

Private Equity (PE) Annual Program Review

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November 13, 2018

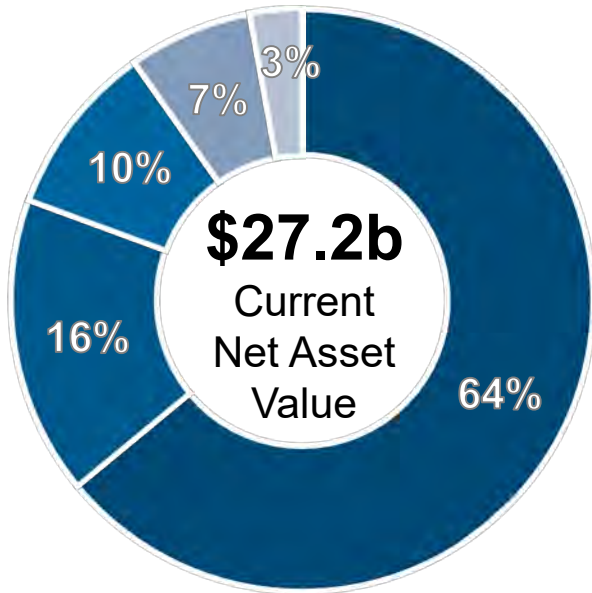
Program Performance Review

	1-YR	3-YR	5-YR	10-YR	20-YR
As of June 30, 2018*	Net Return	Net Return	Net Return	Net Return	Net Return
Private Equity (\$27.2b)	16.1%	10.4%	11.9%	9.0%	10.5%
PE Policy Benchmark	18.6%	12.3%	14.2%	13.5%	9.1%
Excess Return**	(2.5)%	(1.9)%	(2.2)%	(4.5)%	1.4%
CalPERS GE Policy Benchmark (as of 3/31/18 to match PE one quarter lag)	15.6%	8.6%	9.9%	6.7%	5.9%
Excess Return	0.5%	1.8%	2.0%	2.3%	4.6%

*Source: State Street

**Figures may not reconcile due to rounding

Program Characteristics



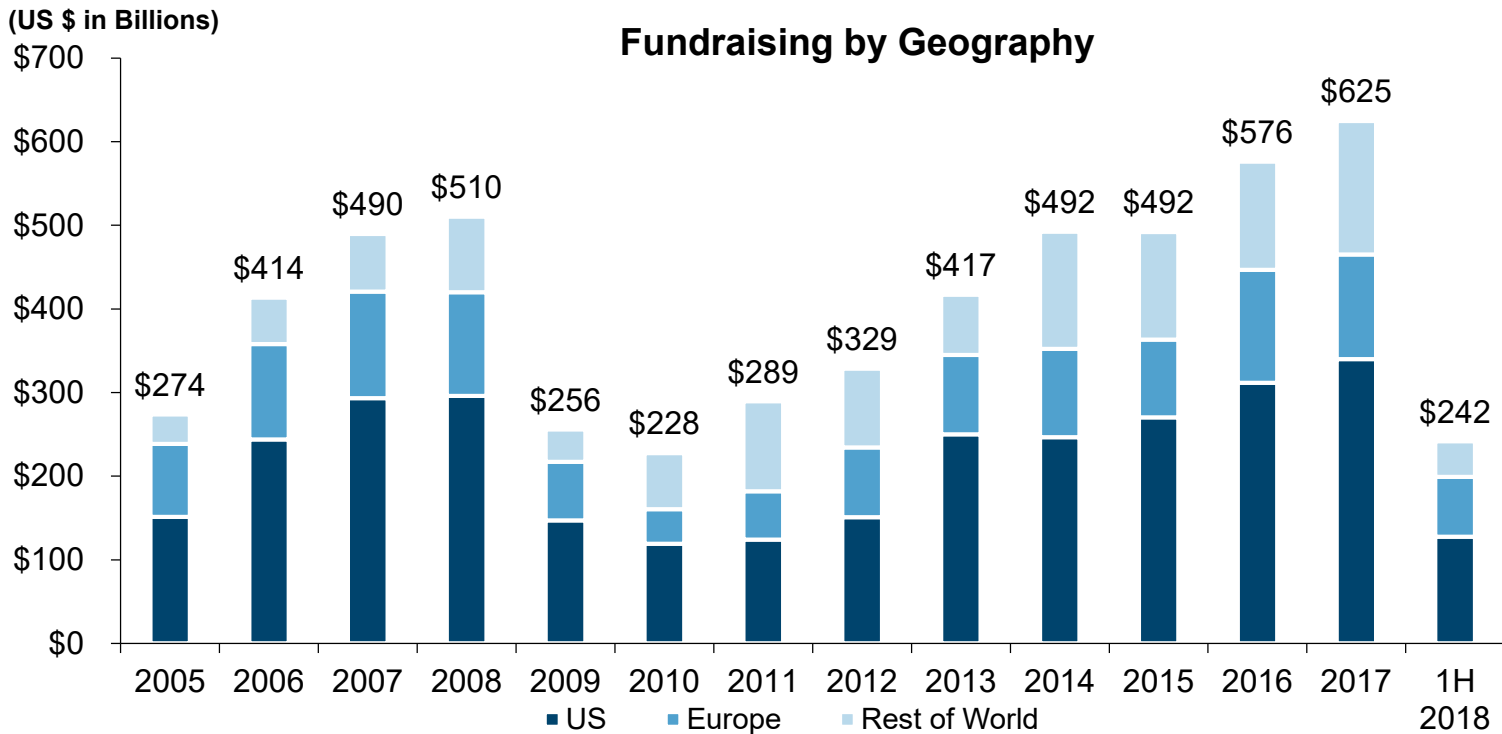
Strategy	Net Asset Value	Current	Target*	5-Year Net Return
Buyouts	\$17.4	64%	65%	13.5%
Growth/Expansion	\$4.5	16%	15%	13.9%
Credit Related	\$2.6	10%	10%	5.3%
Opportunistic	\$1.9	7%	10%	12.8%
Venture Capital	\$0.8	3%	<1%	4.3%
Total	\$27.2	100%	100%	11.9%

- All strategies are within current policy range

*Policy targets effective August 13, 2018

Based on NAV as of June 30, 2018; \$s in billions; Source: State Street

Market Environment - Fundraising

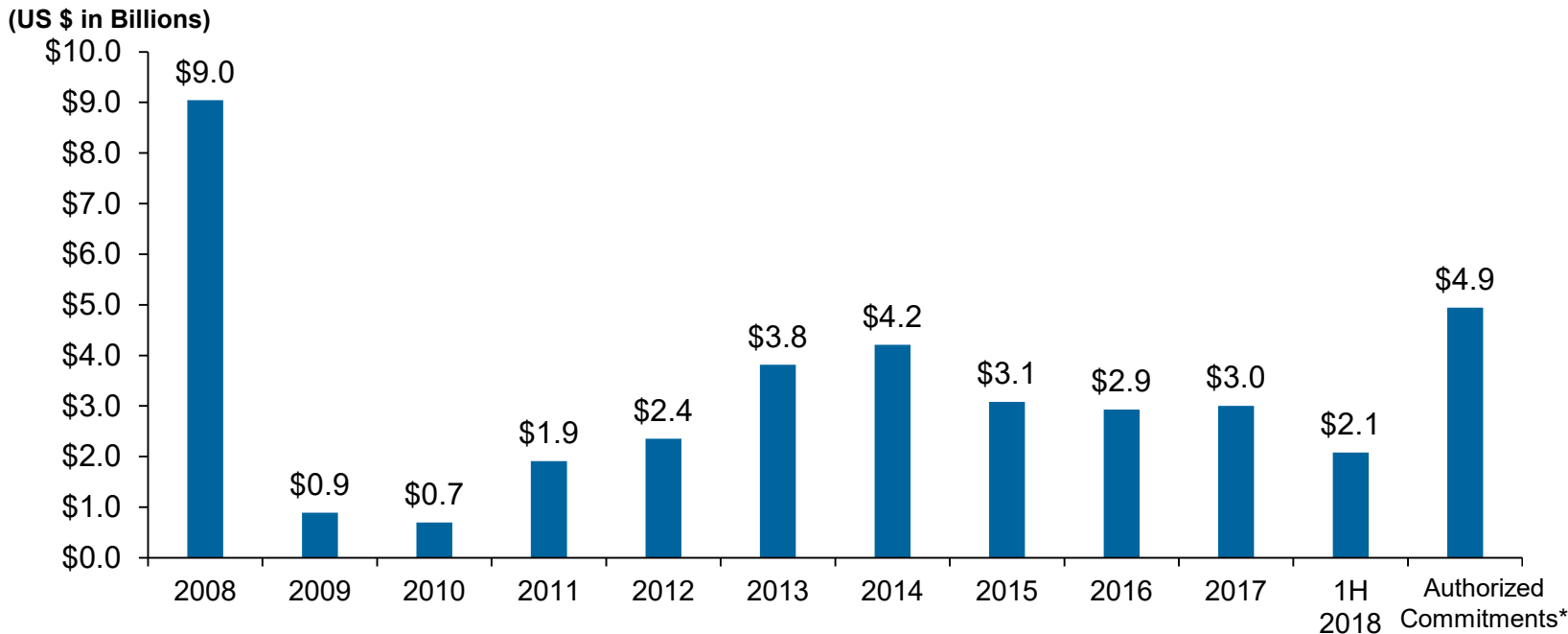


- Strong fundraising market and record levels of dry powder (\$1 trillion*) is creating a competitive environment for purchasing assets
- Global fundraising totaled \$242 billion in 1H 2018

Source: Preqin

*Excludes Real Estate and Infrastructure

Commitments by Vintage Year



- CalPERS PE has maintained a steady approach of capital deployment
- Disciplined pacing and vintage year diversification are two key elements of our capital budgeting

**Amount represents commitments that have not yet called capital
As of June 30, 2018; Source: PEARS*

2017-18 Activities

- Committed \$5.3b to new investments
- Implemented reporting requirements of AB 2833
- Finalized implementation of PEARS
 - Will continue to refine digital strategy for investment analysis
- Continued to review Private Equity Business Model

2018-19 Objectives

- Ongoing review and implementation of Private Equity Business Model
- Collaborate with Global Equity on the implementation of the Growth asset segment
- Allocate up to \$6.0b
- Collaborate with ILPA on rollout of new portfolio company reporting template and Due Diligence Questionnaire

Appendix

Review Outline

Section	Pages	Investment Beliefs Map											
		1	2	3	4	5	6	7	8	9	10		
Executive Summary	2-6												
Program Performance Review	2		■										
Program Characteristics	3						■			■		1	Liabilities
Market Environment - Fundraising	4		■									2	Long-Term Horizon
Commitments by Vintage Year	5		■									3	Stakeholders
Activities & Objectives	6				■						■	4	Three Forms of Capital
Review Outline	8											5	Accountability
Investment Beliefs Key	9											6	Strategic Allocation
I. Program Overview	10											7	Risk Reward
Program Role	11	■	■					■				8	Costs Matter
Program Investment Philosophy	12		■						■			9	Multi-faceted Risk
Policy Benchmark	13					■						10	Resources/Process
Program Characteristics	14						■			■			
Investment Process	15					■					■		
II. Investment Review	16												
Market Environment	17-18		■										
Program Performance Review	19-20		■										
Portfolio Key Risks	21								■		■		
III. Business Review	22												
Functional Organizational Chart	23										■		
Staffing Overview	24										■		
Program Expenses	25								■				
IV. Governance & Sustainability Integration	26												
Progress on Strategic Plan Initiatives	27			■	■								
Conclusion	28												

Investment Beliefs Key

	Short Name	Investment Belief
1	Liabilities	Liabilities must influence the asset structure.
2	Long-Term Horizon	A long time investment horizon is a responsibility and an advantage.
3	Stakeholders	CalPERS investment decisions may reflect wider stakeholder views.
4	Three Forms of Capital	Long-term value creation requires effective management of three forms of capital: financial, physical, and human.
5	Accountability	CalPERS must articulate its investment goals and performance measures and ensure clear accountability for their execution.
6	Strategic Allocation	Strategic asset allocation is the dominant determinant of portfolio risk and return.
7	Risk Reward	CalPERS will take risk only where we have a strong belief we will be rewarded.
8	Costs Matter	Costs matter and need to be effectively managed.
9	Multi-faceted Risk	Risk of CalPERS is multi-faceted and not fully captured through measures such as volatility or tracking error.
10	Resources / Process	Strong processes and teamwork and deep resources are needed to achieve CalPERS' goals and objectives.

I. Program Overview

Private Equity: Program Role

- Primary Role
 - Private equity allocations are a means of enhancing equity returns through an active, value-added approach. The major driver for returns is appreciation, aided by leverage, with negligible cash yield.
 - 2017 Asset Liability Management (ALM)
- Driver of total performance
 - Price appreciation
- Risks
 - Growth risks
 - Illiquid
 - Leverage
 - Unfunded commitments

Program Investment Philosophy

- Long-term investment horizon
- Manager selection and alignment of interest are important to PE's success
- Focused on allocating more capital to fewer managers
- Costs matter

Policy Benchmark

Effective July 1, 2018:

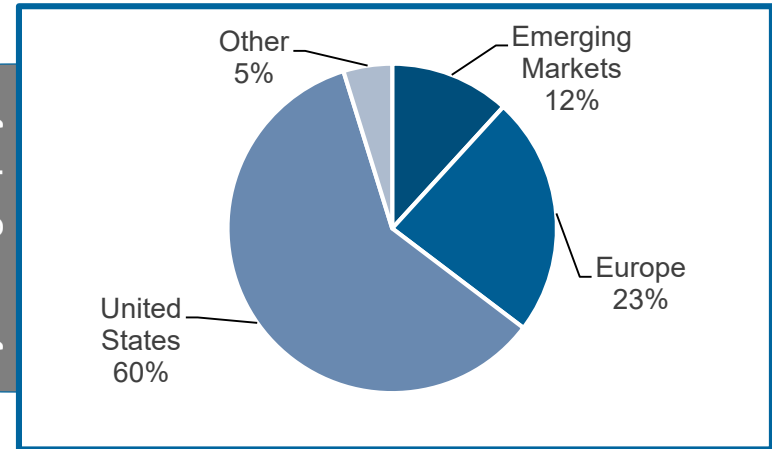
Custom FTSE All World, All Cap Equity + 150bps

- Lagged one quarter

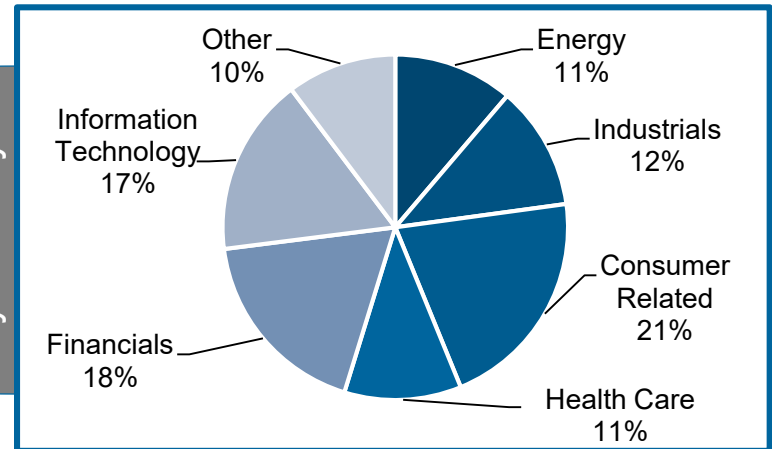
Program Characteristics

Investment Type	Net Asset Value (NAV)*	% of NAV
Funds	\$18.0	66%
Fund-of-Funds	\$2.7	10%
Co-Investments/ Direct Investments	\$2.5	9%
Separate Accounts	\$4.0	15%
TOTAL	\$27.2	

By Geography**



By Industry**

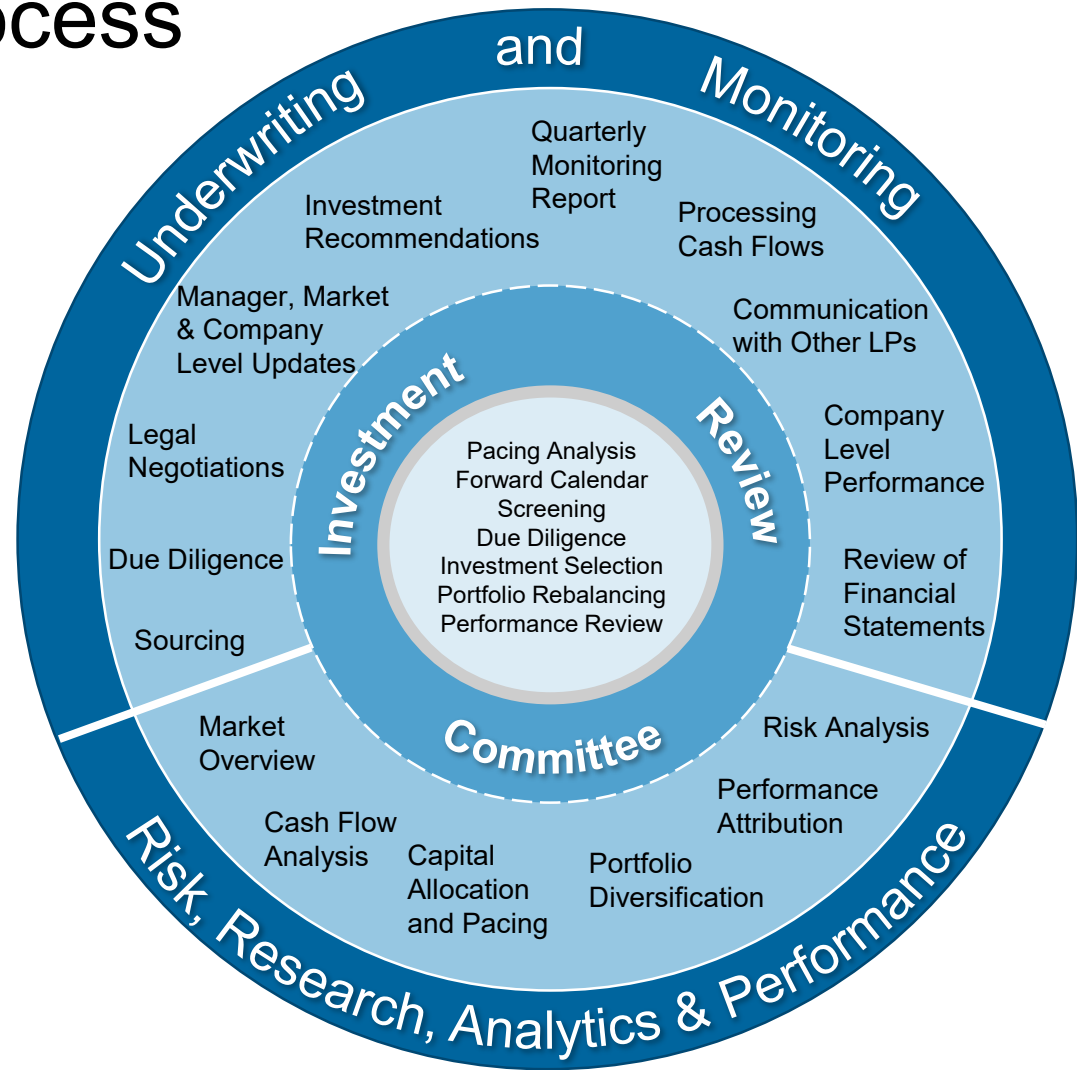


* Based on NAV as of June 30, 2018; \$s in billions; Source: State Street

**Based on Market Value as of March 31, 2018; Source: PEARS

Investment Process

- Investment Review Committee (IRC)**
- Purpose: Consistent review of investments and portfolio
 - Timing: Weekly
 - Participants:
 - 1 Managing Investment Director (MID); 2 Investment Directors (IDs); 2 Investment Managers (IMs) (PE)
 - 1 MID (Real Assets)
 - 1 MID (Global Equity)
 - 1 IM (Trust Level Portfolio Management)
 - 1 IM (ICOR)
 - Board Consultant

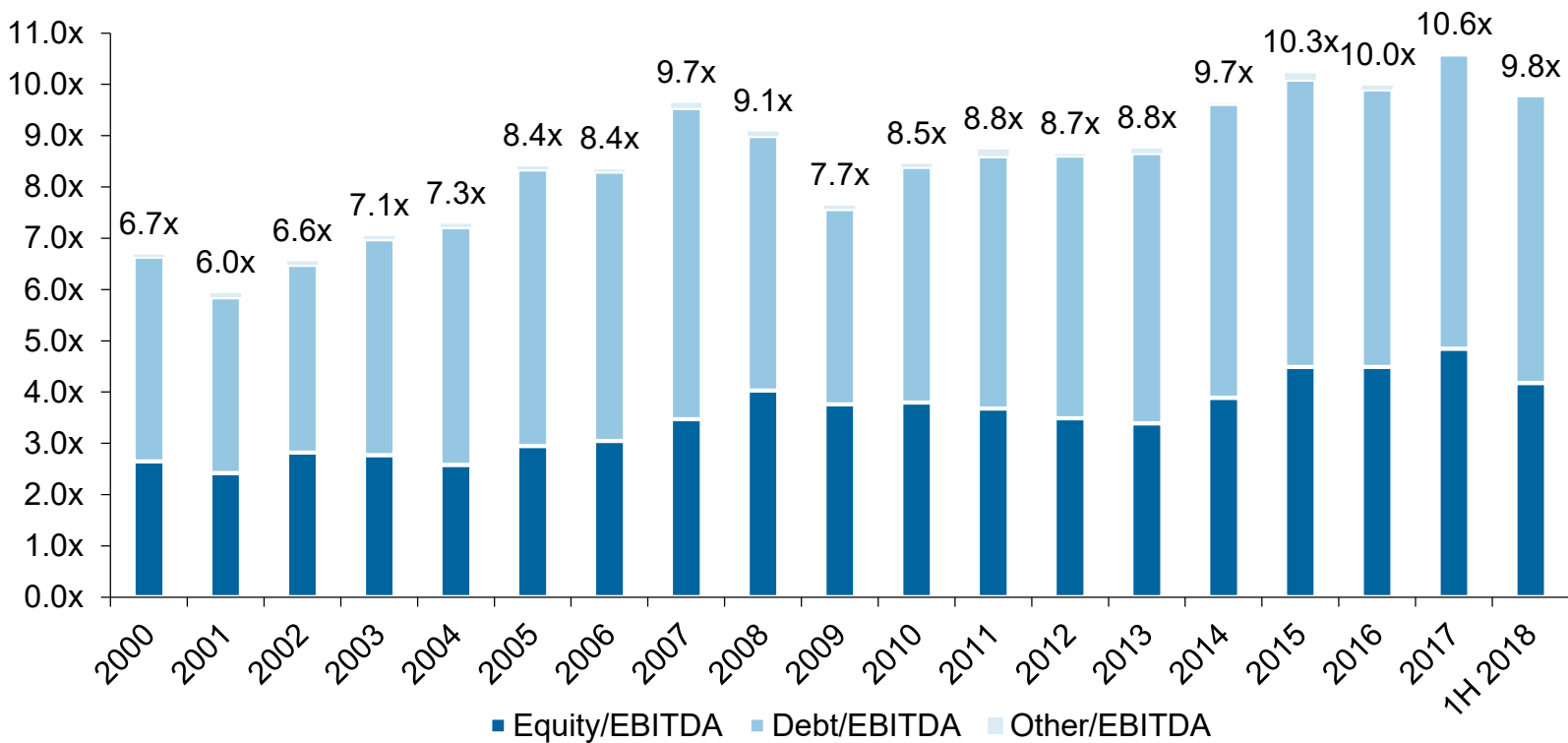


II. Investment Review

Market Environment – Valuations

EV/EBITDA

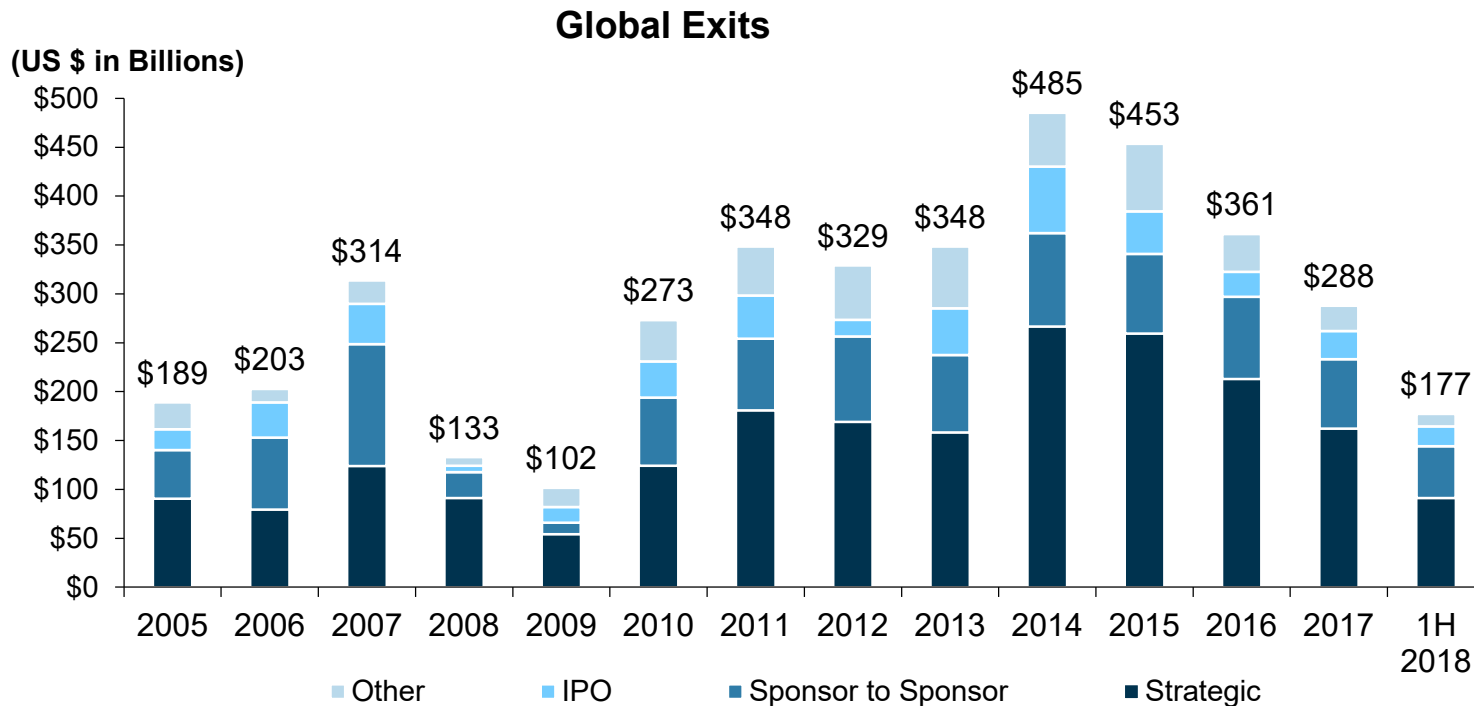
All U.S. LBO



- High valuations continue to make it challenging to find attractively valued assets

Source: S&P

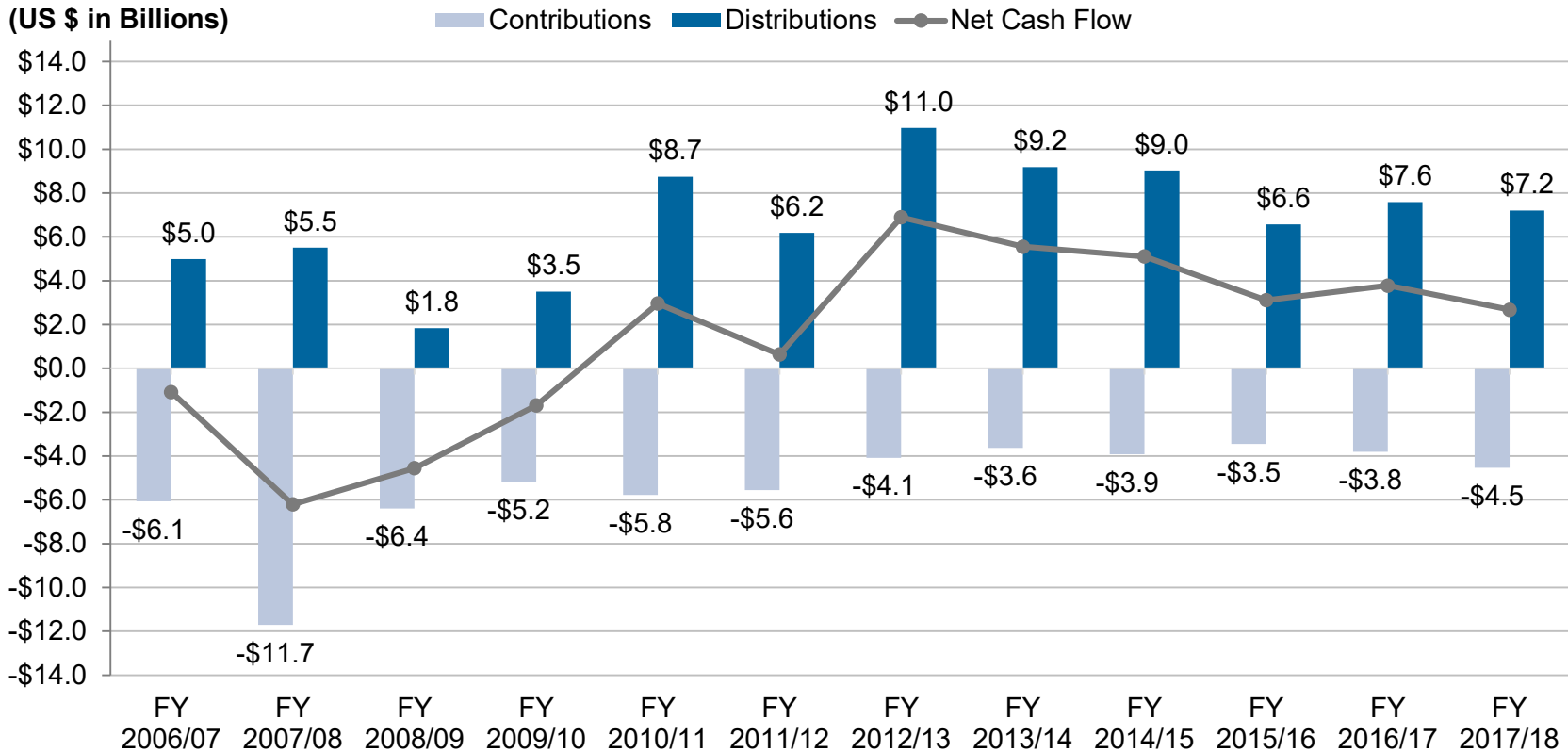
Market Environment – Exits & Liquidity



- Exit markets were robust over the last few years
- 41% increase in exits between the 1H 2017 (\$105bn) and 1H 2018 (\$177bn)
- 10% of exits in the CalPERS PE Portfolio were Sponsor to Sponsor compared to about 25% for the market overall

Sources: Preqin; PEARS

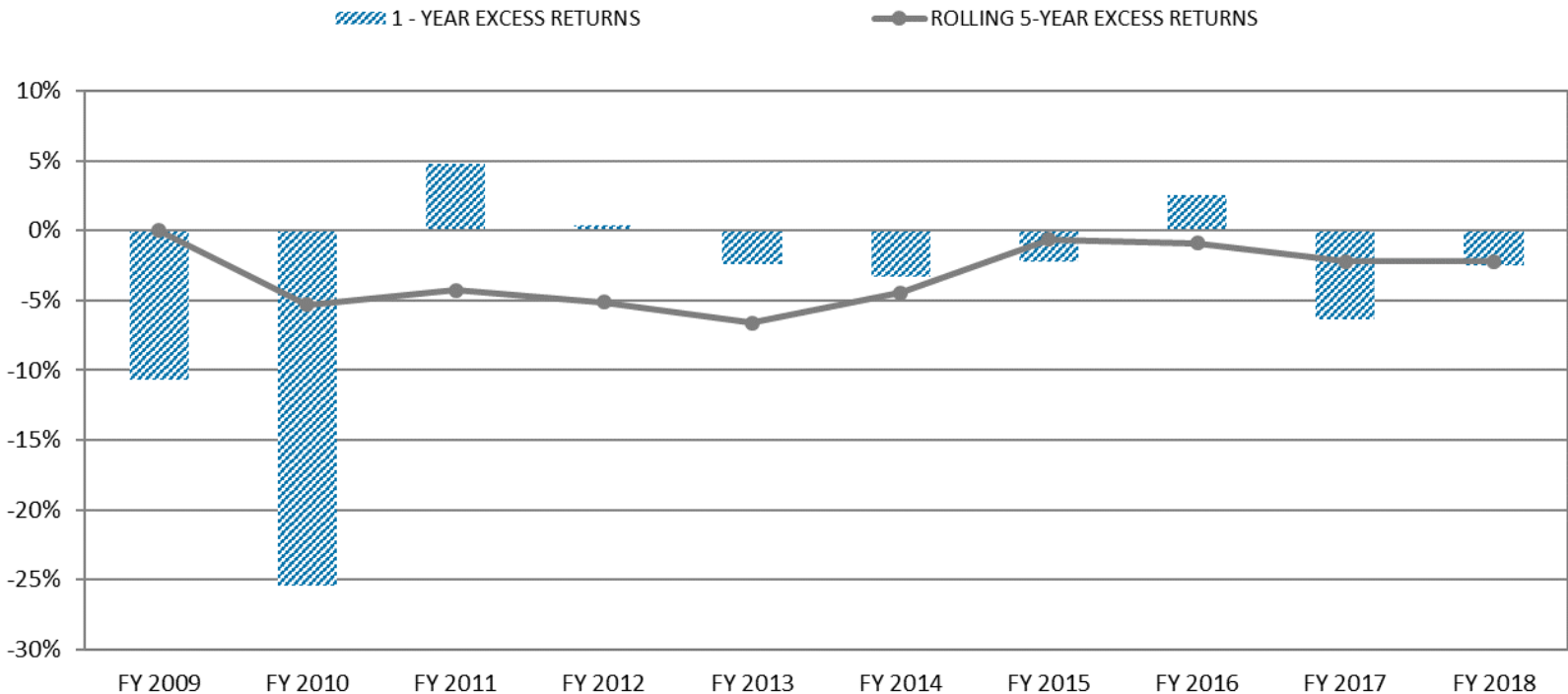
Cash Flow by Fiscal Year



- PE provided positive net cash flow of \$30.7 billion since FY 2010/2011

As of June 30, 2018; Source: PEARS Cash Flow Report

Private Equity 5-Year Rolling Excess Returns



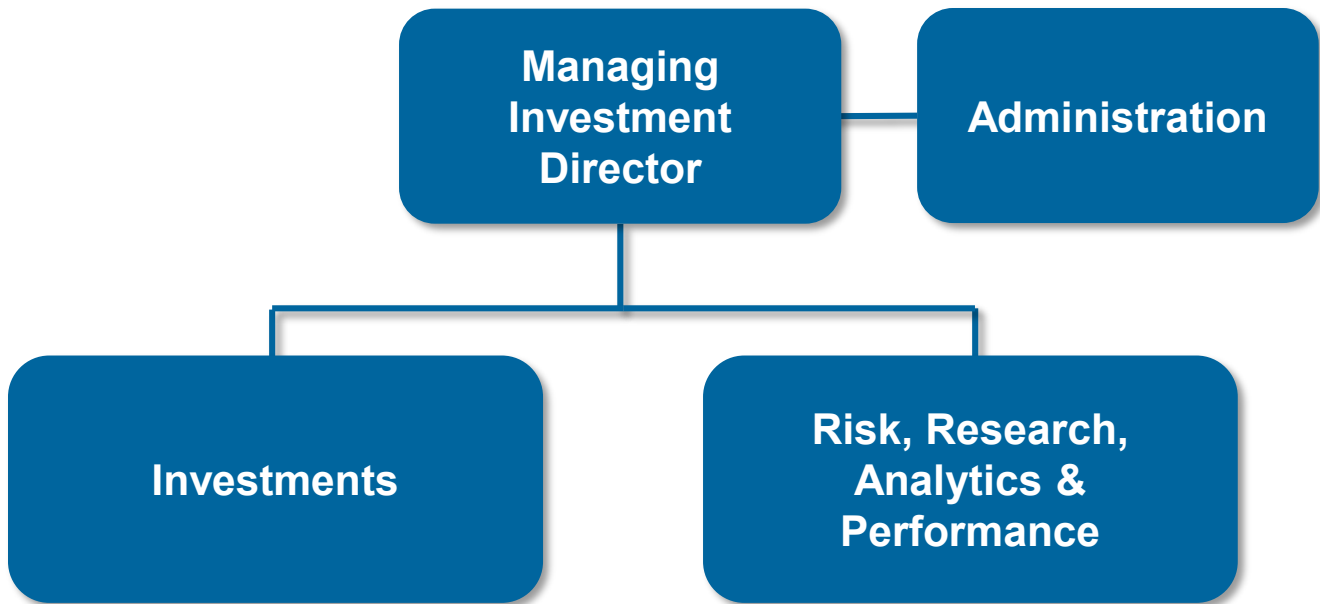
As of June 30, 2018; Source: State Street

PE Portfolio Key Risks

- Vintage year concentration:
 - 34.2% of the NAV is concentrated in Vintage Years 2006 – 2008
- Transparency:
 - Slow adoption by other industry participants of the ILPA Reporting Templates
 - Limited visibility at portfolio company level
- Unfunded Commitments: \$16.0b

III. Business Review

Private Equity Functional Organizational Chart



As of June 30, 2018

Staffing Overview

TOTAL PROGRAM

- 34 total positions within Private Equity

STAFFING UPDATES

- Hired 2 admin staff
- 2 Private Equity professionals appointed to more senior positions
- 1 Position transferred to other program area within INVO

VACANCIES

- 1 Managing Investment Director
- 1 Associate Investment Manager
- 3 Investment Officers

As of June 30, 2018

Program Expenses

	FY 2017-18			FY 2016-17		
	AUM (\$billions)	Fees & Profit Sharing Paid (\$millions)	Fees & Profit Sharing Paid ² (BPs)	AUM (\$billions)	Fees & Profit Sharing Paid (\$millions)	Fees & Profit Sharing Paid ² (BPs)
Internal Management	\$	\$ 6.3	2	\$	\$ 8.3	3
External Management ¹	\$ 27.2	\$ 678.8	250	\$ 25.9	\$ 689.6	267
Asset Management Fees Paid	N/A	\$ 247.7	91	N/A	\$ 234.5	91
Profit Sharing Paid	N/A	\$ 431.1	159	N/A	\$ 455.1	176
Consultants Expense	N/A	\$ 0.7	0	N/A	\$ 1.3	0
Technology & Operating Expense	N/A	\$ 8.6	3	N/A	\$ 10.0	4
Total Program³	\$ 27.2	\$ 694.3	256	\$ 25.9	\$ 709.2	274

FY 2017-18 Profit Sharing (\$millions)	
Profit Sharing Paid	\$431.1
FY 2017-18 CalPERS Realized Gain (\$millions)	
CalPERS Realized Gain	\$3,496.6

FY 2016-17 Profit Sharing (\$millions)	
Profit Sharing Paid	\$455.1
FY 2016-17 CalPERS Realized Gain (\$millions)	
CalPERS Realized Gain	\$3,531.6

¹The external fee information does not include the GP's carried interest. The percentage of carried interest earned varies for each private equity partnership, but generally ranges from 10% - 20% of the net profits of the fund, after expenses. Important to note is that our private equity partners participate in this agreed-upon carried interest profit sharing only after a minimum agreed upon return has been obtained by the investor, and all underlying fund expenses have been incurred. The minimum agreed upon return is typically in the range of 6 - 8%.

²All BPs fees paid figures are calculated on Total Program AUM

³Some totals may not reconcile due to rounding

IV. Governance and Sustainability Integration

Summary of PE Sustainable Investment Practices

PE Sustainable Investments (SI) Implementation

- PE collaborated with IMEP and respective INVO asset class representatives to finalize 'Private Equity ESG and Sustainable Investment Practice Guidelines' in December 2017
- Surveyed General Partners (GPs) on sustainability practices
 - Results highlight increasing SI dedicated resources and process implementation among strategic GPs
- Going forward, additional SI integration opportunities include:
 - Annual surveys to benchmark versus 2018 baseline results
 - PE Due Diligence Questionnaire enhancements
 - Collaborate with ILPA on D&I Initiatives related to DDQ and Code of Conduct

Conclusion

- Private Equity has exceeded the Global Equity benchmark over the 5, 10 and 20 year horizon
- Continue to integrate Sustainable Investment considerations in the investment and monitoring process
- Ongoing review and implementation of Private Equity Business Model