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DEBT RELATED

— **HY issuance was down and leveraged loan issuance was up.** In the first half of 2020, US high yield issuance was down 2.1% at $128 billion\(^1\) compared to 1H 2019. Leverage loan issuance volume reached $385 billion in the first half of 2020, up 22% from the same time last year.

— **Spreads loosen across the board.** US HY Credit Index loosened by 228 bps or 54.2%\(^2\) in 1H 2020 versus the same period last year. BB and B index loosed by 162 bps and 168 bps, a 55.9%\(^2\) and 34.4%\(^2\) increases versus the same period last year. In the meantime, CCC index increased by 46.2%\(^2\) in the first half of 2020 from 2019 same period.

— **Decline in LBO debt, with interest coverage up significantly.** US total leverage (Debt / EBITDA) for 1H 2020 at 5.1x\(^3\) down 14.2% from the same time last year. Interest coverage (EBITDA / Cash Interest) of first half of 2020 was 3.6x\(^3\), up 55.7% from same time 2019 as underwriting new deals focused on risk reduction.

GLOBAL

— **PE dry powder continued to surge globally.** For the first half of 2020, global total PE dry powder was at $1.74 trillion\(^4\), up 16.4% from same time last year. US total PE was up by 21.9% to $964.5 billion\(^4\); Europe total PE increased by 12.3% to $335.2 billion\(^4\); Asia total PE was up by 8.3% to $387.7 billion\(^4\); and the rest of world total PE was up by 11.1% to $55.0 billion\(^4\).

— **Investment activity was down.** During the first of 2020, global PE firms invested in $299.3 billion\(^6\) worth of deals, down 19.0% from the same time prior year and closed on 9,923 transactions\(^6\), down 19.1% from same time in 2019.

US BUYOUTS

— **Dry powder increased.** For the first half of 2020, US buyout dry powder was $505.1 billion\(^4\), up by 15.5% from the same time in 2019.

— **Fundraising activity was down significantly.** In 1H 2020, US firms across all buyout strategies raised $65.6 billion\(^5\), down by 49.8% from same time prior year. Average fund size decreased 25.1%, from $1.72 billion in 1H 2019 to $1.29 billion in 1H 2020.

— **Investment activity was down.** During 1H 2020, US buyout firms invested in $77.4 billion\(^6\) worth of deals, down 41.1% from the same time last year and closed on 1,210 transactions\(^6\), down 23.6% versus the same time in 2019.
LBO price multiples were down. As of June 30, 2020, US LBO purchase price multiples (Enterprise Value / EBITDA) were at 10.6x, a 4.7% decrease from the second quarter-end of 2019.

Exit activity slowed down. During 1H 2020, US buyout firms exited 358 companies, representing $74.6 billion in total transaction value. This represented a 30.4% decrease in the number of exits and a 45.0% decrease in total transaction value compared to the same time last year.

US VENTURE CAPITAL

Dry powder increased. In the first six months of 2020, US VC dry powder was at $150.3 billion, up 27.2% from 1H 2019.

Fundraising activity slowed down, but average fund size increased. US VC firms raised $44.4 billion during the first half of 2020, a 77.6% increase from the same period last year. 193 funds closed in 1H 2020, a 20.6% decrease from the same period last year. The average US VC fund size increased to $230.1 million by 123.6% versus the same period last year.

Investment activity was down, but average check size was up. US VC firms deployed $72.7 billion in capital in 1H 2020, a 9.8% increase from 1H 2019 as deal activity skewed from early to late stage. The number of rounds closed at 2,646, a 21.1% decrease from the same time last year. The average investment per deal increased to $27.5 million, a 39.2% increase from prior year.

All stages valuations were up. Compared to December 31, 2019, the average pre-money valuations increased for both early VC and late VC stages in 1H 2020: up 2.0% at $30.0 million for early stage VC, and 36.4% at $120 million for late stage VC.

Exit activity decreased with larger transactions. US VC firms exited 344 companies in the first half of 2020, down by 4.4% from last year. This represented $49.8 billion in transaction value, up by 5.7% from the same period last year. Largest sectors exited were Technology Services and Health Technology.

EX US

Ex US dry powder grew but less than dry powder in the US. PE dry powder outside the US grew to $777.8 billion for 1H 2020, a 10.2% increase versus last year. However, dry powder outside the US was still 19.4% less than dry powder in the US ($964.5 billion).

Europe buyout and VC dry powders were up. For 1H 2020, Europe buyout dry power was $227.8 billion, up by 11.9% from last year. Same time, VC dry powder in Europe grew to $34.2 billion, a 11.0% increase from prior year.

In Asia, dry powder of both buyout and VC kept increasing, but growth equity decreased. In the first half of 2020, Asia buyout dry power was $99.7 billion, up by 16.1% from same time last year. VC dry powder in Asia increased to $124.1 billion, up by 19.9% from 1H 2019. Growth equity dry powder decreased to $141.3 billion, down by 5.4% from 2019.
Market Commentary

Period Ending: June 30, 2020

— **Fundraising outside of US was down except Europe.** In 1H 2020, ex-US fundraising was down 8.9% to $108.2 billion\(^5\) compared to same time prior year. The decrease was led by Asian funds which raised $35.3 billion\(^5\), down 36.9% from same time last year. Fundraising in the rest of the world decreased by 18.5%, from 8.1 billion\(^5\) in 1H 2019 to $6.6 billion\(^5\) in the same time 2020. However, fundraising was up in Europe, up by 21.0% from $54.8 billion in the first half of 2018 to $66.3 billion\(^5\) in 1H 2020.

— **Investments activity was down, but with larger deals in Asia.** Both Europe buyout and Asia venture capital firms decreased the number of deals and aggregate deal volume in the first 6 months in 2020. But Asia buyout and venture capital firms decreased the number of deals but increased aggregate deal volume in 1H 2020.

  ▪ **Both Europe buyout and VC activities decreased.** In the first half in 2020, Europe buyout firms transacted on $43.4 billion\(^6\) in aggregate value, down by 25.0% from 1H 2019. VC investment activity was down from $19.3 billion in 1H 2019 to $17.3 billion\(^6\) in 1H 2020, an increase of 10.4%.

  ▪ **Asia buyout and VC activities were down, but average deal size was up slightly.** During 1H 2020, Asia buyout firms closed on $30.8 billion\(^6\) in aggregate value, up by 4.2% from the same time of last year’s $29.5 billion\(^6\). VC investment activity was up from $40.6 billion during 1H 2020 to $40.9 billion\(^6\), an increase of 0.9%.

— **Both US and Europe purchase price multiples decreased.** As of June 30, 2020, US median purchase price multiples (Enterprise Value / EBITDA) was 10.6\(^1\), a 4.7% decrease from the same time last year. In the meantime. Europe median purchase price multiples dropped 15.3% from to 8.0\(^4\) from the same time last year.

— **Leverage multiples in Europe moved down.** European LBO leverage multiples (Debt / EBITDA) have averaged 5.8\(^{10}\) during 1H 2020, an increase of 3.9% from the same time last year and an 5.0% decrease from the peak (6.1\(^{11}\)) in 2007. European LBO Loan volume at $26.9 billion\(^{11}\) is down 4.4% versus 1H 2019, a decrease of 75.0% versus the peak of $107.3 billion\(^{11}\) in the first half of 2007.

— **Exit activity weaker in Europe, but stronger in Asia.** During 1H 2020, Europe PE firms aggregate exit value amounted to $32.3 billion\(^6\), a 41.5% decrease from the same time last year, while Asia PE firms’ exits were up 48.6% from to $101.8\(^6\) billion in the same time.
Outlook

— **PE allocations likely to remain stable.** A recent survey of institutional investors conducted on June 30, 2020\(^{12}\) indicated that 41% intend to increase their allocation for private equity compared to 40% during the same period last year; 49% intend to maintain their allocation for private equity compared to 47% during the same period last year; 11% intend to commit less capital to private equity compared to 13% 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 June 30, 2020\(^{12}\), institutional investors view North America as the most attractive location to invest in the current economic climate with 80% choosing it as their preferred developed market investment destination. This compares favorably versus Western Europe (49%) and Asia (11%). China (42%) and India (38%) are the top two desired countries in the emerging markets for investors. In the same survey, 53% of institutional investors also cited the venture capital strategy as presenting the best opportunities in the current financial climate. Small to mid-market buyout strategy was mentioned next with 83% 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, Co-investments, Balanced, and Venture Strategies.
5. Preqin Private Equity Historical Fundraising Statistics
6. Preqin Pro Buyout and Venture Deals and Exits
7. US LBO Review
8. PitchBook-NVCA Venture Monitor
9. PitchBook’s VC Valuations
10. LCD European Leveraged Buyout Review
11. 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
   b. Buyout Review, Pitchbook Europe M&A and Leveraged Loan Monthly Thomson Reuters LPC.
**PE Portfolio Overview**

**Portfolio Summary**

— As of June 30, 2020, the Private Equity Portfolio had a total market value of $342.4M, with $147.6M in Buyout, $156.1M in Venture Capital, and $38.7M 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 $344.6M toward its Private Equity commitments. Unfunded commitments total $153.0M.

— The portfolio exposure at 7.3% is above the new 6% policy target, but within range. All sub-asset classes are within their policy range, except for Venture Capital which is above its policy range due to the growth of values of unrealized investments.

**Portfolio Activity**

— Most recently, SamCERA committed $30.0M to CD&R XI, L.P., and is proceeding with a $15.0M commitment to Canvas Ventures III, L.P.

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**Investment Type** | **Policy Target** | **Policy Range** | **Market Value %** | **Market Value $(000)** | **Unfunded Commitment $(000)** | **Market Value + Unfunded $(000)**
--- | --- | --- | --- | --- | --- | ---
SamCERA - Total Plan | | | 100.0% | 4,671,765 | | |
Buyout (60% +/- 20%) | 3.6% | 2.4%-4.8% | 3.2% | 147,583 | 101,128 | 248,711
Venture Capital (20%, 0%-30%) | 1.2% | 0.0%-1.8% | 3.3% | 156,133 | 8,501 | 164,634
Debt-Related/Special Situations (20% +/- 10%) | 1.2% | 0.6%-1.8% | 0.8% | 38,725 | 43,354 | 82,079
**Total Private Equity*** | 6.0% | 4%-8% | 7.3% | 342,440 | 152,983 | 495,424

* The Private Equity Policy Target of 7.0% was reduced to 6.0% effective 10/1/2018.
PE Performance

— The Private Equity portfolio’s performance, as measured by net IRR, is 19.39%, 423bps above the same cash flow invested in Russell 3000 Total Return Index of 15.15%. Capital weighted average investment age of the portfolio is 5.3 years.

— The portfolio is currently valued at $342.4M. Together with $303.9M in realized distributions, the Total Value at $646.4M is approximately $301.8M above $344.6M total capital contributions, resulting in a total value multiple of 1.88x and a distribution multiple of 0.88x.

— Distributions surpassed contributions with a ratio of 2.8:1 in the first half of 2020 compared to 2.3:1 in 2019, 0.9:1 in 2018, and 1.4:1 in 2017 and 2016.

— Attribution of returns:
  - Buyouts up $100.6M / +49.8% versus cost (Great Hill V & VI, Sycamore, ABRY VII, Warburg Pincus XI and Cevian II leading), with 76.8% of called capital realized and distributed;
  - Venture Capital up $197.49M / +355.0% versus cost (Emergence Capital III, General Catalyst VI, NEA 14, and Third Rock III leading), with 174.4% of called capital realized and distributed; and
  - Debt-related/Special Situations up $3.63M / +4.2% versus cost (ABRY Advanced Securities II and Regiment Capital Special Situations V leading), with 59.7% of called capital realized and distributed.

— Within Private Equity, the current allocation of market value exposure is 43.1% to Buyout, 45.6% to Venture Capital, and 11.3% to Debt-Related/Special Situations.
### Portfolio Diversification

#### Strategy

<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>279,001,040</td>
<td>147,583,068</td>
<td>43.1%</td>
</tr>
<tr>
<td>Venture Capital</td>
<td>64,000,000</td>
<td>156,132,578</td>
<td>45.6%</td>
</tr>
<tr>
<td>Debt-Related/Special Situations</td>
<td>114,500,000</td>
<td>38,724,762</td>
<td>11.3%</td>
</tr>
<tr>
<td><strong>Total Private Equity</strong></td>
<td>457,501,040</td>
<td>342,440,410</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

**Period Ending: June 30, 2020**

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**Private Equity Portfolio: Current Exposure**

- **Buyout**: 43%
- **Venture Capital**: 46%
- **Debt-Related/Special Situations**: 11%
## Geography
### Portfolio Diversification

**Period Ending: June 30, 2020**

<table>
<thead>
<tr>
<th>Geography</th>
<th>Current Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>289,094,801</td>
</tr>
<tr>
<td>Europe*</td>
<td>21,205,237</td>
</tr>
<tr>
<td>Asia</td>
<td>11,410,728</td>
</tr>
<tr>
<td>Rest of World**</td>
<td>1,643,932</td>
</tr>
<tr>
<td><strong>Total Private Equity</strong></td>
<td><strong>323,354,698</strong></td>
</tr>
</tbody>
</table>

Based on the value of portfolio companies as of June 30, 2020, 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 Kenya, United Arab Emirates, Turkey, and Brazil.
Based on the value of portfolio companies as of June 30, 2020, 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**

<table>
<thead>
<tr>
<th>Vintage Year</th>
<th>Commitment as of 6/30/2020</th>
<th>% of Portfolio Commitment</th>
<th>Reported Value as of 6/30/2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>75,000,000</td>
<td>16.39%</td>
<td>25,632,912</td>
</tr>
<tr>
<td>2012</td>
<td>68,000,000</td>
<td>14.86%</td>
<td>143,766,489</td>
</tr>
<tr>
<td>2013</td>
<td>35,000,000</td>
<td>7.65%</td>
<td>30,958,765</td>
</tr>
<tr>
<td>2014</td>
<td>72,500,000</td>
<td>15.85%</td>
<td>59,026,420</td>
</tr>
<tr>
<td>2015</td>
<td>53,000,000</td>
<td>11.58%</td>
<td>38,657,889</td>
</tr>
<tr>
<td>2016</td>
<td>17,000,000</td>
<td>3.72%</td>
<td>9,076,069</td>
</tr>
<tr>
<td>2017</td>
<td>30,000,000</td>
<td>6.56%</td>
<td>22,513,091</td>
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<tr>
<td>2018</td>
<td>35,000,000</td>
<td>7.65%</td>
<td>3,163,288</td>
</tr>
<tr>
<td>2019</td>
<td>30,000,000</td>
<td>6.56%</td>
<td>9,645,487</td>
</tr>
<tr>
<td>2020</td>
<td>42,001,040</td>
<td>9.18%</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total Private Equity</strong></td>
<td><strong>457,501,040</strong></td>
<td><strong>100%</strong></td>
<td><strong>342,440,410</strong></td>
</tr>
</tbody>
</table>

*Period Ending: June 30, 2020*
As of June 30, 2020, the Private Equity Portfolio exposure is 7.3%, greater than the plan's 6.0% policy target, but within its 4-8% target range.

- Compared to December 31, 2019, portfolio exposure is up 0.9%, driven by Venture Capital’s strong performance relative to the Public Markets recovery from March lows.

- Venture Capital remains above its new policy target, as a result of significant increase in two select portfolio companies.