

# SEMI-ANNUAL PERFORMANCE REPORT

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## **California Public Employees' Retirement System**

Private Equity Program

Semi-Annual Report – December 31, 2018



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## **Introduction and Executive Summary**

## Overview

This report provides a review of CalPERS Private Equity Program as of December 31, 2018, and includes a review and outlook for the Private Equity industry. CalPERS began investing in the Private Equity asset class in 1990. CalPERS currently has an 8% Policy Target allocation to the Private Equity asset class. The total value of the portfolio was \$27.8 billion<sup>1</sup>, with total exposure (net asset value plus unfunded commitments) of \$44.9 billion<sup>2</sup>. The Private Equity Portfolio represented 8.3% of CalPERS total assets as of December 31, 2018.

## Executive Summary

### Portfolio

- The Portfolio is diversified by strategy, with Buyouts representing the largest exposure at 66% of total Private Equity net asset value.
  - Mega and Large buyout funds represent approximately 55% of CalPERS' Buyouts exposure, and 36% of total exposure.
- By net asset value (NAV), assets within the United States comprise approximately 60% of the Program's investments.
- Fund investments represent 73% of exposure, with the balance in Customized Investment Accounts (14%), Fund of Funds (7%), and Co-Investments/Direct Investments (6%).

<sup>1</sup> Source: State Street cash-flow adjusted NAVs, as of 12/31/2018.

<sup>2</sup> Source: State Street, CalPERS. Total exposure is the sum of NAVs and unfunded commitments.

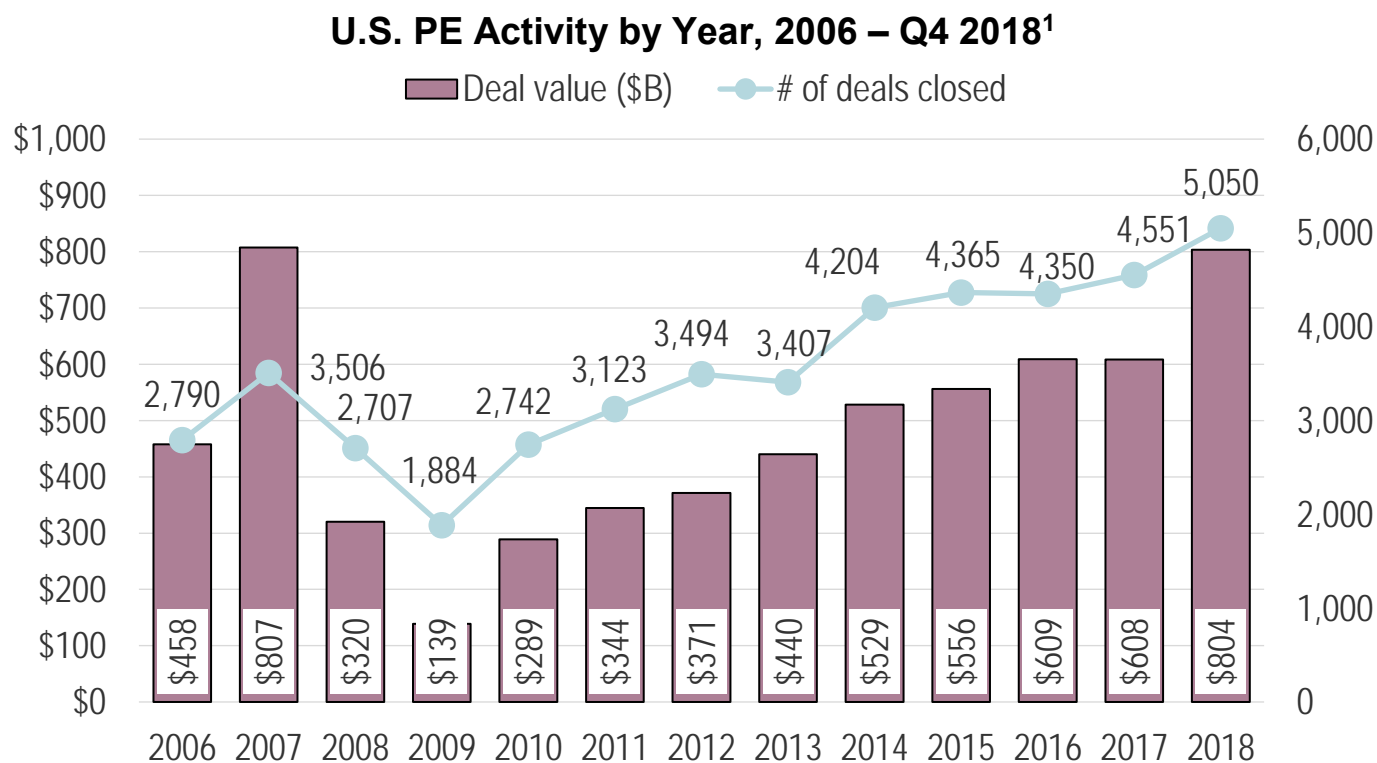
## Performance

- The Program reported a net value increase of \$1.7 billion from July 1, 2018 to December 31, 2018, and \$3.3 billion for the full year 2018.
- The Private Equity Program has underperformed its Policy Benchmark across trailing periods of ten years or less.
  - The Program slightly outperformed the FTSE All World Index plus 150 basis points in the trailing 5- and 10-year periods, while underperforming in the 3-year period.

## Activity

- The Private Equity Program experienced a net positive cash flow of \$1.0 billion through the second half of 2018, and \$2.2 billion for the full year 2018.
- For the second half of 2018, Staff completed 8 commitments totaling \$3.1 billion, and 18 commitments totaling \$6.0 billion for the full year 2018.
- Since 2011 CalPERS has received nearly \$32 billion in net cash flow from the Private Equity Portfolio.

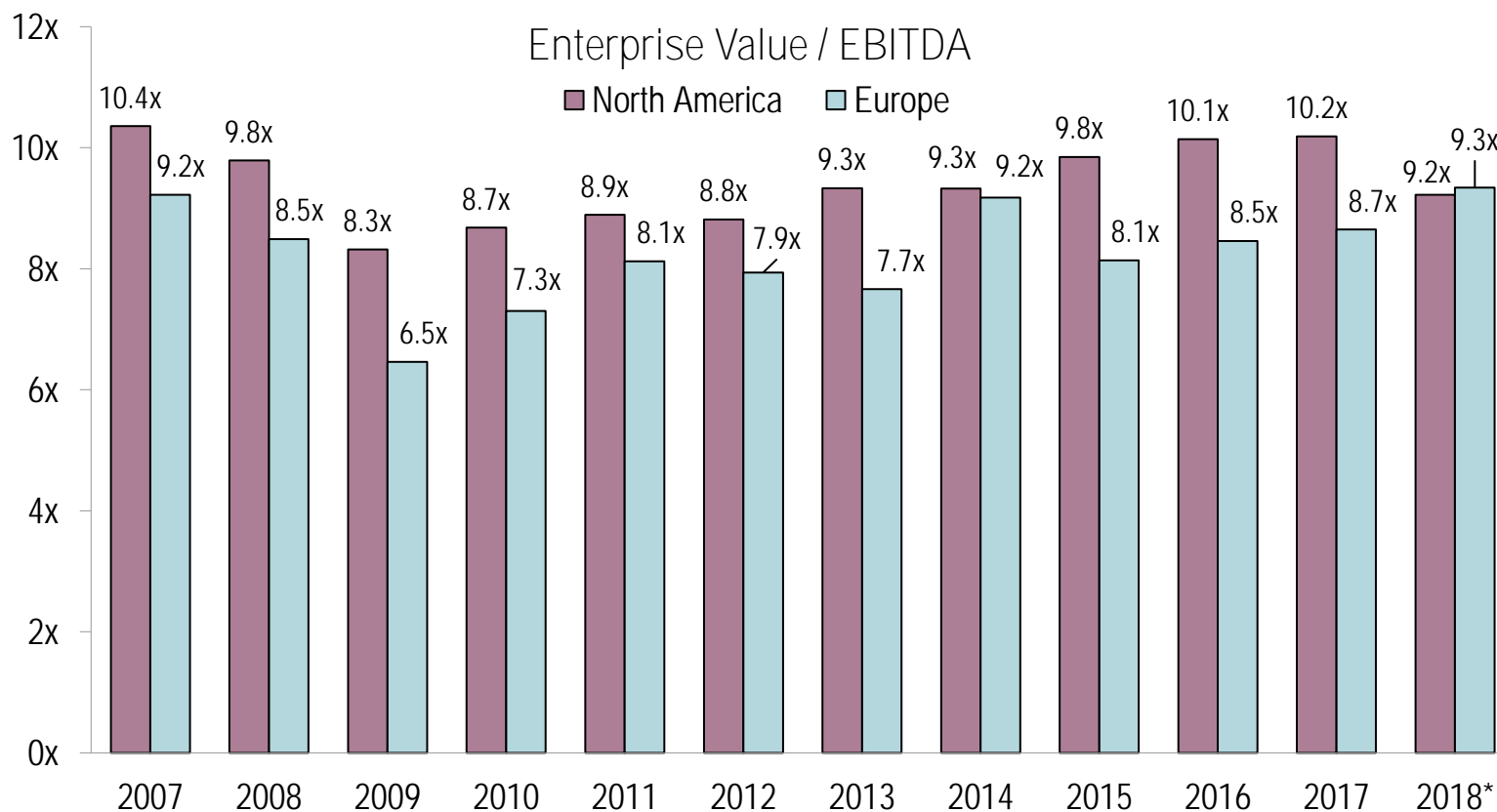
## **Private Equity Industry Review**



- U.S. buyout investment activity was strong in 2018, reaching the highest deal count and second-highest deal value on record. Deal value was at \$804 billion at the close of 2018, compared to \$608 billion for 2017, representing a 32% increase year over year.
- Fourth quarter 2018 posted the highest deal value on record, at \$282.7 billion, driven by several mega deals with the largest being the \$21.0 billion buyout of Dr. Pepper Snapple by JAB Holdings.

<sup>1</sup> Source: Pitchbook. Includes 2018 estimates of additional deal value (\$62.59B) and deal count (283).

### M&A Transaction Multiples, 2010 – Q3 2018<sup>1</sup>

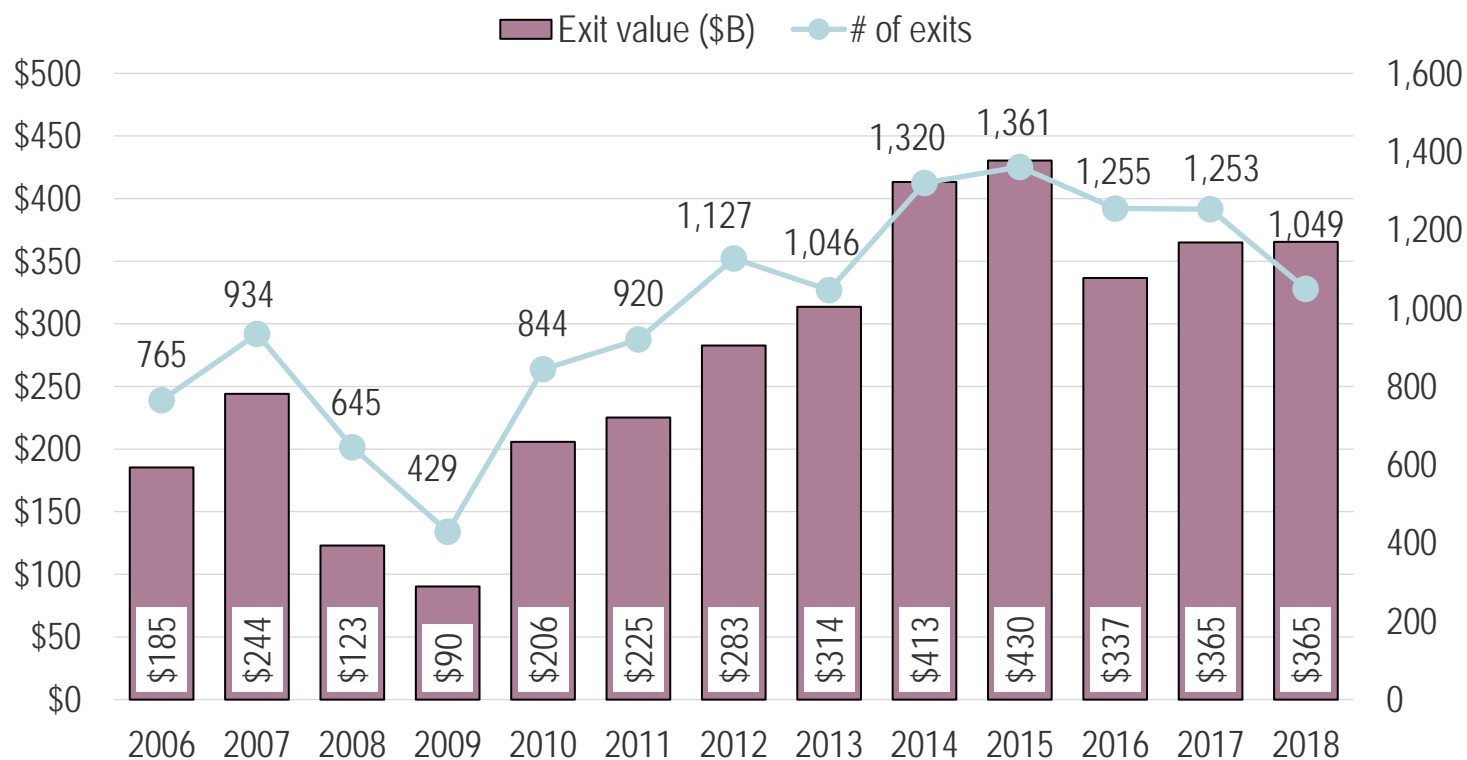


- Valuations in North America over the first three quarters of 2018 declined to the lowest level since 2012.
- Over the same period, valuations in Europe continued to increase to a new all-time high.

<sup>1</sup> Source: Pitchbook.



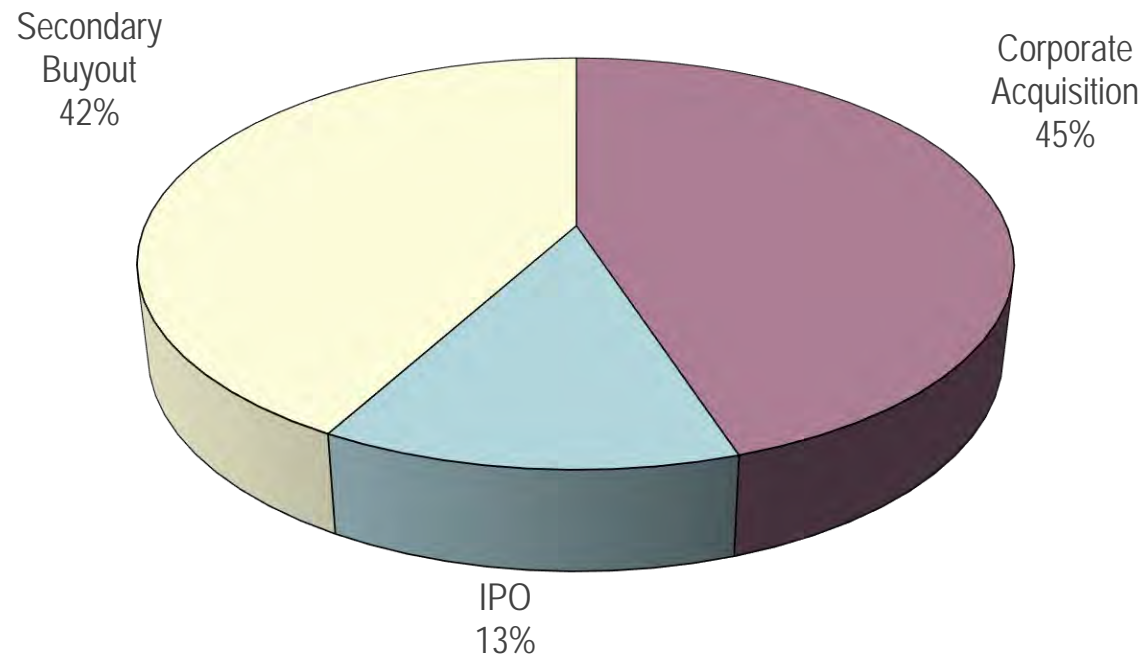
### U.S. PE-backed Exit Activity, 2006 – Q4 2018<sup>1</sup>



- Exit activity remained constant in 2018 in terms of dollar value, while the number of exits reached the lowest it has been in five years, reflecting an increase in average deal value.
- During 2018, 80 exits were recorded at a deal value above \$1 billion, compared to 75 in 2017, and 65 in 2016.

<sup>1</sup> Source: Pitchbook.

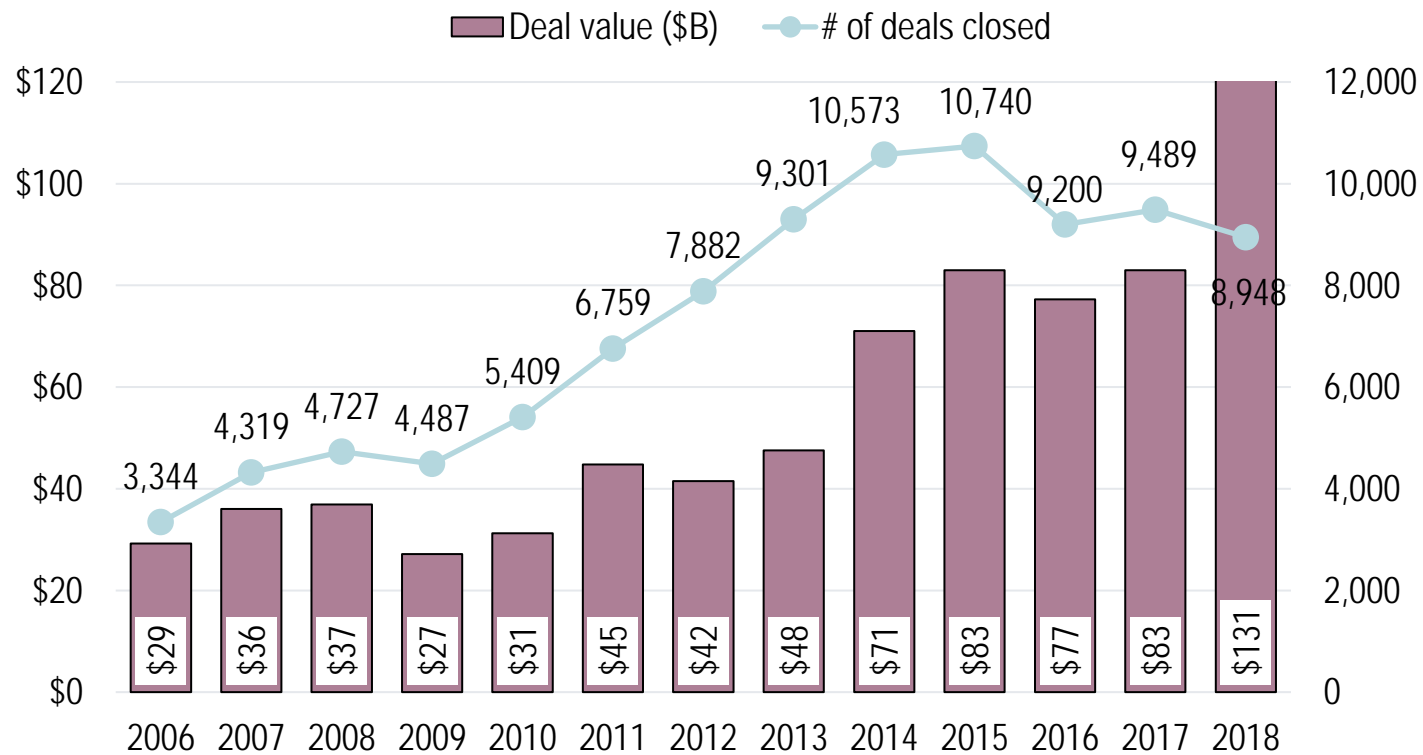
### U.S. PE-backed Exits (\$ Value), Q4 2018<sup>1</sup>



- For 2018, Corporate Acquisitions and Secondary Buyouts experienced a decrease in share of U.S. PE-backed exits as compared to 2017, losing 2% and 4% respectively.
- PE-backed IPO activity reached its highest level since 2014's record of \$86.2 billion, ending the year at nearly \$50 billion.
- Many of 2018's largest exits occurred in the technology sector, with 23 exits valued at or above \$1 billion. Most of these exits came via IPO or Corporate Acquisitions.

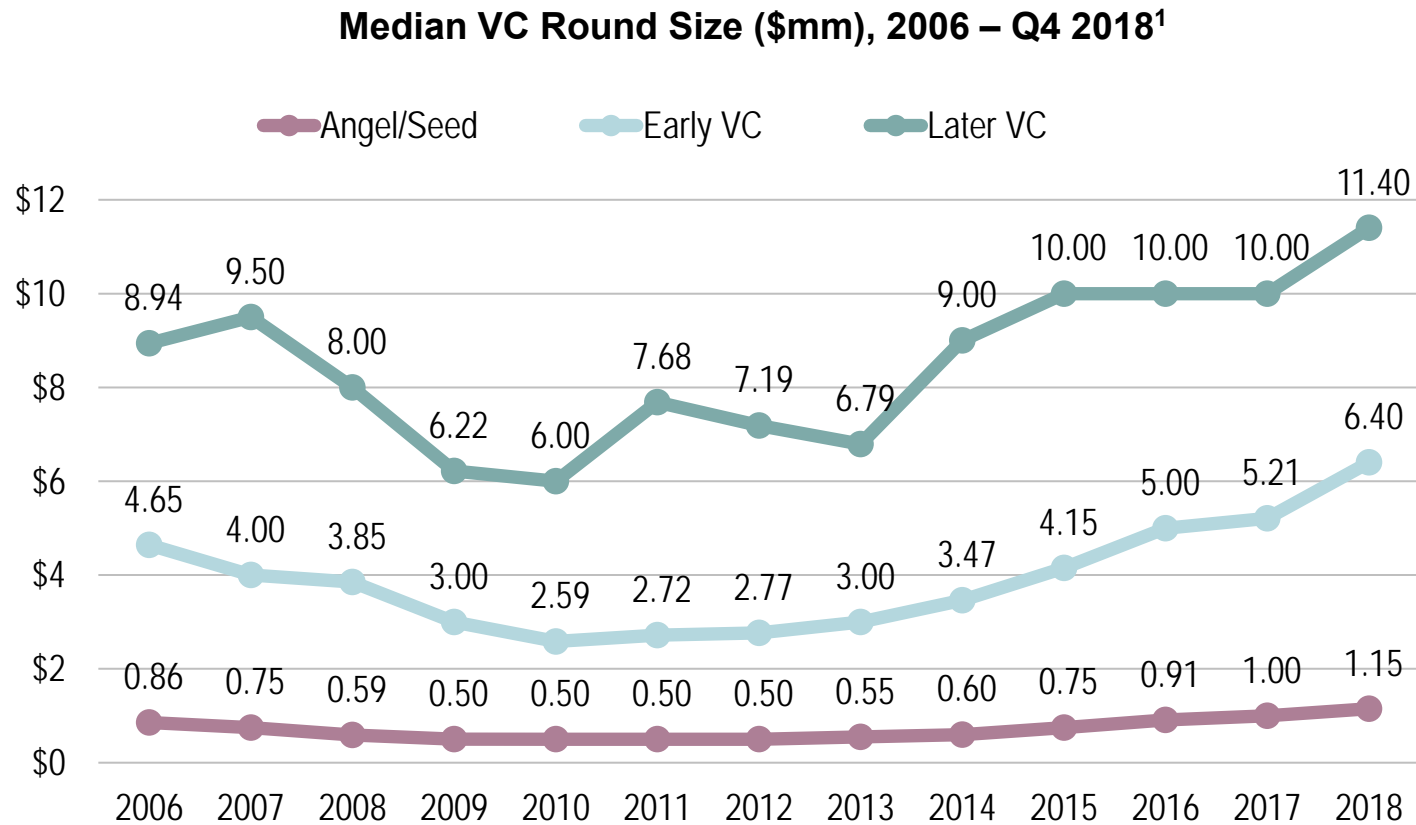
<sup>1</sup> Source: Pitchbook. Based on first quarter of 2018.

### U.S. VC Activity by Year, 2006 – Q4 2018<sup>1</sup>



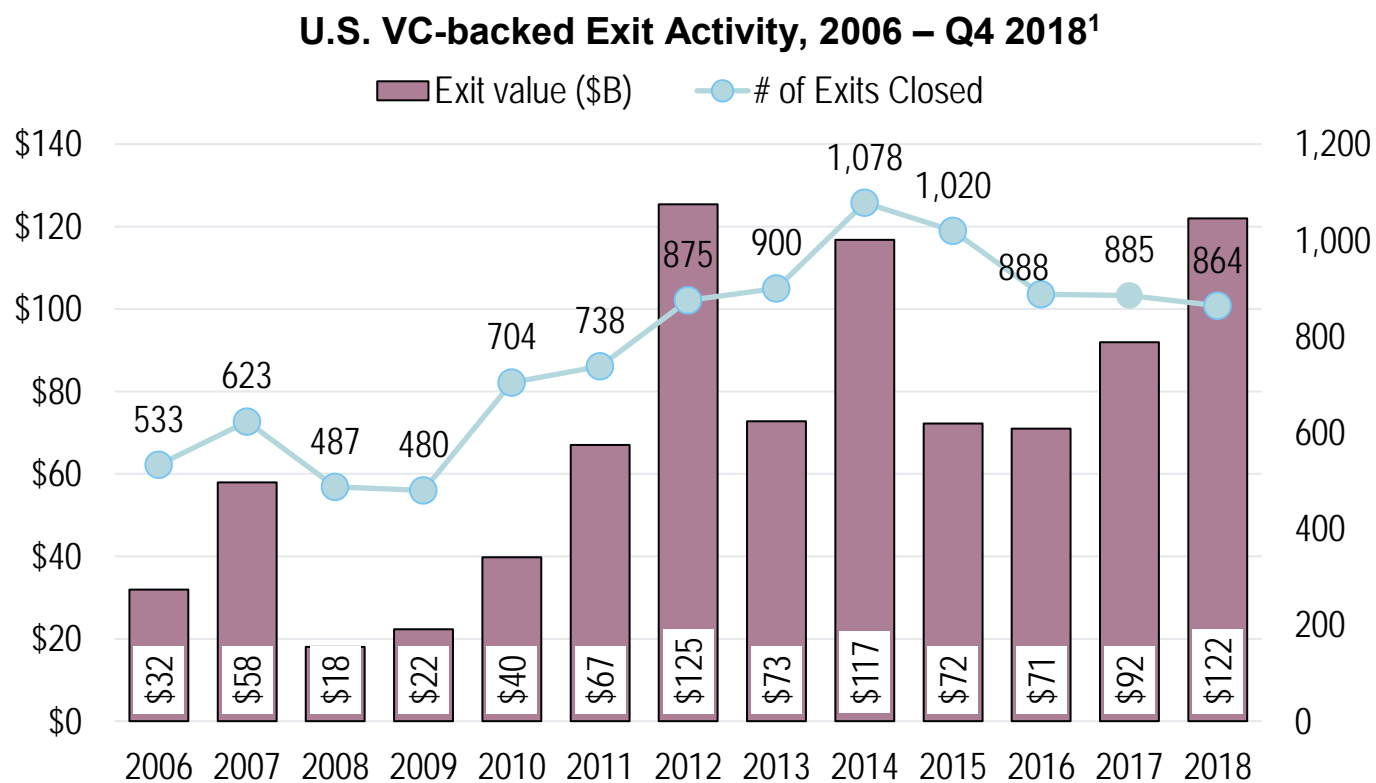
- U.S. Venture activity surpassed the \$100 billion watermark set at the height of the dot-com boom in 2000 with \$131 billion invested in 2018.
- Investments in “unicorns,” or firms valued greater than \$1 billion, accounted for 34% of all VC investment during the year and driving the average deal size to record levels.

<sup>1</sup> Source: Pitchbook.



- Median round sizes for U.S. venture transactions continued to rise with Angel, Early, and Late stage round size, all increasing in 2018.
- The profile of companies at each stage appears to have shifted across the entire venture funding cycle.

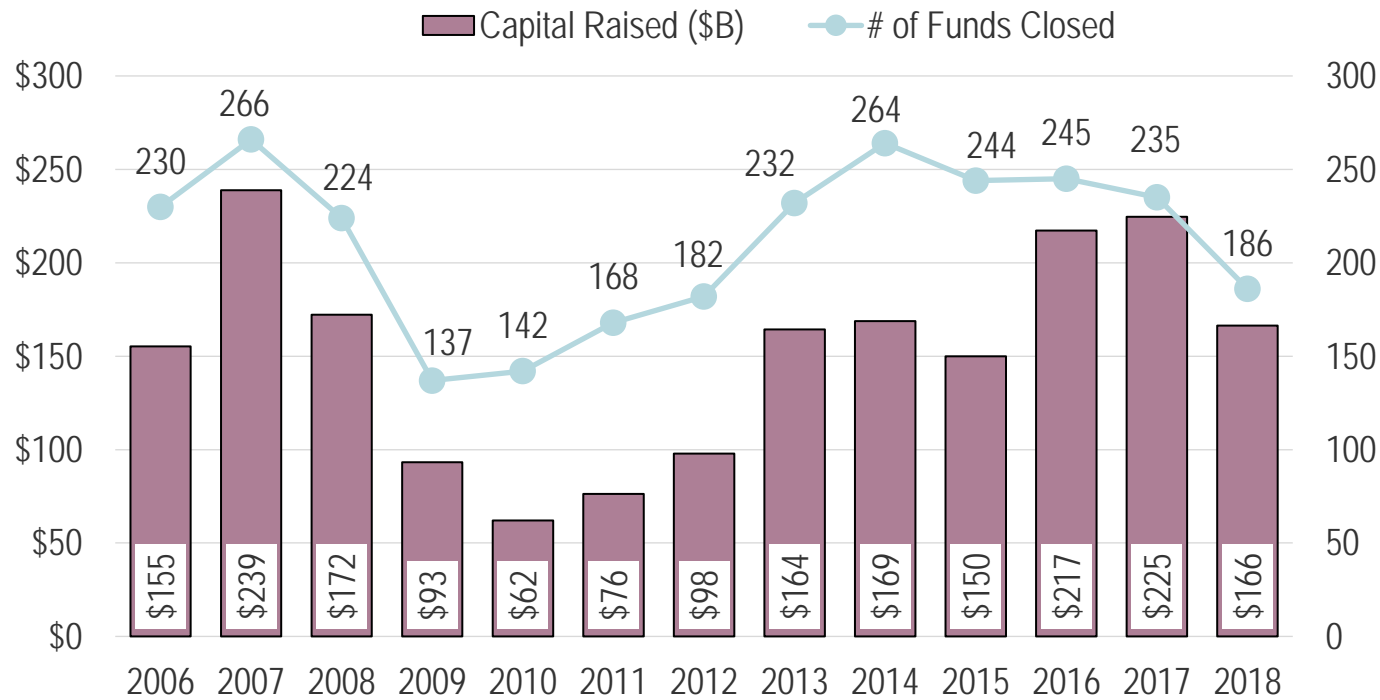
<sup>1</sup> Source: Pitchbook.



- 2018 was a strong year for U.S. VC-backed exits, with \$122 billion in total exit value, representing a 33% increase over 2017.
- Fourth quarter 2018 was one of the stronger recent quarters on an exit value basis, despite the public market volatility and relatively flat exit counts.

<sup>1</sup> Source: Pitchbook.

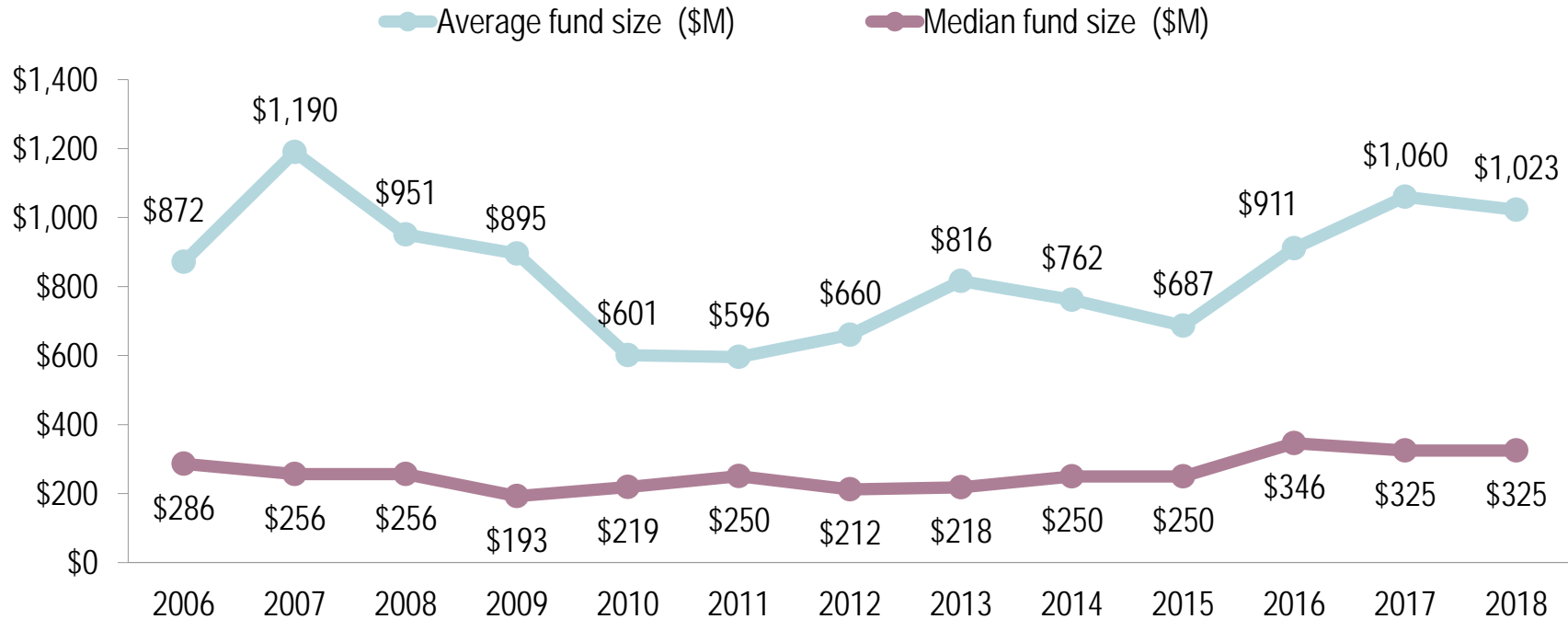
### U.S. PE Fundraising, 2006 – Q4 2018<sup>1</sup>



- Fundraising in 2018 weakened, totaling \$166 billion in capital raised across 186 funds, representing a 26% and 21% decline compared to 2017, respectively.
- The decline in fundraising is largely driven by fewer mega-funds closing, with only five closing during the year (\$52.8 billion), compared to 10 in 2017 (\$107.0 billion).

<sup>1</sup> Source: Pitchbook.

### Average & Median U.S. PE Buyout Fund Size, 2006 – Q4 2018<sup>1</sup>



- Capital continues to remain concentrated at the top with funds sized at \$1 billion or greater accounting for 62% of total fundraising in 2018. The 10 largest funds accounted for nearly one quarter of capital raised.<sup>2</sup>
- Average fund size dropped in 2018, while the median fund size held steady. The average time to close increased to 15.0 months.<sup>1</sup>

<sup>1</sup> Source: Pitchbook.

<sup>2</sup> Source: Preqin.

## Portfolio Overview



**CalPERS Private Equity Overview**  
As of December 31, 2018

Strategy	NAV <sup>1</sup> (\$ mm)	Percent of Total NAV (%)	CalPERS Target (%)	Target Range (%)
Buyout	18,228	65.5	65	55-75
Credit	2,358	8.5	10	0-15
Growth/Expansion	4,451	16.0	15	5-20
Opportunistic	2,063	7.4	10	0-15
Venture	690	2.5	1	0-7
Other <sup>2</sup>	53	0.2	NA	NA
Total Program	27,843	8.3 <sup>3</sup>	8	+/- 4%

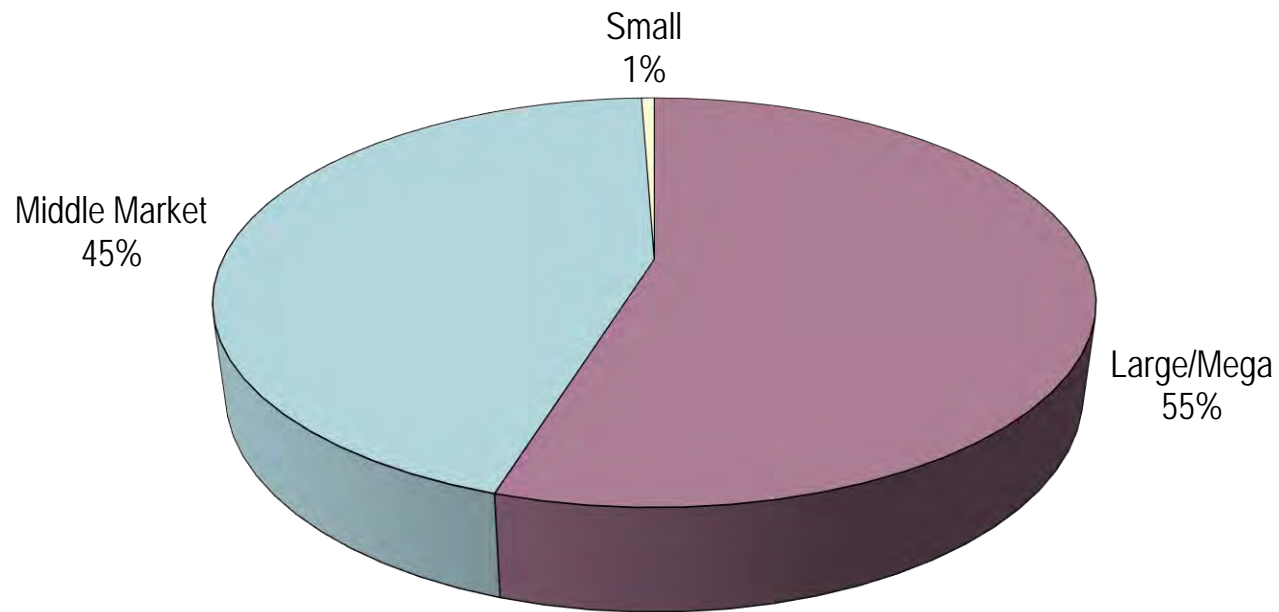
- The CalPERS Private Equity Program was within the diversification ranges outlined in the Private Equity Investment Policy.
- Due to the Program's shift away from Venture in recent years, the sector is becoming a smaller portion of overall exposure.
- The overall private equity program was slightly above the Policy Target of 8% as of December 31, 2018.

<sup>1</sup> Source: State Street.

<sup>2</sup> Includes currency and stock holdings.

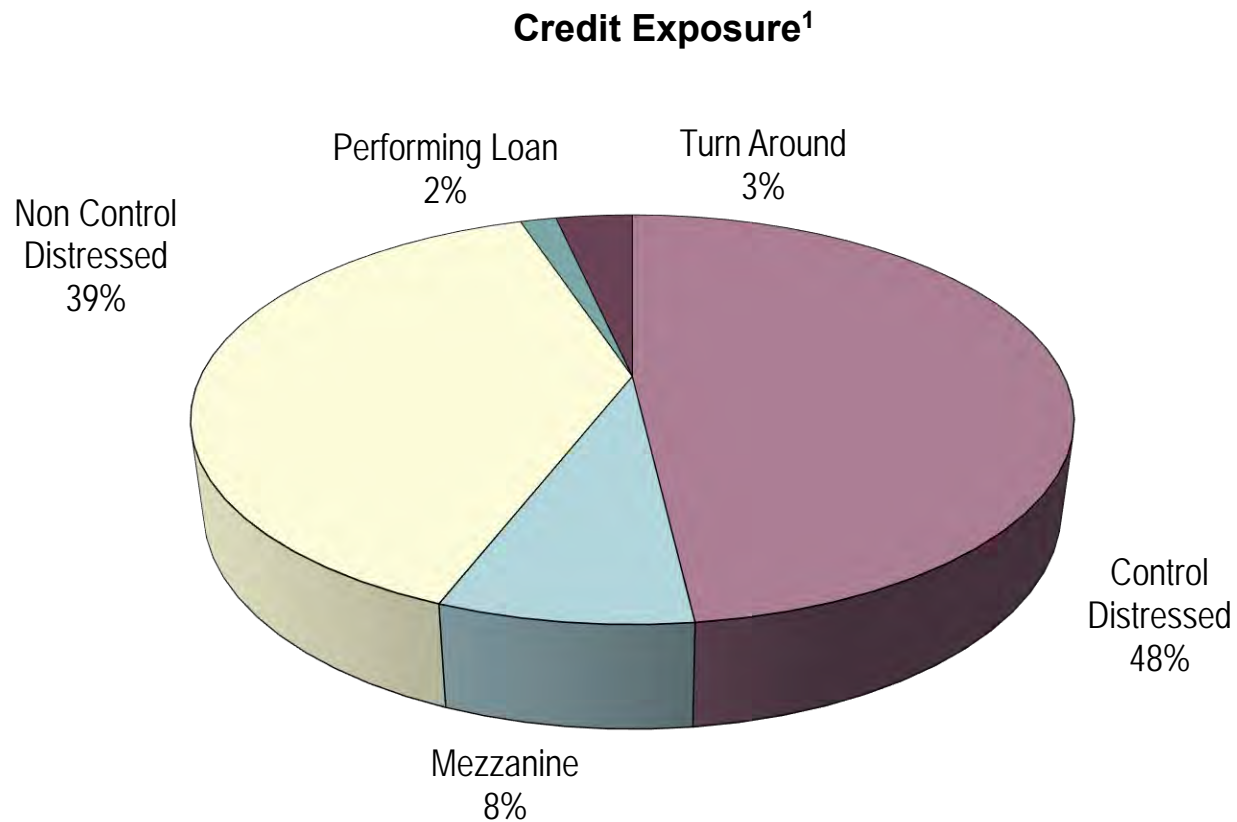
<sup>3</sup> PE program NAV as a percent of total CalPERS portfolio as of 12/31/2018.

### Buyouts Exposure<sup>1</sup>



- The CalPERS Buyouts portfolio maintains a large exposure to both Large/Mega Buyouts (55%) and Middle Market Buyouts (44%), with minimal exposure to Small Buyouts (1%).

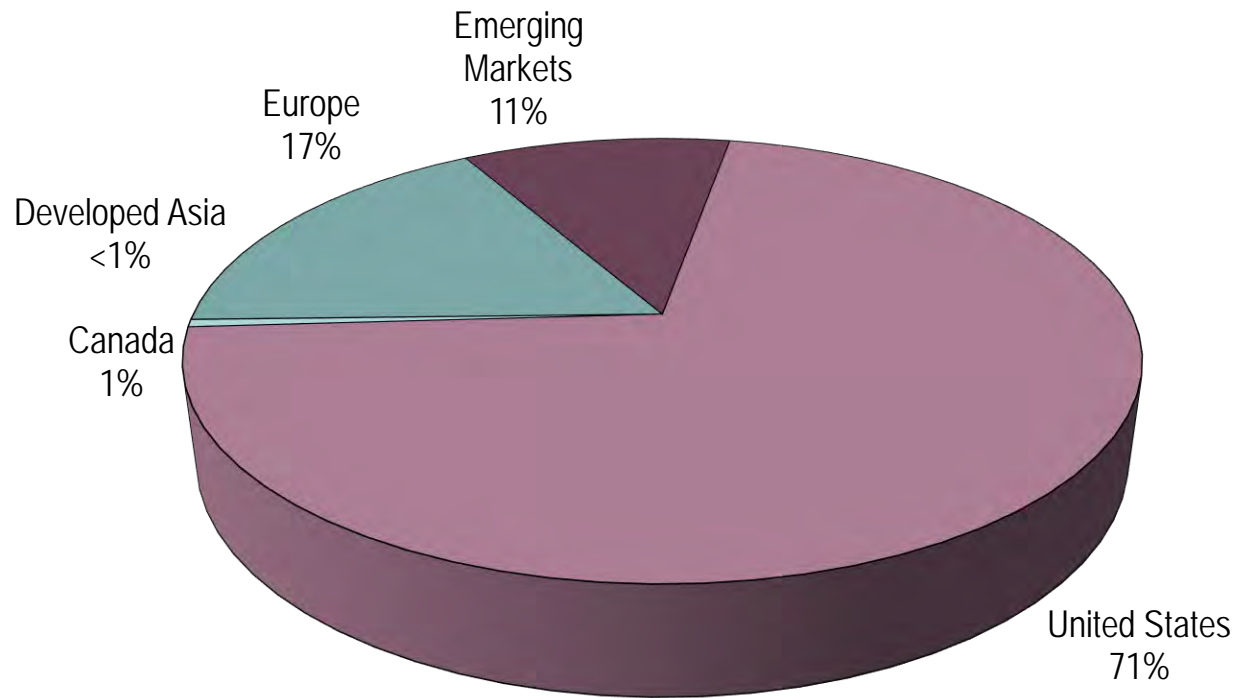
<sup>1</sup> Source: State Street, CalPERS.



- Nearly half of CalPERS Credit portfolio exposure is attributable to Control Distressed investments with another 39% in Non Control Distressed investments. Mezzanine investments (8%), Turn Around investments (3%), and Performing Loans (2%) make up the remainder of CalPERS Credit exposure.

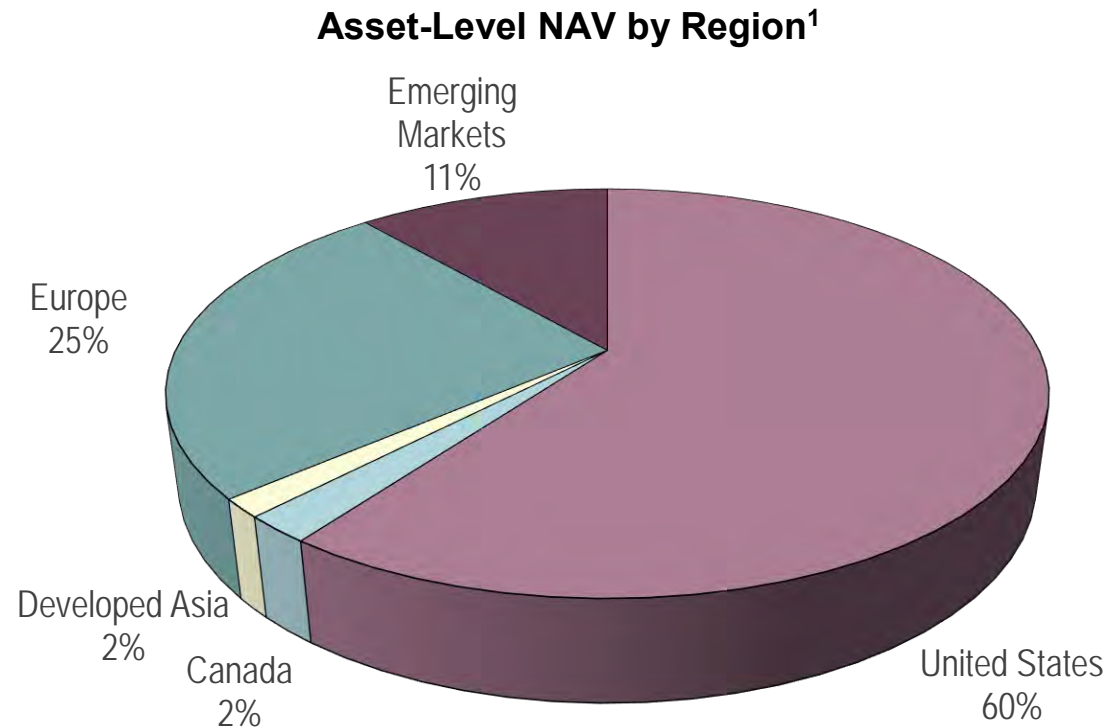
<sup>1</sup> Source: State Street, CalPERS.

### Fund-Level NAV by Region<sup>1</sup>



- The Program has primarily targeted U.S.-focused investments, which comprise approximately 71% of the total unrealized value.

<sup>1</sup> Source: State Street.

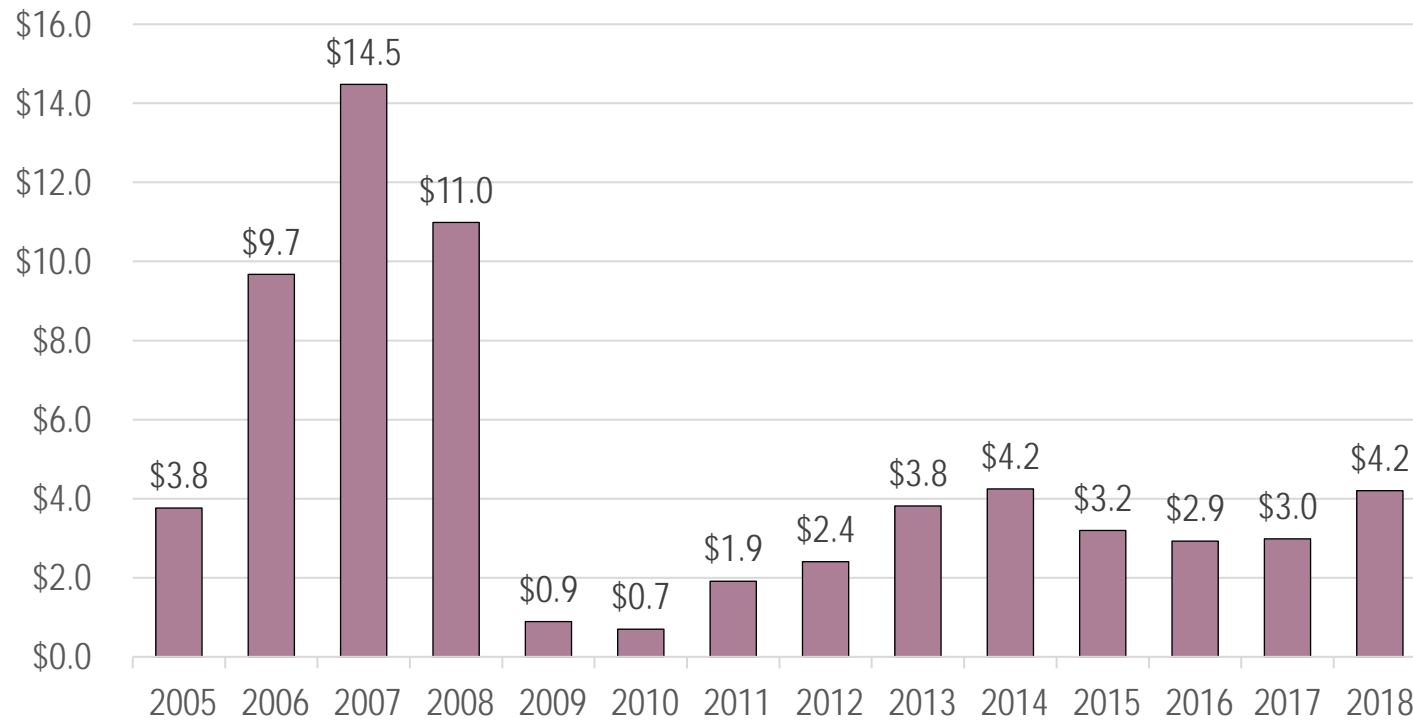


- At the asset level, the majority of the Program's NAV is held in U.S.-based portfolio companies at 60%, along with meaningful exposure to Europe (25%), and Emerging Markets (11%).

<sup>1</sup> Source: CalPERS, as of 6/30/2018. Asset-level data not available as of 12/31/2018.

### Vintage Year Composition (2005 – 2018)

#### Total Commitments (\$ bn)<sup>1</sup>



- The PE program has recently increased its annual commitment pace.
- The Program made significant commitments to the 2005-2008 vintage years, which represent 44% of total historical commitments.

<sup>1</sup> CalPERS. Some commitments signed during 2018 are not yet included in data.

### Vintage Year Composition

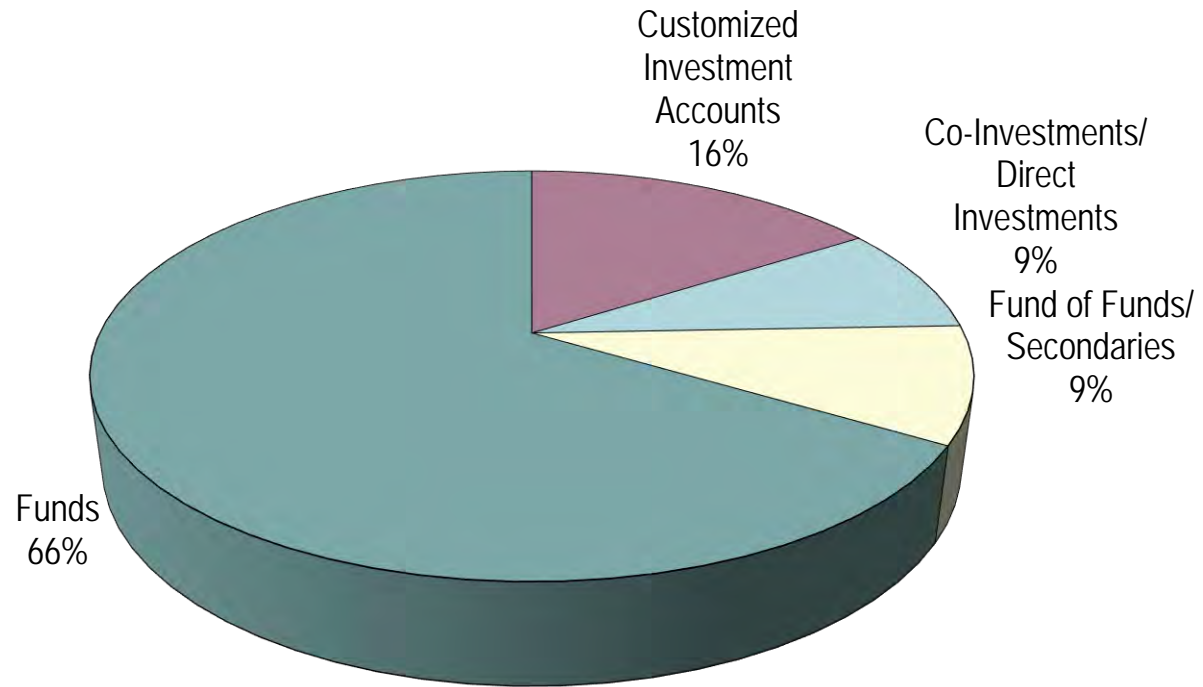
Vintage Year (% of Unfunded Commitments)<sup>1</sup>



- Vintage years 2013-2018 account for nearly three-quarters of the Program’s current unfunded commitments.

<sup>1</sup> CalPERS.

### NAV by Structure<sup>1</sup>

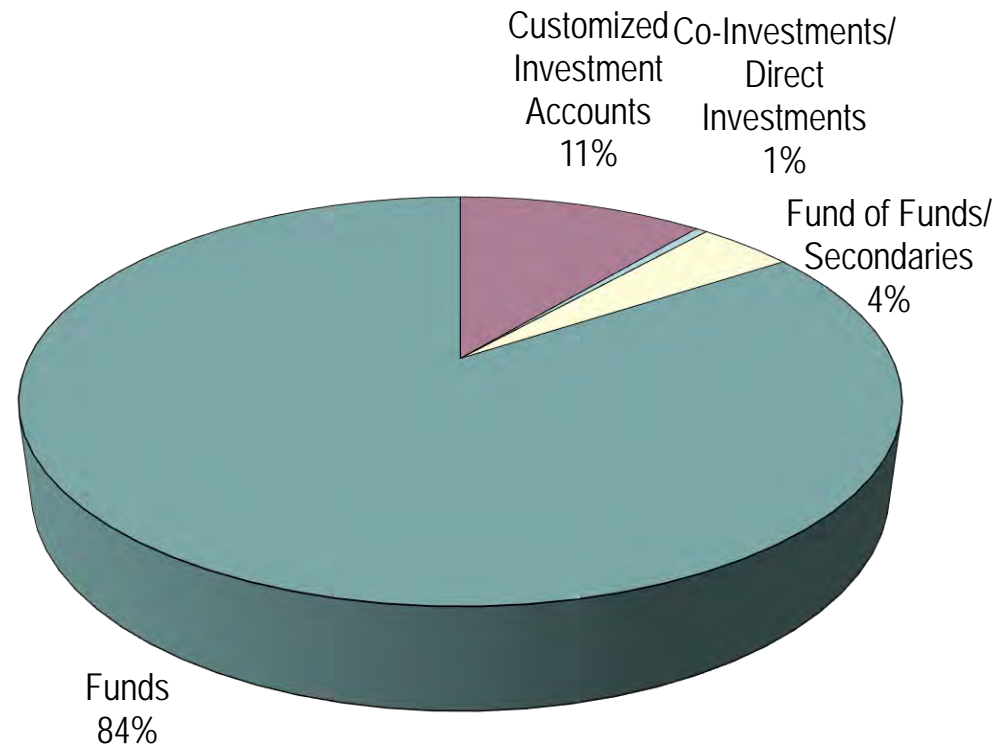


- Fund investments make up approximately two-thirds of the Program's NAV.

<sup>1</sup> Source: State Street.



### Unfunded Commitment by Structure<sup>1</sup>



- Fund investments comprise even more of the Program's unfunded commitments (relative to NAV) at over 80% of the total.
- Co-Investments, Direct Investments, Fund of Funds, and Secondaries make up only 5% of the Program's unfunded commitments, while comprising close to one-fifth of the Program's NAV.

<sup>1</sup> Source: CalPERS.

**Largest Manager Relationships  
As of December 31, 2018**

Manager	Number of Vehicles <sup>1</sup>	Remaining Value <sup>2</sup> (\$ mm)	Unfunded Commitment <sup>2</sup> (\$ mm)	Total Exposure (\$ mm)	Total Program Exposure (%)
The Blackstone Group <sup>3</sup>	21	3,083	1,742	4,825	10.8
The Carlyle Group <sup>4</sup>	25	1,151	1,769	2,920	6.5
CVC Capital Partners	8	1,725	740	2,465	5.5
Apollo Global Management <sup>5</sup>	12	1,653	700	2,354	5.3
TPG Capital <sup>6</sup>	16	751	1,251	2,002	4.5

- CalPERS PE Program has regularly committed across several vehicles offered by the managers listed above, including select co-investments. In several cases, the commitments are managed by separate teams within the manager and execute on different strategies.
- No new commitments to the Program's five largest manager relationships were made during the second half of 2018.

<sup>1</sup> Only includes vehicles with remaining exposure. Includes co-investments.

<sup>2</sup> Source: CalPERS.

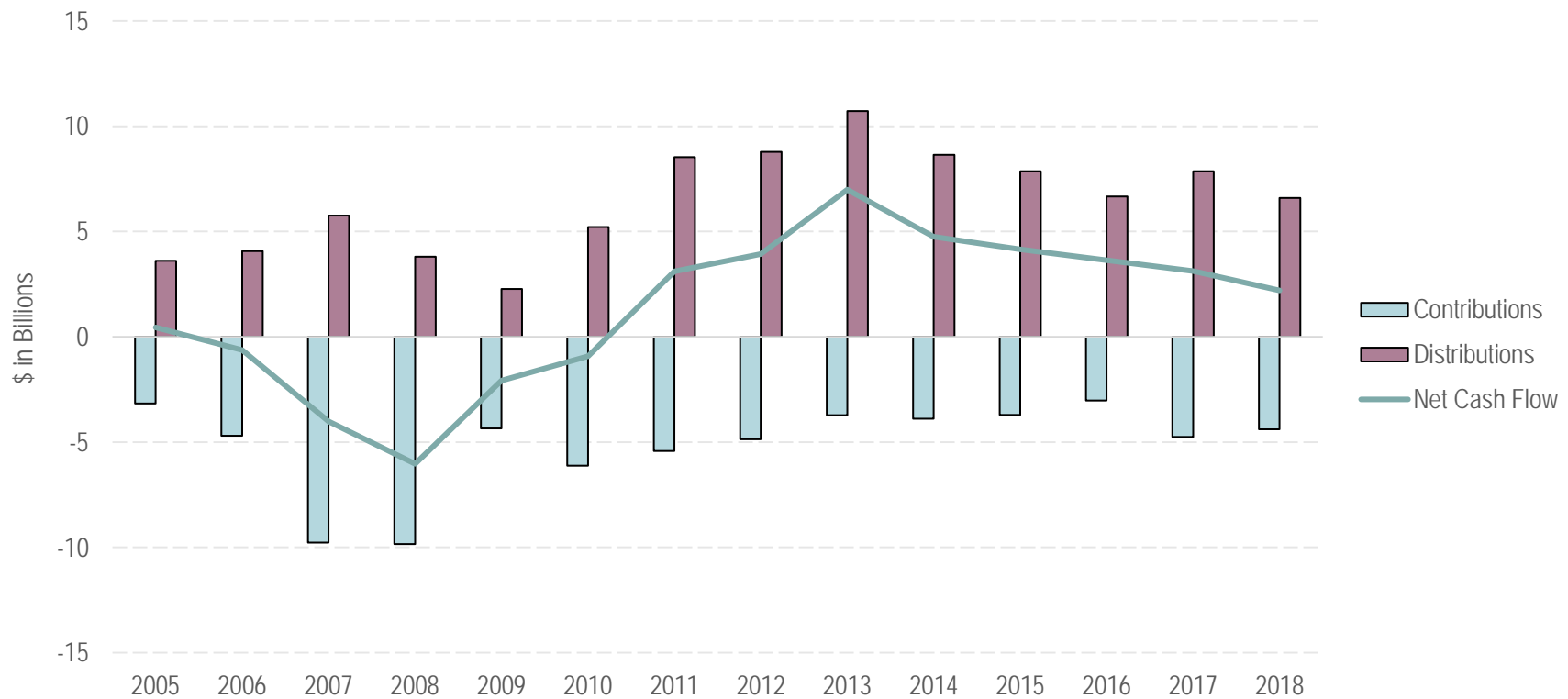
<sup>3</sup> Includes GSO.

<sup>4</sup> Includes Carlyle Realty Partners. Does not include Carlyle/Riverstone.

<sup>5</sup> Includes managed account and investment in Apollo Global Management.

<sup>6</sup> Includes TPG Asia.

### Annual Cash Flows – Total Program Through December 31, 2018<sup>1</sup>

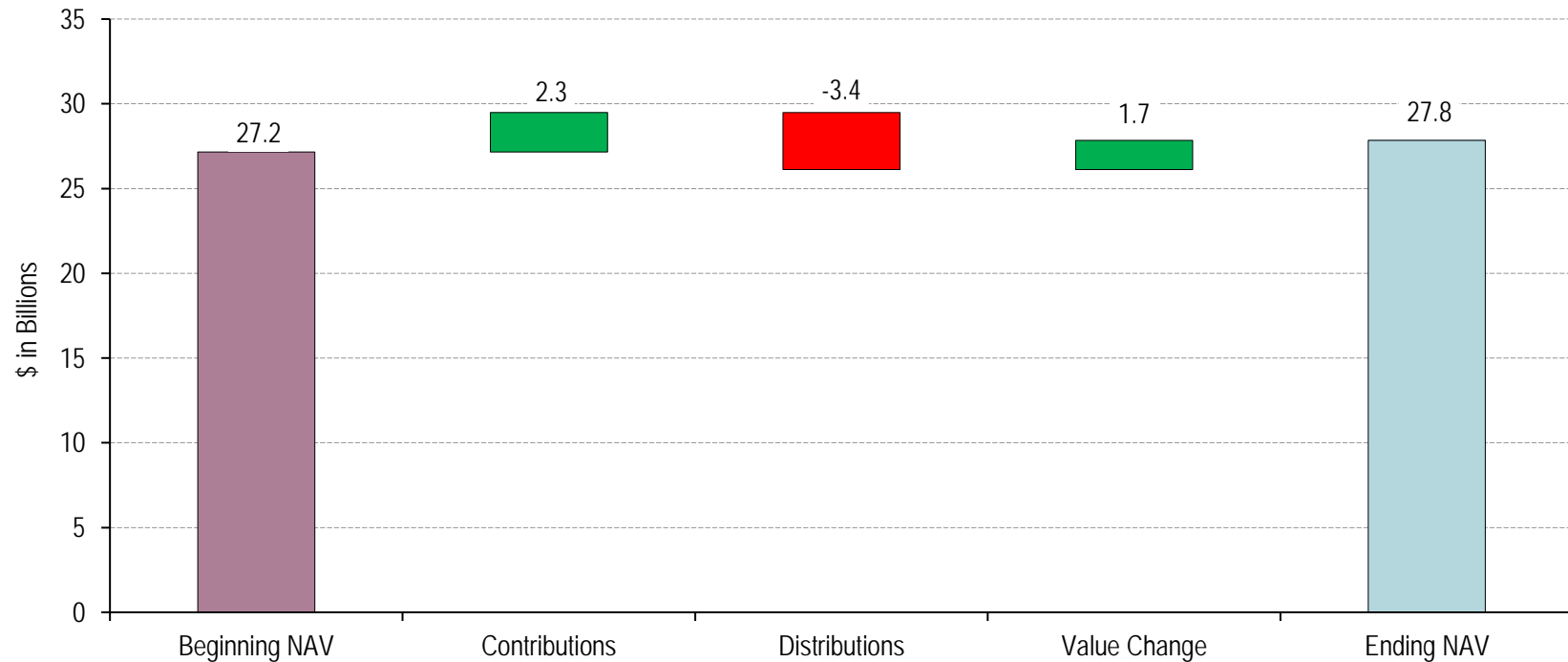


- Since 2011, CalPERS has received \$31.9 billion in net distributions due to the strong exit environment.
- This trend continued through the second half of 2018, though the pace of net distributions continued to slow.

<sup>1</sup> Source: State Street.

## **Program Performance**

### Program Value Change – July 1 to December 31, 2018<sup>1</sup>



- The Private Equity Program reported a total value increase of \$0.7 billion in the six months from July 2018 to December 2018, with strong net cash distributions mostly offsetting the portfolio value increase.
- The Private Equity Program reported a positive portfolio value increase of approximately \$1.7 billion during this time period.

<sup>1</sup> Source: State Street, CalPERS.

### Program Performance

	1 Year	3 Year	5 Year	10 Year
CalPERS PE Program <sup>1</sup>	12.5	12.3	11.3	11.4
<i>Policy Benchmark<sup>2</sup></i>	13.0	17.5	13.2	14.5
<i>Cambridge Associates All PE Global<sup>3</sup></i>	16.8	13.9	13.8	11.5
<i>FTSE All World + 150 bp<sup>4</sup></i>	11.9	15.7	10.9	10.4
Excess vs. Policy Benchmark (%)	↓ -0.6	↓ -5.2	↓ -1.9	↓ -3.2
Excess vs. CA All PE Global (%)	↓ -4.3	↓ -1.6	↓ -2.5	↓ -0.2
Excess vs. FTSE All World + 150 bp (%)	↑ 0.6	↓ -3.4	↑ 0.4	↑ 0.9

- The overall Program performance has shown strong absolute returns in the 1-, 3-, 5-, and 10-year time periods, but continues to trail the Policy Benchmark.
  - The Program’s historical performance has exceeded the Private Equity projected return included in the recently adopted Capital Market Assumptions (8.3%).
- The Program’s performance has underperformed the Cambridge Associates index (private equity peer index).
- The Program has exceeded the FTSE All World Index plus 150 basis points in the 1-, 5-, and 10-year periods, while underperforming in the 3-year period.

<sup>1</sup> Source: State Street. CalPERS returns are reported as time-weighted.

<sup>2</sup> The current Policy Benchmark is a Custom FTSE All World, All Cap Equity + 150 basis points, lagged by one quarter. Previous benchmark was blend FTSE U.S. + FTSE AW ex U.S. + 3% lagged 1 quarter from September 2011 to June 2018, Wilshire 2500 ex-tobacco +3% between July 2009 and September 2011, and the Custom Young Fund Index prior to July 2009.

<sup>3</sup> Returns as of September 30, 2018. Figures are IRR.

<sup>4</sup> Figures are one quarter lagged, time weighted.

### Strategy Performance<sup>1</sup>

	NAV (\$ mm)	1 Year	3 Year	5 Year	10 Year
Buyouts	18,228	15.3	15.1	13.2	11.7
Credit	2,358	5.5	4.1	4.5	10.9
Growth/Expansion	4,451	7.8	13.5	11.5	12.5
Opportunistic	2,063	11.6	9.0	13.8	11.3
Venture	690	8.8	0.3	4.6	4.0
Other <sup>2</sup>	53				
CalPERS PE Program	27,843	12.5	12.3	11.3	11.4

- Buyouts investments have generated strong returns in the 1-, 3-, 5-, and 10-year time periods.
- The Program's Credit and Venture portfolios have underperformed other strategies over all trailing periods.

<sup>1</sup> Source: State Street. All trailing returns included in this report are time-weighted.

<sup>2</sup> Includes currency and stock holdings.

### Performance by Structure<sup>1</sup>

	NAV (\$ mm)	1 Year	3 Year	5 Year	10 Year
Customized Investment Accounts	4,437	13.8	9.5	9.7	10.3
Co-Investments/Direct Investments	2,346	3.4	17.4	9.3	15.3
Fund of Funds/Secondaries	2,547	12.0	7.0	11.2	7.4
Funds	18,460	13.6	13.4	11.7	11.9
Other <sup>2</sup>	53				
CalPERS PE Program	27,843	12.5	12.3	11.3	11.4

- Over all trailing time periods, Fund investments have performed well while also making up a significant majority of the PE Program.
- Co-Investments/Direct Investments performed very well across the 3- and 10-year periods, while generating low returns in the trailing 1-year period. Due to the concentration of the Co-Investment/Direct Investment portfolio, a small number of substantial investments tend to drive performance.
- Fund of Funds/Secondaries have lagged the broader PE Program over all trailing time periods, most significantly in the 3- and 10-year periods.

<sup>1</sup> Source: State Street.

<sup>2</sup> Includes currency and stock holdings.



### Performance by Geography<sup>1</sup> (Fund-Level)

	NAV (\$ mm)	1 Year	3 Year	5 Year	10 Year
United States	19,809	12.6	11.4	10.6	11.7
Canada	148	17.6	21.3	17.9	10.8
Developed Asia	4	-25.5	12.3	12.3	3.0
Europe	4,760	15.9	19.8	15.8	10.0
Emerging Markets	3,068	8.2	9.7	11.4	10.9
Other <sup>2</sup>	53				
CalPERS PE Program	27,843	12.5	12.3	11.3	11.4

- The Program's returns are largely driven by investments in United States.
- European investments have outperformed U.S. investments over the previous 1-, 3-, and 5-year periods, while underperforming over the last 10 years.
- Investments in the Emerging Markets have generally underperformed.
- The Program's investments in Developed Asia, comprising a very small amount of capital, significantly underperformed over the prior 1-year period due to mark-downs of assets within a Japan-focused Buyout fund. Investments in Canada, also accounting for a relatively small portion of total NAV, have generated strong returns over 1-, 3-, and 5-year periods.

<sup>1</sup> Source: State Street.

<sup>2</sup> Includes currency and stock holdings.

## **Program Activity**

### CalPERS Private Equity Completed Investments – H2 2018

Investment	Date Signed	Geography	Strategy	Commitment (\$ mm)
Welsh Carson Anderson & Stowe XIII	July 2018	U.S.	Buyout	400
Tailwind Capital Partners III	July 2018	U.S.	Buyout	200
PAG Asia III	August 2018	Asia	Buyout	380
Hellman & Friedman IX	August 2018	U.S./Europe	Buyout	650
Triton V	August 2018	Europe	Buyout	290
KKR Europe V	September 2018	Europe	Buyout	300
Grosvenor Capital Management (GCM)	October 2018	Global	Fund of Funds	500
Insight Venture Partners X - CIA	November 2018	U.S./Europe	Growth Equity	400

- For the second half of 2018, Staff completed eight commitments totaling \$3.1 billion.

## Appendix

Vintage Years	Capital Committed <sup>1</sup> (\$ mm)	Total Contributions <sup>1</sup> (\$ mm)	Unfunded Commitment <sup>1</sup> (\$ mm)	Total Distributions <sup>1</sup> (\$ mm)	Reported Value <sup>1</sup> (\$ mm)
Vintage Year 1990	125.3	124.1	0.0	298.1	0.0
Vintage Year 1991	171.8	207.2	0.0	537.7	0.0
Vintage Year 1992	160.0	156.6	0.0	341.5	0.0
Vintage Year 1993	538.0	567.9	0.0	1,083.3	0.0
Vintage Year 1994	1,494.2	1,512.9	0.0	2,515.6	0.0
Vintage Year 1995	1,222.9	1,236.8	0.0	2,034.4	0.0
Vintage Year 1996	1,157.3	1,183.2	3.1	1,579.8	0.4
Vintage Year 1997	1,101.7	1,133.5	0.0	1,668.7	0.0
Vintage Year 1998	2,205.5	2,388.1	0.3	3,166.6	0.2
Vintage Year 1999	3,287.4	3,456.5	55.1	4,237.2	64.7
Vintage Year 2000	2,708.5	2,675.7	12.2	3,886.3	7.8
Vintage Year 2001	4,520.6	4,766.9	55.8	7,581.7	213.7
Vintage Year 2002	884.6	1,104.0	1.5	1,537.7	75.3
Vintage Year 2003	1,543.2	1,751.8	36.5	3,480.0	77.2
Vintage Year 2004	1,887.5	1,972.8	42.5	3,180.3	32.9
Vintage Year 2005	3,763.8	3,971.0	197.3	5,644.3	157.4
Vintage Year 2006	9,673.9	10,901.0	644.4	13,692.4	1,324.9
Vintage Year 2007	14,478.7	15,712.9	697.7	19,768.9	3,207.4
Vintage Year 2008	10,986.9	12,561.4	623.6	16,799.3	3,501.0
Vintage Year 2009	891.5	849.9	61.4	582.8	613.4

<sup>1</sup> Source: CalPERS.

Vintage Years (Continued)	Capital Committed <sup>1</sup> (\$ mm)	Total Contributions <sup>1</sup> (\$ mm)	Unfunded Commitment <sup>1</sup> (\$ mm)	Total Distributions <sup>1</sup> (\$ mm)	Reported Value <sup>1</sup> (\$ mm)
Vintage Year 2010	699.4	847.7	39.3	1,030.6	305.2
Vintage Year 2011	1,911.6	1,964.0	251.5	1,694.7	1,384.0
Vintage Year 2012	2,406.0	2,683.7	264.4	2,107.7	1,925.2
Vintage Year 2013	3,815.9	3,799.7	742.4	1,922.2	3,478.0
Vintage Year 2014	4,246.9	3,816.3	815.0	1,521.4	3,302.0
Vintage Year 2015	3,196.1	2,397.8	918.5	725.9	2,820.1
Vintage Year 2016	2,926.6	2,484.7	1,167.3	416.3	2,322.0
Vintage Year 2017	2,984.2	2,020.3	1,058.0	164.6	2,010.0
Vintage Year 2018	4,202.3	787.9	3,414.8	1.9	815.4

<sup>1</sup> Source: CalPERS.

Strategies	Capital Committed <sup>1</sup> (\$ mm)	Total Contributions <sup>1</sup> (\$ mm)	Unfunded Commitment <sup>1</sup> (\$ mm)	Total Distributions <sup>1</sup> (\$ mm)	Reported Value <sup>1</sup> (\$ mm)
Buyouts	56,839.2	51,640.6	12,966.8	60,726.0	18,271.6
Credit	11,733.8	12,327.0	1,129.4	15,596.8	2,356.1
Growth/Expansion	12,531.1	11,564.3	1,447.9	12,476.1	4,357.0
Opportunistic	6,094.5	5,342.4	1,474.4	5,006.9	1,965.6
Venture	8,002.4	8,161.9	93.0	9,396.0	689.5

<sup>1</sup> Source: CalPERS.