corporate securities, excluding emerging markets investments. This population reflects our belief that traded developed markets are likely to react most quickly to and present the widest opportunity set in dislocated markets. Full track record is available upon request.

CARVAL INVESTORS®

CARVAL INVESTORS PLATFORM

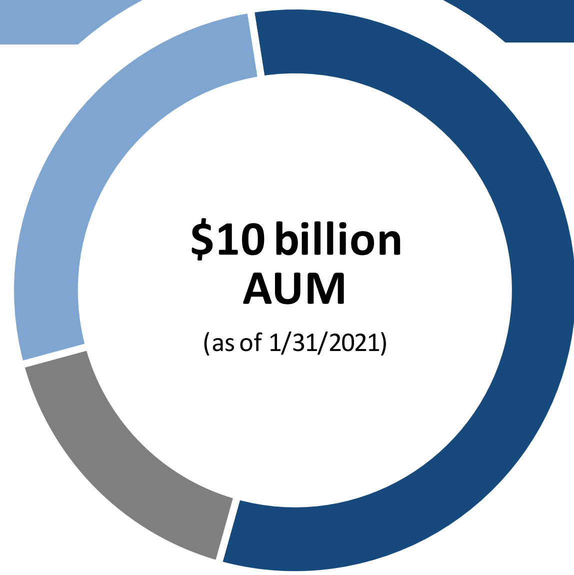
EVERGREEN FUNDS - $2.6 billion

Global Credit Fund[1]
- Target Net Return: 10-12%

Single Investor Funds
- Target Net Return: 10-15%

OTHER - $1.6 billion

Corporate Loans
- CLO I, CLO II, CLO III



DRAWDOWN FUNDS - $5.5 billion

Credit Value Funds
- **CVF I, II, III, IV, V**[1]
- Target Net Return: 15%

Emerging Markets Credit Opportunities Fund
- Target Net Return: 15%+

Aviation Income Fund
- Target Net Return: 10-12%

Clean Energy Fund[1,2]
- Target Net Return: 10-13%

Single Investor Funds
- Target Net Return: 10-15%

[1] Open for investment
[2] This Fund is not being offered in the United Kingdom or any country of the European Economic Area. Other open funds are offered in select EEA jurisdictions only.

CarVal's diverse base of funds allows access to the firm's proprietary global credit platform

In addition to the funds specified above, CarVal's AUM includes the residual value of the Global Value Fund, Shipping Opportunities Fund, Emerging Markets Credit Value Fund, Real Estate funds and the Cargill Managed Account.
See disclaimers regarding Risk of Loss and Targeted Returns.

CARVAL INVESTORS

CARVAL AS A SUCCESSFUL ISSUER

- CarVal is an active issuer of new products in the market, successfully launching:

SLATE I	SLATE II	MCMLT	MCMLT	DUKINFIELD I	MCMLT	HAWKSMOOR	HAWKSMOOR
October 2014	October 2014	2015-1	2015-2	August 2015	2016-1	2016-1	2016-2
£2,384,335,000	£408,258,000	$474,159,000	$272,038,000	£459,700,000	$504,545,000	£2,250,000,000	£1,123,690,000
U.K. Residential Loans	U.K. Residential Loans	U.S. Residential Loans	U.S. Residential Loans	U.K. Residential Loans	U.S. Residential Loans	U.K. Residential Loans	U.K. Residential Loans

DUKINFIELD II	MCMLT	MCMLT	MCMLT	METAL	MARLETTE FUNDING*	DPF	MARLETTE FUNDING*
September 2016	2017-1	2017-2	2017-3	2017-1	2017-2	2017-1	2018-1
£316,958,000	$395,316,146	$382,440,865	$433,817,744	$584,839,000	$247,777,242	€867,004,000	$495,055,015
U.K. Residential Loans	U.S. Residential Loans	U.S. Residential Loans	U.S. Residential Loans	Aircraft	U.S. Consumer Loans	Netherlands Residential, Commercial and Mixed Use Loans	U.S. Consumer Loans

MCMLT	CARVL CLO I	MCMLT	MCMLT	DPF	MCMLT	CARVL CLO II	MCMLT
2018-1	2018-1	2018-2	2018-3	2018-1	2018-4	2019-1	2019-1
$381,651,881	$512,250,000	$437,940,190	$426,064,874	€400,000,000	$627,658,649	$732,750,000	$440,000,000
U.S. Residential Loans	Broadly Syndicated Loans	U.S. Residential Loans	U.S. Residential Loans	Netherlands Residential, Commercial and Mixed Use Loans	U.S. Residential Loans	Broadly Syndicated Loans	U.S. Residential Loans

MCMLT	DPF	MCSLT	CARVL CLO III	MCMLT	MCSLT-2	MIRAVET	DPF 2020-1
2019-GS1	2019-1	March 2019	2019-2	2019-GS2	July 2019	2019-1	January 2020
$386,000,000	€400,000,000	$241,449,000	$504,000,000	$453,000,000	$217,000,000	€350,000,000	€300,000,000
U.S. Residential Loans	Netherlands Residential, Commercial and Mixed Use Loans	U.S. Solar Loans	Broadly Syndicated Loans	U.S. Residential Loans	U.S. Solar Loans	Spanish Residential Loans	Netherlands Residential, Commercial and Mixed Use Loans

MCSLT 2020-1	DPF 2020-2	MIRAVET 2020-1	LPSLT 2021-1*
June 2020	September 2020	November 2020	January 2021
$195,314,056	€325,000,000	€620,000,000	$474,300,000
U.S. Solar Loans	Netherlands Residential, Commercial and Mixed Use Loans	Spanish Residential Loans	U.S. Solar Loans

**CarVal Investors funds contributed to these loans and the total balance includes additional collateral outside of the CarVal contributions.*

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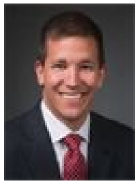
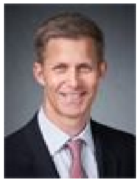
CARVAL SENIOR INVESTMENT TEAM



Lucas Detor - Mr. Detor is a managing principal and member of the Investment Committee for CarVal Investors, responsible for leading the firm's investment strategy and management. He also leads the firm's high yield and transportation investments and oversees capital formation and emerging markets for the firm. Mr. Detor joined CarVal from Morgan Stanley, where he most recently served as managing director and co-head of the global distressed and U.S. leveraged loan business. Mr. Detor has also served the U.S. government as a Special Agent with the United States Secret Service, as well as serving in the U.S. Army Reserves and New York National Guard. Mr. Detor received his M.B.A. from NYU's Stern School of Business and his B.S. in Accounting from SUNY Albany and is a Certified Public Accountant (inactive).



James Ganley - Mr. Ganley is a managing principal and member of the Investment Committee for CarVal Investors, responsible for leading the firm's investment strategy and management, as well as distressed corporate credit investments in the U.S. and Europe, and risk and portfolio management across CarVal's credit funds and investments globally. Prior to joining CarVal in 2009, Mr. Ganley was a managing director for the Special Situations Group at Goldman Sachs in Europe where he focused primarily on corporate credit investments including distressed credit, high-yield credit, event-driven investing and liquidations. Mr. Ganley received his M.B.A. from the University of Chicago and his B.S. in finance and accountancy from Villanova University and is a Certified Public Accountant (inactive).

Jody Gunderson - Ms. Gunderson is a managing principal and member of the Investment Committee for CarVal Investors, responsible for leading the firm's investment strategy and management, as well as its global loan portfolios, clean energy and real estate businesses. In addition, Ms. Gunderson manages investments in asset-backed securities globally, including residential mortgage-backed securities, commercial mortgage-backed securities and collateralized loan obligations. Prior to joining CarVal in 1994, Ms. Gunderson was a manager in the financial services practice of PricewaterhouseCoopers where she served investment fund, commercial banking and thrift clients. Ms. Gunderson earned her B.S. degree in Business from the University of Minnesota and is a Certified Public Accountant (inactive).

David Fry - Mr. Fry is the chief risk officer and a member of the Investment Committee for CarVal Investors. He is responsible for oversight of the portfolio and identification, quantification and communication of material risks. Prior to joining the firm in 1997, Mr. Fry was with Credit Suisse Financial Products in London in risk measurement, and in the financial risk management practice of Deloitte and Touche. Mr. Fry received his B.Sc. in mathematics, operational research, statistics and economics from the University of Warwick, UK and qualified as a UK Chartered Accountant.

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BofAML US High Yield Index	The index tracks the performance of below-investment-grade U.S. dollar-denominated corporate bonds publicly issued in the U.S. domestic market.
HFRI Fund Weighted Composite Index	The HFRI Fund Weighted Composite Index is a global, equal-weighted index of over 2,000 single-manager funds that report to HFR Database. Constituent funds report monthly net of all fees performance in U.S. Dollar and have a minimum of $50 Million under management or a twelve (12) month track record of active performance. The HFRI Fund Weighted Composite Index does not include Funds of Hedge Funds.
HFRI Event-Driven: Distressed/ Restructuring Index	The HFRI indexes are a series of benchmarks designed by Hedge Fund Research, Inc. ("HFRI") to reflect hedge fund industry performance by constructing composites of constituent funds, as reported by the hedge fund managers listed within HFRI's database. The HFRI ED Distressed Restructuring Index is designed to be representative of funds that employ an investment process focused on corporate fixed income instruments, primarily on corporate credit instruments of companies trading at significant discounts to their value at issuance or obliged (par value) at maturity as a result of either formal bankruptcy proceeding or financial market perception of near term proceedings. Managers are typically actively involved with the management of these companies, frequently involved on creditors' committees in negotiating the exchange of securities for alternative obligations, either swaps of debt, equity or hybrid securities. Managers employ fundamental credit processes focused on valuation and asset coverage of securities of distressed firms; in most cases portfolio exposures are concentrated in instruments which are publicly traded, in some cases actively and in others under reduced liquidity but in general for which a reasonable public market exists. In contrast to Special Situations, Distressed Strategies employ primarily debt (greater than 60%) but also may maintain related equity exposure.
S&P 500	Market-capitalization-weighted index of the 500 largest U.S. publicly traded companies.

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VCERA
VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

March 29, 2021

Board of Retirement
Ventura County Employees' Retirement Association
1190 South Victoria Avenue, Suite 200
Ventura, CA 93003

SUBJECT: ASSET-LIABILITY STUDY

Dear Board Members:

The following report is of an asset-liability study conducted for VCERA by NEPC with actuarial data contributed by VCERA's actuary Segal Consulting. The study employed Q4 2020 investment return projections; used the current 7.25% actuarial assumed rate; and, considered objectives over periods of 10 and 30 years.

This study is intended to provide an asset-liability framework for the asset allocation decision. The goals, objectives, and key findings of the study are listed in the Executive Summary section on pages 3 and 4 of the report. The last asset liability study was done in April 2014.

NEPC and staff will bring asset allocation recommendations to the Board for consideration at the Board's April business meeting.

Respectfully submitted,

Daniel P. Gallagher

Dan Gallagher
Chief Investment Officer

1190 S. VICTORIA AVENUE, SUITE 200 • VENTURA, CA 93003
PHONE: 805-339-4250 • FAX: 805-339-4269 • WWW.VCERA.ORG

ASSET/LIABILITY STUDY

VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

VCERA
VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

March 2021

Allan Martin, Partner

Dan Hennessy, CFA, CAIA, Senior Consultant

Lynda Dennen Costello, ASA, EA, Principal

NEPC

BOSTON | ATLANTA | CHARLOTTE | CHICAGO | DETROIT | LAS VEGAS | PORTLAND | SAN FRANCISCO

AGENDA

EXECUTIVE SUMMARY – BACKGROUND

- **The goals of the study are to:**
  - Review the current and projected financial status of the Plan
    - Project Pension liabilities and benefit payments
    - Project asset growth and contribution levels
  - Assess the appropriateness of the current asset allocation relative to the expected progress of liabilities and cash flows
  - Evaluate alternative asset mixes in light of liabilities and cash flows
  - Use multiple models to develop comprehensive understanding of plan dynamics
    - Risk and return of asset allocation
    - Relationship between assets and liabilities

- **VCERA investment objectives:**
  - Earn the highest possible long-term rate of return consistent with a level of risk that is appropriate given the Plan’s assets and liabilities, funded status, and capital markets outlook
  - Exceed the return of the Plan’s long-term policy index

EXECUTIVE SUMMARY – KEY FINDINGS

- **The funded status of the Plan increased from 88.0% as of July 1, 2019 to 89.6% as of July 1, 2020 on a smoothed value basis**
  - However funded ratio fell 1.5% to 87.7% on a market value basis
  - Actual asset return for FYE June 30, 2020 was 3.5%, but the plan returned 17.5% in the first half of fiscal 2021

- **The Current Target allocation, excluding manager contribution, is expected to produce an average return of 7.2% over the next 30 years, barely less than the target of 7.25% expected return on assets (EROA)**
  - Due to lower interest rates in the long term, the 10-year return faces more headwinds and is expected to return 6.2% per year on average

- **This allocation and liability analysis investigates alternative Asset Mixes in order to improve financial outcomes**
  - Increasing public and private equity to increase return expectations
  - Reducing public fixed income and increasing private fixed income
  - Exploring reduction in dedicated U.S. Treasury exposure and modestly decreasing core bonds

ASSET-LIABILITY STUDY OVERVIEW

NEPC, LLC

ASSET LIABILITY FRAMEWORK

Identify Key Issues

- **Investment-related themes**
- **Demographic trends/changes**
- **Regulatory environment**

Projection of Assets & Liabilities

- **Funded ratio**
- **Contribution requirements**

Multi-Faceted Risk Assessment

- **Mean-variance optimization**
- **Risk budgeting**
- **Economic scenario analysis**
- **Deterministic modeling**
- **Stochastic modeling**

Asset Allocation Recommendation

- **Better risk-adjusted returns**
- **Better performance in specific economic environments**

ASSET ALLOCATION APPROACH

Be Dynamic

Build a **long-term** strategic allocation that can meet long-term objectives

Look for **medium-term** “opportunistic ideas” to tilt away from the strategic allocation to add value, protect against drawdowns, and take advantage of **short-term** market dislocations

Build a Mosaic

No single asset allocation approach or model has all the answers

Minimize exposure to the shortcomings of any individual approach by using multiple perspectives and approaches

All analytical tools have the potential to provide useful insights but also including shortcomings

CURRENT TARGET PROFILE

NEPC, LLC

ASSET ALLOCATION

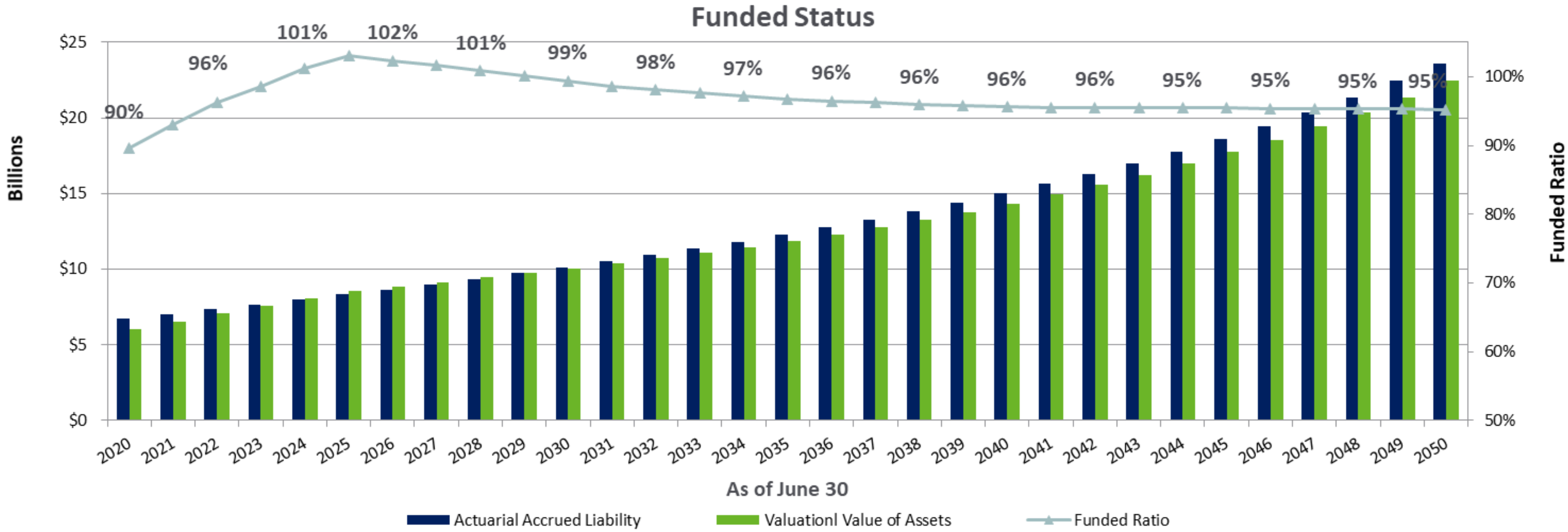
	Current Target
US Large-Cap Equity	22%
US Small/Mid-Cap Equity	3%
Non-US Developed Equity	13%
Emerging Market Equity	3%
Global Equity	10%
Private Equity	15%
Total Equity	**66%**
US Treasury Fixed Income	4%
US Aggregate Fixed income	5%
Absolute Return Fixed Income	6%
Private Debt	5%
Total Fixed Income	**20%**
Core Real Estate	6%
Non-Core Real Estate	2%
Private Real Assets	6%
Total Real Assets	**14%**
Expected Return 10 yrs	**6.2%**
Expected Return 30 yrs	**7.2%**
Standard Deviation	**14.5%**
Sharpe Ratio (10 years)	**0.37**
Sharpe Ratio (30 years)	**0.36**

- **The Current Target has a ten-year expected return of 6.2% using Q4 2020 return projections**
- **The Association's 7.25% EROA is not expected to be achievable over the next 10-year market cycle under the Current Target**
- **The EROA is expected to be attained with a 41% probability over 10 years**
- **Over a longer 30-year time period, expected returns are higher for most asset classes and the expected return of the portfolio is 7.2%, in line with the 7.25% EROA**

ASSET ALLOCATION OBSERVATIONS

- **Asset allocation reflects VCERA' degree of risk tolerance**
  - Expected 30-year return is 7.2% which is just below the assumed actuarial rate of return of 7.25%
  - However, the Current Target encompasses a strategic, long-term perspective of capital markets as well as the nature and structure of VCERA' liabilities
- **Forward-looking environment may continue to be volatile with unique opportunities**
  - COVID-19 has had a significant effect on current market conditions, so it is important to focus on the long-term strategic outlook
  - Market corrections provide opportunities to add risk to the portfolio, while also highlighting the need to add protection against future market volatility
  - Borrowing costs are at all time lows, favoring borrowers
  - Long-term Treasury yields have risen over 50 basis points since this analysis was conducted

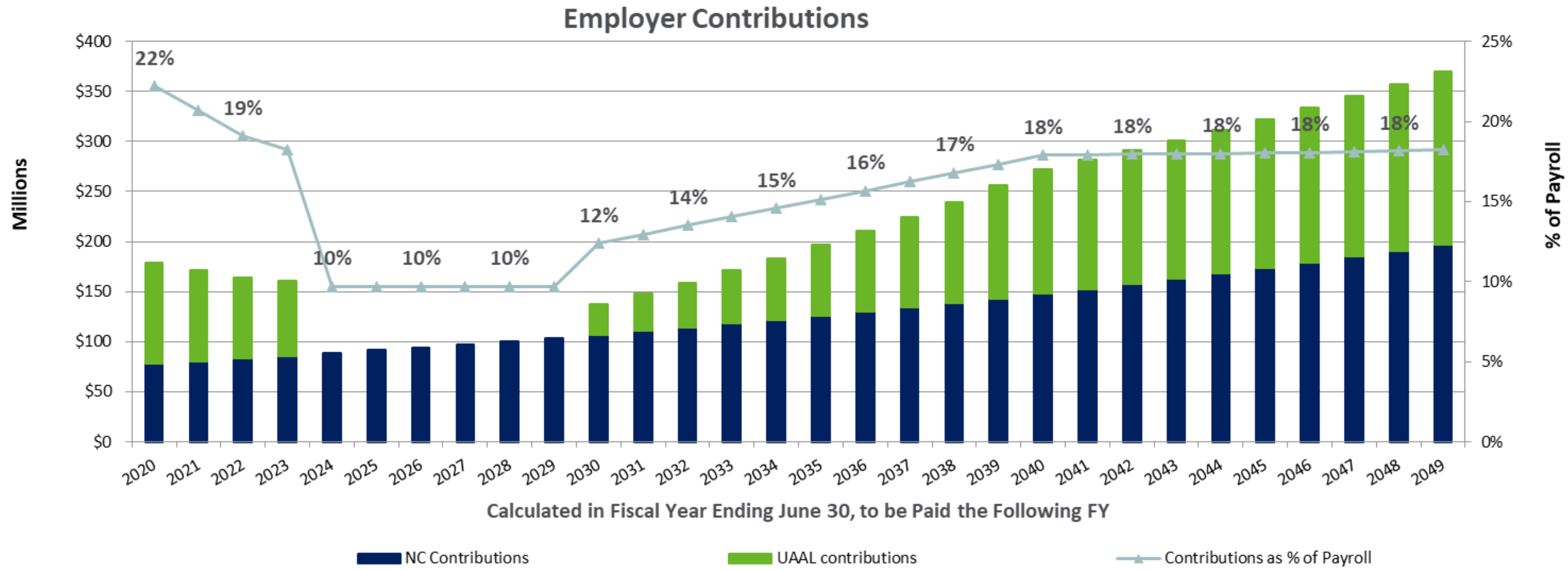
LONG-TERM EXPECTATIONS



- **The funded status of the plan is projected to increase steadily for the next 5 years, then decline slowly over the next 25 years while staying above 95% funded**
  - Funded Status = Valuation Value of Assets / Accrued Liability
- **Market value of assets assumed to return 7.2%, NEPC's 30-year expected return forecast for VCERA**
  - Average annual increase in Actuarial Value of assets is 4.4%
- **Liabilities are estimated to grow at an average pace of 4.3% per year**
  - Discount rate assumed to remain level at 7.25%

Deterministic projections based on the Current Target allocation and NEPC's 12-31-2020 30-year return assumptions. Fiscal YTD 2020 investment return was reported to be 17.5%.

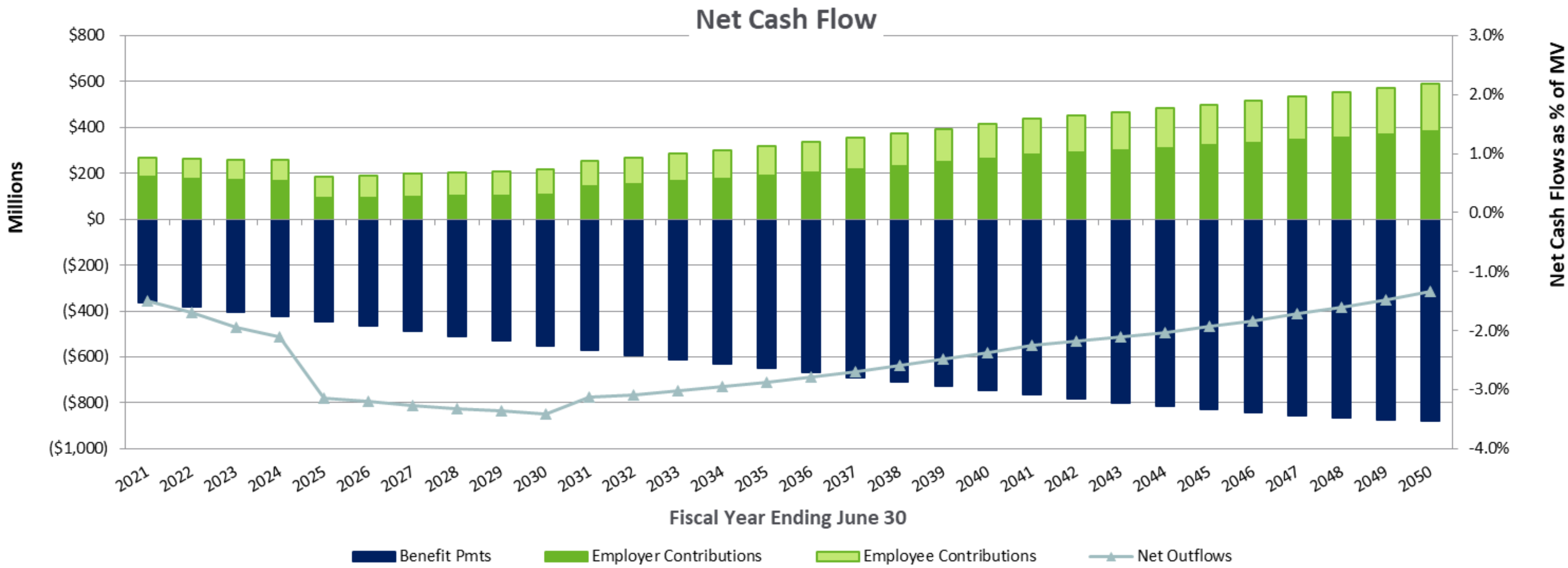
LONG-TERM EXPECTATIONS



- **Assuming a 7.2% investment return, Employer contributions are projected to dip to 10% of payroll by 2024, then slowly start to increase in 2030, ultimately leveling off around 18%**
- **Variations in contributions correspond to various amortization bases becoming fully amortized, and all prior bases being eliminated if a surplus exists**
- **The minimum contribution of 10% of payroll represents the annual normal cost less employee contributions, and is projected to increase annually (in dollar terms) by the 3.25% salary increase assumption**

Deterministic projections based on the Current Target allocation and NEPC's 12-31-2020 30-year return assumptions. Fiscal YTD 2020 investment return was reported to be 17.5%. Assumes prior bases are eliminated if plan reaches 100% funded.

LONG-TERM EXPECTATIONS



- **Benefit payments outweigh total contributions, creating a negative cash flow for the plan**
- **Average annual negative cashflow is 2.6% of market value over the next 30 years**
  - Within the range of a typical public fund pension plan, providing no liquidity concerns
- **Projection assumes a long-term investment return of 7.2%**

Deterministic projections based on the Current Target allocation and NEPC's 12-31-2020 30-year return assumptions. Fiscal YTD 2020 investment return was reported to be 17.5%.

SUMMARY OF CURRENT PROFILE

- **The Current Target allocation is not expected to meet plan objectives over the next 10 or 30 years**
  - Long-term plan expected return of 7.25% is not quite achieved with the December 31, 2020 long term assumption of 7.2%
  - Contributions are projected to remain at reasonable levels and decline over time as a percentage of payroll
- **The funded status of the plan has declined over the last fiscal year in market value terms**
  - Funded status of the plan is expected to increase if expectations are met and recommended contributions are made
- **Given these results, three alternate asset mixes and one comparison mix have been presented for further discussion and analysis in the next section**
  - Increase overall equity exposure through additions to public and private equities
  - Reduce international equity
  - Increase private debt and Treasuries, funded by absolute return
  - Reposition Real Assets Allocation

ALTERNATIVE ALLOCATIONS

NEPC, LLC

PROPOSED ASSET ALLOCATIONS

The goals of the proposed allocations are to achieve:

- Higher expected returns
- Better diversification and tail-risk protection

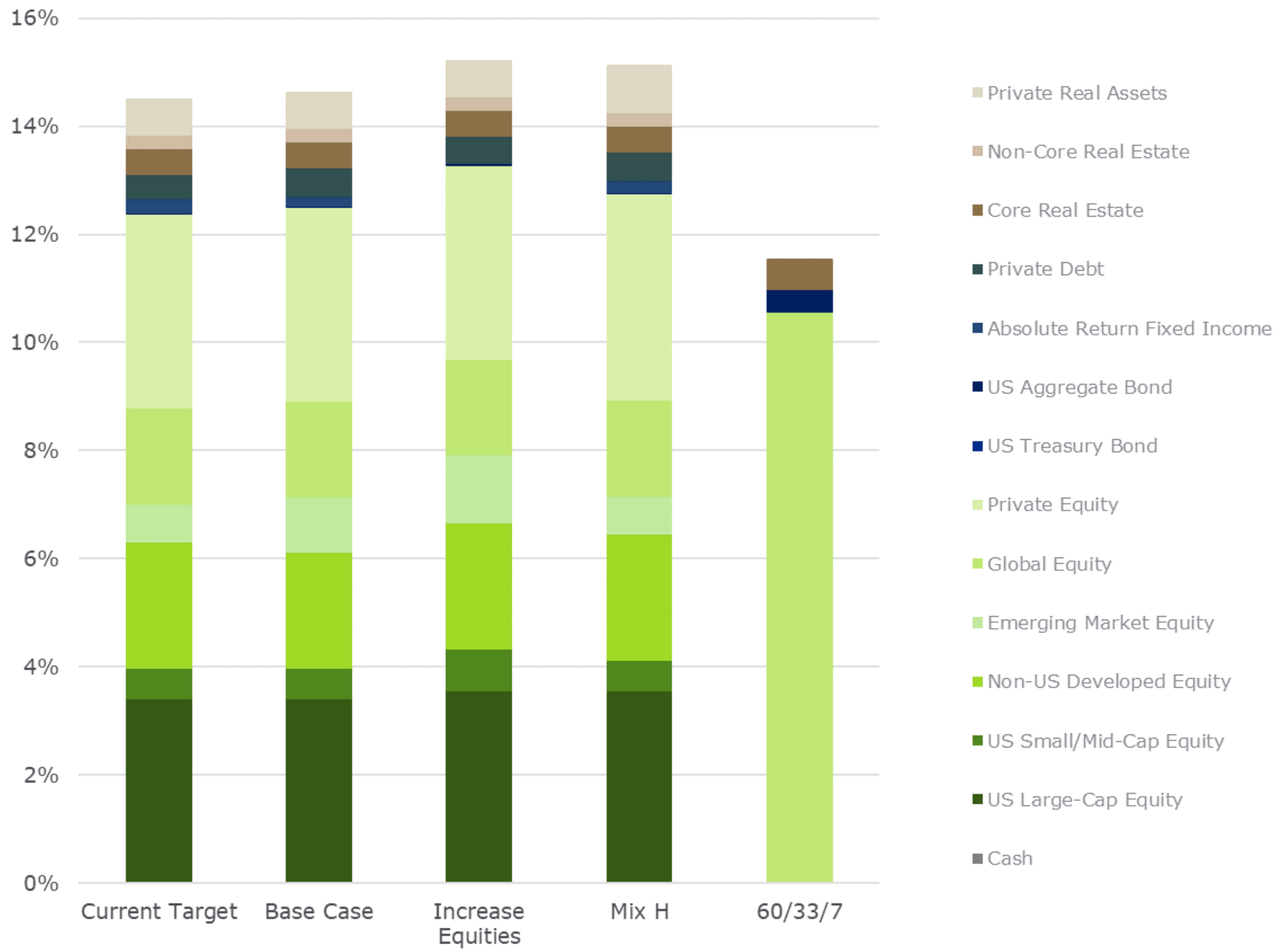
The following allocations are modeled in the next few pages under various economic scenarios:

- **Current Target**
  - Represents the current Investment Policy, which is a well-diversified allocation based on VCERA's risk tolerance
- **Base Case**
  - Makes small adjustments to the allocation by shifting 2% from international developed equities and increasing allocation to Emerging Market Equities
  - Reduces 2% from absolute return fixed income and increases Treasuries and private debt
- **Increase Equities**
  - Increases U.S. public equity by 2% and emerging equities by 2%, funded by elimination of absolute return fixed income
  - Adds 1% to each of Treasuries and private debt
- **Mix H**
  - Increases US large cap equities, private equity and private debt by 1% each, while reducing Treasuries
- **60/33/7**
  - Added for comparison only and represents a simple portfolio of 60% global equities, 33% core fixed income, and 7% real estate

ALTERNATE ALLOCATIONS

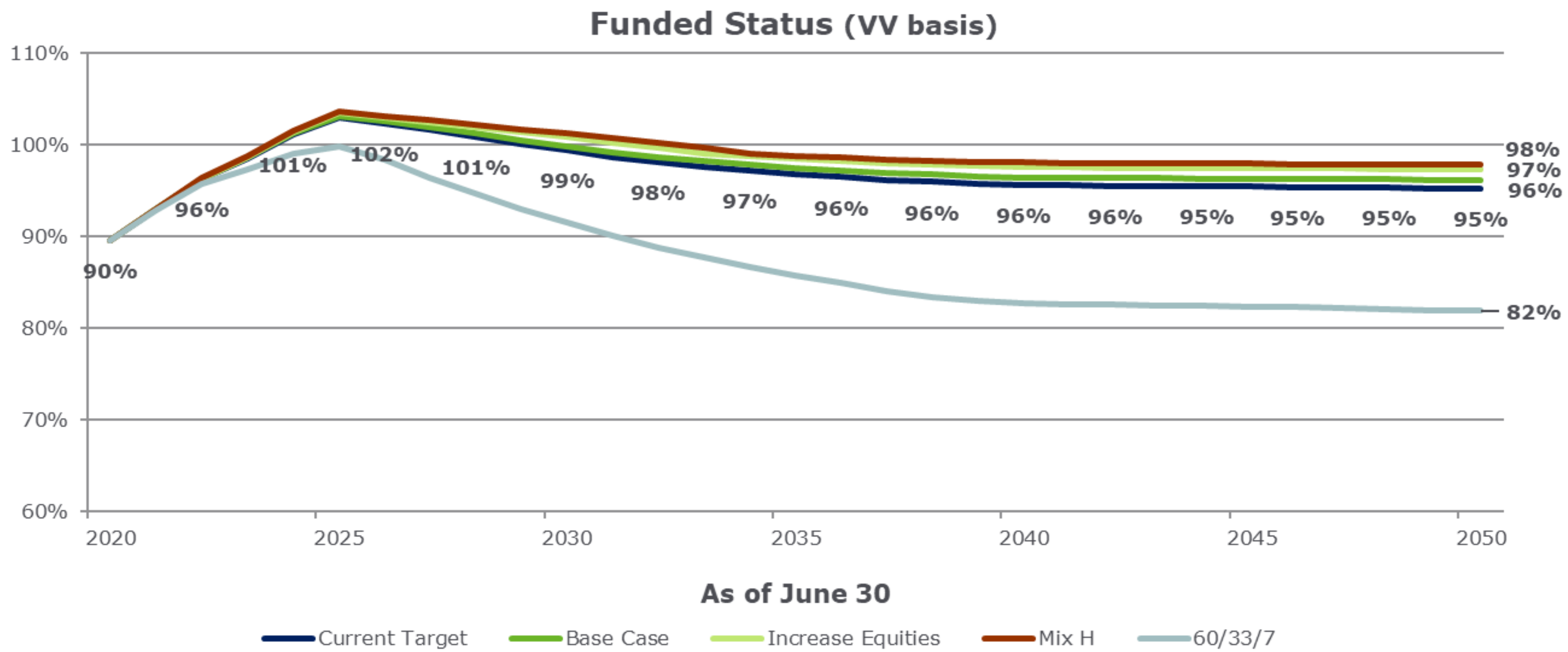
	Current Target	Base Case	Increase Equities	Mix H	60/33/7
US Large-Cap Equity	22%	22%	23%	23%	0%
US Small/Mid-Cap Equity	3%	3%	4%	3%	0%
Non-US Developed Equity	13%	12%	13%	13%	0%
Emerging Market Equity	3%	4%	5%	3%	0%
Global Equity	10%	10%	10%	10%	60%
Private Equity	15%	15%	15%	16%	0%
Total Equity	**66%**	**66%**	**70%**	**68%**	**60%**
US Treasury Fixed Income	4%	5%	5%	2%	0%
US Aggregate Fixed income	5%	5%	5%	5%	33%
Absolute Return Fixed Income	6%	4%	0%	5%	0%
Private Debt	5%	6%	6%	6%	0%
Total Fixed Income	**20%**	**20%**	**16%**	**18%**	**33%**
Core Real Estate	6%	6%	6%	6%	7%
Non-Core Real Estate	2%	2%	2%	2%	0%
Private Real Assets	6%	6%	6%	6%	0%
Total Real Assets	**14%**	**14%**	**14%**	**14%**	**7%**
Expected Return 10 yrs	**6.2%**	**6.2%**	**6.4%**	**6.4%**	**4.8%**
Expected Return 30 yrs	**7.2%**	**7.2%**	**7.3%**	**7.4%**	**5.8%**
Standard Deviation	**14.5%**	**14.6%**	**15.2%**	**15.1%**	**11.5%**
Sharpe Ratio (10 years)	**0.37**	**0.37**	**0.37**	**0.37**	**0.35**
Sharpe Ratio (30 years)	**0.36**	**0.36**	**0.36**	**0.36**	**0.34**

CONTRIBUTION TO RISK ANALYSIS



- **This chart shows the contribution to asset volatility of each asset class based on standard deviation and correlations**
- **Public and private equity have the greatest contribution to portfolio risk, while diversification of asset classes serves to reduce overall volatility**

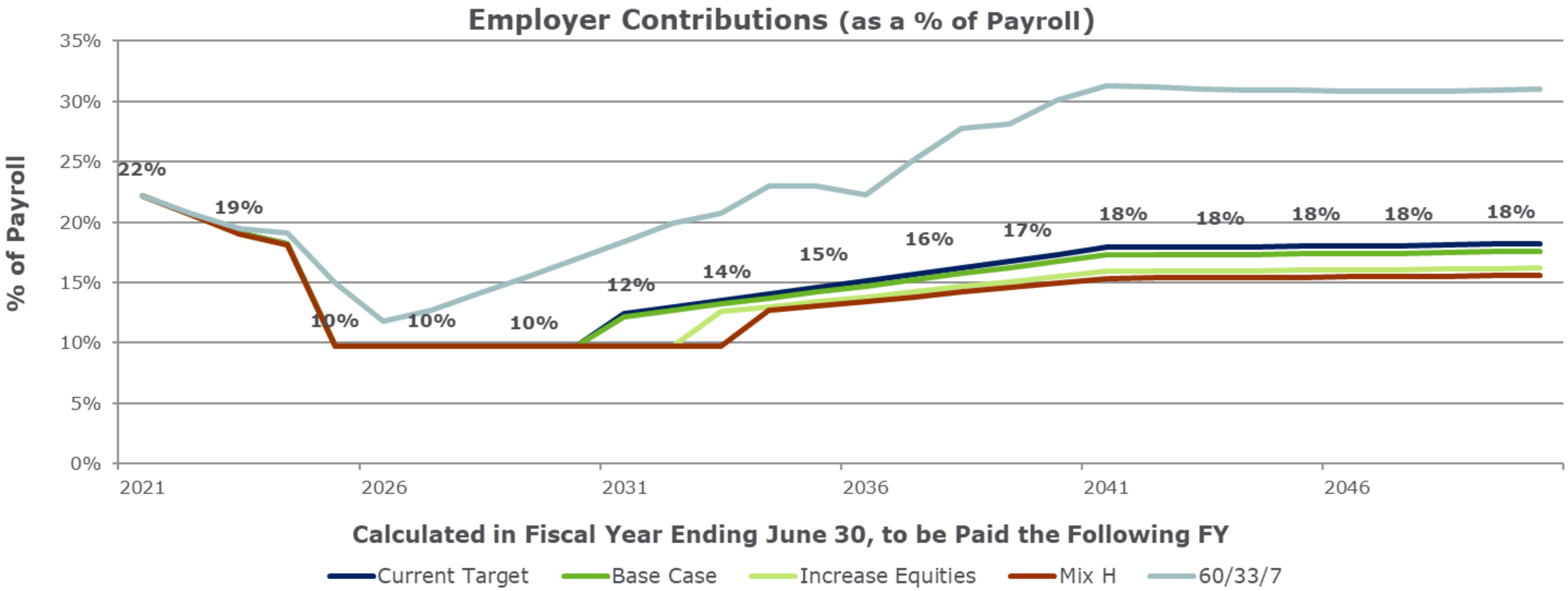
LONG-TERM EXPECTATIONS



- **Mix H and Increase Equities result in a slightly higher funded ratio than the Current Target due to their higher expected return**
  - Results in an approximately 2-3% higher funded status than Current Target over 30 years, but also add more risk
- **Base Case mix tracks closely to the Current Target, with lower funding ratios**
- **Mix 60/33/7 is less efficient with lower returns dragging down funded status over time**
- **Changes to the allocations are on the margins and will not have significant effect on long term funded status**

Deterministic projections based on NEPC's 12-31-2020 30-year return assumptions. Fiscal YTD 2020 investment return was reported to be 17.5%

LONG-TERM EXPECTATIONS



- **The 60/33/7 mix results in the highest contributions over the projection period**
- **Mix H and Increase Equities mix produce lower contributions than the Current Target in each year, with a reduction of up to 3% of payroll in 30 years**
- **Base Case mix tracks closely to the Current Target with slightly lower contributions throughout the projection**
- **Employee contributions are projected to be 9.9% over the projection period**

Deterministic projections based on NEPC's 12-31-2020 30-year return assumptions. Fiscal YTD 2020 investment return was reported to be 17.5%

SCENARIO ANALYSIS

NEPC, LLC

SCENARIO ANALYSIS: REGIME CHANGES

NEPC scenario analysis highlights the impact of shifting economic and market regimes on the portfolio and potential asset allocation mixes

Risk asset returns are informed by credit returns which are based on changes in real rate, inflation, and credit spreads experienced across market regimes

Expansion

Informed by rising interest rates, moderately rising inflation, elevated positive real rates, and consistent spread tightening

Stagflation

Informed by rising interest rates, rising inflation, depressed negative real rates, and consistent spread widening

Goldilocks

Informed by level interest rates, level inflation, positive real rates, and consistent spread tightening

Recession

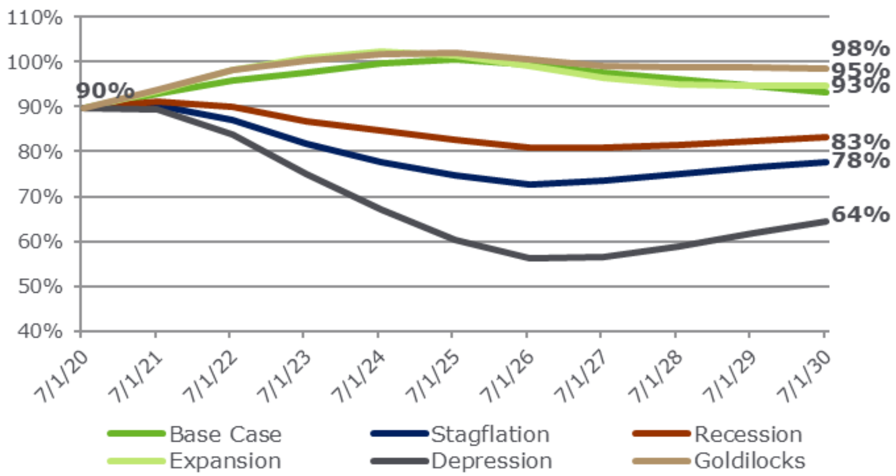
Informed by depressed interest rate levels, falling inflation, depressed positive real rates, and consistent spread widening, followed by tightening back to current levels

Depression

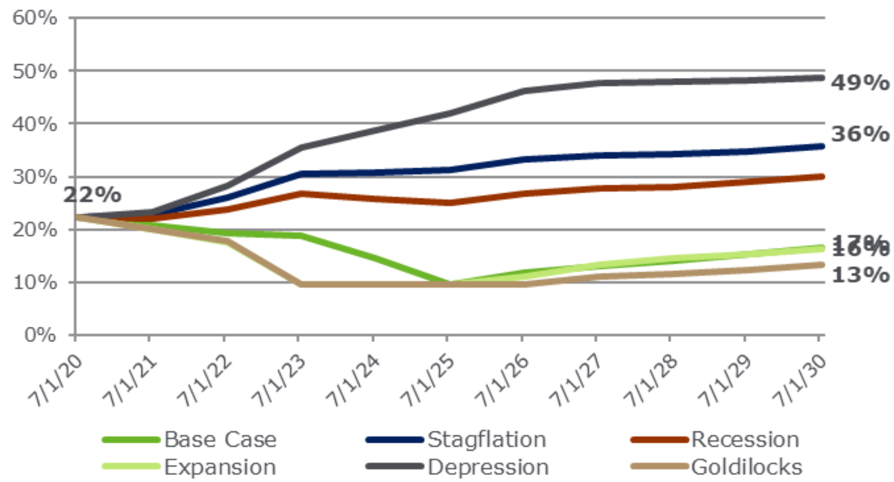
Informed by negative interest rates, deflation, and severe credit defaults and downgrades

ECONOMIC SCENARIOS: POLICY TARGET

Funded Status (VV basis)

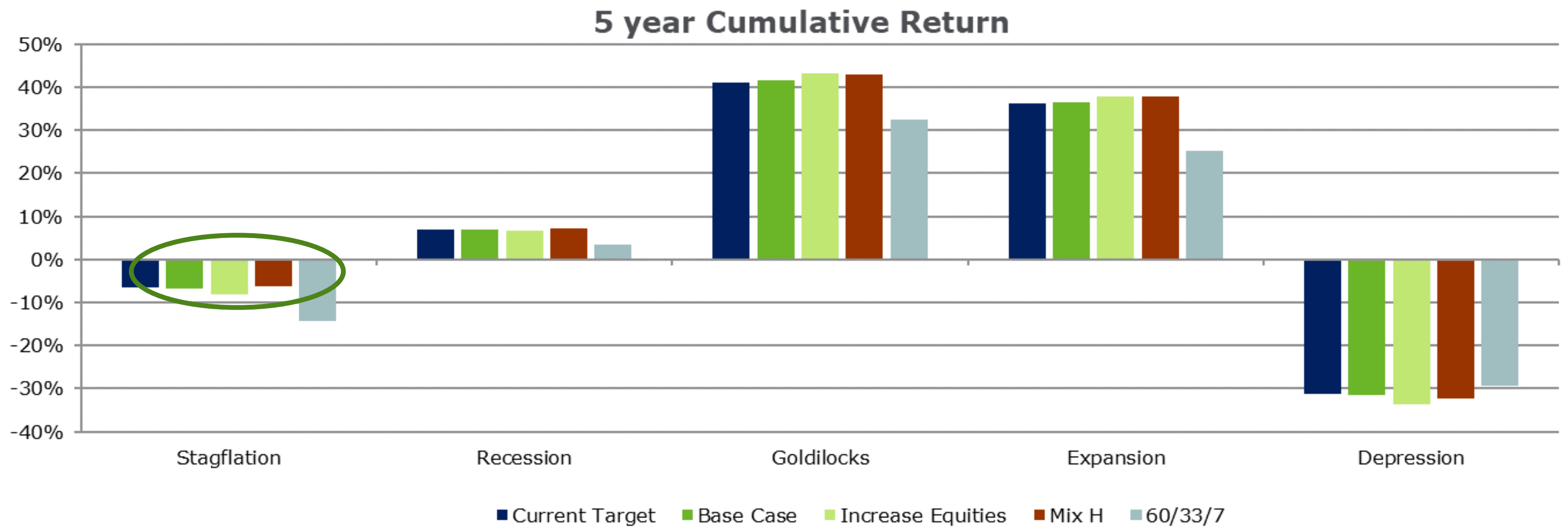


Contributions (% of payroll)



- **Funded status over the next 10 years is expected to increase, but could range between 57% and 102%**
- **The range of outcomes can be significant even with multiple smoothing techniques in place**
  - Actuarial assets smooths Market Value gains and losses over 5 years
  - Gains and losses in unfunded liabilities are amortized over 15 years
- **Negative asset returns under Depression, Recession and Stagflation have the most severe effect on funded status**
- **Contributions are expected to decrease over the next 10 years, but may increase under a weak economy**
  - Contributions could increase to as high as 49% of payroll under the Depression scenario

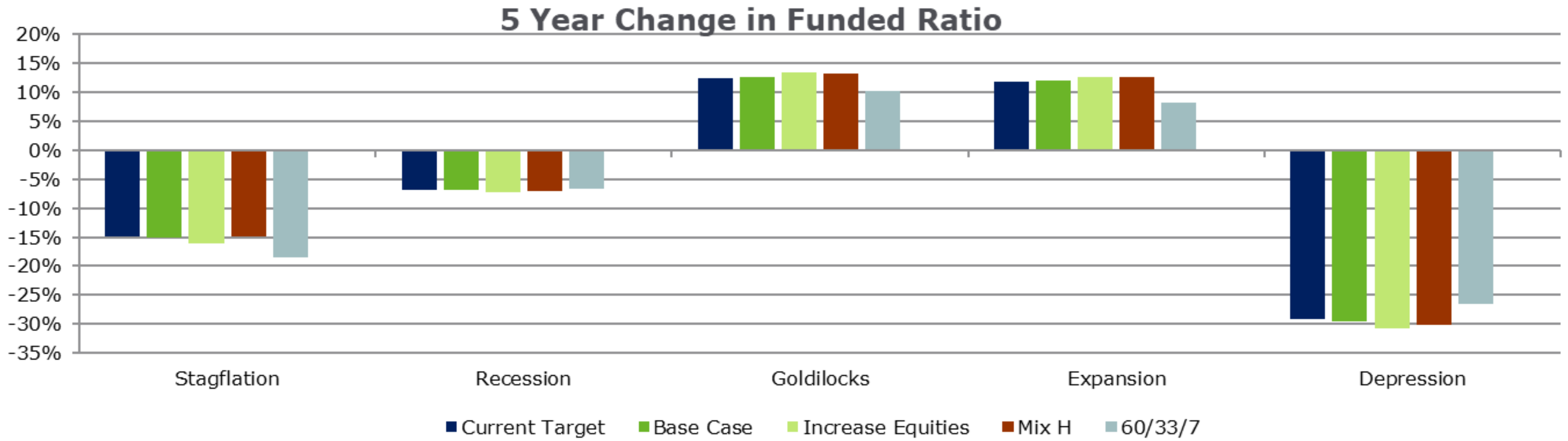
ECONOMIC SCENARIOS

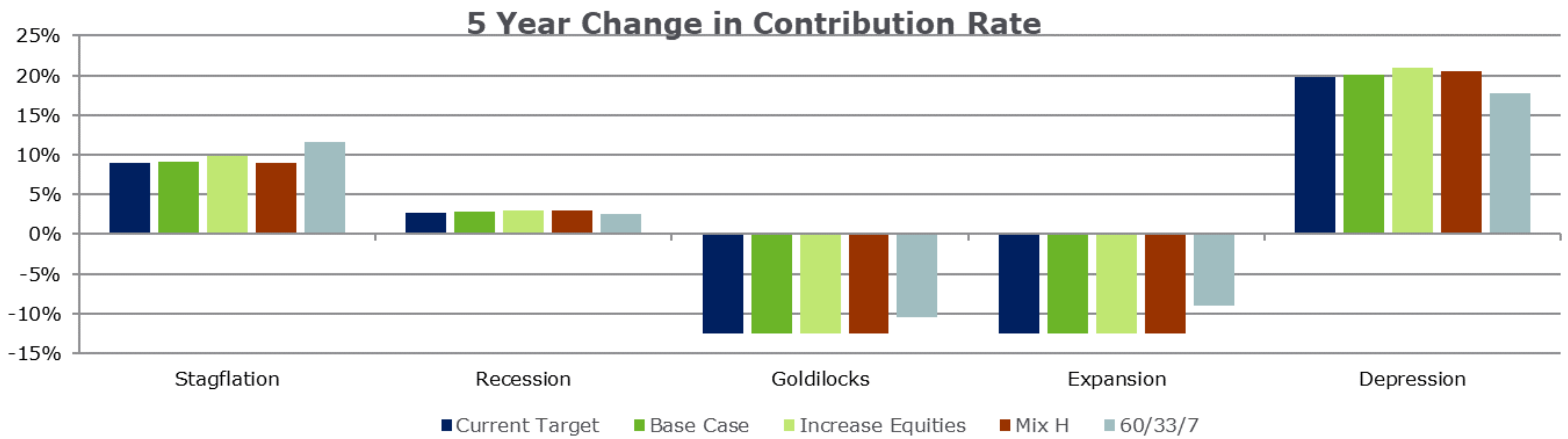


- **Mix H and Increase Equites have similar results in each scenario, with Mix H outperforming the Current Target and Increase Equities in a high inflation Stagflation environment**

- **Base Case, Increase Equities, and Mix H all outperform the Current Target in the strong economies, Goldilocks and Expansion, but lag the Current Target in negative economies, with Increase Equities being the most volatile**

ECONOMIC SCENARIOS



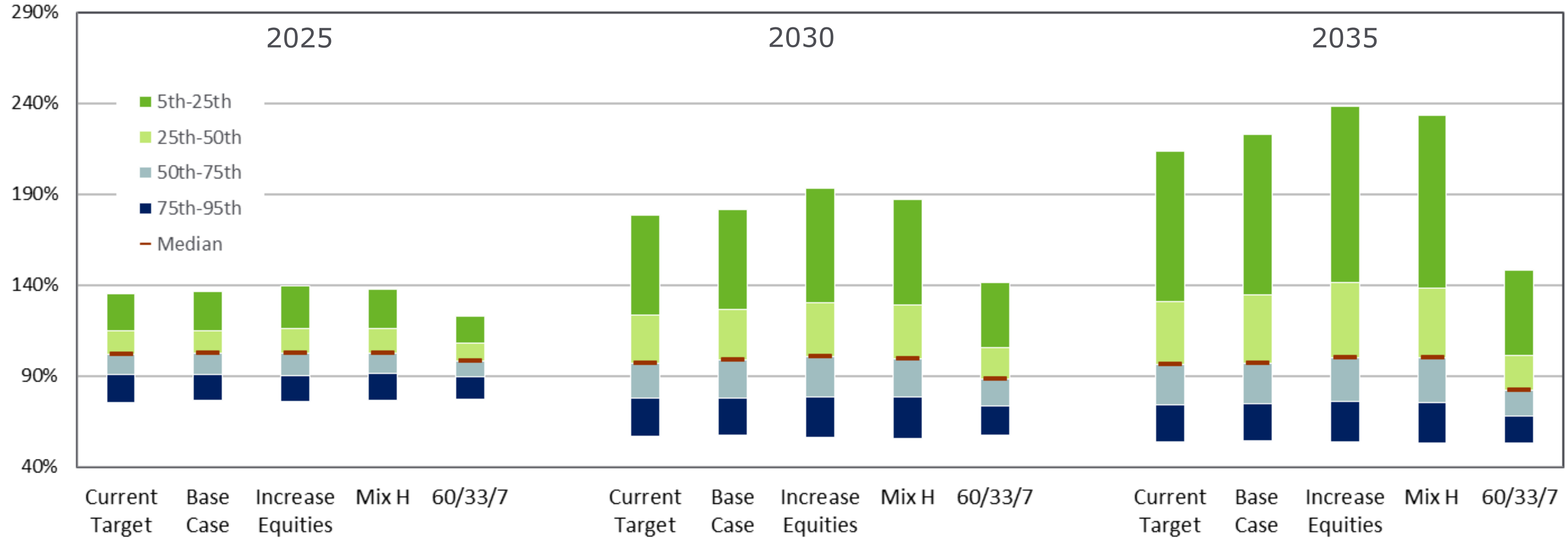


Funded Ratio = Valuation Value of Assets/Accrued Liability

STOCHASTIC ANALYSIS

NEPC, LLC

STOCHASTIC ANALYSIS FUNDED STATUS

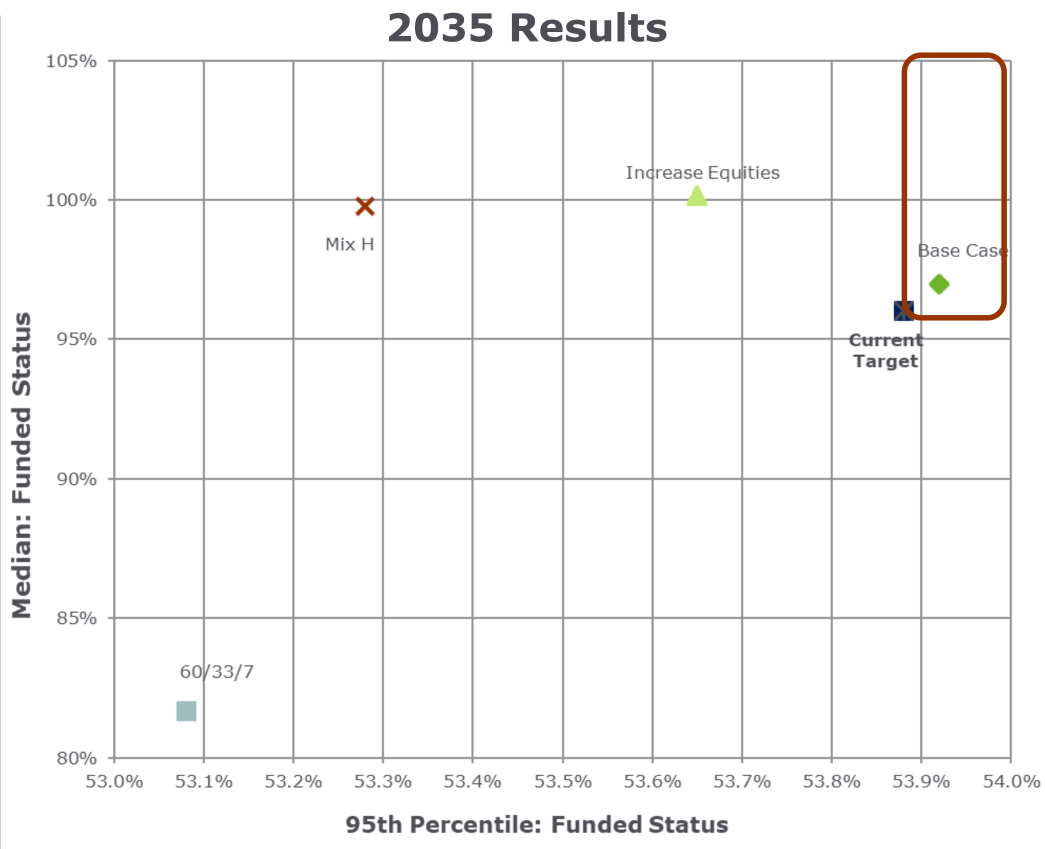


- **All the alternative mixes result in a higher median funded status than the Current Target, while increasing the range of outcomes to the upside, as contributions will increase as any losses are amortized**

- **Increase Equities mix results in the highest funded status at the median in 5, 10 and 15 years, however the Base Case mix has the highest funded status at the 95th percentile**

Note: Analysis uses NEPC's 10-year expected return assumptions as of 12/31/20 for each allocation and annualized standard deviation

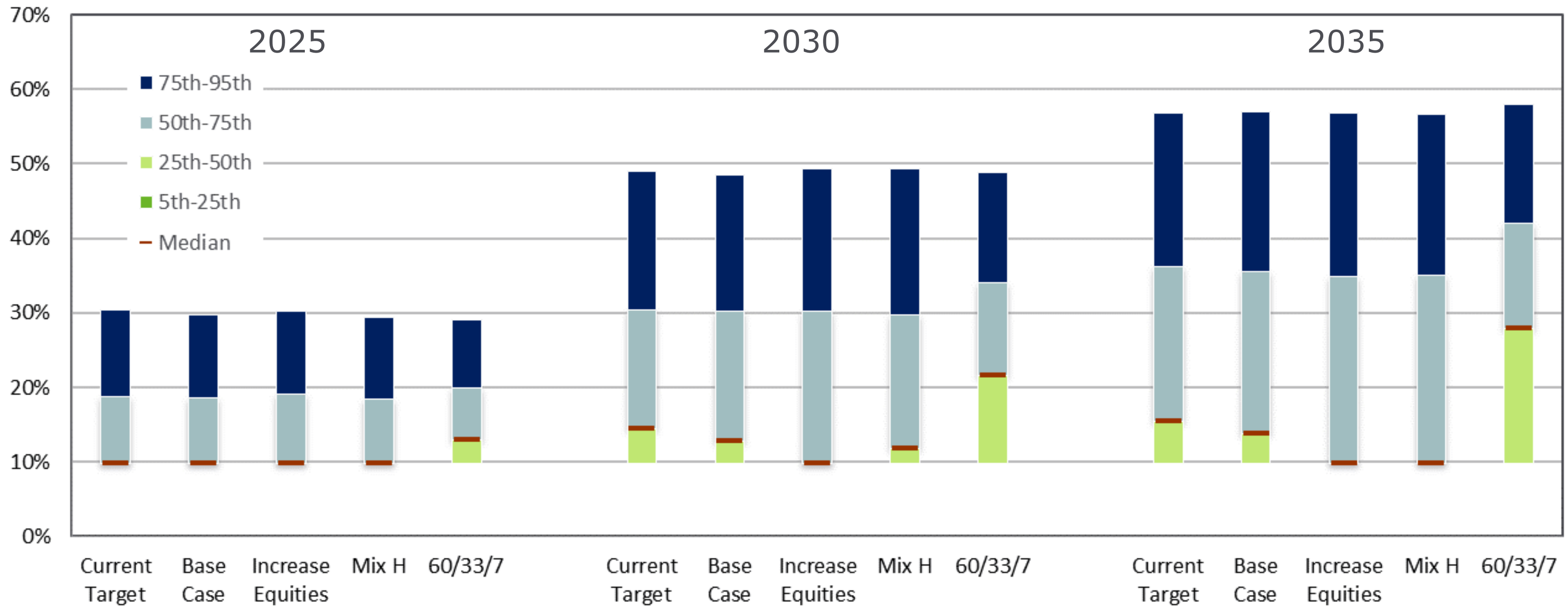
STOCHASTIC ANALYSIS FUNDED STATUS



- **Looking at the results from year 2035, all of the mixes result in a higher median funded status, except for the 60/33/7 mix, with Increase Equities mix achieving the highest median funded status**
- **The Base Case mix achieves a higher funded status than the Current Target and also achieves the highest funded status when looking at the 95th percentile, or worst case scenario**

Note: Analysis uses NEPC's 10-year expected return assumptions as of 12/31/20 for each allocation and annualized standard deviation

STOCHASTIC ANALYSIS
EMPLOYER CONTRIBUTION RATE

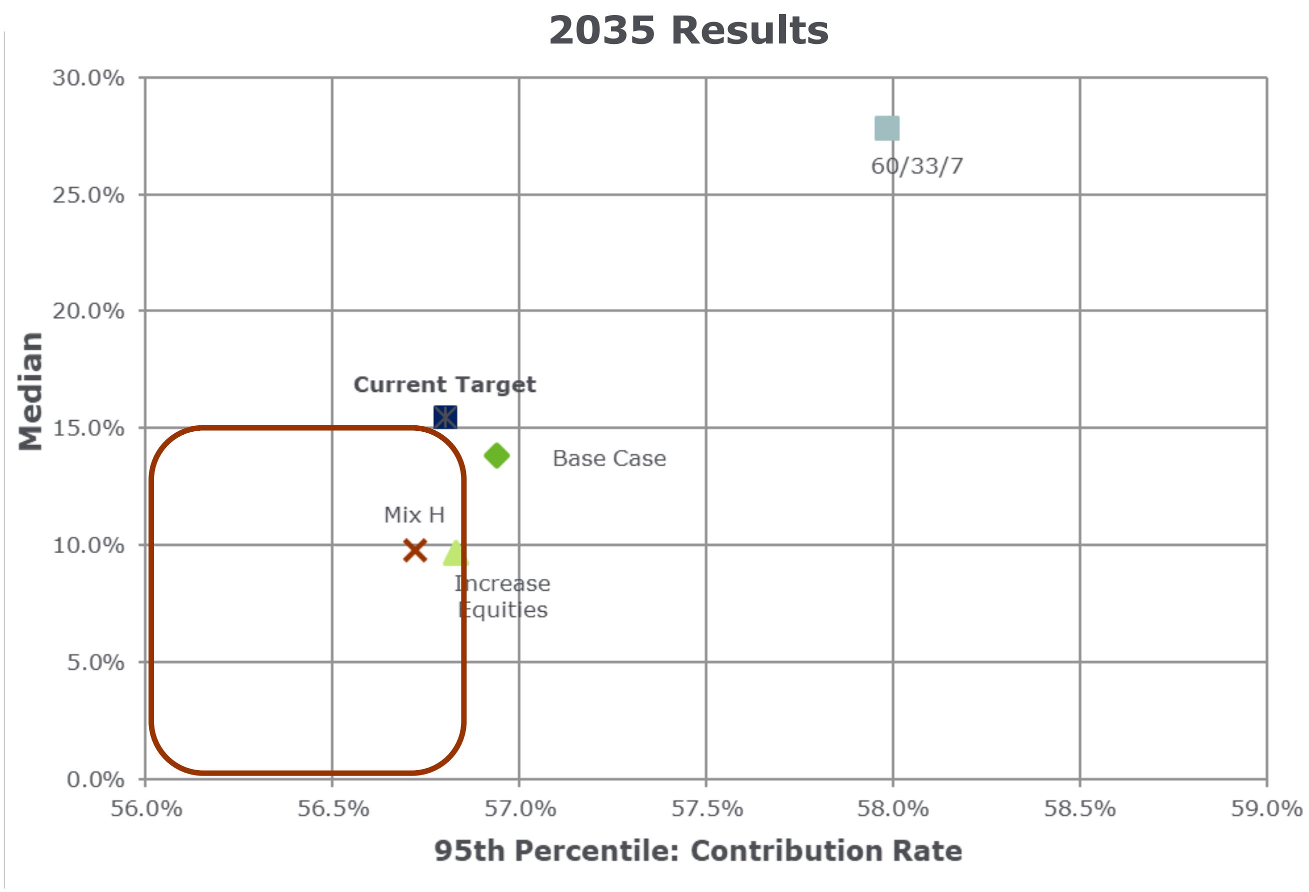


- **Increase Equities mix has the lowest contributions at the median in three years, and has the lowest contributions at the 95th percentile in 2035**

- **Contributions have a floor of the Employer Normal Cost which is around 10% of payroll and represents the additional annual benefits accruing for each participant, less employee contributions**

Note: Analysis uses NEPC's 10-year expected return assumptions as of 12/31/20 for each allocation and annualized standard deviation

STOCHASTIC ANALYSIS
EMPLOYER CONTRIBUTION RATE



- **Looking at the results from year 2035, all of the alternative mixes result in lower median contribution rates than the Current Target, except the 60/33/7 mix**
- **Mix H also results in a lower contribution in the worst case scenario (95th percentile)**

Note: Analysis uses NEPC's 10-year expected return assumptions as of 12/31/20 for each allocation and annualized standard deviation

STOCHASTIC RESULTS

Funded Status (VV basis)

2025	Current Target	Base Case	Increase Equities	Mix H	60/33/7
5th	135.2%	136.2%	139.4%	137.6%	123.0%
25th	114.5%	114.6%	116.1%	115.8%	107.6%
Median	102.0%	102.3%	102.7%	102.5%	98.3%
75th	90.8%	90.9%	90.2%	91.1%	89.1%
95th	75.3%	76.2%	75.5%	76.5%	77.1%

2030	Current Target	Base Case	Increase Equities	Mix H	60/33/7
5th	178.1%	181.7%	193.0%	186.8%	141.2%
25th	123.2%	126.8%	130.0%	128.7%	105.7%
Median	97.0%	98.8%	100.5%	99.6%	88.0%
75th	77.9%	77.9%	78.3%	78.5%	73.6%
95th	56.8%	57.3%	56.1%	55.7%	57.1%

2035	Current Target	Base Case	Increase Equities	Mix H	60/33/7
5th	213.7%	222.8%	238.4%	233.0%	148.1%
25th	130.9%	134.5%	141.5%	138.3%	101.4%
Median	96.0%	97.0%	100.2%	99.8%	81.7%
75th	74.0%	74.7%	75.7%	75.2%	67.8%
95th	53.9%	53.9%	53.7%	53.3%	53.1%

Contributions (% of payroll)

2025	Current Target	Base Case	Increase Equities	Mix H	60/33/7
95th	30.3%	29.8%	30.3%	29.5%	29.0%
75th	18.7%	18.6%	19.0%	18.4%	19.9%
Median	9.7%	9.7%	9.7%	9.7%	12.9%
25th	9.7%	9.7%	9.7%	9.7%	9.7%
5th	9.7%	9.7%	9.7%	9.7%	9.7%

2030	Current Target	Base Case	Increase Equities	Mix H	60/33/7
95th	49.0%	48.4%	49.3%	49.3%	48.8%
75th	30.5%	30.2%	30.2%	29.8%	34.0%
Median	14.5%	12.8%	9.7%	11.8%	21.6%
25th	9.7%	9.7%	9.7%	9.7%	9.7%
5th	9.7%	9.7%	9.7%	9.7%	9.7%

2035	Current Target	Base Case	Increase Equities	Mix H	60/33/7
95th	56.8%	56.9%	56.8%	56.7%	58.0%
75th	36.2%	35.6%	34.9%	35.1%	42.0%
Median	15.5%	13.8%	9.7%	9.8%	27.9%
25th	9.7%	9.7%	9.7%	9.7%	9.7%
5th	9.7%	9.7%	9.7%	9.7%	9.7%

CONCLUSIONS

- **VCERA's funded status has fallen 1.5% over the last year on a market value basis, but asset smoothing helped funded status remain at 89.6%**

- **Funded status is projected to increase over the next five years if investment expectations are met and required plan contributions are made**

- **The Current Target allocation is not expected to meet the long-term expected return of 7.25% over the medium due to economic headwinds**
  - NEPC expectations average 6.2% over the next 10 years and 7.2% over 30 years, using December 31, 2020 forward-looking assumptions

- **The proposed asset allocation changes improve risk-adjusted returns**

- **All proposed asset mixes provide for an improvement to the funded ratio and a modest reduction for employer contributions over the Current Target**

NEXT STEPS

Completed

- Capital Market Assumption Review
- Asset Mix Discussion

Board Evaluation of Input

Completed

NEPC Runs Projections

- Deterministic and Stochastic Forecasting
- Scenario Analysis
- Evaluation of Output

Current Meeting

- Review current and projected financial status of Plan
- Assess appropriateness of current asset allocation vs. alternatives
- Determination of strategic asset mix

Board Evaluation of Output

Future Meeting

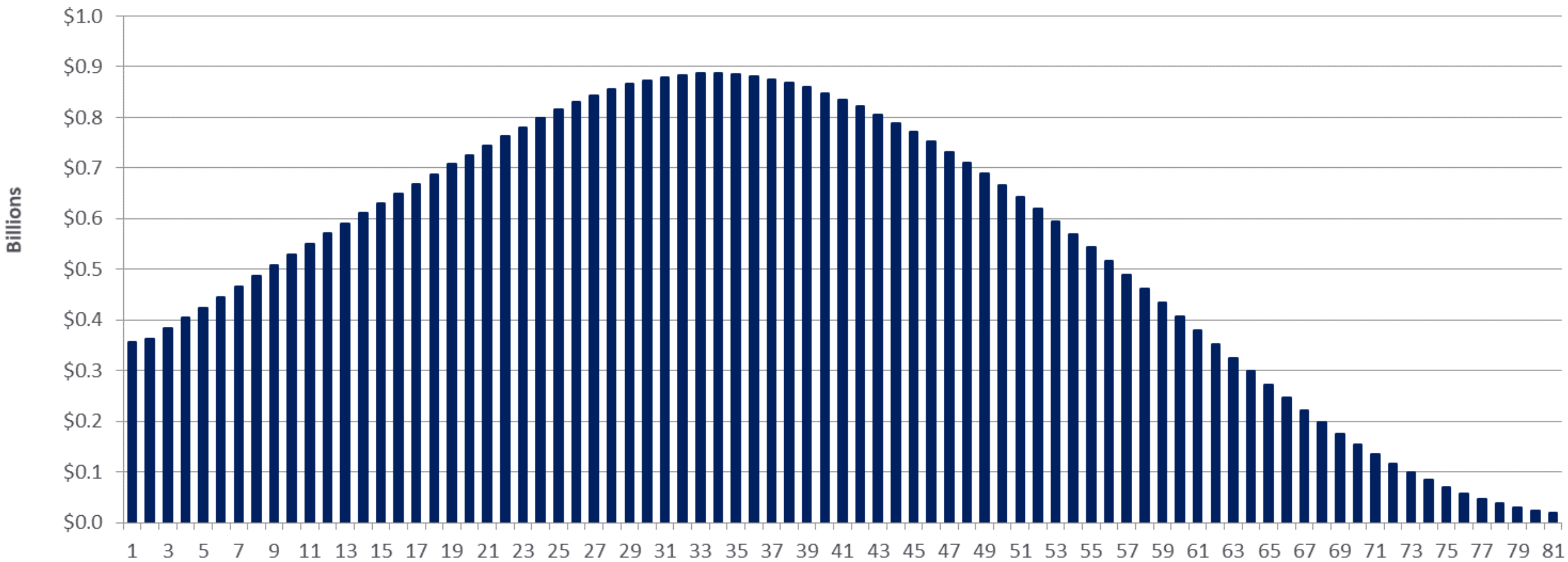
NEPC/Staff Develop a Work Plan

- Update Investment Policy
- Conduct searches (if necessary)
- Implementation of Asset Allocation changes

APPENDIX

NEPC, LLC

PROJECTED BENEFIT PAYMENTS



- **Closed group benefit payments are projected to increase from $356 million per year to $886 million at their peak in 2054**

Source: Segal

ASSUMPTIONS AND METHODOLOGY

- **NEPC's 12/31/2020 asset class return assumptions were used after December 31, 2020**
  - Actual asset returns through December 31, 2020 (17.5% 2021 Fiscal YTD) were used in the projections
  - NEPC's 10-year geometric return of 6.2% for Medium-Term expectations for Current Target
  - NEPC's 30-year geometric return of 7.2% for Long-Term expectations for Current Target

- **Deterministic projections use the Current Target allocation and NEPC's 10-year and 30-year geometric returns from NEPC's 12/31/2020 assumptions for investment returns**

- **Stochastic projections use the following assumptions:**
  - Expected return: 10-year arithmetic expected return based on NEPC's 12/31/20 asset class assumptions
  - Standard deviation: Annualized standard deviation based on NEPC's 12/31/20 asset class assumptions

- **Liability calculations follow a roll-forward methodology based on the June 30, 2020 actuarial valuation by Segal**
  - Accrued Liability and Normal Cost rolled forward annually, adjusted for benefit payment changes
  - Discount rate is assumed to remain at 7.25% each year in the future
  - Benefit payments as projected by the plan's actuary

- **Contribution calculations are based on the plan's funding policy formula**
  - Employer normal cost plus amortization of unfunded liability and various gain and loss and plan change bases
  - Future asset gains and losses are amortized over 15 years
  - If the plan becomes fully funded, all prior amortization bases are wiped out and new bases begin to layer from that date
  - Salary scale is assumed to remain at the 2020 assumed rate of 3.25%
  - Employee contribution rate is assumed to remain level at 9.91% of payroll

SCENARIO ANALYSIS: REGIME RETURNS

Expansion Scenario Return*

Cash: 1.75%
Treasuries: -0.8%
Long Treasuries: -3.9%
US TIPS: 1.3%
US IG Credit: 0.7%
High Yield Bonds: 2.3%
US Large-Cap Equity: 6.9%
Emerging Market Equity: 9.9%
Commodities: 1.6%

Stagflation Scenario Return*

Cash: 1.4%
Treasuries: -0.6%
Long Treasuries: -4.4%
US TIPS: 2.3%
US IG Credit: -0.4%
High Yield Bonds: 0.7%
US Large-Cap Equity: -3.6%
Emerging Market Equity: -11.3%
Commodities: 4.5%

"Goldilocks" Scenario Return*

Cash: 0.5%
Treasuries: 0.3%
Long Treasuries: 0.0%
US TIPS: 0.6%
US IG Credit: 2.4%
High Yield Bonds: 2.8%
US Large-Cap Equity: 7.6%
Emerging Market Equity: 11.1%
Commodities: -0.6%

Recession Scenario Return*

Cash: 0.0%
Treasuries: 0.1%
Long Treasuries: 0.5%
US TIPS: -0.9%
US IG Credit: 2.0%
High Yield Bonds: -0.2%
US Large-Cap Equity: 0.2%
Emerging Market Equity: -2.4%
Commodities: -7.5%

Depression Scenario Return*

Cash: -0.3%
Treasuries: 1.0%
Long Treasuries: 3.7%
US TIPS: -0.7%
US IG Credit: 2.5%
High Yield Bonds: -6.5%
US Large-Cap Equity: -11.7%
Emerging Market Equity: -29.0%
Commodities: -17.2%

Scenario returns are a 5 year annualized returns

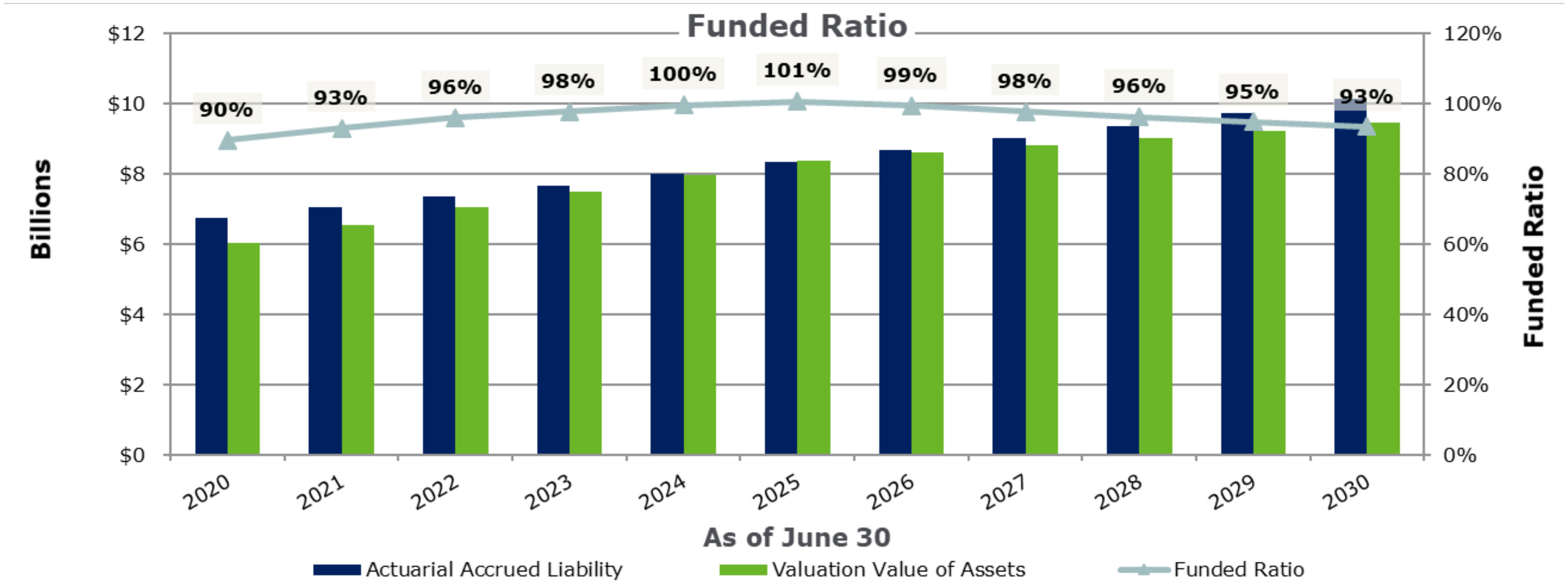
SCENARIO ANALYSIS: REGIME RETURNS

Current Policy

	Asset Returns 2021	2022	2023	2024	2025	Five Year Average	Five Year Return
Base Case	6.2%	6.2%	6.4%	4.8%	6.4%	**6.01%**	**33.89%**
Stagflation	-25.8%	1.5%	3.9%	12.4%	6.3%	**-1.33%**	**-6.50%**
Recession	-14.2%	2.0%	4.7%	9.8%	6.5%	**1.37%**	**7.02%**
Expansion	15.4%	3.8%	0.5%	1.3%	11.6%	**6.36%**	**36.11%**
Depression	-34.1%	-12.1%	1.1%	5.2%	11.7%	**-7.20%**	**-31.19%**
Goldilocks	17.0%	-2.2%	4.4%	7.3%	10.1%	**7.13%**	**41.09%**

Based on NEPC's 12-31-2020 10-year return and 5-year scenario assumptions

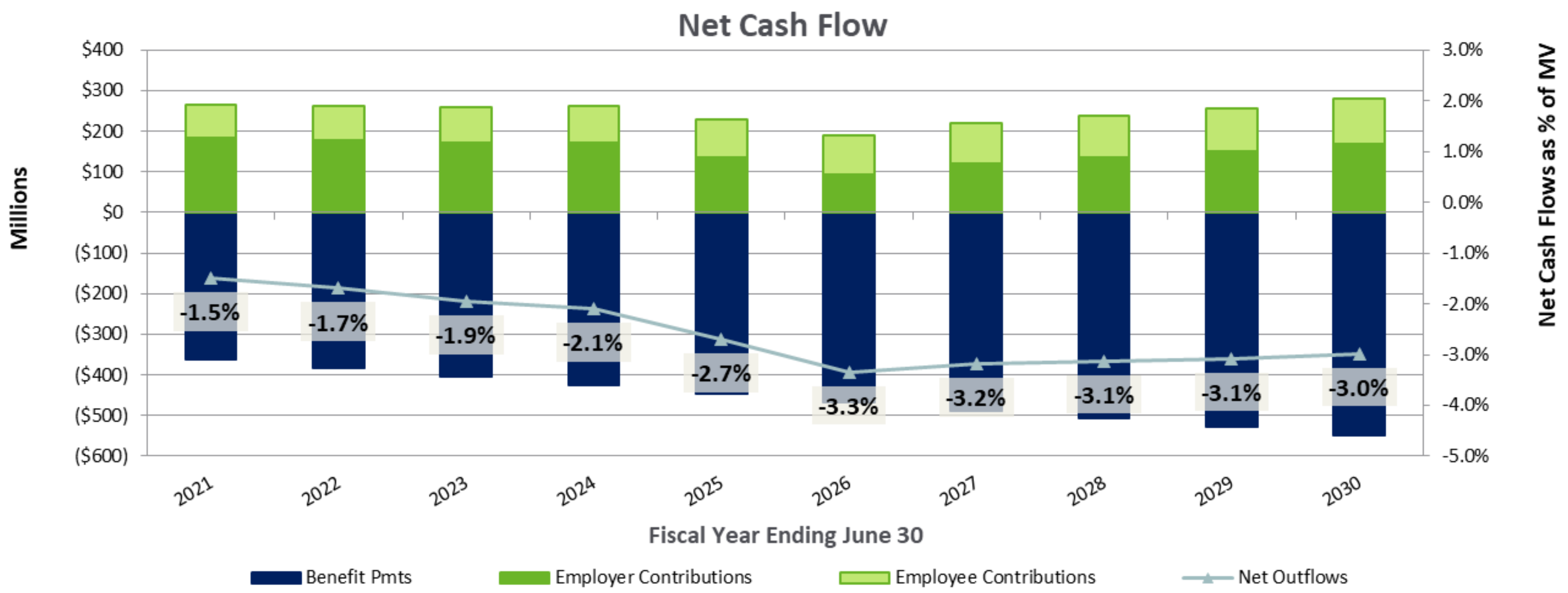
MEDIUM-TERM EXPECTATIONS



- **The funded status of the pension plan is estimated to increase over the next five years to 100% in 2024**
  - Funded Status = Valuation Value of Assets / Accrued Liability
- **Market value of assets is assumed to return 6.2%, NEPC's 10-year expected return forecast for VCERA**
  - Average annual increase in Valuation Value of assets is 4.6%
- **Liabilities grow at an average pace of 4.1% per year**
  - Discount rate is assumed to remain level at 7.25% over the projection period

Deterministic projections based on the Current Target allocation and NEPC's 12-31-2020 10-year return assumptions. Fiscal YTD 2020 investment return was reported to be 17.5%.

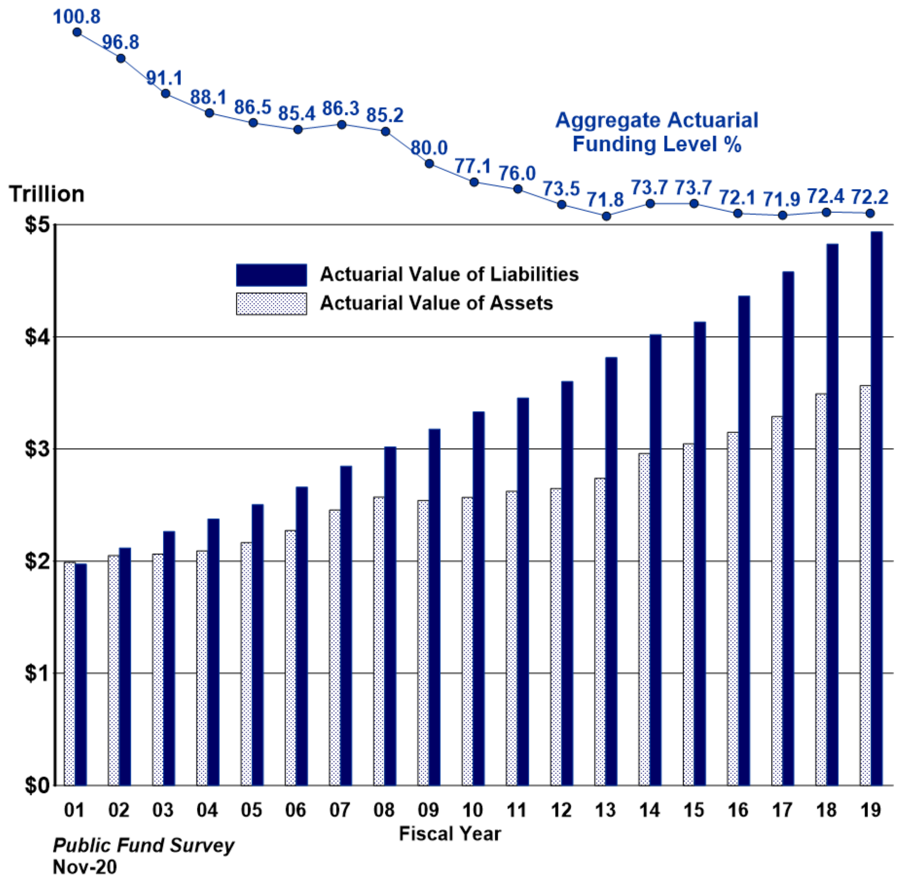
MEDIUM-TERM EXPECTATIONS



- **Benefit payments outweigh total contributions, creating a negative cash flow for the plan**
  - Difference must be made up through investment returns or additional contributions
- **Net cash outflows grow from 1.5% to 3.0% over the next 10 years**
  - A typical range for pension plans, presenting no unusual liquidity issues
- **Benefit payments average 5.9% of Market Value of Assets over the next ten years**

Deterministic projections based on the Current Target allocation and NEPC's 12-31-2020 10-year return assumptions. Fiscal YTD 2020 investment return was reported to be 17.5%.

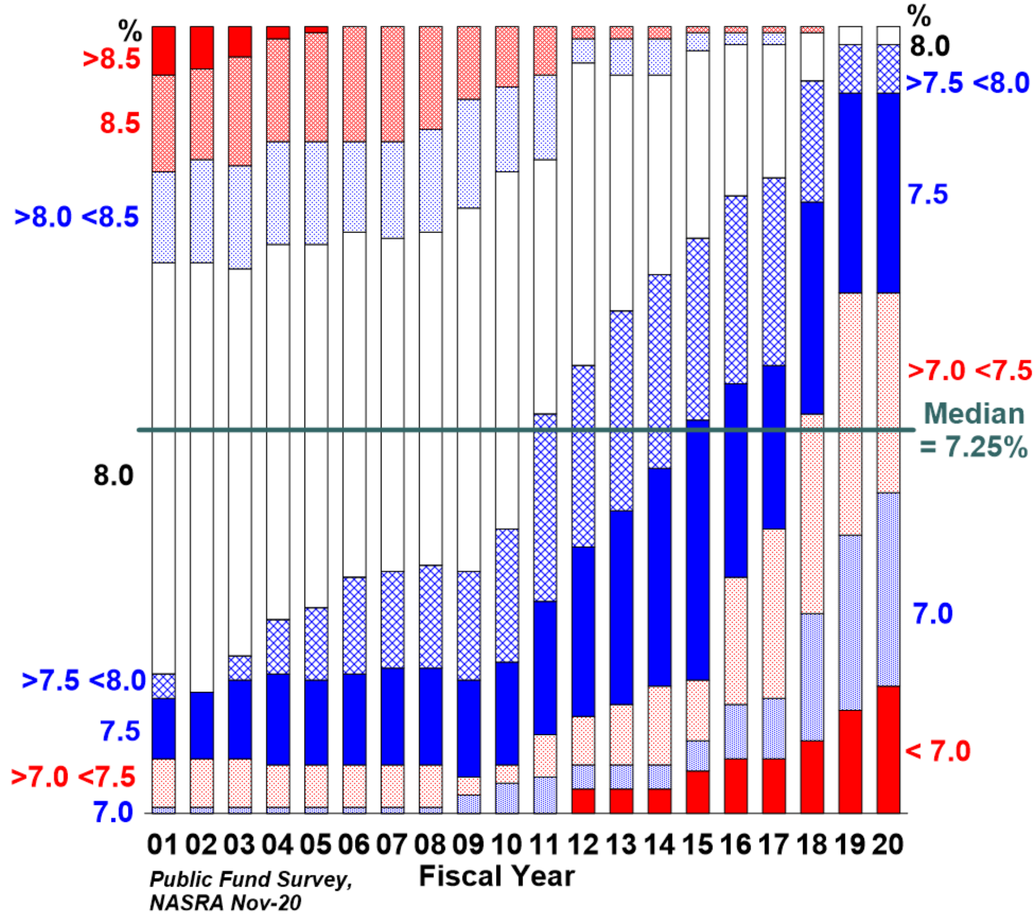
HISTORICAL FUNDED STATUS OF U.S. PUBLIC PENSION PLANS



- **As of July 2019, the average public fund had a funded percentage of 72.2%**
- **In comparison, VCERA funded status, on a valuation value basis, as of July 1, 2020 was 89.6%**

Source: National Association of State Retirement Administrators (NASRA) Public Fund Survey for Fiscal year 2019, published November 2020. The Systems included in the Survey comprise approximately 85 percent of the entire state and local government retirement systems in the US.

EXPECTED RETURN ON ASSETS ASSUMPTION OF U.S. PUBLIC PENSION PLANS



- **As of July 2019, the median Expected Return on Assets (EROA) assumption for U.S. public pension funds was 7.25%**
- **In comparison, VCERA currently has an EROA assumption of 7.25%**

Source: National Association of State Retirement Administrators (NASRA) Public Fund Survey for Fiscal year 2019, published November 2020. The Systems included in the Survey comprise approximately 85 percent of the entire state and local government retirement systems in the US.

GLOBAL INTEREST RATE EXPECTATIONS

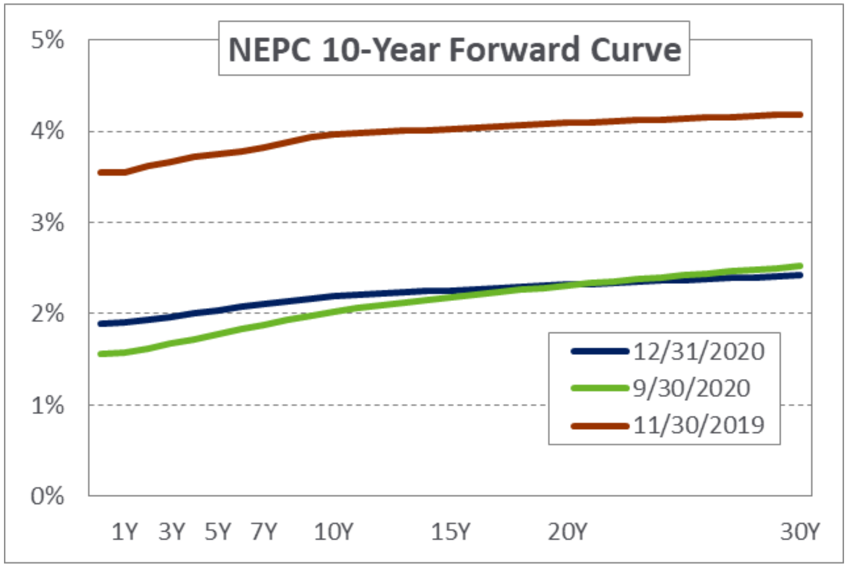
Negative real yields reflect central bank intervention

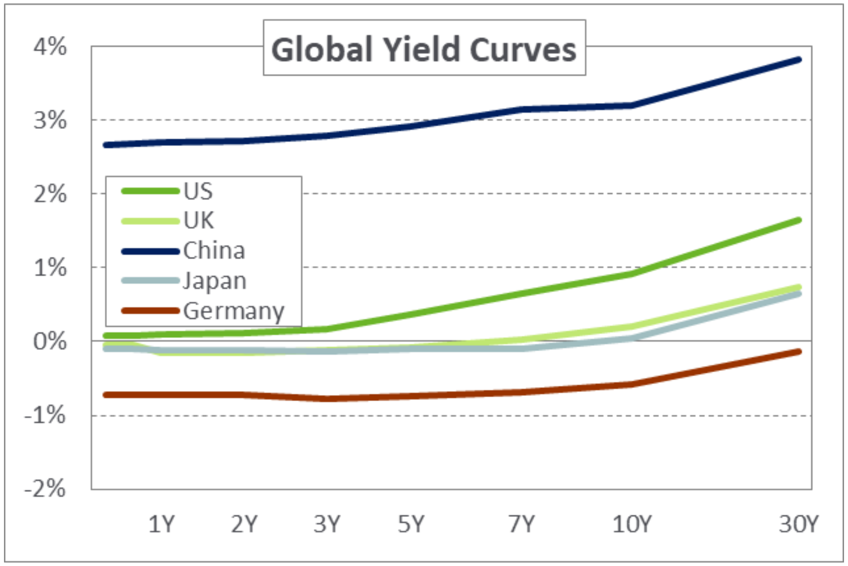
Low real rates depress returns for all assets in the long-term

The Fed's easy policy and low inflation suppress long term yield forecasts

The outlook for Japan and Europe bonds are poor due to negative nominal yields

Emerging market interest rates are higher relative to the developed world





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

CORE GEOMETRIC RETURN ASSUMPTIONS

	Asset Class	10-Year Return	30-Year Return	Volatility
	Cash	0.8%	1.9%	0.6%
	US Inflation	2.0%	2.2%	-
Equity	US Large-Cap Equity	5.4%	6.3%	16.6%
Equity	Non-US Developed Equity	5.9%	6.5%	19.7%
Equity	Emerging Market Equity	7.5%	8.4%	28.7%
Equity	*Global Equity**	*6.2%*	*7.0%*	*18.1%*
Equity	*Private Equity**	*9.3%*	*10.1%*	*24.8%*
Fixed Income	US Treasury Bond	0.9%	2.0%	5.3%
Fixed Income	*US Aggregate Bond**	*1.4%*	*2.7%*	*5.7%*
Fixed Income	US TIPS	1.0%	2.1%	5.8%
Fixed Income	US High Yield Corporate Bond	2.9%	5.0%	11.5%
Fixed Income	*Private Debt**	*6.1%*	*7.5%*	*11.9%*
Real Assets	Commodity Futures	0.9%	3.3%	18.5%
Real Assets	US REIT	5.5%	6.7%	21.4%
Real Assets	Gold	2.9%	3.7%	16.4%
Real Assets	Core Real Estate	4.4%	5.6%	15.0%
Real Assets	Private Real Assets - Infrastructure	5.4%	6.6%	12.5%
Multi-Asset	*60% S&P 500 & 40% US Aggregate*	*4.1%*	5.1%	*10.3%*
Multi-Asset	*60% MSCI ACWI & 40% US Aggregate*	*4.6%*	5.6%	*11.1%*
Multi-Asset	*Hedge Fund**	*4.0%*	5.2%	*8.7%*

*Calculated as a blend of other asset classes

12/31/20 CAPITAL MARKET ASSUMPTIONS

	Asset Class	10-Year Return	30-Year Return	Standard Deviation
MACRO	Inflation	2.0%	2.2%	—
	Cash	0.8%	1.9%	0.6%
	US Leverage Cost	1.2%	2.2%	0.7%
	Non-US Cash	0.0%	1.1%	0.6%
EQUITY	US Large-Cap Equity	5.4%	6.3%	16.6%
	US Small/Mid-Cap Equity	5.7%	6.6%	20.7%
	Non-US Developed Equity	5.9%	6.5%	19.7%
	Non-US Developed Equity (USD Hedge)	6.1%	6.7%	17.7%
	Non-US Developed Small-Cap Equity	6.1%	6.8%	22.5%
	Emerging Market Equity	7.5%	8.4%	28.7%
	Emerging Market Small-Cap Equity	8.1%	8.6%	31.5%
	*Global Equity**	*6.2%*	*7.0%*	*18.0%*
	Hedge Fund – Equity	4.0%	5.0%	11.5%
	Private Equity – Buyout	7.6%	8.5%	18.5%
	Private Equity – Growth	8.9%	9.8%	31.0%
	Private Equity – Venture	10.4%	10.7%	45.0%
	Private Equity – Secondary	7.1%	8.0%	19.5%
	Non-US Private Equity	10.7%	10.7%	32.0%
	*Private Equity**	*9.3%*	*10.1%*	*24.8%*
	China Equity	7.0%	7.8%	29.5%
	US Microcap Equity	6.6%	7.4%	25.0%

12/31/20 CAPITAL MARKET ASSUMPTIONS

	Asset Class	10-Year Return	30-Year Return	Standard Deviation
CREDIT	US TIPS	1.0%	2.1%	5.8%
	US Treasury Bond	0.9%	2.0%	5.3%
	US Corporate Bond	2.2%	3.7%	7.3%
	US Mortgage-Backed Securities	1.2%	2.3%	6.5%
	*US Aggregate Bond**	*1.4%*	*2.7%*	*5.7%*
	US High Yield Corporate Bond	2.9%	5.0%	11.5%
	US Leveraged Loan	3.9%	4.8%	9.2%
	Emerging Market External Debt	3.0%	4.5%	13.0%
	Emerging Market Local Currency Debt	5.0%	5.1%	13.0%
	Non-US Government Bond	0.6%	1.7%	9.5%
	Non-US Government Bond (USD Hedge)	0.8%	1.9%	3.9%
	*Global Government Bond**	*0.7%*	*1.8%*	*7.9%*
	*Global Government Bond (USD Hedge)**	*0.9%*	*2.0%*	*4.0%*
	Non-US Inflation-Linked Bond (USD Hedge)	0.1%	1.1%	5.9%
	*Diversified Fixed Income**	*3.0%*	*4.3%*	*7.9%*
	*Global Multi-Sector Fixed Income**	*3.0%*	*4.3%*	*7.9%*
	*Absolute Return Fixed Income**	*2.5%*	*4.0%*	*6.0%*
	US Municipal Bond	2.0%	2.3%	6.0%
	US Municipal Bond (1-10 Year)	1.1%	1.9%	4.5%
	US High Yield Municipal Bond	2.8%	3.9%	12.0%
	Hedge Fund - Credit	3.9%	5.3%	10.4%
	Private Debt - Credit Opportunities	6.2%	7.0%	14.0%
	Private Debt – Distressed	7.2%	7.8%	14.0%
	Private Debt - Direct Lending	5.4%	7.4%	11.5%
	*Private Debt**	*6.1%*	*7.5%*	*11.9%*

12/31/20 CAPITAL MARKET ASSUMPTIONS

	Asset Class	10-Year Return	30-Year Return	Standard Deviation
CREDIT	US Short-Term TIPS (1-3 Year)	1.1%	2.0%	3.2%
	US Short-Term Treasury Bond (1-3 Year)	1.0%	2.0%	2.1%
	US Short-Term Corporate Bond (1-3 Year)	1.8%	3.7%	3.0%
	US Short-Term High Yield Corporate Bond (1-3 Year)	2.5%	3.5%	8.6%
	US Intermediate-Term TIPS (3-10 Year)	1.0%	2.1%	5.4%
	US Intermediate-Term Treasury Bond (3-10 Year)	0.9%	2.1%	5.4%
	US Intermediate-Term Corporate Bond (3-10 Year)	2.3%	3.8%	7.6%
	US Long-Term Treasury Bond (10-30 Year)	0.7%	1.9%	11.5%
	US Long-Term TIPS (10-30 Year)	1.0%	2.0%	10.9%
	US Long-Term Corporate Bond (10-30 Year)	2.3%	3.8%	11.5%
	20+ Year US Treasury STRIPS	0.4%	1.7%	21.2%
	*US Long-Term Government/Credit**	1.7%	3.1%	10.6%
	US Corporate Bond - AAA	1.5%	2.8%	5.9%
	US Corporate Bond – AA	1.6%	2.9%	5.9%
	US Corporate Bond – A	1.9%	3.3%	7.2%
	US Corporate Bond – BBB	2.5%	3.9%	8.0%
	US Corporate Bond – BB	3.9%	5.6%	9.9%
	US Corporate Bond – B	3.0%	4.9%	12.1%
	US Corporate Bond - CCC/Below	-3.4%	-0.8%	21.7%
	US Securitized Bond	1.8%	3.1%	9.0%
	US Collateralized Loan Obligation	2.3%	3.3%	7.5%
	US High Yield Securitized Bond	2.3%	4.5%	11.0%
	US High Yield Collateralized Loan Obligation	4.6%	5.7%	11.0%
	US Taxable Municipal Bond	2.5%	3.9%	7.5%
	10 Year US Treasury Bond	0.9%	2.3%	7.4%
	10 Year Non-US Government Bond (USD Hedge)	-0.1%	1.1%	5.1%

12/31/20 CAPITAL MARKET ASSUMPTIONS

	Asset Class	10-Year Return	30-Year Return	Standard Deviation
REAL ASSETS	Commodity Futures	0.9%	3.3%	18.5%
	Midstream Energy	7.4%	7.3%	27.0%
	*Public Real Assets (Multi-Asset)**	*4.4%*	*5.6%*	*14.2%*
	US REIT	5.5%	6.7%	21.4%
	Global Infrastructure Equity	5.9%	6.6%	20.4%
	Global Natural Resources Equity	6.7%	7.0%	22.8%
	Gold	2.9%	3.7%	16.4%
	Core Real Estate	4.4%	5.6%	15.0%
	Non-Core Real Estate	5.5%	7.0%	21.0%
	Private Debt - Real Estate	4.1%	5.2%	11.0%
	Private Real Assets - Natural Resources	8.0%	8.5%	32.0%
	Private Real Assets – Infrastructure	5.4%	6.6%	12.5%
MULTI-ASSET	Hedge Fund – Macro	3.6%	4.7%	9.2%
	*Hedge Fund**	*4.0%*	*5.2%*	*8.7%*
	*60% S&P 500 & 40% US Aggregate Bond**	*4.1%*	*5.1%*	*10.3%*
	*60% MSCI ACWI & 40% US Aggregate Bond**	*4.6%*	*5.6%*	*11.1%*

INFORMATION DISCLAIMER

Past performance is no guarantee of future results.

The goal of this report is to provide a basis for substantiating asset allocation recommendations. The opinions presented herein represent the good faith views of NEPC as of the date of this report and are subject to change at any time.

Information on market indices was provided by sources external to NEPC. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.

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NEPC, LLC is an investment consulting firm. We provide asset-liability studies for certain clients but we do not provide actuarial services. Any projections of funded status or contributions contained in this report should not be used for budgeting purposes. We recommend contacting the plan's actuary to obtain budgeting estimates.

The goal of this report is to provide a basis for substantiating asset allocation recommendations.

The projection of liabilities in this report uses standard actuarial projection methods and does not rely on actual participant data. Asset and liability information was received from the plan's actuary, and other projection assumptions are stated in the report.

Assets are projected using a methodology chosen by the client. Gains and losses are estimated through investment returns generated by applying NEPC's medium and long term asset class assumptions and scenario assumptions as of December 31, 2020.

This report is based on forward-looking assumptions, which are subject to change.

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PRELIMINARY MONTHLY PERFORMANCE REPORT

Ventura County Employees' Retirement Association

February 28, 2021

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BOSTON | ATLANTA | CHARLOTTE | CHICAGO | DETROIT | LAS VEGAS | PORTLAND | SAN FRANCISCO

Ventura County Employees' Retirement Association

TOTAL FUND PERFORMANCE DETAIL NET OF FEES

	Market Value ($)	% of Portfolio	Policy %	1 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund	**6,925,087,283**	**100.0**	**100.0**	**1.3**	**1.0**	**18.6**	**20.4**	**9.4**	**11.4**	**8.6**	**8.3**	**Apr-94**
Policy Index				1.6	1.3	18.4	22.1	10.3	12.0	8.9	8.4	*Apr-94*
Over/Under				-0.3	-0.3	0.2	-1.7	-0.9	-0.6	-0.3	-0.1	
60% MSCI ACWI (Net) / 40% FTSE WGBI				*0.4*	*-0.4*	*16.2*	*19.4*	*7.9*	*10.0*	*6.3*	*6.7*	*Apr-94*
60% S&P 500 / 40% BBgBarc Aggregate				*1.1*	*0.2*	*13.8*	*19.1*	*11.0*	*11.6*	*9.6*	*8.7*	*Apr-94*
Total Fund ex Parametric	**6,849,643,032**	**98.9**	**--**	**1.4**	**1.1**	**18.5**	**20.0**	**9.1**	**11.2**	**8.5**	**8.2**	**Apr-94**
Total Fund ex Private Equity	**6,191,519,933**	**89.4**	**--**	**1.3**	**0.9**	**17.8**	**20.1**	**8.9**	**11.1**	**--**	**9.2**	**Jan-12**
Policy Index				1.6	1.3	18.4	22.1	10.3	12.0	8.9	10.1	*Jan-12*
Over/Under				-0.3	-0.4	-0.6	-2.0	-1.4	-0.9		-0.9	
Total US Equity	**2,054,640,480**	**29.7**	**25.0**	**3.0**	**2.3**	**27.9**	**34.4**	**14.9**	**17.5**	**13.6**	**10.0**	**Dec-93**
Russell 3000				3.1	2.7	28.6	35.3	15.0	17.4	13.4	10.3	*Dec-93*
Over/Under				-0.1	-0.4	-0.7	-0.9	-0.1	0.1	0.2	-0.3	
Western U.S. Index Plus	300,395,406	4.3		2.5	1.3	26.6	30.8	14.1	17.3	13.9	7.7	May-07
S&P 500				2.8	1.7	24.3	31.3	14.1	16.8	13.4	9.1	*May-07*
Over/Under				-0.3	-0.4	2.3	-0.5	0.0	0.5	0.5	-1.4	
Blackrock Russell 1000 Index	1,661,761,358	24.0		2.9	2.2	27.2	34.5	15.1	--	--	15.9	May-17
Russell 1000				2.9	2.1	27.0	34.3	15.0	17.4	13.6	15.8	*May-17*
Over/Under				0.0	0.1	0.2	0.2	0.1			0.1	
Blackrock Russell 2500 Index	92,483,716	1.3		6.5	9.1	47.2	45.9	15.1	--	--	14.6	May-17
Russell 2500				6.5	9.1	47.2	45.9	15.1	17.4	12.3	14.5	*May-17*
Over/Under				0.0	0.0	0.0	0.0	0.0			0.1	

Policy Index: Currently, 25% Russell 3000, 20% BBgBarc US Aggregate, 16% MSCI ACWI ex U.S., 10% MSCI ACWI, 15% Russell 3000 Index + 3%, 6% CPI+2%, and 8% NCREIF ODCE Real Estate Index.

Prior to January 2016 the Total U.S. Equity Benchmark was a dynamic hybrid using the respective managers' market value weights within the U.S. Equity component toward their benchmark. Prior to May 2013, the Dow Jones U.S. Total Stock Market Index. Prior to May 2007, the Russell 3000 Index.

Ventura County Employees' Retirement Association

TOTAL FUND PERFORMANCE DETAIL NET OF FEES

	Market Value ($)	% of Portfolio	Policy %	1 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Non-US Equity	**1,110,865,836**	**16.0**	**16.0**	**1.8**	**1.3**	**26.4**	**24.7**	**5.2**	**11.0**	**5.2**	**6.6**	**Mar-94**
MSCI ACWI ex USA				*2.0*	*2.2*	*27.1*	*26.2*	*5.4*	*11.2*	*4.8*	*5.5*	*Mar-94*
Over/Under				-0.2	-0.9	-0.7	-1.5	-0.2	-0.2	0.4	1.1	
MSCI EAFE				*2.2*	*1.2*	*23.0*	*22.5*	*4.6*	*9.7*	*5.0*	*5.1*	*Mar-94*
MSCI ACWI ex USA NR LCL				*2.2*	*3.2*	*20.2*	*19.2*	*6.5*	*10.4*	*6.9*	*--*	*Mar-94*
MSCI EAFE NR LCL				*2.6*	*2.2*	*15.2*	*13.5*	*4.5*	*8.3*	*6.6*	*4.9*	*Mar-94*
BlackRock ACWI ex-U.S. Index	581,930,480	8.4		2.2	2.3	28.1	27.3	5.6	11.5	5.2	3.8	Mar-07
MSCI ACWI ex USA IMI				*2.2*	*2.4*	*28.2*	*27.2*	*5.4*	*11.3*	*5.0*	*3.6*	*Mar-07*
Over/Under				0.0	-0.1	-0.1	0.1	0.2	0.2	0.2	0.2	
MSCI ACWI ex USA NR LCL				*2.2*	*3.2*	*20.2*	*19.2*	*6.5*	*10.4*	*6.9*	*4.2*	*Mar-07*
Sprucegrove	259,934,645	3.8		4.0	3.3	35.8	24.3	2.7	10.8	5.1	7.2	Mar-02
MSCI ACWI ex USA				*2.0*	*2.2*	*27.1*	*26.2*	*5.4*	*11.2*	*4.8*	*6.8*	*Mar-02*
Over/Under				2.0	1.1	8.7	-1.9	-2.7	-0.4	0.3	0.4	
MSCI EAFE				*2.2*	*1.2*	*23.0*	*22.5*	*4.6*	*9.7*	*5.0*	*6.1*	*Mar-02*
MSCI ACWI ex USA NR LCL				*2.2*	*3.2*	*20.2*	*19.2*	*6.5*	*10.4*	*6.9*	*5.7*	*Mar-02*
MSCI EAFE NR LCL				*2.6*	*2.2*	*15.2*	*13.5*	*4.5*	*8.3*	*6.6*	*4.6*	*Mar-02*
Hexavest	93,232,628	1.3		0.4	-1.5	11.8	8.5	-0.4	4.7	2.7	3.2	Dec-10
MSCI EAFE				*2.2*	*1.2*	*23.0*	*22.5*	*4.6*	*9.7*	*5.0*	*5.5*	*Dec-10*
Over/Under				-1.8	-2.7	-11.2	-14.0	-5.0	-5.0	-2.3	-2.3	
MSCI EAFE NR LCL				*2.6*	*2.2*	*15.2*	*13.5*	*4.5*	*8.3*	*6.6*	*6.9*	*Dec-10*
Walter Scott	175,768,082	2.5		-1.7	-3.2	17.5	26.5	11.7	14.2	7.7	7.9	Dec-10
MSCI ACWI ex USA				*2.0*	*2.2*	*27.1*	*26.2*	*5.4*	*11.2*	*4.8*	*5.1*	*Dec-10*
Over/Under				-3.7	-5.4	-9.6	0.3	6.3	3.0	2.9	2.8	
MSCI ACWI ex USA NR LCL				*2.2*	*3.2*	*20.2*	*19.2*	*6.5*	*10.4*	*6.9*	*7.1*	*Dec-10*
MSCI EAFE				*2.2*	*1.2*	*23.0*	*22.5*	*4.6*	*9.7*	*5.0*	*5.5*	*Dec-10*
Total Global Equity	**795,737,787**	**11.5**	**10.0**	**2.3**	**1.9**	**26.5**	**30.7**	**10.7**	**14.8**	**9.0**	**7.2**	**May-05**
MSCI ACWI				*2.3*	*1.9*	*26.3*	*30.2*	*10.3*	*14.2*	*8.8*	*7.8*	*May-05*
Over/Under				0.0	0.0	0.2	0.5	0.4	0.6	0.2	-0.6	
BlackRock MSCI ACWI Equity Index	795,737,787	11.5		2.3	1.9	26.5	30.7	10.7	14.7	--	11.5	Aug-12
MSCI ACWI				*2.3*	*1.9*	*26.3*	*30.2*	*10.3*	*14.2*	*8.8*	*11.1*	*Aug-12*
Over/Under				0.0	0.0	0.2	0.5	0.4	0.5		0.4	

Ventura County Employees' Retirement Association

TOTAL FUND PERFORMANCE DETAIL NET OF FEES

	Market Value ($)	% of Portfolio	Policy %	1 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Private Equity	**733,567,350**	**10.6**	**15.0**	**1.9**	**2.2**	**26.8**	**23.7**	**17.1**	**15.5**	**--**	**15.2**	**Jan-12**
Private Equity Benchmark				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*18.7*	*Jan-12*
Over/Under				-1.5	-1.0	-4.3	-15.6	-1.3	-5.4		-3.5	
C|A Global All PE (Qtr Lag)				*0.0*	*0.0*	*20.5*	*14.9*	*13.0*	*12.6*	*12.8*	*12.5*	*Jan-12*
Adams Street Global Fund Series	205,367,434	3.0		0.0	0.0	23.8	20.1	16.5	13.9	--	13.7	Jan-12
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*18.8*	*Jan-12*
Over/Under				-3.4	-3.2	-7.3	-19.2	-1.9	-7.0		-5.1	
Harbourvest	125,844,570	1.8		-0.1	-0.3	25.1	13.8	15.4	16.7	--	18.3	Aug-13
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*17.0*	*Aug-13*
Over/Under				-3.5	-3.5	-6.0	-25.5	-3.0	-4.2		1.3	
Pantheon Global Secondary Funds	48,918,540	0.7		0.0	0.0	13.8	7.9	7.5	12.2	--	10.8	Jan-12
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*18.8*	*Jan-12*
Over/Under				-3.4	-3.2	-17.3	-31.4	-10.9	-8.7		-8.0	
Drive Capital Fund II	22,551,218	0.3		9.4	9.4	8.3	22.8	22.4	--	--	-3.3	Sep-16
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*19.4*	*Sep-16*
Over/Under				6.0	6.2	-22.8	-16.5	4.0			-22.7	
Abbott Secondary Opportunities	15,865,241	0.2		0.0	0.0	25.7	30.4	24.5	--	--	23.0	Jan-18
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*18.0*	*Jan-18*
Over/Under				-3.4	-3.2	-5.4	-8.9	6.1			5.0	
Clearlake Capital Partners V	12,564,561	0.2		0.0	0.0	31.3	34.1	35.5	--	--	35.5	Mar-18
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*18.4*	*Mar-18*
Over/Under				-3.4	-3.2	0.2	-5.2	17.1			17.1	
Battery Ventures XII	18,093,916	0.3		0.0	0.0	33.7	47.1	--	--	--	13.0	Apr-18
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*19.7*	*Apr-18*
Over/Under				-3.4	-3.2	2.6	7.8				-6.7	
Insight Venture Partners X	48,536,749	0.7		23.2	24.6	78.4	86.3	--	--	--	29.6	May-18
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*20.1*	*May-18*
Over/Under				19.8	21.4	47.3	47.0				9.5	

Please Note: Private Equity performance is shown on a time-weighted return basis. Values are cash adjusted with current month cash flows.

Ventura County Employees' Retirement Association

TOTAL FUND PERFORMANCE DETAIL NET OF FEES

	Market Value ($)	% of Portfolio	Policy %	1 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
GTCR Fund XII	21,241,170	0.3		5.6	5.6	56.5	64.2	--	--	--	-9.0	Jun-18
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*19.4*	*Jun-18*
Over/Under				2.2	2.4	25.4	24.9				-28.4	
Buenaventure One, LLC	75,639,192	1.1		0.0	0.0	17.0	16.9	--	--	--	8.6	Jul-18
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*19.7*	*Jul-18*
Over/Under				-3.4	-3.2	-14.1	-22.4				-11.1	
ECI 11	8,640,230	0.1		3.5	39.6	89.1	68.8	--	--	--	42.2	Dec-18
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*22.4*	*Dec-18*
Over/Under				0.1	36.4	58.0	29.5				19.8	
The Resolute Fund IV L.P	19,869,406	0.3		0.0	0.0	35.9	60.9	--	--	--	54.9	Jan-19
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*28.8*	*Jan-19*
Over/Under				-3.4	-3.2	4.8	21.6				26.1	
GGV Capital VII L.P.	8,088,102	0.1		0.0	0.0	6.9	7.8	--	--	--	-7.7	Feb-19
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*25.0*	*Feb-19*
Over/Under				-3.4	-3.2	-24.2	-31.5				-32.7	
GGV Discovery II, L.P.	1,603,718	0.0		0.0	0.0	7.0	11.2	--	--	--	3.9	Feb-19
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*25.0*	*Feb-19*
Over/Under				-3.4	-3.2	-24.1	-28.1				-21.1	
Drive Capital Overdrive Fund I	7,713,005	0.1		12.3	12.3	66.6	63.4	--	--	--	28.2	May-19
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*22.3*	*May-19*
Over/Under				8.9	9.1	35.5	24.1				5.9	
Riverside Micro Cap Fund V, LP	4,432,527	0.1		-2.2	-2.2	7.8	-0.5	--	--	--	-17.0	May-19
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*22.3*	*May-19*
Over/Under				-5.6	-5.4	-23.3	-39.8				-39.3	
GGV Capital VII Plus, LP	2,005,753	0.0		0.0	0.0	15.8	15.7	--	--	--	8.9	Jun-19
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*28.1*	*Jun-19*
Over/Under				-3.4	-3.2	-15.3	-23.6				-19.2	

Please Note: Private Equity performance is shown on a time-weighted return basis. Values are cash adjusted with current month cash flows.

Ventura County Employees' Retirement Association

TOTAL FUND PERFORMANCE DETAIL NET OF FEES

	Market Value ($)	% of Portfolio	Policy %	1 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Astorg VII L.P.	3,435,713	0.0		-0.6	-2.5	59.7	49.5	--	--	--	-8.8	Jul-19
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*24.4*	*Jul-19*
Over/Under				-4.0	-5.7	28.6	10.2				-33.2	
M/C Partners Fund VIII LP. Limited Partnership	3,471,195	0.1		-3.2	-3.2	5.7	-30.2	--	--	--	-33.0	Jul-19
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*24.4*	*Jul-19*
Over/Under				-6.6	-6.4	-25.4	-69.5				-57.4	
Genstar Capital Partners IX	3,377,222	0.0		0.0	0.0	27.3	25.6	--	--	--	--	Aug-19
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*24.4*	*Aug-19*
Over/Under				-3.4	-3.2	-3.8	-13.7					
Genstar IX Opportunities Fund I	1,649,234	0.0		0.0	-0.3	13.0	12.5	--	--	--	7.4	Aug-19
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*24.4*	*Aug-19*
Over/Under				-3.4	-3.5	-18.1	-26.8				-17.0	
ABRY Partners IX, LP	5,781,735	0.1		6.1	6.1	32.2	-10.2	--	--	--	-16.4	Sep-19
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*27.5*	*Sep-19*
Over/Under				2.7	2.9	1.1	-49.5				-43.9	
Advent International GPE IX LP	5,166,086	0.1		20.9	20.9	60.8	60.7	--	--	--	33.2	Nov-19
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*27.2*	*Nov-19*
Over/Under				17.5	17.7	29.7	21.4				6.0	
Drive Capital Fund III LP	2,207,325	0.0		-2.1	-2.1	7.8	-10.9	--	--	--	-8.8	Dec-19
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*25.2*	*Dec-19*
Over/Under				-5.5	-5.3	-23.3	-50.2				-34.0	
Oak HC/FT Partners III LP	10,491,077	0.2		0.0	0.0	16.3	8.8	--	--	--	2.5	Dec-19
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*25.2*	*Dec-19*
Over/Under				-3.4	-3.2	-14.8	-30.5				-22.7	
TA XIII A LP	5,699,260	0.1		0.0	0.0	21.6	11.6	--	--	--	1.7	Dec-19
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*23.9*	*Dec-19*
Over/Under				-3.4	-3.2	-9.5	-27.7				-22.2	

Ventura County Employees' Retirement Association

TOTAL FUND PERFORMANCE DETAIL NET OF FEES

	Market Value ($)	% of Portfolio	Policy %	1 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Dover Street X, LP	10,272,992	0.1		0.0	-0.5	56.5	40.0	--	--	--	35.7	Feb-20
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*25.8*	*Feb-20*
Over/Under				-3.4	-3.7	25.4	0.7				9.9	
Hellman & Friedman CP IX	14,121,460	0.2		-0.1	-0.1	26.7	--	--	--	--	-2.6	Apr-20
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*61.0*	*Apr-20*
Over/Under				-3.5	-3.3	-4.4					-63.6	
Clearlake Capital Partners VI	9,214,216	0.1		0.0	0.0	11.7	--	--	--	--	11.7	Jun-20
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*34.4*	*Jun-20*
Over/Under				-3.4	-3.2	-19.4					-22.7	
Flexpoint Fund IV	1,496,237	0.0		0.0	0.0	10.7	--	--	--	--	10.7	Jun-20
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*34.4*	*Jun-20*
Over/Under				-3.4	-3.2	-20.4					-23.7	
Battery Ventures XIII	4,396,013	0.1		0.0	0.0	2.2	--	--	--	--	2.2	Jun-20
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*34.4*	*Jun-20*
Over/Under				-3.4	-3.2	-28.9					-32.2	
Green Equity Investors VIII, L.P.	1,907,379	0.0		-2.4	-4.9	--	--	--	--	--	-4.9	Nov-20
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*21.5*	*Nov-20*
Over/Under				-5.8	-8.1						-26.4	
CapVest Private Equity Partners IV, SCSp	860,711	0.0		-0.1	-0.8	--	--	--	--	--	1.5	Dec-20
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*8.1*	*Dec-20*
Over/Under				-3.5	-4.0						-6.6	
Great Hill Equity Partners VII	1,253,763	0.0		0.0	0.0	--	--	--	--	--	0.0	Jan-21
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*3.2*	*Jan-21*
Over/Under				-3.4	-3.2						-3.2	
Vitruvian Investment Partners IV	275,907	0.0		-0.1	-0.8	--	--	--	--	--	-0.8	Jan-21
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	*3.2*	*Jan-21*
Over/Under				-3.5	-4.0						-4.0	
CRV XVIII, L.P.	750,000	0.0		--	--	--	--	--	--	--	--	Mar-21
Russell 3000 + 3%				*3.4*	*3.2*	*31.1*	*39.3*	*18.4*	*20.9*	*16.8*	--	*Mar-21*
Over/Under												

Ventura County Employees' Retirement Association

TOTAL FUND PERFORMANCE DETAIL NET OF FEES

	Market Value ($)	% of Portfolio	Policy %	1 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total US Fixed Income	**960,081,707**	**13.9**	**15.0**	**-0.9**	**-1.3**	**3.2**	**7.2**	**6.5**	**5.3**	**4.6**	**5.9**	**Feb-94**
BBgBarc US Aggregate TR				-1.4	-2.2	-0.9	1.4	5.3	3.6	3.6	5.2	Feb-94
Over/Under				0.5	0.9	4.1	5.8	1.2	1.7	1.0	0.7	
BlackRock U.S. Debt Fund	175,503,292	2.5		-1.5	-2.2	-0.9	1.5	5.4	3.6	3.6	5.1	Nov-95
BBgBarc US Aggregate TR				-1.4	-2.2	-0.9	1.4	5.3	3.6	3.6	5.1	Nov-95
Over/Under				-0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	
Western	299,986,660	4.3		-2.1	-3.0	0.9	4.0	6.6	5.1	5.0	6.1	Dec-96
BBgBarc US Aggregate TR				-1.4	-2.2	-0.9	1.4	5.3	3.6	3.6	5.1	Dec-96
Over/Under				-0.7	-0.8	1.8	2.6	1.3	1.5	1.4	1.0	
Reams	345,615,430	5.0		0.3	0.4	6.1	12.0	6.7	5.6	4.4	5.5	Sep-01
Reams Custom Index				0.0	0.0	0.2	0.4	1.7	1.5	1.9	3.6	Sep-01
Over/Under				0.3	0.4	5.9	11.6	5.0	4.1	2.5	1.9	
BBgBarc US Aggregate TR				-1.4	-2.2	-0.9	1.4	5.3	3.6	3.6	4.4	Sep-01
3-Month LIBOR + 3%				0.3	0.5	2.1	3.4	4.7	4.5	3.9	4.8	Sep-01
Loomis Strategic Alpha	48,476,298	0.7		0.1	0.1	8.2	10.0	5.0	5.3	--	3.6	Jul-13
BBgBarc US Aggregate TR				-1.4	-2.2	-0.9	1.4	5.3	3.6	3.6	3.5	Jul-13
Over/Under				1.5	2.3	9.1	8.6	-0.3	1.7		0.1	
3-Month LIBOR + 3%				0.3	0.5	2.1	3.4	4.7	4.5	3.9	4.1	Jul-13
Loomis Sayles Multi Strategy	90,500,028	1.3		-0.3	-0.7	6.7	10.1	7.1	7.5	6.0	6.6	Jul-05
Loomis Custom Index				-0.9	-1.3	3.0	3.8	5.6	5.1	4.4	5.1	Jul-05
Over/Under				0.6	0.6	3.7	6.3	1.5	2.4	1.6	1.5	
BBgBarc US Govt/Credit TR				-1.8	-2.8	-1.2	1.3	5.8	3.9	3.9	4.3	Jul-05
Treasuries	**88,129,043**	**1.3**	**2.0**	**-3.2**	**-4.7**	**-5.8**	**-1.7**	**--**	**--**	**--**	**6.1**	**Apr-19**
Reams 10-Year Treasuries	88,129,043	1.3		-3.2	-4.7	-5.8	-1.7	--	--	--	6.1	Apr-19
BBgBarc US Treasury 7-10 Yr TR				-2.3	-3.4	-4.4	-0.2	6.3	2.9	4.2	6.1	Apr-19
Over/Under				-0.9	-1.3	-1.4	-1.5				0.0	

Reams Custom Index: Merrill Lynch 3 Month Libor Constant Maturity Index, prior to February 2013 the Barclays Aggregate.
Loomis Custom Index: 65% BBgBarc US Aggregate, 30% Citigroup High Yield Market Index and 5% JPM Non-US Hedged Bond Index.

Ventura County Employees' Retirement Association

TOTAL FUND PERFORMANCE DETAIL NET OF FEES

	Market Value ($)	% of Portfolio	Policy %	1 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Private Debt	**157,522,833**	**2.3**	**3.0**	**3.6**	**4.0**	**17.3**	**10.8**	**8.1**	**--**	**--**	**7.6**	**Jan-18**
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps				*0.5*	*1.3*	*11.4*	*8.4*	*7.0*	--	--	*6.8*	*Jan-18*
Over/Under				3.1	2.7	5.9	2.4	1.1			0.8	
CVI Credit Value Fund IV	30,323,437	0.4		2.8	4.4	21.5	4.6	6.1	--	--	5.7	Jan-18
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps				*0.5*	*1.3*	*11.4*	*8.4*	*7.0*	--	--	*6.8*	*Jan-18*
Over/Under				2.3	3.1	10.1	-3.8	-0.9			-1.1	
Monroe Capital Private Credit Fund III	21,258,594	0.3		0.0	0.0	11.5	11.2	--	--	--	9.9	Dec-18
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps				*0.5*	*1.3*	*11.4*	*8.4*	*7.0*	--	--	*8.2*	*Dec-18*
Over/Under				-0.5	-1.3	0.1	2.8				1.7	
Bluebay Direct Lending Fund III	10,120,127	0.1		2.6	2.6	10.0	11.0	--	--	--	9.3	Apr-19
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps				*0.5*	*1.3*	*11.4*	*8.4*	*7.0*	--	--	*7.5*	*Apr-19*
Over/Under				2.1	1.3	-1.4	2.6				1.8	
Pimco Private Income Fund	62,806,095	0.9		4.0	4.0	15.4	15.7	--	--	--	11.6	Nov-19
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps				*0.5*	*1.3*	*11.4*	*8.4*	*7.0*	--	--	*7.5*	*Nov-19*
Over/Under				3.5	2.7	4.0	7.3				4.1	
Bridge Debt Strategies III Limited Partner	23,529,177	0.3		0.0	0.0	16.3	2.6	--	--	--	2.2	Jan-20
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps				*0.5*	*1.3*	*11.4*	*8.4*	*7.0*	--	--	*6.4*	*Jan-20*
Over/Under				-0.5	-1.3	4.9	-5.8				-4.2	
PIMCO Corp Opps Fund III	6,985,402	0.1		40.9	40.9	63.2	--	--	--	--	88.6	May-20
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps				*0.5*	*1.3*	*11.4*	*8.4*	*7.0*	--	--	*17.4*	*May-20*
Over/Under				40.4	39.6	51.8					71.2	
Torchlight Debt Fund VII, L.P.	2,500,000	0.0		0.0	0.0	--	--	--	--	--	0.0	Jan-21
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps				*0.5*	*1.3*	*11.4*	*8.4*	*7.0*	--	--	*1.3*	*Jan-21*
Over/Under				-0.5	-1.3						-1.3	

Ventura County Employees' Retirement Association

TOTAL FUND PERFORMANCE DETAIL NET OF FEES

	Market Value ($)	% of Portfolio	Policy %	1 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Real Estate	**429,734,245**	**6.2**	**8.0**	**0.0**	**0.0**	**-1.0**	**-2.7**	**1.4**	**3.4**	**7.4**	**7.1**	**Mar-94**
NCREIF ODCE Net				*0.0*	*0.0*	*1.4*	*0.3*	*4.0*	*5.3*	*8.9*	*7.6*	*Mar-94*
Over/Under				0.0	0.0	-2.4	-3.0	-2.6	-1.9	-1.5	-0.5	
Prudential Real Estate	168,998,678	2.4		0.0	0.0	1.7	2.1	5.4	6.2	9.8	6.0	Jun-04
NCREIF ODCE Net				*0.0*	*0.0*	*1.4*	*0.3*	*4.0*	*5.3*	*8.9*	*6.5*	*Jun-04*
Over/Under				0.0	0.0	0.3	1.8	1.4	0.9	0.9	-0.5	
NCREIF ODCE				*0.0*	*0.0*	*1.8*	*1.2*	*4.9*	*6.2*	*9.9*	*7.4*	*Jun-04*
UBS Real Estate	243,594,337	3.5		0.0	0.0	-2.4	-4.7	-0.5	1.9	6.2	6.0	Mar-03
NCREIF ODCE Net				*0.0*	*0.0*	*1.4*	*0.3*	*4.0*	*5.3*	*8.9*	*6.7*	*Mar-03*
Over/Under				0.0	0.0	-3.8	-5.0	-4.5	-3.4	-2.7	-0.7	
NCREIF ODCE				*0.0*	*0.0*	*1.8*	*1.2*	*4.9*	*6.2*	*9.9*	*7.6*	*Mar-03*
LaSalle Income + Growth VIII Limited Partnership	17,141,229	0.2		0.0	0.0	-6.9	-19.0	--	--	--	-19.0	Mar-20
NCREIF ODCE Net				*0.0*	*0.0*	*1.4*	*0.3*	*4.0*	*5.3*	*8.9*	*0.3*	*Mar-20*
Over/Under				0.0	0.0	-8.3	-19.3				-19.3	
NCREIF ODCE				*0.0*	*0.0*	*1.8*	*1.2*	*4.9*	*6.2*	*9.9*	*1.2*	*Mar-20*

Total Real Estate Benchmark: NCREIF ODCE; prior to January 2006, the NCREIF Property Index.
Total Real Assets Benchmark CPI + 4% from inception until 6/30/2019; CPI +2% from 6/30/2019 to present.
Real Estate managers and NCREIF ODCE are valued on a quarterly basis. Performance is not applicable in mid-quarter months, therefore 0% return is shown.

Ventura County Employees' Retirement Association

TOTAL FUND PERFORMANCE DETAIL NET OF FEES

	Market Value ($)	% of Portfolio	Policy %	1 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Real Assets	**464,512,707**	**6.7**	**6.0**	**-1.3**	**-0.8**	**10.8**	**3.1**	**2.6**	**5.5**	**--**	**3.7**	**Apr-13**
Real Assets Index				*0.7*	*1.3*	*3.4*	*3.7*	*4.8*	*5.5*	*7.7*	*5.7*	*Apr-13*
Over/Under				-2.0	-2.1	7.4	-0.6	-2.2	0.0		-2.0	
Bridgewater All Weather Fund	371,281,616	5.4		-2.6	-2.9	9.5	6.6	6.3	7.9	--	5.6	Aug-13
CPI + 5% (Unadjusted)				*1.0*	*1.8*	*5.4*	*6.8*	*6.9*	*7.2*	--	*6.6*	*Aug-13*
Over/Under				-3.6	-4.7	4.1	-0.2	-0.6	0.7		-1.0	
Tortoise Energy Infrastructure	64,954,159	0.9		5.5	11.4	19.0	-6.7	-8.1	-1.5	--	-3.1	Apr-13
Tortoise MLP Index				*7.4*	*15.1*	*28.6*	*3.1*	*-5.7*	*1.1*	*-0.7*	*-4.6*	*Apr-13*
Over/Under				-1.9	-3.7	-9.6	-9.8	-2.4	-2.6		1.5	
Brookfield Infra Fund IV B LP	24,421,040	0.4		2.0	2.0	5.2	--	--	--	--	5.2	Apr-20
CPI + 2% (Unadjusted)				*0.7*	*1.3*	*3.4*	*3.7*	*3.9*	*4.1*	*3.8*	*3.8*	*Apr-20*
Over/Under				1.3	0.7	1.8					1.4	
Harbourvest Real Assets Fund IV L.P.	3,855,892	0.1										
CPI + 2% (Unadjusted)				*0.7*	*1.3*	*3.4*	*3.7*	*3.9*	*4.1*	*3.8*	*3.7*	*Sep-19*
Over/Under												
Overlay	**130,295,296**	**1.9**	**0.0**									
Parametric	75,444,251	1.1										
Abbott Capital Cash	54,851,045	0.8										

Please Note: Private Equity performance is shown on a time-weighted return basis. Values are cash adjusted with current month cash flows.

VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

PRIVATE EQUITY LIMITED PARTNERSHIP PERFORMANCE

Fund Name	Vintage Year	Initial Investment Date	Commitment	Capital Called to Date[1]	Outstanding Commitment[1]	Call Ratio	Add'l Fees[2]	Distributions to Date	Valuation	Total Value	Net Benefit	IRR	Distributions to Paid In Multiple (DPI)	Total Value to Paid In Multiple (TVPI)
Abbott Secondary Opportunities, LP.	2017	12/21/2017	$25,000,000	$23,974,362	$1,388,355	96%	--	$16,750,000	$15,865,243	$32,615,243	$8,640,881	21.7%	0.7x	1.36x
Abbott Secondary Opportunities II, LP.	2020	1/31/2020	$25,000,000	--	$25,000,000	--	--	$0	$605,838	$605,838	--	--	--	--
ABRY Partners IX	2019	12/6/2018	$10,600,000	$5,837,353	$4,762,647	55%	--	--	$5,781,736	$5,781,736	($55,617)	-0.9%	--	0.99x
Adams Street 2010 U.S. Fund	2010	5/21/2010	$42,500,000	$37,442,500	$5,057,500	88%	$15,213	$45,476,406	$32,126,606	$77,603,012	$40,145,299	15.3%	1.21x	2.07x
Adams Street 2010 Non-U.S. Dev. Mkts Fund	2010	5/21/2010	$25,500,000	$22,962,749	$2,537,251	90%	$1,589	$24,305,483	$15,011,050	$39,316,533	$16,352,195	12.4%	1.06x	1.71x
Adams Street 2010 Non-U.S. Emg Mkts Fund	2010	1/3/2011	$8,500,000	$7,633,000	$867,000	90%	--	$4,596,756	$9,377,966	$13,974,722	$6,341,722	10.8%	0.6x	1.83x
Adams Street 2010 Direct Fund	2010	5/21/2010	$8,500,000	$8,168,500	$331,500	96%	$6,697	$10,372,022	$4,534,409	$14,906,431	$6,731,234	12.3%	1.27x	1.82x
Adams Street 2013 Global Fund	2013	6/27/2013	$75,000,000	$61,350,000	$13,650,000	82%	$10,728	$24,950,902	$78,189,644	$103,140,546	$41,779,818	11.9%	0.41x	1.68x
Adams Street 2016 Global Fund	2016	12/22/2016	$60,000,000	$39,492,000	$20,508,000	66%	--	$4,801,064	$46,586,129	$51,387,193	$11,895,193	12.6%	0.12x	1.3x
Adams Street Co-Investment Fund IV A	2018	9/24/2018	$30,000,000	$16,684,931	$13,410,000	56%	$67,808	--	$19,804,408	$19,804,408	$3,051,669	14.1%	--	1.19x
Advent International GPE IX	2019	5/23/2019	$10,000,000	$3,874,930	$6,125,070	39%	--	$319,600	$5,166,087	$5,485,687	$1,610,757	46.3%	--	1.42x
Astorg VII	2019	12/17/2018	$9,181,116	$3,094,116	$6,087,000	34%	--	--	$2,830,543	$2,830,543	($263,573)	-13.4%	--	0.91x
Battery Ventures XII	2018	2/1/2018	$9,050,000	$7,672,590	$1,377,410	85%	--	--	$10,582,899	$10,582,899	$2,910,309	19.8%	--	1.38x
Battery Ventures XII Side Fund	2018	2/1/2018	$5,050,000	$4,469,755	$580,245	89%	--	--	$7,511,022	$7,511,022	$3,041,267	32.1%	--	1.68x
Battery Ventures XIII	2020	2/11/2020	$9,240,000	$2,439,360	$6,800,640	26%	--	--	$2,433,803	$2,433,803	($5,557)	-0.5%	--	1x
Battery Ventures XIII Side Fund	2020	2/11/2020	$6,160,000	$1,850,464	$4,309,536	30%	--	--	$1,962,209	$1,962,209	$111,745	16.4%	--	1.06x
Buenaventure One, LLC	2018	1/5/2018	$160,429,500	$65,380,590	$95,048,910	41%	--	$403,156	$75,639,186	$76,042,341	$10,661,751	12.6%	0.01x	1.16x
CapVest Equity Partners IV	2019	7/11/2018	$13,276,686	$826,432	$12,450,254	6%	--	--	($245,879)	($245,879)	--	-100.0%	--	-0.3x
Charlesbank Equity Fund X	2020	11/20/2020	$24,000,000	--	$24,000,000	--	--	--	--	--	--	--	--	--
Charlesbank Equity Overage Fund X	2020	11/20/2020	$6,000,000	--	$6,000,000	--	--	--	--	--	--	--	--	--
Clearlake Capital Partners V	2017	12/22/2017	$9,950,000	$9,163,056	$2,180,279	92%	$46,158	$2,797,682	$12,564,560	$15,362,242	$6,153,028	36.1%	0.31x	1.68x
Clearlake Capital Partners VI	2020	1/2/2020	$18,700,000	$9,073,299	$9,681,226	49%	--	$155,933	$9,167,529	$9,323,462	$250,163	10.0%	0.02x	1.03x
CRV XVIII	2020	7/2/2020	$15,000,000	$750,000	$14,250,000	5%	--	--	$750,000	$750,000	--	0.0%	--	1x
CVC Capital Partners VIII	2020	5/22/2020	$22,206,960	--	$22,206,960	--	--	--	--	--	--	--	--	--
Drive Capital Fund II	2016	9/1/2016	$15,000,000	$14,476,970	$526,240	97%	$3,210	--	$22,551,217	$22,551,217	$8,071,037	21.0%	--	1.56x
Drive Capital Fund III	2019	4/5/2019	$7,500,000	$2,262,290	$5,237,710	30%	--	--	$2,207,326	$2,207,326	($54,964)	-6.2%	--	0.98x
Drive Capital Overdrive Fund I	2019	4/5/2019	$7,500,000	$5,167,303	$2,332,697	69%	--	$12,492	$7,713,002	$7,725,494	$2,558,191	42.5%	0x	1.5x
ECI 11	2018	7/5/2018	$10,051,815	$5,458,182	$4,593,633	54%	--	--	$6,179,977	$6,179,977	$721,795	11.6%	--	1.13x
Flexpoint Fund IV-A	2019	7/2/2019	$10,650,000	$1,783,947	$8,866,053	17%	--	--	$1,496,238	$1,496,238	($287,709)	-30.2%	--	0.84x
Flexpoint Overage Fund IV-A	2019	7/2/2019	$3,550,000	--	$3,550,000	--	--	--	($4,699)	($4,699)	--	-100.0%	--	--
Genstar Capital Partners IX	2019	2/21/2019	$7,500,000	$2,944,241	$4,728,882	39%	--	$175,000	$3,377,223	$3,552,223	$607,982	20.7%	0.06x	1.21x
Genstar Capital Partners IX Opportunities Program	2019	2/21/2019	$2,500,000	$1,502,042	$997,958	60%	--	--	$1,649,234	$1,649,234	$147,192	10.3%	--	1.1x
GGV Capital VII	2019	8/15/2018	$10,160,000	$7,874,000	$2,286,000	78%	--	--	$8,088,101	$8,088,101	$214,101	3.0%	--	1.03x
GGV Capital VII Plus	2019	8/15/2018	$2,540,000	$1,778,000	$762,000	70%	--	--	$2,005,753	$2,005,753	$227,753	12.8%	--	1.13x
GGV Capital VIII	2020	10/30/2020	$9,180,000	--	$9,180,000	--	--	--	--	--	--	--	--	--
GGV Capital VIII Plus	2020	10/30/2020	$2,295,000	--	$2,295,000	--	--	--	--	--	--	--	--	--
GGV Discovery II	2019	8/15/2018	$2,100,000	$1,501,500	$598,500	72%	--	--	$1,603,718	$1,603,718	$102,218	7.4%	--	1.07x
GGV Discovery III	2020	10/30/2020	$3,825,000	--	$3,825,000	--	--	--	--	--	--	--	--	--
Great Hill Equity Partners VII	2019	6/28/2019	$8,900,000	$1,253,763	$7,646,237	14%	--	$2,458,521	$468,054	$2,926,575	$1,672,812	--	--	2.33x
Green Equity Investors VIII	2019	10/18/2019	$15,000,000	$2,023,598	$12,976,402	13%	--	--	$1,907,378	$1,907,378	($116,220)	-24.3%	--	0.94x
GTCR Fund XII	2017	9/29/2017	$30,000,000	$18,720,000	$11,280,000	62%	--	$4,079,641	$21,241,168	$25,320,809	$6,600,809	23.2%	0.22x	1.35x
GTCR Fund XIII	2020	10/27/2020	$30,000,000	--	$30,000,000	--	--	--	-$19,819	-$19,819	--	-100.0%	--	--
HarbourVest - Dover Street VIII	2013	5/30/2013	$67,500,000	$62,184,954	$5,400,000	92%	$84,954	$79,383,522	$21,228,882	$100,612,404	$38,342,496	19.7%	1.28x	1.62x
HarbourVest - Dover Street IX	2016	12/16/2016	$60,000,000	$48,000,000	$12,000,000	80%	--	$25,562,719	$44,056,194	$69,618,913	$21,618,913	22.3%	0.53x	1.45x
HarbourVest - Dover Street X	2019	5/31/2019	$40,000,000	$9,000,000	$31,000,000	23%	--	$935,750	$10,320,704	$11,256,454	$2,256,454	52.0%	--	1.25x
HarbourVest - PRTNS CO INVEST IV L.P.	2017	6/2/2017	$30,000,000	$24,464,388	$5,732,352	82%	--	$6,050,893	$30,899,619	$36,950,512	$12,486,124	15.0%	0.25x	1.51x
HarbourVest - PRTNS CO INVEST V L.P.	2019	7/31/2018	$35,000,000	$24,500,000	$10,500,000	70%	--	--	$31,375,921	$31,375,921	$6,875,921	35.8%	--	1.28x
Hellman & Friedman Capital Partners IX	2019	9/28/2018	$19,800,000	$13,826,540	$5,973,460	70%	--	--	$14,121,455	$14,121,455	$294,915	4.8%	--	1.02x
Insight Venture Partners X	2017	10/13/2017	$25,000,000	$25,093,372	$169,314	100%	--	$2,280,029	$48,608,057	$50,888,086	$25,794,714	44.0%	0.09x	2.03x
M/C Partners VIII	2019	4/2/2018	$10,000,000	$4,009,621	$5,990,379	40%	--	--	$3,471,193	$3,471,193	($538,428)	-16.7%	--	0.87x
Oak HC/FT Partners III	2019	7/31/2019	$15,000,000	$9,700,837	$5,299,163	65%	--	--	$10,491,077	$10,491,077	$790,240	13.4%	--	1.08x
Oak HC/FT Partners IV	2021	2/17/2021	$10,000,000		$10,000,000		--	--	--	--	--	--	--	--
Pantheon Global Secondary Fund IV	2010	8/20/2010	$15,000,000	$9,960,000	$2,040,000	66%	--	$13,694,043	$2,040,635	$15,734,678	$5,774,678	13.0%	1.37x	1.58x
Pantheon Global Secondary Fund V	2015	2/26/2015	$50,000,000	$35,616,509	$14,383,491	71%	($162,514)	$15,982,534	$33,229,899	$49,212,433	$13,758,438	11.0%	0.45x	1.38x
Pantheon Global Secondary Fund VI	2018	2/24/2020	$25,000,000	$11,897,805	$13,337,113	48%	--	$37,120	$13,648,009	$13,685,129	$1,787,324	27.0%	0x	1.15x
The Resolute Fund IV	2018	5/2/2018	$20,000,000	$16,476,664	$6,601,113	82%	--	$5,076,184	$19,869,406	$24,945,590	$8,468,926	51.0%	0.31x	1.51x
Riverside Micro-Cap Fund V	2018	8/21/2018	$10,000,000	$4,667,946	$5,332,054	47%	--	--	$4,432,527	$4,432,527	($235,419)	-5.7%	--	0.95x
TA XIII	2019	5/2/2019	$10,000,000	$5,500,000	$4,500,000	55%	--	--	$5,699,260	$5,699,260	$199,260	6.1%	--	1.04x
Vitruvian Investment Partnership IV	2020	6/3/2020	$22,211,139	$278,517	$21,932,622	1%	--	--	$162,288	$162,288	($116,229)	-95.0%	--	--
Total VCERA Private Equity Program	***--***	***5/21/2010***	***$1,271,607,216***	***$704,062,976***	***$570,483,156***	***55%***	***$73,843***	***$290,657,452***	***$730,363,984***	***$1,021,021,436***	***$317,375,608***	***15.9%***	***0.41x***	***1.45x***

1. Includes recycled/recallable distributions received to date.

2. Add'l Fees represents notional interest paid/(received).

2. Add'l Fees for Pantheon Global Secondary Fund V includes notional interest paid/(received) and management fee rebates paid to VCERA.

Note: Private equity performance data is reported net of fees.

Performance shown is based on 2/28/2021 statement of investments produced by Abbott Capital.

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VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

PRIVATE DEBT LIMITED PARTNERSHIP PERFORMANCE

Fund Name	Vintage Year	Initial Investment Date	Commitment	Capital Called to Date[1]	Outstanding Commitment[1]	Call Ratio	Distributions to Date	Valuation	Total Value	Net Benefit	Since Inception IRR	Since Inception Distributions to Paid In Multiple (DPI)	Since Inception Total Value to Paid In Multiple (TVPI)
BlueBay Direct Lending III	2019	2/12/2019	$25,000,000	$11,849,228	$13,150,772	47%	$3,075,371	$10,120,127	$13,195,498	$1,346,269	9.0%	0.26x	1.11x
Bridge Debt Strategies III	2019	12/20/2019	$25,000,000	$24,072,665	$927,335	96%	$1,312,521	$23,529,177	$24,841,698	$769,033	3.1%	0.05x	1.03x
CVI Credit Value Fund IV	2017	12/31/2017	$30,000,000	$29,100,000	$900,000	97%	$2,106,147	$30,323,437	$32,429,584	$3,329,584	6.2%	0.07x	1.11x
Monroe Capital Private Credit Fund III	2018	9/5/2018	$25,000,000	$21,253,151	$3,746,849	85%	$3,317,508	$21,258,594	$24,576,102	$3,322,951	10.3%	0.16x	1.16x
PIMCO Corporate Opportunities Fund III	2020	1/26/2020	$50,000,000	$3,750,000	$46,250,000	8%	$56,285	$6,985,402	$7,041,687	$3,291,687	88.2%	0.02x	1.88x
PIMCO Private Income Fund	2019	3/25/2019	$55,000,000	$55,000,000	$0	100%	$0	$62,806,095	$62,806,095	$7,806,095	15.2%	0x	1.14x
Torchlight Debt Fund VII	2021	1/25/2021	$25,000,000	$2,500,000	$22,500,000	10%	$0	2,500,000.00	$2,500,000	$0	0.0%	0x	1x
Total VCERA Private Debt Program	***--***		***$235,000,000***	***$147,525,044***	***$87,474,956***	***63%***	***$9,867,831***	***$157,522,833***	***$167,390,664***	***$19,865,620***	***10.9%***	***0.07x***	***1.13x***

1. Includes recycled/recallable distributions received to date.

Note: Private debt performance data is reported net of fees.

Performance shown is based on 2/28/2021 cash-adjusted market values.

VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

PRIVATE REAL ESTATE LIMITED PARTNERSHIP PERFORMANCE

												Since Inception		
Fund Name	Vintage Year	Initial Investment Date	Commitment	Capital Called to Date[1]	Outstanding Commitment[1]	Call Ratio	Distributions to Date	Valuation	Total Value	Net Benefit	IRR	Distributions to Paid In Multiple (DPI)	Total Value to Paid In Multiple (TVPI)
Lasalle Income & Growth Fund VIII, LP	2019	2/26/2020	$100,000,000	$20,172,821	$79,827,179	20%	$0	$17,141,229	$17,141,229	-$3,031,592	-18.2%	0x	0.85x
Total VCERA Private Real Estate Program	*--*		***$100,000,000***	***$20,172,821***	***$79,827,179***	***20%***	***$0***	***$17,141,229***	***$17,141,229***	***-$3,031,592***	***-18.2%***	***0x***	***0.85x***

1. Includes recycled/recallable distributions received to date.

Note: Private Real Estate performance data is reported net of fees.

Performance shown is based on 2/28/2021 cash-adjusted market values.

VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

PRIVATE REAL ASSETS LIMITED PARTNERSHIP PERFORMANCE

Fund Name	Vintage Year	Initial Investment Date	Commitment	Capital Called to Date[1]	Outstanding Commitment [1]	Call Ratio	Distributions to Date	Valuation	Total Value	Net Benefit	Since Inception IRR	Since Inception Distributions to Paid In Multiple (DPI)	Since Inception Total Value to Paid In Multiple (TVPI)
Brookfield Infrastructure Fund IV, LP	2019	10/21/2019	$50,000,000	$24,829,149	$26,908,578	50%	$2,511,321	$24,421,040	$26,932,361	$2,103,212	10.2%	0.1x	1.08x
Harbourvest Real Assets Fund IV, LP	2019	7/15/2019	$100,000,000	$0	$100,000,000	0%	$0	$3,855,892	$3,855,892	--	--	--	--
Total VCERA Private Real Estate Program	***--***		***$74,829,149***	***$24,829,149***	***$126,908,578***	***33%***	***$2,511,321***	***$28,276,932***	***$30,788,253***	***$2,103,212***	***10.2%***	***0.1x***	***1.24x***

1. Includes recycled/recallable distributions received to date.

Note: Private Real Assets performance data is reported net of fees.

Performance shown is based on 2/28/2021 cash-adjusted market values.

Ventura County Employees' Retirement Association

TOTAL FUND

Cash Flow Summary

Month Ending February 28, 2021

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Fees	Net Investment Change	Ending Market Value	Month Return
Abbott Capital Cash	$84,315,486	$17,954,612	-$47,438,149	-$29,483,537	$0	$19,096	$54,851,045	0.03%
Abbott Secondary Opportunities	$15,865,241	$0	$0	$0	$0	$0	$15,865,241	0.00%
ABRY Partners IX, LP	$5,096,839	$358,855	$0	$358,855	$0	$326,041	$5,781,735	6.09%
Adams Street Global Fund Series	$213,523,674	$0	-$8,156,216	-$8,156,216	$0	-$25	$205,367,434	0.00%
Advent International GPE IX LP	$4,099,737	$199,959	$0	$199,959	$0	$866,391	$5,166,086	20.88%
Astorg VII L.P.	$3,457,975	$0	$0	$0	$0	-$22,262	$3,435,713	-0.64%
Battery Ventures XII	$18,093,916	$0	$0	$0	$0	$0	$18,093,916	0.00%
Battery Ventures XIII	$4,396,013	$0	$0	$0	$0	$0	$4,396,013	0.00%
BlackRock ACWI ex-U.S. Index	$569,481,905	$0	$0	$0	-$50,161	$12,448,575	$581,930,480	2.18%
BlackRock MSCI ACWI Equity Index	$777,516,422	$0	$0	$0	-$28,191	$18,221,365	$795,737,787	2.34%
Blackrock Russell 1000 Index	$1,614,780,395	$0	$0	$0	-$14,265	$46,980,963	$1,661,761,358	2.91%
Blackrock Russell 2500 Index	$86,801,281	$0	$0	$0	-$1,541	$5,682,435	$92,483,716	6.54%
BlackRock U.S. Debt Fund	$178,096,988	$0	$0	$0	-$9,183	-$2,593,696	$175,503,292	-1.46%
Bluebay Direct Lending Fund III	$9,863,562	$0	$0	$0	$0	$256,565	$10,120,127	2.60%
Bridge Debt Strategies III Limited Partner	$23,529,177	$0	$0	$0	$0	$0	$23,529,177	0.00%
Bridgewater All Weather Fund	$381,184,451	$0	$0	$0	-$110,684	-$9,902,835	$371,281,616	-2.60%
Brookfield Infra Fund IV B LP	$23,931,805	$0	$0	$0	$0	$489,235	$24,421,040	2.04%
Buenaventure One, LLC	$70,689,207	$4,950,000	$0	$4,950,000	$0	-$15	$75,639,192	0.00%
Buenaventure Two, LLC	$714,492	$50,000	$0	$50,000	$0	$0	$764,492	0.00%
CapVest Private Equity Partners IV, SCSp	$861,491	$0	$0	$0	$0	-$780	$860,711	-0.09%

Ventura County Employees' Retirement Association

TOTAL FUND

	Month Ending February 28, 2021							
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Fees	Net Investment Change	Ending Market Value	Month Return
Clearlake Capital Partners V	$12,564,561	$0	$0	$0	$0	$0	$12,564,561	0.00%
Clearlake Capital Partners VI	$7,401,296	$1,812,922	$0	$1,812,922	$0	-$2	$9,214,216	0.00%
CRV XVIII, L.P.	$0	$750,000	$0	$750,000	$0	$0	$750,000	--
CVI Credit Value Fund IV	$29,484,576	$0	$0	$0	$0	$838,861	$30,323,437	2.85%
Dover Street X, LP	$10,272,992	$0	$0	$0	$0	$0	$10,272,992	0.00%
Drive Capital Fund II	$20,622,517	$0	$0	$0	$0	$1,928,701	$22,551,218	9.35%
Drive Capital Fund III LP	$2,254,487	$0	$0	$0	$0	-$47,162	$2,207,325	-2.09%
Drive Capital Overdrive Fund I	$6,865,353	$0	$0	$0	$0	$847,652	$7,713,005	12.35%
ECI 11	$8,351,490	$0	$0	$0	$0	$288,740	$8,640,230	3.46%
Flexpoint Fund IV	$1,496,237	$0	$0	$0	$0	$0	$1,496,237	0.00%
Genstar Capital Partners IX	$3,377,222	$0	$0	$0	$0	$0	$3,377,222	0.00%
Genstar IX Opportunities Fund I	$1,649,234	$0	$0	$0	$0	$0	$1,649,234	0.00%
GGV Capital VII L.P.	$7,326,100	$762,000	$0	$762,000	$0	$2	$8,088,102	0.00%
GGV Capital VII Plus, LP	$1,853,353	$152,400	$0	$152,400	$0	$0	$2,005,753	0.00%
GGV Discovery II, L.P.	$1,477,718	$126,000	$0	$126,000	$0	$0	$1,603,718	0.00%
Great Hill Equity Partners VII	$780,349	$473,414	$0	$473,414	$0	$0	$1,253,763	0.00%
Green Equity Investors VIII, L.P.	$1,955,243	$0	$0	$0	$0	-$47,864	$1,907,379	-2.45%
GTCR Fund XII	$19,414,214	$744,000	$0	$744,000	$0	$1,082,956	$21,241,170	5.56%
Harbourvest	$129,884,376	$0	-$3,871,897	-$3,871,897	$0	-$167,909	$125,844,570	-0.13%
Harbourvest Real Assets Fund IV L.P.	$3,855,892	$0	$0	$0	$0	$0	$3,855,892	0.00%
Hellman & Friedman CP IX	$9,369,156	$4,767,108	$0	$4,767,108	$0	-$14,804	$14,121,460	-0.11%
Hexavest	$92,804,154	$0	$0	$0	-$35,244	$428,474	$93,232,628	0.42%
Insight Venture Partners X	$38,815,047	$643,372	$0	$643,372	$0	$9,078,331	$48,536,749	23.21%
LaSalle Income + Growth VIII Limited Partnership	$17,141,229	$0	$0	$0	$0	$0	$17,141,229	0.00%
Loomis Sayles Multi Strategy	$90,779,464	$0	$0	$0	-$28,458	-$279,436	$90,500,028	-0.34%

Ventura County Employees' Retirement Association

TOTAL FUND

	Month Ending February 28, 2021							
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Fees	Net Investment Change	Ending Market Value	Month Return
Loomis Strategic Alpha	$48,408,923	$0	$0	$0	-$16,159	$67,375	$48,476,298	0.11%
M/C Partners Fund VIII LP. Limited Partnership	$2,653,350	$929,368	$0	$929,368	$0	-$111,523	$3,471,195	-3.20%
Monroe Capital Private Credit Fund III	$21,258,594	$0	$0	$0	$0	$0	$21,258,594	0.00%
Oak HC/FT Partners III LP	$10,491,077	$0	$0	$0	$0	$0	$10,491,077	0.00%
Pantheon Global Secondary Funds	$48,918,540	$0	$0	$0	$0	$0	$48,918,540	0.00%
Parametric	$84,403,366	$0	$0	$0	-$7,329	-$8,959,115	$75,444,251	-10.62%
PIMCO Corp Opps Fund III	$4,974,898	$0	-$19,095	-$19,095	$0	$2,029,599	$6,985,402	40.90%
Pimco Private Income Fund	$60,401,935	$0	$0	$0	$0	$2,404,160	$62,806,095	3.98%
Prudential Real Estate	$168,998,678	$0	$0	$0	$0	$0	$168,998,678	0.00%
Reams	$344,577,567	$0	$0	$0	-$49,452	$1,037,863	$345,615,430	0.29%
Reams 10-Year Treasuries	$91,007,561	$0	$0	$0	$0	-$2,878,518	$88,129,043	-3.16%
Riverside Micro Cap Fund V, LP	$3,251,671	$1,277,274	$0	$1,277,274	$0	-$96,418	$4,432,527	-2.15%
Sprucegrove	$249,764,822	$0	$0	$0	-$73,736	$10,169,823	$259,934,645	4.04%
TA XIII A LP	$5,699,260	$0	$0	$0	$0	$0	$5,699,260	0.00%
The Resolute Fund IV L.P	$19,869,406	$0	$0	$0	$0	$0	$19,869,406	0.00%
Torchlight Debt Fund VII, L.P.	$2,500,000	$0	$0	$0	$0	$0	$2,500,000	0.00%
Tortoise Energy Infrastructure	$61,514,790	$0	$0	$0	-$33,830	$3,439,369	$64,954,159	5.54%
UBS Real Estate	$243,594,337	$0	$0	$0	$0	$0	$243,594,337	0.00%
Vitruvian Investment Partners IV	$276,157	$0	$0	$0	$0	-$250	$275,907	-0.09%
Walter Scott	$178,658,210	$0	$0	$0	-$109,759	-$2,890,128	$175,768,082	-1.68%
Western	$306,398,096	$0	$0	$0	-$49,998	-$6,411,436	$299,986,660	-2.11%
Western U.S. Index Plus	$293,101,204	$0	$0	$0	-$50,049	$7,294,202	$300,395,406	2.47%
Total	**$6,856,818,760**	**$35,951,283**	**-$59,485,356**	**-$23,534,073**	**-$668,041**	**$91,802,596**	**$6,925,087,283**	**1.33%**

DISCLAIMERS & DISCLOSURES

- Past performance is no guarantee of future results.
- Returns for pooled funds, e.g. mutual funds and collective investment trusts, are collected from third parties; they are not generally calculated by NEPC. Returns for separate accounts, with some exceptions, are calculated by NEPC. Returns are reported net of manager fees unless otherwise noted.
- A "since inception" return, if reported, begins with the first full month after funding, although actual inception dates (e.g. the middle of a month) and the timing of cash flows are taken into account in Composite return calculations.
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- All investments carry some level of risk. Diversification and other asset allocation techniques are not guaranteed to ensure profit or protect against losses.
- The opinions presented herein represent the good faith views of NEPC as of the date of this presentation and are subject to change at any time. Neither fund performance nor universe rankings contained in this report should be considered a recommendation by NEPC.
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VCERA
VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

March 29, 2021

Board of Retirement
Ventura County Employees' Retirement Association
1190 South Victoria Avenue, Suite 200
Ventura, CA 93003

SUBJECT: RECOMMENDATION TO APPROVE TECHNOLOGY USE & MOBILE DEVICE POLICY AND SURPLUS PROPERTY POLICY

Dear Board Members:

As part of the Board Policy Development Process, each Board policy is to be formally reviewed with varying frequency depending on the policy. Today, staff recommends changes to the existing Mobile Device Policy (including a new title of *Technology Use & Mobile Device Policy*), as well as adoption of a new Surplus Property Policy.

Technology Use & Mobile Device Policy
You will note that staff has included two versions for Board review to reflect a broader scope for overall agency operations, as well as an abbreviated version that is limited to trustee devices and technology use. Overhauled by VCERA's Chief Technology Officer Leah Oliver, both versions provide additional background, precautions, and guidelines, but more importantly, it better protects VCERA's data and assets.

Surplus Property Policy
This policy was developed to provide VCERA staff with specific guidelines for proper disposal of both furniture and electronic equipment. It emphasizes surplus requirements in alignment with the County of Ventura's Surplus Policy but further identifies VCERA specific items such as permitting the trade-in/resale of items back to the vendor and prohibiting the donation/sale of items to staff, trustees or individuals.

RECOMMENDATION: APPROVE PROPOSED TECHNOLOGY USE & MOBILE DEVICE POLICIES AND SURPLUS PROPERTY POLICY

VCERA staff will be pleased to respond to any questions on this matter at the March 29, 2021, meeting.

Sincerely,

Linda Webb
Retirement Administrator

1190 S. VICTORIA AVENUE, SUITE 200 • VENTURA, CA 93003
PHONE: 805-339-4250 • FAX: 805-339-4269 • WWW.VCERA.ORG

VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

MOBILE DEVICE POLICY

I. Definitions

1) For purposes of this policy, "mobile devices" are defined to include laptops, cellular phones, tablets, Kindles, eReaders, iPads or any other mobile device capable connecting to the Internet to access VCERA and County of Ventura email and data.

II. Purpose and Objectives

2) This policy is intended to set forth the authorization and limitations of use of Ventura County Employees' Retirement Association (VCERA) mobile devices and personal devices that have County of Ventura email and VCERA data present.

3) This policy is not intended to address usage of USB sticks, DVDs, CDs, external hard drives or other forms of portable data storage.

III. Scope

4) These guidelines apply to all Board and staff members.

IV. Background

5) Board packet material is extensive. The copying, delivering and producing of the packet material is expensive and not in line with environmental practices of VCERA. VCERA makes available an electronic PDF version of the monthly board packet and provides offsite access and usage of the electronic version by allowing Board and staff members to use mobile devices to retrieve, store, edit and read the electronic board packet.

6) Mobile devices are a security risk because, they are at risk for loss, theft, or other unauthorized access, and may contain confidential or privileged VCERA information, including, without limitation, private member and beneficiary information, member health records (HIPPA data), as well as confidential and proprietary information of alternative investment managers.

7) Personal mobile devices may be more vulnerable to malware, viruses and other such threats because the user may not regularly use virus protection software and other safeguards available to VCERA's desktop computers.

8) Personal mobile devices may be more vulnerable to unauthorized access because the user is required to manually configure passwords or security codes on their device(s).

9) Email and other written communications by VCERA Board and staff members discussing or otherwise conducting VCERA business constitute public records that are subject to inspection unless protected by the California Public Records Act from disclosure. If personal devices are used for official communications, as the California Supreme Court concluded in the 2017 *City of San Jose v. Superior Court* decision, VCERA Board and staff members will be required timely to respond to requests for their email communications regarding VCERA business in response to any California Public Records Act requests for such communications.

V. Guidelines

10) Privacy: Board and staff members understand that their authorization to use VCERA assigned mobile devices are for the primary purpose of conducting VCERA business. Board and staff members further understand that they have no expectation of privacy with regard to their use of such devices.

11) Security Patching, Upgrades, Routine Maintenance or Repair: Board and staff members understand that VCERA could require that assigned devices be returned to the office for, security patching, upgrades, routine maintenance or repair, to ensure that devices are being used only in a manner that is consistent with these policies. Board and staff members are responsible for immediately contacting the VCERA Chief Technology Officer, should any suspected malicious activity or breach of passwords occur. If deemed necessary, the device must be surrendered to the Chief Technology Officer for further review.

12) Loss or Theft and Data Backups: Board and staff members who have an assigned mobile device are responsible for the security of the device, all associated equipment and all data. Board and staff members must report any lost or stolen device or data, to the Chief Technology Officer as soon as discovered. All users are responsible for backing up personal data stored on the assigned mobile device. Should a personal device, configured with County of Ventura email or VCERA data be lost or stolen, users must inform the Chief Technology Officer immediately.

13) Password/Security Code: All VCERA assigned mobile devices must use, at a minimum, a four-digit security code or 8-character password for access. Personal mobile devices that have County of Ventura email or VCERA data on them, must use, at a minimum a four-digit security code or password for access.

14) Auto-Lock: All VCERA assigned mobile devices must automatically lock after a maximum of 10 minutes of inactivity and require entry of a security code or password to unlock for use. Personal mobile devices that have County of Ventura email or VCERA data on them, must automatically lock after a maximum of 10 minutes of inactivity and require entry of a security code or password to unlock for use.

15) Management Software: Assigned mobile devices may have management software installed for enforcing policies, deploying updates and new software, and identifying device location. Board and staff members understand such software may not be tampered with, uninstalled or disabled.

16) County of Ventura Email and VCERA Data on Personal Devices: Personal mobile devices configured with County of Ventura email or VCERA data are subject to remote wiping of business email and data or the entire contents of the mobile device. Board and staff members understand that every attempt will be made to contact the user before this occurs, but in the event of a significant security breach or threat, this may not be possible.

17) Return Prior to Separation: Board and staff members will return all assigned mobile device(s) prior to separation of VCERA service and remove all personal accounts, data and passwords. Board and staff members will be required to provide user account information should personal account and passwords not be removed from the device.

VI. Process Review

18) The Chief Technology Officer will review the Mobile Device Policy at least once every three (3) years to ensure that it remains relevant and appropriate and present to the Board for approval.

VII. Process History

19) The Chief Technology Officer last reviewed this policy on June 26, 2019. The Board last reviewed and approved this policy on July 1, 2019. The Board previously approved this policy on June 1, 2018. The Board originally adopted this policy on June 18, 2012.

TRUSTEE TECHNOLOGY USE & MOBILE DEVICE POLICY

I. Policy

The Ventura County Employees' Retirement Association (VCERA) relies on mobile devices to provide Board members with the ability to conduct business both on and off site. The purpose of this document is to ensure appropriate use of both VCERA-owned Mobile Devices and Personal Devices (when such devices are used for VCERA business), support of VCERA devices and to identify expectations for replacement of VCERA owned devices should loss or damage occur.

II. Purpose

This policy is intended to set forth the authorization and limitations of use of VCERA Mobile Devices and Personal Devices that have County of Ventura email and VCERA data present or accessible.

This policy is not intended to address usage of USB sticks, DVDs, CDs, external hard drives or other forms of portable data storage.

i. VCERA provides electronic versions of board and committee materials with offsite access. The electronic version is created to allow Board members to use Mobile Devices to retrieve, store, edit and read the electronic board agenda packet.

ii. Mobile Devices and personal devices are a potential security risk due to loss, theft, or other unauthorized access, and may contain confidential or privileged VCERA information, including, without limitation, private member and beneficiary information, member health records, as well as confidential and proprietary information of alternative investment managers.

iii. Personal Devices may be more vulnerable to malware, viruses and other such threats because the user may not regularly use virus protection software and other safeguards available to VCERA's computers.

iv. Personal Devices may be more vulnerable to unauthorized access because the user is required to manually configure passwords or security codes on their device(s).

v. Email, data and other written communications by VCERA Board members discussing or otherwise conducting VCERA business, constitutes public records that may be subject to inspection unless protected from disclosure under the California Public Records Act. If personal devices are used for official communications, VCERA Board will be required to review their emails for communications responsive to a Public Records Act request for VCERA business information in a timely manner to enable VCERA to respond to such requests, pursuant to the California Supreme Court decision in *City of San Jose v. Superior Court* 2 Cal.5th 608.

III. Scope

These guidelines apply to VCERA Board members.

IV. Definitions

For purposes of this policy the following key terms are defined as follows:

i. "Mobile Device" is defined as any portable device owned and issued by VCERA, with Internet capabilities, that can leave the VCERA office. This may include laptops, smartphones, tablets, eReaders, iPads and any other mobile device capable connecting to the Internet, VCERA and County of Ventura networks, email and data.

ii. "Associated Equipment" is defined to include charging cables, accessories and other peripheral devices used in conjunction with "Mobile Devices."

iii. "Personal Device" is defined to include laptops, smartphones, tablets, eReaders, iPads or any Mobile Device that is personally owned but capable of connecting to the Internet, VCERA and County of Ventura networks, email and data.

iv. "Mobile Device Agreement" is defined as the signed agreement between VCERA and Board members documenting assignment of VCERA-owned issued devices, associated equipment and replacement costs should a device be lost or damaged due to neglect.

V. Objectives

i. <u>Device Assignment</u> - Mobile Devices will be provided Board members, as deemed by the Retirement Administrator require access to County email, data and VCERA Board Meeting materials, outside the office or beyond normal working hours. Acquisition, assignment and use will be governed by this policy.

ii. <u>Appropriate Use</u> – To protect both VCERA and the County of Ventura (to the extent VCERA data is stored on County servers), controls are in place to ensure appropriate use. VCERA and County-owned Mobile Devices contain data that may be legally "discoverable", i.e., subject to disclosure under the Public Records Act and to discovery under the civil litigation or criminal discovery rules, within the limits defined by law.

iii. <u>Mobile Device Management (MDM)</u> – To ensure controls are in place to protect VCERA, the County and member data, Mobile Devices are to be enrolled in MDM software. MDM has controls in place to monitor and prohibit unauthorized use, app installation, content, etc. on VCERA owned devices. MDM software cannot be uninstalled by the user and requires location services to be enabled.

iv. <u>Mobile Device Encryption</u> – All mobile computing devices (laptops, Windows tablets, etc.) are to be encrypted with full disk encryption as supported by County of Ventura – IT Services. Mobile devices are encrypted by default when locked.

v. Personal Devices –Board members may be permitted access to County or VCERA resources from a Personal Device. Users must be aware that when a County or agency email profile is created on their Personal Device, it creates a connection to Office 365. VCERA data that is on Personal Devices that connect to the County network and Office 365 may be subject to disclosure under the Public Records Act or discovery under civil litigation or criminal discovery rules, within limits defined by law. Additionally, upon departure from VCERA (resignation, retirement, termination, death, etc.), a data wipe may be initiated, to remove the VCERA or County email profile loaded on the Personal Device.

VI. Guidelines

i. Privacy - Board members understand that their authorization to use VCERA assigned Mobile Devices is for the primary purpose of conducting VCERA business. Board members further understand that they have no expectation of privacy regarding their use of such devices, as between the user and VCERA.

ii. Mobile Device Agreement - Users issued VCERA-owned Mobile Devices and associated equipment are responsible for safeguarding the VCERA asset and may be responsible for the replacement cost of the device or associated equipment if it is lost or damaged due to neglect or misuse. Board members are required to sign the VCERA Mobile Device Agreement upon acquisition of Mobile Device equipment governed by this policy.

iii. Security Patching, Upgrades, Routine Maintenance or Repair - Board members understand that VCERA may require assigned Mobile Devices be returned to the office for security patching, upgrades, or routine maintenance or repair; this is to ensure that devices are being used only in a manner consistent with this policy. Board members are responsible for immediately contacting the VCERA Chief Technology Officer should any suspected malicious activity or breach of passwords occur. If deemed necessary, the device must be surrendered to the Chief Technology Officer for further review.

Loss or Theft and Data Backups – **Should a VCERA owned or Personal Device, configured with County of Ventura email or VCERA data be lost or stolen, Board members must report this loss to the Chief Technology Officer immediately.**

Board members who have an assigned Mobile Device are responsible for the security of the device, all associated equipment and all data and must sign the VCERA Mobile Device Agreement upon receipt of the device. The purpose of this is primarily to protect VCERA, County or member data, and secondarily to attempt to recover the asset.

All users are responsible for backing up any personal data stored on the assigned Mobile Device.

iv. Password/Security Code - All VCERA assigned Mobile Devices must use, at a minimum, a four-digit security code or 8-character password for access. Personal Devices that have County of Ventura email or VCERA data on them, MUST be configured at a minimum, with a four-digit security code or password for access.

v. Auto-Lock - All VCERA assigned Mobile Devices must automatically lock after a maximum of 15 minutes of inactivity and require entry of a security code or password to unlock for use. Personal Devices that have County of Ventura email or VCERA data on them, must automatically lock after a maximum of 10 minutes of inactivity and require entry of a security code or password to unlock for use.

vi. Management Software - Assigned Mobile Devices may have management software installed for enforcing policies, deploying updates and new software, and identifying device location. Board members understand such software may not be tampered with, uninstalled or disabled.

vii. County of Ventura Email and VCERA Data on Personal Devices - Personal Devices configured with County of Ventura email or VCERA data are subject to remote wiping of business email and data or the entire contents of the device. Board members understand that every attempt will be made to contact the user before such action is taken, but in the event of a significant security breach or threat, this may not always be possible.

viii. Return Prior to Separation - Board members will return all assigned Mobile Devices and associated equipment prior to or upon separation of VCERA service and remove all personal accounts, data and passwords. Board members will be required to provide user account information if personal account and passwords are not removed from the device prior to its return. Should a Mobile Device or its associated equipment not be returned, Board members may be responsible for reimbursing VCERA the costs agreed upon in the VCERA Mobile Device Agreement.

VII. Process Review

VCERA staff will review both the Technology Use and Mobile Device Policy and the VCERA Mobile Device Agreement at least once every three (3) years to ensure that it remains relevant and appropriate and present to the Board for approval.

VIII. Policy History

The Chief Technology Officer last reviewed this policy on March 24, 2021. The Board last reviewed and approved this policy on March 29, 2021. The Board previously approved this policy on June 1, 2019. The Board originally adopted this policy on June 18, 2012.

STAFF TECHNOLOGY USE & MOBILE DEVICE POLICY

I. Policy

The Ventura County Employees' Retirement Association (VCERA) relies on mobile devices to provide Board members and staff with the ability to conduct business both on and off site. The purpose of this document is to ensure appropriate use of both VCERA-owned Mobile Devices and Personal Devices (when such devices are used for VCERA business), support of VCERA devices and to identify expectations for replacement of VCERA owned devices should loss or damage occur.

II. Purpose

This policy is intended to set forth the authorization and limitations of use of VCERA Mobile Devices and Personal Devices that have County of Ventura email and VCERA data present or accessible.

This policy is not intended to address usage of USB sticks, DVDs, CDs, external hard drives or other forms of portable data storage.

i. VCERA provides electronic versions of board and committee materials with offsite access. The electronic version is created to allow Board members and staff to use Mobile Devices to retrieve, store, edit and read the electronic board agenda packet.

ii. Mobile Devices and personal devices are a potential security risk due to loss, theft, or other unauthorized access, and may contain confidential or privileged VCERA information, including, without limitation, private member and beneficiary information, member health records, as well as confidential and proprietary information of alternative investment managers.

iii. Personal Devices may be more vulnerable to malware, viruses and other such threats because the user may not regularly use virus protection software and other safeguards available to VCERA's computers.

iv. Personal Devices may be more vulnerable to unauthorized access because the user is required to manually configure passwords or security codes on their device(s).

v. Email, data and other written communications by VCERA Board members and staff discussing or otherwise conducting VCERA business, constitutes public records that may be subject to inspection unless protected from disclosure under the California Public Records Act. If personal devices are used for official communications, VCERA Board and staff will be required to review their emails for communications responsive to a Public Records Act request for VCERA business information in a timely manner to enable VCERA to respond to such requests, pursuant to the California Supreme Court decision in *City of San Jose v. Superior Court* 2 Cal.5^{th} 608.

III. Scope

These guidelines apply to Board members and VCERA staff.

IV. Definitions

For purposes of this policy the following key terms are defined as follows:

i. "Mobile Device" is defined as any portable device owned and issued by VCERA, with Internet capabilities, that can leave the VCERA office. This may include laptops, smartphones, tablets, eReaders, iPads and any other mobile device capable connecting to the Internet, VCERA and County of Ventura networks, email and data.

ii. "Associated Equipment" is defined to include charging cables, accessories and other peripheral devices used in conjunction with "Mobile Devices."

iii. "Personal Device" is defined to include laptops, smartphones, tablets, eReaders, iPads or any Mobile Device that is personally owned but capable of connecting to the Internet, VCERA and County of Ventura networks, email and data.

iv. "Mobile Device Agreement" is defined as the signed agreement between VCERA and Board members or staff documenting assignment of VCERA-owned issued devices, associated equipment and replacement costs should a device be lost or damaged due to neglect.

V. Objectives

i. Device Assignment - Mobile Devices will be provided Board members and staff whose job functions, as deemed by the Retirement Administrator require access to County email, data and VCERA Board Meeting materials, outside the office or beyond normal working hours. Acquisition, assignment and use will be governed by this policy.

ii. Appropriate Use – Mobile Device usage is entrusted to staff and Board members and will be governed by VCERA's Chief Technology Officer. To protect both VCERA and the County of Ventura (to the extent VCERA data is stored on County servers), controls are in place to ensure appropriate use. VCERA and County-owned Mobile Devices contain data that may be legally "discoverable", i.e., subject to disclosure under the Public Records Act and to discovery under the civil litigation or criminal discovery rules, within the limits defined by law.

iii. Mobile Device Management (MDM) – To ensure controls are in place to protect VCERA, the County and member data, Mobile Devices are to be enrolled in MDM software. MDM has controls in place to monitor and prohibit unauthorized use, app installation, content, etc. on VCERA owned devices. MDM software cannot be uninstalled by the user and requires location services to be enabled.

iv. Mobile Device Encryption – All mobile computing devices (laptops, Windows tablets, etc.) are to be encrypted with full disk encryption as supported by County of Ventura – IT Services. Mobile devices are encrypted by default when locked.

v. Personal Devices – Staff and Board members may be permitted access to County or VCERA resources from a Personal Device. Users must be aware that when a County or agency email profile is created on their Personal Device, it creates a connection to Office 365. VCERA data that is on Personal Devices that connect to the County network and Office 365 may be subject to disclosure under the Public Records Act or discovery under civil litigation or criminal discovery rules, within limits defined by law. Additionally, upon departure from VCERA (resignation, retirement, termination, death, etc.), a data wipe may be initiated, to remove the VCERA or County email profile loaded on the Personal Device.

County and VCERA WiFi

The County of Ventura offers separate WiFi networks to staff, business partners and vendors. These networks are available in VCERA offices and serve different purposes and have separate controls in place to regulate and ensure appropriate use. If staff attempts to connect to an unauthorized network from a VCERA owned device, the device will be blocked and dropped from all County WiFi networks.

i. VCWiFi – This network is for staff access only while using County/VCERA owned devices which includes laptops, iPads, some desktop computers and VCERA-issued smartphones, if any.

ii. NCWiFi – This network is intended for business partners such as consultants, visitors, contractors, etc. This is NOT to be used by staff or from County/VCERA owned devices.

VCERA WiFi Networks

VCERA has WiFi networks that are separate and distinct from the WiFi provided by the County of Ventura. Use of VCERA WiFi is restricted to use of Board devices, VCERA-issued Mobile Devices, staff Personal Devices, contractors and approved guests. Usage is as follows:

iii. VCERA-Board – This network is intended for use by Board member and Executive Mobile Devices. This network is monitored to ensure only approved devices are connecting.

iv. VCERA-Contractor – This network is intended for use by hired Contractors and designed VCERA Staff upon approval by the Chief Technology Officer and/or Retirement Administrator. This network is monitored to ensure only approved devices are connecting.

v. VCERA-Staff – This network is intended for use by Staff to connect Personal Devices and is to be used in accordance with this policy. Should a device be vaguely named or flagged as compromised or exceeding acceptable resource usage, it will be blocked from connecting.

vi. VCERA-Guest – This network is intended for use by business partners such as consultants, visitors, contractors, etc. This is NOT to be used by staff or from County/VCERA owned devices.

VI. Guidelines

i. Privacy - Board members and staff understand that their authorization to use VCERA assigned Mobile Devices is for the primary purpose of conducting VCERA business. Board members and staff further understand that they have no expectation of privacy regarding their use of such devices, as between the user and VCERA.

ii. Mobile Device Agreement - Users issued VCERA-owned Mobile Devices and associated equipment are responsible for safeguarding the VCERA asset and may be responsible for the replacement cost of the device or associated equipment if it is lost or damaged due to neglect or misuse. Board members and staff are required to sign the VCERA Mobile Device Agreement upon acquisition of Mobile Device equipment governed by this policy.

iii. Security Patching, Upgrades, Routine Maintenance or Repair - Board members and staff understand that VCERA may require assigned Mobile Devices be returned to the office for security patching, upgrades, or routine maintenance or repair; this is to ensure that devices are being used only in a manner consistent with this policy. Board members and staff are responsible for immediately contacting the VCERA Chief Technology Officer should any suspected malicious activity or breach of passwords occur. If deemed necessary, the device must be surrendered to the Chief Technology Officer for further review.

Loss or Theft and Data Backups – **Should a VCERA owned or Personal Device, configured with County of Ventura email or VCERA data be lost or stolen, Board members and staff must report this loss to the Chief Technology Officer immediately.**

Board members and staff who have an assigned Mobile Device are responsible for the security of the device, all associated equipment and all data and must sign the VCERA Mobile Device Agreement upon receipt of the device. Board members and staff must report any lost or stolen device or data immediately to the Chief Technology Officer. The purpose of this is primarily to protect VCERA, County or member data, and secondarily to attempt to recover the asset.

All users are responsible for backing up any personal data stored on the assigned Mobile Device.

iv. Password/Security Code - All VCERA assigned Mobile Devices must use, at a minimum, a four-digit security code or 8-character password for access. Personal

Devices that have County of Ventura email or VCERA data on them, MUST be configured at a minimum, with a four-digit security code or password for access.

v. Auto-Lock - All VCERA assigned Mobile Devices must automatically lock after a maximum of 15 minutes of inactivity and require entry of a security code or password to unlock for use. Personal Devices that have County of Ventura email or VCERA data on them, must automatically lock after a maximum of 10 minutes of inactivity and require entry of a security code or password to unlock for use.

vi. Management Software - Assigned Mobile Devices may have management software installed for enforcing policies, deploying updates and new software, and identifying device location. Board members and staff understand such software may not be tampered with, uninstalled or disabled.

vii. County of Ventura Email and VCERA Data on Personal Devices - Personal Devices configured with County of Ventura email or VCERA data are subject to remote wiping of business email and data or the entire contents of the device. Board members and staff understand that every attempt will be made to contact the user before such action is taken, but in the event of a significant security breach or threat, this may not always be possible.

viii. Return Prior to Separation - Board members and staff will return all assigned Mobile Devices and associated equipment prior to or upon separation of VCERA service and remove all personal accounts, data and passwords. Board members and staff will be required to provide user account information if personal account and passwords are not removed from the device prior to its return. Should a Mobile Device or its associated equipment not be returned, Board members or staff may be responsible for reimbursing VCERA the costs agreed upon in the VCERA Mobile Device Agreement.

VII. Process Review

VCERA Staff will review both the Technology Use and Mobile Device Policy and the VCERA Mobile Device Agreement at least once every three (3) years to ensure that it remains relevant and appropriate and present to the Board for approval.

VIII. Policy History

The Chief Technology Officer last reviewed this policy on March 24, 2021. The Board last reviewed and approved this policy on March 29, 2021. The Board previously approved this policy on June 1, 2019. The Board originally adopted this policy on June 18, 2012.

VCERA SURPLUS PROPERTY POLICY

I. Policy

When VCERA property (furniture, electronic, computing equipment or other tangible assets) is no longer needed now or in the foreseeable future, the below documented process for proper disposal is to be followed.

An item is considered surplus when:

- it does not function in whole or in part
- repairs are too expensive or not feasible
- technologically obsolete
- it no longer supports the business needs

II. Scope

i. Furniture/Office Supplies Disposal

The VCERA Retirement Administrator (RA) is responsible for determining with Senior Staff if departmental furniture and office supplies should be retained for future use or are subject to disposal to a vendor trade-in program; transferred to another County Agency; or disposed of through the County of Ventura Surplus procedures. If surplus property is transferred to another County Agency or disposed of through the County's Surplus procedures such that no consideration is received by VCERA, it shall be documented that the costs, including administrative costs, of sale or trade-in are equal to or greater than what VCERA could receive if the surplus items were sold or traded in.

ii. Electronic and Computing Equipment Disposal

The VCERA Chief Technology Officer (CTO) is responsible for determining if electronic, computing equipment, computing furniture and accessories should be retained for future use.

If the above listed items are no longer required, disposal must be approved by Retirement Administrator. Upon receipt of approval the CTO will confirm if the items should be submitted to a vendor trade-in program; transferred to another County Agency; or disposed of through the County of Ventura Surplus procedures.

III. Guidelines

i. An item is labeled as surplus when furniture, electronics, computing equipment or other tangible assets owned by VCERA, are determined by the RA, CTO, CFO or COO to be obsolete, damaged or no longer required for use by VCERA.

ii. The method used to dispose of surplus property will be determined from the list below, in item number 3, and approved by the RA and in coordination with Senior Staff. Using the method selected, the disposal of surplus property will be coordinated by respective department designees.

iii. Surplus property is to be disposed of by one of the following methods:

i. Trade-in/Resale with vendor
ii. Transfer of items to any County of Ventura Department or Agency
iii. All computing equipment hard drives, USB storage devices and other media that stores data must be wiped using software or by processes adhering to Department of Defense standards.
    i. If data cannot be sufficiently erased, then the storage device must be physically destroyed and disposal of through eWaste/Recycling in 4.
iv. Surplus donation to County of Ventura General Services Agency
v. Recycle
vi. Dispose

iv. Erased hard drives and rewritable media will be submitted to the County of Ventura's General Services Agency for proper disposal.
v. Disposal of surplus property that has an estimated market value that exceeds $5,000 must be approved by the Board of Retirement.
vi. Proceeds from the resale of surplus equipment to manufacturer/vendor will be via certified check or check and remitted to VCERA's Fiscal Department to be deposited into VCERA's account
vii. Direct selling or donating of surplus equipment to any employee, trustee or individual is strictly prohibited.

IV. Policy Review

VCERA Staff will review this policy at least once every three (3) years to ensure that it remains relevant and appropriate and present to the Board for approval

V. Policy History

The Chief Technology Officer last reviewed this policy on March 24, 2021. The Board reviewed and approved this policy on March 29, 2021.

VCERA
VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

March 29, 2021

Board of Retirement
Ventura County Employees' Retirement Association
1190 S. Victoria Ave., Ste. 200
Ventura, CA 93003

SUBJECT: AUTHORIZATION TO PURCHASE PREPAID BLOCK OF 2,500 VITECH SUPPORT HOURS

Based on current and projected expenditures for the remainder of Fiscal Year 2020-21 and Fiscal Year 2021-22 respectively, staff is requesting approval for the purchase of a prepaid block of 2,500 support hours from Vitech. Vitech has committed to a lower hourly support rate commencing for the remainder of Fiscal Year 2020-21 to be used over a 3-year term.

The support hours (2,000) will be used primarily in Fiscal Year 2021-22 for regular ongoing support, and significant benefit calculation changes required in V3 and the Member Portal due to the Alameda Court Decision. The remaining 500 support hours are required for the remainder of the current fiscal year based on projected ongoing Vitech support needs.

With the purchase of 2,500 prepaid hours, Vitech has offered a discounted hourly rate of $190 (hourly rate in Fiscal Year 2021-22 is $242) for a total cost of $475,000. This represents a discount of $130,000 (21.5%) based on the hourly rate of $242.

Included in the current fiscal year adopted budget is $282,000 for 1,200 Vitech support hours at an hourly rate of $235 per hour. Subsequently your Board approved the purchase of a prepaid block of 1,000 support hours at a reduced rate of $200 per hour for a total of $200,000. Currently, $82,000 remains uncommitted and would secure an additional 339 hours based on the hourly rate of $242. However, staff estimates a need for an additional 500 hours for the remainder of the current fiscal year. If the Board approves the purchase of the prepaid block at the reduced rate of $190 per hour, the actual cost of the additional 500 hours would be $95,000. Staff believes the shortfall in the current year budget of $13,000 ($282,000 - $200,000 (1,000-hour block) -$95,000 (500-hour block)) can be absorbed in the existing adopted budget.

If VCERA purchases the prepaid block of 2,500 hours, Vitech has committed to invoice the prepaid hours in two installments, the first for $95,000, for 500 support hours, in Fiscal Year 2020-21 and the second for $380,000, for 2000 support hours, in Fiscal Year 2021-22. Any unused hours from the Fiscal Year 2020-21 will carried over and be covered under the 3-year term expiration date.

Staff recommends that your Board approve the purchase of a prepaid block of 2,500 at a significant discounted rate.

RECOMMENDATION: AUTHORIZE RETIREMENT ADMINISTRATOR TO EXECUTE AN AGREEMENT WITH VITECH FOR THE PRE-PURCHASE OF 2,500 SUPPORT HOURS AT A COST OF $475,000, $95,000 TO BE PAID FROM THE EXISTING FY 2020-21 BUDGET WITH THE REMAINING $380,000 TO BE INCLUDED IN THE FY 2021-22 BUDGET.

Staff will be available to discuss further at the March 29, 2021 Business Meeting.

Respectfully,

LOliver

Leah Oliver
Chief Technology Officer

VCERA
VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

March 29, 2021

Board of Retirement
Ventura County Employees' Retirement Association
1190 S. Victoria Ave., Ste. 200
Ventura, CA 93003

SUBJECT: Proposed Finance Committee Charter

Dear Board Members:

Attached is a proposed charter for the Finance Committee (Committee). It includes responsibilities pertaining to the annual actuarial valuation and related items. These responsibilities were included solely for the purpose of providing the Board the opportunity to decide if it wants the Committee's purview to extend into the actuarial arena. The Committee recommends otherwise; that its responsibilities should be limited to only accounting, financial reporting, financial auditing, and budgetary matters.

As the Committee was working on the proposed charter, it became apparent that a three-member committee presents issues pertaining to the Brown Act. Specifically, if more than one member of the Committee met with staff, the financial auditor, or any other service provider, it would have to be a noticed public meeting because a majority of the Committee would be present. The Committee believes this would hamper its efficiency and is therefore recommending that the membership of the Committee be increased to four.

RECOMMENDATIONS: (1) That the Board approve increasing the membership of the Finance Committee to four, and (2) That the Board approve the proposed Finance Committee Charter:

a) Inclusive of actuarial responsibilities, or
b) Without actuarial responsibilities

Sincerely,

Arthur E. Goulet

Arthur E. Goulet, Chair
Finance Committee

Attachment

VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

FINANCE COMMITTEE CHARTER

I. Introduction

The Board is responsible for the oversight of the financial and operational controls at VCERA, the accuracy of financial and actuarial reporting released by VCERA, the budgeting of VCERA's resources, and the general safekeeping of VCERA's assets. To assist the Board with these responsibilities, the Board has established a Finance committee, to be comprised of not fewer than three (3) trustees, and for which the operation, and duties are set forth below.

II. Operation and Duties

Committee Operation

1) The Finance Committee shall operate as follows:

   a) The presence of a majority of committee members shall constitute a quorum for a meeting.

   b) All actions and/or recommendations of the committee shall be by affirmative vote of the majority of the members present at a meeting of the committee, and only if a quorum is present.

   c) All actions of the committee shall subsequently be approved by the Board to be effective, unless otherwise provided herein.

   d) The committee shall meet at least annually but may meet as frequently as is deemed necessary by the committee or Chair of the committee, in consultation with the Retirement Administrator

   e) Meetings of the committee shall be open to the public and noticed and held in accordance with the Brown Act

   f) The committee shall keep minutes of its meetings.

   g) The Retirement Administrator and Chief Financial Officer shall serve as the staff contact for the Committee.

Committee Duties

Accounting and Audit Functions

2) The Finance Committee shall:

   a) Meet at least annually with the financial auditors and Management to review the audit process, examine, and approve the objectives and scope of financial audits, reporting on internal controls, the duties and responsibilities of the financial auditor, and the timing and estimated budget of the annual financial audit.

b) Review and comment on any claims or contingencies that could have a material effect on the financial condition of VCERA and the way they have been disclosed in the financial statements.

c) Review and comment on the appropriateness of accounting policies and financial reporting practices, any significant proposed changes thereto, and any new or pending developments in accounting and reporting standards that may have an impact on VCERA.

d) Meet with the financial auditor to discuss the annual financial statements, review the findings of the financial auditor, and review any response thereto by Management.

e) Review and comment on the Management Discussion and Analysis section of the Plan's Comprehensive Annual Financial Report (CAFR) and all other financial information contained in the CAFR as deemed appropriate, prior to Board approval.

f) Serve as the primary liaison, on behalf of the Board, for all matters related to financial audits, examinations, investigations, or inquiries from financial authorities.

g) Review and comment on the findings or comments of any regulatory agencies concerning financial information or reporting of VCERA and Management's response thereto.

h) Review the engagement of the financial auditor at least every five (5) years with regards to performance, internal quality control procedures, fees, qualifications, and independence and then make recommendations to the Board on these matters

j) Review and comment on any internal audit plans that may be established and coordinate special investigations, audits, or other compliance efforts of VCERA as may be necessary and inform the Board of such investigations or audits.

Actuarial and Funding Matters

3) The Finance Committee shall:

a) Review and comment on any actuarial or funding-related policies requiring Board approval

b) Review and comment on the objectives, scope, and process for actuarial valuations, including the actuary's plans therefor, and meet with the actuary to review and comment on the annual actuarial valuation prior to final report submittal to the Board for approval.

c) Annually, review and comment upon the advice of the actuary or other experts, as necessary, changes in the rates of interest, and contribution rates of members and employers prior to Board approval.

d) Review and comment on the triennial actuarial experience of VCERA.

e) Recommend initiation of, and coordinate, a periodic actuarial audit.

f) Review the engagement of the actuary at least every five (5) years with regards to performance, fees, qualifications, and independence, and make recommend-ations to the Board.

g) Review and comment on any significant changes in actuarial practices or policies that may have an impact on VCERA

Budgeting

4) The Finance Committee shall:

a) Review and comment on the proposed Operating Budget prior to Board approval.

b) Periodically review the budget process and format with Management.

Other Duties

5) The Finance Committee shall:

a) Be available to advise the Board and Management as required, and perform any other duties assigned to it by the Board.

V. Review

6) The Board shall review this charter at least once every 3 years to ensure that it remains relevant and appropriate.

VI. History

7) The Board last approved this charter on _____________, 2021. This charter was originally adopted by the Board on _______________, 2021.

VCERA
VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

March 29, 2021

Board of Retirement
Ventura County Employees' Retirement Association
1190 Victoria Avenue, Suite 200
Ventura, CA 93003

SUBJECT: EXECUTE CONTRACT EXTENSION WITH BROWN ARMSTRONG FOR AUDITING SERVICES

Dear Board Members:

Staff recommends that the existing agreement with Brown Armstrong for auditing services be extended for an additional year. The three-year term of the current agreement expired with the completion of the June 30, 2020, financial audit. Section 5 of the existing agreement has the option to extend the agreement for one additional year. The fee for exercising the extension would be the same as the current agreement at $46,450 for the financial audit and $4,930 for the audit of GASB 68 Schedules of Employer Allocations and Pension Amounts by Employer, for a total of $51,380. The fee for the audit of GASB 68 schedules is a pass-through cost, reimbursed to VCERA by the participating Plan employers. VCERA's Chief Financial Officer, Henry Solis, recommends executing a one-year extension and I support that recommendation.

Staff presented this request to the Finance Committee on March 22, 2021, and the committee supports staff's recommendation. The one-year extension will allow staff time to meet with the Finance Committee in the future to evaluate our existing external auditor relationship and determine if a request for proposal (RFP) is appropriate.

Staff would be pleased to answer any questions you may have on this matter.

RECOMMENDATION: **AUTHORIZE BOARD CHAIR TO EXECUTE ATTACHED CONTRACT EXTENSION, SUBJECT TO FINAL REVIEW BY COUNSEL, FOR AUDIT SERVICES WITH BROWN ARMSTRONG FOR A ONE-YEAR PERIOD.**

Sincerely,

Linda Webb

Linda Webb,
Retirement Administrator

Attachment

Renewal of Auditing Services Agreement
Brown Armstrong Accountancy Corporation

RECITALS

On March 19, 2018, the VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION ("VCERA") and BROWN ARMSTRONG ACCOUNTANCY CORPORATION ("AUDITOR") entered into an Auditing Services Agreement ("AGREEMENT") for a three-year term, commencing March 19, 2018;

Paragraph 5 of the AGREEMENT provides that the AGREEMENT may be renewed for one additional year, provided that both parties sign renewal documents and the total payments during the renewal terms are specified, and;

The parties wish to renew the AGREEMENT for one year, at the same annual rate of $51,380.

RENEWAL AGREEMENT

The AGREEMENT is hereby renewed for a one-year period, beginning March 29, 2021, at the total rate of $51,380.

EXECUTED AND AGREED TO by the parties as of March 29, 2021, by their duly authorized representatives.

BROWN ARMSTRONG ACCOUNTANCY CORPORATION

By: ______________________________
AUTHORIZED REPRESENTATIVE

VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

By: ______________________________
Mike Sedell
Chair, Board of Retirement