

Private Equity Annual Program Review

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Program Performance Review

	1-YR	3-YR	5-YR	10-YR	20-YR
As of June 30, 2016*	Net Return	Net Return	Net Return	Net Return	Net Return
PRIVATE EQUITY	1.7%	10.0%	9.7%	10.2%	11.4%
PE POLICY BENCHMARK	(0.8)%	10.8%	10.6%	12.7%	10.1%
Excess Return	2.5%	(0.8)%	(0.9)%	(2.6)%	1.4%
Current ALM Return Expectation	9.3%	9.3%	9.3%	9.3%	9.3%
Excess Return	(7.6)%	0.7%	0.4%	0.9%	2.1%
CalPERS GE Policy Benchmark	(4.0)%	6.5%	5.9%	5.0%	6.5%
Excess Return	5.7%	3.5%	3.8%	5.2%	4.9%

*Source: My State Street Monthly CIO Report & 2013 ALM Workshop

Program Characteristics

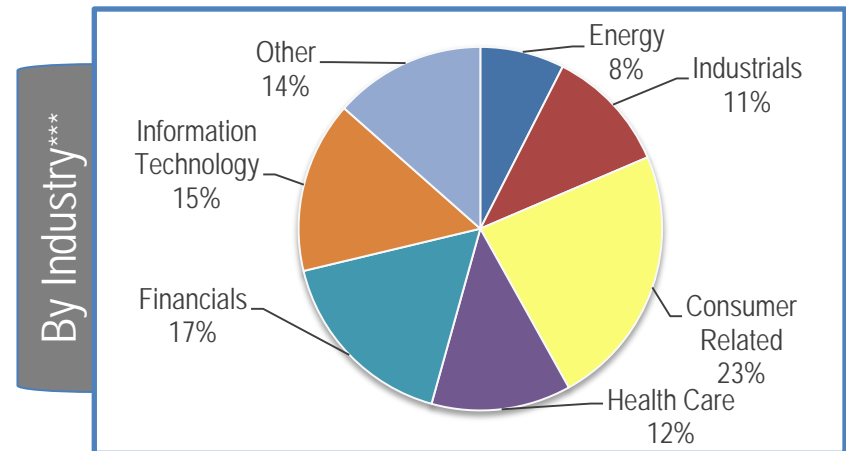
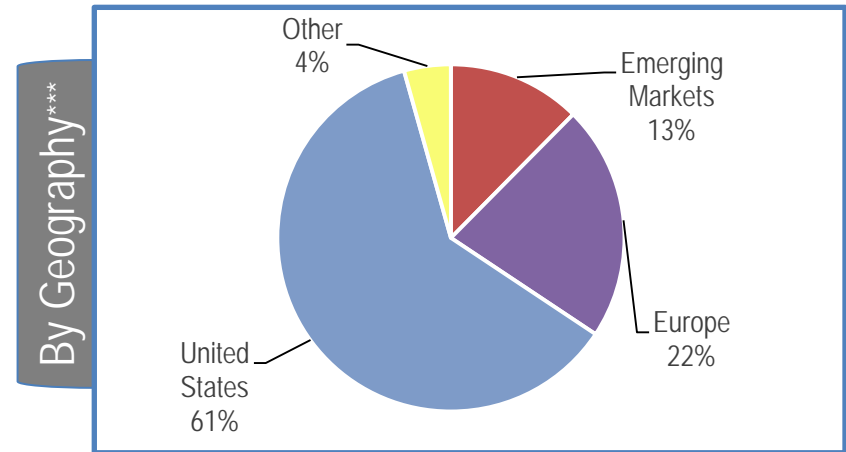
Investment Type	Net Asset Value (NAV) As of 6/30/16	% of NAV As of 6/30/16	Net Asset Value (NAV) As of 6/30/12	% of NAV As of 6/30/12
Funds	\$17.7	67%	\$27.2	80%
Fund-of-Funds	\$3.8	15%	\$4.0	12%
Co-Investments/ Direct Investments	\$1.8	7%	\$1.8	5%
Separate Accounts	\$2.9	11%	\$1.1	3%
TOTAL	\$26.4*		\$34.3**	

*Includes currency and distributed securities in the amount of \$193mm

** Includes currency and distributed securities in the amount of \$181mm

***Based on Market Value as of March 31, 2016

Source: State Street; Private Equity Accounting and Reporting Solution (PEARS)



2015-16 Accomplishments

- Private Equity Accounting and Reporting Solution (PEARS) went live
- Secondary transaction
- Transparency – Institutional Limited Partners Association (ILPA) Template
- Committed to separate accounts with improved economics

2016-17 Objectives

- Allocate up to \$4 Billion
- Review Private Equity's benchmark
- Continue to reduce complexity
- Examine Business Model
- Further PEARS integration

Program Expenses

	FY 2015-16			FY 2014-15		
	AUM (\$billions)	Fees Paid (\$millions)	Fees Paid ^a (BPS)	AUM (\$billions)	Fees Paid (\$millions)	Fees Paid ^a (BPS)
Internal Management	\$	\$ 9.3	4	\$	\$ 8.2	3
External Management (net)	\$ 26.4	\$206.5 ^c	78	\$ 29.0	\$ 414.1 ^d	143
Consultants Expense	N/A	\$ 1.3	0	N/A	\$ 2.0	1
Technology & Operating Expense	N/A	\$ 11.3	4	N/A	\$ 7.4	3
Total Program^b	\$ 26.4	\$228.4	86	\$ 29.0	\$ 431.7	149

FY 2015-16 Profit Sharing (\$millions)	
Profit Sharing Distributed	\$539.0
FY 2015-16 CalPERS Realized Gain (\$millions)	
CalPERS Realized Gain	\$3,258.8

^a All BPS fees paid figures are calculated on Total Program AUM

^b Some totals may not reconcile due to rounding

^c Does not include Management Fees paid by the underlying Funds in the Fund of Fund. These fees totaled approximately \$46 million

^d In addition to Management Fees, Partnership Expenses were included in this figure (Legal fees, Audit fees, etc.). Partnership Expenses in FY 2015-16 total approximately \$75 million

Appendix

Private Equity Annual Program Review

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

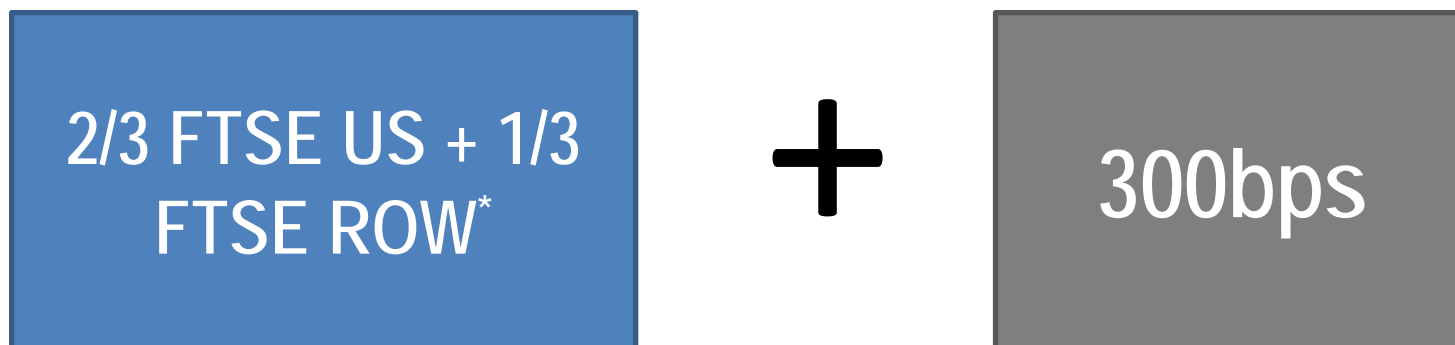
Private Equity: Program Role

- Primary Role
 - Private Equity allocations are a means of enhancing equity returns through a value-added approach to investment management of a diverse set of portfolio companies and to capture the illiquidity premium. The major driver for returns is appreciation, with negligible cash yield.
 - ALM Workshop 2013
- Driver of total performance
 - Price appreciation
- Risks
 - Growth risks
 - Illiquid
 - Leverage
 - Unfunded commitments

Program Investment Philosophy

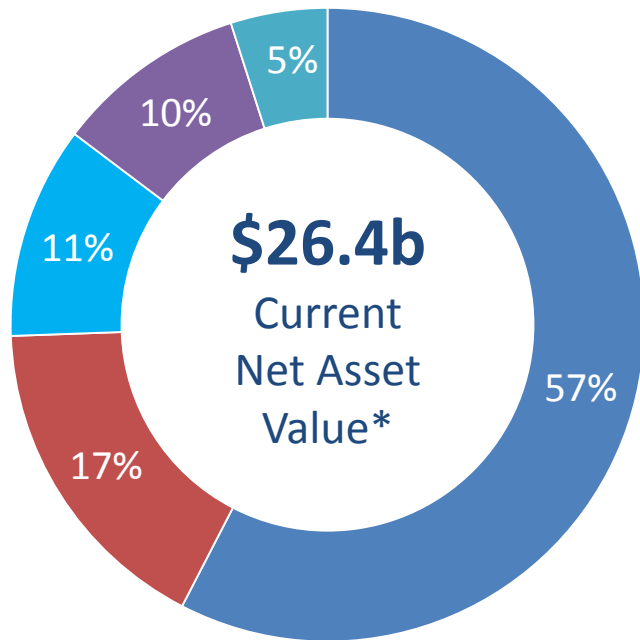
- Long-term investor
- Manager selection and alignment of interest are important to PE's success
- Over-diversification negatively impacts performance
- Costs matter

Current Policy Benchmark



**(2/3 FTSE U.S. Total Market Index + 1/3 FTSE All World ex-U.S. Total Market Index) + 300 bps lagged by one quarter.*

Program Characteristics



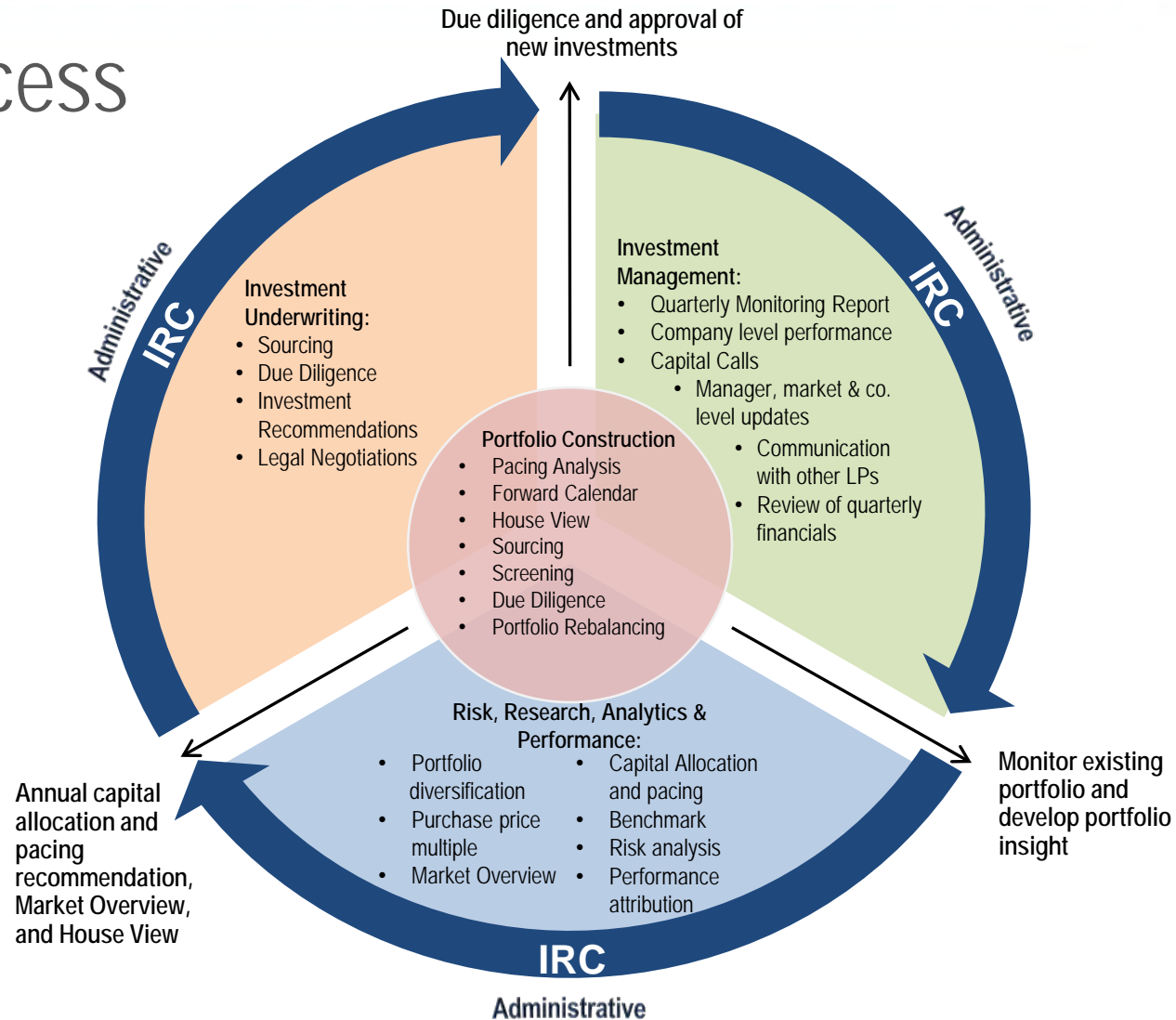
Strategy	Net Asset Value*	Current*	Target
Buyouts	\$15.1	57%	60%
Growth/Expansion	\$4.4	17%	15%
Credit Related	\$2.8	11%	15%
Opportunistic	\$2.6	10%	10%
Venture Capital	\$1.3	5%	<1%
Total	\$26.4	100%	100%

*Based on NAV as of June 30, 2016; \$s in billions; Includes currency and distributed securities in the amount of \$193mm
Source: State Street

Investment Process

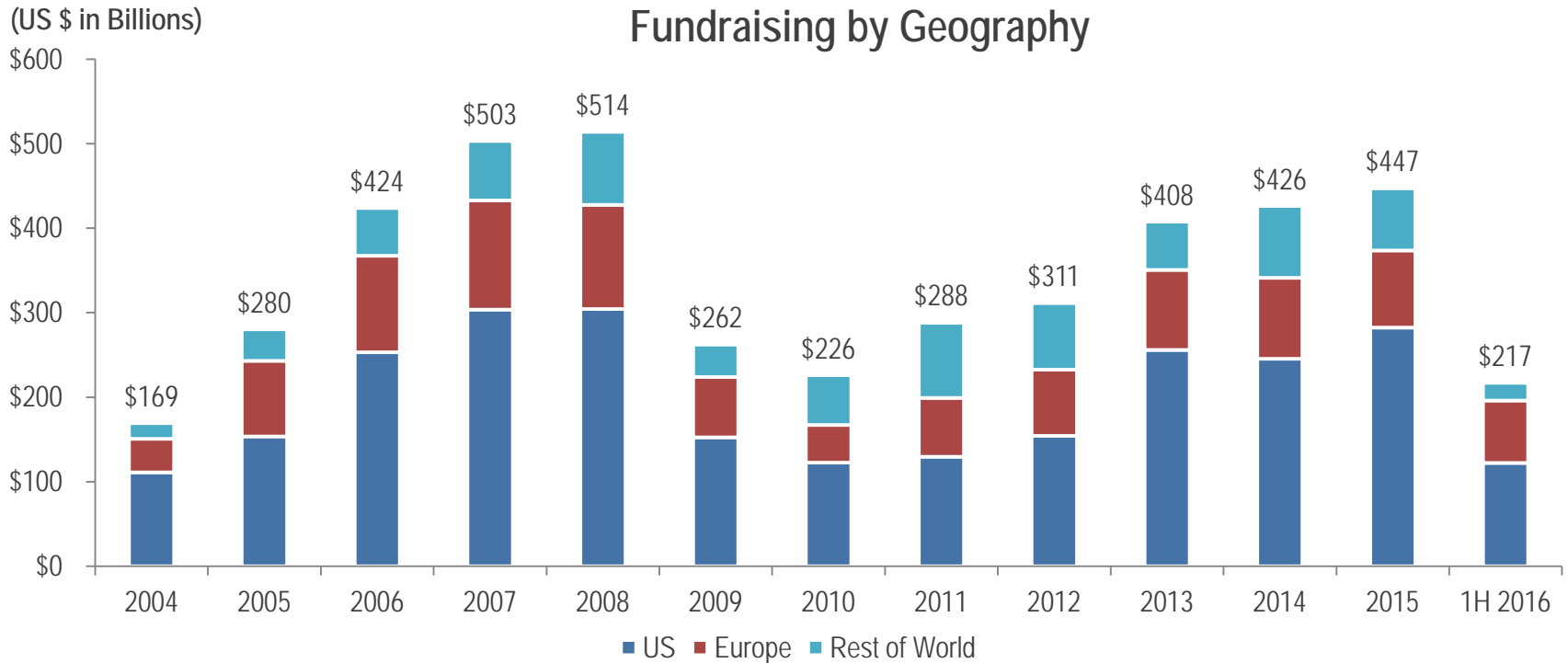
Investment Review Committee (IRC)

- Purpose: Consistent review of investments and portfolio
- Timing: Weekly
- Participants:
 - 1 Managing Investment Director (MID); 3 Investment Directors (IDs) (PE)
 - 1 MID (Real Assets)
 - 1 ID (Global Fixed Income)
 - 1 Investment Manager (IM) (Asset Allocation)
 - 1 IM (ICOR)
 - Board Consultant



II. Market Environment

Market Environment - Fundraising

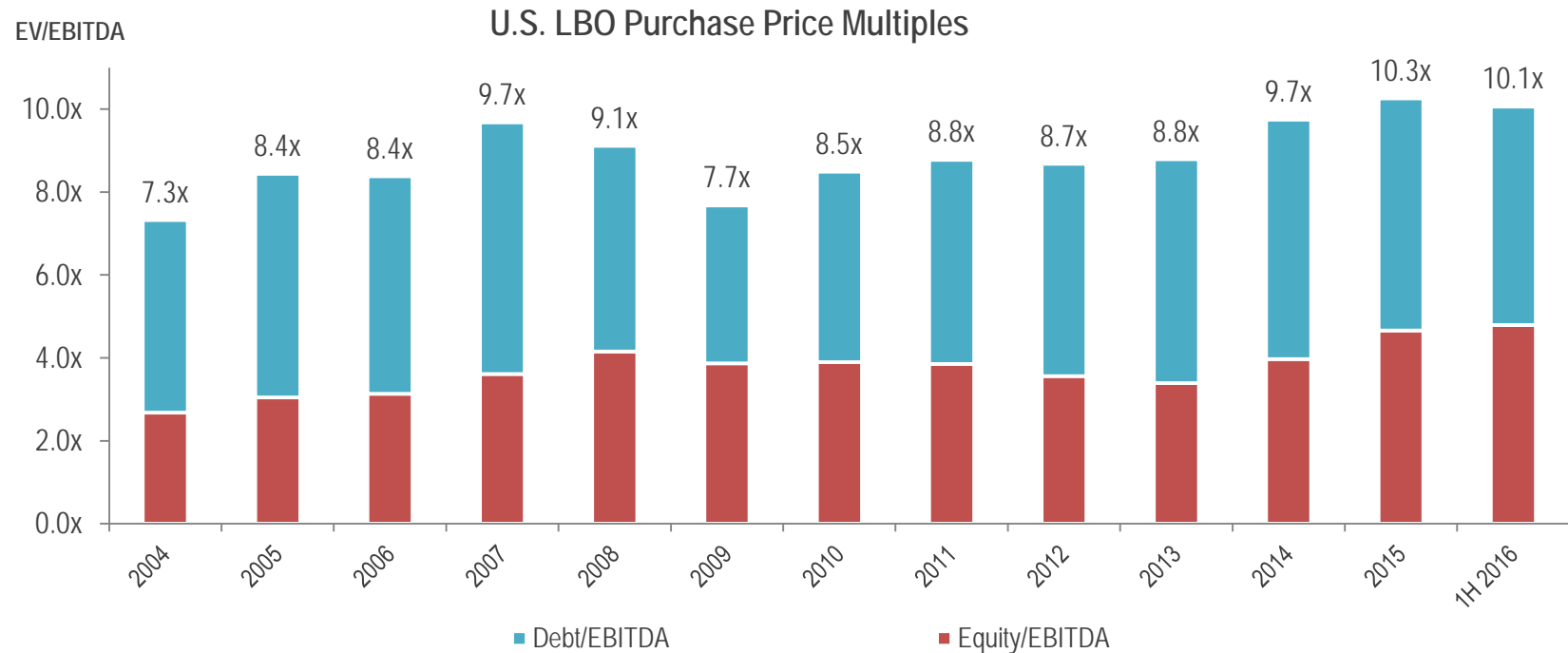


- Strong fundraising market and record levels of dry powder (\$954 billion*) creating competitive environment for purchasing assets
- Fundraising for Buyout strategy accounted for nearly half of overall fundraising in 1H 2016

Source: Preqin

* Includes the following strategies: Buyout, Growth, Distressed/Mezzanine and Venture

Market Environment – Valuations



- High market prices continue to make it challenging to find attractively valued assets
- Average debt multiples in the U.S. declined from 5.8x/EBITDA in 2014 to 5.3x/EBITDA in 1H 2016

Source: Preqin

Market Environment – Exits & Liquidity

(US \$ in Billions)

Global PE Exits

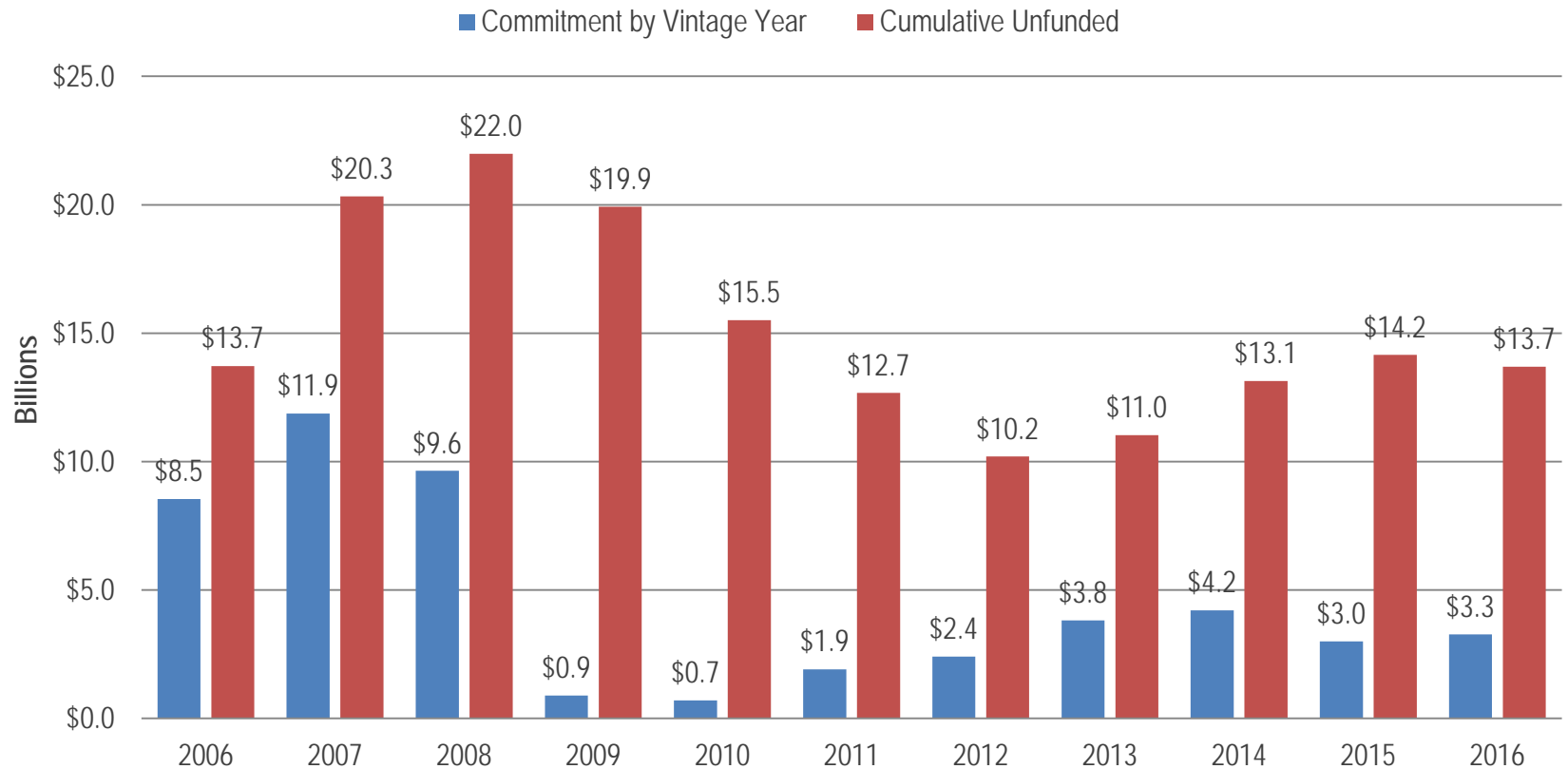


- Exit markets have been extremely robust over the last few years but slowing down in 1H 2016 amidst decrease in M&A and IPO activity

Source: Preqin

III. Portfolio Positioning

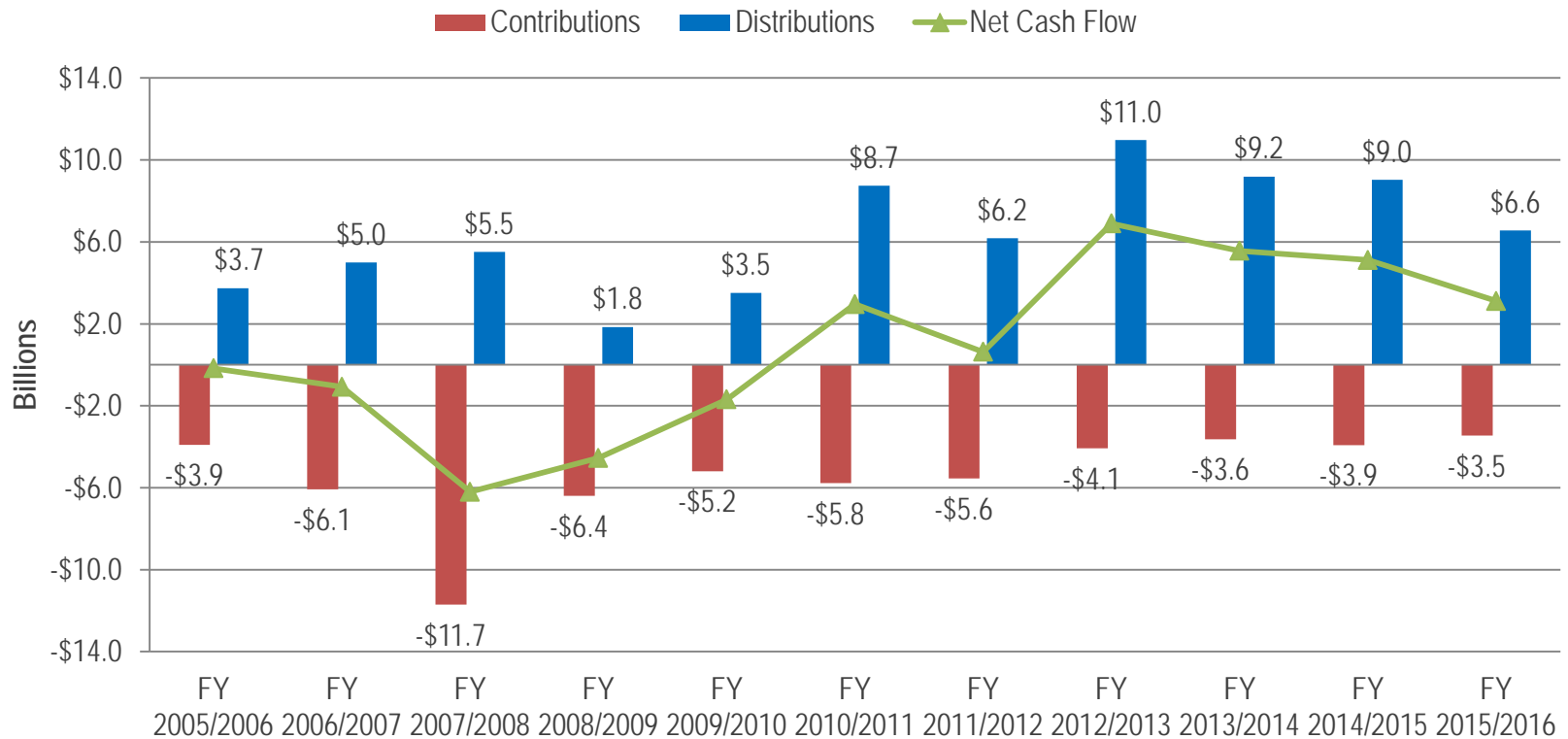
Commitments and Unfunded



As of June 30, 2016

Source: Private Equity Accounting and Reporting Solution (PEARS)

Cash Flow by Fiscal Year



- PE provided net cash flow of \$24.2 billion since FY 2010/2011

As of June 30, 2016

Source: Private Equity Accounting and Reporting Solution (PEARS)

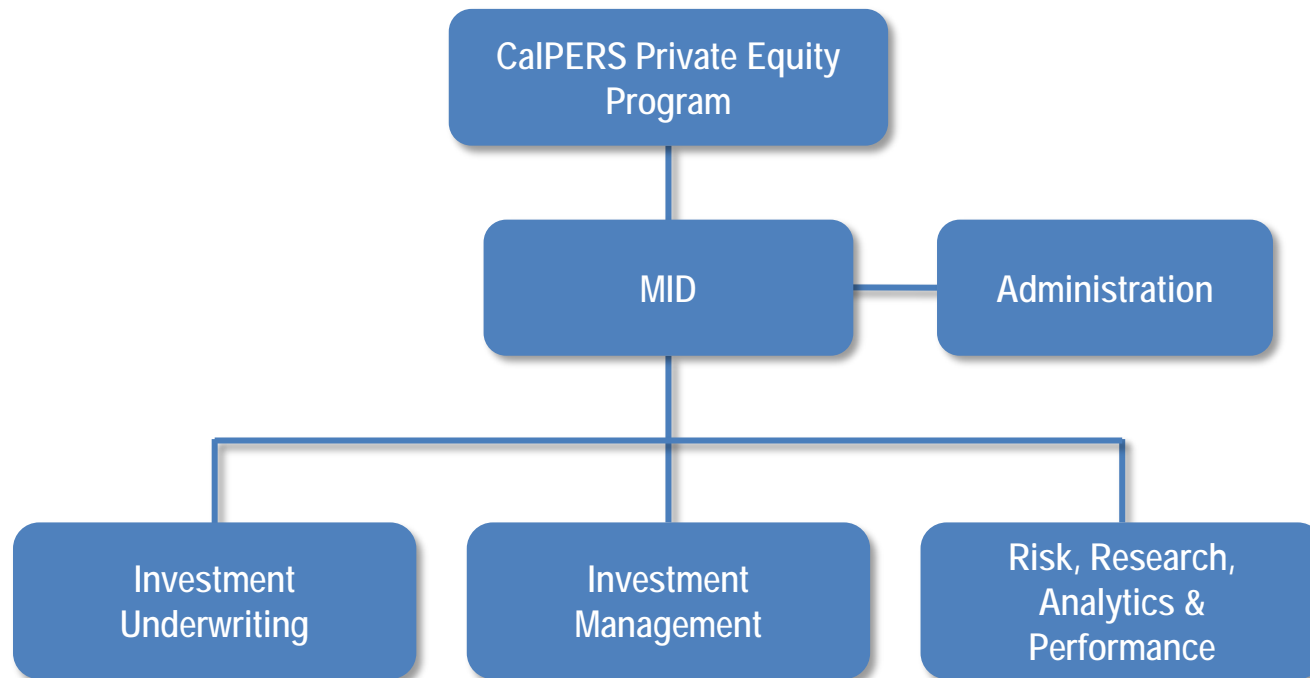
PE Portfolio Key Risks

- Vintage year concentration:
 - 53.3% of the NAV is concentrated in Vintage Years 2006 – 2008
- Transparency:
 - Slow adoption by other industry participants of the ILPA Fee Reporting Template
- Fund of Funds:
 - In general, are a low returning asset, and are very slow to return cash

As of June 30, 2016

IV. Business Review

Functional Organizational Chart



Staffing Overview

TOTAL PROGRAM

- 50 total positions within Private Equity

STAFFING UPDATES

- Hired 8 investment and administrative staff
- Promoted 5 Private Equity professionals

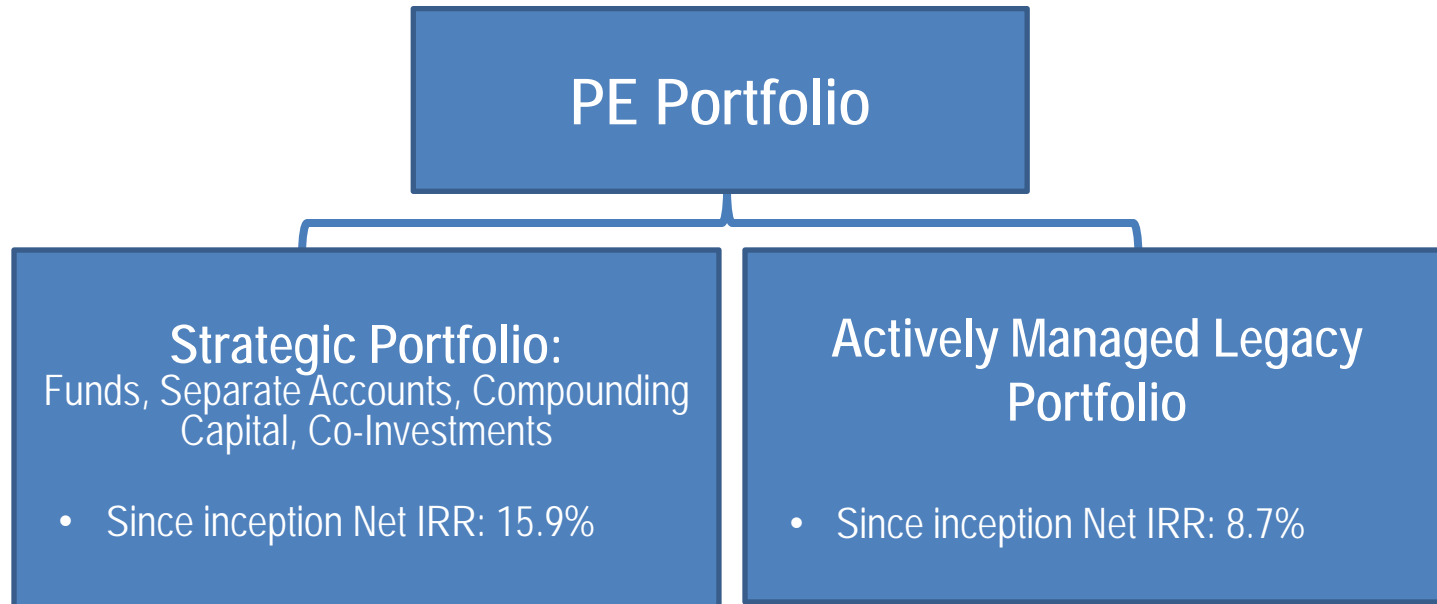
CURRENT VACANCIES

- 1 Associate Investment Manager
- 4 Investment Officers

As of June 30, 2016

Private Equity Vision 2020

- ✓ Reduce complexity by concentrating the portfolio
- ✓ Focus on cost effective structures with better alignment
- ✓ Organize the portfolio into two categories:



As of June 30, 2016

Source: Private Equity Accounting and Reporting Solution (PEARS)

PE Projects Update

Project	Objectives	Accomplishments & Upcoming Activities
Transparency	Support industry-wide transparency initiatives through ILPA and other industry participants	Supported ILPA on Fee Transparency Initiative
PEARS	Implement a new service and technology solution to manage and account for private equity portfolio data and activity while increasing PE data transparency	<ul style="list-style-type: none"> • Monitoring and performance report automation • On-going implementation

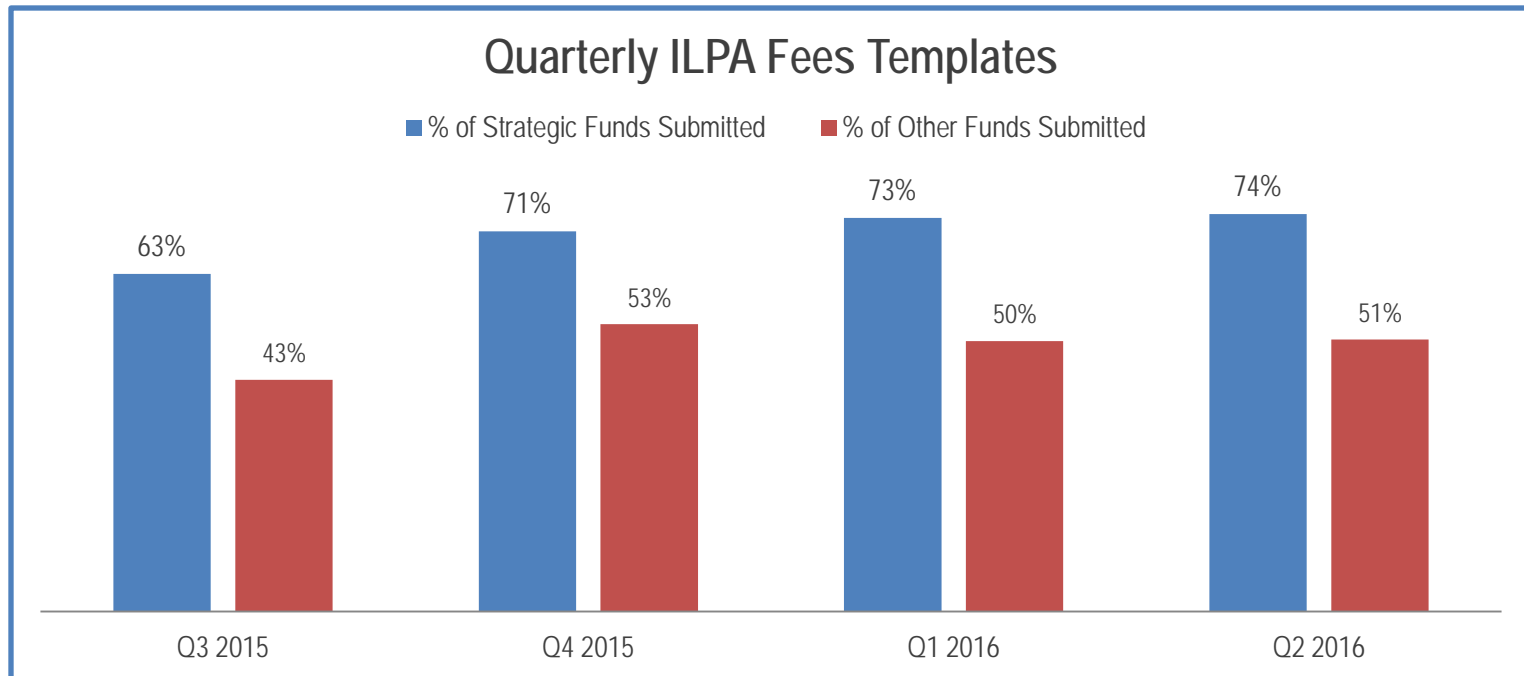
PE Fee & Profit Sharing Transparency

Objective

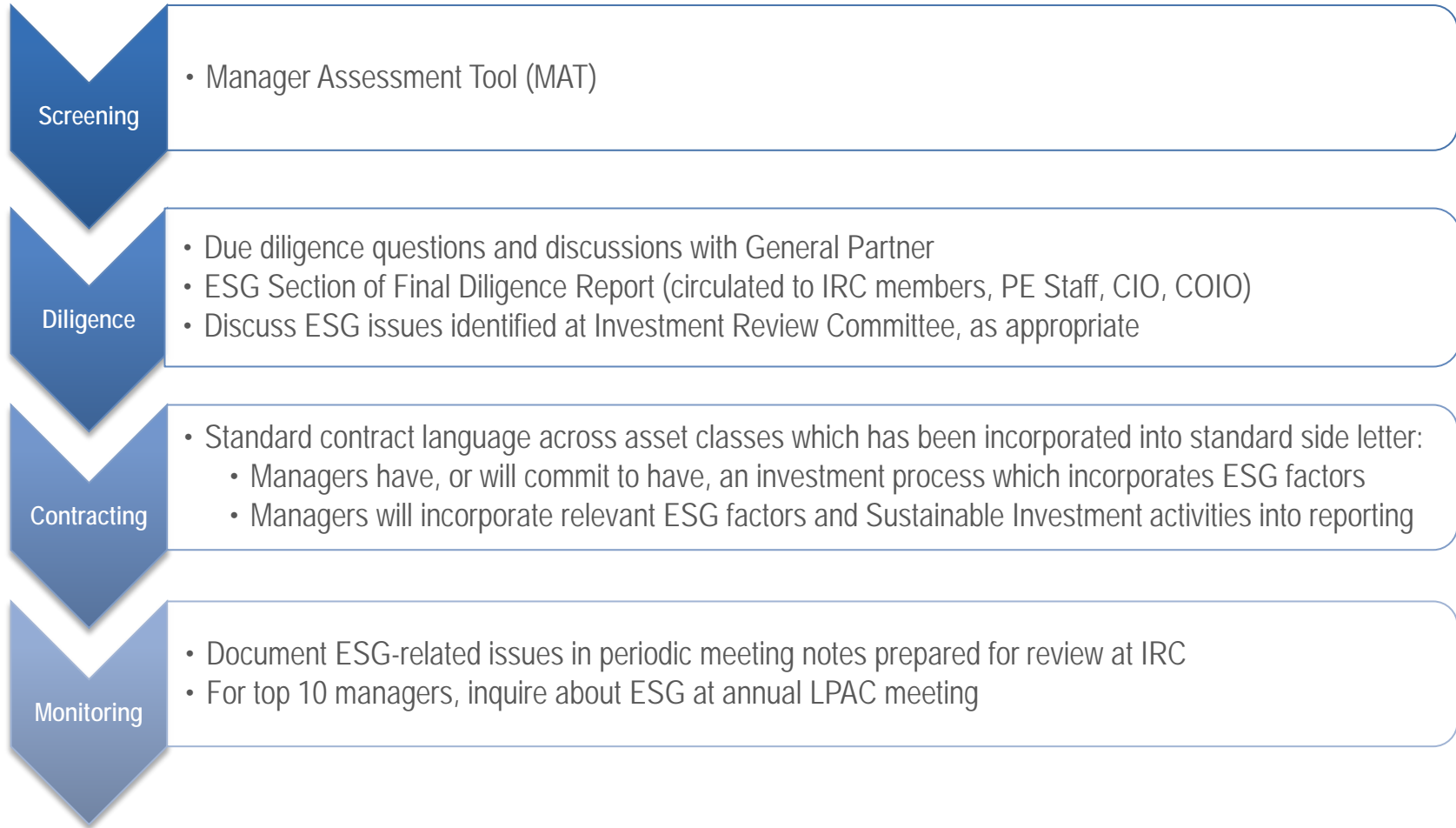
- Industry adoption of the Institutional Limited Partners Association (ILPA) framework for transparency of fees and profit sharing

Key Performance Indicators

- Ensure 100% of CalPERS strategic private equity partnerships complete the ILPA fee reporting template and provide profit sharing information within 5 years



Summary of PE Sustainable Investment Practices



Conclusion

- Private Equity (PE) has met the return expectation of the Asset Liability Management (ALM) Assumptions over the 3, 5, 10 and 20 year horizon
- PE is progressing with significant restructuring and portfolio rebalancing
- PEARS has been operational for a year and functionality continues to be built out
- Environmental, Social, and Governance (ESG) considerations integrated in the investment and monitoring process
- Overall, PE is progressing, reducing costs and complexity