

AGENDA

A REGULAR MEETING OF THE EQUITY: PUBLIC/PRIVATE COMMITTEE AND BOARD OF INVESTMENTS*

LOS ANGELES COUNTY EMPLOYEES RETIREMENT ASSOCIATION

300 N. LAKE AVENUE, SUITE 810, PASADENA, CA

8:00 A.M., THURSDAY, NOVEMBER 8, 2018**

*The Committee may take action on any item on the agenda,
and agenda items may be taken out of order.*

- I. CALL TO ORDER
- II. APPROVAL OF THE MINUTES
 - A. Approval of the Minutes of the Equity: Public/Private Committee Meeting of August 8, 2018.
- III. PUBLIC COMMENT
- IV. NON-CONSENT ITEMS
 - A. Recommendation as submitted by Christopher Wagner, Principal Investment Officer and David Simpson, Investment Officer: That the Committee advance the 2019-2020 Structure Review to the Board of Investments for approval.
(Memo dated October 29, 2018)
 - B. Recommendation as submitted by Christopher Wagner, Principal Investment Officer and David Simpson, Investment Officer: That the Committee advance the revised Private Equity Objective, Policies, and Procedures to the Board of Investments for approval.
(Memo dated October 29, 2018)

November 8, 2018

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V. REPORT

- A. Private Equity Co-Investment Program Review
Christopher Wagner, Principal Investment Officer
David Chu, Senior Investment Officer

(Public Memo dated October 29, 2018)

(Privileged and Confidential Version of Memo dated October 29, 2018)

VI. ITEMS FOR STAFF REVIEW

- VII. GOOD OF THE ORDER
(For information purposes only)

VIII. ADJOURNMENT

*The Board of Investments has adopted a policy permitting any member of the Board to attend a standing committee meeting open to the public. Members of the Board of Investments who are not members of the Committee may attend and participate in a meeting of a Committee but may not vote, make a motion, or second on any matter discussed at the meeting. The only action the Committee may take at the meeting is approval of a recommendation to take further action at a subsequent meeting of the Board.

**Although the meeting is scheduled for 8:00 a.m., it can start anytime thereafter, depending on the length of the Board of Investment meeting preceding it. Please be on call.

Documents subject to public disclosure that relate to an agenda item for an open session of the Board of Investments that are distributed to members of the Board of Investments less than 72 hours prior to the meeting will be available for public inspection at the time they are distributed to a majority of the Board of Investments Members at LACERA's offices at 300 N. Lake Avenue, Suite 820, Pasadena, CA 91101, during normal business hours of 9:00 a.m. to 5:00 p.m. Monday through Friday.

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MINUTES OF THE REGULAR MEETING OF THE EQUITY: PUBLIC/PRIVATE
COMMITTEE OF THE BOARD OF INVESTMENTS

LOS ANGELES COUNTY EMPLOYEES RETIREMENT ASSOCIATION

300 N. LAKE AVENUE, SUITE 810, PASADENA, CA 91101

8:00 A.M., WEDNESDAY, AUGUST 8, 2018

PRESENT: Herman B. Santos, Chair

 Wayne Moore, Vice Chair

 Shawn R. Kehoe

 Gina V. Sanchez

 David Green, Alternate

MEMBERS AT LARGE:

 Joseph Kelly

 David Muir

 Michael Schneider

 Ronald Okum

STAFF, ADVISORS, PARTICIPANTS

 Jonathan Gabel, Chief Investment Officer

 Christopher Wagner, Principal Investment Officer

STAFF, ADVISORS, PARTICIPANTS (Continued)

StepStone Group, LP
Jose Fernandez, Partner

Meketa Investment Group
Timonthy Filla, Vice President
Stephen McCount, Managing Principal

I. CALL TO ORDER

The Meeting was called to order by Chair Santos at 8:00 a.m., in the Board Room of Gateway Plaza.

II. APPROVAL OF MINUTES

A. Approval of the Minutes of the Equity: Public/Private Committee Meeting of May 9, 2018.

Mrs. Sanchez made a motion, seconded by Mr. Moore, to approve the minutes of the meeting of May 9, 2018. The motion carried by unanimous vote.

III. PUBLIC COMMENT

There were no requests from the public.

IV. REPORT

A. Private Equity Secondary Sale Review
Greenhill & Co.
Andy Nick, Managing Director – Greenhill & Co.
Wes Bender, Principal – Greenhill & Co.
Neshmeen Faatimah, Analyst – Greenhill & Co.
(Memo dated July 24, 2018)

August 8, 2018

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IV. REPORT (Continued)

Mr. Wagner and Messrs. Nick, Bender and Ms. Faatimah of Greenhill & Co. provided their presentation and answered questions from the Committee.

V. REPORT OF STAFF ACTION ITEMS

There were no items to report.

VI. GOOD OF THE ORDER
(For information purposes only)

There were no comments.

VII. ADJOURNMENT

There being no further business to come before the Committee, the meeting was adjourned at 8:39 a.m.

October 29, 2018

TO: Each Member
Equity: Public/Private Committee

FROM: Christopher J. Wagner *ejw*
Principal Investment Officer

David E. Simpson, CFA *DES*
Investment Officer

FOR: November 8, 2018 Equity: Public/Private Committee Meeting

SUBJECT: **2019-2020 PRIVATE EQUITY STRUCTURE REVIEW**

RECOMMENDATION

Advance the 2019-2020 Structure Review to the Board of Investments for approval.

BACKGROUND

Staff has prepared the 2019-2020 Private Equity Structure Review (**Attachment A**) for review by the Board of Investments Equity Committee and ultimately for approval by the Board of Investments. Staff proposes that this biannual Structure Review replace the annual Investment Plan.¹ StepStone Group LLC ("StepStone" or "Advisor"), LACERA's private equity advisor, has reviewed the Structure Review and concurs with the recommendation (their memo is included as **Attachment C**). The primary purpose of the Structure Review is to establish an appropriate commitment pace for the 2019-2020 calendar year, identify key investment themes, outline upcoming initiatives, and ensure appropriate diversification to private equity investment strategies (i.e., Buyouts, Venture Capital, and Co-Investments/Fund-of-Funds).

StepStone calculated a potential annual commitment pace for the 2018-2027 period. Using their investment-pacing model for estimating private equity commitments, for the years covered by this Structure Review, StepStone projected that LACERA should commit up to \$1.5 billion (+/- 20%) in 2019 and \$1.6 billion (+/- 20%) in 2020. The wide range recognizes variability in the economy, the private equity marketplace, fund availability, constraints to allocation access, and fluctuations in the total plan assets denominator. StepStone factored in LACERA's potential secondary sale disposition. In subsequent years, LACERA expects to increase gradually the deployment pace to maintain the 10% target allocation level.

In calculating the projected commitment pace, StepStone made several assumptions about the rate of contributions and distributions to the Fund, economic growth rates, fund durations, and

¹ The 2018 Private Equity Investment Plan (**Attachment B**) is included for reference.

LACERA's commitments by strategy. As the economy and market are subject to change, the pacing model is viewed as a planning tool and proposed investments during the year will depend on market conditions, the availability of high-quality opportunities, and LACERA's overall exposure to private equity.

Throughout calendar years 2019-2020, staff and StepStone will look for quality investments (both re-ups and new) in each investment strategy of the Private Equity Program. Over the past five years, LACERA's commitments have been approximately 70% to Buyouts and 78% to U.S. managers. While LACERA will maintain relationships with compelling managers returning to the marketplace, an emphasis in the upcoming period will be on increasing exposure to top-tier funds outside of the United States. Staff and StepStone expect this strategy will incorporate several new, top-quality managers.

CONCLUSION

The deployment pace of up to \$1.5 billion (+/- 20%) in 2019 and \$1.6 billion (+/- 20%) in 2020 which staff and StepStone recommend, positions LACERA to execute its plan of investing in top-tier private equity funds coming to market in the coming years. This also allows LACERA to move toward the target private equity exposure of 10% of the overall Fund.

Attachments

NOTED AND REVIEWED:



Jonathan Grabel

Chief Investment Officer

Private Equity 2019-2020 Structure Review

Equity: Public/Private Committee

November 8, 2018

Christopher J. Wagner – Principal Investment Officer

David E. Simpson, CFA – Investment Officer



LOS ANGELES COUNTY EMPLOYEES RETIREMENT ASSOCIATION

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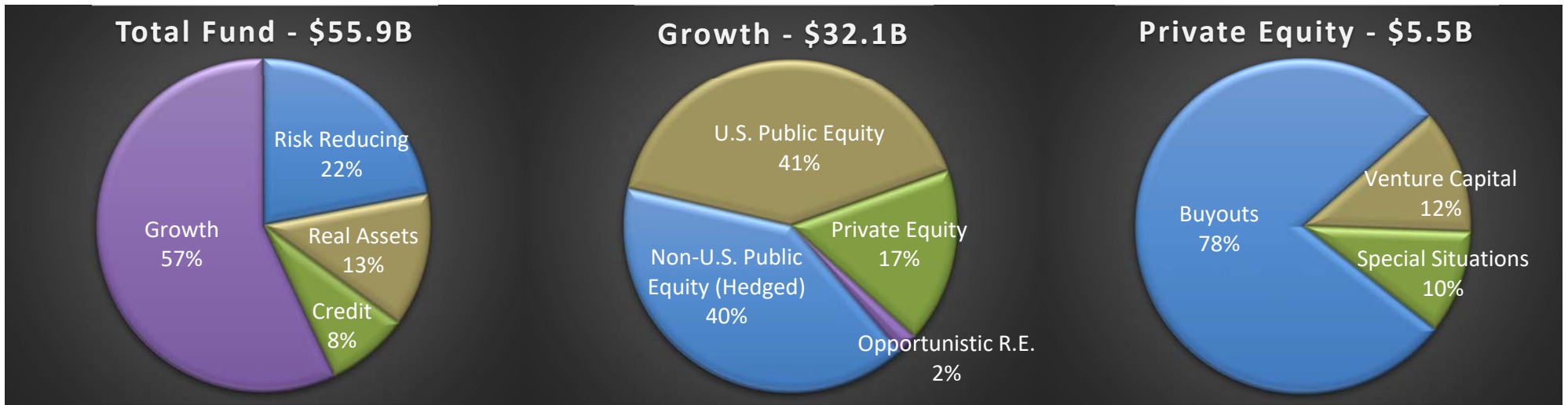
- I. Role of Private Equity
- II. Market Environment and Opportunity
- III. Portfolio Structure
- IV. Portfolio Performance
- V. Investment Themes
- VI. Initiatives
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Appendices

- A. Detailed StepStone Allocation Model Assumptions
- B. 2018 Commitments
- C. 2019 Potential Re-Ups
- D. Fund Opportunity Set



Role of Private Equity*



- Growth investments are the primary driver of long term total Fund returns.
- Within the growth category, private equity is expected to generate the highest performance at an acceptable level of risk.
- The target return for private equity is 200 basis points over the MSCI ACWI IMI** Index, net of all fees.

*Data as of March 31, 2018.

**Morgan Stanley Capital International, All Country World Index, Investable Market Index.



Market Environment and Opportunity

High valuations

- Market valuations remain at all time high levels. Current U.S. LBO EV/EBITDA* ratio stands at 11.5x. This exceeds the pre-GFC levels.

Increased political risk

- Populism is creating a level of political and economic uncertainty related to trade, economic unions, currencies, and regulatory environments.

Demographic shifts

- Aging populations in developed markets, surging youth in emerging markets, growing minority populations in the U.S., migrations driven by despair and hope, emerging market middle class growth and consumption, and sustainability.

Technological advancement

- The convergence of media, technology, and connectivity (combined with big data and artificial intelligence) is in early stages of disrupting many industries.

** Enterprise Value / Earnings Before Interest, Taxes & Depreciation.*



Portfolio Structure - Allocation and Commitment*

LACERA's Plan Level Target Allocation Status Projected December 31, 2018 (\$MM)	
Total Fund Value	\$58,311
Net Asset Value	\$5,220
Allocation %	9.0%
Target Allocation	10%
Target Allocation Range	7%-13%

Recommendation

Adopt proposed target commitment amounts for 2019 and 2020 of \$1.5 billion and \$1.6 billion (both +/- 20%) respectively, until the next Structure Review.

StepStone Pacing Model: 2019 -2024 Projections** (\$MM)						
Calendar Year	New Commitments	PE Draw-downs	PE Distributions	PE Market Value	Total Portfolio Value	PE Allocation %
2019	\$1,500	\$1,452	\$1,416	\$5,872	\$61,199	9.6%
2020	\$1,600	\$1,453	\$1,700	\$6,207	\$64,249	9.7%
2021	\$1,600	\$1,491	\$1,884	\$6,535	\$67,441	9.7%
2022	\$1,700	\$1,544	\$1,865	\$6,994	\$70,744	9.9%
2023	\$1,700	\$1,585	\$1,982	\$7,448	\$74,156	10.0%
2024	\$1,800	\$1,644	\$2,139	\$7,865	\$77,695	10.1%

Target Allocation Model Commentary

1. New commitment targets assume a +/- 20% range, based on opportunities available in the marketplace.
2. Model projects increasing allocations over the next five years i) to recoup potential 2018 secondary sale disposition, and ii) methodically pace deployment 10 years into a bull market.

* StepStone model factors in LACERA's potential secondary sale.

** StepStone model assumptions are in Appendix A.



Portfolio Structure by Investment Type*

As of 6/30/2018	Active GPs	Market Value	Outstanding Commitments	Sum of Exposure	% of Total Exposure	Current Range	Proposed Range
Buyout - Global	5	\$766	\$703	\$1,468	19%		
Buyout - Large	4	\$932	\$639	\$1,571	20%		
Buyout - Mid	7	\$602	\$452	\$1,054	13%		
Buyout - Small	11	\$595	\$730	\$1,325	17%		
Buyouts SubTotal	27	\$2,894	\$2,524	\$5,418	68%	50% - 85%	50% - 85%
Co-Investments	1	\$330	\$35	\$365	5%		
Fund of Funds**	2	\$656	\$313	\$969	12%		
FoF/Co-Inv Subtotal	3	\$987	\$349	\$1,336	17%	N/A	10% - 25%
Growth Equity	4	\$256	\$102	\$358	5%		
VC - Balanced	3	\$270	\$46	\$316	4%		
VC - Early Stage	5	\$150	\$153	\$304	4%		
VC - Late Stage	2	\$166	\$35	\$201	3%		
VC/GE SubTotal	14	\$842	\$337	\$1,179	15%	10% - 25%	15% - 30%
Grand Total	44	\$4,723	\$3,210	\$7,933	100%		

Investment Type Commentary

1. Propose reclassifying Special Situations (formerly 5%-25% range) to Credit and Real Assets.
2. Propose formally establishing a target range for Co-Investments/FoF at 10%-25%.
3. Continued goal is to increase the average exposure to GPs at smaller end of market.
4. Given attractive return profile and opportunity set (see Appendix D), propose increasing VC/Growth Equity allocation to 15%-30%.

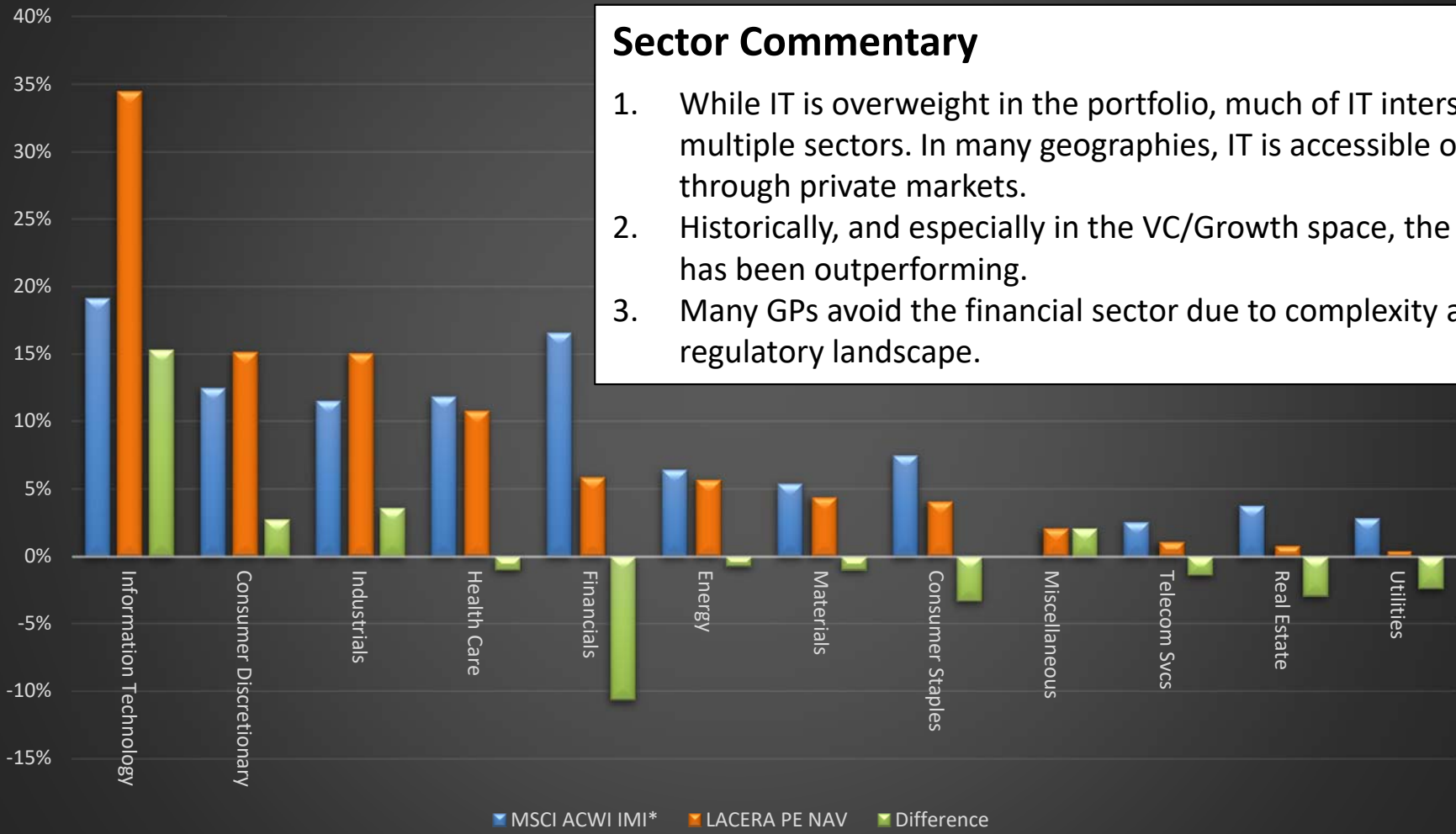
* Excludes GPs associated with proposed secondary sale.

** Fund-of-Funds represent an additional 95 primary fund relationships.



Portfolio Structure – Industrial Sector

LACERA PE NAV* versus MSCI ACWI IMI** by Sector



Sector Commentary

1. While IT is overweight in the portfolio, much of IT intersects multiple sectors. In many geographies, IT is accessible only through private markets.
2. Historically, and especially in the VC/Growth space, the IT sector has been outperforming.
3. Many GPs avoid the financial sector due to complexity and the regulatory landscape.

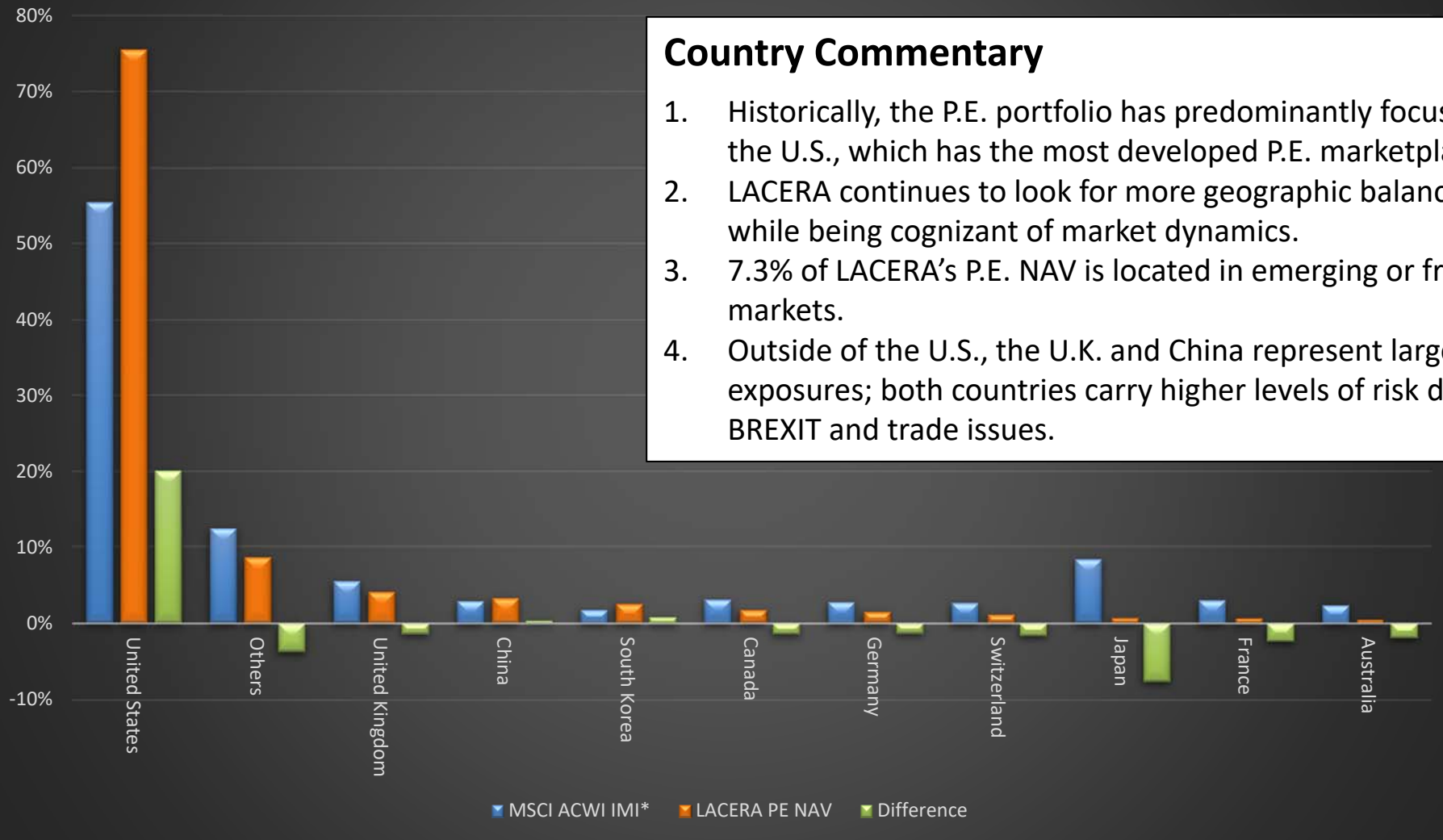
*Based on September 28, 2018 values.

**Morgan Stanley Capital International, All Country World Index, Investable Market Index.



Portfolio Structure - Country

LACERA PE NAV* versus MSCI ACWI IMI** by Country



Country Commentary

1. Historically, the P.E. portfolio has predominantly focused on the U.S., which has the most developed P.E. marketplace.
2. LACERA continues to look for more geographic balance, while being cognizant of market dynamics.
3. 7.3% of LACERA's P.E. NAV is located in emerging or frontier markets.
4. Outside of the U.S., the U.K. and China represent largest exposures; both countries carry higher levels of risk due to BREXIT and trade issues.

*Based on September 28, 2018 values.

**Morgan Stanley Capital International, All Country World Index, Investable Market Index.



Portfolio Performance - Sub-Strategy

Strategy / Sub-Strategy	Cumulative Contributions	Cumulative Distributions	Market Value	Total Value	Total Value to Paid-in	Since-Inception Net IRR	Since-Inception PME*
Buyout	\$7,732.0	\$9,402.9	\$3,447.2	\$12,850.1	1.66x	13.8%	1.21
Buyout - Global	2,818.5	4,078.1	902.9	4,981.0	1.77x	16.3%	1.28
Buyout - Large	2,139.7	2,508.8	1,177.7	3,686.5	1.72x	15.4%	1.26
Buyout - Mid	1,470.6	1,455.1	704.0	2,159.1	1.47x	10.2%	1.09
Buyout - Small	1,303.2	1,360.9	662.6	2,023.5	1.55x	10.9%	1.08
Venture Capital	\$1,251.3	\$1,807.6	\$598.7	\$2,406.3	1.92x	21.7%	1.21
Venture Capital - Balanced	561.2	754.0	275.0	1,029.0	1.83x	16.3%	1.09
Venture Capital - Early Stage	444.4	772.6	157.8	930.4	2.09x	73.0%	1.34
Venture Capital - Late Stage	245.8	281.1	165.8	446.9	1.82x	24.7%	1.33
Co-Investments	\$575.2	\$594.4	\$366.2	\$960.6	1.67x	18.7%	1.12
Fund of Funds	\$865.1	\$546.6	\$715.7	\$1,262.3	1.46x	10.6%	1.07
Growth Equity	\$566.9	\$1,026.3	\$257.4	\$1,283.8	2.26x	86.8%	1.58
Secondaries	\$151.3	\$230.0	\$2.0	\$231.9	1.53x	17.2%	1.23

Performance Commentary

1. In each sub-strategy, LACERA has generated performance that exceeds the PME benchmark.
2. Growth equity and venture capital, driven by long term relationships, have performed exceptionally well.

*Public Market Equivalent designs a set of analyses used in the Private Equity Industry to evaluate the performance of a Private Equity Fund against a public benchmark or index.



Investment Themes

High valuations

- Focus on GPs who have invested through several cycles.
- Target GPs with sustainable competitive advantages that translate into proprietary sourcing, preferential valuations, and the ability to accelerate value creation.

Increased political risk

- Remain cautious about increased geopolitical risk.
- Favor countries with strong internal domestic consumption.

Demographic shifts

- Target GPs globally specializing in healthcare, education, logistics, and healthy lifestyles.
- Domestically and in select emerging markets, target GPs positioned to address predictable consumption patterns of identifiable market segments.

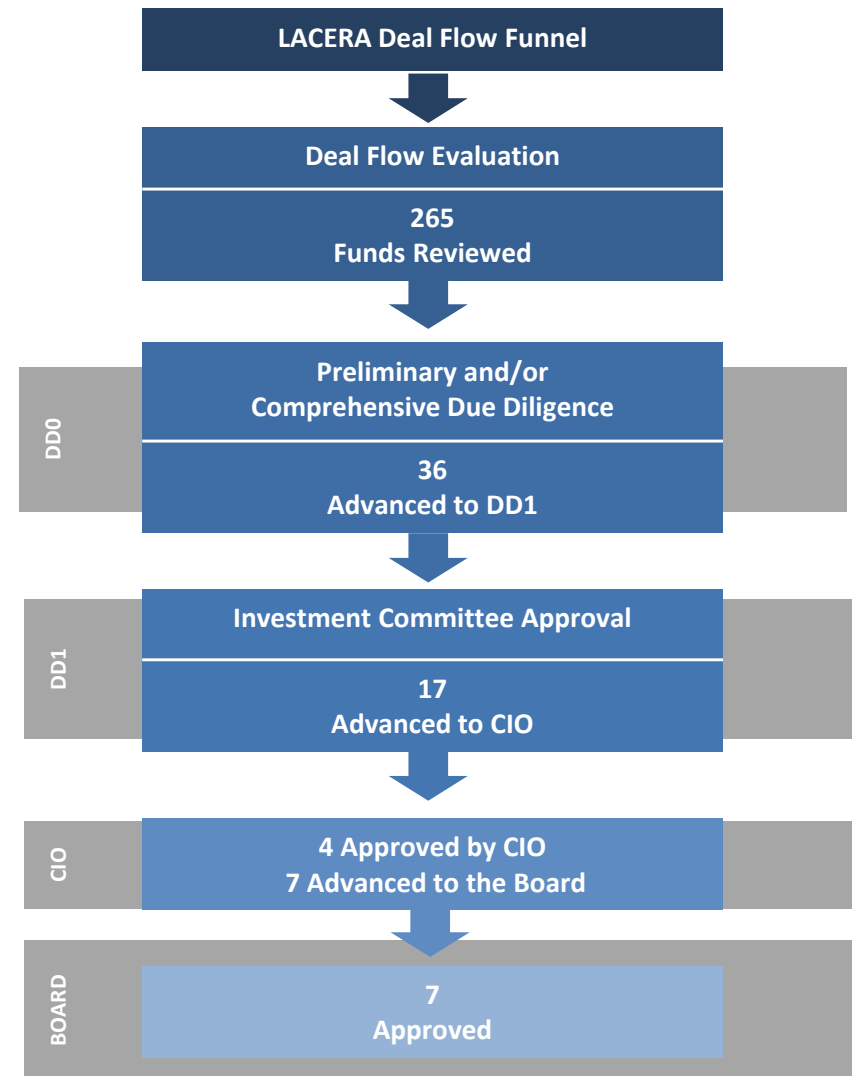
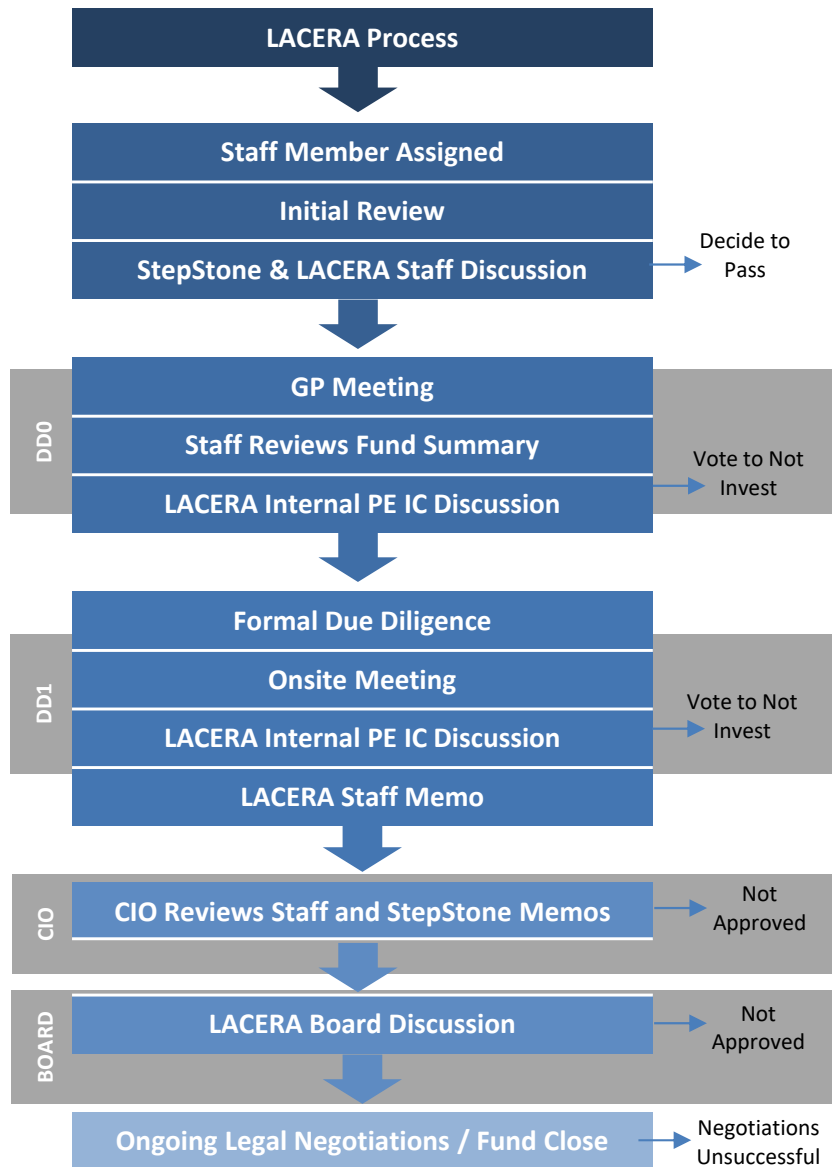
Technological advancement

- Remain cautious about industries undergoing transformation (e.g., retail, auto).
- Increase exposure to GPs specializing in financial technology, mobility and e-commerce, artificial intelligence, big data, and cybersecurity.

Initiatives

- Review of Co-Investment program.
- Exploration of VC incubators.
- Incorporating ILPA ESG diversity and inclusion initiatives.
- Continued assessment of legacy relationships.
- Manager scorecard development.
- Implementation of knowledge management system.

Operations



Advance to Board

Staff proposes advancing the following

- Adopt proposed target commitment amounts for 2019 and 2020 of \$1.5 billion and \$1.6 billion (both +/- 20%) respectively, until the next Structure Review.
- Reclassify Special Situations to Credit and Real Assets.
- Establish a target range for Separately Managed Accounts at 10%-25%.
- Increase the allocation to VC/Growth Equity to 15%-30%.

Appendices



Appendix A – Allocation Model Assumptions

- StepStone pacing model driven by five independent variables⁽¹⁾:
 - Rate of contributions
 - Rate of distributions
 - Annual growth or return by sub-sector
 - Life of fund in years
 - Annual commitments by sub-sector
- StepStone’s preliminary pacing model utilizes the following assumptions for LACERA’s portfolio:
 - Total Portfolio Value: \$55.6 billion⁽²⁾
 - Actuarial Rate of Return (net): 7.25%⁽³⁾
 - Annual Cash Contributions: \$2.1 billion for 2018, growing 3.8% per year on average through 2027⁽⁴⁾
 - Annual Cash Distributions: \$3.4 billion for 2017, growing 4.5% per year on average through 2027⁽⁴⁾
 - Target Private Equity (% of Total FMV): 10.0%
- PE Weighted Average Return assumptions equate to:
 - Base Case Net IRR of 12.50% (only scenario used for purposes of chart on previous page)
 - High Case Net IRR of 18.75%
 - Low Case Net IRR of 6.25%
- StepStone assumed the following exposures going forward:
 - Buyout 75%
 - VC/Growth 20%
 - Co-investments 5%

(1) Any return contained herein is hypothetical and is not a guarantee of future performance. The returns set forth herein do not constitute a forecast; rather they are indicative of the internal transaction analysis regarding outcome potentials. Any returns set forth herein are based on Stepstone’s belief about the returns that may be achievable on investments that the Partnership intends to pursue. Such returns are based on current view in relation to future events and financial performance of potential investments and various models, estimations and “base case” assumptions made, including estimations and assumptions about events that have not occurred. Actual events and conditions may differ materially from the assumptions used to establish returns and there is no guarantee that the assumptions will be applicable to the Partnership’s investments

(2) Total Portfolio Value for YE2017 provided by LACERA

(3) The Actuarial Assumed Rate of Return as adopted by the LACERA Board of Investments

(4) Projected portfolio contributions and distributions for calendar years, as provided by LACERA on 9/25/18



Appendix B – 2018 Commitments

Board Date	Fund Name	Commitment (\$ in Millions)
February 14, 2018	GTB II-B	\$100
April 11, 2018	Juggernaut Capital Partners IV	\$125
May 9, 2018	AE Industrials Fund II	\$100
June 13, 2018	Storm Ventures Fund VI*	\$50
August 8, 2018	Accel-KKR Growth Capital Partners III	\$50
September 12, 2018	Riverside Micro-Cap Fund V, L.P.	\$65
September 12, 2018	Triton Fund V, L.P.	\$175
September 12, 2018	GGV Discovery II, GGV VII, GGV VII Plus*	\$100
September 12, 2018	Hellman & Friedman Capital Partners IX*	\$150
October 10, 2018	Siris Partners IV*	\$100
		\$1,015

LACERA did not re-up in the following funds

- ABRY Advanced Securities Fund III
- Carlyle Partners VII
- Institutional Venture Partners XVI
- Palladium Equity Partners V
- Riverside Capital Appreciation Fund VII
- Vista Equity Partners Fund VII

* Denotes re-up commitment approved under CIO authority.



Appendix C – 2019 Potential Re-Ups

MOST RECENT FUND INVESTMENT	COMMITMENT DATE	VINTAGE YEAR	STRATEGY	PRIOR COMMITMENT	CUMULATIVE CONTRIBUTIONS	PERCENT COMMITTED
Insignia Capital Partners (Parallel A), L.P.	9/2013	2013	Buyout - Small	100.0	49.5	50%
Palladium Equity Partners IV, L.P.	2/2014	2014	Buyout - Small	100.0	90.1	90%
The Energy & Minerals Group Fund III, L.P.	3/2014	2014	Energy	150.0	142.6	95%
Centerbridge Capital Partners III, L.P.	10/2014	2015	Distressed	75.0	41.1	55%
Carlye U.S. Equity Opportunity Fund II, L.P.	3/2015	2015	Buyout - Mid	200.0	106.1	53%
BDCM Opportunity Fund IV, L.P.	6/2015	2015	Distressed	100.0	83.2	83%
GBOF V Feeder SCS	11/2015	2016	Buyout - Mid	87.4	39.0	45%
Harvest Partners VII, L.P.	12/2015	2016	Buyout - Mid	80.0	48.7	61%
BRV Aster Fund II, L.P.	9/2016	2017	Venture Capital - Early Stage	40.0	24.0	60%
LAV Biosciences Fund IV, L.P.	2/2017	2017	Venture Capital - Balanced	40.0	17.9	45%
Livingbridge 6, L.P.	7/2016	2016	Buyout - Small	52.9	18.8	36%
Green Equity Investors VII, L.P.	2/2016	2017	Buyout - Mid	150.0	55.8	37%
Blackstone Capital Partners VII, L.P.	5/2015	2016	Buyout - Global	200.0	48.5	24%



Appendix D – Fund Opportunity Set

Global Regions	Fund Type	Vintage Years 2016-2018		
		Fund Count	Fund Size Sum (\$ Millions)	% of Capital Raised
United States	Buyout	453	432,031	71%
	PE Growth-Expansion	114	58,258	10%
	Venture Capital	692	94,537	16%
	Venture Capital - Early Stage	135	13,788	2%
	Venture Capital - Later Stage	15	5,708	1%
	All	1,409	604,321	100%
All	Buyout	777	727,140	67%
	PE Growth-Expansion	206	185,751	17%
	Venture Capital	1,113	149,894	14%
	Venture Capital - Early Stage	206	21,432	2%
	Venture Capital - Later Stage	24	7,641	1%
	All	2,326	1,091,858	100%

Rationale for Increasing VC/GE Allocation

Currently, 10% of LACERA's PE NAV is in VC and 5% in Growth Equity funds.

Per PitchBook, over the past three years, in the U.S., 19% of the capital targeted VC and 10% Growth Equity.

Globally, over that same period of time, 17% of the capital targeted VC and 17% Growth Equity strategies.

Given this opportunity set, combined with LACERA's desire to increase non-U.S. exposure, raising LACERA's target range from 10%-25% to 15%-30% is justified.

**Los Angeles County Employees Retirement Association
2018 Private Equity Investment Plan**

January 10, 2018

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A. Introduction

The Private Equity Annual Investment Plan ("Plan") reviews the portfolio's target allocations, current composition, and the 2017 investment activity. The document then looks forward to the investment pace and strategies for the Private Equity Program ("Program") in calendar year 2018.

The primary objective of the Program is to achieve an attractive total return for the Fund at an acceptable level of risk. The target return for this asset class, as measured by Internal Rate of Return (IRR)¹, is an annualized return of 300 to 500 basis points over the Russell 3000 Index over a rolling 10-year time frame, net of all partnership and advisor fees. The primary strategy is to prudently build a diversified portfolio of the most attractive investment opportunities securing the best possible terms while mitigating risks. The 2018 Investment Plan provides a tactical roadmap for how the Program will be managed in order to execute this strategy.

Three appendices are attached to the Plan. A glossary of terms is included in **Appendix A**. LACERA's policy regarding the privatization of jobs held by LACERA's members is included in **Appendix B**. StepStone Group LP ("StepStone" or "Advisor") serves as a private equity advisor ("PEA") to LACERA and provided their memorandum confirming agreement with the Plan, included as **Appendix C**.

¹ IRR: A measure of performance used to evaluate the attractiveness of an investment. The interest rate at which the net present value of all cash flows is zero.

B. Portfolio Target Allocations

The target allocations for the asset class and the sub-asset classes are approved annually by the Board during their review of the Private Equity Objectives, Policies, and Procedures document. The allocations are incorporated herein to restate current exposure and diversification levels.

I. Asset Class Allocation Target

In October 2015, the Board established a target allocation of 10 percent for private equity investments, with an acceptable range of 7 percent to 14 percent. Given the unpredictable nature of cash flows in this asset class, the actual allocation number fluctuates. Staff closely monitors the actual market value and committed exposure (new commitments and undrawn capital) to this asset class.

LACERA's Plan Level Target Allocation Status
(As of June 30, 2017¹ - Millions)

Net Asset Value	Total Fund Value	Allocation % ²	Target Allocation Range
\$5,086	\$52,755	9.6%	7% - 14%

¹ Values adjusted from the 6/30/17 Total Asset Allocation report by +\$221 million eliminating PE reporting lag.

² Factoring in \$3,852 million in undrawn capital, the combined PE allocation percentage equals 15.8 percent.

In the Annual Investment Plan, staff and PEA recommend an annual commitment pace to ensure that investments fall within the policy allocation range. LACERA seeks to avoid an undue concentration of commitments in any one calendar year. Accordingly, LACERA adjusts the target amount of new commitments to capture the benefits of time diversification and to match the expected growth of LACERA's total plan assets.

II. Sub-Asset Class Allocation Targets

The Board, staff, and the PEA(s) annually review target allocation ranges to the various sub-asset classes and international investments. These target allocation ranges are measured and set following LACERA's review and consideration of the private equity marketplace over the forthcoming three to five years for each investment sub-asset class.

LACERA's Sub-Asset Class Target Allocation Status
(As of June 30, 2017 - Millions)

Sub-asset Class	Net Asset Value	Sub-asset Class Allocation %	Target Allocation Ranges
Buyouts¹	\$3,849	75.7%	50 – 85%
Venture Capital/ Growth Equity	\$716	14.1%	10 – 25%
Special Situations²	\$520	10.2%	5 – 25%
Grand Total	\$5,086	100%	
Non-U.S.³	\$1,322	26%	20 – 45%

¹ Includes Co-Investments, Fund-of-Funds, and Secondaries.

² Comprised of distressed debt, mezzanine, energy, and natural resources-focused funds.

³ Total of non-U.S. investments based on company domicile across the sub-asset class categories, excluding cash.

LACERA recognizes that cash flows are unpredictable and at the discretion of the general partner. Accordingly, LACERA allows staff and the PEA(s) some latitude outside of the ranges. In the short term, LACERA does not wish to have staff or its PEA(s) constrained by the designated sub-asset class ranges; i.e., fulfilling target allocations will not drive the investment recommendation process. LACERA will invest consistently over time to gain the proper exposure to the various sub-asset classes.

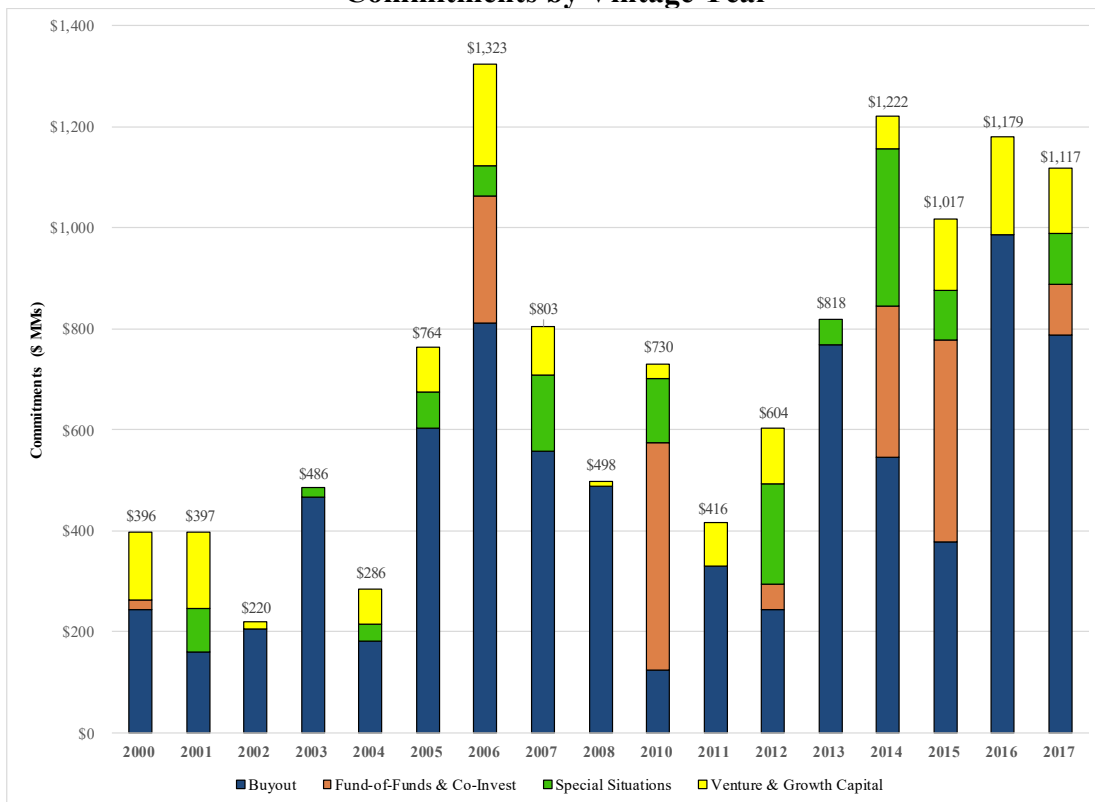
C. Portfolio Composition

From the inception of the Program in October 1986 through June 30 2017, LACERA has committed \$14.6 billion to 310 private equity fund investments managed by 149 general partners. The Program currently has 209 active investments managed by 104 general partners. Given the large number of general partners in the portfolio, staff now adds new general partners primarily for strategic purposes. Diversification mitigates risk and is achieved by investing consistently over time and in a variety of investment strategies. The following charts depict the portfolio's composition and diversification by vintage year, investment type, geography, and sector.

I. Vintage Year

A goal of the Program is to invest in private equity steadily over time. **Chart 1** reflects commitments by vintage year and strategy, or the year a fund first draws capital for investment. As depicted in the chart, LACERA has made commitments relatively consistently over the past several years with the exception of 2009, which was due to liquidity concerns brought on by the financial crisis. The 2017 numbers include commitments through June 30, 2017. The increase in deployments, starting in 2013, is in line with the strategic objective of increasing LACERA's private equity exposure.

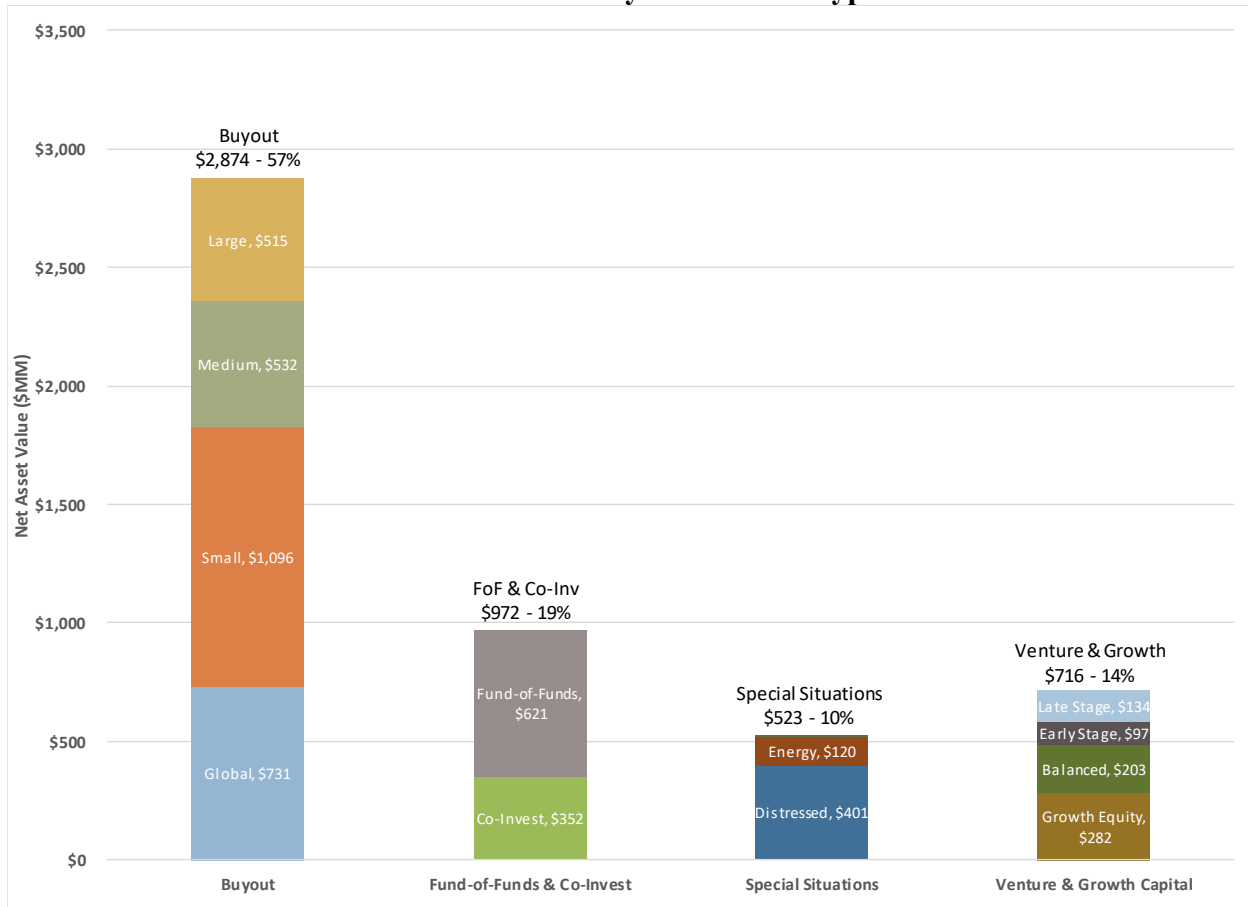
Chart 1
Commitments by Vintage Year



II. Investment Type

A central strategy of the Program is to diversify investments by strategy. The June 30, 2017 net asset values by sub-asset class and their components are presented in **Chart 2**. At \$2,874 million in net asset value, or 57 percent of the Program, LACERA's portfolio is heavily weighted to buyouts. Exposure to venture capital and growth equity stands at \$716 million, or 14 percent of the Program's net asset value.

Chart 2
Net Asset Value by Investment Type



Historically, the Venture Capital and Growth Equity strategies have generated the best results (21.7 percent and 86.8 percent Net IRRs since inception, respectively). Buyouts and the Co-Investment platform have performed solidly (13.5 percent and 18.9 percent, respectively). The Special Situations and Fund-of-Funds managers have not, as a whole, generated strong results (10.4 percent and 9.7 percent, respectively). LACERA remains committed to seeking out and maintaining relationships with top managers in each strategy.

III. Geography

As of June 30, 2017, LACERA held 2,192 company positions with a reported market value of \$5.1B via its underlying fund investments. Geographic diversification of portfolio companies weighted by market value, based on the location of their headquarters, is shown in **Charts 3** and **Chart 4**.

Chart 3
Portfolio Investments – U.S. versus Non-U.S.

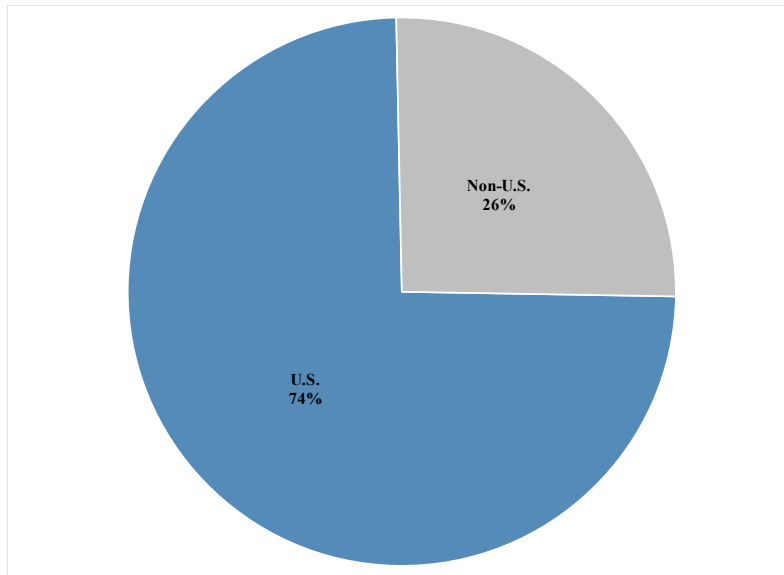
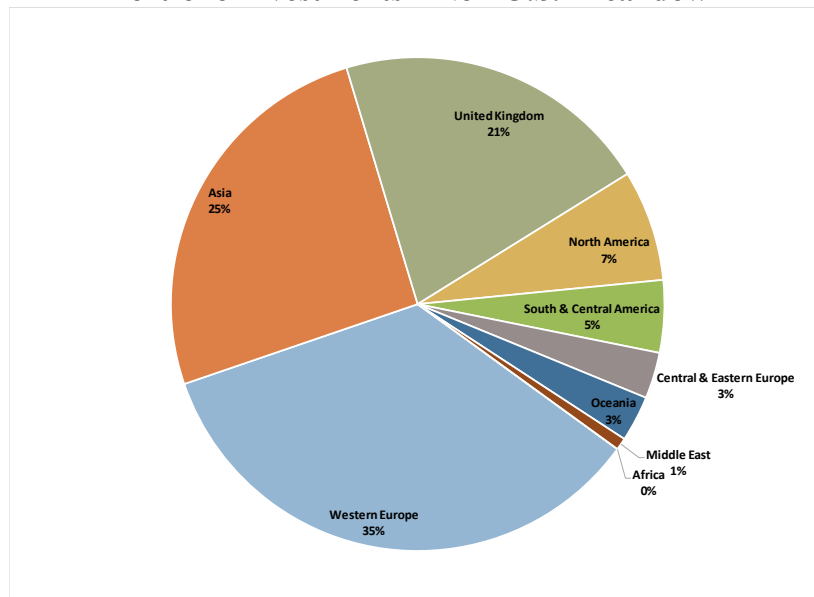


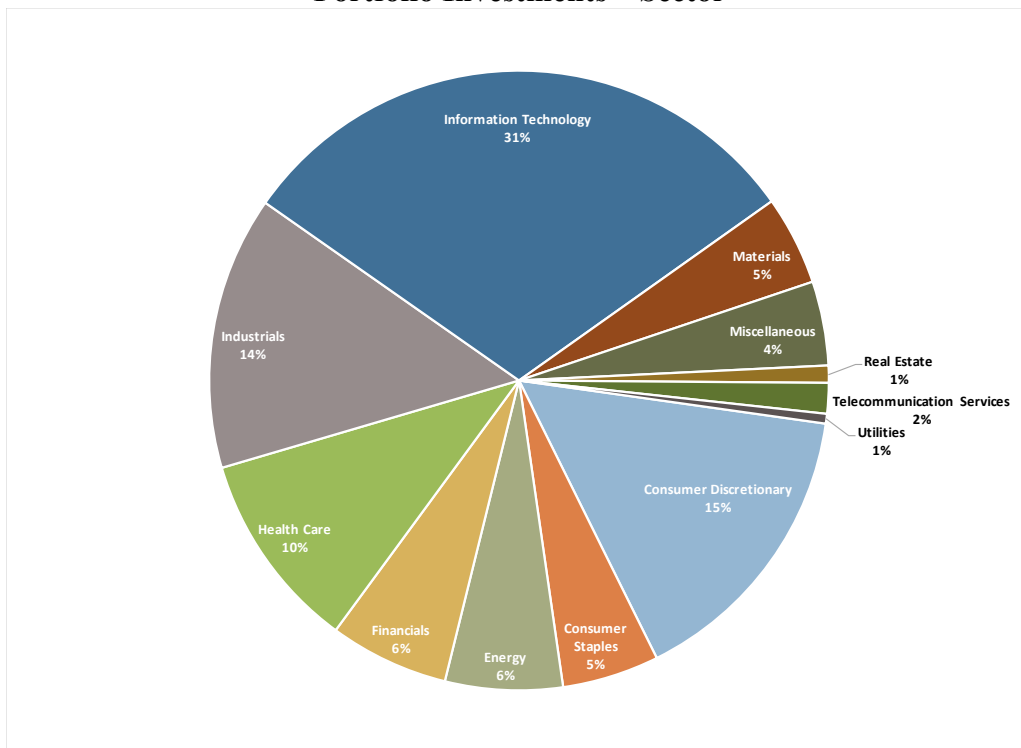
Chart 4
Portfolio Investments – Non-U.S. Breakdown



IV. Sector

Staff and Advisor closely monitor the portfolio's sector and industry diversification to avoid over-concentration and to identify opportunities to increase exposure. The June 30, 2017, portfolio sector diversification is presented in **Chart 5**. The primary objective of sector diversification is to mitigate volatility due to economic cycles. While Information Technology exposure appears over-weighted at 31 percent, the sector crosses virtually all other sectors, decreasing the sensitivity to economic cycles.

Chart 5
Portfolio Investments – Sector



D. 2017 Investment Activity

The Private Equity program is managed internally at LACERA and externally through three separate accounts managed on a discretionary basis. This section provides greater detail on each of the four programs.

I. Private Equity Program

Year-to-date, as of November 2, 2017, LACERA will have successfully committed \$1,300 million to ten private equity funds as seen in **Table 1**. The investment pace is on target to achieve the 2017 Annual Investment Plan (which allocated up to \$1,500 million +/- 20 percent to private equity investments). Staff maintained its rigorous scrutiny of opportunities in the marketplace from both existing and prospective general partners to ensure LACERA maintains and establishes relationships with a diversified roster of high quality managers.

Table 1

2017 Commitments			
Partnership	Type	Region	Commitments (\$ millions)
One Rock Capital Partners II	Buyout - Small	North America	\$73
Silver Lake Partners V	Buyout - Large	Global, North America	\$180
CVC VII	Buyout - Large	Europe, Global	\$228
Glendon Opportunities Fund II	Special Situations	Global	\$100
Canaan Partners XI	Venture - Early	North America	\$50
Alchemy Special Opportunities IV	Special Situations	Europe	\$117
Onex Partners V	Buyout - Large	Europe, North America	\$200
Clarion Investors III	Buyout - Small	U.S.	\$50
Clearlake Capital Partners V	Buyout - Middle Market	U.S.	\$125
PAI Europe VII	Buyout - Middle Market	Europe	\$177
Total			\$1,300

Through the first six months of 2017, the Program has received \$564.5 million in distributions and disbursed \$501.9 million in capital calls, resulting in a net cash flow of +\$62.6 million.

II. Separate Account Programs

LACERA has three active separate account programs managed on a discretionary basis. A brief summary of each program and its most recent activity is provided below.

Middle Market Program: Pathway Capital Management ("Pathway") manages \$600 million in two separate account vehicles ("Gateway A" and "Gateway B") targeting the middle market. Gateway A is fully invested, with commitments of \$307.7 million made to 31 partnerships. For the 12 month period ending March 31, 2017, Gateway A's cumulative contributions and distributions equaled \$29.8 million and \$28.5 million, respectively. No new investments were made into Gateway A during this period. The since-inception IRR for Gateway A stands at 11.1 percent. Gateway B was approved by the Board in September 2015. Through March 31, 2017, Gateway B had committed \$288.8 million to 13 private equity partnerships. For the 12 month period ending March 31, 2017, cumulative contributions equaled \$50.8 million. There have been no distributions. Performance at this stage of the fund's life is not meaningful.

Emerging Manager Program: JP Morgan manages \$350 million in three separate account vehicles ("JPM EM1", "JPM EM2", and "JPM EM3") targeting emerging managers. JPM EM1 is fully invested, with commitments of \$149 million made to 19 investments. As of June 30, 2017, since-inception cumulative contributions and distributions equaled \$146.8 million and \$112.9 million, respectively. The reported valuation of unrealized investments stands at \$134.1 million. No new investments were made into JPM EM1 in 2016. The since-inception IRR for JPM EM1 stands at 19.2 percent and the TVPI² at 1.67x.

JPM EM2 is also fully invested, with commitments of \$100 million made to 16 investments. As of June 30, 2017, the since-inception cumulative contributions equaled \$62.7 million while distributions equaled \$11.5 million. The reported valuation of unrealized investments stands at \$121.4 million. The since-inception IRR for JPM EM2 stands at 52.2 percent and the TVPI at 2.12x.

JPM EM3 was approved by the Board on August 10, 2016 for a \$100 million allocation. As of June 30, 2017, the since-inception cumulative contributions equaled \$2.0 million. No distributions have taken place to date. The reported valuation of unrealized investments stands at \$1.8 million. The since-inception metrics for JPM EMP3 (-30.2 percent IRR, 0.89x TVPI) are not deemed meaningful.

Co-Investment Program: Morgan Stanley manages \$550 million in two separate accounts ("GTB I" and "GTB II") targeting co-investment opportunities. Since-inception though June 30, 2017, GTB I has drawn down \$261.2 million and distributed \$436.0 million. The net asset value of unrealized investments stands at \$110.0 million. No new investments were made during the year. The since-inception net IRR and TVPI for GTB I stand at 11.9 percent and 1.8x, respectively.

As of June 30, 2017, since-inception, GTB II had drawn down \$213.8 million. The portfolio has had distributions of \$10.3 million. GTB II made five investments since June 30, 2016 totaling \$71.5 million in commitments. The net asset value of unrealized investments stands at \$266.5 million. The since-inception net IRR and TVPI for GTB II stand at 14.7 percent and 1.2x, respectively.

² TVPI: total value to paid-in capital = (distributions + market value)/contributions.

E. 2018 Commitment Target

In an effort to impact the Total Fund's investment performance while maintaining an adequate level of diversification, LACERA has established a long-term private equity target allocation of 10.0 percent of the Total Fund's market value. The private equity allocation of 9.6 percent is currently below its 10.0 percent target. Based on the prevailing private equity market conditions, staff and the Advisor believe that with \$1.5 billion (+/- 20 percent) annually in 2018-2026 commitments, LACERA's portfolio will sustain exposure in the 10 percent target range. It is anticipated that LACERA will pace its annual commitments evenly, with allowance for some flexibility based on the number of quality investments available in a calendar year. In this manner, the portfolio will continue to be constructed over full market cycles, thereby reducing the portfolio's risk and exposure to a specific time period.

Staff and Advisor used the Advisor's allocation model to determine the appropriate commitment pace for achieving LACERA's objectives. Several assumptions were made, identified below, about the economy and the private equity market, and their impact on the development of LACERA's Portfolio. Since the economy and market are unpredictable, these assumptions are subject to change, and the model should be viewed as a planning tool rather than an absolute determinant of future results. Further, it is important to monitor the progress of the portfolio and make adjustments on an annual basis.

ASSUMPTIONS USED IN ALLOCATION MODEL

Total Fund Value.	\$49.4 billion at December 31, 2016.
Expected growth of LACERA's Total Fund	7.25 percent per annum.
Asset mix of future commitments	Assumes that during each year 65 percent of commitments will go to Buyouts, 15 percent to Venture Capital, 15 percent to Special Situations, and 5 percent to Co-Investments.
Expected timing of future commitments	Commit evenly throughout the year, rather than at the beginning or end of a calendar year.
Expected draw-down and distribution rate for future commitments	Different for each investment strategy and developed based on historical draw-down and distribution data as captured by Venture Economics.
Expected draw-down and distribution rate for existing partnership unfunded commitments	Different for each investment strategy and developed based on historical draw-down and distribution data as captured by Venture Economics and LACERA.
Expected annual ending market values	Based upon a partnership's average residual value to paid-in capital using vintage year partnership data provided by Venture Economics.
Expected life of the partnership	Different for each strategy and developed based on historical data as captured by Venture Economics.
Availability of quality investment opportunities	Assumes the availability of enough quality investments to meet targeted annual commitments.

Based on these assumptions and the status of LACERA's existing portfolio, staff and the Advisor believe LACERA should commit \$1.5 billion (+/- 20 percent) in 2018. Over the following years, it is anticipated that LACERA will continue a steady deployment pace between \$1.2 billion and \$1.8 billion to achieve and maintain its 10 percent target, while being mindful of the fluctuations in the total portfolio.

In **Table 2**, staff and Advisor present projected commitments, draw-downs, distributions, Total Fund market value, and exposure to the private equity asset class over the next six years. Data through 2023 is provided to illustrate the impact of recent commitments on future years. New commitments do not impact the Total Fund's private equity exposure immediately because they are drawn down over five years, on average. Given this projected commitment pace, staff and the Advisor estimate that LACERA's portfolio will reach the 10.0 percent target allocation in 2019.

Table 2

2018 - 2023 PROJECTIONS (\$ in millions)

Calendar Year	New Commitments	PE Draw-downs	PE Distributions	PE Market Value	Total Portfolio Value⁽¹⁾	PE Allocation
2018	\$1,500	\$1,256	\$1,249	\$5,290	\$53,551	9.9%
2019	\$1,500	\$1,340	\$1,480	\$5,683	\$55,991	10.2%
2020	\$1,500	\$1,426	\$1,592	\$6,107	\$58,468	10.4%
2021	\$1,500	\$1,443	\$1,755	\$6,482	\$61,014	10.6%
2022	\$1,500	\$1,460	\$1,802	\$6,900	\$63,641	10.8%
2023	\$1,500	\$1,483	\$2,023	\$7,154	\$66,340	10.8%

(1) Total Portfolio Value is projected using an assumed 7.25% annual growth with estimated contributions/distributions as provided by Milliman

It is important to remember the following facts when reviewing this information. First, regardless of the projected and expected increase in investment pace, staff will adhere to its rigorous due diligence and underwriting standards. Second, the actual deployment of capital is dependent upon the availability of and accessibility to the world's best managers executing proven strategies in attractive markets. Third, substantially increasing or decreasing the investment pace exposes the Portfolio to increased risk, possibly resulting in overexposure to poor-performing vintage year funds or under-exposure to top-performing years.

The model takes into account the Total Fund's market value as of December 31, 2016, and assumes a 7.25 percent growth rate from that point forward. For the past nine years, staff has observed significant public equity market appreciation. Even so, volatility in global markets impacts the Total Fund's exposure to public equities and creates swings in the private equity component of the Total Fund (the Denominator Effect). Staff and the Advisor continually monitor the portfolio and remain alert to adjust the commitment pace should long-term market trends warrant such change.

F. 2018 Prospective Investment Activity

Staff and the Advisor(s) constantly search for the highest caliber investments (both re-ups and new) in each sub-investment strategy of the Program. Staff diligently attends industry events, analyzes databases, reads all forms of communications, and taps into networks, including our separate account managers, to generate deal flow and ascertain best thinking on opportunities and strategies in the marketplace. In addition to those core activities, staff will actively pursue several investment themes and strategies during 2018.

I. Potential Candidates for Planning Purposes

Funds listed in **Table 3** are the anticipated 2018 calendar year investment offerings from existing LACERA managers. It is unlikely that LACERA will re-up with all of these managers, or that all the managers will decide to raise a fund in 2018. Of the twelve existing LACERA managers expected to raise funds in 2018, Staff anticipates re-upping with seven to nine. The rationale for re-ups will depend in part on past fund performance, on whether LACERA can make a meaningful commitment to the fund (\$50-\$200 million), and on the availability of potentially better alternatives in the market. Staff also assesses if a fund size has outgrown the manager's strategy potentially indicating a mindset transition from investing to generate returns to gathering assets to generate fees. Another differentiator will be strategy overlap. If two funds with the same strategy come to market, staff and the Advisor will consider recommending only the manager with the most potential to earn top-quartile returns. Staff will also assess how the general partner has amended Limited Partnership Agreement terms and nurtured Limited Partner relations during its history with LACERA.

Taking into account re-ups and likely new relationships, staff believes there will be enough quality funds in the market to meet LACERA's \$1.5 billion (+/- 20 percent) target.

Table 3
Active Existing Managers Likely to Raise a New Fund in 2018

Expected Next Fund	Prior Fund Vintage Year	% Drawn as of June 30, 2017	LACERA's Previous Commitment (\$ millions)
Buyout			
ABRY Partners IX	2014	87%	\$35
Jordan Resolute IV*	2013	67%	60
Juggernaut	2015	54%	100
MS GTB III	2014	72%	300
Palladium Equity Partners V	2014	70%	100
Riverside CAF VII	2013	76%	100
Siris Partners IV	2014	51%	60
Thomas H Lee VIII*	2015	65%	60
Vista Equity Partners VII	2016	55%	200
Total Buyout			\$1,015
Special Situations			
ABRY ASF IV	2014	43%	25
BDCM Opportunity VII	2015	57%	100
Energy & Minerals Group IV*	2014	85%	150
Total Special Situations			\$275
Venture Capital			
Storm Ventures VI	2015	48%	50
Total Venture Capital			\$50
Total Past Commitments to Returning Managers			\$1,340

*LACERA did not commit to most recent fund.

II. Co-Investment Mandate

As discussed earlier, GTB II, the co-investment separate account managed by Morgan Stanley, is nearing depletion. As of October 12, 2017, LACERA had made capital contributions of \$237.7 million, or 79 percent of the \$300 million in committed capital. Staff will review the program and recommend next best steps to the Board.

III. In-house Emerging Manager Program Feasibility Study

Staff will draft a feasibility study that assesses the costs and benefits of developing in-house capabilities to develop an emerging manager practice, in contrast to outsourcing the program to third party managers. The study will also consider logical and sequential stages and optimal timing for such a program.

IV. Secondary Sale

Staff and the Board recently amended the Private Equity Secondary Policy (Appendix A of the Objectives, Policies, and Procedures document), underscoring broad agreement on the intent to undertake a sale of non-core assets in the portfolio. Adhering to policy guidelines, staff will work with advisors to identify non-core limited partnership interests, to determine fair valuations, and to execute appropriate transactions. Staff will proactively communicate with the Board at all stages of the transactions.

V. 2018 Investment Themes

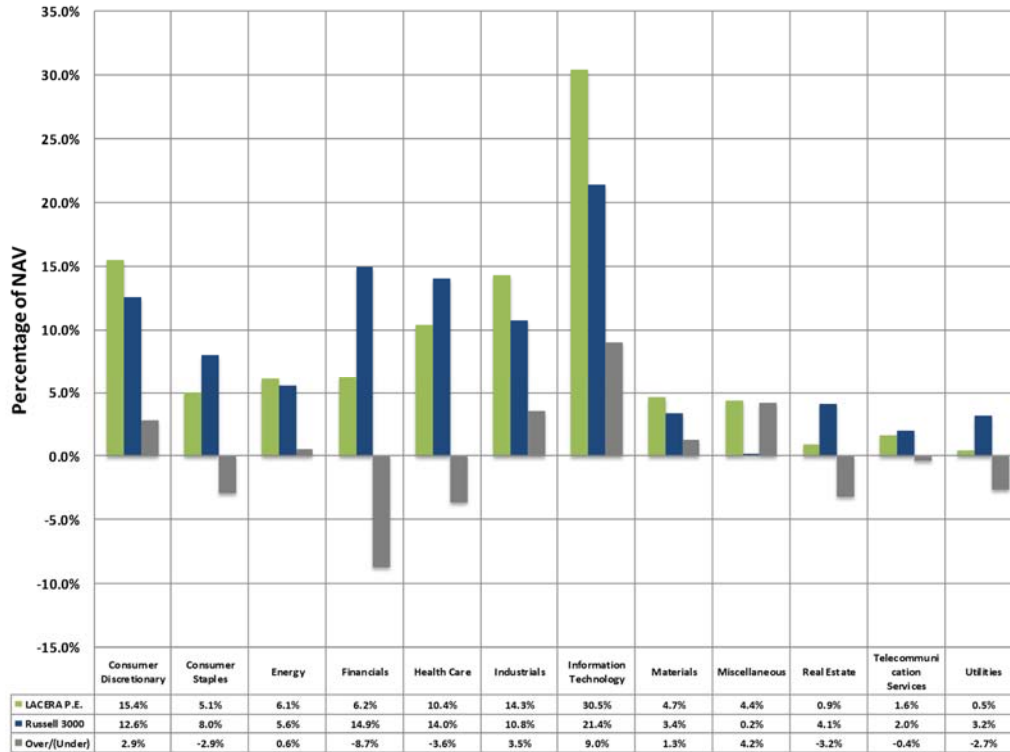
The dominant activity of staff is the ongoing assessment of managers in each sub-asset class strategy. Even so, staff is attentive to economic cycles, private equity industry developments, and research emanating from thought leaders in the marketplace. Emergent strategies under consideration in 2018 are presented below.

Sector Discussion

Staff and Advisor(s) are continually evaluating geographic and sector exposure to identify opportunities to increase or decrease projected future allocations.

Sector weightings - In **Chart 6**, Relative to the Russell 3000 Index sector weightings, LACERA is most underweight in the Financials and Consumer Staples sectors. While this underweighting may be reflective of a lack of quality opportunities or lack of required rate of return, staff and Advisor are alert to opportunities in those sectors. Conversely, the portfolio is over-weighted to Information Technology/Telecommunications by 900 basis points.

**Chart 6
 Sector Weightings**



Staff has had numerous discussions on technology exposure over the past year. We continue to believe that diversification across sectors remains the best strategy to mitigate economic cycle risk. Even so, Information Technology permeates every sector. LACERA’s technology exposure includes financial technology, healthcare IT, data security, tech-enabled services, and software. Generalist funds, as well as specialist funds such as Silver Lake, Vista and Siris, are deploying larger dollars to companies with global presences. Furthermore, technology is still in the early innings of disrupting many of the traditional business models (case in point – department stores). Basically, we expect that technology will continue to play a dominant role in the portfolio.

Under-represented Geographies

Country Weightings – In **Table 4**, LACERA's net asset value is presented by country, based on company headquarter domicile. Alongside those numbers are the World Bank 2016 Gross Domestic Product (GDP) numbers and the Pitchbook 2016 private equity deal numbers.

Table 4
LACERA NAV Exposure by Country vs World GDP and 2016 PE Activity

GDP Rank	Country	LACERA PE Market Value	% of LACERA PE MV	World Bank GDP	% of World Bank GDP	2016 GDP Growth Rate	MSCI Index Status	Region	Pitchbook 2016 PE Activity (Exc VC) (No. of Deals x Median Value)		
									PE Deals	Est. PE Capital	% of Est. PE Capital
1	United States	\$3,517.7	74%	\$18,569	29%	1.6%	Developed	Americas	4,806	\$151,870	37.7%
2	China	\$97.5	2%	\$11,199	18%	6.7%	Emerging	Asia	136	\$40,907	10.1%
3	Japan	\$19.6	0%	\$4,939	8%	1.0%	Developed	Asia	34	\$1,307	0.3%
4	Germany	\$81.8	2%	\$3,467	5%	1.9%	Developed	Europe	400	\$48,810	12.1%
5	United Kingdom	\$249.7	5%	\$2,619	4%	1.8%	Developed	Europe	1,161	\$19,853	4.9%
6	France	\$27.0	1%	\$2,466	4%	1.2%	Developed	Europe	670	\$7,397	1.8%
7	India	\$11.7	0%	\$2,264	4%	7.1%	Emerging	Asia	203	\$5,422	1.3%
8	Italy	\$14.7	0%	\$1,850	3%	0.9%	Developed	Europe	207	\$15,980	4.0%
9	Brazil	\$19.1	0%	\$1,796	3%	-3.6%	Emerging	Americas	68	\$4,512	1.1%
10	Canada	\$83.8	2%	\$1,530	2%	1.5%	Developed	Americas	753	\$2,331	0.6%
11	South Korea	\$130.9	3%	\$1,411	2%	2.8%	Emerging	Asia	46	\$2,924	0.7%
12	Russia	\$5.0	0%	\$1,283	2%	-0.2%	Emerging	Europe	50	\$1	0.0%
13	Spain	\$8.2	0%	\$1,232	2%	3.2%	Developed	Europe	165	\$8,225	2.0%
14	Australia	\$35.5	1%	\$1,205	2%	2.8%	Developed	Pacific	252	\$3,699	0.9%
15	Indonesia	\$1.5	0%	\$932	1%	5.0%	Emerging	Asia	10	\$750	0.2%
	Others	\$424.6	9%	\$6,954	11%				1,789	\$89,078	22%
	Totals	\$4,728.3	100%	\$105,563	166%	2.4%			10,750	\$403,068	100%

Several takeaways from the data:

1. LACERA's PE portfolio is 74 percent weighted to the U.S., which makes up 29 percent of world GDP and an estimated 38 percent of PE transaction value.
2. In the developed markets, LACERA's combined 3 percent exposure to Germany and France is significantly below the two countries' 9 percent GDP share and 14 percent share of PE deal flow.
3. Several large deals in China propelled them to being the only emerging market country with substantial GDP, high GDP growth, and a critical mass of PE activity.
4. The inverse of #3 above, the expected high GDP growth emerging country markets of India, Brazil, and Indonesia evidenced light PE volume in 2016.

In terms of action items, LACERA will continue to diversify the private equity portfolio into global markets to diversify country exposure, and to capture emerging market high GDP growth opportunities that are not accessible through the public equity markets.

Strategies Discussion

Staff monitors current net asset value exposure and committed but not yet called capital (**Table 5**), to validate the direction of the portfolio.

Table 5
LACERA NAV and Unfunded Commitments Exposure by Strategy

	Strategy	Market Value	% of Market Value	Unfunded Commitments	% of Unfunded Commitments
Buyouts	Buyout - Global	\$731,013,087	14.4%	\$960,415,974	24.9%
	Buyout - Large	\$1,096,211,823	21.6%	\$427,638,447	11.1%
	Buyout - Mid	\$531,909,424	10.5%	\$559,390,754	14.5%
	Buyout - Small	\$515,009,897	10.1%	\$604,401,754	15.7%
	BO SubTotal	\$2,874,144,231	56.5%	\$2,551,846,929	66.2%
Fund-of-Funds / Co-Investments	Co-Investments	\$351,693,266	6.9%	\$90,814,121	2.4%
	Fund of Funds	\$620,602,183	12.2%	\$461,415,199	12.0%
	FoF/Co-In SubTotal	\$972,295,449	19.1%	\$552,229,320	14.3%
Special Situations	Distressed	\$400,824,474	7.9%	\$362,484,340	9.4%
	Energy	\$119,540,615	2.4%	\$11,095,496	0.3%
	Secondaries	\$2,754,248	0.1%	\$1,166,264	0.0%
	SS SubTotal	\$523,119,337	10.3%	\$374,746,100	9.7%
Venture Capital / Growth Caopital	Growth Equity	\$281,664,004	5.5%	\$105,092,461	2.7%
	VC - Balanced	\$203,387,350	4.0%	\$72,785,996	1.9%
	VC - Early Stage	\$97,376,403	1.9%	\$121,248,498	3.1%
	VC - Late Stage	\$133,746,398	2.6%	\$74,112,500	1.9%
	VC/GC SubTotal	\$716,174,155	14.1%	\$373,239,454	9.7%
	Grand Total	\$5,085,733,171	100.0%	\$3,852,061,804	100.0%

A few trends can be extracted from Table 5 as to conscious changes in portfolio construction:

- On the Buyout front, at 30.2 percent of combined unfunded commitments, Small and Middle Market Buyout funds show the largest increase relative to net asset value exposure, of any strategies. This trend is consistent with staff's efforts to increase exposure to this end of the market.
- Under Special Situations, while the energy sector volatility constrained new commitments, failure to commit capital to a sector that represents 6 percent of the Russell 3000 market cap might prove shortsighted. Staff notes that at the company level, the energy exposure equals \$253 million or 8.5 percent of portfolio company value. But large portions of that are attributed to managers whose most recent funds LACERA did not commit to (EMG, \$104M; First Reserve, \$24M; Kelso, \$18M). Active relationships that transact in the energy space do include BDCM, \$7M; Blackstone, \$21M; and Clearlake, \$38M.

VI. Alternative Investment Structures

Staff will continue to evaluate alternative investment structures such as fund of funds, separate accounts, or overage pools with general partners specializing in attractive, access-constrained market subsectors where LACERA can gain sizeable allocations and reasonable fee structures. As the private equity marketplace evolves, new structures are continually being introduced. Alternative structures staff anticipates evaluating in the current investment cycle include:

- Structured/synthetic private equity solutions
- Permanent/long-term capital vehicles
- Dedicated co-investment vehicles attached to primary fund investments
- Joint ventures and partnerships with other investors
- Fund commitments offering general partner ownership stakes

Many of these vehicles pose unique challenges in that they require an opportunistic mindset coupled with an accelerated due diligence process. Benchmarking terms and return expectations can be difficult as comparable data is sparse. Finally, structural innovations tend to arise out of necessity or opportunism depending on the strength or weakness of the investment manager.

Glossary

Private Equity

Investments that are privately negotiated and typically do not trade in an efficient capital market. Investments are illiquid and long term in nature, thereby introducing greater risk into a portfolio. Investors seek to be rewarded with higher returns than traditional asset classes. LACERA classifies its private equity investments into the following categories: Buyouts, Venture Capital, Special Situations, and non-U.S. (international) investments. Additionally, these categories utilize several different investment sub-strategies.

Buyouts

Buyout funds acquire companies through the purchase of controlling interests of preferred and common equity. Transactions utilize some degree of leverage. Target companies are established businesses in more mature industries. The target holding period of a Buyout investment is four to seven years. Exit strategies are less dependent on the public market and primarily involve strategic sales. This reduced reliance on the public market allows for liquidity events to occur continually throughout the life of a fund. Buyout investments have lower overall business risk than venture investments; however, depending on the amount of leverage in the capital structure of the investment and general economic conditions, Buyouts can have meaningful total risk. LACERA's Private Equity Strategic Plan defines Buyouts as acquisition and takeover, specialized strategy, non-controlling interest, structured equity, and development capital/growth equity funds. Several of the more popular Buyout investment strategies are addressed below.

Acquisition and Takeover

The acquisition and takeover investment strategy involves the purchase of a company, division, or subsidiary that is currently undervalued or underperforming. This strategy generally involves the use of leverage. Within this category, there is further diversification by the size of the Buyout: small, medium, or large. The acquisition and takeover strategy may involve the existing management of a business acquiring the company with a financial buyer, or the financial buyer may introduce a new management team to the company.

Value Buyouts

Leveraged financing with control position (over 50 percent equity ownership) that is used to purchase a company, subdivision, or subsidiary of a company that is currently undervalued or underperforming. Companies typically sell low or non-technology products in industries not subject to wide profitability swings.

Growth Buyouts

Leveraged financing with control position (over 50 percent equity ownership) that is used to purchase a company, subdivision, or subsidiary of a company that operates in an industry that is expected to experience rapid growth or is potentially subject to wide profitability swings.

Development Capital/Growth Equity

The development capital/growth equity investment strategy focuses on building a small company into a much larger, rapidly growing company. Attractive candidates must be able to capitalize on key competitive advantages, as they have to increase revenues and cash flow through market share gains, rapid market growth, distribution, or product line expansion, and/or market consolidation.

Platform Add-ons

A growth strategy that involves the acquisition of a company that will be the base (or platform) from which future acquisitions will be made. The platform is similar to Growth Buyouts in that both are considered high-growth investment strategies; however, platforms rely on growth through industry consolidation or acquisitions.

Venture Capital

Venture Capital investing involves the financing of start-up, growth, or expansion stage companies focused primarily on the information technology, healthcare, or clean technology sectors. The holding period for most Venture Capital investments generally is longer than that of Buyout investments because companies are in the early stages of the product life cycle, requiring multiple rounds of financing before achieving sufficient critical mass and a positive exit. Both strategic sales and the public market are used as the exit mechanisms for Venture Capital investments. LACERA's Private Equity Strategic Plan defines Venture Capital as: Seed, Early, Middle, Late Stage, and Balanced Venture Capital funds. Each category within Venture Capital is addressed below.

Seed Stage

Investments in companies with an idea, but which at the time of investment have no commercial products. Capital is provided for research and product development. Generally, the company is not generating revenues.

Early Stage

Investment in companies for product development and initial marketing, manufacturing, and sales activities. May include companies that have developed an initial product but are receiving venture capital for the first time.

Middle Stage

Working capital for the initial expansion of a company that is producing and shipping products. The company may have growing revenues, accounts receivable, and inventories, but still may not be showing a profit.

Late Stage

A fund strategy involving financing for the expansion of a company that is producing, shipping, and increasing its sales volume. Funds are utilized for further plant expansion, marketing, working capital, or an improved product.

Balanced

A fund strategy that involves a balanced approach including a combination of Seed, Early, and/or Late Venture Capital strategies.

Special Situations

Special situations invest in mezzanine securities, execute distressed debt trading strategies, invest in distressed principal transactions, or focus on specific industry niches such as commodity-based oil and gas strategies. The following is a brief description of several special situations strategies.

Mezzanine Financing

Some private equity fund managers raise captive mezzanine funds to provide financing solely to their portfolio companies. Third-party mezzanine funds are typically raised by independent fund managers to provide financing to a general populace of companies, independent of any particular equity fund. Mezzanine funds can invest in companies independent of an equity sponsor or may partner with an equity sponsor to complete a transaction. Returns from mezzanine funds are garnered by providing subordinated debt to companies that produce current income. In addition, a mezzanine fund may enhance its returns by requiring equity warrants as part of the financing package.

Distressed Debt

Distressed debt funds invest in the securities or obligations of distressed companies. Typically, portfolio companies are undergoing, are likely to undergo, or have undergone a reorganization under the federal bankruptcy law or similar laws in other countries, or have undergone other extraordinary transactions outside of bankruptcy, such as a debt restructuring, reorganization, or liquidation.

Natural Resources

Natural resource fund managers pursue investments in companies involved directly or indirectly in the extraction of economic value from the earth's raw materials. Examples include oil & gas, mining, and water.

Oil and Gas (Energy)

Energy funds invest in the exploration and production of oil and gas, the energy service sector, the processing, storing, transporting, and marketing of oil, natural gas and natural gas liquids, and clean technology.

Venture Leasing

Venture leasing strategy offers equipment leasing arrangements to venture-backed businesses in exchange for above-average lease yields and possibly equity participation. A venture leasing investment is generally secured by the physical and intellectual assets of the company.

Project Finance

Project finance investing involves financing of large "projects"—such as oil pipelines, power generation plants, or electric utilities—in exchange for a claim on the revenues generated by the assets.

Secondary Market

The market for the sale of partnership interests in private equity funds. Sometimes limited partners choose to sell their interest in a partnership, typically to raise cash or because they cannot meet their obligation to invest more capital according to the takedown schedule. Certain investment companies specialize in buying these partnership interests at a discount.

Co-investment

The syndication of a private equity financing round or an investment by individuals (usually limited partners) alongside a private equity fund in a financing round. Two or more investors in a given transaction. Also known as syndication.

LACERA Private Equity Privatization Policy

LACERA does not aim to promote privatization of public jobs through its private equity investment program. It is highly unlikely that LACERA private equity investments would be in domestic partnerships or similar pooled investment vehicles (“partnerships”) that are dependent on privatization strategies.

When performing due diligence prior to making the initial investment in a domestic partnership, staff and/or Advisor, as applicable, will use their reasonable efforts to ascertain the following:

- 1) whether the partnership’s current investment strategy includes the privatization of jobs held by LACERA members;
- 2) whether previous partnerships operated by the general partners, if any, have invested in companies dependent upon privatization of jobs held by LACERA members.

Staff and/or Advisor will seek guidance from the Board of Investments before investing in a domestic partnership if the due diligence establishes a positive answer to either (1) or (2) above.

December 22, 2017

Board of Investments
Los Angeles County Employees Retirement Association (“LACERA”)
300 N Lake Avenue, Suite 850
Pasadena, CA 91101-6130

Re: Proposed 2018 Investment Plan

Dear Board Members,

StepStone Group L.P. (“StepStone”) was honored to be chosen as the private equity advisor to LACERA’s Board of Investments since September 2016. We worked closely with LACERA Staff to build and evaluate the Private Equity 2018 Investment Plan. A number of assumptions were included in arriving at the projections and developing the plan during this collaborative process. The 2018 proposed commitment target was developed with the goal achieving the 10% portfolio target allocation by the end of 2018 and maintaining it through 2026, with the recognition that market conditions can lead to deviations from the target. We believe the Private Equity 2018 Investment Plan further explained below serves the long-term interests of LACERA’s portfolio.

The analysis resulted in a proposed commitment of \$1.5 billion, plus or minus 20% (\$300 million), in 2018 and each year thereafter through 2026. Consistent with prior year’s recommendation, we believe that a target range of \$1.2 to \$1.8 billion is more appropriate than targeting a specific figure in order to allow flexibility to invest more or less according to market conditions. While a consistent pace of investment year over year is important to maintain proper vintage year diversification, LACERA should not feel forced to invest a specific amount every year if enough high quality opportunities are not available and should have the flexibility to invest more if there are more high quality opportunities in a given year than could be accommodated with a fixed allocation target.

StepStone will review this recommendation each year to ensure it continues to align with the goal of maintaining a 10% exposure based on fair market value of the private equity portfolio relative to LACERA’s overall investment portfolio.

StepStone Group LP

Jose Fernandez, Partner

To the knowledge of StepStone, (i) this recommendation does not take into account the interest of StepStone or any StepStone Entity (as defined in the Advisory Services Agreement between LACERA and StepStone) in this investment, (ii) neither StepStone nor any StepStone Entity will receive any benefit from this recommendation other than compensation paid by LACERA to StepStone pursuant to the Advisory Services Agreement, and (iii) there are no conflicts of interest among StepStone and its affiliates and the Fund in connection with the recommendation herein.



ATTACHMENT C

StepStone Group LP
4275 Executive Square, Suite 500
La Jolla, CA 92037
Phone +1 858.558.9700

October 25, 2018

Board of Investments
Los Angeles County Employees Retirement Association ("LACERA")
300 N Lake Avenue, Suite 850
Pasadena, CA 91101-6130

Re: Proposed 2019 Investment Plan

Dear Board Members,

StepStone Group L.P. ("StepStone") was honored to be chosen as the private equity advisor to LACERA's Board of Investments since September 2016. We worked closely with LACERA Staff to build and evaluate the Private Equity 2019 Investment Plan. A number of assumptions were included in arriving at the projections and developing the plan during this collaborative process. The 2019 proposed commitment target was developed with the plan of gradually increasing annual commitments by up to US\$300 million to achieve the 10% portfolio target allocation by the end of 2023, with the recognition that market conditions can lead to deviations from the target. We believe the Private Equity 2019 Investment Plan further explained below serves the long-term interests of LACERA's portfolio.

For the 2019 plan we have taken into account the potential secondary sale of a number of existing investments as currently contemplated. The analysis resulted in a proposed commitment of US\$1.5 billion in 2019 and gradually increase the annual commitment by up to US\$300 million. Increasing the annual commitment allows the private equity portfolio to recover exposure from the secondary transaction and stay within +/-1% of the 10% target. Consistent with prior year's recommendation, we believe that a target range of \$1.2 to \$1.8 billion is more appropriate than targeting a specific figure in order to allow flexibility to invest more or less according to market conditions. While a consistent pace of investment year over year is important to maintain proper vintage year diversification, LACERA should not feel forced to invest a specific amount every year if enough high quality opportunities are not available and should have the flexibility to invest more if there are more high quality opportunities in a given year than could be accommodated with a fixed allocation target.

StepStone will review this recommendation each year to ensure it continues to align with the goal of maintaining a 10% exposure based on fair market value of the private equity portfolio relative to LACERA's overall investment portfolio.

StepStone Group LP

Jose Fernandez, Partner

To the knowledge of StepStone, (i) this recommendation does not take into account the interest of StepStone or any StepStone Entity (as defined in the Advisory Services Agreement between LACERA and StepStone) in this investment, (ii) neither StepStone nor any StepStone Entity will receive any benefit from this recommendation other than compensation paid by LACERA to StepStone pursuant to the Advisory Services Agreement, and (iii) there are no conflicts of interest among StepStone and its affiliates and the Fund in connection with the recommendation herein.

October 29, 2018

TO: Each Member
Equity: Public/Private Committee

FROM: Christopher J. Wagner *CJW*
Principal Investment Officer

David E. Simpson, CFA *DES*
Investment Officer

FOR: November 8, 2018 Equity: Public/Private Committee Meeting

SUBJECT: **PRIVATE EQUITY OBJECTIVES, POLICIES, AND PROCEDURES**

RECOMMENDATION

Advance the revised Private Equity Objectives, Policies, and Procedures to the Board of Investments for approval.

BACKGROUND

LACERA's Private Equity Objectives, Policies, and Procedures ("OPP") document i) defines and describes the objectives and strategy for investing in private equity assets, ii) delineates the methods and guidelines used in making private equity investments, and iii) articulates the responsibilities of the Board of Investments ("BOI"), investment staff, private equity advisor(s), and LACERA's general consultant.

Staff is reviewing and consolidating the policy statements and OPPs for all asset classes. The framework of policy and procedure documents is under review as well. Given that ongoing work, at this time, staff recommends four minor changes to the Private Equity OPP, the first three of which conform to prior BOI actions at the August 2018 and September 2018 BOI meetings related to the asset allocation study. The fourth proposed change moves the sub-asset class target allocation section to the Private Equity Structure Review document.

1. Under Section B, Investment Objective and Strategy, staff proposes updating the target return to an annualized return of 200 basis points in excess of the MSCI ACWI IMI¹ index return, net of all partnership and advisor fees, on a quarterly lag.
2. Under Section C, Definitions, staff proposes reclassifying Special Situations, as the strategies within the asset class belong to Credit and Real Assets.

¹ MSCI ACWI IMI is an acronym for the Morgan Stanley Capital International All Country World Index Investable Market Index

3. Under Section D. I., Total Fund Target Allocations, staff updates figures and proposes modifying the Target Allocation Range to 7%-13% of the Total Fund.
4. Finally, Section D. II., staff proposes moving the Sub-Asset Class Target Allocations section to the Private Equity Structure Review document.

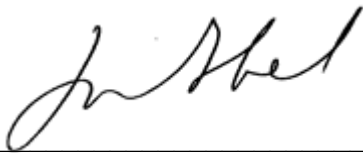
The attached shows the revised OPP with proposed changes from the previous version in red.

CONCLUSION

The current LACERA policy requires an annual review of the OPP, including an analysis of LACERA's target allocation to the various private equity sub-asset classes. The OPP further requires that any necessary revisions be submitted for Board approval. Staff has completed its review of the OPP and recommends the Committee advance the revised OPP to the BOI for approval of the proposed changes.

Attachment

NOTED AND REVIEWED:



Jonathan Grabel
Chief Investment Officer

**Los Angeles County Employees Retirement Association
Private Equity Objectives, Policies, and Procedures**

Adopted: April 23, 1997

Last Revised: ~~January 10~~ November 8, 2018

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A. DOCUMENT PURPOSE

The Private Equity Objectives, Policies, and Procedures ("OPP") document sets forth LACERA's investment objective and strategy for investing in private equity as outlined in the Fund's Investment Policy Statement. The OPP stipulates the policies that establish parameters on the program, spells out the procedures to be followed, and delineates the responsibilities of the Board of Investments (the "Board"), staff, and the Private Equity Advisor(s) ("PEA"). In essence, the OPP provides the blueprint that guides the portfolio's construction and composition.

B. INVESTMENT OBJECTIVE AND STRATEGY

LACERA invests in private equity to obtain attractive returns for the Fund at an acceptable level of risk. The target return for this asset class, as measured by Internal Rate of Return (IRR), is an annualized return of ~~2300 to 500~~ basis points **in excess of** over the ~~MSCI ACWI IMI~~¹ ~~Russell 3000~~ Index ~~return, over a rolling 10-year time frame~~, net of all partnership and advisor fees, **on a quarterly lag**. The primary strategy is to prudently build a diversified portfolio of the most attractive investment opportunities securing the best possible terms while mitigating risks.

C. DEFINITIONS

I. Private Equity

Private equity refers to privately negotiated investments in companies. These investments are predominantly equity interests that are illiquid and long-term in nature. Private equity investments can be made directly, but they are more commonly made through investments in limited partnerships and other types of investment vehicles that offer limited liability to investors. Private equity strategies are classified into the following sub-asset class categories:

Buyouts	Venture Capital	Special Situations*
Acquisitions and Takeovers	Seed Stage	Mezzanine Financing
Industry-Focused	Early Stage	Distressed Debt
Specialized Strategies	Middle Stage	Oil and Gas (Energy)
Non-controlling Interests	Late Stage	Alternative Energy Sources
Structured Equity	Growth Equity	Infrastructure
		Natural Resources

¹ MSCI ACWI IMI is an acronym for the Morgan Stanley Capital International All Country World Index Investable Market Index

In addition to these sub-asset class categories, LACERA classifies private equity investments by general partner, industry, and geography.

II. Related Terms

Co-Investments are investments made directly into companies by a limited partner, when invited to be part of the consortium by an existing private equity fund. General partners make co-investment opportunities available to limited partners when the total required equity investment in a specific company by the fund exceeds that fund's per-company maximum investment.

Direct investments are investments made directly into companies by investors where no private equity fund is involved. The investors are not limited partners, and as such may be involved in the management of the companies and sit on their board of directors.

Emerging markets are countries other than Canada and those in the Morgan Stanley Capital Index – Europe Asia, Far East (MSCI EAFE) Index.

Fund-of-funds are vehicles comprised of a portfolio of funds which frequently target a particular sub-asset class or category of investments.

General Partners ("GPs") are the managing partners in a private equity management company, who have unlimited personal liability for the debts and obligations of the limited partnership and have the right to participate in its management. Their activities include raising capital, investing the capital, actively monitoring the portfolio companies, reporting results to limited partners, and exiting the investments. The general partner receives an annual management fee and may earn "carried interest," which is a negotiated percentage of the profits.

Limited Partners ("LPs") are passive investors with limited liability in the partnerships who have no involvement in the day-to-day management of the partnership and underlying portfolio companies.

Non-U.S. investments are private equity investments in any of the sub-asset classes outside of the United States in both developed and emerging markets. These investments may focus on an individual country, a geographical region, or they might span the globe.

Secondary investments are limited partnership interests bought from or sold by existing investors in private equity funds. The secondary market offers limited partners the opportunity to actively manage the composition of their existing private equity portfolio.

D. INVESTMENT POLICIES AND GUIDELINES

I. Total Fund Target Allocation

In ~~September 2018~~ ~~October 2015~~, the Board established a target allocation of 10 percent for private equity investments, with an acceptable range of 7 percent to 134 percent. Given the unpredictable nature of cash flows in this asset class, the actual allocation number fluctuates. Staff will closely monitor the actual market value of and committed exposure (new commitments and unfunded existing commitments) to this asset class.

LACERA's Plan Level Target Allocation Status¹
(As of June 30, 2018⁷ - Millions)

Net Asset Value ²	Total Fund Value ²	Allocation %	Target Allocation Range
\$5,947,086	\$56,142,755	109.6%	7% - 143%

¹ Values adjusted from the 6/30/18⁷ Total Asset Allocation report by +\$188,221 million eliminating PE reporting lag.

² Factoring in \$3,759,852 million in Undrawn Capital, the combined PE allocation percentage equals 16.25-8%.

In the Annual Investment Plan, staff and PEA will recommend an annual commitment pace to ensure that investments fall within the policy's allocation range. Even so, LACERA seeks to avoid an undue concentration of commitments in any one calendar year. LACERA will adjust the amount of new commitments to the portfolio each year to capture the benefits of time diversification and to match the expected growth of LACERA's total plan assets.

~~H. Sub-Asset Class Target Allocations~~

~~The Board, staff, and the PEA shall annually review target allocation ranges to the various sub-asset classes and international investments. These target allocation ranges will be measured and set following LACERA's review and consideration of the private equity marketplace over the forthcoming three to five years for each investment sub-asset class.~~

~~LACERA's Sub-Asset Class Target Allocation Status
(As of June 30, 2017 - Millions)~~

Sub-asset Class	Net Asset Value	Sub-asset Class Allocation %	Target Allocation Ranges
Buyouts	\$2,874	57%	50—85%
Venture Capital/ Growth Equity	\$716	14%	10—25%
Special Situations[†]	\$520	10%	5—25%
Other[‡]	\$975	19%	
Grand Total	\$5,086	100%	
Non-U.S.[‡]	\$1,322	26%	20—45%

[†]~~Comprised of distressed debt, mezzanine, energy, and natural resources focused funds.~~

[‡]~~Comprised of Co-Investments, Fund of Funds, and Secondaries.~~

[‡]~~Estimated total of non-U.S. investments based on company domicile, excludes cash.~~

~~LACERA recognizes that cash flows are unpredictable and at the discretion of the general partner. Accordingly, LACERA allows staff and the PEA(s) some latitude outside of the ranges. In the short term, LACERA does not wish to constrain staff or its PEA to the designated sub-asset class ranges; i.e., fulfilling target allocations will not drive the investment recommendation process. LACERA will invest consistently over time to gain the proper exposure to the various sub-asset classes.~~

III. Investment Exposure Limits

LACERA's private equity portfolio will be diversified by vintage year, sub-asset category, industry, general partner, and geography. The following guidelines will apply unless a waiver is approved by the Board.

Size of Investments: The minimum size of a fund commitment shall be \$5 million, while the maximum size of investment made shall be 10 percent of LACERA's market value exposure plus undrawn commitments. The \$5 million minimum is expected to be utilized for venture capital-type investments while the maximum would most typically apply to separate account or fund-of-fund mandates.

Partnership Limits:

1. LACERA's share in a single partnership, once the partnership has closed to new investors, shall not exceed 50 percent of that partnership's total commitments from all limited partners. (This policy does not apply to separate accounts where LACERA may be 100% of the capital.)
2. LACERA shall limit maximum exposure (market value plus unfunded commitments) to any one general partner such that the aggregate investment with that general partner across multiple funds is not greater than 10 percent of LACERA's private equity portfolio market value plus unfunded commitments at the time of commitment.

Emerging Markets: No more than 15 percent of the portfolio will be invested in emerging markets.

IVII. Prohibited Investments

Hostile Takeovers: LACERA avoids investment strategies that primarily involve hostile takeovers, defined as acquisitions opposed by the board of directors of the target company.

Derivatives: Derivative instruments are not permitted to the extent that they expose LACERA to new risks not associated with the original intent of the investment.

LACERA Private Equity Privatization Policy: LACERA does not aim to promote privatization of public jobs through its private equity investment program. It is highly unlikely that LACERA would invest in private equity investments that are dependent on privatization strategies.

When performing due diligence prior to making the initial investment in a domestic partnership, staff and/or PEA, as applicable, will use reasonable efforts to ascertain the following:

1. Whether the partnership's current investment strategy includes the privatization of jobs held by LACERA members, and
2. Whether previous partnerships operated by the general partners, if any, have invested in companies dependent upon privatization of jobs held by LACERA members.

Staff and/or PEA will seek guidance from the Board before investing in a domestic partnership if the due diligence establishes a positive answer to either (1) or (2) above.

United Nations Principles for Responsible Investments: LACERA is a signatory of the United Nations Environment Programme Finance Initiative's Principles for Responsible Investments ("UNPRI") and has a conviction that environmental, social, and governance-related considerations should provide material input into the Investor's investment decision and that the integration of such criteria supports its commitment to sustainable value creation. Presently, this

shall not be interpreted so as to require the general partner or the partnership to adopt the UNPRI in its analysis of any potential investment.

IV. Investment Vehicle Guidelines

LACERA deems the following types of investment vehicles appropriate for investing in this asset class, subject to the constraints mentioned in this document:

Limited Partnerships: LACERA anticipates that the majority of its exposure to this asset class will take place through these pooled investment vehicles.

Separate Accounts: Separate account vehicles may be appropriate in certain cases, e.g., to gain access, or additional exposure, to a particular sub-asset class or category of investments, or to secure favorable terms.

Fund-of-Funds: Fund-of-funds vehicles may be appropriate in certain cases, e.g., to gain access, or additional exposure, to a particular sub-asset class or category of investments.

Secondary Investments: Staff and the PEA will seek to improve long-term returns by adding exposure through the acquisition of attractively priced secondary investment opportunities in partnerships in which LACERA is already invested. In addition, dispositions of LACERA's existing interests and future commitments may be undertaken after a favorable evaluation of market pricing is determined in comparison to potential future returns.

A complete description of the LACERA Private Equity Secondary Program and its investment guidelines is attached as **Appendix A**.

Co-Investments: LACERA may employ manager(s) to make co-investments alongside partnerships that may or may not have an existing relationship with LACERA.

Direct Investments: The Board has not authorized the staff or the PEA to autonomously make direct investments or co-investments.

E. INVESTMENT PROCEDURES

LACERA follows clearly established methodologies when investing in this asset class. In this section, these are defined and explained.

I. Managing Risk

Private equity investments entail a number of unique risks. Prior to investing, staff and the PEA will ascertain the pertinent risks of a particular private equity investment. This knowledge will enable the implementation of appropriate risk mitigation measures. The types of risks and LACERA's method for managing them follow:

1. *Illiquidity*: Illiquidity (whether due to the form of asset or to the investment structure) is a fundamental characteristic of the asset class and a source of the expected return premium. LACERA will ensure that each limited partnership investment provides for the maximum liquidity practical, through utilization and structure of appropriate investment vehicles and exit strategies. In addition, LACERA may opportunistically buy and sell interests in the secondary market to mitigate the liquidity risks inherent in the asset class.
2. *Volatility*: Concentrated portfolios, the uncertain prospects of companies undergoing transformational change, and the use of leverage all lead to volatility in private equity returns. LACERA will mitigate total volatility by diversifying the portfolio by strategy, sub-asset class category, manager, geography, and across vintage years.
3. *Lack of Public Information*: The limited public financial reporting requirements of most private equity investments makes it difficult to obtain unbiased, reliable information to analyze potential investments and to conduct consistent performance evaluations. LACERA will employ specialized resources (e.g., advisors, databases), as needed to evaluate potential investments in this area. LACERA will establish and maintain appropriate resources and procedures to obtain quarterly valuations of assets held in the private equity portfolio and to monitor interim performance.
4. *Non-U.S. Investments*: Non-U.S. private equity investments are exposed to all the risks associated with domestic private equity investments. In addition, they bring with them risks specific to international investments, including currency risk, political risk, regulatory risk, legal system risk, and accounting standard risk. LACERA will employ the appropriate legal resources needed to review each non-U.S. investment partnership agreement and associated documentation.

II. Sourcing Investments

Staff, and the PEA, will source potential investments and designate those that meet the Program's selection criteria and performance goals. LACERA will consider all reasonable investment opportunities. Sourcing prospective investments will entail but not be limited to the following:

1. Attending investment conferences to meet GPs
2. Traveling to the offices of general partners
3. Meeting general partners in LACERA's offices
4. Cold-calling potential general partners
5. Accessing the PEA's market intelligence on fundraising
6. Meeting with placement agents

7. Accessing proprietary databases (such as Preqin or Pitchbook) to identify potential GPs
8. Reading industry publications to keep abreast of deal, people, and fund news

III. Conducting Due Diligence

When conducting due diligence, staff, and the PEA, will pursue viable investments prioritizing the best opportunities that fit the program's goals and add value to the existing portfolio, and rejecting those that do not meet the program's criteria. Major factors to be considered include, but are not limited to, the following:

1. Experience and cohesiveness of the general partners or principals involved
2. Depth of the general partner's organization and resources
3. Assessment of the general partner's strategy
4. Analysis of the general market environment
5. Appropriateness of the investment for inclusion in LACERA's portfolio
6. Compliance with LACERA's guidelines
7. Compliance with all national, state, and local regulatory and legal requirements
8. Extensive reference and background checks on the investment sponsor
9. Comprehensive track record analysis

IV. Addressing Conflicts of Interest

Staff and the PEA shall not recommend/make any investment until all identified real and potential conflicts of interest have been addressed and mitigated. The Board shall not approve any investment until all identified conflicts of interest have been addressed and mitigated.

V. Structuring and Negotiating Key Terms, Provisions, and Fees

Staff shall negotiate terms and provisions and structure fees so as to provide maximum investor protection and value.

VI. Monitoring and Reporting Portfolio Performance

Reporting to LACERA's Board: Staff shall issue semi-annual portfolio performance reports to the Board. In addition, staff and the PEA shall report to the Board at least yearly on the status of investments currently held in the portfolio. Reports shall include, but not be limited to, such items as the following:

1. The general investment environment and expected opportunities coming to the private equity markets

2. Allocations made across different industries and sub-asset classes of private equity
3. Summary of investment portfolio performance, along with an update on overall market performance
4. New commitments made since the last report
5. Summary of drawdowns and distributions

Performance Reporting: The PEA or other service provider shall provide annual and quarterly portfolio performance reports to LACERA's staff. In general, there will be a greater level of detailed reporting on the annual report when compared to the quarterly reports. Quarterly reporting is meant to serve the purpose of alerting staff to possible adverse developments as well as providing timely updates on the performance and analyses of investments.

Returns will be measured against the universe of performance numbers for vintage year funds, as provided by a third party source such as Cambridge Associates or Burgiss. The comparison of performance to top quartile funds will be a secondary measure of the program's success for the asset class, as it will allow LACERA to measure the ability of its staff and PEA to add value within the asset class.

Monitoring Adherence to Strategy: Staff shall monitor the type, amount, and allocation of investments to ensure that the strategy set forth in this document is adhered to. While some flexibility shall be permitted because of the time that may be required to find attractive investment opportunities, LACERA expects staff and the PEA to adhere to the ranges set forth in this document as well as the investment guidelines as set forth in the Annual Investment Plan.

Proxy Voting for Distributed Securities: LACERA will retain the right to vote all proxies and will vote in accordance with LACERA's public equity proxy voting policy. Proxies for distributed securities must be voted based on protecting and promoting the economic interests of LACERA's members and beneficiaries.

Distributions: LACERA prefers cash distributions to in-kind distributions (stock distributions). Distribution management shall be handled by the PEA, or specialized distribution advisor, who will work closely with staff to ensure the timely sale or transfer of securities. Exceptions to this will be handled on a case-by-case basis.

Cash Management: The amount of cash held by partnerships should be kept to a minimum, and should be used only for working capital. "Just-in-time" drawdowns are preferred in order to stay as fully invested as possible.

F. SUMMARY OF ROLES AND RESPONSIBILITIES

The roles of the Board, staff, PEA, and the general consultant are summarized below:

Board Responsibilities

1. Review and approve the Private Equity Objectives, Policies, and Procedures.
2. Review and approve the Annual Investment Plan.
3. Review performance of the private equity investment portfolio with the PEA and/or staff at least annually.
4. Review and approve primary fund investments and any investment exception or waiver to the investment guidelines, to the extent not delegated.
5. Refer private equity investment opportunities to staff for evaluation, either directly or with the assistance of the PEA.

Staff Responsibilities

1. Develop, evaluate, review, and make recommendations to the Board on the Private Equity Objectives, Policies, and Procedures developed with the PEA or general consultant.
2. Review and evaluate the Investment Plan annually with the PEA, recommending changes to the Board as appropriate.
3. Monitor and report on the activities of the PEA to the Board. Make appropriate recommendations on retention and/or hiring of PEAs.
4. Screen, evaluate, and recommend investments to the Board of Investments in consultation with the PEA.
5. Approve the purchase or sale of any existing fund investment within the Private Equity portfolio in accordance with the secondary program investment guidelines (Appendix A).
6. Determine the most effective procedures for addressing stock distributions.
7. Ensure that adequate measurement systems are implemented to monitor the performance and fees of LACERA's private equity investments and its PEA.
8. Meet with the PEA and the Board at least yearly to review performance, asset allocation to the various sub-asset classes of private equity, and other issues that arise.
9. Assure that LACERA has appropriate legal counsel as needed to work with staff to review terms and conditions on all proposed investment vehicles.

10. Document due diligence procedures undertaken for recommended investments, and maintain a checklist to be certified by senior management.
11. The CIO is authorized to approve capital commitments in follow-on-funds up to \$150 million per fund [or at the same ownership percentage in the predecessor fund], provided:
 - i. LACERA's prior investments in each predecessor fund greater than three years old exceeds the benchmark Median Return for the fund's sub-asset class strategy, and
 - ii. There have been no material changes in the investment strategy or key persons, and
 - iii. LACERA's PEA concurs with the investment

The Board will receive written notification of all such actions from staff and PEA.

12. Retain a veto right over which investments are approved for investment in the separate account programs to ensure portfolio fit and no overlapping positions.

PEA(s) Responsibilities

1. Serve the interest of the Board, in support of its fiduciary obligation to LACERA.
2. Proactively disclose any perceived or actual conflicts of interest that might arise.
3. Carry out strategic initiatives, as directed by the Board.
4. Identify opportunities, conduct due diligence, and make investment recommendations/ selections within their approved mandates, working in conjunction with staff.
5. Develop, with staff, the Annual Investment Plan.
6. Monitor investments in conjunction with staff.
7. Work with staff to address the process for handling stock distributions.
8. Work with staff on portfolio performance measurement.
9. Meet with the Board and staff at least annually to review performance of the private equity portfolio.
10. Provide the Board and staff with ongoing educational presentations and/or materials covering market conditions and developments.
11. Adhere to the "prudent expert" standard throughout all phases of the investment process, as overseen by LACERA. Specific processes covered include investment sourcing, consideration, evaluation, recommendation, negotiation, reporting, and monitoring.

General Consultant Responsibilities

1. Work with staff to review the OPP, as necessary.
2. Work with staff, as necessary, to determine the annual private equity allocation.

G. CONCLUDING REMARKS

This Objectives, Policies, and Procedures document provides the framework to guide the private equity portfolio's construction and composition. The OPP states LACERA's investment objective and strategy and details the responsibilities of all parties. Acknowledging the unique characteristics of the asset class, LACERA will continue to be flexible, opportunistic, and innovative, striving to partner with the best managers to obtain attractive returns at acceptable levels of risk.

October 29, 2018

TO: Equity: Public/Private Committee
Herman Santos, Chair
Wayne Moore, Vice Chair
Shawn R. Kehoe
Gina V. Sanchez
David Green, Alternate

FROM: Christopher J. Wagner *cfw*
Principal Investment Officer

David Chu *DC.*
Senior Investment Officer

FOR: November 8, 2018 Equity: Public/Private Committee Meeting

SUBJECT: **PRIVATE EQUITY CO-INVESTMENT PROGRAM REVIEW**

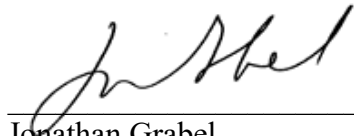
BACKGROUND

Earlier this year, the Board approved an additional \$100 million commitment to Morgan Stanley Alternative Investment Partners (“MSAIP”), the discretionary manager of LACERA's Private Equity Co-Investment Program (the “Program”) since 2006. The Program was originally conceived to invest in co-investment opportunities sourced primarily from LACERA’s private equity managers, while also benefiting from deals sourced from MSAIP relationships. Including the most recent commitment, MSAIP is managing a total of approximately \$650 million across three separate commitments for LACERA.

The primary reason for the \$100 million commitment was to ensure continued investment in co-investments, while allowing LACERA sufficient time to conduct a comprehensive review of the Program, including assessing the costs and benefits of managing co-investments internally. Over the past six months, staff conducted this review and will present its summary findings at the November committee meeting. Attached for your review is the presentation booklet.¹

Attachment

NOTED AND REVIEWED:



Jonathan Grabel
Chief Investment Officer

CJW:DC:mm

¹ The information on Slide 8 of the attached presentation is regarded as confidential by LACERA’s managers. It is also not subject to disclosure under the Public Records Act. Cal. Gov’t Code §§ 6254.26(a)(4), 6255. Accordingly, under the Brown Act, this information is not subject to public disclosure and is presented to the Board on a confidential basis; the information on Slide 8 should not be discussed in open session. Cal. Gov’t Code §§ 54956.9(f), 54957.5(a). The other slides of the presentation contain public information.

ATTACHMENT

Private Equity Co-Investment Program Review

Equity: Public/Private Committee

November 8, 2018

Christopher Wagner – Principal Investment Officer

David Chu – Senior Investment Officer

Calvin Chang – Senior Investment Analyst



LOS ANGELES COUNTY EMPLOYEES RETIREMENT ASSOCIATION

Discussion Topics

- I. Overview of Private Equity Co-Investments
- II. Current Private Equity Co-Investment Program
- III. Evaluation of Co-Investment Options
- IV. Establishing an In-house Co-Investment Program
- V. Appendix



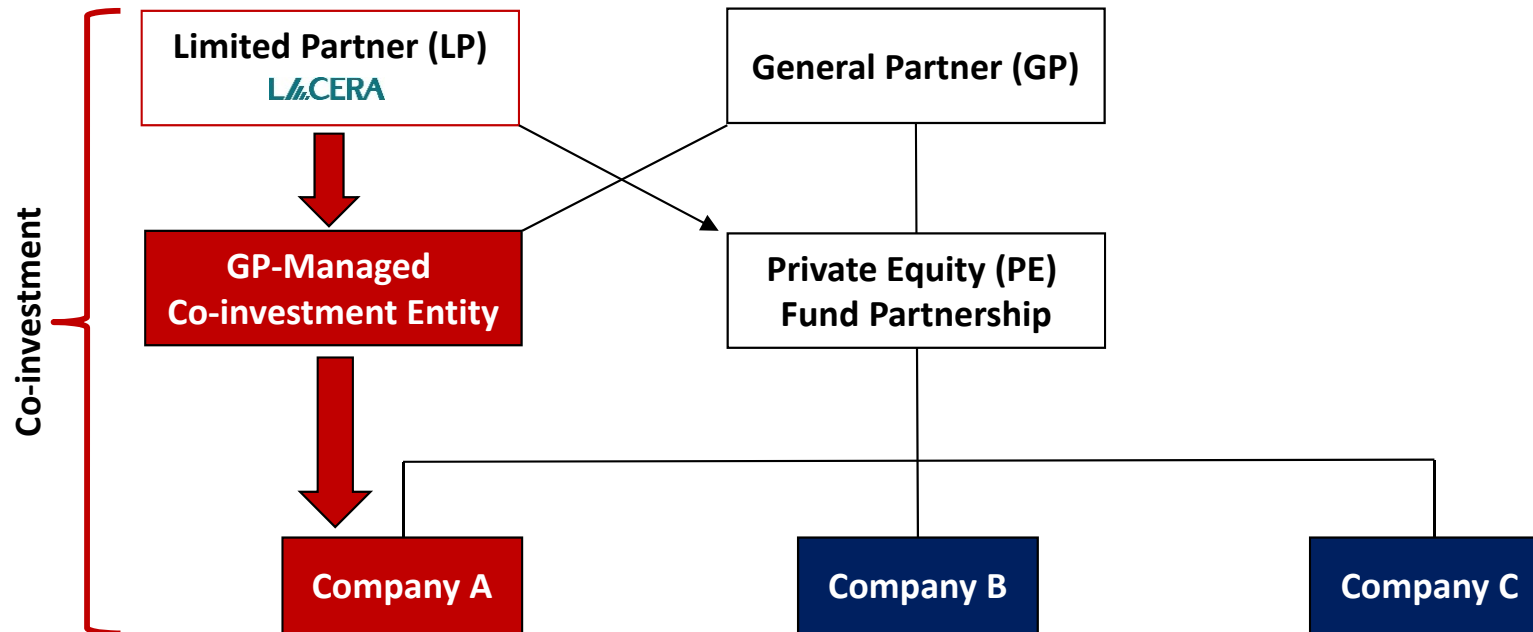
I. Overview of Private Equity Co-Investments



Private Equity Co-Investments Definition

Co-investments are typically minority investments made directly in portfolio companies by fund limited partners alongside a private equity fund partnership

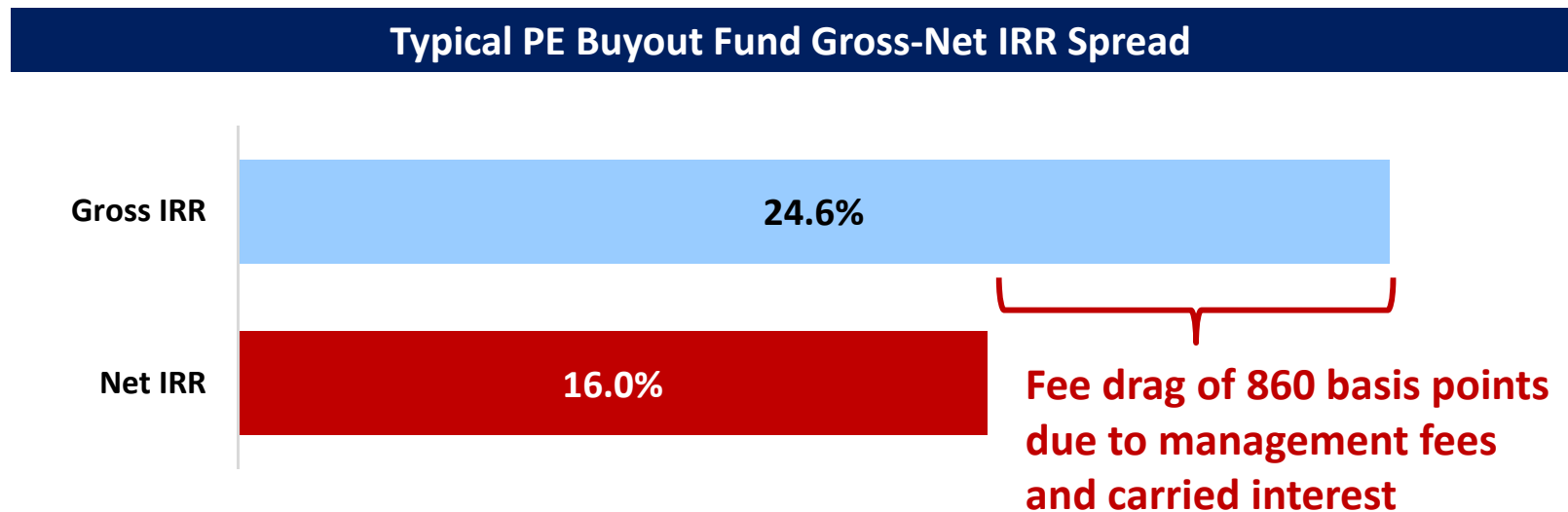
Illustrative Co-Investment Deal Structure



In this example, LACERA has exposure to “Company A” through its commitment to the private equity fund AND further exposure through a co-investment

Fee Savings: Co-Investment Vs. Fund Investment

Many co-investments enable limited partners to participate in potentially attractive investments without paying the usual “2% and 20%” management and carried interest fees charged by a typical private equity fund



II. Current Private Equity Co-Investment Program



LACERA's Co-Investment Program

Since 2006, LACERA has outsourced its co-investment program to Morgan Stanley across three commitments

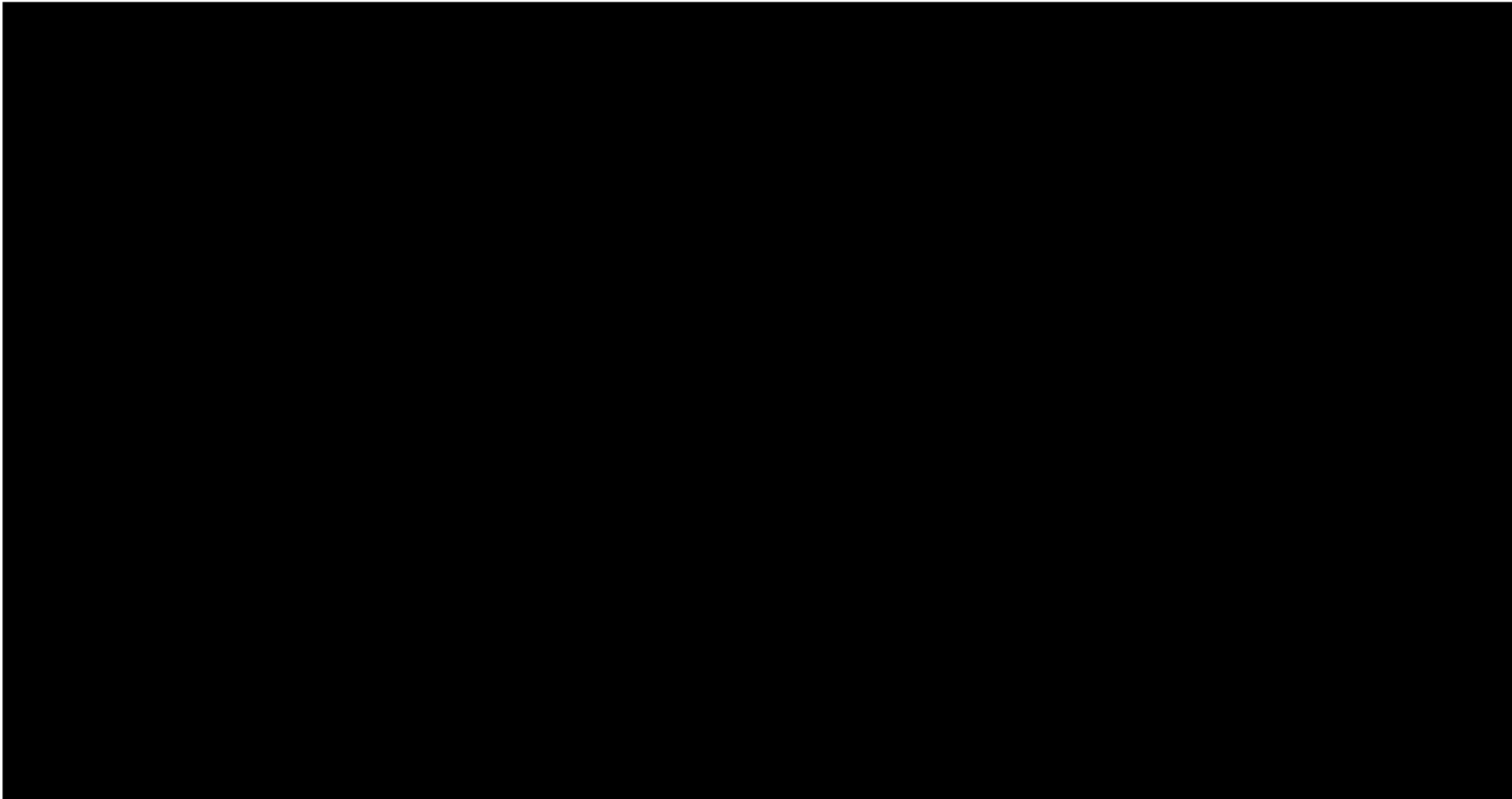
<i>As of 3/31/18 (\$ in millions)</i>	GTB I	GTB II	GTB III
Vintage	2006	2014	2018
LACERA Committed Capital	\$250M	\$300M	\$100M
# Investments	20	17	Recently Activated
Cumulative Contributions	\$263	\$250	
Cumulative Distributions	\$451	\$20	
Net IRR*	12.4%	15.2%	
Net MOIC*	2.0x	1.3x	
Distributed to Paid-In-Capital Ratio (DPI)*	1.7x	.08x	
Total Projected Fees to be Paid by LACERA	\$44M	\$50M	\$16M

Quartile Key 1st 2nd 3rd

*Quartile benchmarking based on the Burgiss Private iQ Global PE performance benchmarks as of March 31, 2018.



CONFIDENTIAL



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III. Evaluation of Co-Investment Options



Different Ways to Access Co-Investments

Per the Board’s guidance, staff focused on evaluating the development of an in-house co-investment program versus the current externally managed solution; a fund-of-funds solution was not contemplated given the program’s maturity and relative disadvantages around costs and portfolio construction

	INTERNALLY MANAGED	EXTERNALLY MANAGED	FUND OF FUNDS
COST			
Management Fees	●	◐	○
Carried Interest	●	◐	○
In-house Team	◐	◑	●
PORTFOLIO CONSTRUCTION			
Customization	●	◐	○
Diversification	●	◑	●
Blind Pool Risk	●	◐	◑
OTHER FACTORS			
Decision Making Process	◑	◑	●
Due Diligence Benefits	●	◑	◐
Investment Opportunities	◑	●	●

● ⇒ Best to Worst ⇒ ○

Source: StepStone with staff’s own ratings for the internally managed option, as well as management fees and carried interest ratings for all three options.



In-house Program Strategy Evaluation Process

Staff's six-month process involved detailed interviews with LACERA's peers and private equity advisors, as well as extensive market research

Key Findings

Current Co-Investment Program

- While performance has been generally above the median, staff believes the returns have been driven mainly by: (1) deal sourcing from LACERA's high quality manager pool, and (2) the substantial fee savings inherent in co-investments due to the reduced fee burden

LACERA Peer Interviews

- Staff conducted detailed interviews with 5 limited partners who are currently insourcing co-investments
- All 5 reported superior performance of co-investments versus their respective overall PE program returns; moreover, all 5 had achieved this performance with minimal dedicated co-investment team members (0-1)

LACERA PE Advisor Interviews

- Staff conducted detailed interviews with Morgan Stanley, StepStone, and Pathway, all of whom advise or manage money on behalf of LACERA's private equity program and have co-investment capabilities
- Deal sourcing and assessing the co-investment deal's fit with the manager's strengths are keys

Market Research and Studies

- Academic studies are mixed – reports of both outperformance and underperformance from co-investments
- Preqin limited partner surveys, StepStone research, LACERA peer interviews, and LACERA's own experience support the notion that co-investments can be additive to a private equity program's returns

Peers with In-house Co-Investment Programs

Staff interviews with several peers yielded the following observations:

- (1) internal co-investment teams leveraged the broader private equity teams for sourcing and execution;
- (2) performance was additive; and
- (3) staff (or staff + outside consultant) were given delegated authority with parameters given the accelerated decision timeframes (~2-4 weeks) inherent with co-investments

Criteria	U.S. Public Pension	U.S. Endowment	U.S. Endowment	Sovereign Wealth Fund	U.S. Public Pension
Total Assets Under Management (\$ billions)	> \$100B	> \$25B	> \$25B	> \$50B	> \$100B
Number of Dedicated PE Co-Investment Team Members	1	0	0	1	0
Outperform Overall PE Program	Yes	Yes	Yes	Yes	Yes
Require Board Approval	No	No	No	No	No
Co-investment Decision Delegation	Staff	Staff	Staff	Staff + Outside Consultant	Staff + Outside Consultant

Common delegation guidelines included limiting co-investments to specific size limits, strategies, geographies, and board-approved managers



Potential In-House Co-Investment Program Cost Benefit Analysis

Staff estimates insourcing will save LACERA about \$350 million over 15 years

\$26.3 Million **×** **15** **=** **\$394 Million**
 Externally Managed Expenses per Year Years in Total Externally Managed Expenses

\$2.9 Million **×** **15** **=** **\$43 Million**
 Internally Managed Expenses per Year Years in Total Internally Managed Expenses

Difference = \$351 Million
 in Total In-house Cost Savings

	Total Cost (\$ In Millions)		
	Internally Managed	External Managed	Fund of Fund
1.50x	\$43	\$228	\$403
1.75x	\$43	\$280	\$472
2.00x	\$43	\$394	\$541
2.25x	\$43	\$464	\$611
2.50x	\$43	\$533	\$680

*Assumptions include increasing co-investment commitments from \$100 million to \$450 million annually over a 10-year period for a total of \$2.8 billion; 2x gross return on co-investments.



Other Potential Benefits to In-house Asset Management

Besides financial considerations, there are many intangible benefits from insourcing for LACERA

- ✓ Enhanced investment culture and image
- ✓ Increased portfolio control
- ✓ Fewer agency issues



IV. Establishing an In-house Co-Investment Program



In-house Co-Investment Program Concerns and Mitigants

LACERA has the necessary experience and resources internally to develop and manage an in-house co-investment program

Concerns	Mitigants
Adverse Selection / Headline Risk	<ul style="list-style-type: none">▪ Managers that show bad deals risk cutting-off their capital sources which should be a major deterrent▪ Constructing a diversified portfolio helps to mitigate both concerns
Deal Sourcing	<ul style="list-style-type: none">▪ LACERA's sizable general partner roster produces sufficient high quality deal flow▪ LACERA's meaningful commitment sizes and high participation rate on fund advisory boards helps secure preferred access to co-investments
Team	<ul style="list-style-type: none">▪ LACERA has the in-house capabilities and experience to execute co-investments▪ Over 130 years of relevant private equity experience, including multiple team members with direct and co-investment skills; understanding of how to build and manage diversified portfolios
Due Diligence	<ul style="list-style-type: none">▪ Existing knowledge of its managers' core areas of expertise will enable the private equity team to quickly assess opportunities within the accelerated decision timeframes inherent with co-investments▪ Only investments that fit LACERA's "Strike Zone" will be considered (discussed on next slide)
Post-Investment Monitoring	<ul style="list-style-type: none">▪ LACERA's private equity team is already monitoring our managers' investments



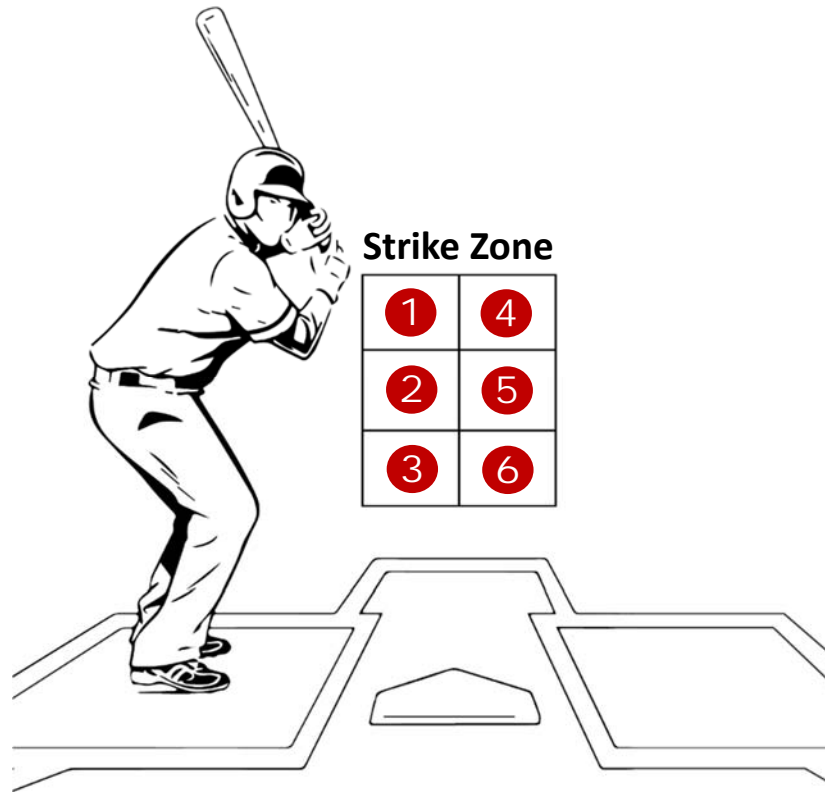
Co-investment Evaluation Criteria - Illustrative

Thorough co-investment guidelines can be developed to mitigate risks and ensure consistent decision making; only investments that fit LACERA's "Strike Zone" will be considered

1 Strong LACERA portfolio fit

2 Fit with general partner's investment strengths

3 Reasonable valuation and deal structure



4 Acceptable downside risk or protections

5 Positive macro tailwinds and/or manageable headwinds

6 Achievable company value creation strategy

Existing Staff Delegated Co-Investment Authority

Since co-investment opportunities require prompt action, the Board has delegated investment staff co-investment authority for real estate investments when certain conditions are met. They are:



The amount of co-investment per opportunity by LACERA does not exceed \$50 million;



The subject property of the co-investment is located within the United States of America; and



The co-investment is sourced by an existing separate account manager or sponsor of a commingled fund in which LACERA is an investor.

Similar staff delegation guidelines can be developed for private equity co-investments

Proposed Next Steps

Gather Committee feedback and discuss further actions



V. Appendix



Potential In-house Co-Investment Program Parameters

Potential parameters could be similar to the staff-delegated guidelines for co-investments in LACERA's real estate program, and designed to minimize risks

Initial Targeted Annual deployment	<ul style="list-style-type: none">• \$100 million	Deal Sourcing	<ul style="list-style-type: none">• 100% from BOI-approved managers
Annual # of Co-Investments	<ul style="list-style-type: none">• 4-6	Deal types	<ul style="list-style-type: none">• Primarily buyouts and growth capital• No venture capital
Co-Investment size	<ul style="list-style-type: none">• Average: \$25 million• Maximum: \$40 million	Geography	<ul style="list-style-type: none">• 100% from USA headquartered companies

LACERA's Deal Sourcing Advantage

LACERA's meaningful commitment size and high participation rate on advisory boards provides preferred access to co-investments



SILVERLAKE

LGP | LEONARD GREEN & PARTNERS

CVC

HELLMAN & FRIEDMAN

ONEX



EP EXCELLERE PARTNERS

Centerbridge



AUSTRALIS Partners

ae Industrial Partners

Riverside

MBK PARTNERS

Gilde Buy Out Partners

HP HARVEST PARTNERS

THE ENERGY & MINERALS GROUP

JUGGERNAUT CAPITAL PARTNERS

LIGHTYEAR CAPITAL

ALCHEMY

BLACK DIAMOND CAPITAL MANAGEMENT

STERLING INVESTMENT PARTNERS

Triton

- Represent ~8% on average of total commitments to PE managers' latest funds
- Serve on ~70% of advisory boards of core managers' latest funds

Note: Only a portion of LACERA's private equity manager logos are shown above. PE managers excludes venture capital managers and managers included in pending secondary sale.



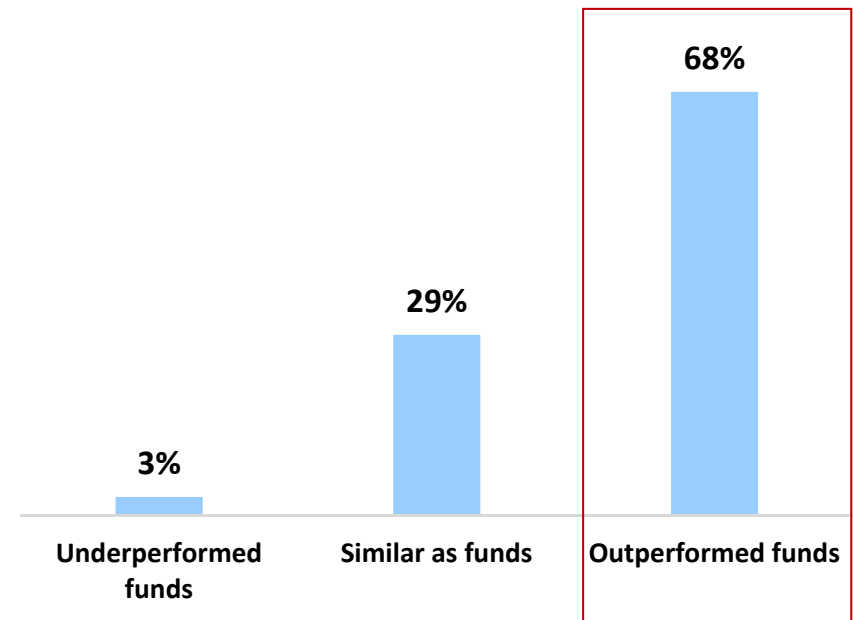
Current Private Equity Co-Investment Market

Co-investments are now mainstream, and many limited partners have reported outperformance from their co-investments, contradicting other studies about adverse selection

2017 Co-Investment Market Size

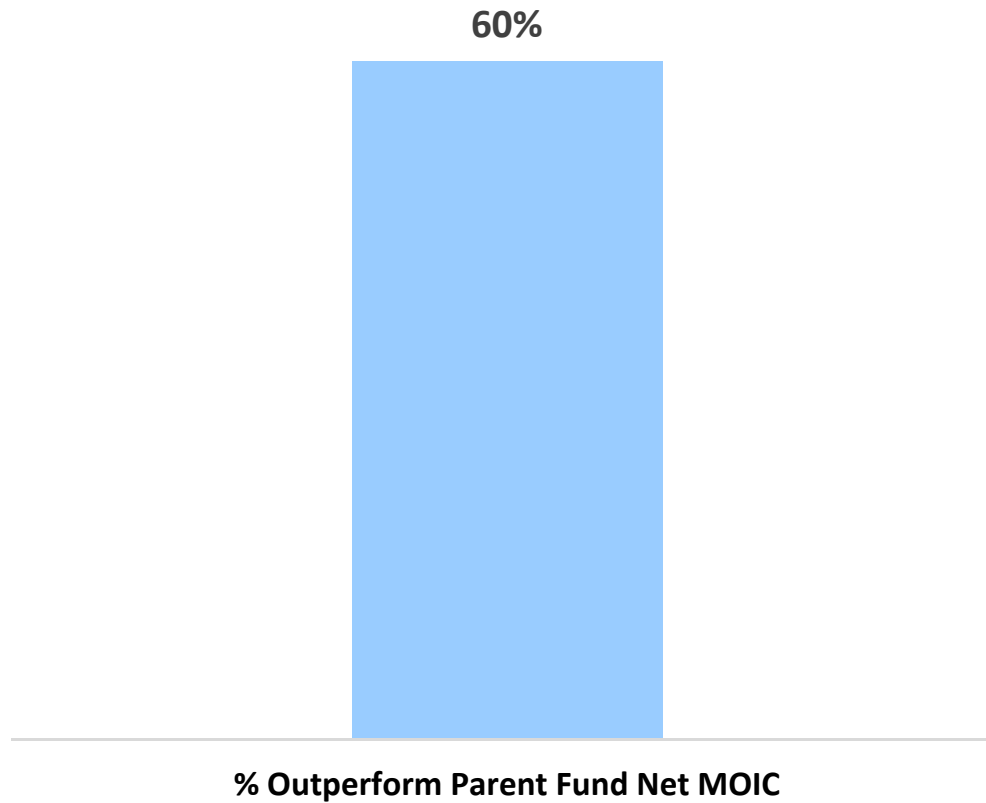
\$100 billion or **40%**
of total buyout capital called

2017 Limited Partner Survey on Co-Investment Returns Vs. Fund Returns



Adverse Selection?

A StepStone study of nearly 1,000 co-investment deals conducted between 2000-2013 showed that 60% of co-investment deals outperformed the net multiple of invested capital (MOIC) of their parent funds



Source: StepStone, based on analysis of 959 co-investment transactions across 128 general partners.



Potential Benefits of Private Equity Co-Investments

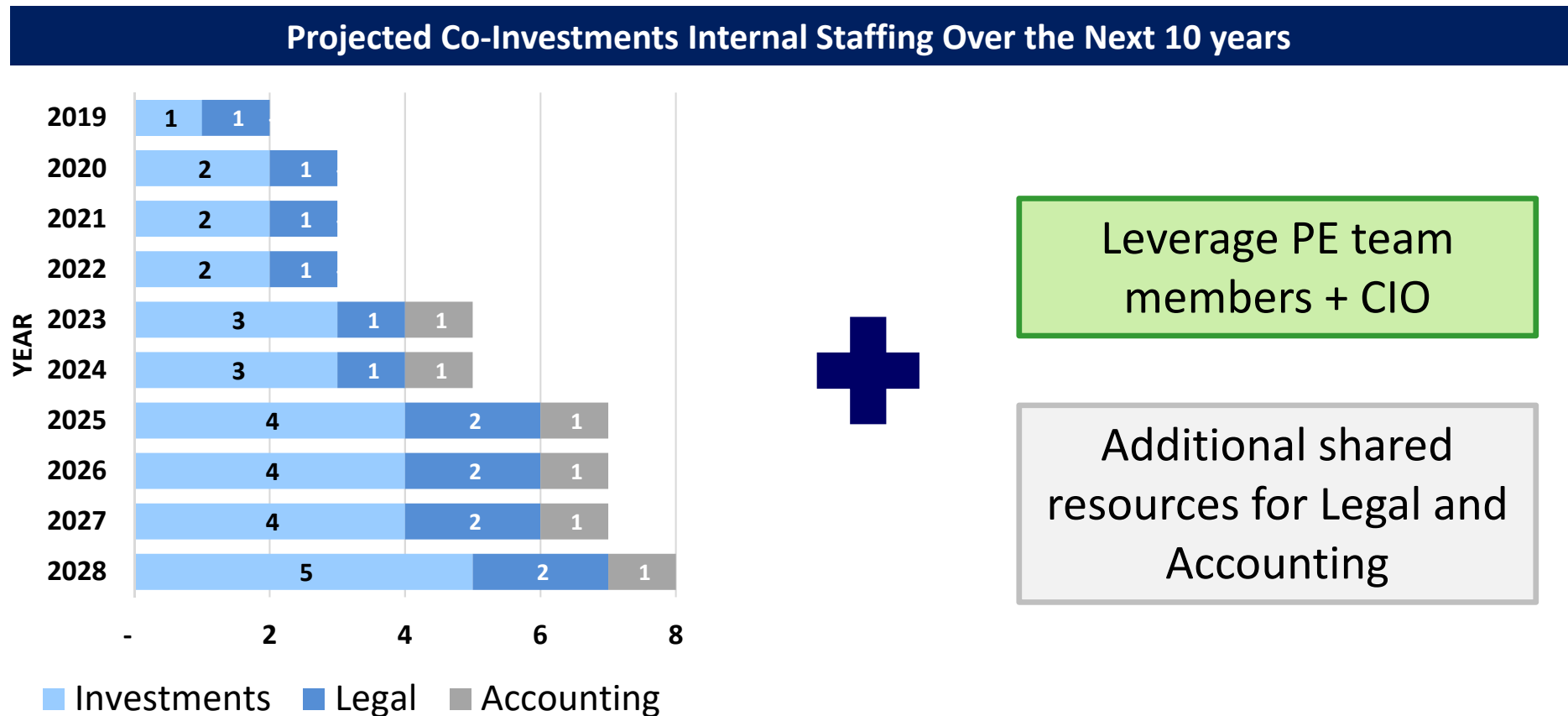
There are compelling reasons why co-investments are viewed favorably by limited partners

Limited Partners

- Better performance over fund investing due to reduced fee burden and/or skillful deal selection
- Intentional portfolio construction
- Improved manager selection
- Gain industry knowledge
- Stronger manager relationships

Expected Internal Staffing Resources

Staffing for the in-house co-investment program will be efficiently established in tranches to meet the anticipated resourcing needs and comparable to industry peers



Leverage PE team members + CIO

Additional shared resources for Legal and Accounting

*Assumptions include increasing co-investment commitments from \$100 million to \$450 million annually over a 10-year period for a total of \$2.8 billion; co-investment internal staff assumed to spend 50% of their time on co-investments and 50% on other activities.





Documents not attached are exempt from disclosure under the California Public Records Act and other legal authority.

**For further information, contact:
LACERA
Attention: Public Records Act Requests
300 N. Lake Ave., Suite 620
Pasadena, CA 91101**