PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS

PERIOD ENDING: DECEMBER 31, 2017
Private Equity Review
San Mateo County Employees’ Retirement Association
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DEBT RELATED

**HY and leveraged loan issuance was up.** 2017 US high yield issuance of $281.0 billion\(^1\) was up 23.1% from 2016 and leveraged loan volume of $1.4 trillion\(^1\) was up 60.0% versus 2016 and higher than the previous high-point ($1.1 trillion) recorded in 2013. The growth was driven largely by robust refinancing activity.

**Spreads tightened across the board.** Reflecting a red hot credit market, US HY Credit Index tightened by 107 bps or 22.3%\(^2\) versus the same period last year. BB, B and CCC index tightened by 45 bps, 81 bps and 125 bps respectively, a 14.4%\(^2\), 15.9%\(^2\) and 9.4%\(^2\) decrease versus the same period last year.

**LBO debt terms loosen.** US total leverage (Debt / EBITDA) for 1H17 at 5.7x\(^3\) up 4.4% from last year. Interest coverage (EBITDA / Cash Interest) of 2017 was flat at 3.06x\(^3\).

GLOBAL

**PE dry powder continues its surge.** At the end of 2017, global total PE dry powder was at $1.15 trillion\(^4\), up 9.8% from 2016. US total PE was up by 11.8% to $648.6 billion\(^4\); Europe was down by 1.5% to $259.6 billion\(^4\); Asia was up by 27.6% to $204.5 billion\(^4\); and the Rest of the World total PE was down by 14.3% to $36.6 billion\(^4\).

**Investment activity was up.** During 2017, global PE firms invested in $529.5 billion\(^6&15\) worth of deals, up 9.5% from prior year and closed on 15,335 transactions\(^6&15\), down 5.4% from prior year.

US BUYOUTS

**Dry powder increased.** At the end of 2017, US buyout dry powder was $368.3 billion\(^4\), up by 20.7% from 2016.

**Fundraising strengthened.** In 2017, US buyout firms across all buyout strategies raised $176.4 billion\(^5\), up 46.8% from prior year.

**Investment activity declined.** During 2017, US buyout firms invested in $174.8 billion\(^6\) worth of deals, down 7.9% from prior year and closed on 2,284 transactions\(^6\), up 6.9% from prior year.
LBO price multiples hit a new peak. As of December 31, 2017, US LBO purchase price multiples (Enterprise Value / EBITDA) were at 10.6x, a 5.9% increase from prior year. This was above the peak of 10.0x in 2015.

Exit activity decreased. During 2017, US buyout firms exited 778 companies, representing $141.5 billion in total transaction value. This represented a 2.5% decrease in the number of exits and a 24.6% decrease in total transaction value compared to prior year.

US VENTURE CAPITAL

Dry powder increased. At the end of 2017, US VC dry powder was at $93.1 billion, up 5.9% from the same period last year.

Fundraising was down. US VC firms raised $30.2 billion in 2017, an 11.6% decrease from the same period last year. 222 funds closed in 2017, a 0.9% increase from the same period last year. The average US VC fund size decreased by 12.4% at $136.0 million versus the same period last year.

Increase in investment activity. US VC firms deployed $77.0 billion in capital for 2017, a 26.0% increase from prior year. The number of rounds closed at 4,302, a 13.4% increase from prior year. The average investment per deal increased slightly to $17.9 million, an 11.1% increase from prior year.

All stages valuations were up. Compared to 2016, the average pre-money valuations increased across all stages in 2017: up 8.3% at $6.5 million for Seed stage, 9.0% at $17.0 million Series A, 5.6% at $45.0 million Series B, 23.4% at $103.8 million Series C, and 90.9% at $255.3 Series D. Over the past 5 years, the average pre-money valuations of Seed stage, Series A, Series B, Series C and Series D investments were up 68.4%, 131.3%, 101.2%, 105.0% and 206.2%, respectively.

Exit activity increased. US VC firms exited 676 companies in 2017, up 3.0% from the same period last year, representing $51.7 billion in transaction value up 13.2% from the same period last year.
EX US dry powder grew but less than dry powder in the US. PE dry powder outside the US grew to $500.7 billion\(^4\) for 2017, a 7.3% increase versus the same period last year. However, dry powder outside the US was still less than dry powder in the US ($648.6 billion\(^4\)) by 22.8%.

Europe buyout and VC dry powders were up. In 2017, Europe buyout dry power was $184.1 billion\(^4\), up by 0.8% from last year. Same time, VC dry powder in Europe grew to $23.1 billion\(^4\), a 17.3% increase from prior year.

Dry powder of buyout, VC and growth equity in Asia increased significantly. At the end of 2017, Asia buyout dry power was $55.8 billion\(^4\), up by 0.8% from last year. VC dry powder in Asia increased to $56.9 billion\(^4\), up by 22.4% from prior year. Growth equity dry powder grew to $72.8 billion\(^4\), a 69.3% increase from 2016.

Fundraising outside of US was up. For 2017, Ex US fundraising was up 15.3% to $181.3 billion\(^5\) compared to prior year. The increase was led by Asian funds which raised $63.9 billion\(^5\), up 65.37% from prior year. The increase was offset by a decrease in funds in Europe which raised $108.2 billion\(^5\), down 1.4% from prior year. Fundraising in the Rest of the World was up 6.8% to $9.2 billion\(^5\) compared to prior year.

Investments activity was up. Both buyout and venture capital firms increased the number of deals and aggregate deal volume in 2017.

Europe buyout and VC investment activities increased. In 2017, Europe buyout firms transacted on $98.1 billion\(^6\) in aggregate value, up by 12.0% from last year. VC investment activity was up from $12.1 billion prior year to $17.7 billion\(^15\), an increase of 46.0%.

Asia buyout and VC investment activities were up. In 2017, Asia buyout firms closed on $62.5 billion\(^6\) in aggregate value, up by 165.0% from last year’s $23.6 billion\(^6\). VC investment activity was also up from $52.1 billion prior year to $75.2 billion\(^15\), an increase of 44.3%.

Global purchase price multiples increased slightly. As of December 31, 2017, global median purchase price multiples (Enterprise Value / EBITDA) was 11.0x\(^1\), a 12.6% increase from prior year. This was driven by a 5.9% increase in US purchase multiples at 10.6x\(^7\), a 1.7% increase in purchase price multiples in Europe at 9.9x\(^12\), and a 33.5% increase in the rest of the world at 11.1x\(^12\).

Leverage multiples in Europe moved up. European LBO leverage multiples (Debt / EBITDA) have averaged 5.3x\(^11\) in 2017, an increase of 6.4% from prior year and a 13.3% decrease from the peak (6.1x\(^11\)) in 2007. European LBO Loan volume at $78.6 billion\(^12\) is up 56.0% versus prior year, an decrease of 42.9% versus the peak of $137.7 billion\(^12\) in 2007.

Exit activity stronger in Europe. Unlike the U.S. which recorded $184.8 billion\(^8\) in exits for 2017, a decrease of 16.6% from prior year, exits in Europe amounted to $147.76 billion\(^13\), a 19.7% increase from prior year.
Market Commentary  
Period Ending: December 31, 2017

Outlook

**PE allocations likely to increase.** A recent survey of institutional investors conducted on December 31, 2017 indicated that 53\(^{14}\) intend to increase their allocation for private equity compared to 48\(^{14}\) during the same period last year. 43\(^{14}\) intend to maintain their allocation for private equity compared to 46\(^{14}\) during the same period last year.

**Institutional investors most interested in investing in North America and like small- to mid-market buyouts.** Based on the survey conducted on December 31, 2017, Institutional investors view North America as the most attractive location to invest in the current economic climate with 69\(^{14}\) choosing it as their preferred investment destination. This compares favorably versus Europe (51\(^{14}\)) and Asia (32\(^{14}\)). In the same survey, 49\(^{14}\) of institutional investors also cited the small to mid-market buyout strategy as presenting the best opportunities in the current financial climate. Growth strategy was mentioned next with 28\(^{14}\) of institutional investors believing it presented the best opportunities.

Notes
1. Leveraged Loan Monthly Thomson Reuters LPC
2. Guggenheim High-Yield Bank Loan Outlook
3. LCD’s Leveraged Buyout Review
4. Preqin Dry powder by Geography (Preqin Website) Dry powder includes Buyout, Distressed PE, Growth, Mezzanine, Other, Real Estate and Venture Strategies.
5. Preqin Private Equity Fundraising
6. Preqin Private Equity-Backed Buyout Deals and Exits Factsheet
7. US LBO Review
8. Pitchbook’s PE and VC Exits
9. PitchBook’s VC Valuations
10. PitchBook’s VC Exits
11. LCD European Leveraged Buyout Review
12. European Leveraged Lending Review
   a. Ex US Multiples were estimated utilizing a number of sources including Preqin Private Equity-Backed Buyout Deals and Exits Factsheet, LCD’s Leveraged Buyout Review, Europe Leverage Lending Review and Leveraged Loan Monthly Thomson Reuters LPC.
13. Annual US PE Breakdown
15. Preqin Venture Capital Deals and Exits
August 2018

SamCERA 7

PE Portfolio Overview Period Ending: December 31, 2017

Portfolio Summary

— As of December 31, 2017, the Private Equity Portfolio had a total market value of $255.7 million, with $161.9 million in Buyout, $69.1 million in Venture Capital, and $24.7 million in Debt-Related/Special Situations. Total market value is the current reported value of investments, excluding the remaining amount of unfunded commitments.

— SamCERA has contributed $253.6 million toward its Private Equity commitments. Unfunded commitments total $163.8 million.

— The portfolio exposure at 6.0% is at the lower end of its target range. All sub-asset classes are within the policy range while commitments continue to be made to new managers at a slower pace.

Portfolio Activity

— SamCERA committed $15.0 million to Bernhard Capital Partners II in November 2017.
**Performance**

— The Private Equity portfolio’s performance, as measured by net IRR, is 17.34%. Capital weighted average investment age of the portfolio is 3.27 years.

— The portfolio is currently valued at $255.7 million. Together with $131.4 million in realized distributions, the Total Value at $387.1 million is approximately $133.5 million above $253.6 million total capital contributions, resulting in a total value multiple of 1.53x and a distribution multiple of 0.52x.

— Attribution of returns:
  - Buyouts up $78.91 million / +50.4% versus cost (Sycamore and ABRY VII leading), with 47.0% of called capital realized and distributed;
  - Venture Capital up $39.63 million / +85.9% versus cost (General Catalyst VI, Third Rock III, Emergence Capital III, and NEA 14 leading), with 36.0% of called capital realized and distributed;
  - Debt-related/Special Situations up $16.34 million / +33.4% versus cost (ABRY Advanced Securities II and III leading), with 82.9% of called capital realized and distributed.

— Within Private Equity, the current allocation of invested capital is 63.3% to Buyout, 27.0% to Venture Capital, and 9.7% to Debt-Related/Special Situations.
### Portfolio Diversification

**Period Ending: December 31, 2017**

<table>
<thead>
<tr>
<th>Investment Type</th>
<th>Commitment</th>
<th>Reported Value</th>
<th>Current Exposure as % of Private Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buyout</td>
<td>212,000,000</td>
<td>161,879,538</td>
<td>63.3%</td>
</tr>
<tr>
<td>Venture Capital</td>
<td>59,000,000</td>
<td>69,145,824</td>
<td>27.0%</td>
</tr>
<tr>
<td>Debt-Related/Special Situations</td>
<td>94,500,000</td>
<td>24,703,251</td>
<td>9.7%</td>
</tr>
<tr>
<td><strong>Total Private Equity</strong></td>
<td><strong>365,500,000</strong></td>
<td><strong>255,728,613</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

**PRIVATE EQUITY PORTFOLIO: CURRENT EXPOSURE**

- Buyout: 63%
- Venture Capital: 27%
- Debt-Related/Special Situations: 10%

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August 2018
### Geography

**Portfolio Diversification**

Period Ending: December 31, 2017

<table>
<thead>
<tr>
<th>Geography</th>
<th>Current Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>168,385,311</td>
</tr>
<tr>
<td>Europe*</td>
<td>50,762,616</td>
</tr>
<tr>
<td>Asia</td>
<td>15,995,734</td>
</tr>
<tr>
<td>Rest of World**</td>
<td>3,034,575</td>
</tr>
<tr>
<td><strong>Total Private Equity</strong></td>
<td><strong>238,178,236</strong></td>
</tr>
</tbody>
</table>

Based on the value of portfolio companies as of December 31, 2017, if provided by the partnerships. Differences between reported value and the total portfolio valuation is due to temporary cash funds, fees, other expenses, and holdings with undisclosed geography breakdown.

* Europe includes 100% market value from Cevian II.
** Rest of World includes Chile and Australia.
### Industry Portfolio Diversification

**Period Ending: December 31, 2017**

<table>
<thead>
<tr>
<th>Industry</th>
<th>Current Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biotechnology</td>
<td>13,339,433</td>
</tr>
<tr>
<td>Communications</td>
<td>1,424,640</td>
</tr>
<tr>
<td>Computer Related</td>
<td>46,423,803</td>
</tr>
<tr>
<td>Consumer Related</td>
<td>72,938,953</td>
</tr>
<tr>
<td>Energy Related</td>
<td>10,732,125</td>
</tr>
<tr>
<td>Industrial Products</td>
<td>4,484,603</td>
</tr>
<tr>
<td>Medical/Health Related</td>
<td>23,124,200</td>
</tr>
<tr>
<td>Other</td>
<td>21,590,673</td>
</tr>
<tr>
<td>Other Electronics Related</td>
<td>5,525,909</td>
</tr>
<tr>
<td><strong>Total Private Equity</strong></td>
<td><strong>199,584,340</strong></td>
</tr>
</tbody>
</table>

Based on the value of portfolio companies as of December 31, 2017, if provided by the partnerships. Differences between reported value and the total portfolio valuation is due to temporary cash funds, fees, other expenses, and holdings with undisclosed geography breakdown.
## Vintage Year
### Portfolio Diversification

**Period Ending: December 31, 2017**

<table>
<thead>
<tr>
<th>Vintage Year</th>
<th>Commitment as of 12/31/17</th>
<th>% of Portfolio Commitment</th>
<th>Reported Value as of 12/31/17</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>75,000,000</td>
<td>20.5%</td>
<td>43,942,997</td>
</tr>
<tr>
<td>2012</td>
<td>68,000,000</td>
<td>18.6%</td>
<td>81,260,059</td>
</tr>
<tr>
<td>2013</td>
<td>35,000,000</td>
<td>9.6%</td>
<td>52,010,288</td>
</tr>
<tr>
<td>2014</td>
<td>72,500,000</td>
<td>19.8%</td>
<td>49,346,556</td>
</tr>
<tr>
<td>2015</td>
<td>53,000,000</td>
<td>14.5%</td>
<td>25,767,713</td>
</tr>
<tr>
<td>2016</td>
<td>10,000,000</td>
<td>2.7%</td>
<td>687,851</td>
</tr>
<tr>
<td>2017</td>
<td>37,000,000</td>
<td>10.1%</td>
<td>2,713,149</td>
</tr>
<tr>
<td>2018</td>
<td>15,000,000</td>
<td>4.1%</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total Private Equity</strong></td>
<td><strong>365,500,000</strong></td>
<td><strong>100%</strong></td>
<td><strong>255,728,612</strong></td>
</tr>
</tbody>
</table>

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![Pie chart showing percentage allocation by vintage year]
— As of December 31, 2017, the Private Equity Portfolio is at the lower end of its target allocation, with exposures within target diversification bands.