Private Equity (PE) Annual Program Review

Sarah Corr
Interim Managing Investment Director

Mahboob Hossain
Investment Director

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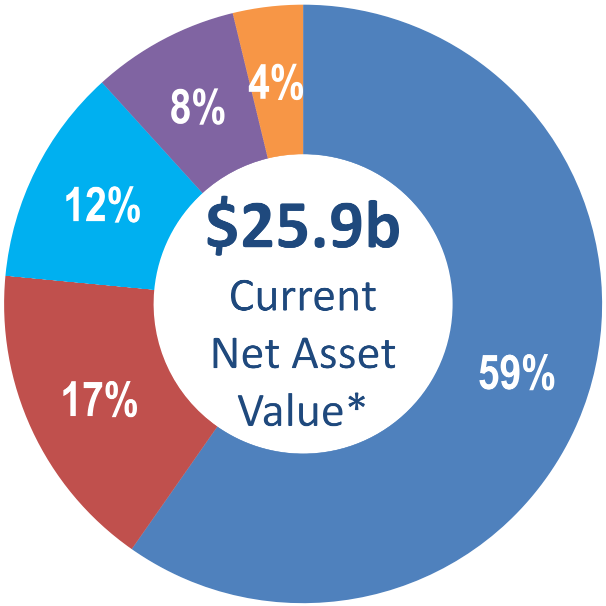
CalPERS | Investment Office
Private Equity

Program Performance Review

	1-YR	3-YR	5-YR	10-YR	20-YR
As of June 30, 2017*	Net Return	Net Return	Net Return	Net Return	Net Return
Private Equity ($25.9b)	**13.9%**	**8.1%**	**11.5%**	**9.3%**	**11.3%**
PE Policy Benchmark	**20.3%**	**9.9%**	**13.7%**	**13.0%**	**9.6%**
Excess Return	(6.4)%	(1.8)%	(2.2)%	(3.7)%	1.7%
CalPERS GE Policy Benchmark (as of 3/31/17 to match PE one quarter lag)	**16.2%**	**5.5%**	**9.2%**	**4.9%**	**6.8%**
Excess Return	(2.3)%	2.6%	2.3%	4.4%	4.4%

**Source: State Street*

Program Characteristics



Strategy	Net Asset Value*	Current*	Target	5-Year Net Return
Buyouts	$15.3	59%	60%	12.2%
Growth/Expansion	$4.4	17%	15%	12.8%
Credit Related	$3.0	12%	15%	8.1%
Opportunistic	$2.1	8%	10%	13.4%
Venture Capital	$1.0	4%	<1%	4.7%
Total	**$25.9**	**100%**	**100%**	**11.5%**

- All strategies are within policy range

**Based on NAV as of June 30, 2017; $s in billions; Includes currency and distributed securities in the amount of $93mm*
Source: State Street

2016-17 Activities

- Committed $3.3b to new opportunities
- Private Equity Accounting and Reporting Solution (PEARS)
  - Rolled out two releases - final release expected by October 2017
- Transparency – Institutional Limited Partners Association (ILPA) Template
  - 77% of Strategic funds provided template as of Q1 2017
- Costs – external management fees of 91 bps of AUM and profit sharing paid was $455m relative to CalPERS realized gain of $3.5b

2017-18 Objectives

- Allocate up to $4b
- Collaborate with Global Equity on the implementation of the Growth asset segment
- Refine business model
- Implement reporting requirements of AB 2833

Appendix

Review Outline

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1	Liabilities
2	Long-Term Horizon
3	Stakeholders
4	Three Forms of Capital
5	Accountability
6	Strategic Allocation
7	Risk Reward
8	Costs Matter
9	Multi-faceted Risk
10	Resources/Process

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
- Over-diversification negatively impacts performance
- Costs matter

Policy Benchmark

Current

- **67% FTSE U.S. Total Market + 33% FTSE All World ex U.S. + 300 bps (arithmetic)**
  - Lagged one quarter
  - Attempted to reflect actual geographic exposures

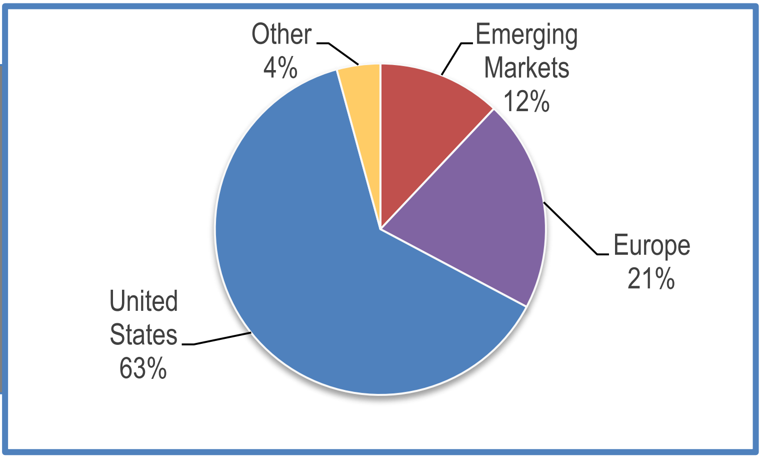
Effective July 1, 2018

- **FTSE All World, All Capitalization (Global Equity) + 150 bps (geometric)**
  - 2013 CMA expectations had a 158 bps spread between GE and PE

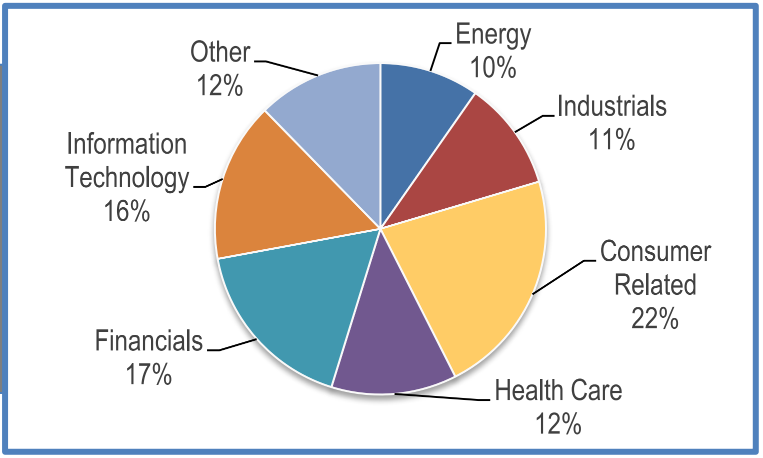
Program Characteristics

Investment Type	Net Asset Value (NAV)*	% of NAV
Funds	$17.1	66%
Fund-of-Funds	$3.1	12%
Co-Investments/ Direct Investments	$2.1	8%
Separate Accounts	$3.5	14%
TOTAL	**$25.9**	

By Geography**



By Industry**

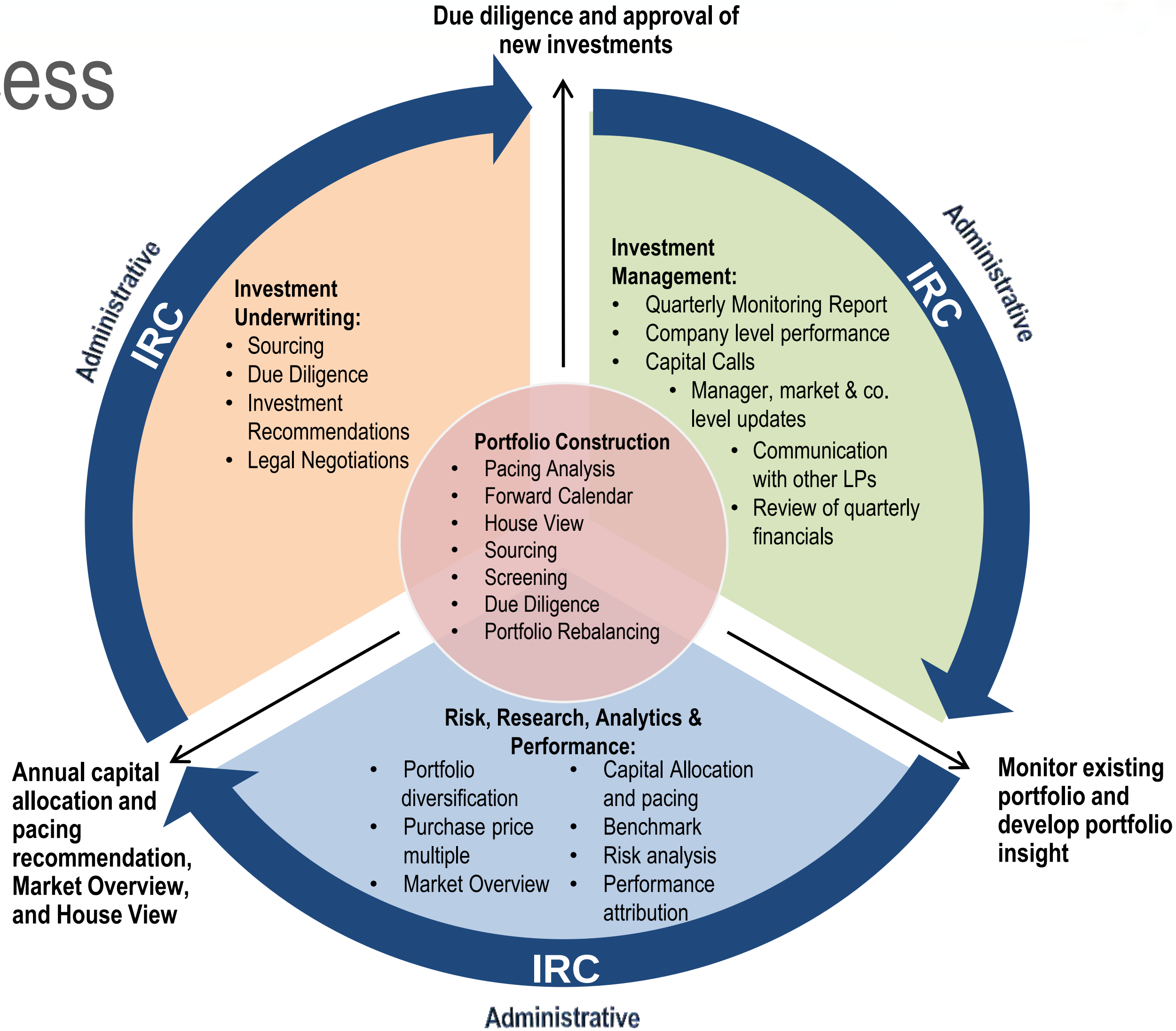


** Based on NAV as of June 30, 2017; $s in billions; Includes currency and distributed securities in the amount of $93mm; Source: State Street*
***Based on Market Value as of December 31, 2016; Source: PEARS*

Investment Process

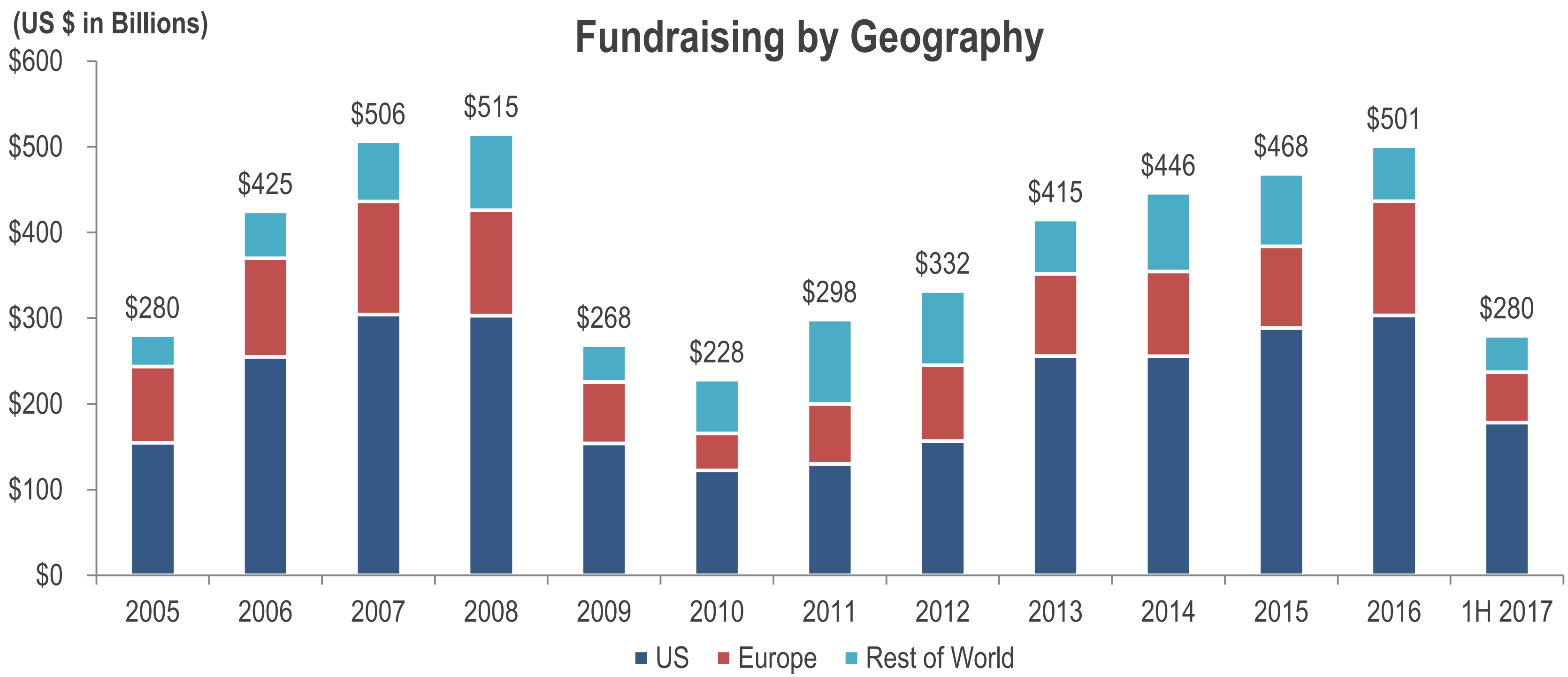
Investment Review Committee (IRC)

- Purpose: Consistent review of investments and portfolio
- Timing: Weekly
- Participants:
  - 1 Managing Investment Director (MID); 2 Investment Directors (IDs) (PE)
  - 1 MID (Real Assets)
  - 1 ID (Global Fixed Income)
  - 1 Investment Manager (IM) (Trust Level Portfolio Management)
  - 1 IM (ICOR)
  - Board Consultant



II. Investment Review

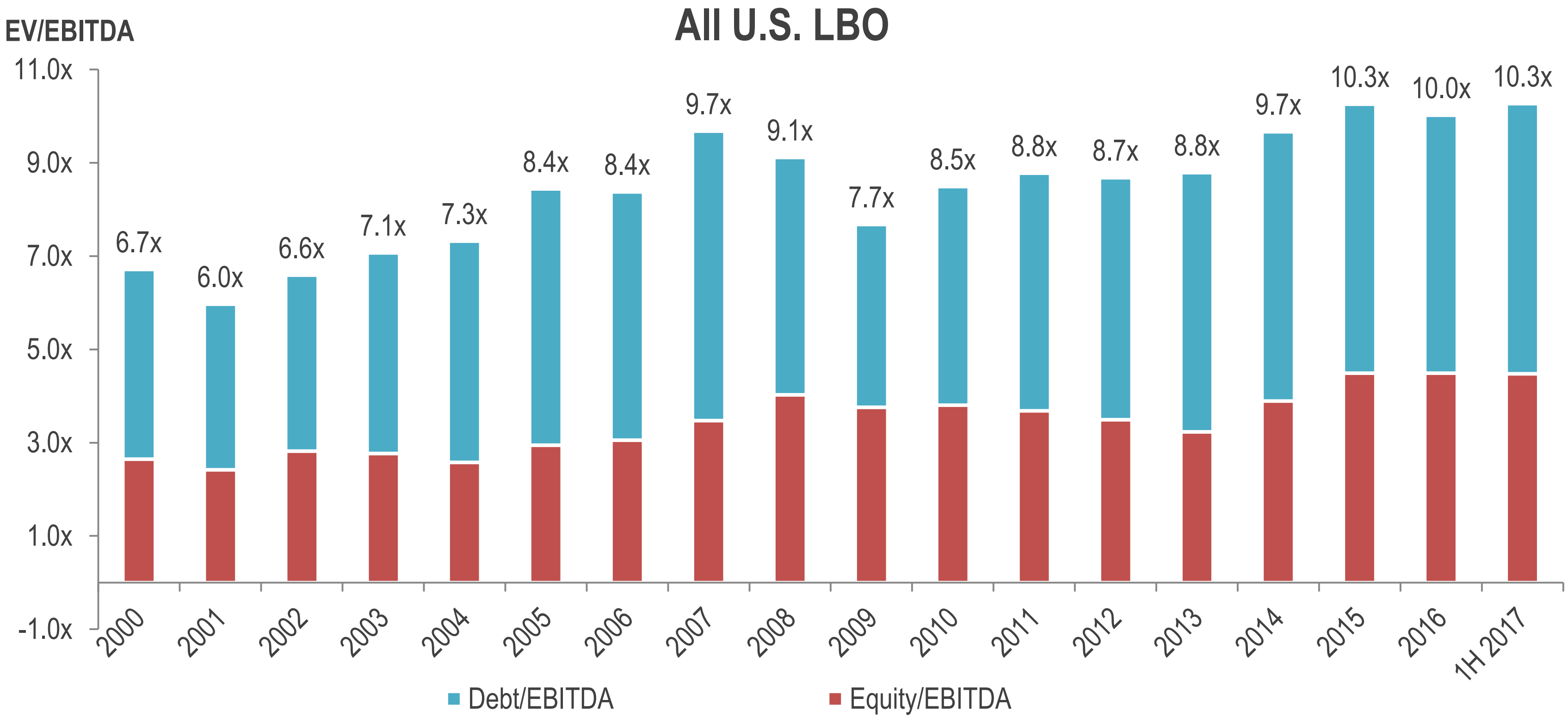
Market Environment - Fundraising



- Strong fundraising market and record levels of dry powder ($906b*) is creating a competitive environment for purchasing assets
- Fundraising for Buyout strategy accounted for 55% of overall fundraising in 1H 2017

Source: Preqin
**Excludes Real Estate and Infrastructure*

Market Environment – Valuations

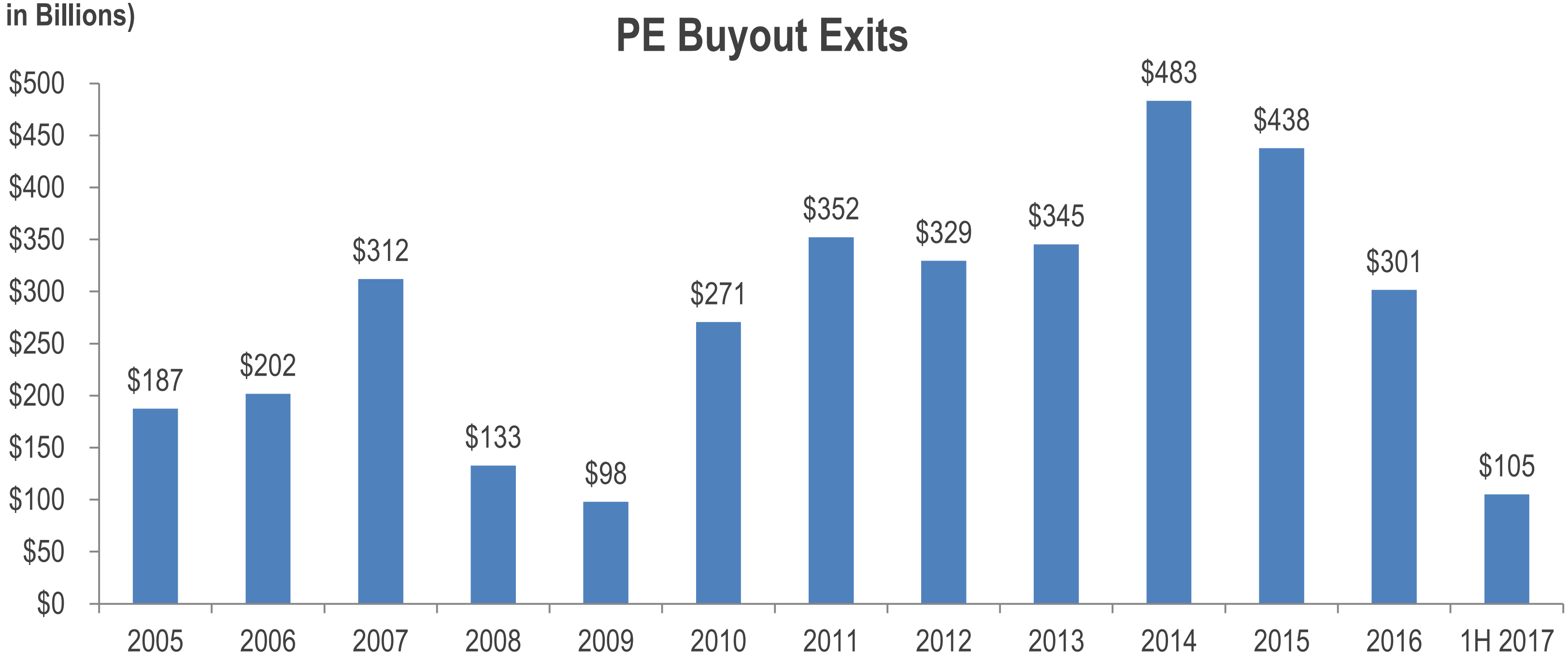


- High valuations continue to make it challenging to find attractively valued assets

Source: Preqin

Market Environment – Exits & Liquidity

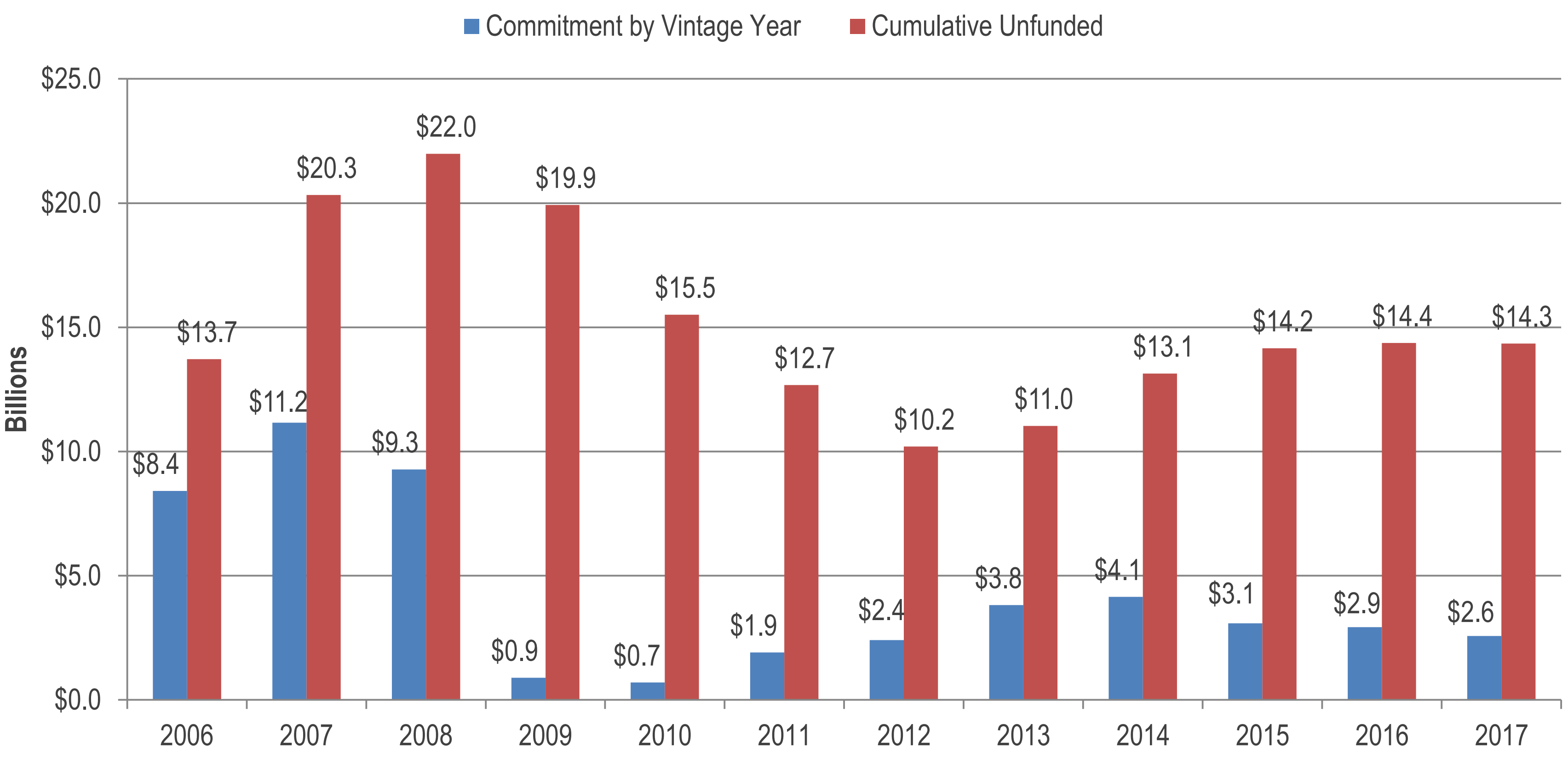
(US $ in Billions)



- Exit markets were robust over the last few years but slowed down in 2016 and 1H 2017 amidst a decrease in M&A and IPO activity
- 12% decrease in exits between the 1H 2016 and 1H 2017
- Q2 2017 had the lowest number of quarterly exits since 2010

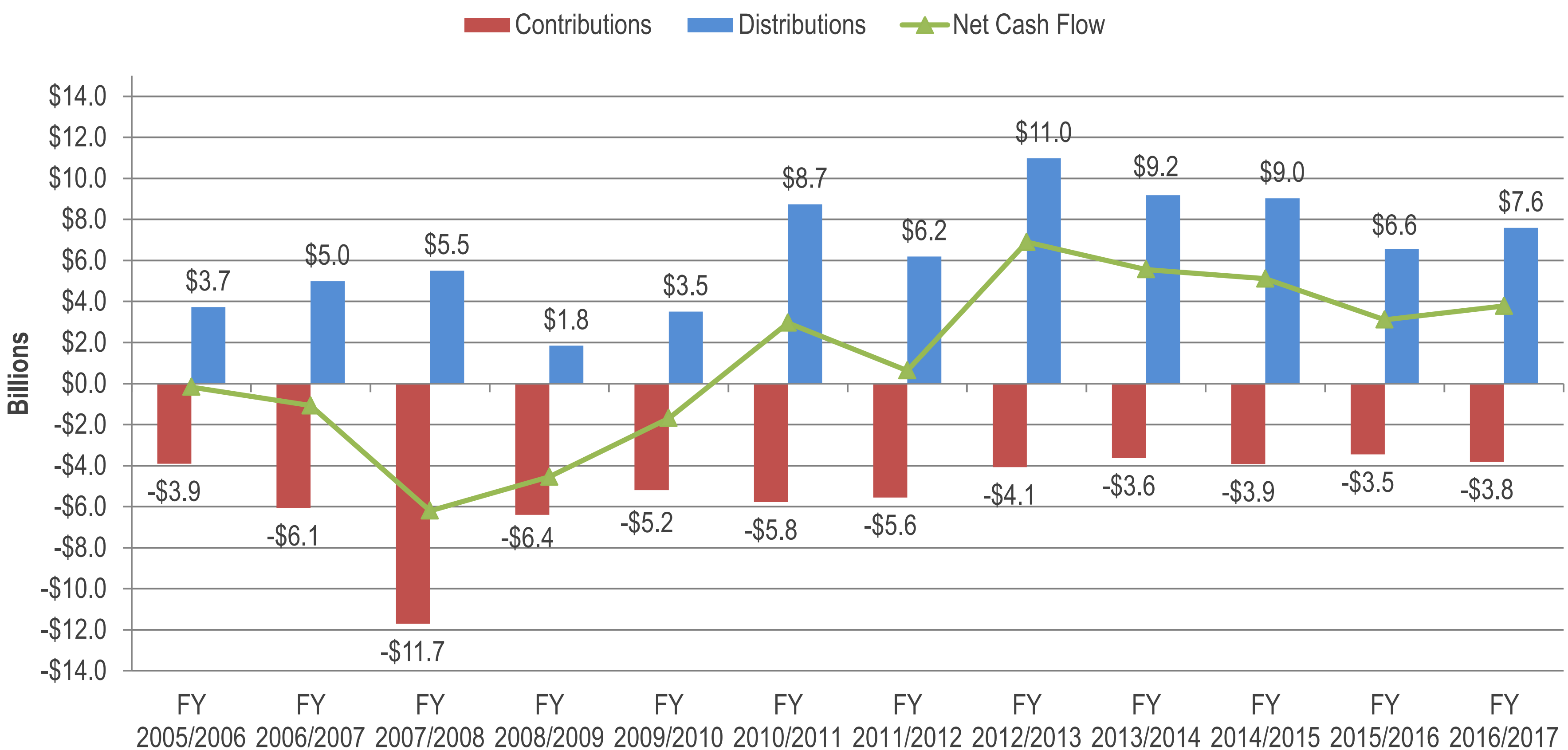
Source: Preqin

Commitments and Unfunded



As of June 30, 2017
Source: PEARS

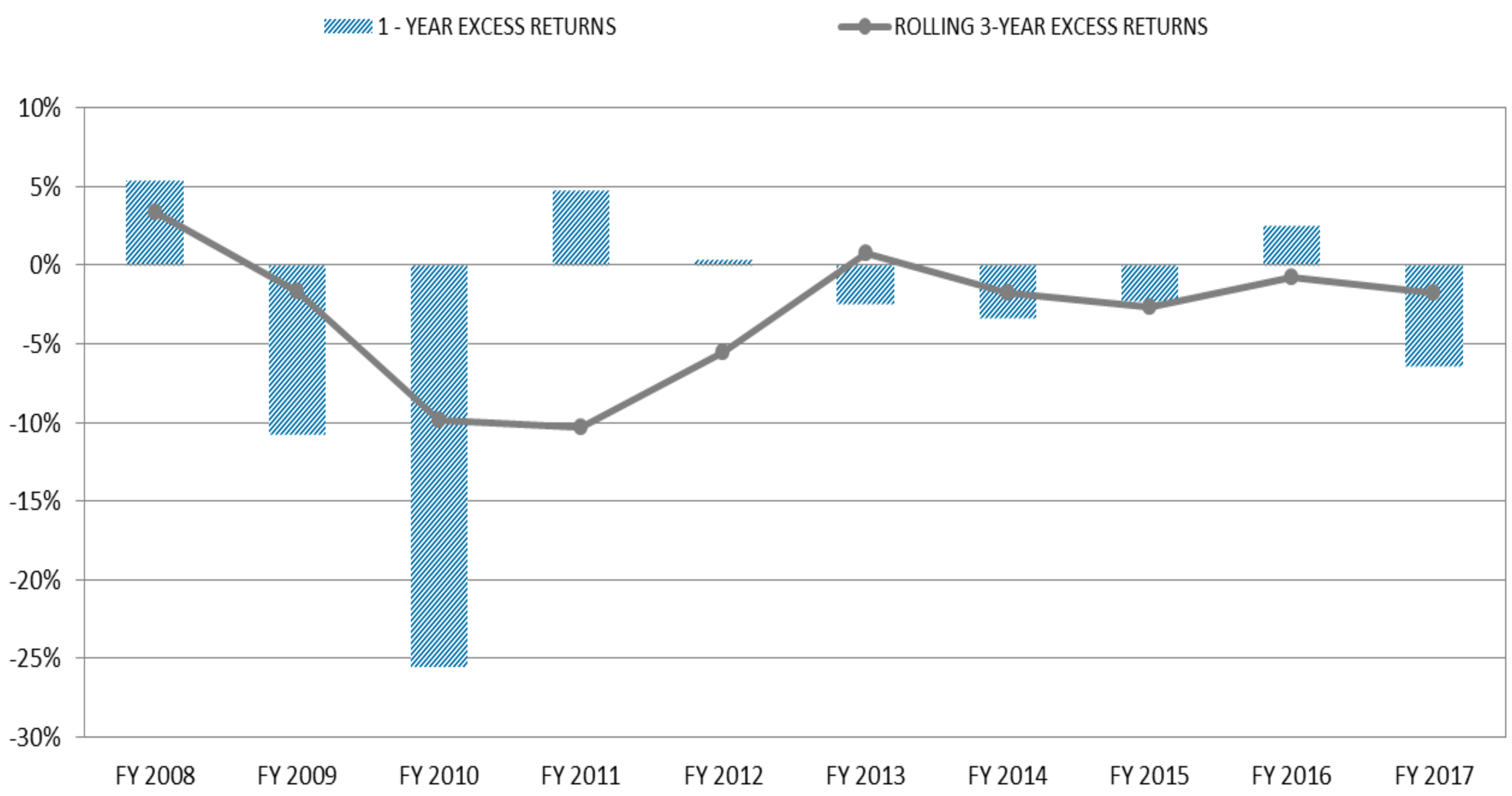
Cash Flow by Fiscal Year



- PE provided net cash flow of $28 billion since FY 2010/2011

As of June 30, 2017
Source: PEARS Cash Flow Report

Private Equity 3-Year Rolling Excess Returns



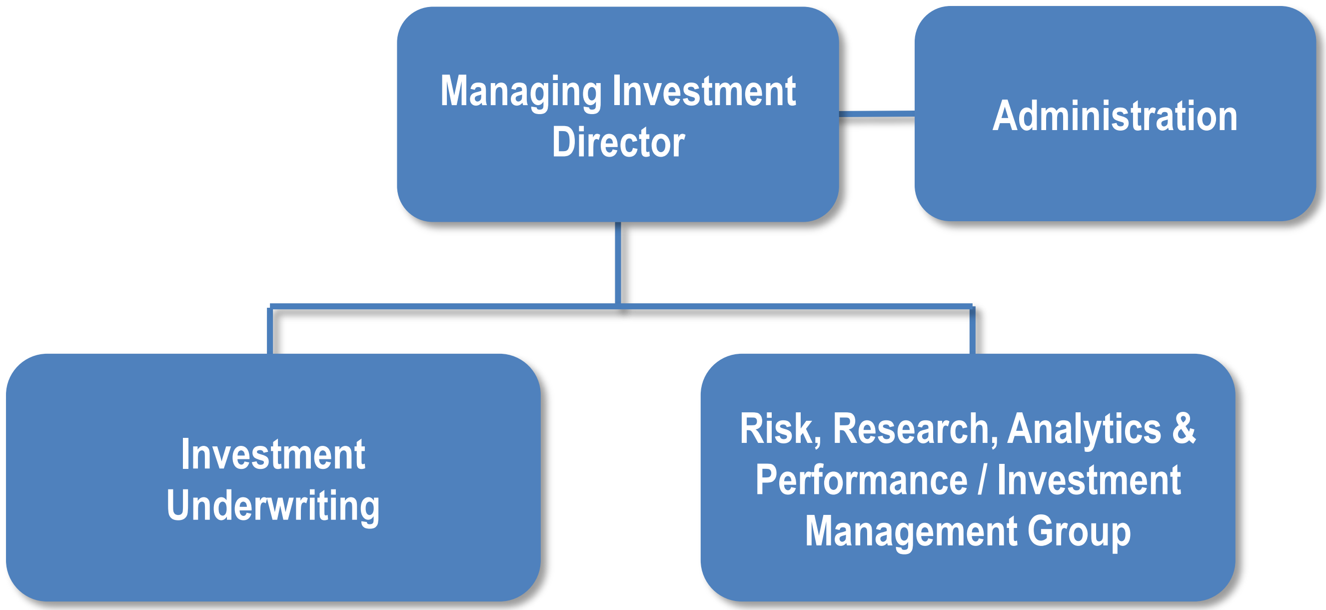
PE Portfolio Key Risks

- Vintage year concentration:
  - 44.3% of the NAV is concentrated in Vintage Years 2006 – 2008
- Transparency:
  - Slow adoption by other industry participants of the ILPA Fee Reporting Template
  - Limited visibility on portfolio positions
- Unfunded Commitments: $14.3b

As of June 30, 2017

III. Business Review

Private Equity Functional Organizational Chart



As of September 1, 2017

Staffing Overview

TOTAL PROGRAM	• 35 total positions within Private Equity
STAFFING UPDATES	• Hired 2 investment staff • 8 Private Equity professionals appointed to more senior positions • 10 professionals transferred to other areas of INVO
CURRENT VACANCIES	• 1 Managing Investment Director • 1 Investment Officer • 1 Administrative Support Staff

As of September 1, 2017

Program Expenses

	FY 2016-17			FY 2015-16		
	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	$	$ 8.3	3	$	$ 9.3	4
External Management[1]	$ 25.9	$ 828.9	320	$ 26.4	$ 899.5	341
Asset Management Fees Paid	N/A	$ 234.5	91	N/A	$ 207.3	79
Profit Sharing	N/A	$ 455.1	176	N/A	$ 489.8	186
Change in Accrued Profit Sharing	N/A	$139.3	53	N/A	$ 202.4	77
Consultants Expense	N/A	$ 1.3	0	N/A	$ 1.3	0
Technology & Operating Expense	N/A	$ 10.0	4	N/A	$ 11.3	4
Total Program	**$ 25.9**	**$ 848.5**	**327**	**$ 26.4**	**$ 921.4**	**349**

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

FY 2015-16 Profit Sharing ($millions)	
Profit Sharing Paid	$489.8
FY 2015-16 CalPERS Realized Gain ($millions)	
CalPERS Realized Gain	$3,258.8

[1] The 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%.

[2] All BPS fees paid figures are calculated on Total Program AUM. Some totals may not reconcile due to rounding.

Summary of PE Sustainable Investment Practices

UN PRI Principle 1

*"We will incorporate ESG issues into **investment analysis** and **decision-making processes**."*

- **Due Diligence** - staff is asking questions covering the following areas around the GPs' practices in the ESG space:
  - Formal ESG policy
  - Pre-investment process
  - Post-investment monitoring of the holdings
- The majority of CalPERS PE's due diligence questions on ESG overlap with the standard UN PRI Due Diligence Questionnaire.
- **Monitoring** - staff is discussing ESG practices across the portfolio.
  - For the top 10 managers by assets under management, staff inquires about ESG issues and practices at the annual Limited Partner Advisory Committee (LPAC) meeting.

Summary of PE Sustainable Investment Practices

Next Steps

CalPERS staff will engage GPs on ESG concerns and accomplishments across the portfolio

Broader adoption of ILPA Fee and Profit Sharing template and increased transparency remains a top priority for CalPERS

77% of Strategic funds provided template as of Q1 2017

Conclusion

- Private Equity has exceeded the Global Equity benchmark over the 5, 10 and 20 year horizon
- PEARS implementation nearly complete
- Continue to integrate Environmental, Social, and Governance (ESG) considerations in the investment and monitoring process