



**State of Connecticut**  
**Office of the Treasurer**

SHAWN T. WOODEN  
TREASURER

**M E M O R A N D U M**

**TO: Members of Investment Advisory Council**

**FROM: Shawn T. Wooden, State Treasurer and Council Secretary**

**DATE: May 8, 2020**

**SUBJECT: Investment Advisory Council Meeting – May 13, 2020**

Enclosed is the agenda package for the Investment Advisory Council meeting on Wednesday, May 13, 2020 starting at 9:00 A.M.

The following subjects will be covered at the meeting:

**Item 1: Comments by the Chair**

**Item 2: Approval of the Minutes of the April 23, 2020 IAC Meeting**

**Item 3: Opening Comments by the Treasurer**

**Item 4: Economic and Market Update**

Meketa Investment Group will provide an update on capital markets and discuss endpoint bias relative to investment performance measurement.

**Item 5: Watch List Process & Assessment Factors**

Kevin Cullinan, Chief Risk Officer, will review the updated watch list process and discuss expanded assessment factors.

**Item 6: Private Markets Pacing Plan Overview**

Mark Evans, Principal Investment Officer, and Danita Johnson, Principal Investment Officer, will provide an overview of the Pacing Plan for Private Markets.

**Item 7: Presentation by and Consideration of Stellex Capital Partners Fund II, L.P.**

Mark Evans, Principal Investment Officer, will provide opening remarks and introduce Stellex Capital Partners Fund II, L.P., Private Investment Fund opportunity.

**Item 8: Presentation by and Consideration of Leeds Capital Partners VII, L.P.**

Mark Evans, Principal Investment Officer, will provide opening remarks and introduce Leeds Capital Partners VII, L.P., a Private Investment Fund opportunity.

**Item 9: Other Business**

- Discussion of the preliminary agenda for the June 10, 2020 IAC meeting

We look forward to reviewing these agenda items with you at the May 13<sup>th</sup> meeting.

If you find that you are unable to attend this meeting, please call Katrina Farquhar at (860) 702-3110.

D. Ellen Shuman  
Partner Emerita  
Edgehill Endowment Partners



D. Ellen Shuman has worked in the field of endowment management for over 30 years. In 2013 she co-founded Edgehill Endowment Partners, a firm that operates as a full-service investment office to steward the endowment assets of a limited number of mission-based institutions. Edgehill manages approximately \$2 billion on behalf of 4 clients in global, diversified portfolios. She recently transitioned to a strategic role at Edgehill.

Prior to founding Edgehill, Ms. Shuman spent her career at the Yale University Investments Office (1986-1998) and as the Chief Investment Officer of Carnegie Corporation of New York, a private foundation (1999-2011).

At Carnegie Corporation of New York, Ms. Shuman was recruited by President Vartan Gregorian to serve as the foundation's first Chief Investment Officer. She built the Corporation's investment office and implemented a set of strategies that dramatically diversified the portfolio - globally and by asset class. Investment performance exceeded the Corporation's policy benchmark throughout her tenure, in which the Corporation's assets grew from \$1.5 billion to \$2.55 billion, after spending of more than \$1 billion. Unlike colleges and universities, all endowment growth was from investment return.

Prior to Carnegie Corporation, Ms. Shuman worked at the Yale University Investment Office, reporting to Chief Investment Officer David Swensen. As Director of Investments she focused on real estate, energy and fixed income asset classes, including the University's debt issuance. She taught several courses at Yale College and the Yale School of Management on Finance and Real Estate Investing.

Ms. Shuman received the Institutional Investor Magazine Lifetime Achievement Award in 2014 and the Award for Excellence in Investment Management – Foundations – in 2006. She was appointed a member of the Investors' Committee of the President's Working Group on Financial Markets in 2008, which issued a report on "Principles and Practices for Hedge Fund Investors" in January 2009. In 2008 she was profiled in the book, *Foundation and Endowment Investing*, by Cathleen Rittreiser and Larry Kochard, published by Wiley & Sons.

Ms. Shuman has served on several non-profit and public company boards:

- Bowdoin College, Trustee, 1992 to 2013
  - Committee service: Audit (Chair); Presidential Search; Investments; Committee on Trustees; Vice Chair (1999-2003)
- The Investment Fund for Foundations (TIFF), Trustee, 2000 to 2009
  - Committee Service: Governance, Audit (Chair), Compensation
- Edna McConnell Clark Foundation, 1998 to 2013. Investment Advisor (1998 – 2010); Trustee (2010-2013)
  - Committee Service: Investments (Chair 2010 – 2013)
- Meristar Hospitality Corporation (NYSE:MHX), 2001 to 2006
  - Committee Service: Audit
- General American Investors (NYSE: GAM), 2004 to 2013
  - Committee Service: Governance; President Search; Audit (Chair)

Currently Ms. Shuman is on the board of JBG Smith (NYSE: JBGS), a REIT based in Washington, D.C. JBGS was selected by Amazon as its HQ2 development partner in 2019.

Ms. Shuman received a B.A., *magna cum laude*, from Bowdoin College; an M.P.P.M. from the Yale School of Management; and earned the CFA designation in 1992.

She lives in New Haven, CT with her husband Douglas Rae and their two Australian terriers.

INVESTMENT ADVISORY COUNCIL  
Thursday, April 23, 2020

**SUCH MINUTES ARE IN DRAFT FORM AND SUBJECT TO THE FINAL REVIEW  
AND APPROVAL OF THE INVESTMENT ADVISORY COUNCIL**

**MEETING NO. 474**

**Members present:** Thomas Fiore, representing Secretary Melissa McCaw  
Joshua Hall  
\*12:08pm Departure Michael Knight  
Michael LeClair\*  
Steven Muench\*  
William Murray  
Richard Ross  
Patrick Sampson  
Carol Thomas, Interim Chair  
Shawn T. Wooden, Treasurer

**Others present:** Laurie Martin, Chief Investment Officer  
Kevin Cullinan, Chief Risk Officer  
Mark Evans, Principal Investment Officer  
Katrina Farquhar, Executive Assistant  
Lyndsey Farris, Principal Investment Officer  
John Flores, General Counsel  
Karen Grenon, Legal Counsel  
Darrell Hill, Deputy Treasurer  
Barbara Housen, Chief Compliance Officer, Deputy General Counsel  
Danita Johnson, Principal Investment Officer  
Harvey Kelly, Analyst  
Casi Kroth, Investment Officer  
Raynald Lévêque, Deputy Chief Investment Officer  
Steve Meier, Senior Principal Investment Officer  
Paul Osinloye, Principal Investment Officer  
Olivia Wall, Investment Officer

**Guests:** Kevin Alcala, Goldman Sachs  
Tim Atkinson, Meketa Investment Group  
Dyice Ellis Beckham, Invesco  
Drienne Benner, Appomattox  
Judy Chambers, Meketa Investment Group  
Gar Chung, Financial Investment News  
Anthony DeVicaris, Met Life  
Maguette Diop, SEIU  
Mike Elio, StepStone  
Will Greene, Loop Capital  
Robyn Kaplan-Cho, CEA  
Mary Mustard, Meketa Investment Group

David Peligal, Brookfield  
William Rejeski, Goldman Sachs  
Matt Ritter, NEPC  
Lisa Rotenberg, Goldman Sachs  
Ellen Shuman, Incoming IAC Chair  
Liz Smith, AllianceBernstein  
Ann Parker Weeden, AllianceBernstein  
Ryan Wagner, T. Rowe Price

With a quorum present, Interim Chair Carol Thomas called the Investment Advisory Council (“IAC”) meeting to order at 9:01 a.m.

### **Approval of Minutes of the March 11, 2020 IAC Meeting**

Chair Thomas called for a motion to accept the minutes of the March 11, 2020 IAC meeting. **Richard Ross moved to approve the minutes of the March 11, 2020 IAC meeting. The motion was seconded by Steven Muench. There was one correction from William Murray. There being no further discussion, the Chair called for a vote and the motion passed.**

### **Comments by the Treasurer**

Treasurer Wooden welcomed IAC members to the meeting and thanked them for their commitment to the IAC in this time of unprecedented uncertainty around our public health, our economy and our markets. He commented on the capital markets noting that the first quarter of 2020 was the worst since the 2008 Global Financial Crisis. He stated that although we couldn’t have anticipated the speed and magnitude of the market decline, we have positioned the CRPTF to withstand volatility and changes in market cycles. He stated that with the reduction in the return assumptions and changes made to the asset allocations for the largest pension plans, we reduced our exposure to global equity and increased our investments in fixed income. He further stated that within the hedge fund allocation, we reduced risk seeking strategies in exchange for risk mitigation strategies. He stated that after given consideration to the feedback from the IAC following the extensive due diligence conducted by our in house staff and our general consultant, Meketa – he has decided to award contracts to State Street Global Advisors, Northern Trust, BlackRock, Rhumblin, Piedmont and T Rowe Price for index, enhanced index and transition management services. Finally, he announced that four investments were under consideration at the meeting today for the Private Investment Fund (“PIF”) and the Real Assets Fund (“RAF”).

### **Update on the Market, the Connecticut Retirement Plans and Trust Funds Final Performance for Month Ending March 31, 2020**

Laurie Martin, Chief Investment Officer (“CIO”), provided an update on the CRPTF’s performance and commented on the capital market environment and the economic outlook.

### **Private Credit Fund Opportunities**

Mark Evans, Principal Investment Officer, provided an overview of our Private Credit market strategy and the opportunities in the current environment.

**Presentation by and Consideration of Altaris Health Partners V, L.P.**

Mr. Evans provided opening remarks and introduced Altaris Health Partners V, L.P. (“Altaris”), a PIF opportunity.

Altaris, represented by George Aitken-Davies, Co-founder and Managing Director, made a presentation to the IAC.

**Roll Call of Reactions for the Altaris Health Partners V, L.P. PIF opportunity.**

Messrs. Murray, Muench, Ross, Michael LeClair, Michael Knight, Thomas Fiore, Joshua Hall, Patrick Sampson and Chair Thomas provided feedback on Altaris. Chair Thomas called for a motion to waive the 45-day comment period. **A motion was made by Mr. Muench, seconded by Mr. Hall, to waive the 45-day comment period for Altaris. There was one abstention by Mr. Ross. There being no discussion, the Chair called for a vote and the motion passed.**

**Presentation by and Consideration of Hg Genesis 9, L.P. & Hg Saturn 2, L.P.**

Mr. Evans provided opening remarks and introduced Hg Genesis 9, L.P. & Hg Saturn 2, L.P. (“Hg”), a PIF opportunity.

Hg, represented by Nic Humphries, Senior Partner and Head of Saturn Fund; Martina Sanow, Partner and Deputy Chief Operating Officer, and Mathijs de Bruijn; Principal, Client Services (US East Coast coverage), made a presentation to the IAC.

**Roll Call of Reactions for the Hg Genesis 9, L.P. & Hg Saturn 2, L.P. PIF opportunity.**

Messrs. Murray, Muench, Knight, Hall, Sampson, LeClair, Ross and Chair Thomas provided feedback on Hg. Chair Thomas called for a motion to waive the 45-day comment period. **A motion was made by Mr. Ross, seconded by Messrs. Muench and Murray, to waive the 45-day comment period for Hg. There being no discussion, the Chair called for a vote and the motion passed.**

**Presentation by and Consideration of Homestead Capital USA Farmland Fund III, L.P.**

Danita Johnson, Principal Investment Officer, provided opening remarks and introduced Homestead Capital USA Farmland Fund III, L.P. (“Homestead”), a RAF opportunity.

Homestead, represented by Gabe Santos, Co-CEO; Dan Little, Co-CEO; Patrick Trainor, Managing Director; and Ryan Gallant, Managing Director, made a presentation to the IAC.

**Roll Call of Reactions for the Homestead Capital USA Farmland Fund III, L.P. RAF opportunity.**

Messrs. Murray, Muench, Knight, Hall, Sampson, LeClair, Ross and Chair Thomas provided feedback on Homestead. Chair Thomas called for a motion to waive the 45-day comment period. **A motion was made by Mr. Ross, seconded by Mr. Murray, to waive the 45-day comment period for Homestead. There being no discussion, the Chair called for a vote and the motion passed.**

**Presentation by and Consideration of Rockpoint Real Estate Fund VI, L.P.**

Ms. Johnson provided opening remarks and introduced Rockpoint Real Estate Fund VI, L.P. (“Rockpoint”), a RAF opportunity.

Rockpoint, represented by Keith Gelb, Managing Member and Co-Founder; Hank Midgley, Managing Member and Head of Investor Relations and Capital Raising; and Tanya Oblak, Senior Managing Director, Investor Relations and Capital Raising, made a presentation to the IAC.

**Roll Call of Reactions for the Rockpoint Real Estate Fund VI, L.P. RAF opportunity.**

Messrs. Murray, Muench, Knight, Hall, Sampson, LeClair, Ross and Chair Thomas provided feedback on Rockpoint. Chair Thomas called for a motion to waive the 45-day comment period. **A motion was made by Mr. Murray, seconded by Mr. Sampson, to waive the 45-day comment period for Rockpoint. There being no discussion, the Chair called for a vote and the motion passed.**

**Other Business**

Chair Thomas noted the next meeting will be held on May 13, 2020. She invited the council members to submit agenda items.

**Comments by the Chair**

There being no further business, the Chair called for a motion to adjourn the meeting. **Mr. Ross moved to adjourn the meeting and the motion was seconded by Mr. Murray. There being no discussion, the meeting was adjourned at 1:04 p.m.**

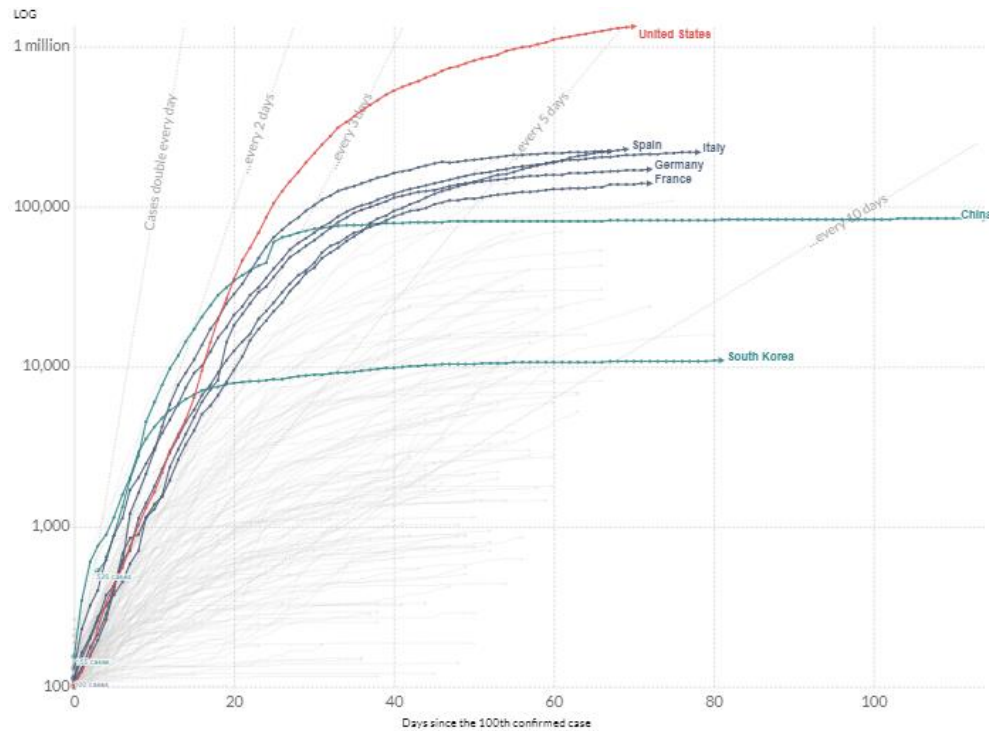
# Economy and Market Update

Data as of May 8, 2020





**Case Count by Select Country: Flattening the Curve<sup>1</sup>**



- There are over 4.2 million cases of coronavirus globally across 187 countries with the US now the epicenter.
- With some improvements in the data, countries are starting to gradually reopen parts of their economies.

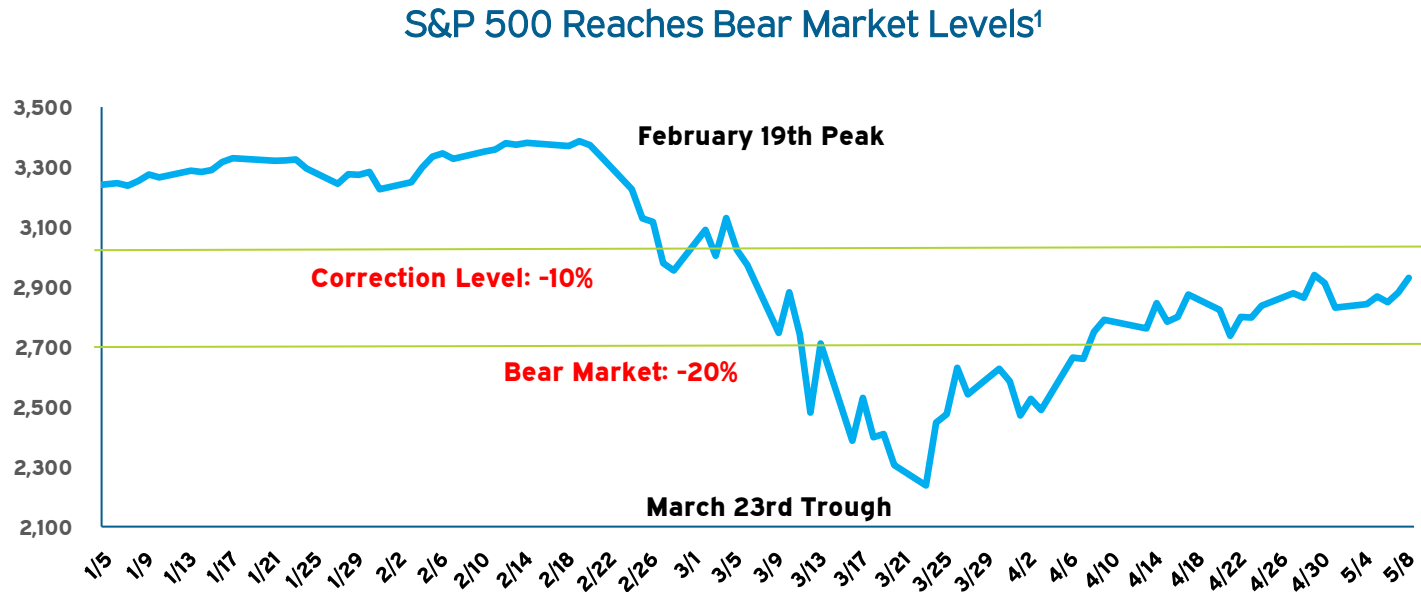
<sup>1</sup> Source: European CDC via Visual Capitalist. Data is as of May 12, 2020. Most data throughout the rest of the document is through May 8, 2020.

### Market Returns<sup>1</sup>

Indices	YTD	3 Year	5 Year	10 Year	20 Year
S&P 500	-8.7%	9.0%	8.9%	12.5%	5.7%
MSCI EAFE	-18.2%	-1.4%	-0.4%	4.6%	2.6%
MSCI Emerging Markets	-17.8%	-0.2%	-0.1%	2.3%	-
MSCI China	-4.5%	8.5%	2.3%	5.8%	--
Bloomberg Barclays Aggregate	4.5%	5.1%	3.8%	3.9%	5.2%
Bloomberg Barclays TIPS	4.5%	4.6%	3.3%	3.5%	5.5%
Bloomberg Barclays High Yield	-8.2%	2.1%	3.5%	6.2%	7.1%
10-year US Treasury	10.3%	7.2%	4.3%	5.2%	5.5%
30-year US Treasury	19.8%	14.9%	8.4%	9.5%	7.9%

- Given uncertainty related to the ultimate impact of the virus on economic growth, company profitability, and societal norms, many investors have sought perceived safe haven assets like US Treasuries.
- Initially, stocks experienced large declines, but fiscal and monetary authorities across the globe have deployed emergency measures to cushion huge economic losses; the S&P 500 has recovered by over 20% percent from its March lows.
- The 2020 decline in US stocks (S&P 500) brought 20-year returns to levels just slightly above US bonds (Bloomberg Barclays Aggregate), as this period also included the popping of the dot.com bubble and the GFC.
- By contrast, 10-year returns for the S&P 500 were 12.5%, far above the bond market's 3.9% annual return, indicating how dramatically long-term returns can shift.

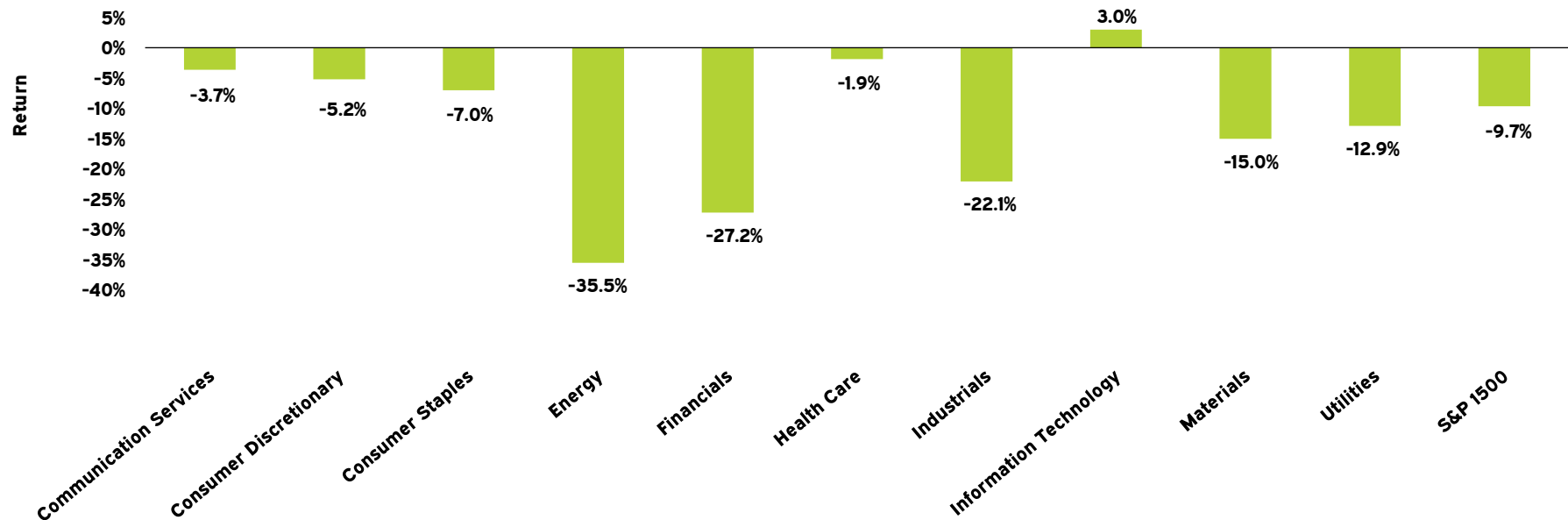
<sup>1</sup> Source: InvestorForce and Bloomberg. Data is as of May 8, 2020.



- Given the economic uncertainty surrounding the pandemic, US stocks declined from their recent peak into bear market (-20%) territory at the fastest pace in history.
- From the February 19 peak, the S&P 500 declined 34% in just 24 trading days.
- The index rebounded from its lows, likely due to the unprecedented monetary and fiscal stimulus announced in the US, improvements in virus data, and some economies reopening.
- It is unclear whether the US equity market has reached a bottom, or if the recent recovery is temporary, with more declines to come as the impact of COVID-19 on the economy becomes more apparent.

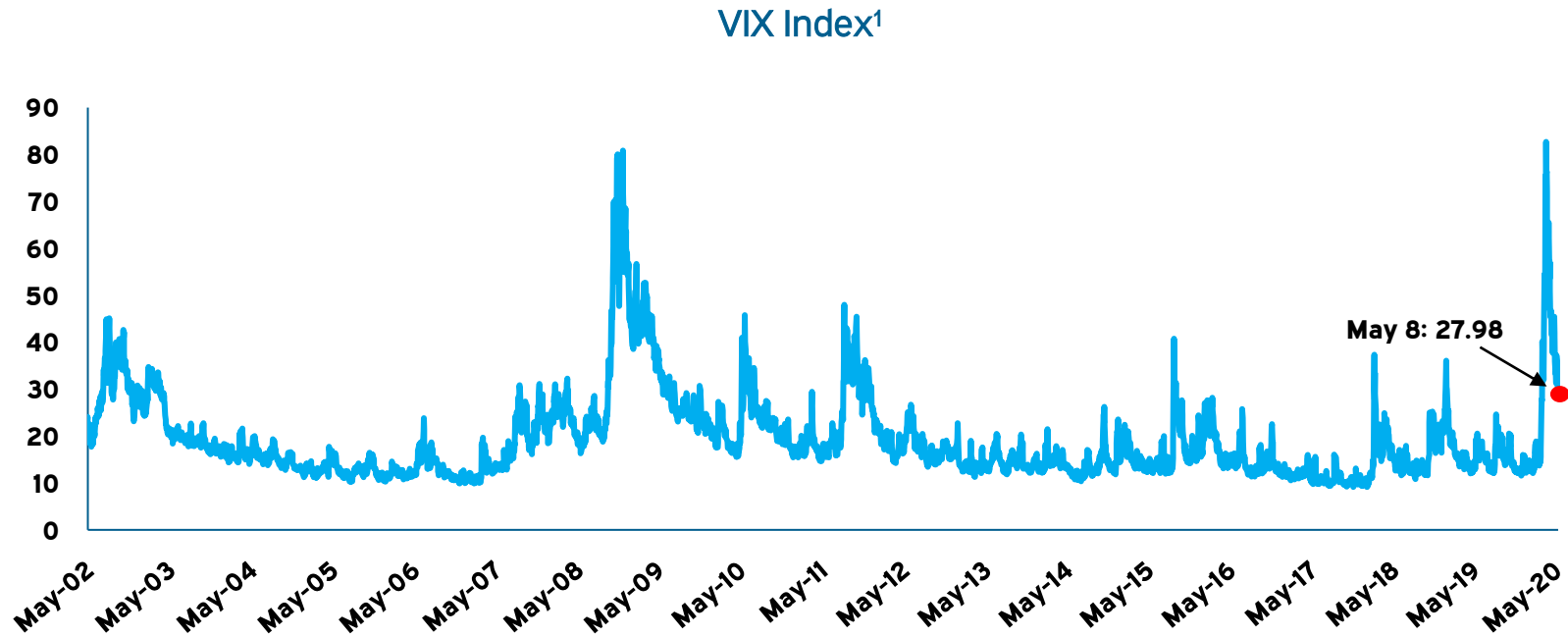
<sup>1</sup> Source: Bloomberg. Data is as of May 8, 2020.

### 2020 YTD Sector Returns<sup>1</sup>



- The energy sector has seen some improvements given the agreement between Saudi Arabia and Russia to cut supply and economies starting to gradually reopen, but it remains the sector with the greatest decline, triggered by the fall in oil prices.
- Financials, industrials, and materials experienced the next largest declines, while sectors like health care and consumer staples experienced smaller depreciation.
- Returns in the information technology sector recently turned positive as consumers moved to online purchases and entertainment under the stay-at-home restrictions.

<sup>1</sup> Source: Bloomberg. Data is as of May 8, 2020.



- Given the recent fiscal and monetary support and corresponding improvement in investor risk sentiment, expectations of short-term volatility, as measured by the VIX index, continue to decline from record levels but remains elevated.
- At the recent height, the VIX index reached 82.7, surpassing the pinnacle of volatility during the GFC, showing the magnitude of the crisis, and of investor fear.
- Going forward there is the risk of additional spikes in volatility, as investors continue to process the impacts of COVID-19 and the effectiveness of the policy response.

<sup>1</sup> Source: Chicago Board of Exchange. Data is as of May 8, 2020.

## Global Financial Crisis Comparison

	2007-2009 Global Financial Crisis	COVID-19 Crisis
<b>Primary Causes</b>	<p>Excess Risk Taking Due to:</p> <ul style="list-style-type: none"> <li>Deregulation, un-constrained securitization, shadow banking system, fraud</li> </ul>	<p>Pandemic/Natural Disaster:</p> <ul style="list-style-type: none"> <li>Large scale global restrictions on businesses and individuals leading to immediate and significant deterioration in economic fundamentals</li> </ul>
<b>Fiscal Measures</b>	<ul style="list-style-type: none"> <li>American Recovery Reinvestment Act of 2009: \$787 billion</li> <li>Economic Stimulus Act of 2008: \$152 billion</li> </ul>	<ul style="list-style-type: none"> <li>PPP Act: \$659 billion</li> <li>CARES Act of 2020: \$2.3 trillion</li> <li>Families First Coronavirus Response Act: \$150 billion</li> <li>Coronavirus Preparedness &amp; Response Supplemental Appropriations Act 2020: \$8.3 billion</li> <li>National Emergency: \$50 billion</li> </ul>
	2007-2009 Global Financial Crisis	COVID-19 Crisis
<b>Monetary Measures</b>		
Lowering Fed Funds Rate	X	X
Quantitative Easing	X	X
Primary Dealer Repos	X	X
Central Bank Swap Lines	X	X
Commercial Paper Funding Facility	X	X
Primary Dealers Credit Facility	X	X
Money Market Lending Facility	X	X
Term Auction Facility	X	
TALF	X	X
TSLF	X	
FIMA Repo Facility		X
Primary & Secondary Corp. Debt		X
PPP Term Facility		X
Municipal Liquidity Facility		X
Main Street Loan Facility		X

### Global Financial Crisis Comparison (continued)

- The US **fiscal** COVID-19 Crisis response has been materially larger than the 2007-2009 Global Financial Crisis (GFC), and stimulus is acutely focused on areas of the economy showing the greatest need, including small and mid-sized companies. For example, the Paycheck Protection Program helps small businesses keep employees working by offering forgivable loans to cover salaries.
- On the **monetary** side, markets targeted during both crises represent those most in need, but for the COVID-19 Crisis the policy response was dramatically faster, measured in weeks, not years, as in the GFC.
- Of the monetary stimulus measures, the corporate debt (Primary & Secondary Corporate Debt) programs and Main Street Loan Facility are new and garnered much attention from market participants.

Historic \$2T US Fiscal Stimulus

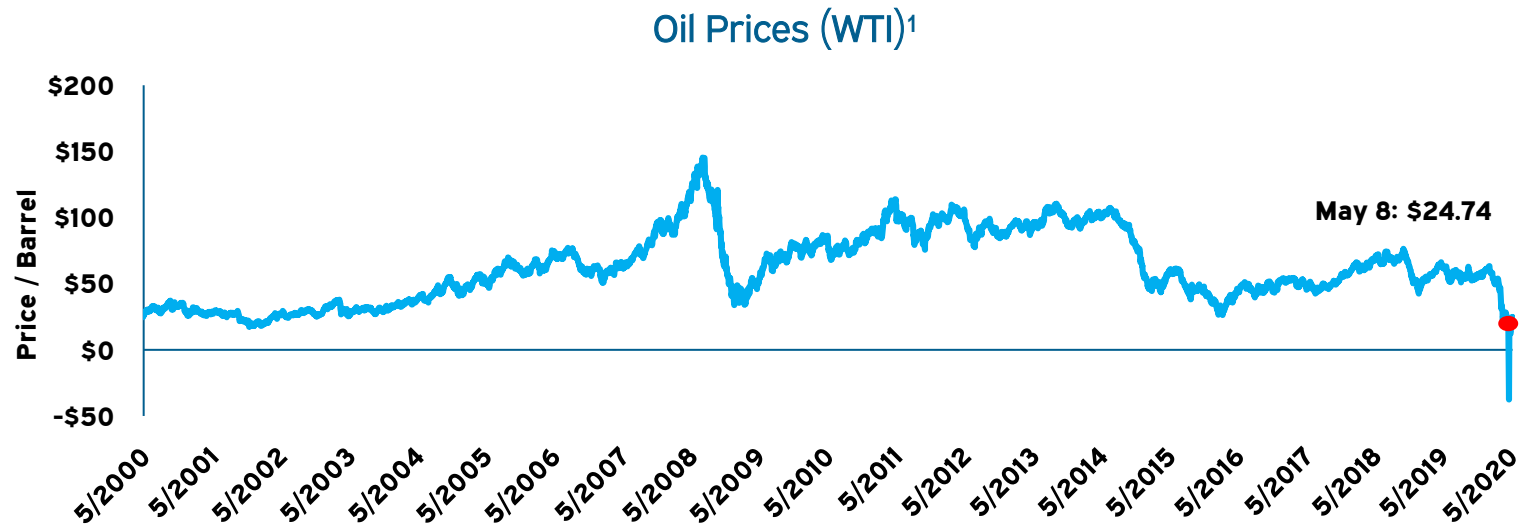
Destination	Amount (\$ Billion)
Individuals	\$560
Large Corporations	\$500
Small Business	\$377
State & Local Governments	\$340
Public Health	\$154
Student Loans	\$44
Safety Net	\$26

- Late in March, a historic \$2 trillion fiscal package was approved in the US, representing close to 10% of GDP and including support across the economy.
- Individuals are actively receiving cash payments of up to \$1,200 per adult and \$500 per child, and extended and higher weekly unemployment benefits (+\$600/week).
- The package also includes a \$500 billion lending program for distressed industries like airlines, and \$377 billion in loans to small businesses.
- Other parts of the package include allocations to state and local governments, support for public health, student loan relief, and a safety net.
- Recently, the next round of fiscal stimulus was approved with the majority targeted to replenish the depleted small business lending program.



## Policy Responses

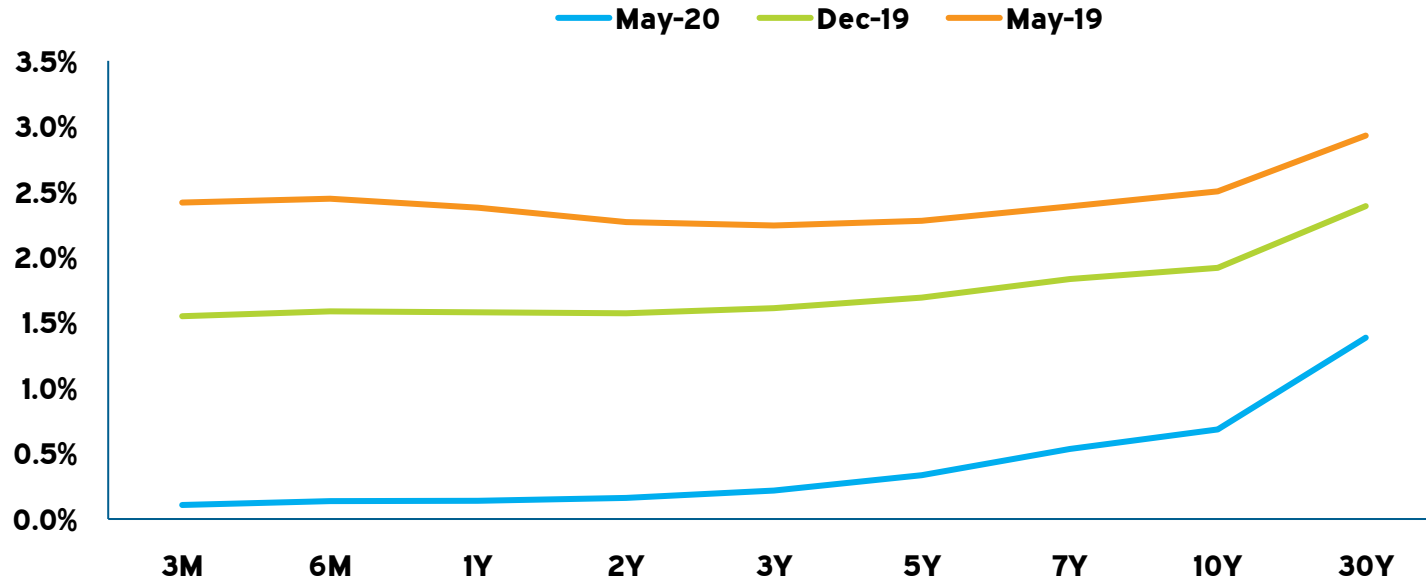
	Fiscal	Monetary
United States	\$50 billion to states for virus related support, interest waived on student loans, flexibility on tax payments and filings, expanded COVID-19 testing, paid sick leave for hourly workers, \$2 trillion package for individuals, businesses, and state/local governments. Additional \$484 billion package to replenish small business loans, provide funding to hospitals, and increase testing.	Cut policy rates to zero, unlimited QE4, offering trillions in repo market funding, restarted CPFF, PDCF, MMMF programs to support lending and financing market, expanded US dollar swap lines with foreign central banks, announced IG corporate debt buying program with subsequent amendment for certain HY securities, Main Street Lending program, Muni liquidity facility, repo facility with foreign central banks, and easing of some financial regulations for lenders.
Euro Area	Germany: Launched 750 billion euro stimulus package. France: 45 billion euro for workers, guaranteed up to 300 billion euro in corporate borrowing. Italy: 25 billion euro emergency decree, suspending mortgage payments for impacted workers. Spain: 200 billion euro and 700 million euro loan and aid package, respectively.	Targeted longer-term refinancing operations aimed at small and medium sized businesses, under more favorable pricing, and announced the 750 billion euro Pandemic Emergency Purchase Program. and then expanded the purchases to include lower-quality corporate debt
Japan	\$20 billion in small business loans, direct funding program to stop virus spread among nursing homes and those affected by school closures, discussion of additional relief in the coming months, and \$240 billion supplementary spending (pending).	Initially increased QE purchases (ETFs, corporate bonds, and CP) and then expanded to unlimited purchases and doubling of corporate debt and commercial paper, expanded collateral and liquidity requirements, and 0% interest loans to businesses hurt by virus
China	Tax cuts, low-interest business loans, extra payments to gov't benefit recipients.	Expanded repo facility, policy rate cuts, lowered reserve requirements.
Canada	\$7.1 billion in loans to businesses to help with virus damage.	Cut policy rates, expanded bond-buying and repos, lowered bank reserve requirements.
UK (BOE)	Tax cut for retailers, small business cash grants, benefits for those infected with virus, expanded access to gov't benefits for self and un-employed.	Lowered policy rates and capital requirements for UK banks, restarts QE program and subsequently increased the purchase amounts.
Australia	\$11.4 billion, subsidies for impacted industries like tourism, one-time payment to gov't benefit recipients.	Policy rate cut, started QE.



- Recently, in an unprecedented move, oil prices plunged to negative levels on concerns over storage capacity in the US. This led to producers having to pay to offload their oil for May delivery.
- Negative prices were driven by the futures market that requires physical delivery of oil at contract expirations. As the May expiration date approached, traders sold the contracts given extremely low demand and storage constraints. Prices have since moved back into positive territory, but the risk of a similar dynamic remains as the June expiration date approaches.
- Prior to this, oil markets were already under pressure as the virus lowered global growth expectations, and prices deteriorated further when Saudi Arabia initiated a price war after Russia's decision to not participate in the proposed OPEC+ supply cuts. Russia ultimately agreed to participate and this, along with optimism over economies starting to reopening, provided some support to oil recently.

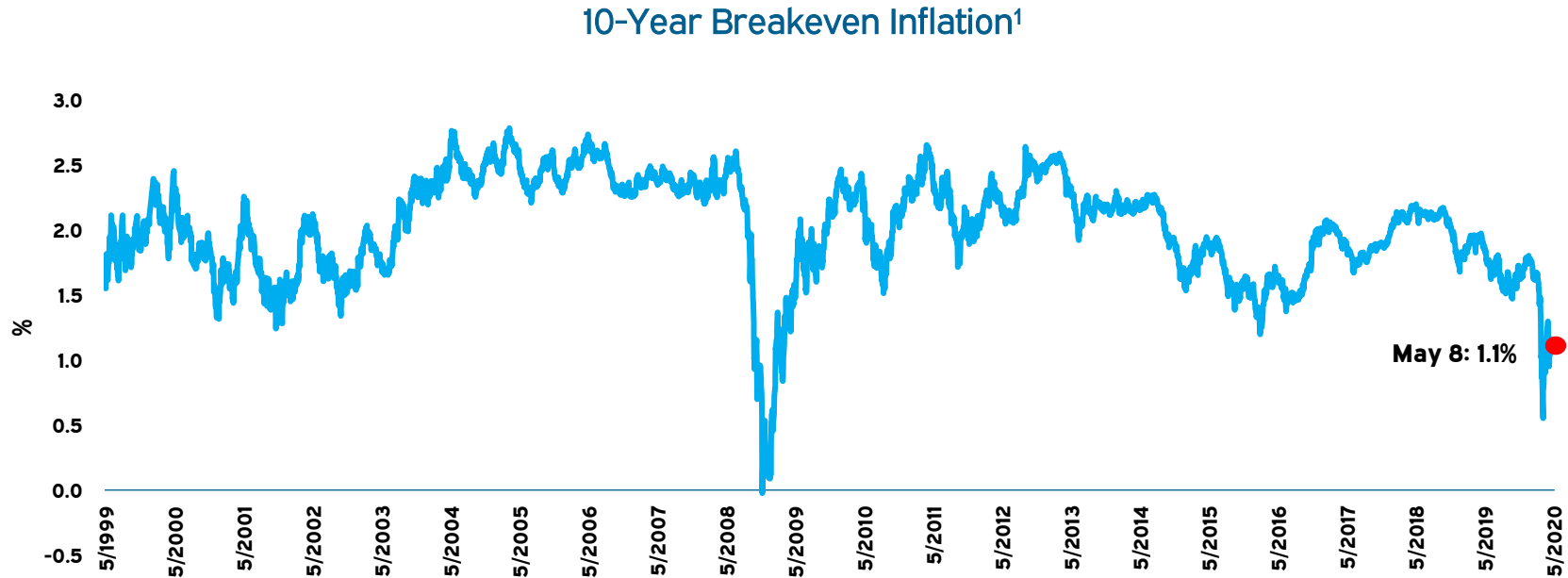
<sup>1</sup> Source: Bloomberg. Represents WTI first available futures contract. Data is as of May 8, 2020.

### US Yield Curve Declines<sup>1</sup>



- The US Treasury yield curve has declined materially since last year.
- Cuts in monetary policy rates lowered yields in shorter maturities, while flight-to-quality flows, low inflation, and lower growth expectations, particularly given indications that economic growth could slow by record amounts, have driven the changes in longer-dated maturities.
- The Federal Reserve’s unlimited quantitative easing purchase program has provided further downward pressure on interest rates.

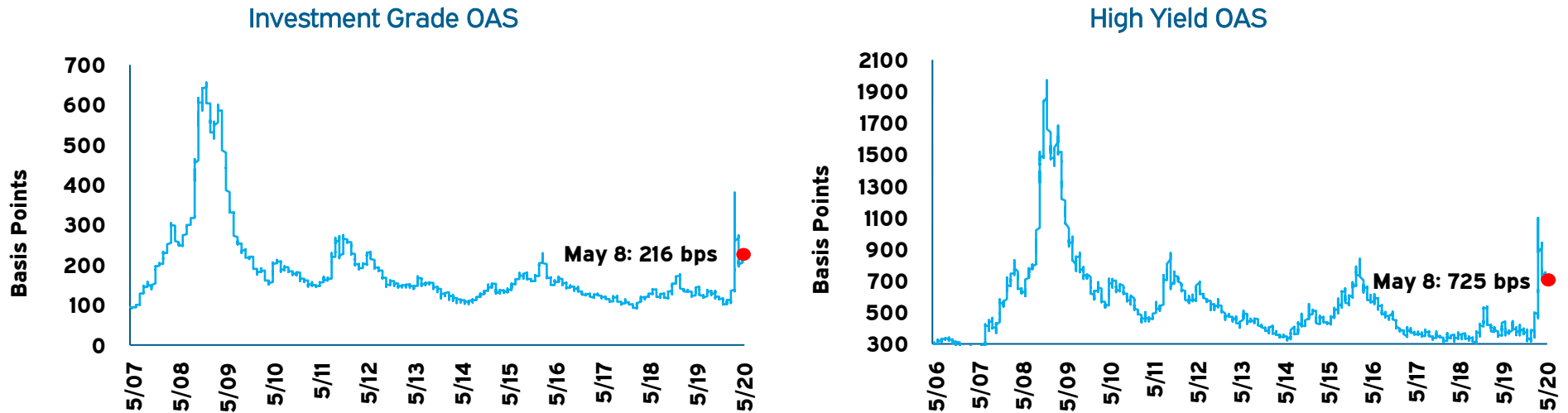
<sup>1</sup> Source: Bloomberg. Data is as of May 8, 2020.



- Inflation breakeven rates declined sharply over the last two months, due to a combination of declines in inflation expectations and liquidity dynamics in TIPS during the height of rate volatility.
- As liquidity improved, and given the potential longer term inflationary effects of the unprecedented US fiscal and monetary responses, inflation expectation levels have come off of their recent lows, but remain well below historical averages.

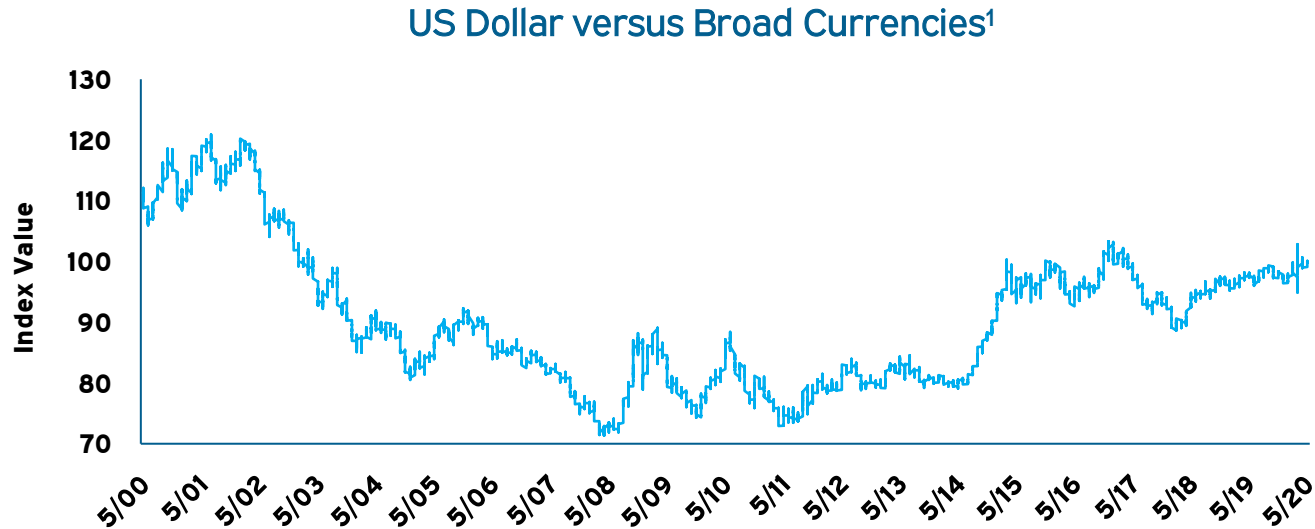
<sup>1</sup> Source: Bloomberg. Data is as of May 8, 2020.

### Credit Spreads (High Yield & Investment Grade)<sup>1</sup>



- Credit spreads (the spread above a comparable Treasury bond) for investment grade and high yield corporate debt expanded sharply as investors sought safety.
- Investment grade bonds held up much better than high yield bonds. The Federal Reserve’s corporate debt purchase program for investment grade and certain high yield securities that were recently downgraded from investment grade, was well received by investors, leading to a decline in spreads.
- Corporate debt issuance has more than doubled since 2008, which magnifies the impact of deterioration in the corporate debt market. This is particularly true in the energy sector, which represents a large portion of the high yield bond market.

<sup>1</sup> Source: Federal Reserve Bank of St. Louis Economic Research. Data is as of May 8, 2020.



- When financial markets began aggressively reacting to COVID-19 developments, the US dollar came under selling pressure as investors sought safe-haven exposure in currencies like the Japanese yen.
- As the crisis grew into a pandemic, investors’ preferences shifted to holding US dollars and highly liquid, short-term securities like US Treasury bills. This global demand for US dollars led to appreciation versus most major currencies.
- A relatively strong US dollar makes US goods more expensive for overseas consumers and causes commodity prices outside the US to rise, affecting foreign countries, and particularly emerging markets.
- To help ease global demand for US dollars, the Federal Reserve, working with a number of global central banks, re-established the US dollar swap program, providing some relief to other currencies.

<sup>1</sup> Source: Bloomberg. Represents the DXY Index. Data is as of May 8, 2020.

## Economic Impact

### Supply Chain Disruptions:

- Factories closing, increased cost of stagnant inventory, and disrupted supply agreements.
- Reduced travel, tourism, and separation policies including closed borders: Significant impact on service-based economies.

### Labor Force Impacts:

- Huge layoffs across service and manufacturing economies.
- Increased strains as workforce productivity declines from increased societal responsibilities (e.g., home schooling of children) and lower functionality working from home.
- Illnesses from the disease will also depress the labor force.

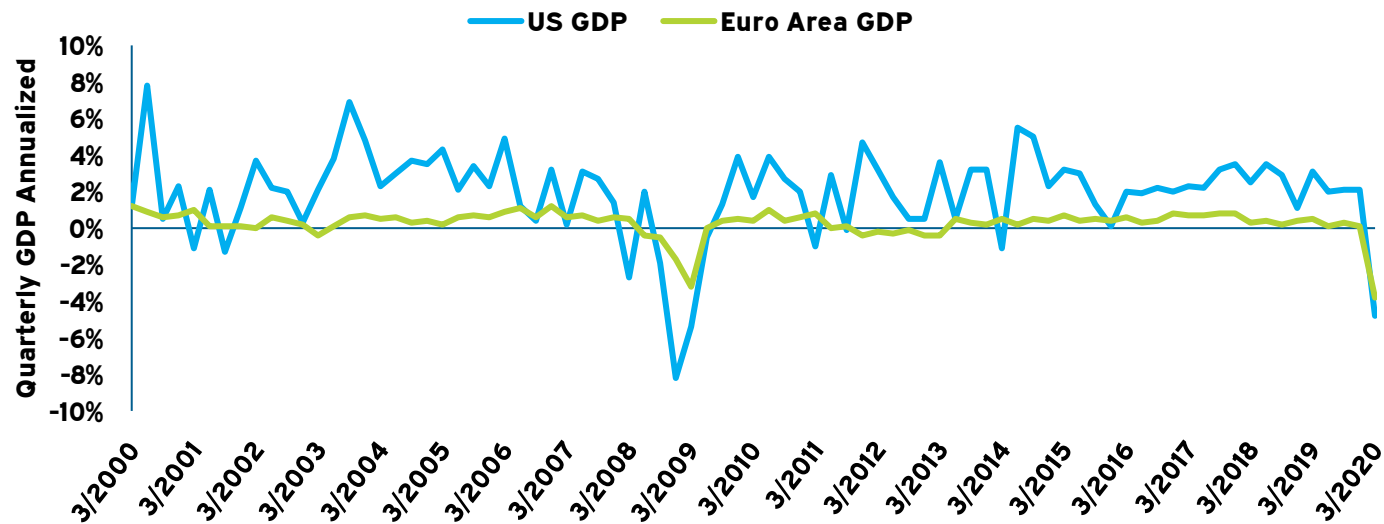
### Declines in Business and Consumer Sentiment:

- Sentiment drives investment and consumption, which leads to increased recessionary pressures as sentiment slips.

### Wealth Effect:

- As financial markets decline and wealth deteriorates, consumer spending will be impacted.

### GDP Data Shows First Signs of Crisis<sup>1</sup>

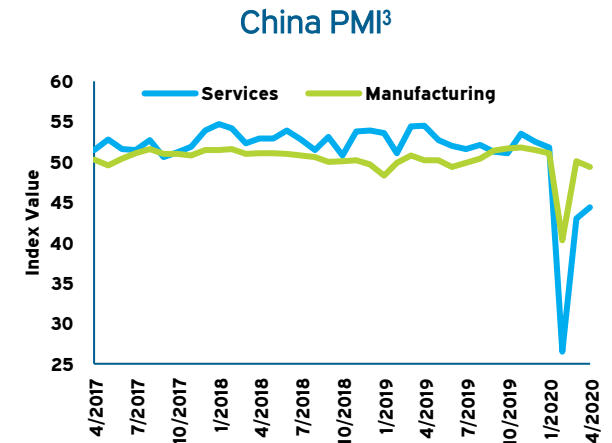
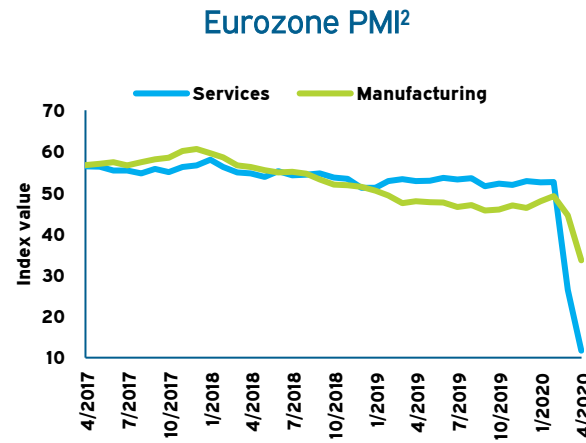
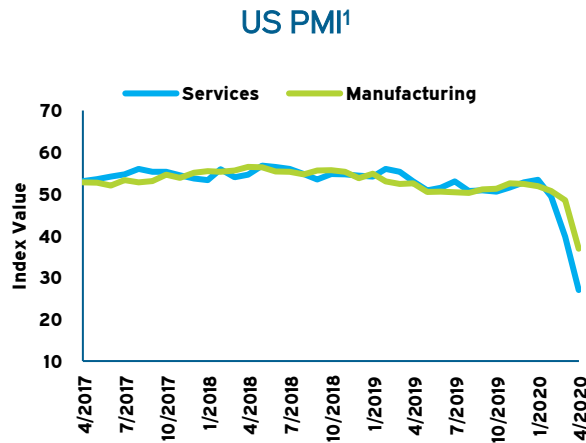


- The global economy faces major recessionary pressures this year, but optimism remains for improvements in 2021 as economies are expected to gradually reopen.
- In the US, initial estimates for first quarter GDP came in at -4.8%, with personal consumption declining the most since 1980. Eurozone GDP also fell (-3.8%) with the major economies in France, Spain and Italy experiencing historic declines.
- Going forward, Bloomberg Economics estimates that second quarter global GDP could experience further declines and be as low as -9%.

<sup>1</sup> Source: Bloomberg. Q1 2020 data represents first estimate of GDP for Euro Area and United States.



### Global PMIs



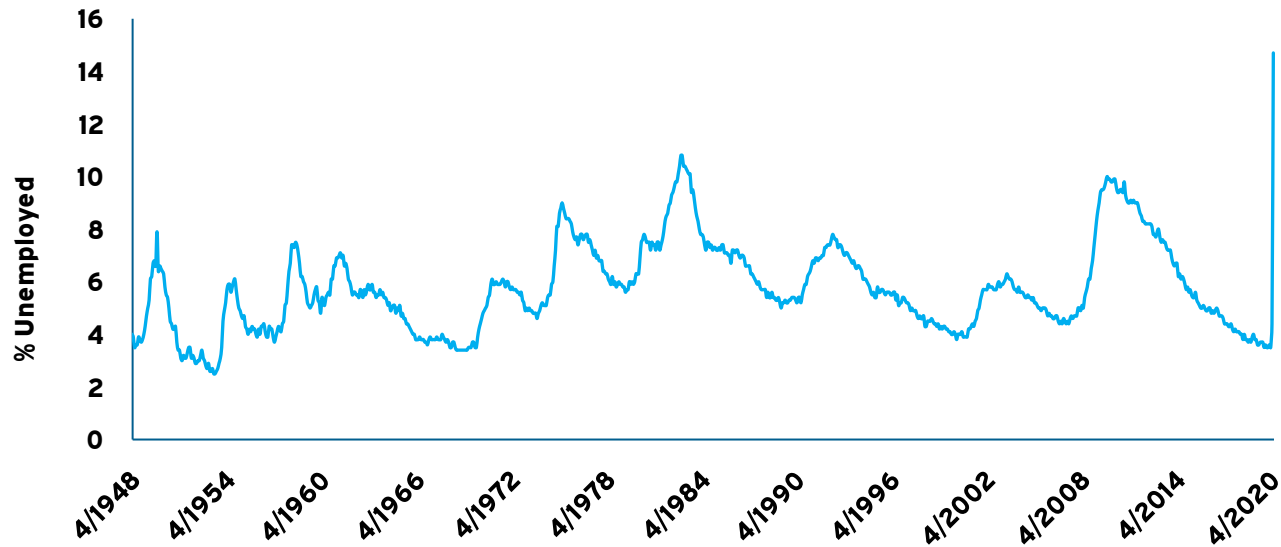
- Purchasing Managers Indices (PMI) based on surveys of private sector companies, collapsed across the world to record lows, as output, new orders, production, and employment have been materially impacted by closed economies.
- Readings below 50 represent contractions across underlying components and act as a leading indicator of economic activity, including the future paths of GDP, employment, and industrial production.
- The services sector has been particularly hard hit given the stay at home restrictions in many places.

<sup>1</sup> Source: Bloomberg. US Markit Services and Manufacturing PMI. Data is as of April 2020

<sup>2</sup> Source: Bloomberg. Eurozone Markit Services and Manufacturing PMI. Data is as of April 2020

<sup>3</sup> Source: Bloomberg. Caixin Manufacturing and Services PMI Data is as of April 2020.

### US Unemployment Rate<sup>1</sup>

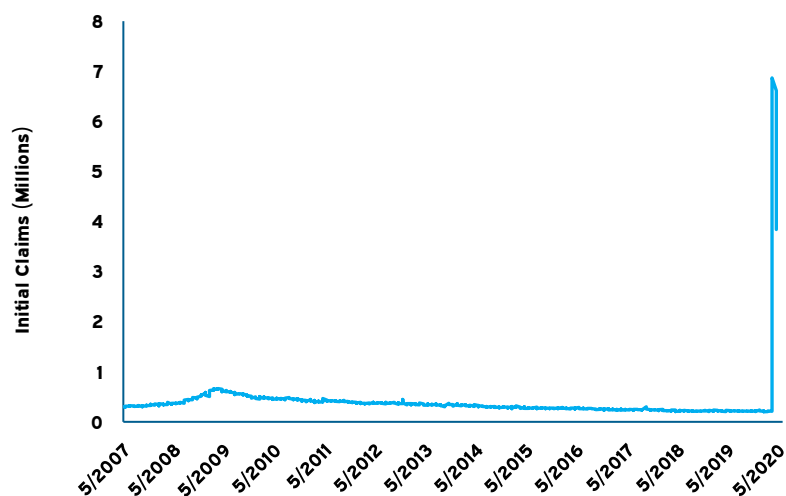


- The April reading of unemployment came in at 14.7%, slightly below estimates of 16%, but representing the highest level since the Great Depression.
- The Bureau of Labor Statistics commented in their release that a large number of workers were likely being misclassified as “employed but absent from work” versus “unemployed on temporary layoff” and that the unemployment rate was probably close to 5% higher than reported.

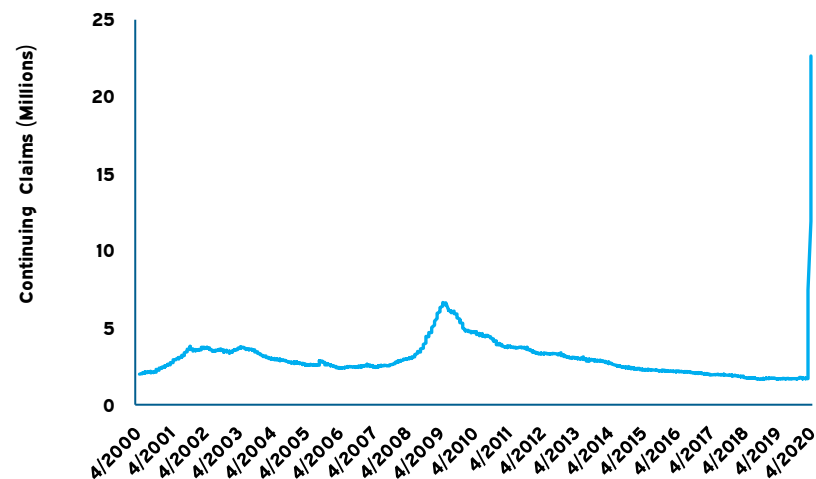
<sup>1</sup> Source: Bloomberg. Data is as of April 30, 2020.

### US Jobless Claims

#### US Initial Jobless Claims<sup>1</sup>



#### Continuing Claims<sup>2</sup>



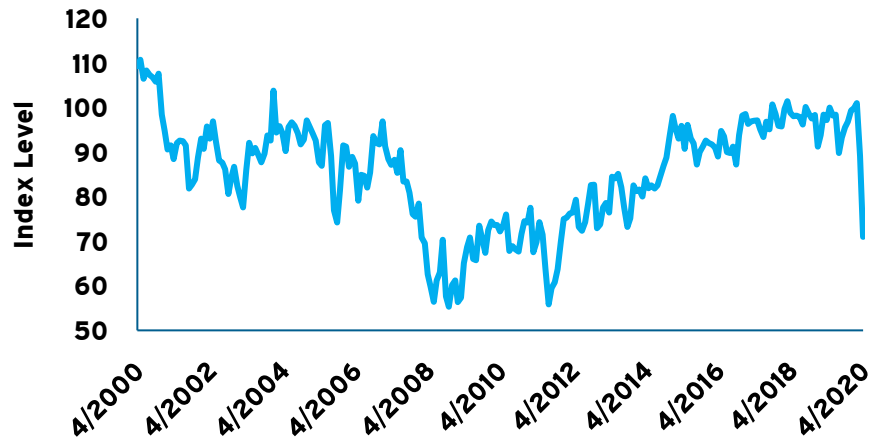
- Over the last seven weeks, over 33 million people filed for initial unemployment. This level exceeds the 22 million jobs added since the GFC, highlighting just how unprecedented the impact of the virus is.
- Continuing jobless claims (i.e., those currently receiving benefits) also spiked to a record level of 22.6 million people.

<sup>1</sup> Source: Bloomberg. First reading of seasonally adjusted initial jobless claims. Data is as of April 25, 2020.

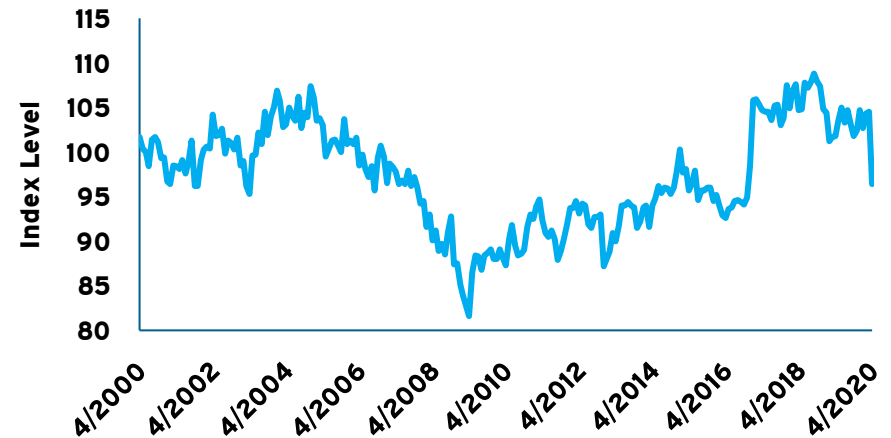
<sup>2</sup> Source: Bloomberg. US Continuing Jobless Claims SA. Data is as of April 24, 2020.

### Sentiment Indicators

University of Michigan Consumer Sentiment<sup>1</sup>



Small Business Confidence<sup>2</sup>

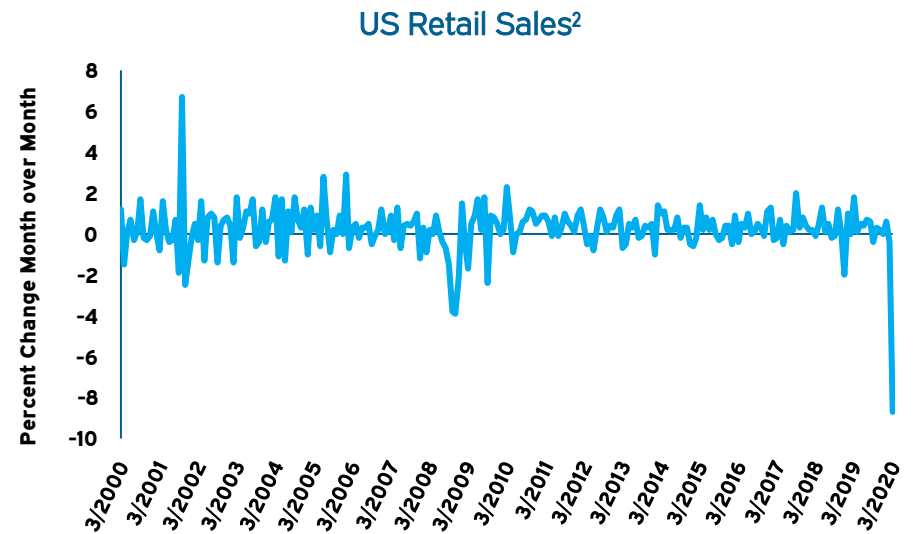
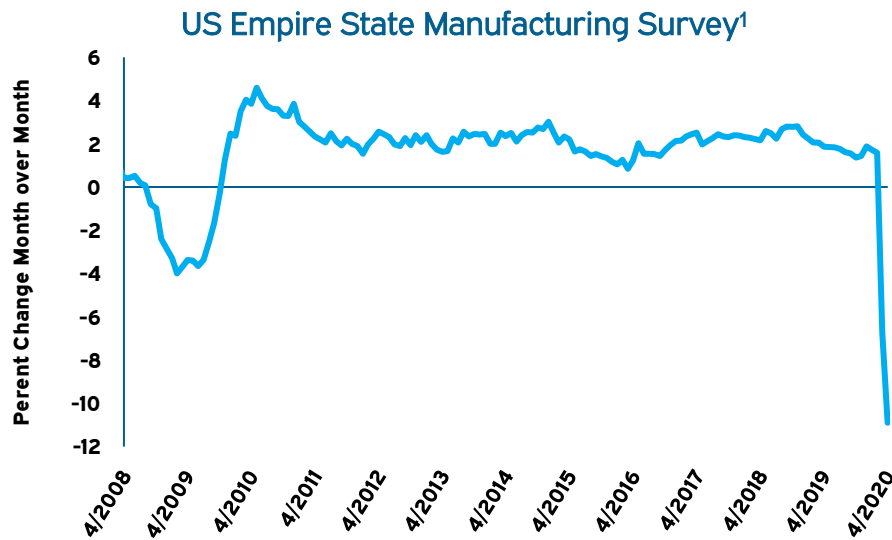


- A strong indicator of future economic activity are the attitudes of businesses and consumers today.
- Consumer spending comprises close to 70% of US GDP, making the attitudes of consumers an important driver of future economic growth. Additionally, small businesses comprise a majority of the economy, making sentiment in that segment important too.
- As restrictions caused many businesses to close and employees to be laid off, sentiment indicators have seen corresponding declines with potentially more to come as the impact of the virus evolves.

<sup>1</sup> Source: Bloomberg. University of Michigan Consumer Sentiment Index. Data is as of April 2020.

<sup>2</sup> Source: Bloomberg. NFIB Small Business Optimism Index. Data is as of March 31, 2020.

### Cracks Starting to Show in Q2 US Data



- Manufacturing in New York during March declined at the fastest pace on record, falling 78.2%, the lowest on record dating back to 2001, with readings below zero indicating economic contraction.
- March US retail sales also fell by a record amount (-8.7%), more than double the prior -3.8% record, set during November 2008. Declines were led by clothing and accessories store sales which fell more than 50% from the previous month.

<sup>1</sup> Source: Bloomberg. Data is as of April 30, 2020 and represents the US Empire State Manufacturing Survey General Business Conditions SA.

<sup>2</sup> Source: Bloomberg. Data is as of March 31, 2020 and represents the adjusted Retail Sales SA Monthly % Change.

Government Re-Opening Recommendation<sup>1</sup>

Phase One	Phase Two	Phase Three
<ul style="list-style-type: none"> <li>• Vulnerable individuals continue to stay at home.</li> <li>• Avoid groups of more than 10 people if social distancing is not possible.</li> <li>• Minimize non-essential travel.</li> <li>• Work remotely if possible with restrictions in the office for those businesses that open.</li> <li>• Schools remain closed, but some larger venues can open with strict protocols.</li> <li>• Outpatient elective surgeries can resume.</li> </ul>	<ul style="list-style-type: none"> <li>• Vulnerable individuals continue to stay at home.</li> <li>• Avoid groups of more than 50 people if social distancing is not possible.</li> <li>• Non-essential travel resumes.</li> <li>• Continue to work remotely if possible with restrictions in the office for those businesses that open.</li> <li>• Schools can reopen.</li> <li>• Inpatient elective surgeries can resume</li> </ul>	<ul style="list-style-type: none"> <li>• Vulnerable individuals can return to public life with social distancing.</li> <li>• Workplaces can reopen without restrictions.</li> <li>• Larger venues can operate under reduced social distancing protocols.</li> </ul>

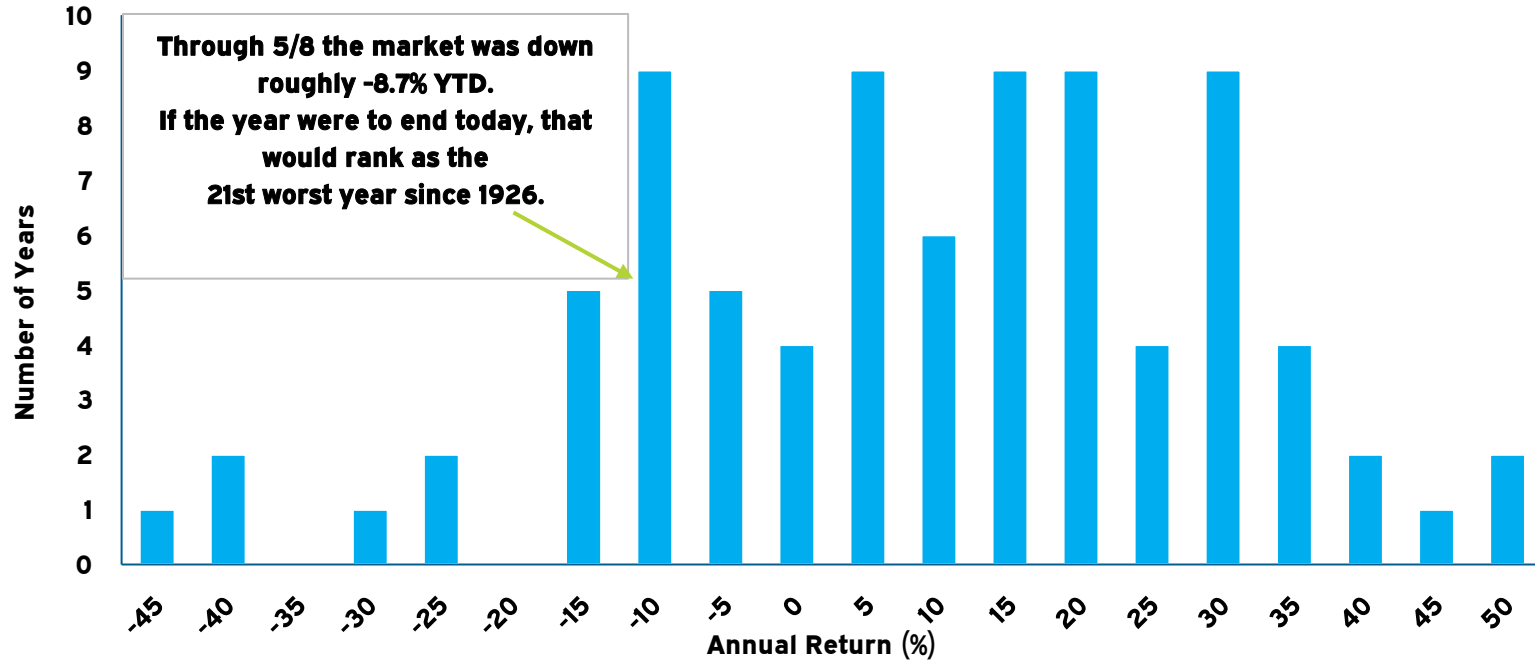
- The Trump administration recently announced guidelines for re-opening the US economy.
- Guidelines recommend states document a “downward trajectory” in new cases for two weeks before beginning a three-phase process to scale back distancing measures and reopen local economies.
- States should also document an additional two-week period decline in instances between each of the three phases, and be prepared to reinstate social distancing measures should cases rebound.
- Recently, some states have begun the reopening process, with others considering to start the process soon.

<sup>1</sup> Source: <https://www.whitehouse.gov/openingamerica/>

### Looking Forward...

- There will be significant economic impact and a global recession.
  - How deep it will be and how long it will last depend on factors (below) that are unknowable at this time.
- The length of the virus and country responses will be key considerations.
  - As of now, it is not clear the end is in sight; however, impacted countries are attempting to lay the groundwork to support a recovery.
- Central banks and governments are pledging support, but will it be enough?
  - Based on initial market reactions to announced policies, the answer is no, until the virus gets better contained.
- Expect heightened market volatility given the virus and previous high valuations.
  - This has been a consistent theme over the last weeks; volatility is likely to remain elevated for some time.
- It is important to retain a long-term focus.
  - History supports the argument that maintaining a long-term focus will ultimately prove beneficial for diversified portfolios.

**Distribution of Annual S&P 500 Returns<sup>1</sup>  
(1926-2020)**



- The -8.7% year-to-date decline (through 5/8) in the S&P 500 would be the twenty-first largest in modern history if it ended the year at this level.
- With around eight months remaining in 2020, and trillions of dollars in fiscal and monetary stimulus deployed, we expect asset prices to experience notable volatility over the near term.

<sup>1</sup> Source: Bloomberg. Data is as of May 8, 2020.



Prior Drawdowns and Recoveries from 1926-2020<sup>1</sup>

Period	Peak-to-Trough Decline of the S&P 500	Approximate Time to Recovery
Sept 1929 to June 1932	-85%	266 months
February 1937 to April 1942	-57%	48 months
May 1946 to February 1948	-25%	27 months
August 1956 to October 1957	-22%	11 months
December 1961 to June 1962	-28%	14 months
February 1966 to October 1966	-22%	7 months
November 1968 to May 1970	-36%	21 months
January 1973 to October 1974	-48%	69 months
September 1976 to March 1978	-19%	17 months
November 1980 to August 1982	-27%	3 months
August 1987 to December 1987	-32%	19 months
July 1990 to October 1990	-20%	4 months
July 1998 to August 1998	-19%	3 months
March 2000 to October 2002	-49%	56 months
October 2007 to March 2009	-57%	49 months
February 2020 to May 2020	-34%	TBD
<b>Average</b>	<b>-36%</b>	<b>41 months</b>
<b>Average ex. Great Depression</b>	<b>-33%</b>	<b>25 months</b>

- Markets are continuing to reprice amid the uncertain impact of the virus on markets and the global economy, which means this drawdown is still being defined in the context of history.
- That said, financial markets have experienced material declines with some frequency, and while certain declines took a meaningful time to recover, in all cases they eventually did.
- The current decline is severe, and it is still too early to tell how long a full recovery might take.

<sup>1</sup> Source: Goldman Sachs. Recent peak to trough declines are through May 8, 2020.

### Implications for Clients

- Be prepared to rebalance and take advantage of the age-old wisdom “buy low, sell high”.
  - Before rebalancing, consider changes in liquidity needs given the potential for inflows to decline in some cases.
  - Also, consider the cost of rebalancing as investment liquidity declines.
- Diversification works. The latest decline was an example of a flight to quality leading to gains in very high quality bonds.

### Performance YTD (through May 8, 2020)

S&P 500	ACWI (ex. US)	Aggregate Bond Index	Balanced Portfolio <sup>1</sup>
-8.7%	-18.1%	4.5%	-7.3%

- Meketa will continue to monitor the situation and communicate frequently.
  - The situation is fluid and the economic impact is uncertain at this stage.
- Please feel free to reach out with any questions.
  - We would be glad to assist with performance estimates, memorandums, or phone calls.

<sup>1</sup> Source: InvestorForce. Balanced Portfolio represents 60% MSCI ACWI and 40% Bloomberg Barclays Global Aggregate.

# State of Connecticut Retirement Plans and Trust Funds

May 13, 2020

Endpoint Bias Discussion

#### Introduction

- Almost all investors look at historical returns when making investment decisions.
- However, this data may be biased or incomplete, depending on the time period chosen, as this represents a single “snapshot” of time.
- Endpoint bias refers to the inclusion or exclusion of data that significantly skews results.
  - That is, if the recent past (or the starting period) witnessed unusually high or low returns, then long-term results can change considerably.
  - Starting point bias is as significant as endpoint bias when dramatic investment results are at the beginning of the period.
- Relying solely on data that is biased in this fashion can result in investors making flawed decisions.

#### Endpoint Bias: Examples

##### Example 1: Changing Markets

- As of March 2000, the Russell 1000 Growth index had outperformed its Value counterpart by 1.3% annually over twenty years.
- From this data, investors might initially conclude that growth stocks offer a long-term premium relative to value stocks.
- When the twenty-year trailing return is measured one year later, the premium is reversed. Value stocks outperformed growth stocks by an annualized 2.1%.

	20 Years As of 3/00 (%)	20 Years As of 3/01 (%)
Russell 1000 Growth	18.5	13.2
Russell 1000 Value	17.2	15.3

#### Example 2: Anomalies

- For the twenty-year period ending February 2008, the S&P 500 index had earned 3.4% more annually than the Barclays Aggregate index.
- This was consistent with the long-term premium observed for stocks over bonds.
- However, when measured one year later, investment grade bonds outperformed by an annualized 0.2% over the twenty-year period. Note that this relationship only lasted for one month.

	20 Years As of 2/08 (%)	20 Years As of 2/09 (%)
S&P 500	10.8	7.1
Barclays Aggregate	7.4	7.3

#### Example 3: Short Time Periods

- Measured over a shorter period of five years ending March 2000, the Russell 2000 Growth index outperformed its Value counterpart by 10.8% on average, per year.
- Twelve months later, small cap value stocks beat small cap growth stocks over the trailing five-year period.

	5 Years As of 3/00 (%)	5 Years As of 3/01 (%)
Russell 2000 Growth	31.8	11.6
Russell 2000 Value	21.0	14.2

- For both the five- and twenty-year periods examined, endpoint bias was significant for growth and value stocks due to the extraordinary rise and fall of technology stocks.

#### Example 4: Cyclicality

- For the ten-year period ending December 1989, the MSCI EAFE index earned 4.5% more than the S&P 500 index, annually.
- When measured ten years later, the situation was reversed: U.S. equities exhibited an annualized ten-year outperformance of 11.2%.
  - Foreign equity returns were led by dramatic increases in the Japanese equity market in the 1980s.
  - Japanese stocks were then responsible for dragging down performance for foreign equity through the 1990s.
- Over the following decade, the roles reversed again and international equities outperformed domestic for the period ending December 2009.

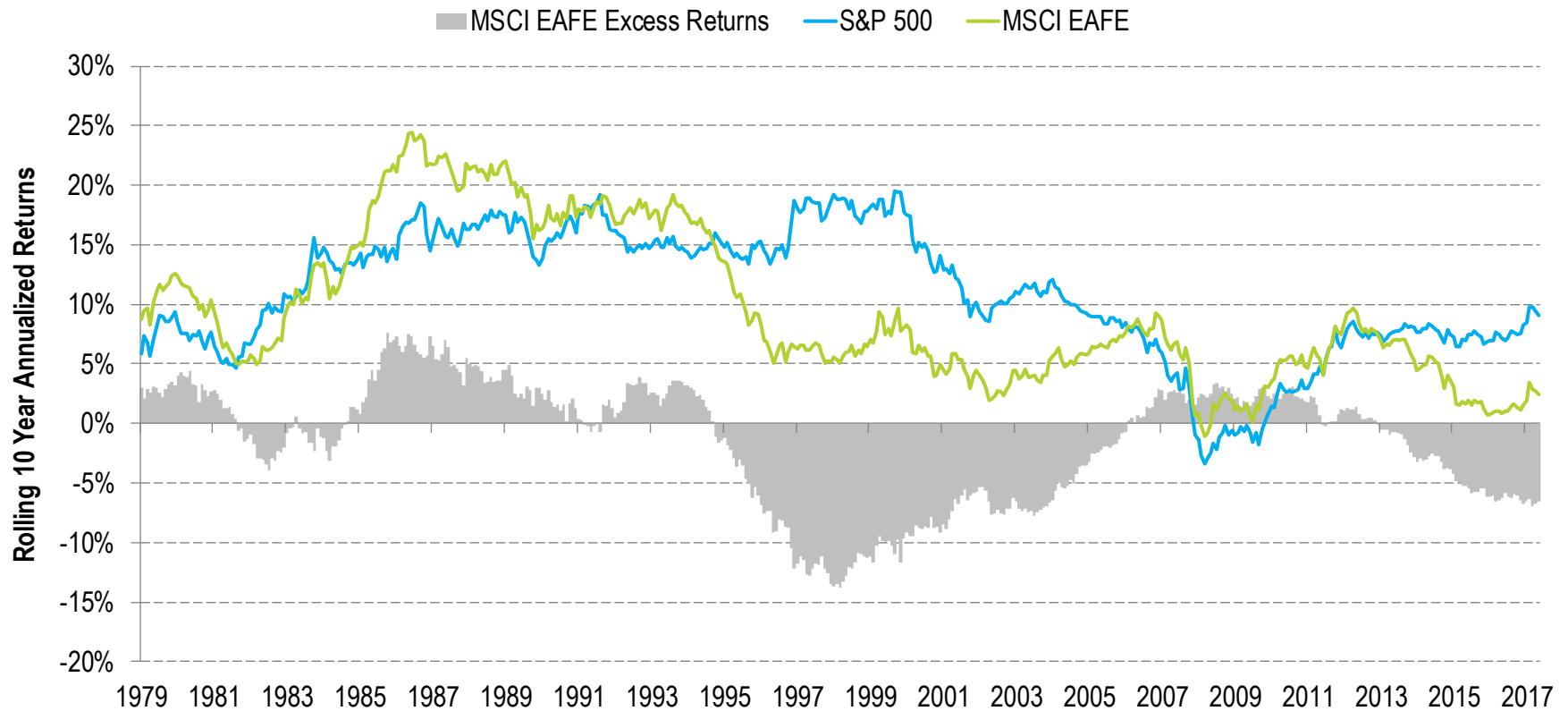
	10 Years As of 12/89 (%)	10 Years As of 12/99 (%)	10 Years As of 12/09 (%)	8 Years As of 12/17 (%)
MSCI EAFE	22.0	7.0	1.2	6.3
S&P 500	17.5	18.2	-1.0	13.9

- This trend has reversed once again, with U.S. equities significantly outperforming foreign equities over the subsequent eight years.



#### Example 4: Cyclicality (continued)

- The chart below shows further evidence of the cyclicality experienced by international and domestic equities.



#### Example 5: Insufficient Data

- Often, the time period being measured may be particularly favorable (or unfavorable) for a certain investment style.
- Bank loans had never experienced more than a 2% loss over a twelve-month period until the arrival of the Global Financial Crisis, when they declined -28.8%.

#### One-Year Rolling Returns for Bank Loans

1992 to 2017



#### Example 6: Including All Available Data

- Between 2000 and 2007, S&P GSCI (commodities) performance was seven times that of the S&P 500.
- However, when looking at the full history of the S&P GSCI, the annualized returns lag the S&P 500 by almost four hundred basis points.

	2000 – 2007 (%)	1970 – 2017 (%)
S&P GSCI	13.2	6.7
S&P 500	1.7	10.6

- Commodities experienced strong performance between 2000 and 2007, a period that started in negative territory for equities due to the Tech Crisis of 2000.

#### Example 7: Active Management

- As of December 2010, the median value manager was performing better than the median growth manager versus their respective benchmarks.
- For the last three periods in the below chart, the median growth manager has underperformed their benchmark while the median value manager has outperformed in all but one (only 3 bp underperformance)
- These swings are more likely due to market factors (e.g., cap or sector bias) than they are due to a sudden change in manager skill.

#### Performance versus Benchmark for

#### Large Cap Value and Large Cap Growth Managers

	Median for 5 Years Ending 12/08	Median for 5 Years Ending 12/10	Median for 5 Years Ending 12/13	Median for 5 Years Ending 12/15	Median for 5 Years Ending 12/17
Large Cap Value	35 bp	118 bp	97 bp	-3 bp	52 bp
Large Cap Growth	103 bp	5 bp	-65 bp	-60 bp	-75 bp

### Recommended Approach

- Examine the longest time period available.
  - More data is always better when making statistical estimates.
- Examine periods that contain a variety of market and economic conditions.
  - Data from a bull market cannot properly describe an entire business cycle, for example.
- Examine multiple sub-periods or calculate trimmed means<sup>1</sup>.
  - The available history may include periods of extreme volatility.
  - If so, observing sub-periods and continuously rolling periods may help to limit anomalous data points and explain more typical asset class behavior.
- Examine the underlying drivers of asset class returns.
  - An understanding of fundamental drivers may improve our confidence in estimates.
  - Investors may benefit from forward-looking scenario analysis, based on an understanding of the fundamental drivers of historical returns.

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<sup>1</sup> A trimmed mean is a method of averaging a set of values that removes extreme values.

### Summary

- Endpoint bias refers to investors' tendency to place undue significance on results for measurement periods ending in the present.
  - If the recent past has witnessed unusually high or low returns, then long-term results can change considerably.
  - Investors should be aware of endpoint biases, to avoid selling underperforming assets at the wrong time.
  - Also, it might allow investors to find opportunities to profit from mean reversion in the markets through a contrarian investment style.
- Changing markets and insufficient data are two causes of return behavior in financial markets.
- Endpoint bias can also be found in volatility and correlation data, as well as returns of active managers.
- To gauge and mitigate the effects of endpoint bias, Meketa Investment Group recommends following the approach outlined on the prior page.
  - This approach also holds true when evaluating and selecting managers to be hired (or fired).

Appendix: Public Natural Resources Cyclicity

- For the ten-year period ending December 2007, the S&P North America Natural Resources index earned 6.9% more than the S&P 500 index, annually.
- When measured ten years later, the situation reversed: domestic equities exhibited an annualized ten-year outperformance of 8.7%.

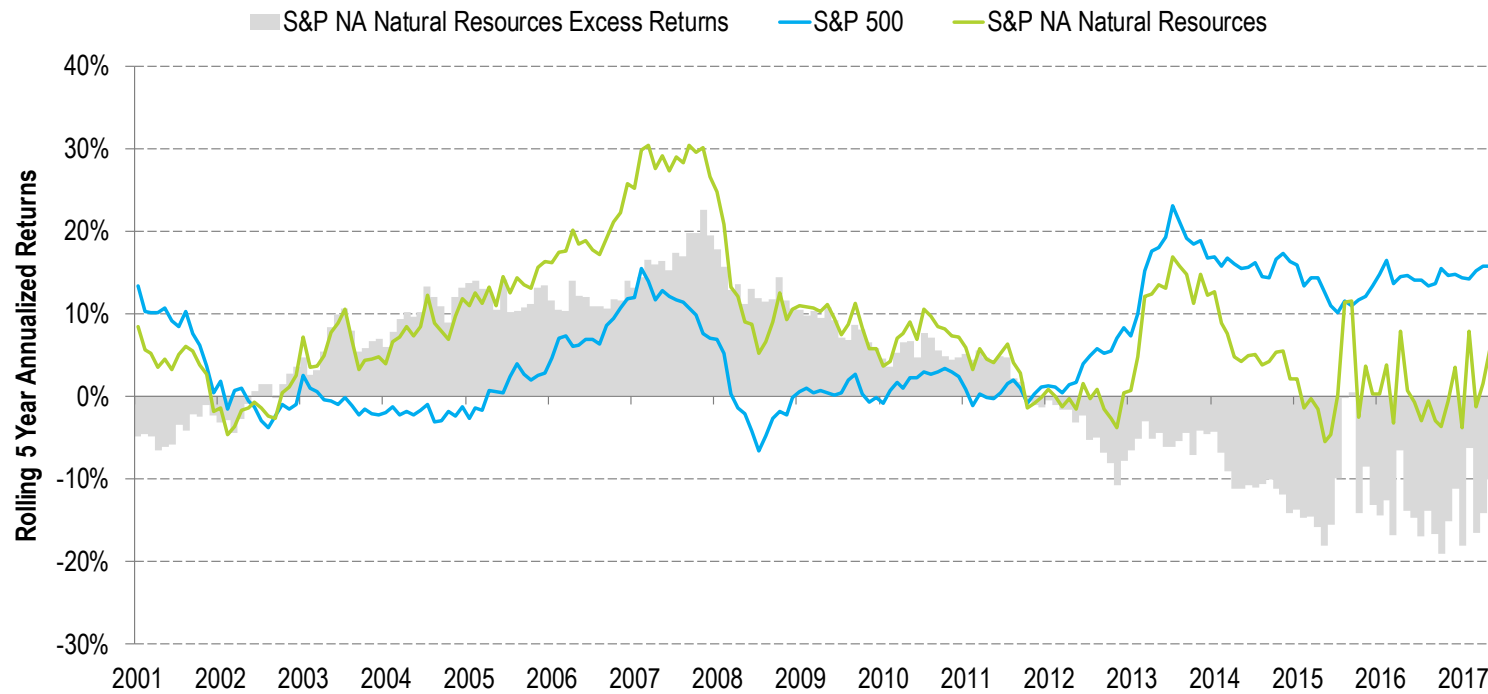
	10 Years As of 12/07 (%)	10 Years As of 12/17 (%)
S&P NA Natural Resources	12.8	-0.2
S&P 500	5.9	8.5

- Public natural resources returns were hurt in the last decade by the dramatic decline in oil prices, which somewhat coincided with a bull market for equities coming out of the Global Financial Crisis.

As of 12/17	1 YR (%)	5 YR (%)	10 YR (%)	Since Inception (%)
S&P NA Natural Resources	1.2	1.1	-0.2	7.1
S&P 500	21.8	15.8	8.5	10.4

#### Appendix: Public Natural Resources Cyclicity (Continued)

- Public natural resource equities returns are exposed to the cyclical nature of commodities returns, and thus will experience periods of out- and under-performance relative to the broad U.S. equities market.



- We can observe that between 2002 and 2012 public natural resource equities outperformed broad equities in all trailing five-year periods. That trend reversed, however, mainly driven by the decline in energy prices.



#### Appendix: Emerging Market Equities

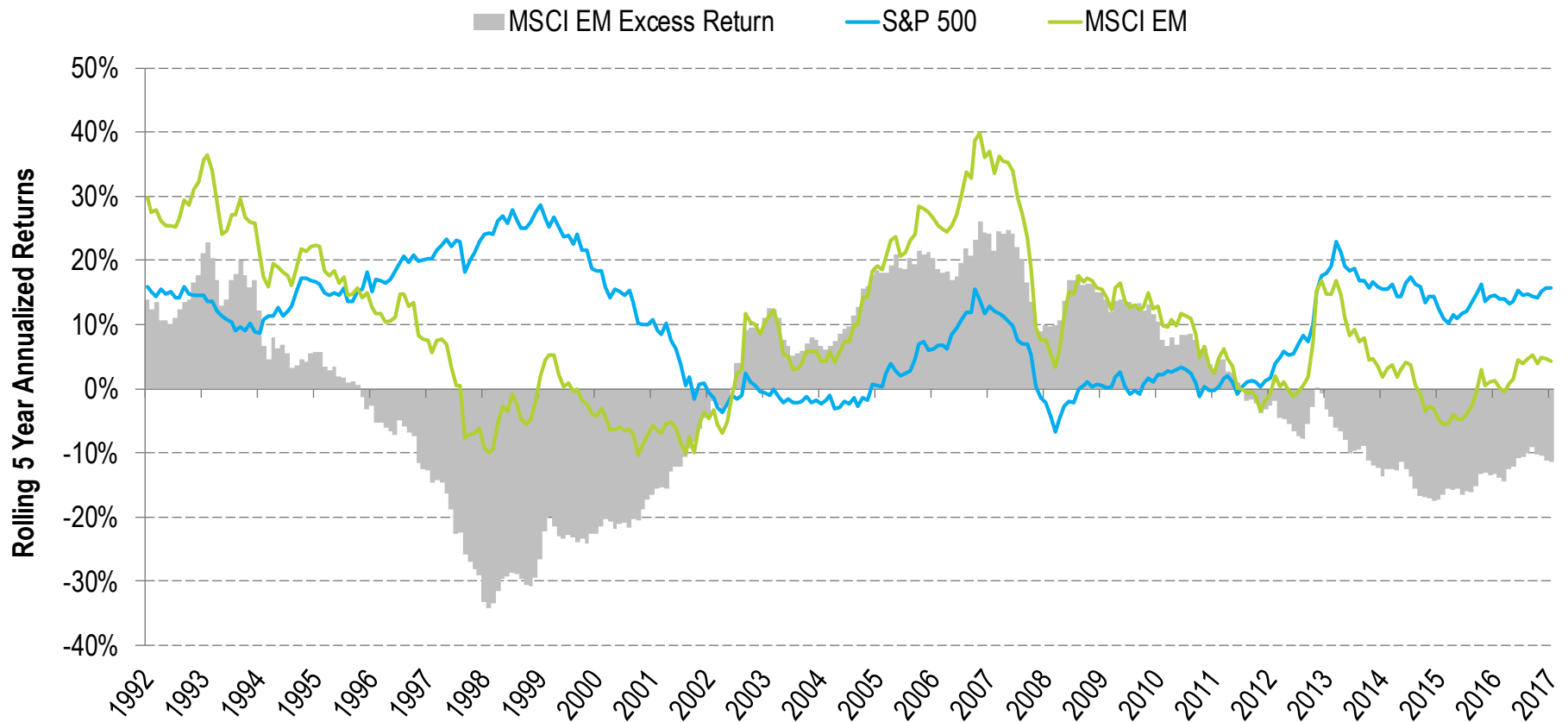
- Recent emerging markets equities underperformance brought the annualized since-inception returns to par with U.S. equities.
- However, taking a closer look at the sub-periods available, we can observe periods of relative out-performance from emerging markets equities that, coupled with their still attractive historical standalone realized returns and future expected return potential, points to clear diversification benefits for investors.

As of 12/17	Since Inception (%)	Since Inception to 12/98 (%)	01/99 to 03/08 (%)	04/08 to 12/17 (%)
MSCI Emerging Markets	11.1	13.4	17.7	2.9
S&P 500	10.7	19.0	2.4	9.8

<sup>1</sup> MSCI Emerging Markets Index Inception is January 1988.

#### Appendix: Emerging Market Equities (continued)

- The graph below shows the cycle of historical out- and under-performance of emerging markets equities relative to U.S. equities.



#### Appendix: High Yield Bonds

- High yield bonds have been a source of additional return to core fixed income holdings, given their increased credit risk.
- However, in November 2008, in the middle of the Global Financial Crisis, investors looking at past performance may have concluded that high yield investing was not worth the risk given that the Barclays Aggregate had outperformed the Barclays High Yield Index in all trailing periods.

As of 11/30/2008	1 YR (%)	5 YR (%)	10 YR (%)	20 YR (%)	Since Inception (%)
Barclays High Yield Index	-31.2	-1.8	1.4	5.9	7.4
Barclays Aggregate Index	1.7	4.1	5.3	7.2	8.3

- That relationship changed quickly. Just a year later, high yield had experienced an impressive recovery.

As of 11/30/2009	1 YR (%)	5 YR (%)	10 YR (%)	20 YR (%)	Since Inception (%)
Barclays High Yield Index	65.0	6.1	6.5	8.5	9.2
Barclays Aggregate Index	11.6	5.5	6.4	7.1	8.4

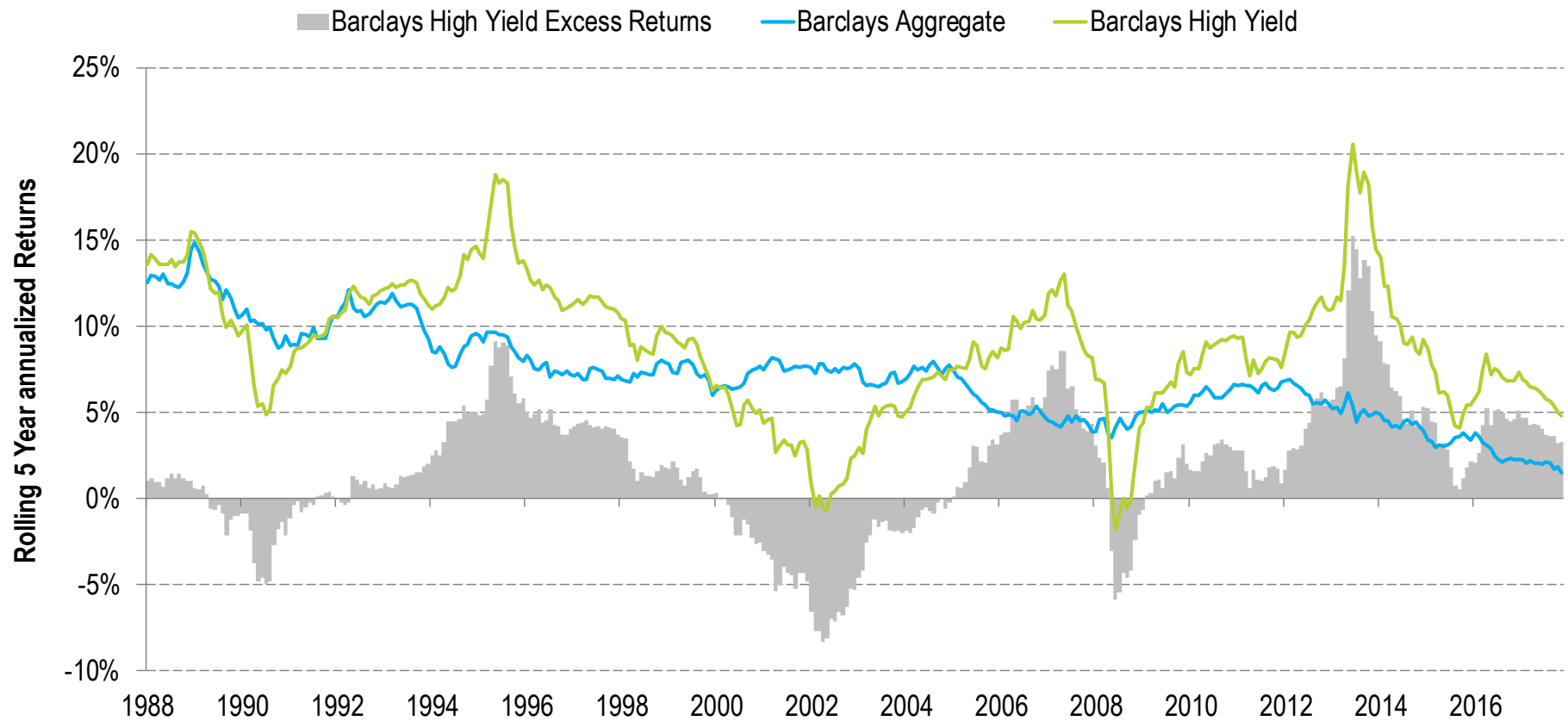
**Appendix: High Yield Bonds (continued)**

- Fast forward to 2017, and high yield annualized performance doubled that of core bonds after the 2009 recovery.

<b>As of 12/31/2017</b>	<b>Since Inception to 11/08 (%)</b>	<b>12/08 to 12/17 (%)</b>
Barclays High Yield Index	7.4	8.0
Barclays Aggregate Index	8.3	4.0

#### Appendix: High Yield Bonds (continued)

- High yield bonds performance is exposed to the cyclical nature of the economy and credit, which results in periods of relative out- and under-performance to core bonds.



#### Appendix: Changing Markets

- As of March 2000, the Russell 1000 Growth index outperformed its Value counterpart in all trailing periods, fueled by an impressive recent performance.

As of 03/31/2000	1 YR (%)	5 YR (%)	10 YR (%)	20 YR (%)	Since Inception <sup>1</sup> (%)
Russell 1000 Growth	34.1	31.8	21.6	18.5	18.3
Russell 1000 Value	6.3	21.0	16.0	17.2	16.8

- From this data, investors might initially conclude that growth stocks offer a long-term premium relative to value stocks.
- However, just one year later, with the bursting of the technology bubble, the premium had reversed.

As of 03/31/2001	1 YR (%)	5 YR (%)	10 YR (%)	20 YR (%)	Since Inception (%)
Russell 1000 Growth	-42.7	11.6	12.7	13.2	14.5
Russell 1000 Value	0.3	14.2	15.2	15.3	16.0

<sup>1</sup> Inception for both Russell 1000 Growth and Russell 1000 Value indices was January 1979.

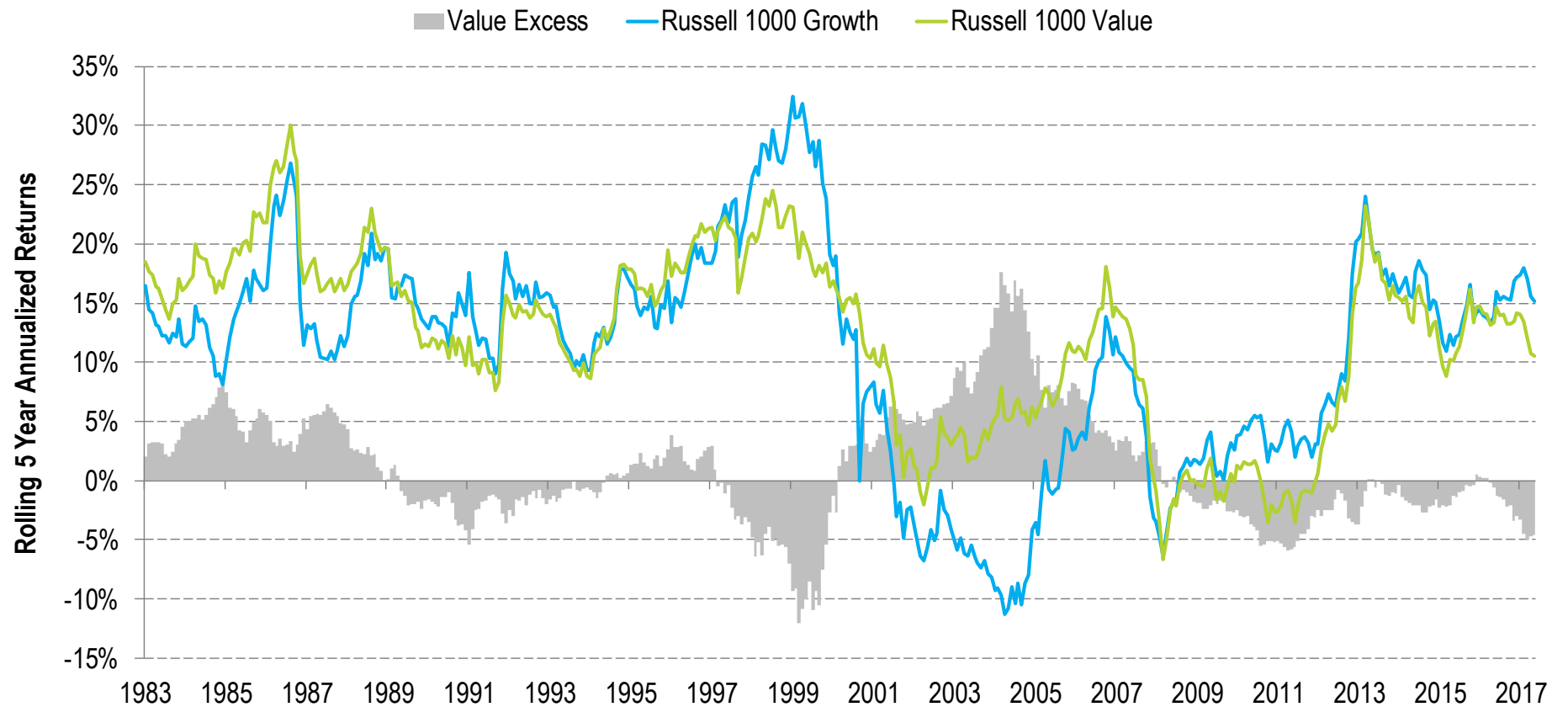
Appendix: Changing Markets (continued)

- Fast forward to 2018, and Russell 1000 Value annualized performance almost doubled that of Growth stocks since the 2000 technology crisis.

As of 4/30/2018	Since Inception to 03/00 (%)	04/00 to 04/18 (%)
Russell 1000 Growth	18.3	3.7
Russell 1000 Value	16.8	6.7

#### Appendix: Changing Markets (continued)

- The chart below shows further proof of the cyclicity experienced by U.S. large cap value equities relative to U.S. large cap growth equities.







# Watch List Process & Metrics Public Assets

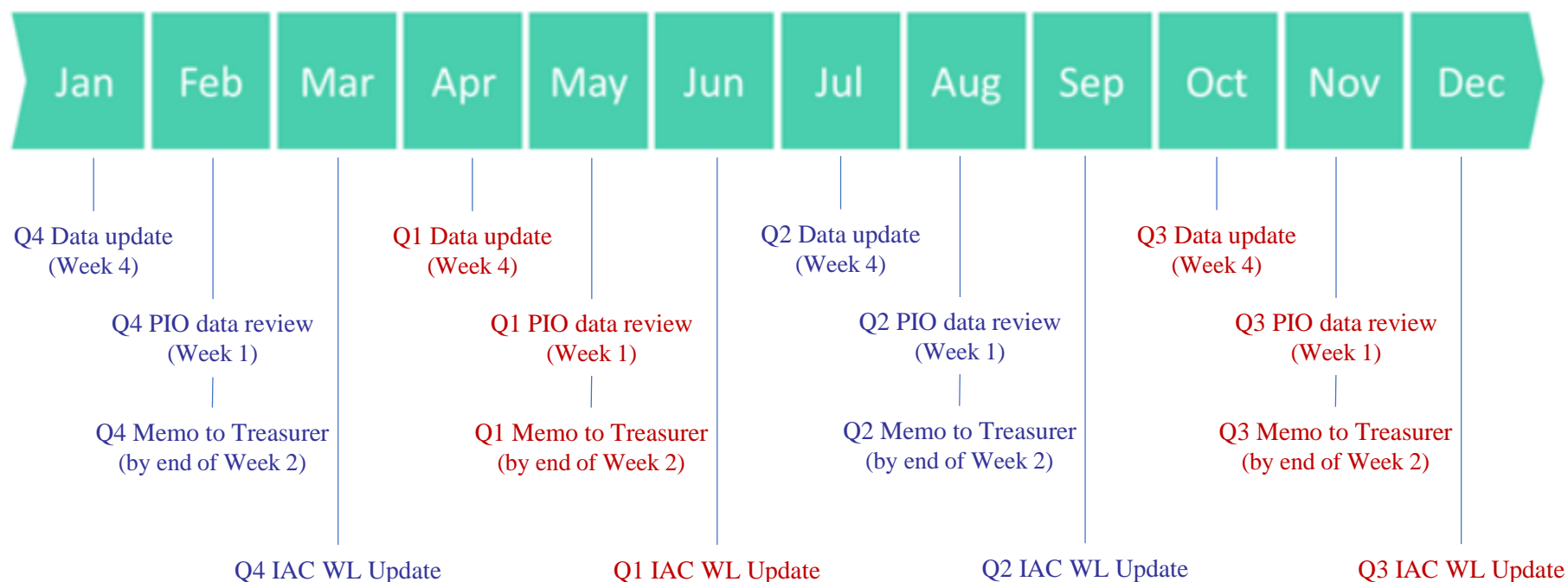
Risk Management

May 2020

Kevin Cullinan

- IPS: “Staff will regularly monitor the investment performance for individual money managers and if necessary recommend the Treasurer place a money manager on a Watch List”
- Horizon for reviewing performance of an active money manager is long-term and any of the following conditions can trigger placement on the Watch List:
  - Significant under-performance vs benchmark and / or peers
  - Other qualitative concerns such as (but not limited to):
    - Staff /process change
    - Compliance / legal / regulatory
    - Disclosure of investigations or other inquiries into manager’s operations (e.g. SEC, FSA, FBI)
    - Unusually poor (or strong) risk adjusted performance metrics
- There is no specific time horizon for money managers placed on watch. Ultimately, the Treasurer will determine whether to (a) continue to monitor the money manager’s performance (b) remove the money manager from Watch List or (c) terminate the money manager. (*IPS language*)

- Watch List (WL) review frequency: Quarterly
- Proposed review process timeline...
  - eVest data update: due last week of the month following quarter end (source: Meketa)
  - PIO review results: first week of second month following quarter end
  - WL memo to Treasurer: by end of second week of second month following quarter
  - IAC WL update: IAC meeting in third month following quarter end



Factor	Time Period	Performance / Info Ratio <sup>1)</sup>	Measurement Objective
1	3 Year	Returns < BM <u>and</u> < Median vs. Peers	Assess Manager's <u>medium term</u> <i>relative performance</i> to market <u>and</u> <i>peer</i> group universe
2	3 Year <u>and</u> 5 Year	Returns < BM	Assess Manager's <u>medium &amp; long term</u> <i>relative performance</i> to market
3	3 Year <u>and</u> 5 Year	Returns < Median vs. Peers	Assess Manager's <u>medium &amp; long term</u> <i>relative performance</i> to <i>peer</i> group universe
4	5 Year	Info Ratio <sup>1)</sup> < Median vs. Peers	Assess Manager's <u>long term</u> <i>relative performance</i> to <i>peer</i> group <u>adjusted for risk</u>
5	1 Year	Returns in Bottom Quartile vs. Peers	Assess Manager's <u>short term</u> <i>performance</i> relative to <i>peer</i> group

1) Generally speaking, an information ratio in the 0.40-0.60 range is considered quite good. Information ratios of 1.00 or more for long periods of time are rare

If assessment factors #2, #3 and #5 are tripped simultaneously, Staff will recommend the fund be placed on watch automatically. Otherwise Staff will exercise discretion when deciding whether or not to recommend the Treasurer place a fund on watch.

# Watch List

# Qualitative Assessment Factors

## Staff / Process Change

- Change in staff key to investment process and/or operations
- Strategy change or material style drift inconsistent with expectations

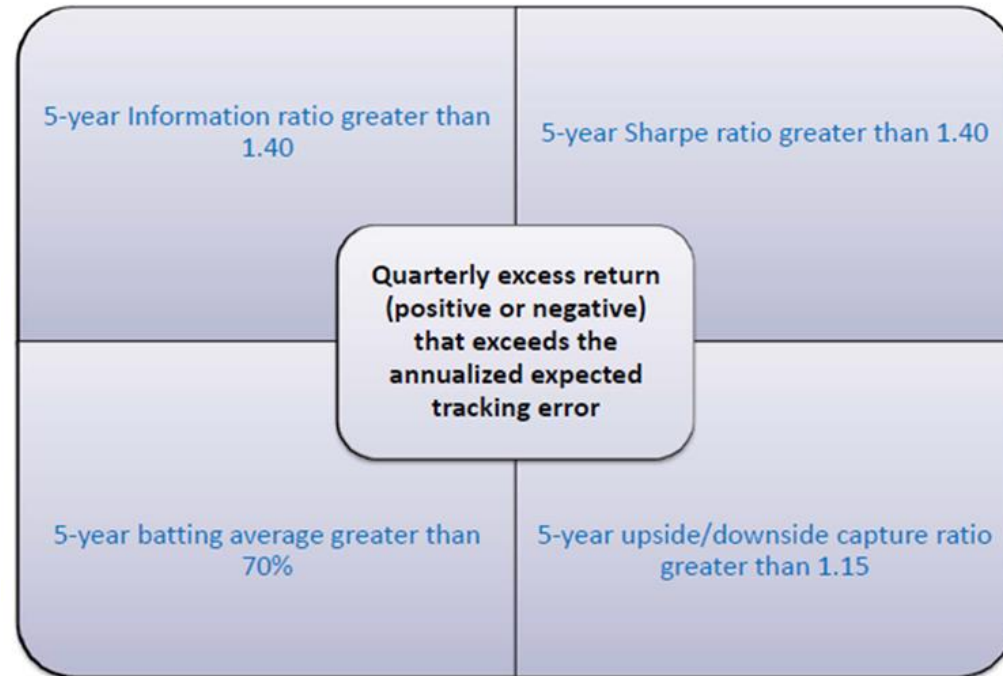
## Compliance / Legal / Regulatory

- Failure to comply with IMA, guidelines, prospectus or regulations
- Breach of fiduciary duty (real or perceived)

## Organization

- Change in personnel, organizational structure, ownership and/or AUM

Other qualitative concerns can be driven by unusually poor (or strong) performance



# State of Connecticut Retirement Plans and Trust Funds

May 2020

Private Credit Strategy

#### Why Private Credit?

##### Complimentary exposure with strong downside protection

- Opportunity for consistent returns with additional upside potential
- Ability to access differentiated and diversifying sources of return
- Strong downside protection through cash flow, structure and/or asset coverage

**Illiquidity premium**

**Downside protection**

**Lower interest  
rate sensitivity**

**Broad opportunity set**

### What is Private Credit?

#### Fits in the gap between liquid credit and private equity

- Investors should get paid for **illiquidity** and **complexity**.
- Strategies participate in both new origination and secondary market purchases.

	Liquid Credit	Private Credit	Private Equity
Target Return (net)	6%	8-12%	>15%
Total Fund Life	Evergreen	5-7 years	10-12 years
Distributions	Varies	Income distributions during investment period	During harvest
Fees	Paid on NAV Yearly incentive fees; no hurdle rate	Typically paid on invested capital; 6% hurdle rate	Typically paid on committed capital; 8% hurdle rate
J-Curve	N/A	Modest	Severe



#### What are the key risks & misperceptions?

Implementation, particularly portfolio construction and fund selection, is critical

#### Key Risks

- Program concentration
- Capital impairment (credit losses)
- Leverage (if used)
- Pace of capital deployment

Risks  
can be mitigated  
through disciplined  
implementation

#### Common Misperceptions

- Private credit is EXCLUSIVELY middle market direct lending...or mezzanine...or corporate distressed
- All private credit investments generate income
- Private credit is uncorrelated with traditional fixed income

#### Challenges

- Portfolio construction
- Benchmarking
- Governance and operational constraints

## Private Credit Investment Approach

## Portfolio Construction & Strategy: Program Design

### Ensure goals are appropriately outlined and establish a plan

- Perform an initial review of existing Investment Policy Statements
  - Review existing goals and objectives
  - Discuss desired approaches and exposures with corresponding risk/return characteristics
  - Reaffirm approach to private market benchmarking
  - Update the Investment Policy/Asset Class Guidelines, as appropriate
- Establish a go forward strategic plan
  - Establish an annual commitment pacing target
  - Determine appropriate diversification targets across private market asset classes
  - Build a road map

### Implementation

- Partnership identification, selection, and due diligence
  - Systematic review of deal flow and potential opportunities
  - Prioritize opportunities and due diligence
  - Perform ongoing monitoring and performance reports

## Portfolio Construction & Strategy: Portfolio Construction

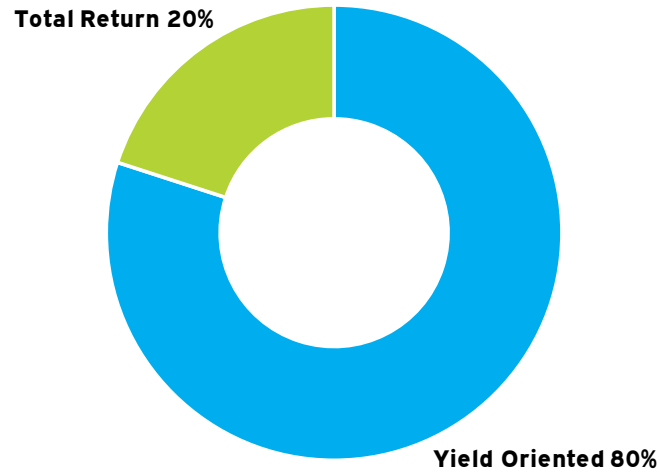
- When constructing portfolios we consider the strategy characteristics and return components.
  - These include, among other features, contractual cash yield, duration, and amortization.

### Strategy Characteristics

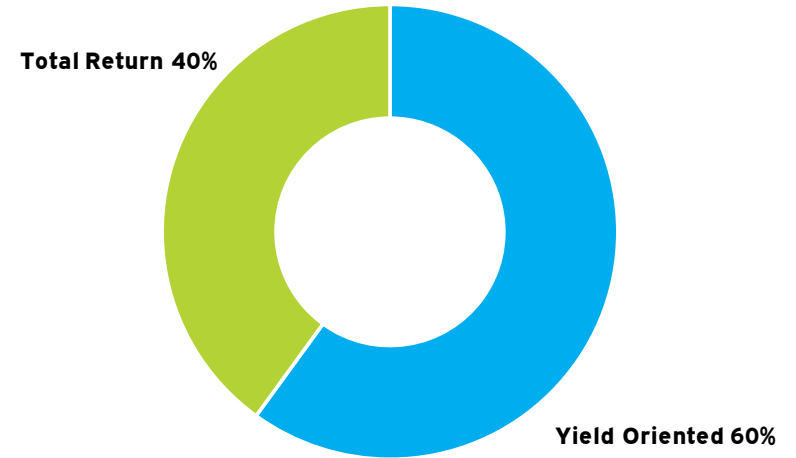
Yield-Oriented	Total Return
Typical Targeted Return: 8-11% net IRR	Typical Targeted Return: 11%-14% net IRR
Focus on income and downside protection	Focus on higher absolute return
Often seen as a fixed income substitute	Asset purchases
Typically origination-related	Low dollar price
Shallow J-curve	Longer dated
Often shorter duration	Typically no leverage
May employ modest leverage	Typically more capacity-constrained and opportunistic
Large, diverse opportunity set	

#### Portfolio Construction & Strategy: Portfolio Construction

Liquid Credit Substitute



Balanced



- Income focus
- Greater downside protection
- Shallow J-curve

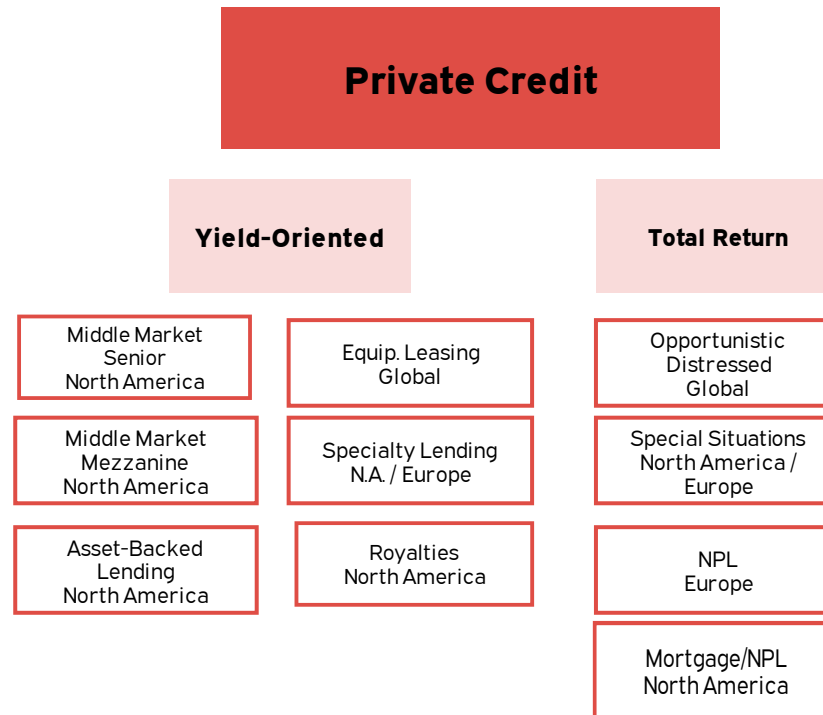
- Greater diversification
- Greater opportunity to capitalize on market volatility
- Higher return objective

For Illustrative Purposes Only

### Portfolio Construction & Strategy: Investment Roadmap

#### Sample Private Credit Investment Roadmap

*For Illustrative Purposes Only*



## CRPTF Private Credit Implementation Plan

#### Investment Objective

- Long-term return objective of 10%, net of fees
  - The program will also be measured versus peer private credit and public markets credit benchmarks
- Focus on Yield-Oriented strategies with complementary Total Return exposure
  - Long-term target of 75% Yield-Oriented/25% Total Return

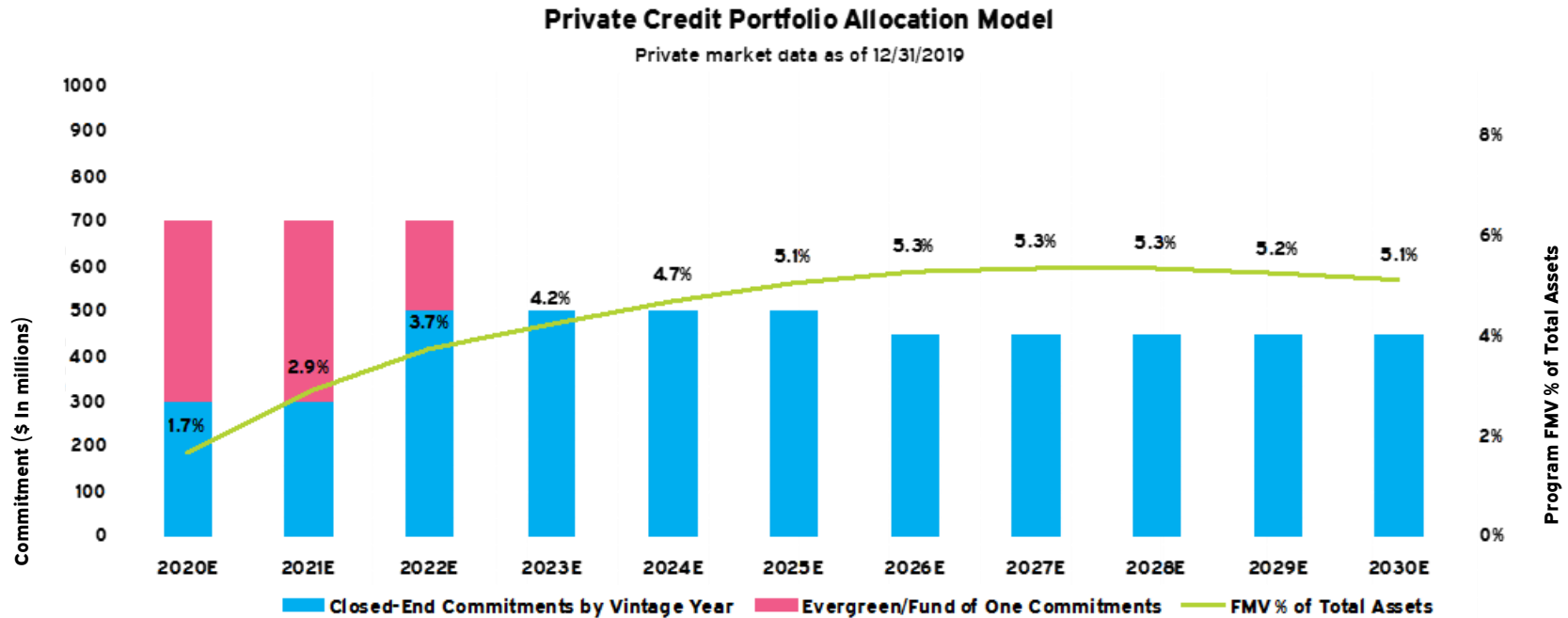
#### Initial Program Targets

- 5% target allocation
- **Evergreen "Core" Investments:** two to three investments implemented in first three years
  - Evergreen vehicles allow investors to leverage their size for greater efficiency, scope and lower fees
- **Traditional Closed-End Investments:** two to four per annum
  - Access to smaller investments and themes, or more opportunistic investments
- Prioritize long-term general partner relationships
  - Large evergreen accounts
  - Recommitting to follow-on funds when appropriate



## State of Connecticut Retirement Plans and Trust Funds Private Credit Fund

### Portfolio Allocation Study



The initial pacing study conducted by Meketa Investment Group assumes \$700 million of private credit commitments for the first three years, reducing to \$500 million for the next three years.

- The initial commitment years include the funding of evergreen private credit vehicles.

### Evergreen Vehicles in Private Credit

Meketa Investment Group believes that the CRPTF should consider investing in two to three evergreen private credit investment vehicles.

- Unlike closed-end funds with predetermined investment periods followed by a harvest period and wind down, evergreen vehicles continuously reinvest proceeds to maintain consistent exposure over long periods of time.

	Evergreen Vehicle	Traditional Closed-End Vehicle
Investment Strategy	<ul style="list-style-type: none"> <li>• Customizable</li> <li>• Ability to access multiple strategies across a GP credit platform</li> <li>• Can quickly adapt to new market opportunities</li> </ul>	<ul style="list-style-type: none"> <li>• Tends to be single-strategy focused</li> <li>• “Off the shelf”</li> </ul>
Investment Period / Total Term	<ul style="list-style-type: none"> <li>• Ongoing / Open-ended</li> <li>• Investor initiated distributions and liquidation</li> </ul>	<ul style="list-style-type: none"> <li>• 3 years / 7 years</li> </ul>
Fees	<ul style="list-style-type: none"> <li>• Tend to be lower than closed-end funds</li> <li>• Potential for fee netting</li> </ul>	<ul style="list-style-type: none"> <li>• Standardized</li> <li>• Difficult to negotiate</li> </ul>
Operational / Governance Burden	<ul style="list-style-type: none"> <li>• Initially high, very little ongoing</li> </ul>	<ul style="list-style-type: none"> <li>• LP must evaluate and underwrite follow-on funds every 2-3 years</li> </ul>
Investment Minimum	<ul style="list-style-type: none"> <li>• \$100 to \$500 million</li> </ul>	<ul style="list-style-type: none"> <li>• \$5 million</li> </ul>
Monitoring / Reporting	<ul style="list-style-type: none"> <li>• Greater investment transparency</li> <li>• Customizable, client-specific reporting usually available</li> </ul>	<ul style="list-style-type: none"> <li>• Standard transparency and reporting requirements</li> </ul>



# PIF Annual Strategic Pacing Plan

May 2020 | Confidential

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# Strategic and Pacing Plan Overview



- **Strategic Plan:** a long-term investment plan designed to achieve Connecticut Retirement Plans and Trust Funds' ("CRPTF") investment objectives consistent with the Investment Policy Statement ("IPS")
  - CRPTF has worked with StepStone Group ("StepStone") to develop a pacing plan to prudently achieve and maintain a targeted asset allocation to the Private Investment Fund's ("PIF") investment strategies over the medium- (i.e., five year) and long-term (i.e., ten year)
  - The pacing plan includes portfolio construction objectives created to achieve appropriate diversification by sub-strategy, geography and manager
- **Annual Plan:** tactical recommendations for potential allocation opportunities for fiscal year 2021 that facilitate and align with the execution of the Strategic Plan
  - CRPTF and StepStone have developed a pipeline of near-term opportunities that will be leveraged to identify attractive fund investment opportunities for the Annual Plan
  - Annual Plan executes on the Strategic Plan within the context of the opportunities available, current market environment and any near-term priorities
- **Transition Plan:** potential for additional annual commitments to capture near-term market opportunities and aid in the near term, efficient deployment of capital to shorter duration, lower risk investment opportunities

- **Strategic Plan:**
  - Target annual base commitments of US\$775 million in FY 2021 with gradually scaled commitments thereafter in order to achieve the CRPTF's targeted 10% exposure by FMV to Private Equity
  - Increase geographic diversification with a continued focus on commitments to European managers consistent with the long-term goal of having 20% of the PIF's market value in Europe
  - Target direct commitments to late stage venture/growth managers to offset gradual reduction of venture capital exposure
  - Implement Co-Investment program to generate higher net returns and strengthen partnership with core managers
  - Continued focus on return optimization through portfolio construction and fee structures
  - Seek enhanced return potential through investments with the next generation of innovative and diverse managers

# Strategic Recommendation (cont'd)



- **Annual Plan:**

- Target FY21 annual commitments of \$775 million to core strategies
- Focus on partnering with the highest-quality managers, including potential re-ups with existing PIF managers and selectively adding new managers to the PIF portfolio
- Begin implementation of Co-Investment program
- Utilize advisory firm, selected through the RFP process underway, to explore opportunities for optimizing portfolio construction and returns through the secondary market

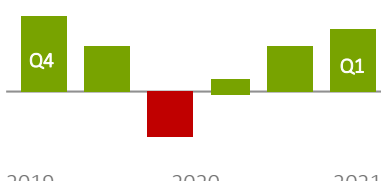
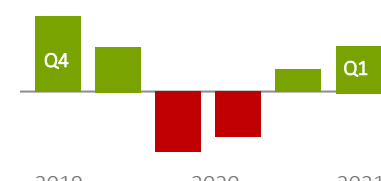
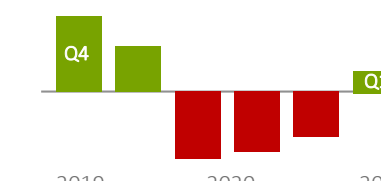
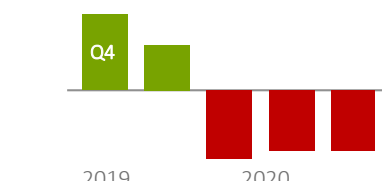
- **Transition Plan:**

- Target Transition Plan allocation of up to US\$200 million in FY21
- The Transition Plan will pursue two objectives:
  1. Provide increased flexibility to deploy capital in strategies benefitting from current/expected market conditions
  2. Improved returns by closing the CRPTF's under-allocated position to private equity
- Identify strategies with shorter durations consistent with PIF's return expectations
- Transition Plan commitments incremental to the recommended FY21 and FY22 Annual Plan targeted commitments

# Private Equity Historical Macro Perspective



# COVID-19: Scenario Definitions

	Stress Scenario 3-MONTH V	Stress Scenario 6-MONTH V	Stress Scenario 9-MONTH U	Stress Scenario > 12-MONTH L OR W
<b>DEPTH &amp; DURATION</b>	Economic activity slowly restarts in the second half of Q2	Longer period of social distancing required; economic activity resumes in Q3	Social distancing required into Q4 and/or “double dip” outbreaks occur resulting in lasting damage to the economy	“Double dip” in outbreaks or virus mutations require continued reduced economic activity; social unrest complicates situation.
<b>MITIGATION</b>	<p><b>Monetary Actions:</b> swift and material measures taken</p> <p><b>Fiscal Actions:</b> appropriate, timing ‘at the curve’, government support for SMBs</p>	<p><b>Monetary Actions:</b> swift and material measures taken, but programs don’t support all parts of the economy.</p> <p><b>Fiscal Actions:</b> appropriate reaction first, but some parts of the economy fall through the cracks</p>	<p><b>Monetary Actions:</b> ‘whatever it takes’ approach needed</p> <p><b>Fiscal Actions:</b> uncoordinated and/or not sufficient, government support for corporates not long enough and/or inadequate resulting in severe cashflow problems, defaults and slower re-employment of laid-off workers</p>	<p><b>Monetary Actions:</b> “whatever it takes” not effective because it can’t compensate for the enforced reduction of activity</p> <p><b>Fiscal Actions:</b> governments can’t bring up enough funding to support long enough; MMT type approaches may become more attractive</p>
<b>GDP IMPACT<sup>1</sup></b>				
<b>IMPACT ON CORPORATES</b>	<p><b>Most vulnerable companies/assets</b> will run into cashflow problems in H1 2020 leading to an increase in payment and covenant defaults; most firms however, either have enough cash or can obtain financing; asset values and economic growth recover relatively rapidly despite deep recession</p>	<p>The longer lockdown creates <b>problems beyond the most vulnerable</b>; even hardy companies/assets are affected; economic recovery takes longer to materialize, but is relatively rapid as economic activity resumes; asset values and economic growth regain prior levels</p>	<p><b>Entire economy</b> would be strongly affected under such a scenario. High payment default rates in most prone sectors; payment defaults inevitable across most of the economy not just the most vulnerable sectors. Lengthy recovery period sustains period of low growth, depressed asset values</p>	<p><b>Entire economy</b> enters a depression characterized by widespread high default rates and very high unemployment rates.</p>

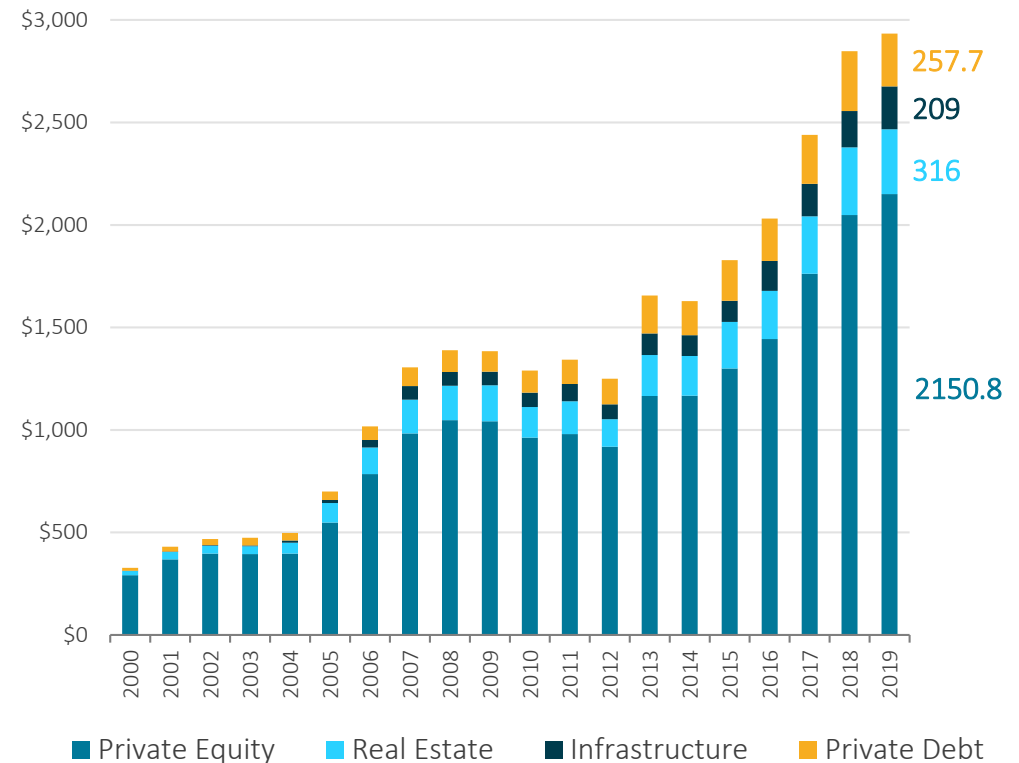
<sup>1</sup> For illustrative purposes only

# Dry Powder & Market Resilience

The nature of this dislocation is likely to show Private Markets in their best light

- General partners are sitting on an unprecedented mountain of dry powder—enabling them to provide support to sound investments needing capital to get through this massive stop in economic activity
- Direct Lending funds have flexibility to renegotiate and support borrowers because they are not levered the way banks are
- Patient capital creates flexibility for more investments to survive the downturn
- **However**, many funds won't have the capital to support their investments; GPs will need to get creative

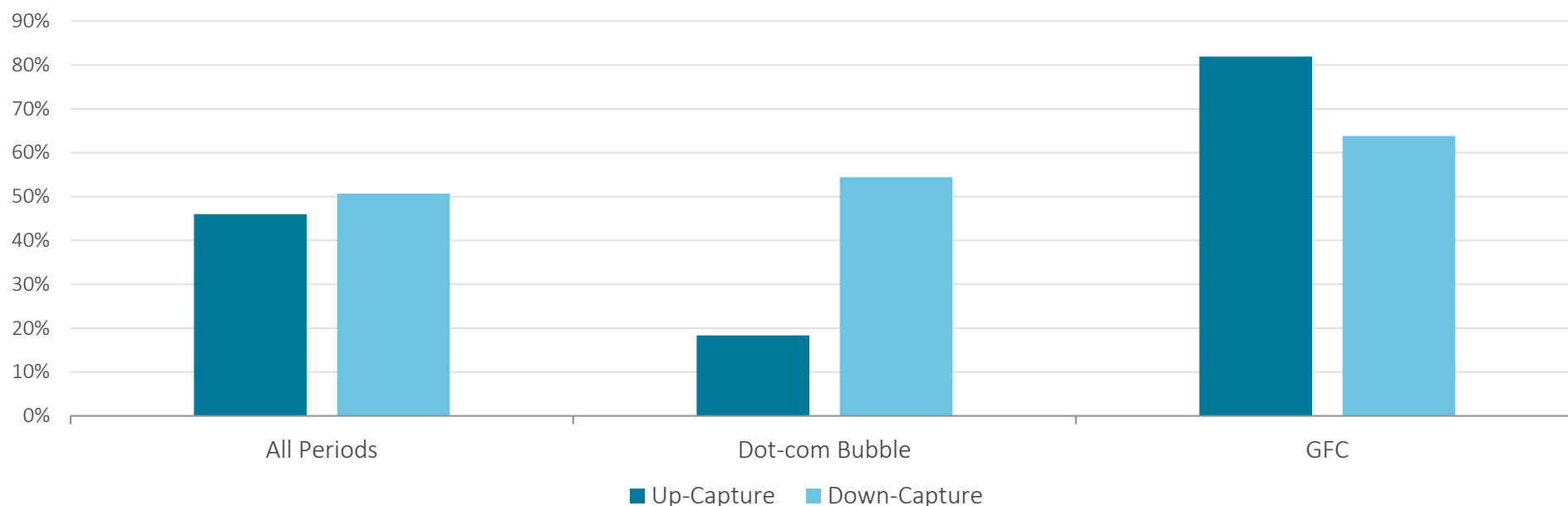
PRIVATE MARKETS DRY POWDER (\$B)



# Potential Valuation Impact: Private Equity

Capital market dislocations demonstrate an underappreciated role of Private Markets in an investment portfolio

## PRIVATE EQUITY MARKET CAPTURE vs S&P 500TR



- Down-capture is the ratio of decline in Private Markets to decline in the S&P 500 Total Return index, measured from peak-to-trough; Up-Capture is same ratio, measured trough-to-peak in subsequent recovery
- Data from Omni demonstrate that Private Markets captured about 60% of the downside during the GFC
- GPs are not forced to sell at the bottom, and do not capture all the volatility in a market in turmoil

Source: StepStone Portfolio Analytics & Reporting, as of April 2020; SPAR data are updated continuously; values are subject to change.

Omni is StepStone's proprietary portfolio monitoring dashboard. Market capture measures the relative performance of an investment manager or managers relative to an index.

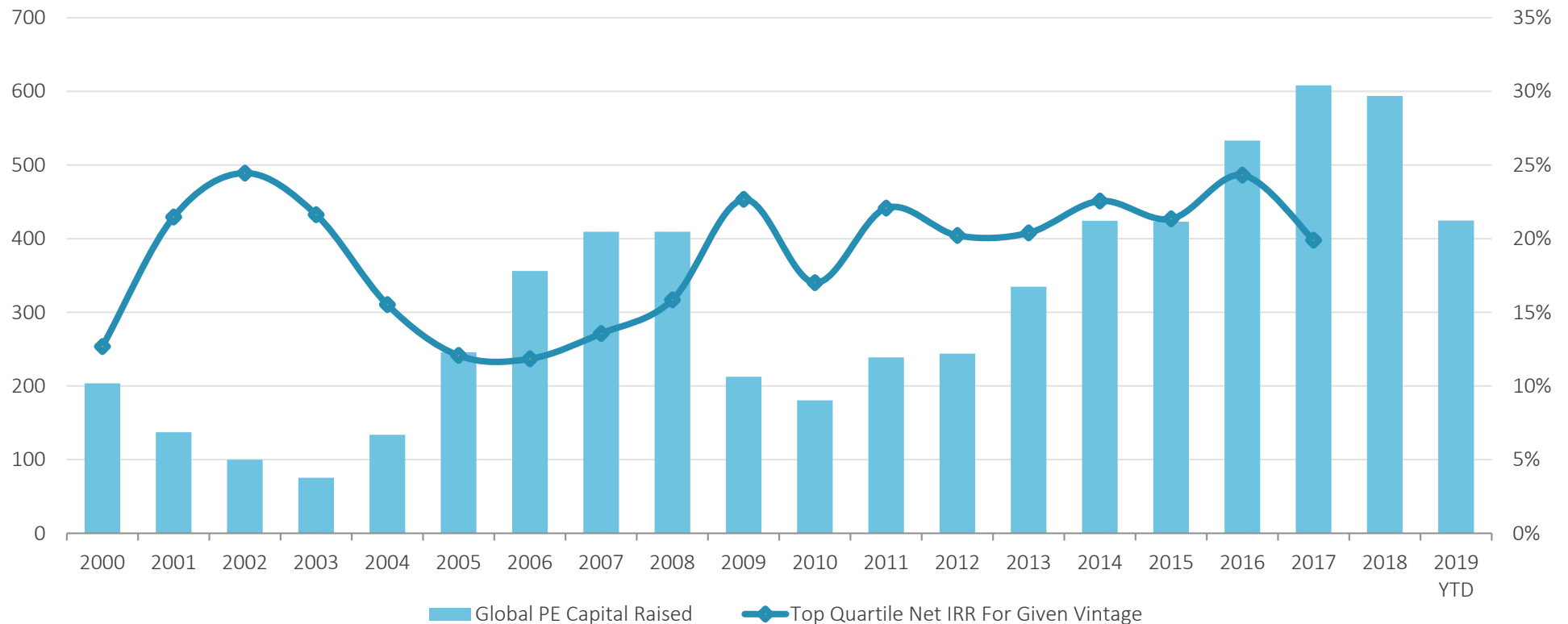
Past performance is not necessarily indicative of future results. Actual performance may vary.

# Resist the Temptation to Time Private Markets

Every asset class will tout its returns coming out of recession; Private Markets perform best when fundraising is low—but so do other assets

- Fully invested funds may see returns moderate in the near term and will not be able to capitalize on the current dislocation

## NEGATIVE CORRELATION BETWEEN LP COMMITMENTS & VINTAGE YEAR RETURNS



Source: IRRs are based on the Burgiss Private iQ Global All Private Equity benchmark as of June 30, 2019. Post-2017 vintages are deemed to be too immature for the benchmark to provide meaningful Results; Fundraising from Preqin as of October 2019.

# What To Do?

StepStone's advice during the crisis is similar to the advice we gave at the top of the cycle: it is difficult to time markets, especially private markets; but pockets of relative value do exist

- Stay the course—continue to put capital in the hands of high quality GPs based on the long-term portfolio plan
- Lean into the dislocation—seek out opportunities in pockets of illiquidity
  - Syndicated loans / CLOs
  - LP Secondaries
  - Asset recapitalizations
  - Distressed / deep value opportunities as cycle progresses
- There will be opportunities in both private and public markets during this crisis; maintain flexibility, and leverage the relationships you have been building through the cycle

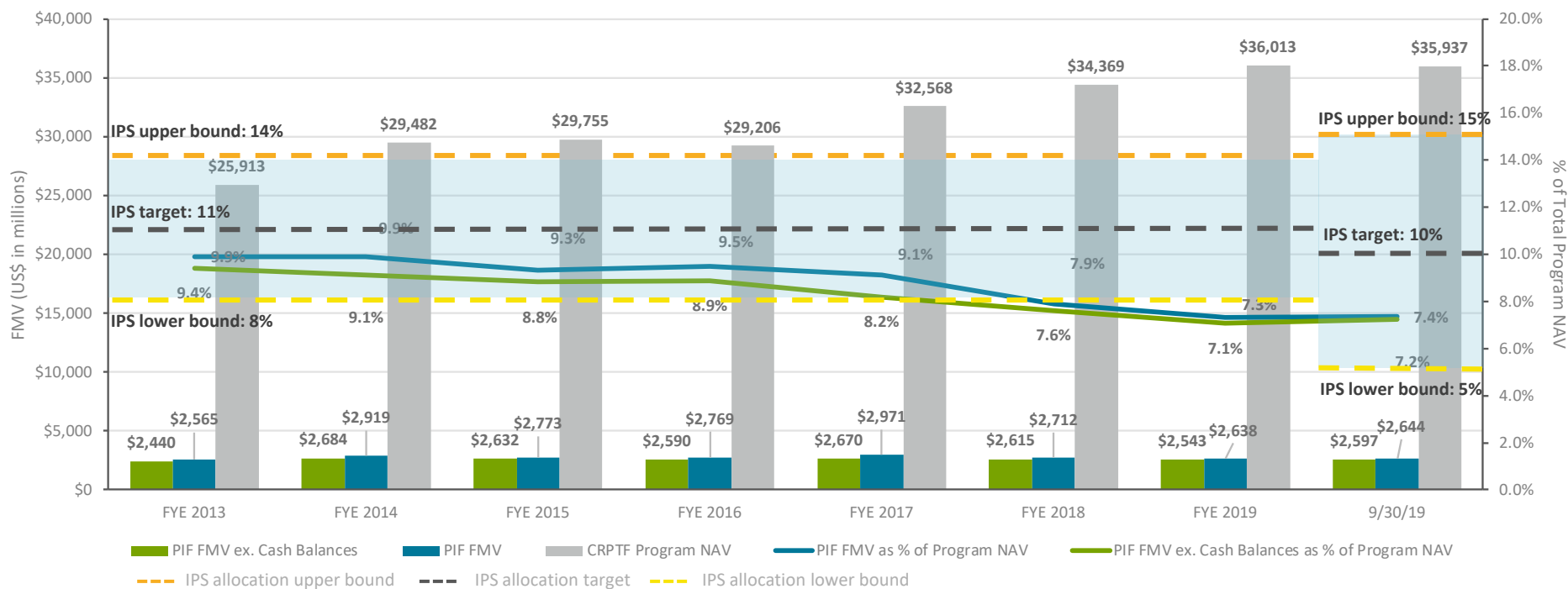
# Historical Portfolio Review

# Private Equity FMV Exposure Analysis

Historical private equity fair market value (“FMV”) has remained fairly consistent as total CRPTF value has increased

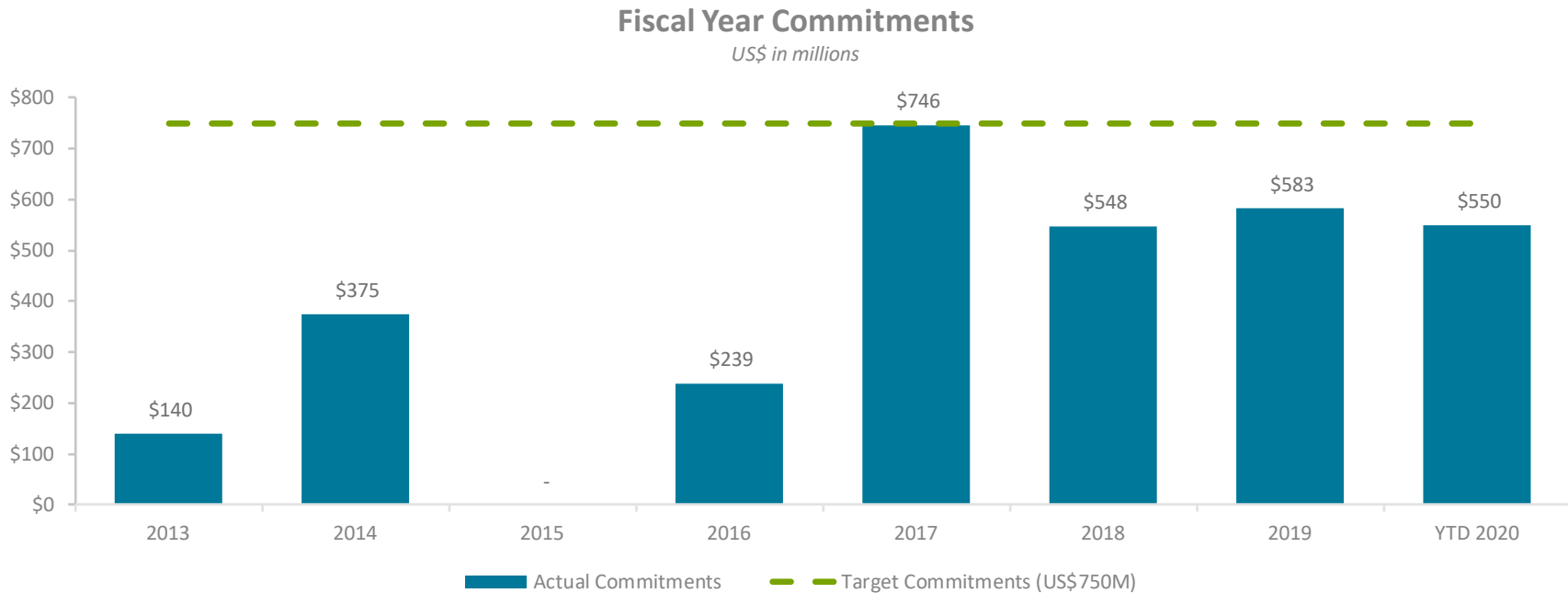
- Due to a moderate commitment pace between 2009 and 2016 and increased distributions in recent years, PIF’s FMV has been declining since FY17
- With the growth in overall CRPTF value, private equity FMV as a percentage of total CRPTF net asset value has declined
- As a result of the above factors, the CRPTF’s private equity allocation has continued to fall below the policy targets

CRPTF Private Equity FMV as % of Program NAV



# Annual Commitment Analysis

- While below targeted levels, the CRPTF’s capital commitments in FY17 through FY19 have been consistently higher than prior periods
- FY20 commitments are expected to meet or exceed the annual target, including commitments made to secondary strategies as part of the PIF Transition Plan

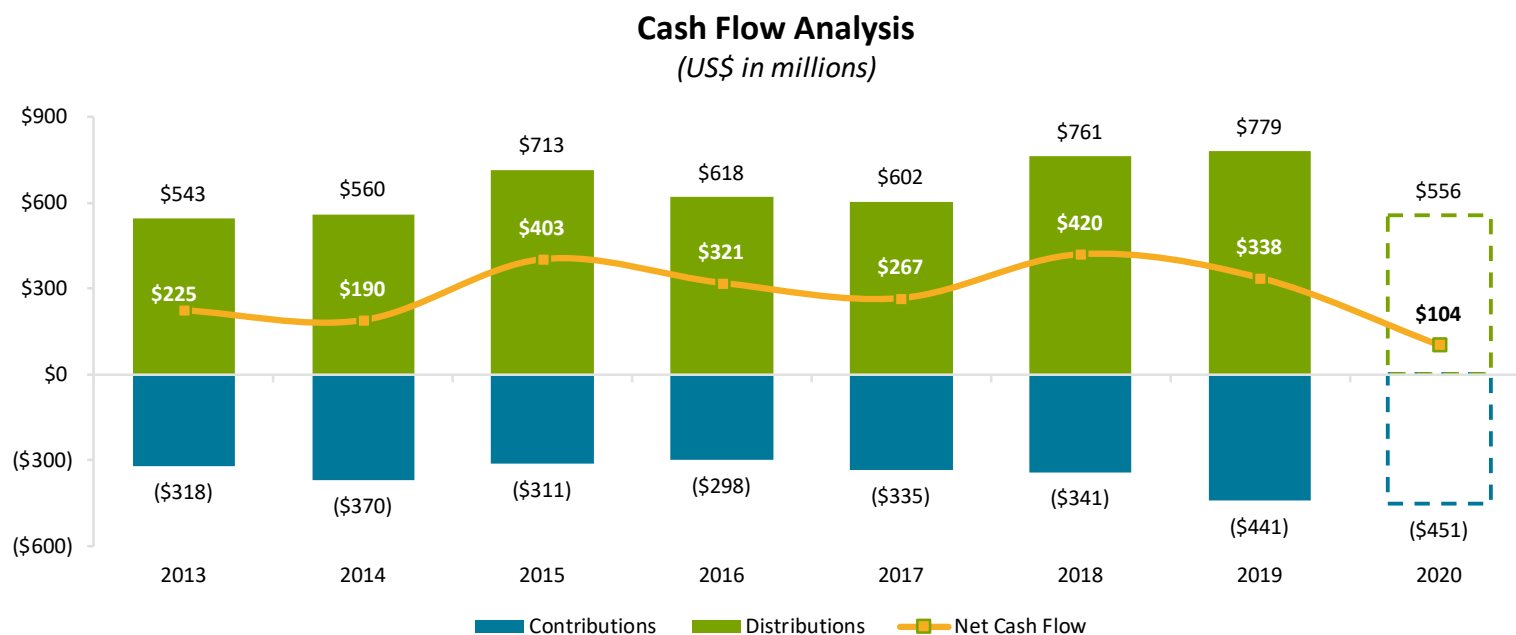




# Cash Flow Analysis

- The PIF portfolio generated US\$2.2 billion of net cash flow in the last seven fiscal years as a result of significant realizations from older vintage year funds, partially offset by capital calls from more recent vintage year funds.
- StepStone’s cash flow pacing model expects this runoff of more mature funds to continue, offset by contributions related to new commitments, and it estimates that the net cash inflow for FY20 will decrease to approximately US\$104 million.

- Cash flow pacing model uses historical data from *StepStone’s SPI Database* to forecast the amount of capital calls and distributions that could be expected over the next 12 months from CRPTF’s existing portfolio and projected commitments
- Cash flows for FY20 include YTD 3/31/20 cash flows, with cash flows in final quarter estimated based on historical quarterly seasonality averages from past three years

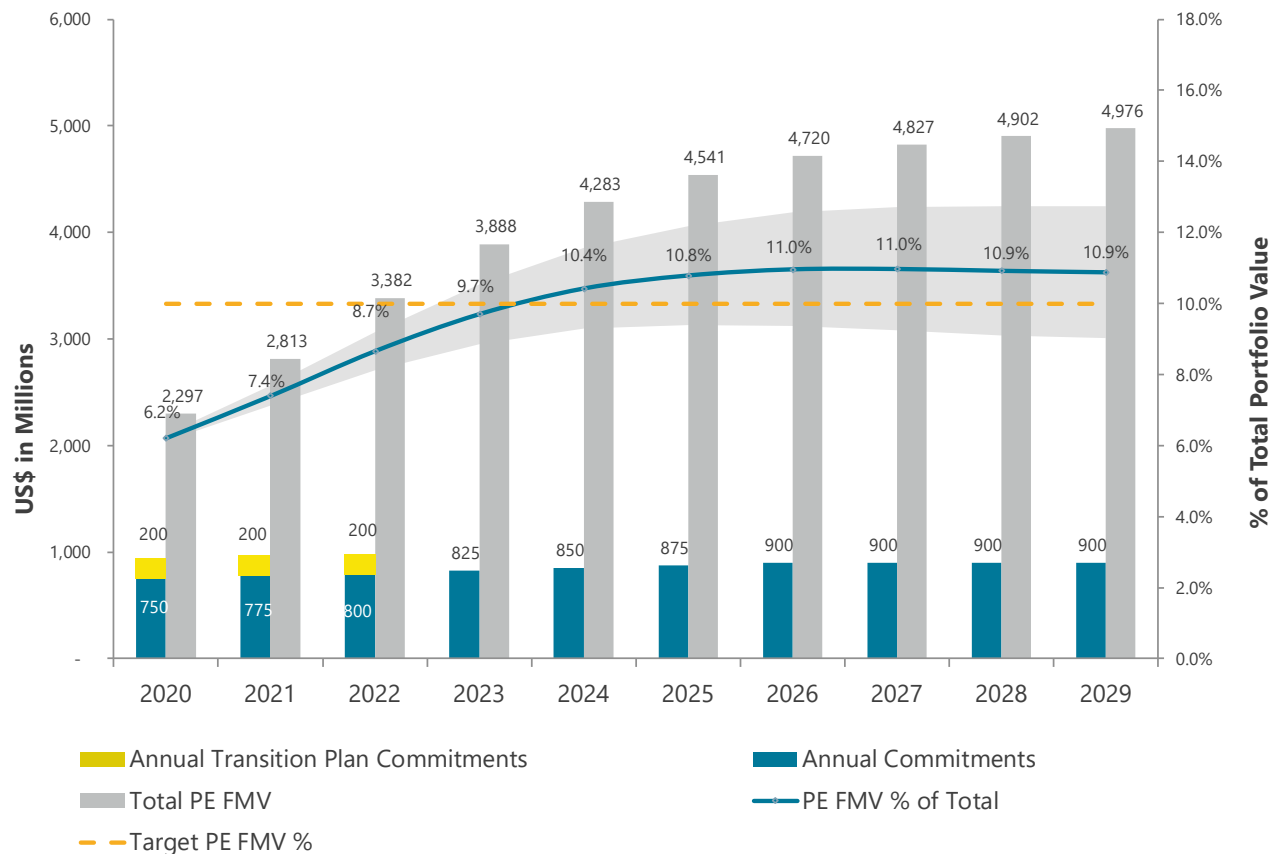


NOTES: Fiscal year end June 30<sup>th</sup>. FY2020 cash flows are estimates.

# Recommended Strategic Pacing Plan

# Pacing Analysis (Incl. Transition Plan)

## CRPTF PIF Pacing Model<sup>1,2,3</sup>



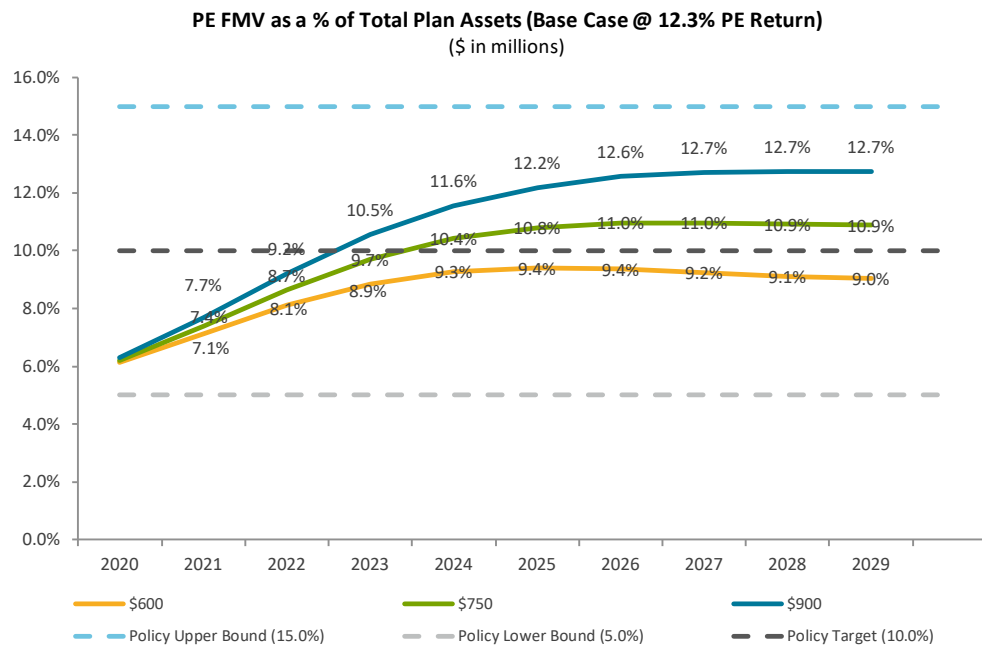
### Notes:

- (1) For illustrative purposes only.
- (2) Private Equity Values as of September 30, 2019.
- (3) Represents total exposure by strategy and sector in year 5 of projection.

- StepStone updated its pacing analysis for CRPTF's PIF portfolio
- Assumed CRPTF AUM of \$35,937M in FY2019 reaching \$45,737M in FY2029 and weighted average return on Private Equity portfolio of 12.3%
- To achieve target Private Equity exposure of 10% of total portfolio value over a 5-year period, StepStone recommends:
  - Gradually scaling annual base commitments from \$750M beginning in FY 2020 to \$900M by FY 2026
  - Implementing Co-Investment program to generate higher net returns
  - Increasing geographic diversification with a continued focus on commitments to European managers
  - Targeting direct commitments to late stage venture/growth managers to offset gradual reduction of venture capital exposure
- Analysis includes an additional \$200M annual commitment in FY 2020, FY 2021 and FY 2022 as part of the Transition Plan.
- PIF 5-year total exposure by Strategy and Sector<sup>3</sup>:
  - Corporate Finance 87%
    - Buyout 55%
    - Growth Equity 6%
    - Distressed/Restructuring 10%
    - Mezzanine: 8%
    - Secondaries 8%
  - Venture Capital 13%

# Pacing Plan – FMV Exposure Projection

- As part of CRPTF’s Strategic Investment Plan, an Annual Pacing Scenario Analysis was conducted to a) illustrate the projected movement in PE FMV as a percentage of the Plan’s total fair market value, and b) present different annual commitment pacing scenarios to increase PE FMV exposure.
- The analysis is based on PIF’s financial information as of September 30, 2019.
- The Annual Pacing Scenario Analysis shown below demonstrates the impact of Transition Plan commitments of US\$200 million in FY20, FY21 and FY22 in addition to the core Annual Plan commitments for each year.
- The plan is annually reviewed and updated with recommendations and assumptions reassessed based on CRPTF’s overall targets as well as the general market environment.

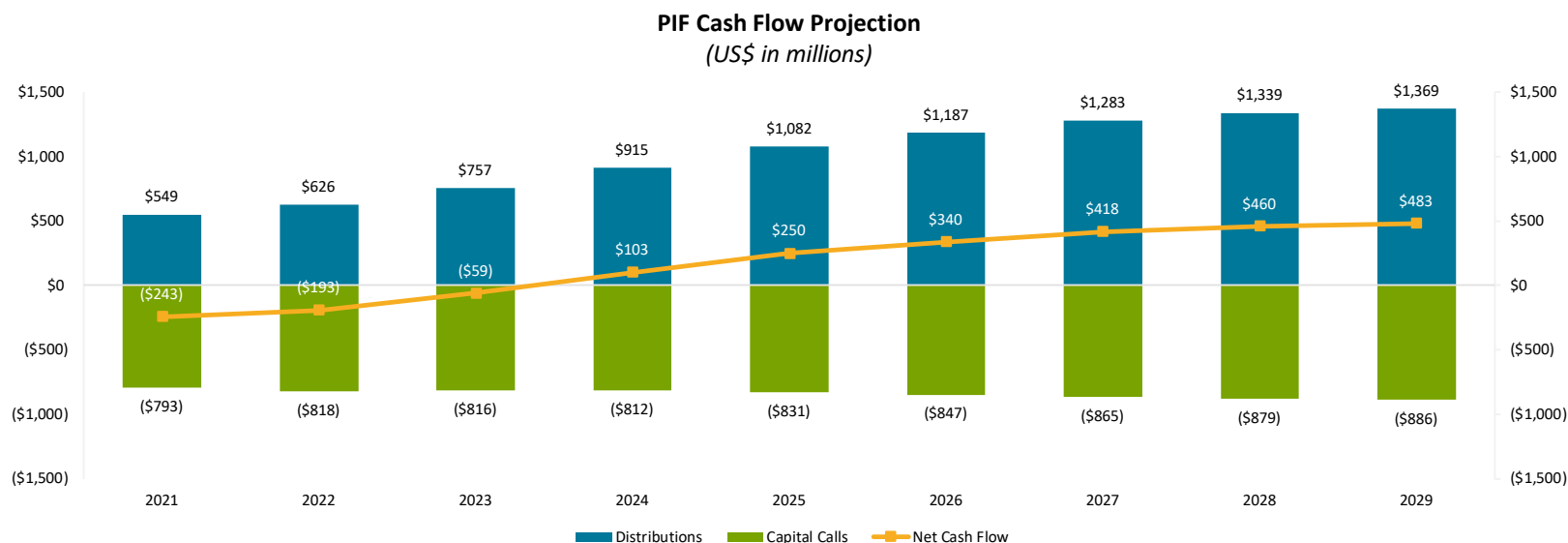


Target Annual Commitments (incl. Transition Plan)										
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
\$900	\$1,100	\$1,125	\$1,150	\$975	\$1,000	\$1,025	\$1,050	\$1,050	\$1,050	\$1,050
\$750	\$950	\$975	\$1,000	\$825	\$850	\$875	\$900	\$900	\$900	\$900
\$600	\$800	\$825	\$850	\$675	\$700	\$725	\$750	\$750	\$750	\$750

NOTES: Commitments per legend represent FY20 core strategy commitments, which are assumed to increase by US\$25 million each year between FY21-FY26. Includes impact of Transition Plan, which assumes an additional US\$200 million of annual commitments in FY 2020, FY2021 and FY 2022.

# Pacing Plan – Cash Flow Projection

- Based on the same assumptions in the Annual Pacing Scenario Analysis, StepStone projected the anticipated capital calls (cash outflows), distributions (cash inflows), and net cash flows to PIF through FY29, as seen in the figure below.
- Net cash flows for FY 2020 are expected to remain positive as realizations from funds committed to in FY16 and earlier exceed capital calls of more recent commitments.
- Cash flows are projected to be negative in FY 2021-2023 as distributions taper over the near-term due to the COVID-19 crisis and additional capital deployed to rebuild private equity allocation exceeds expected realizations.
- Distributions from new commitments are projected to begin outpacing contributions in FY 2024.

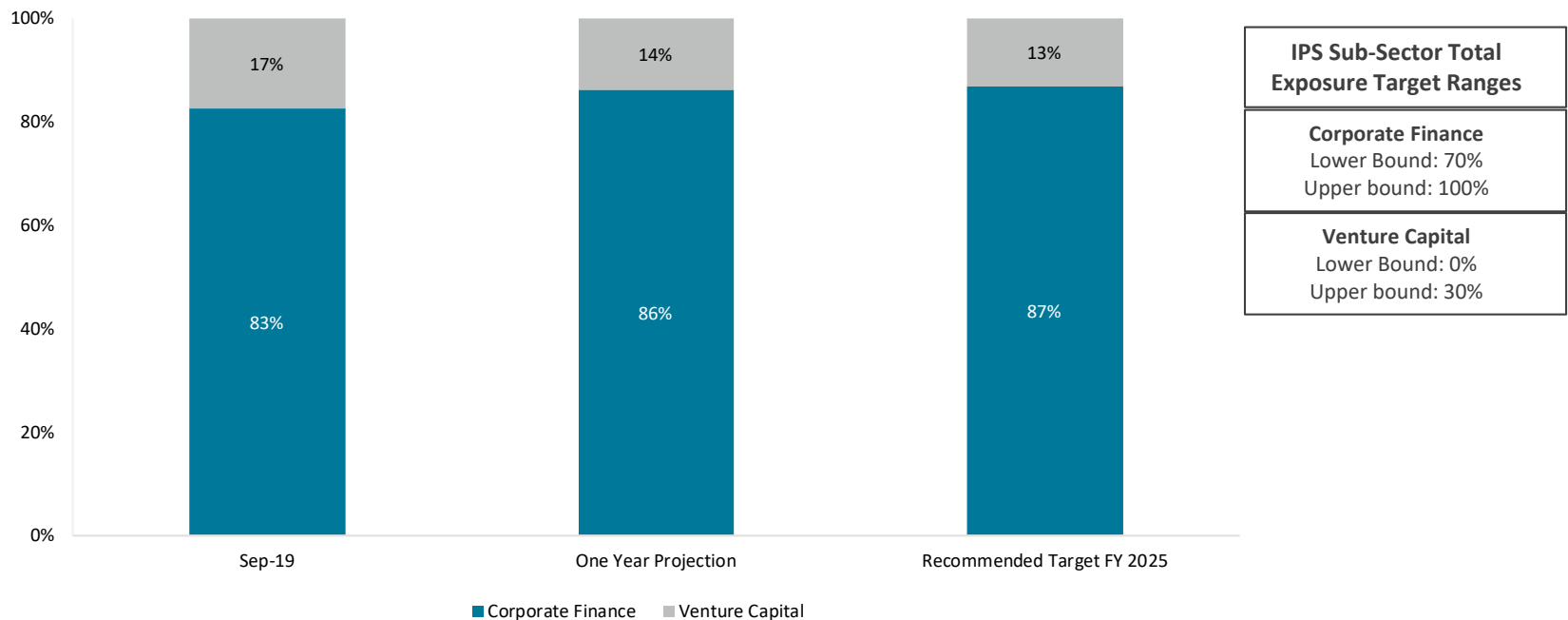


NOTES: Fiscal year end June 30<sup>th</sup>. Includes impact of Transition Plan, which assumes an additional US\$200 million of annual commitments in FY 2021 and FY 2022.

# Asset Class Total Exposure

- Per CRPTF’s IPS, PIF has a target range of total exposure (defined as FMV + unfunded) for private equity investments of 70-100% Corporate Finance (inclusive of Buyouts, Growth, Distressed / Restructuring, Secondaries, and Mezzanine strategies) and 0-30% Venture Capital.
- The current total exposure by asset class, as of September 30, 2019 is shown below.
- StepStone’s one-year and FY 2025 total exposure projection accounts for the progression of historical private equity investments made by PIF and projected new investments made beginning in FY 2020.
- Annual future commitments are assumed to be allocated 90% to Corporate Finance and 10% to Venture Capital asset classes. In addition to CRPTF’s core commitments, US\$200 million of commitments may be made from the Transition Plan in FY 2020, FY 2021 and FY 2022.
- As shown below, with an allocation of 90% into Corporate Finance, PIF will decrease its total Venture Capital exposure from 17% to 13% over a five-year period.

**Total Exposure by Asset Class**



# PIF Strategic and Annual Plan Recommendation



Private Equity Strategies	9/30/2019 Total Exposure	Long Term (5-year) Target	Difference (%)	Strategic Plan Recommendation	
				Annual Capital Deployment %	FY21 Capital Deployment (\$M)
Buyout	57.1%	55.4%	1.6%	59.2%	\$459
Growth	1.1%	5.7%	(4.5%)	6.7%	\$52
Distressed / Restructuring	7.6%	9.6%	(2.0%)	12.5%	\$97
Mezzanine	7.7%	8.0%	(0.4%)	5.0%	\$39
Secondaries	9.2%	8.1%	1.1%	6.7%	\$52
<b>Total Corporate Finance</b>	<b>82.6%</b>	<b>86.8%</b>	<b>(4.2%)</b>	<b>90.0%</b>	<b>\$698</b>
Venture Capital	17.4%	13.2%	4.2%	10.0%	\$78
<b>Total Venture Capital</b>	<b>17.4%</b>	<b>13.2%</b>	<b>4.2%</b>	<b>10.0%</b>	<b>\$78</b>
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>	<b>100.0%</b>	<b>\$775</b>

- StepStone recommends gradually scaling up base private equity commitments from a target of US\$775 million in FY21 to US\$900 million by FY26 to achieve the CRPTF's targeted 10% allocation to Private Equity.
- StepStone recommends to continue commitments to high-conviction Buyout managers and funds, with special emphasis on allocating to European based managers.
- StepStone recommends increasing direct commitments to high conviction Late Stage Venture Capital and Growth Equity managers while simultaneously reducing PIF's Venture Capital exposure.
- The Strategic and Annual Plan Recommendation outlined above includes continues commitments to emerging and diverse managers.

NOTE: Long Term Recommendation does not include Transition Plan commitments.

# PIF Strategic Plan Recommendation by Geography



Private Equity Geographies	9/30/2019 FMV Exposure	Long Term (5-year) Target	Difference (%)	Strategic Plan Recommendation	
				Annual Capital Deployment %	FY21 Capital Deployment (\$M)
North America	95.0%	77.4%	17.6%	75.0%	\$581
Europe	4.6%	18.8%	(14.2%)	20.0%	\$155
Rest of World	0.4%	3.9%	(3.5%)	5.0%	\$39
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>	<b>100.0%</b>	<b>\$775</b>

- StepStone recommends continued focus on increasing European exposure by FMV through all strategies in order to achieve a long term target of ~20% exposure to European managers.



# Appendix

# Annual Pacing Scenario Analysis Assumptions

**StepStone’s Annual Pacing Scenario Analysis aids in recommending the allocation for PIF’s private equity program such that it can meet its targets over a specific horizon.**

## Investment Policy Statement Objectives

- Target a 10% exposure by FMV to private equity as a percentage of plan assets.
- Generate an investment return of 250 bps over the Russell 3000 over the long-term.

Investment Guidelines			
Asset Allocation	Lower Target	Policy Target	Upper Target
PIF	5.0%	10.0%	15.0%
Asset Class	Lower Target		Upper Target
Corporate Finance	70.0%		100.0%
Venture Capital	0.0%		30.0%

## Key Model Assumptions

Total Plan Assets	Private Equity Portfolio Assumptions
<ul style="list-style-type: none"> <li>• US\$35.9 billion of total plan assets at September 30, 2019</li> <li>• 4.2% annual growth in the overall portfolio<sup>2</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Base annual commitments of US\$750 million beginning in FY 2020, increasing gradually to US\$900 million annually by FY 2026</li> <li>• An additional US\$200 million annual commitment for FY 2020, FY 2021 and FY 2022 as part of the Transition Plan, deployed equally in Mezzanine and Secondaries.</li> <li>• Wtd. Avg. Expected Return on PE: 12.3%</li> <li>• Asset Class Allocation: Corporate Finance (90%), Venture Capital (10%)</li> <li>• Strategy Allocation<sup>1</sup>: Buyout (59%), Venture Capital (10%), Growth (7%), Mezzanine (5%), Distressed / Restructuring (13%), Secondaries (7%)</li> <li>• Geographical Allocation: North America (75%), Europe (20%), Rest of World (5%)</li> </ul>

## Recommendation & Results

- PIF should target annual commitments of US\$775 million beginning in FY 2021 and gradually scale its annual commitments to US\$900 million by FY 2026. In addition to PIF’s target base annual commitments, US\$200 million in annual commitments should be deployed in FY 2020, FY 2021 and FY 2022 as part of the Transition Plan.
- Based on StepStone’s analysis, PIF should meet its target FMV exposure by FY 2024 under the base case.

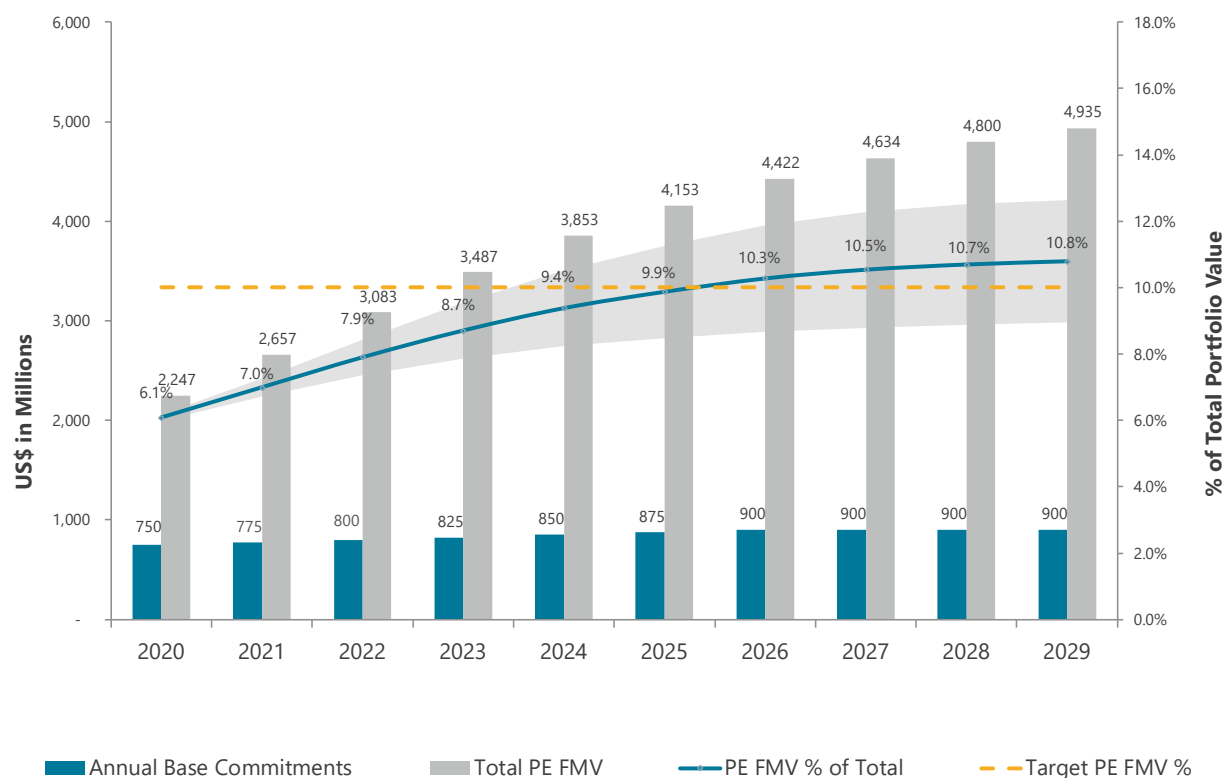
1. Strategy allocation does not include the impact of the Transition Plan commitments.  
 2. Based on 4YR average of CRPTF program’s annual growth (2015-2019)

- As part of the Strategic Plan, StepStone conducts a cash flow pacing analysis for PIF using a proprietary cash flow pacing model
- This model provides a guideline for annual commitment amounts by Private Equity Strategy based on IPS objectives, deployment pacing parameters and the model's projected cash flows
- StepStone's proprietary cash flow model is based on cash flow profiles across six Private Equity Strategies (i.e., Buyout, Venture Capital, Growth, Mezzanine, Distressed / Restructuring, Secondaries), which have been developed through historic cash flow data across 25,000+ funds contained within StepStone's proprietary *SPI Database*
- StepStone employs five independent variables as key inputs to project capital calls, distributions and net asset values ("NAV"):
  - Private Equity Allocation (by Strategy)
  - Expected Net Return
  - J-Curve Factor
  - Expected Drawdown Rates
  - Partnership Term
- StepStone has input the CRPTF's program details (e.g., overall program size, growth rate, private equity allocation goal, contributions, distributions, etc.) and details around the existing PIF portfolio (e.g., investments, commitments, exposure, NAV, etc.) into the proprietary cash flow pacing model
  - Based on these inputs, the model's assumptions and StepStone's proprietary cash flow profiles, the model will output cash flow projections that will determine guidance for annual commitment ranges

- Transition Plan is being contemplated to best assess possible opportunities to redeploy significant net cash flow generated by the PIF portfolio over the last several years
  - From FY 2013 to FY 2019, the PIF portfolio generated \$2.2 billion of net cash flow
  - Strong positive cash flows have contributed to a decline in exposure to private equity strategies
- **Objectives:**
  - Provide increased flexibility to deploy capital in strategies benefitting from current/expected market conditions
  - Improved returns by closing the CRPTF's under-allocated position to private equity
- **Execution**
  - Investing in opportunities with shorter investment periods consistent with PIF's return expectations
  - Target Transition Plan allocation of up to US\$200 million in FY21
  - Transition Plan commitments incremental to the recommended FY21 and FY22 Annual Plan targeted commitments
- **Potential Opportunities:**
  - Mezzanine and Secondaries strategies with target returns consistent with PIF's return expectations

# Pacing Analysis (Excl. Transition Plan)

## CRPTF PIF Pacing Model<sup>1,2,3</sup>



Notes:

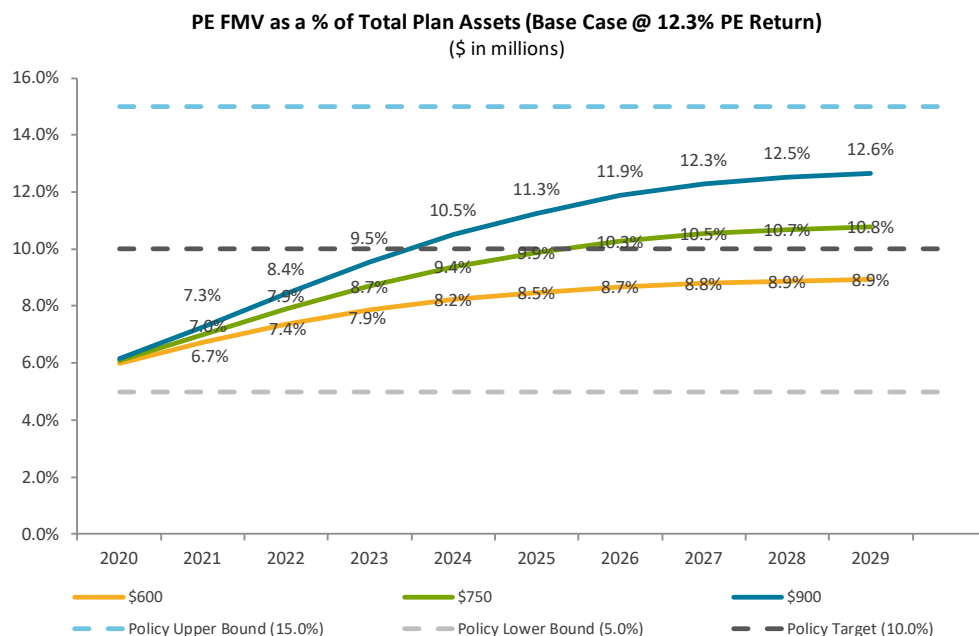
- (1) For illustrative purposes only.
- (2) Private Equity Values as of September 30, 2019.
- (3) Represents total exposure by strategy and sector in year 5 of projection.

- StepStone updated its pacing analysis for CRPTF’s PIF portfolio, excluding the implementation of the Transition Plan.
- Assumed CRPTF AUM of \$35,937M in FY2019 reaching \$45,737M in FY2029 and weighted average return on Private Equity portfolio of 12.3%
- To achieve and maintain a target Private Equity exposure of 10% of total portfolio value over the long-term (10 years), StepStone recommends:
  - Gradually scaling annual base commitments from \$750M beginning in FY 2020 to \$900M by FY 2026
  - Implementing Co-Investment program to generate higher net returns
  - Increasing geographic diversification with a continued focus on commitments to European managers
  - Targeting direct commitments to late stage venture/growth managers to offset gradual reduction of venture capital exposure
- PIF 5-year total exposure by Strategy and Sector<sup>3</sup>:
  - Corporate Finance 86%
    - Buyout 60%
    - Growth Equity 6%
    - Distressed/Restructuring 10%
    - Mezzanine: 5%
    - Secondaries 5%
  - Venture Capital 14%

# Pacing Plan – FMV Exposure Projection (ex-Transition Plan)



- Excluding the impact of the Transition Plan, the ramp-up of the private equity portfolio is slower.
- In the base case with US\$750 million of starting commitments, the portfolio reaches the lower target FMV exposure of 10% in FY 2026 (versus FY 2024 when including the Transition Plan).
- However, by FY 2029, the FMV exposure of the portfolio still reaches ~11% excluding the Transition Plan.



Target Annual Commitments (excl. Transition Plan)		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
—	\$900	\$900	\$925	\$950	\$975	\$1,000	\$1,025	\$1,050	\$1,050	\$1,050	\$1,050
—	\$750	\$750	\$775	\$800	\$825	\$850	\$875	\$900	\$900	\$900	\$900
—	\$600	\$600	\$625	\$650	\$675	\$700	\$725	\$750	\$750	\$750	\$750

NOTES: Excludes impact of Transition Plan. Commitments per legend represent FY20 core strategy commitments, which are assumed to increase by US\$25 million each year between FY21-FY26.

# Risks and Other Considerations



**Risks Associated with Investments.** Identifying attractive investment opportunities and the right underlying fund managers is difficult and involves a high degree of uncertainty. There is no assurance that the investments will be profitable and there is a substantial risk that losses and expenses will exceed income and gains.

**Restrictions on Transfer and Withdrawal; Illiquidity of Interests; Interests Not Registered.** The investment is highly illiquid and subject to transfer restrictions and should only be acquired by an investor able to commit its funds for a significant period of time and to bear the risk inherent in such investment, with no certainty of return. Interests in the investment have not been and will not be registered under the laws of any jurisdiction. Investment has not been recommended by any securities commission or regulatory authority. Furthermore, the aforementioned authorities have not confirmed the accuracy or determined the adequacy of this document.

**Limited Diversification of Investments.** The investment opportunity does not have fixed guidelines for diversification and may make a limited number of investments.

**Reliance on Third Parties.** StepStone will require, and rely upon, the services of a variety of third parties, including but not limited to attorneys, accountants, brokers, custodians, consultants and other agents and failure by any of these third parties to perform their duties could have a material adverse effect on the investment.

**Reliance on Managers.** The investment will be highly dependent on the capabilities of the managers.

**Risk Associated with Portfolio Companies.** The environment in which the investors directly or indirectly invest will sometimes involve a high degree of business and financial risk. StepStone generally will not seek control over the management of the portfolio companies in which investments are made, and the success of each investment generally will depend on the ability and success of the management of the portfolio company.

**Taxation.** An investment involves numerous tax risks. Please consult with your independent tax advisor.

**Conflicts of Interest.** Conflicts of interest may arise between StepStone and investors. Certain potential conflicts of interest are described below; however, they are by no means exhaustive. There can be no assurance that any particular conflict of interest will be resolved in favor of an investor.

**Allocation of Investment Opportunities.** StepStone currently makes investments, and in the future will make investments, for separate accounts having overlapping investment objectives. In making investments for separate accounts, these accounts may be in competition for investment opportunities.

**Existing Relationships.** StepStone and its principals have long-term relationships with many private equity managers. StepStone clients may seek to invest in the pooled investment vehicles and/or the portfolio companies managed by those managers.

**Carried Interest.** The entitlement of StepStone and the underlying portfolio fund managers to carried interest over and above their basic management fees could create an incentive for StepStone and the portfolio fund managers to make investments that are riskier or more speculative than would otherwise be the case.

**Other Activities.** Employees of StepStone are not required to devote all of their time to the investment and may spend a substantial portion of their time on matters other than the investment.

**Material, Non-Public Information.** From time to time, StepStone may come into possession of material, non-public information that would limit their ability to buy and sell investments.

# State of Connecticut Retirement Plans and Trust Funds

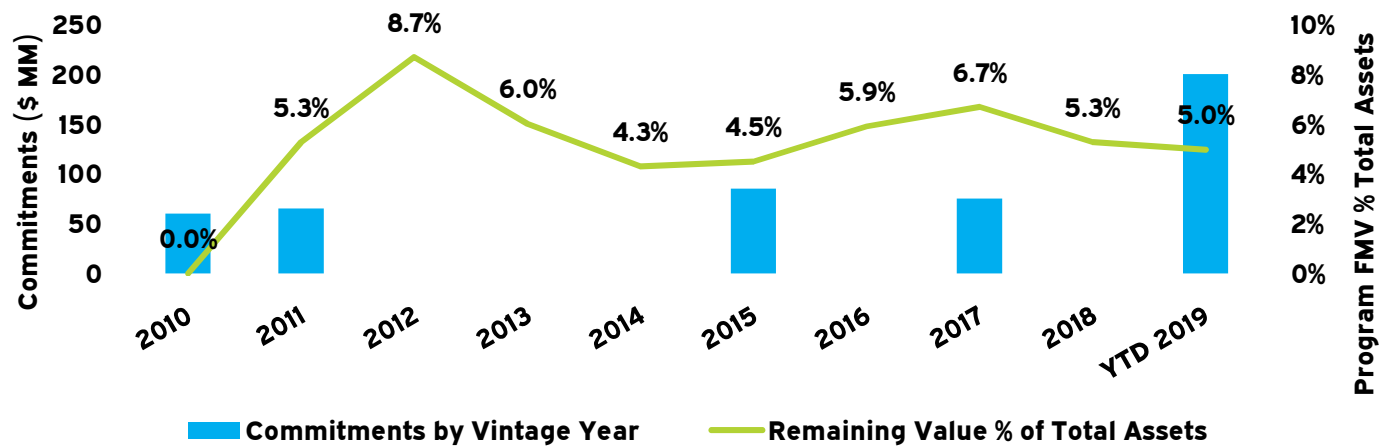
May 5, 2020

Real Assets Pacing Study



### Introduction

In January 2020, the Connecticut Retirement Plans and Trust Funds reviewed its policies and recommend to remove the Real Assets Program from the Alternative Investment Funds (“AIF”) portfolio. The approved target allocation of 4.2% to the Real Assets Program in addition to a maximum exposure limitation of 5.25% of total plan assets remains in existence. The policy will be finalized in February 2020.



#### Program Status

No. of Investments	5
Committed (\$ MM)	485.0
Contributed (\$ MM)	254.9
Distributed (\$ MM)	146.9
Remaining Value (\$ MM)	147.7

#### Program Performance Since Inception

DPI	0.58x
TVPI	1.16x
IRR	5.1%

By Strategy

Group	Number	Committed (\$ MM)	Contributed (\$ MM)	Unfunded (\$ MM)	Distributed (\$ MM)	Remaining Value (\$ MM)	Exposure (\$ MM)	DPI (X)	TVPI (X)	IRR (%)
Infrastructure	4	425.0	191.8	236.2	96.4	125.9	362.1	0.50	1.16	6.1
Natural Resources	1	60.0	63.1	0.0	50.5	21.8	21.8	0.80	1.15	3.4
<b>Total</b>	<b>5</b>	<b>485.0</b>	<b>254.9</b>	<b>236.2</b>	<b>146.9</b>	<b>147.7</b>	<b>383.9</b>	<b>0.58</b>	<b>1.16</b>	<b>5.1</b>

By Vintage

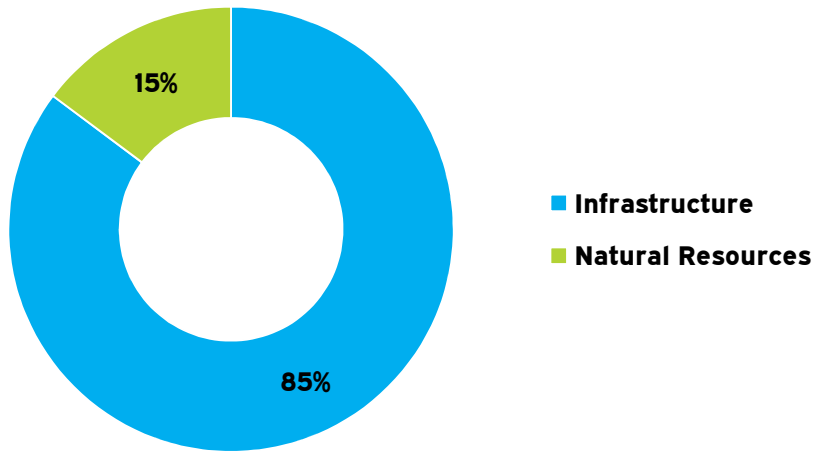
Group	Number	Committed (\$ MM)	Contributed (\$ MM)	Unfunded (\$ MM)	Distributed (\$ MM)	Remaining Value (\$ MM)	Exposure (\$ MM)	DPI (X)	TVPI (X)	IRR (%)
2010	1	60.0	63.1	0.0	50.5	21.8	21.8	0.80	1.15	3.4
2011	1	65.0	65.9	0.0	62.9	22.4	22.4	0.95	1.29	8.0
2015	1	85.0	86.1	0.0	31.2	78.1	78.1	0.36	1.27	9.1
2017	1	75.0	39.8	36.2	2.3	27.8	64.1	0.06	0.76	NM
2019	1	200.0	0.0	200.0	0.0	NM	197.6	0.00	NM	NM
<b>Total</b>	<b>5</b>	<b>485.0</b>	<b>254.9</b>	<b>236.2</b>	<b>146.9</b>	<b>147.7</b>	<b>383.9</b>	<b>0.58</b>	<b>1.16</b>	<b>5.1</b>

Fund Performance: Sorted By Vintage and Strategy

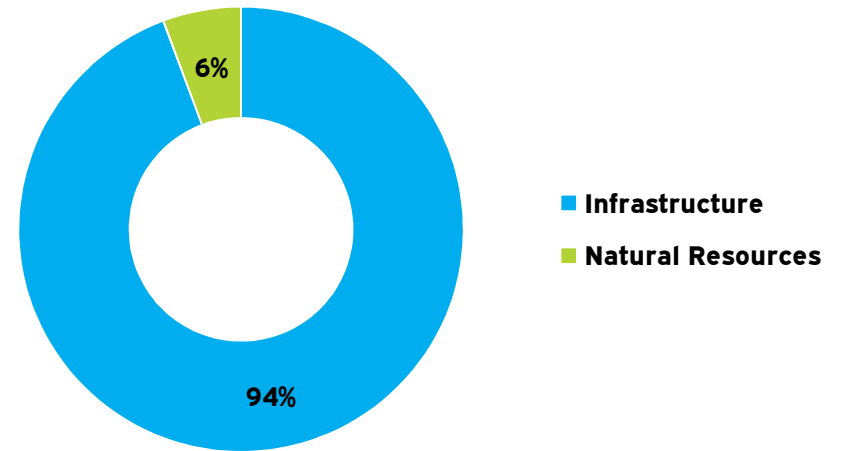
By Investment	Vintage	Strategy	Committed (\$ MM)	Contributed (\$ MM)	Unfunded (\$ MM)	Distributed (\$ MM)	Remaining Value (\$ MM)	TVPI (X)	IRR (%)
EIG XV	2010	Natural Resources	60.0	63.1	0.0	50.5	21.8	1.15	3.4
ArcLight V	2011	Infrastructure	65.0	65.9	0.0	62.9	22.4	1.29	8.0
ArcLight VI	2015	Infrastructure	85.0	86.1	0.0	31.2	78.1	1.27	9.1
ISQ Infra II	2017	Infrastructure	75.0	39.8	36.2	2.3	27.8	0.76	NM
GIP IV	2019	Infrastructure	200.0	0.0	200.0	0.0	NM	NM	NM
<b>Total</b>			<b>485.0</b>	<b>254.9</b>	<b>236.2</b>	<b>146.9</b>	<b>147.7</b>	<b>1.16</b>	<b>5.1</b>

#### By Strategy

Percent of FMV

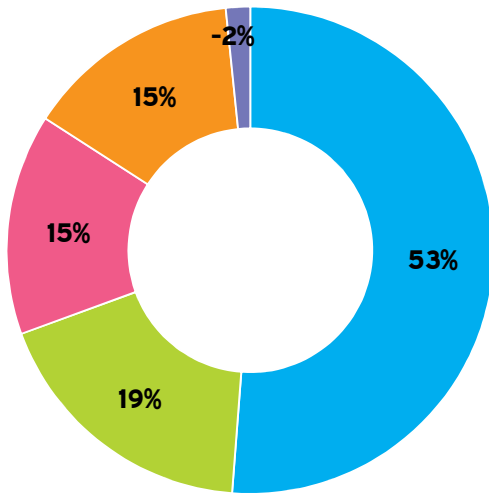


Percent of Exposure



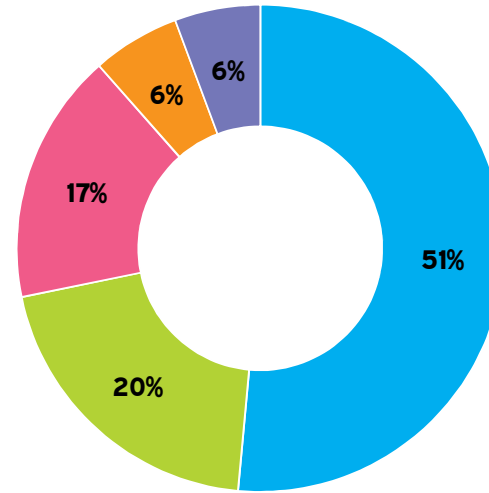
#### By Vintage

Percent of FMV



- 2015
- 2017
- 2011
- 2010
- 2019

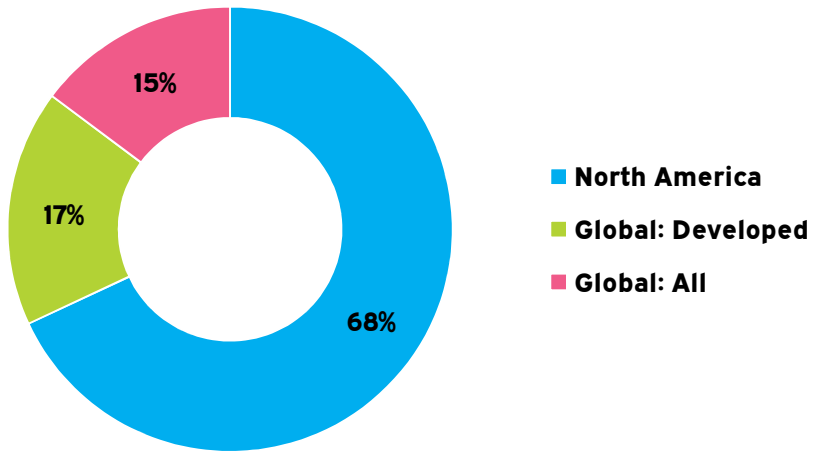
Percent of Exposure



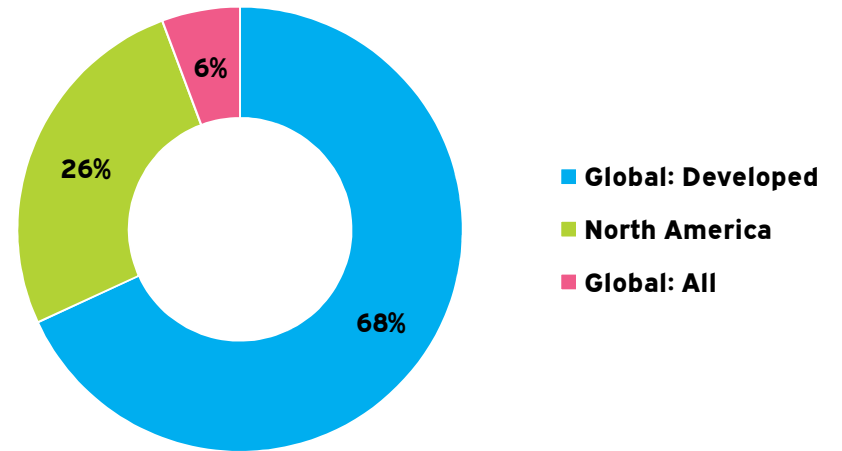
- 2019
- 2015
- 2017
- 2010

#### By Geographic Focus

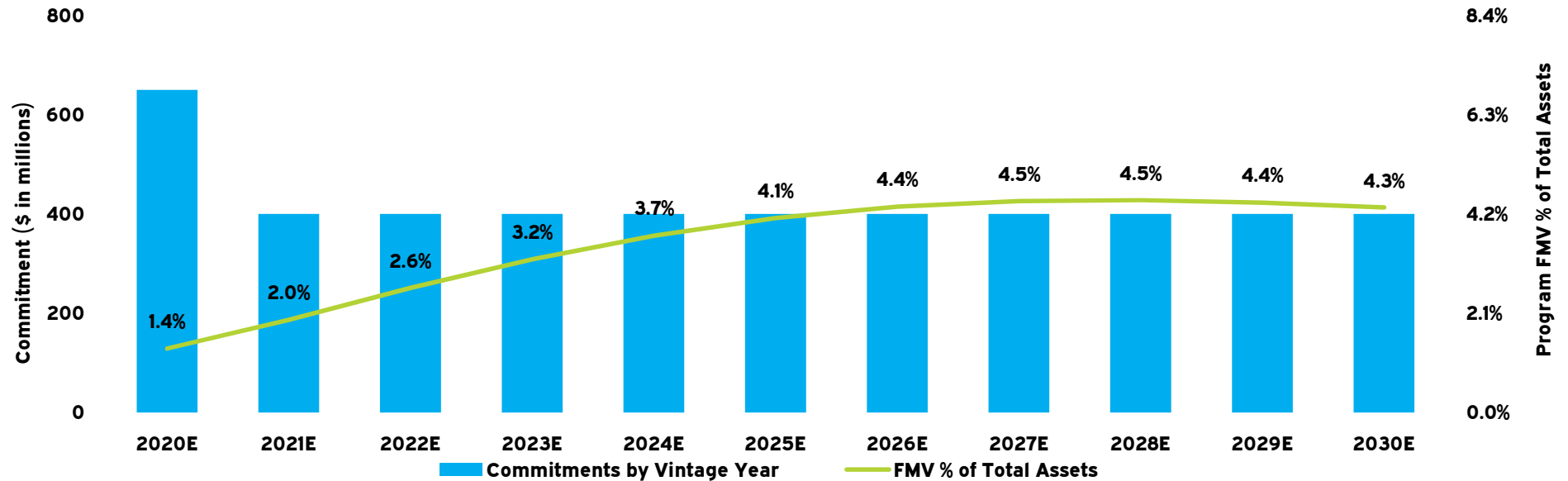
Percent of FMV



Percent of Exposure

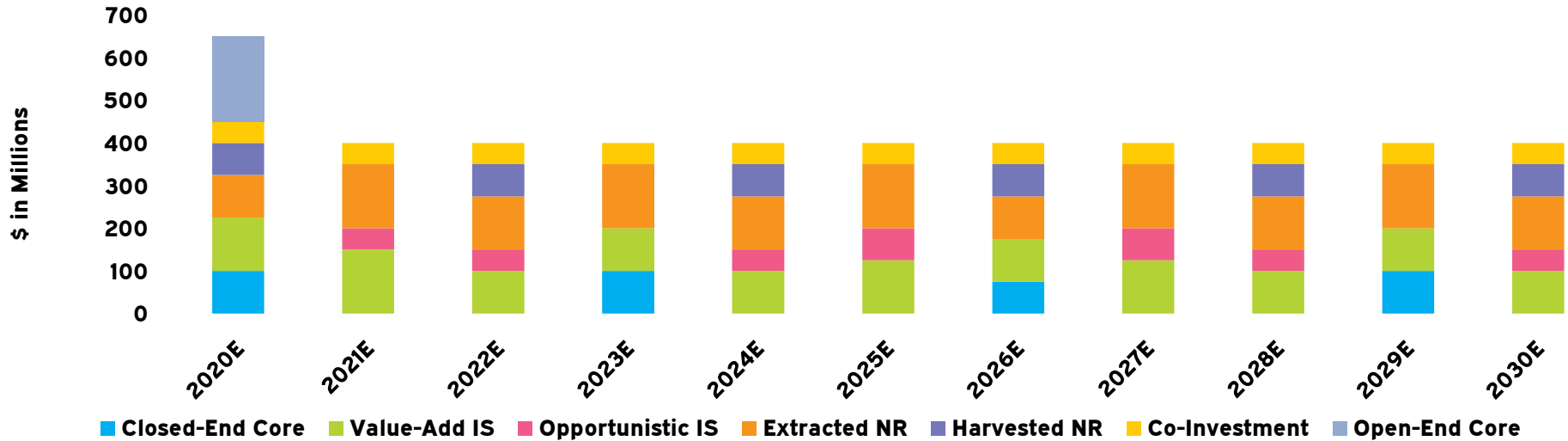


### Pacing Study Summary



(\$ in millions)	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
<b>Private Market Investments</b>											
Commitments by Vintage Year	650	400	400	400	400	400	400	400	400	400	400
Contributions	-334	-237	-301	-338	-359	-375	-383	-390	-391	-396	-396
Distributions	8	12	42	104	157	226	300	372	435	487	528
Net Cash Flow	-326	-225	-259	-234	-202	-149	-83	-18	45	92	132
Fair Market Value	468	726	1040	1362	1679	1970	2220	2427	2587	2715	2812
<b>FMV % of Total Assets</b>	<b>1.4%</b>	<b>2.0%</b>	<b>2.6%</b>	<b>3.2%</b>	<b>3.7%</b>	<b>4.1%</b>	<b>4.4%</b>	<b>4.5%</b>	<b>4.5%</b>	<b>4.4%</b>	<b>4.3%</b>

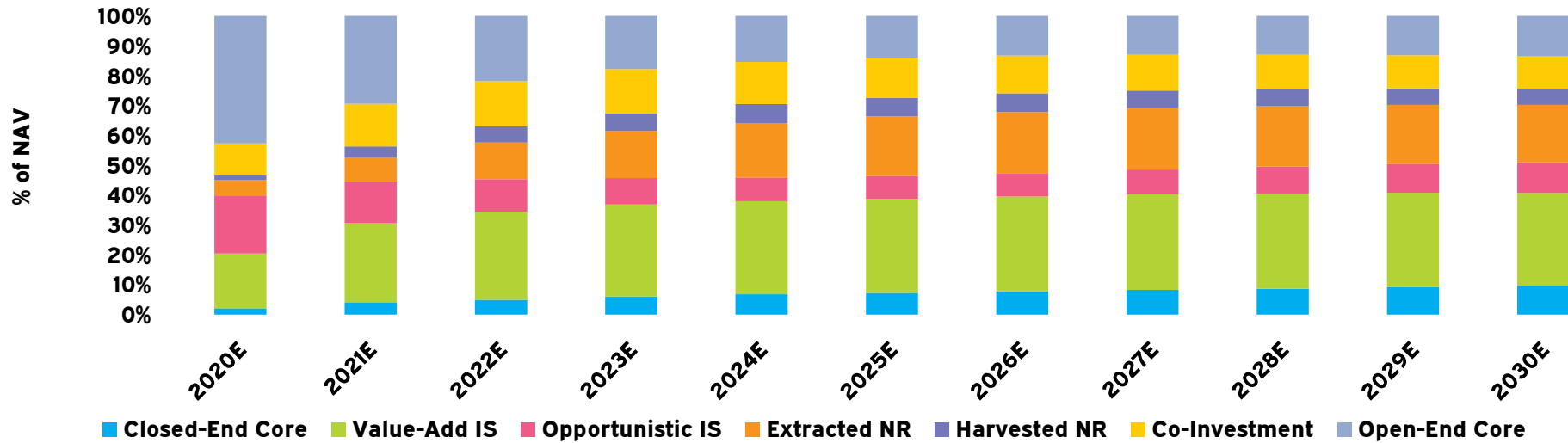
### Commitment by Strategy



	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
<b>Closed-End Core</b>	100			100			75			100	
<b>Value-Add IS</b>	125	150	100	100	100	125	100	125	100	100	100
<b>Opportunistic IS</b>		50	50		50	75		75	50		50
<b>Extracted NR</b>	100	150	125	150	125	150	100	150	125	150	125
<b>Harvested NR</b>	75		75		75		75		75		75
<b>Co-Investment</b>	50	50	50	50	50	50	50	50	50	50	50
<b>Open-End Core</b>	200	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>650</b>	<b>400</b>	<b>400</b>	<b>400</b>	<b>400</b>	<b>400</b>	<b>400</b>	<b>400</b>	<b>400</b>	<b>400</b>	<b>400</b>



### NAV Exposure by Strategy



	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Closed-End Core	2%	4%	5%	6%	7%	7%	8%	8%	9%	9%	10%
Value-Add IS	18%	26%	29%	31%	31%	32%	32%	32%	32%	32%	31%
Opportunistic IS	19%	14%	11%	9%	8%	8%	8%	8%	9%	10%	10%
Extracted NR	5%	8%	12%	16%	18%	20%	20%	21%	20%	20%	19%
Harvested NR	2%	4%	5%	6%	6%	6%	6%	6%	6%	6%	5%
Co-Investment	11%	14%	15%	15%	14%	13%	13%	12%	12%	11%	11%
Open-End Core	43%	29%	22%	18%	15%	14%	13%	13%	13%	13%	14%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

### Global Quarterly Unlisted Natural Resource Fundraising<sup>1</sup>

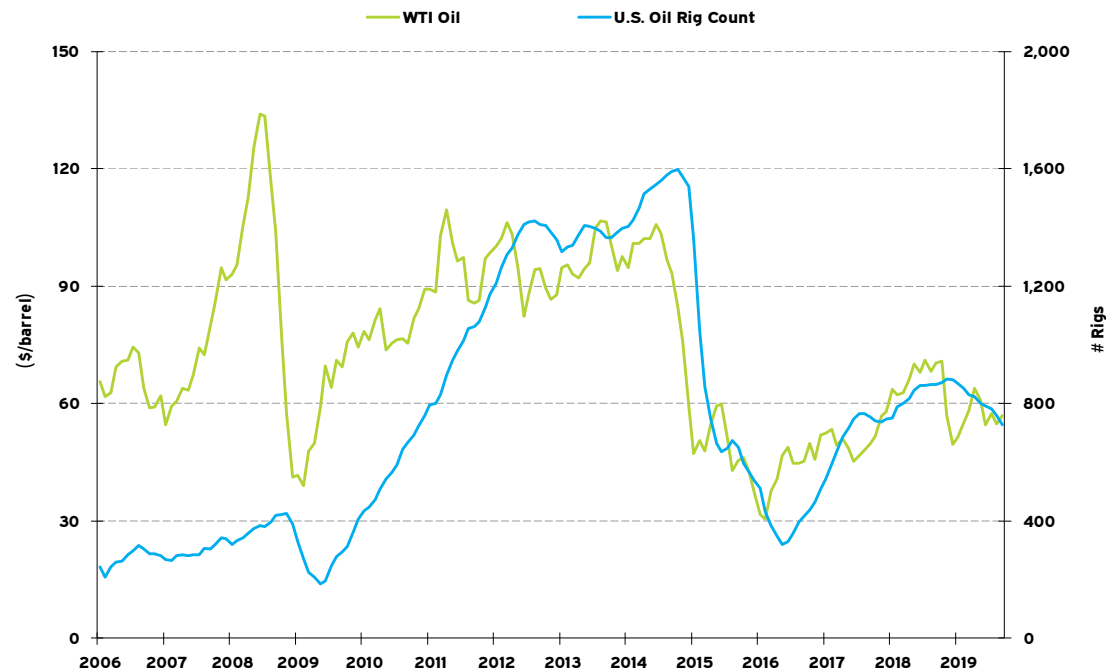


Capital raised in the third quarter of 2019 was substantially lower than in prior quarters, representing a decline of approximately 61% relative to the amount raised in the third quarter of 2018. The number of vehicles raised also fell during the third quarter with just 18 funds reaching final close. This quarter, the average fund size raised was \$500 million, below the 2018 average of \$800 million. As of September 30, 2019, Preqin reported a total of 313 unlisted natural resources funds with a combined fundraising target of approximately \$219 billion. The majority of natural resources managers fundraising during the third quarter were focused on North America, accounting for nearly 63% of aggregate targeted capitalization in the market.

<sup>1</sup> Source: Preqin Private Capital Fundraising Update, Q3 2019.

Extracted Resources

Oil Price vs. Active U.S. Rigs<sup>1</sup>

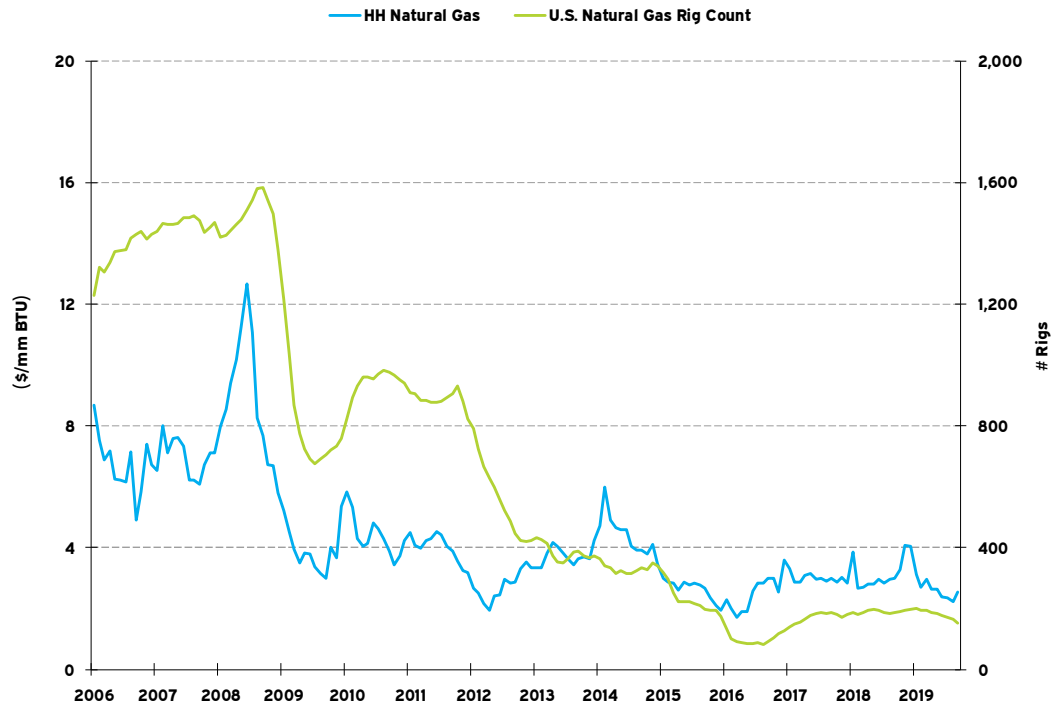


West Texas Intermediate (“WTI”) oil prices increased by 4% to \$57 per barrel during the third quarter. In September, drone and missile attacks damaged Saudi Aramco’s Abqaiq facility, the world’s largest crude oil processing and stabilization plant, and the Khurais oil field in eastern Saudi Arabia. The attack highlighted geopolitical risks associated with the industry, potential global supply disruptions, and uncertainty of Saudi Aramco’s plans of a future IPO. During the third quarter, the U.S. produced over 12.2 million barrels of oil equivalent per day. The oil rig count in the U.S. fell by 64 bringing the total to 726. U.S. gasoline prices for regular blend decreased by 5% to \$2.81 from the previous quarter, representing a 6% decrease from one year prior.

<sup>1</sup> Source: EIA and Baker Hughes.

Extracted Resources

Natural Gas Price vs. Active U.S. Rigs<sup>1</sup>

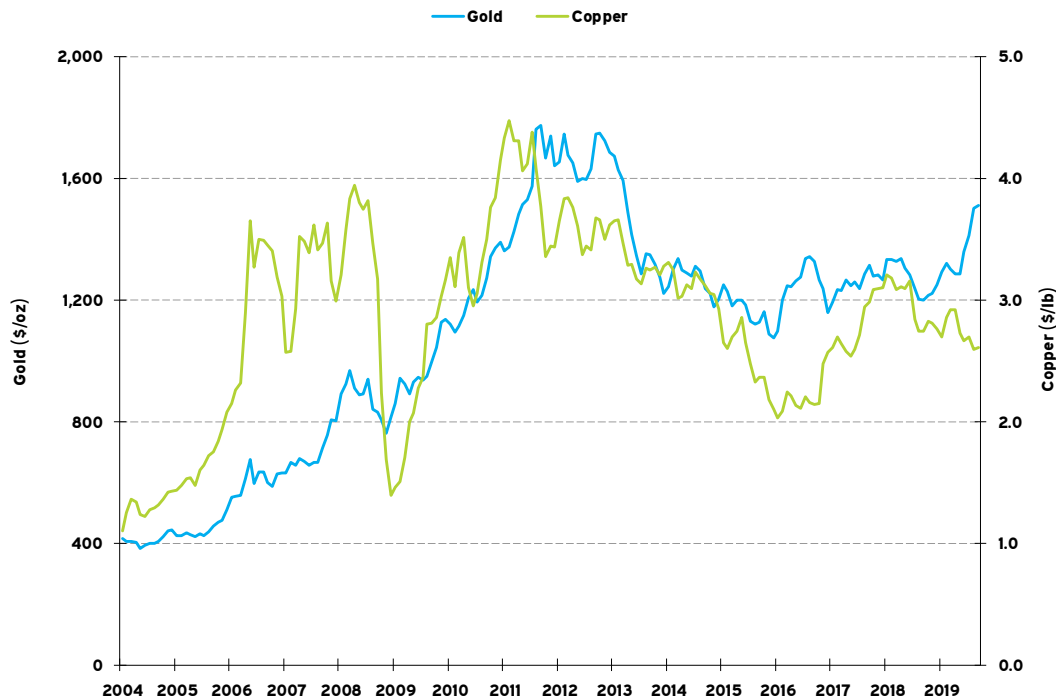


Henry Hub natural gas spot prices ended the quarter at approximately \$2.56/MM BTU, representing a 7% decrease from the prior quarter. Significant pricing differentials continue to exist between Henry Hub, the national benchmark for U.S. natural gas, and other markets; however, differential should moderate as midstream infrastructure continues to be developed. Despite a reduction in rig count during the quarter the U.S. natural gas production continues to be robust as a result of operational improvements and increased associated gas production from oil wells. Storage has absorbed a large portion of the recent production growth with natural gas inventories forecasted to expand in the coming years. During the third quarter, the natural gas rig count fell by 27 to 152 while daily production averages reached more than 101 billion cubic feet.

<sup>1</sup> Source: EIA and Baker Hughes.

### Extracted Resources

#### Metals Prices<sup>1</sup>

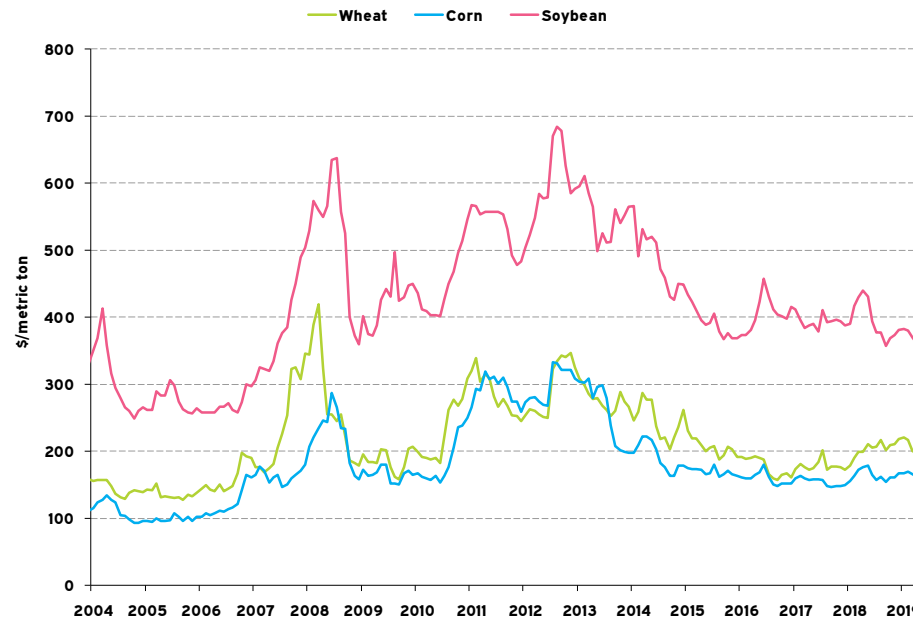


Geopolitical tensions continued into the third quarter headlined by the ongoing U.S. – China global trade war as well as economic uncertainty resulting from falling bond yields. Trade concerns continue to create uncertainty on global growth projections and the demand for certain base and industrial metals. Copper prices fell by approximately 2% to \$2.61 per ounce during the quarter. Safe-haven assets, such as gold, tend to fare better during turbulent periods. The price of gold rose to \$1,511 per ounce during the quarter. Relative to one year prior, copper and gold prices changed by -5% and +26%, respectively.

<sup>1</sup> Source: World Bank.

### Harvested Resources

#### Wheat, Corn, & Soybean<sup>1</sup>

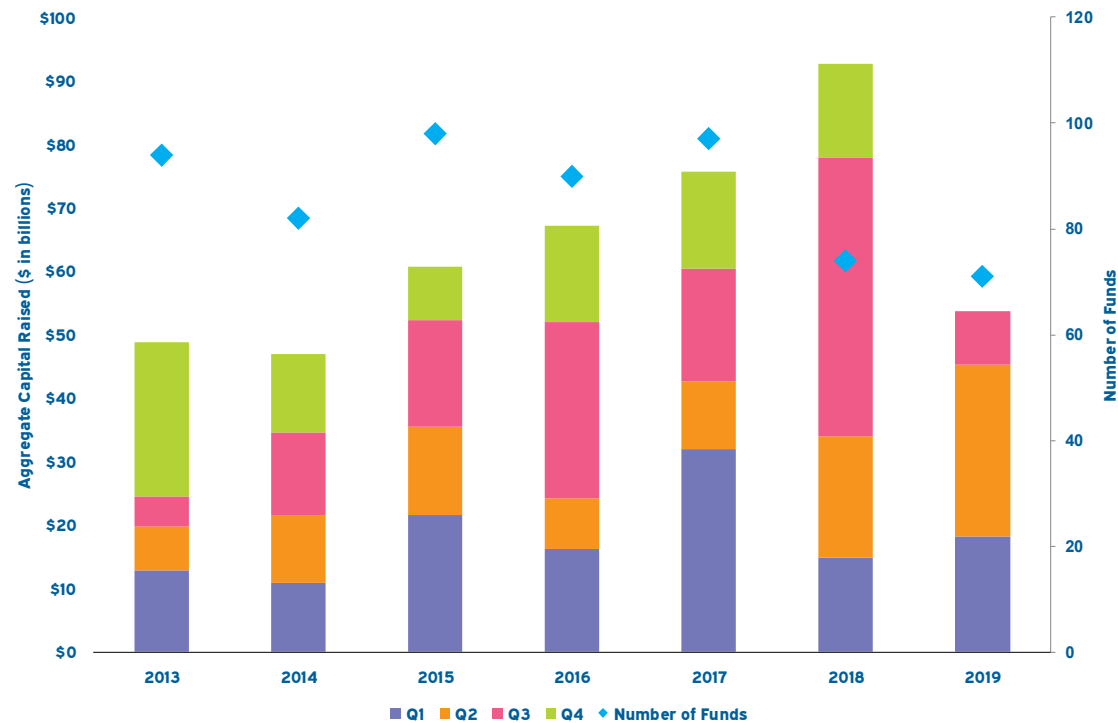


Agriculture continues to be adversely impacted by global trade wars, which have led to decreased export demand for the U.S. Record levels of rainfall and flooding across the Midwest and South U.S. regions significantly reduced grain plantings, specifically corn and wheat, during the third quarter. A trade agreement between the U.S. and Japan, and progress on a Phase I trade deal with China has the potential to significantly increase demand for U.S. agricultural products. During the quarter, wheat and corn prices fell by 9% and 19%, respectively, while soybean prices increased by 2%.

During the quarter, the NCREIF Farmland index experienced a 1% increase that was driven mainly by income gains of 1.0%. The NCREIF Timberland index increased by 0.2% primarily as a result of income gains of 0.7%.

<sup>1</sup> Source: World Bank.

### Global Quarterly Unlisted Infrastructure Fundraising<sup>1</sup>

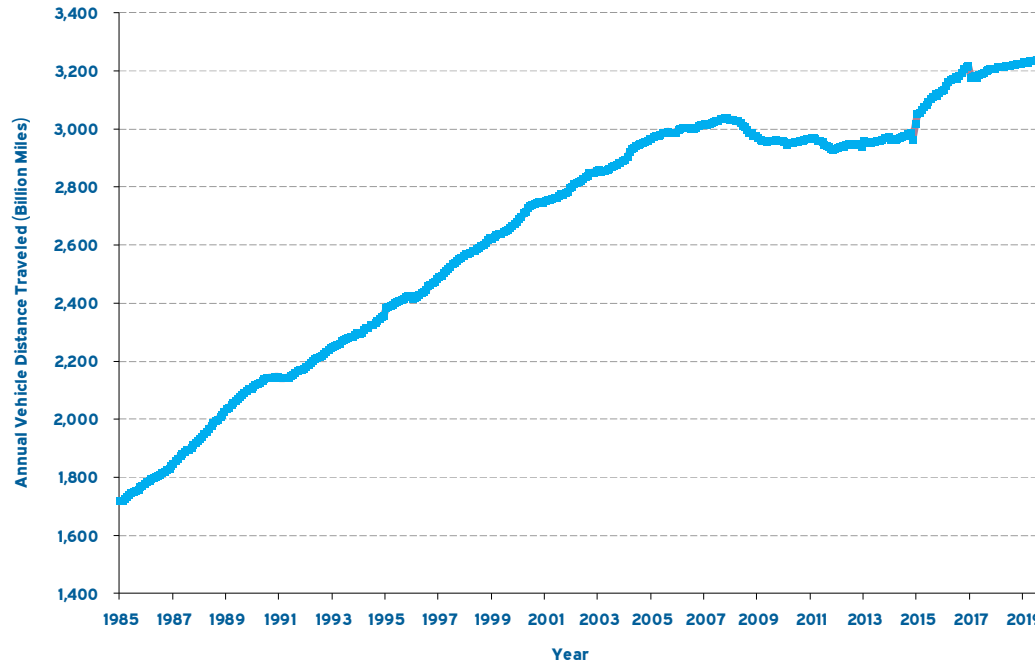


Capital raised in the third quarter of 2019 fell well below the amount raised in the second quarter of 2019. In the third quarter, the average fund size didn't exceed \$0.5 billion, falling below the 2018 average of \$1.3 billion. As of September 30, 2019, a total of 241 unlisted infrastructure funds were in market, according to Preqin, with a combined fundraising target of approximately \$200 billion.

The majority of infrastructure capital was focused on the developed market in North America, accounting for nearly 31% of the capital raised so far in 2019.

<sup>1</sup> Source: Preqin Private Capital Fundraising Update, Q3 2019.

Moving 12-month Total on All U.S. Roads<sup>1</sup>



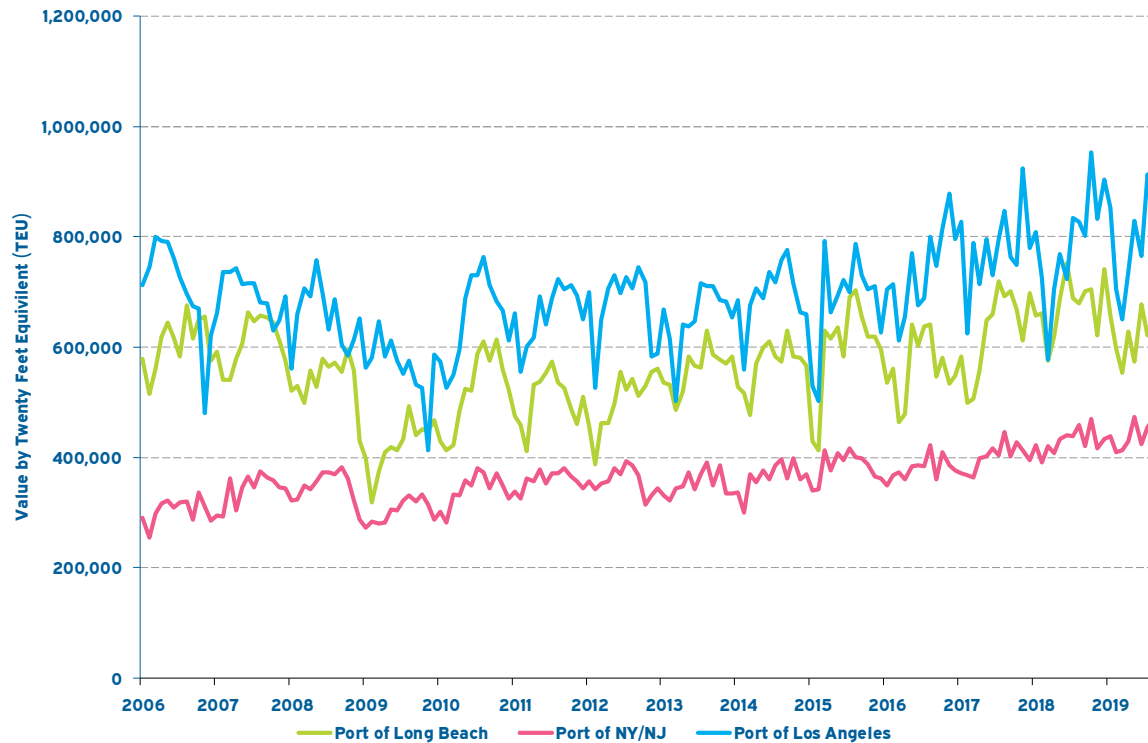
During the third quarter of 2019, travel on U.S. roads totaled approximately 850 billion miles. This represented an increase of 1.8% over the same period in 2018. Year-to-date, Federal Highway Administration data showed vehicle miles traveled increased by 21.2 billion miles, up 0.88% over 3Q 2018.

Up to this point in 2019, the average U.S. price of a gallon of gas went up to a monthly average of \$2.69 per gallon, with a peak of \$2.95. This compared to \$2.82 and \$2.99 seen in 2018. According to INRIX, Boston, Washington, D.C., and Chicago rank as the top three cities in the U.S. in which drivers spend the most hours in traffic.

<sup>1</sup> Source: U.S. Department of Transportation, Federal Highway Administration: Office of Highway Policy Information.



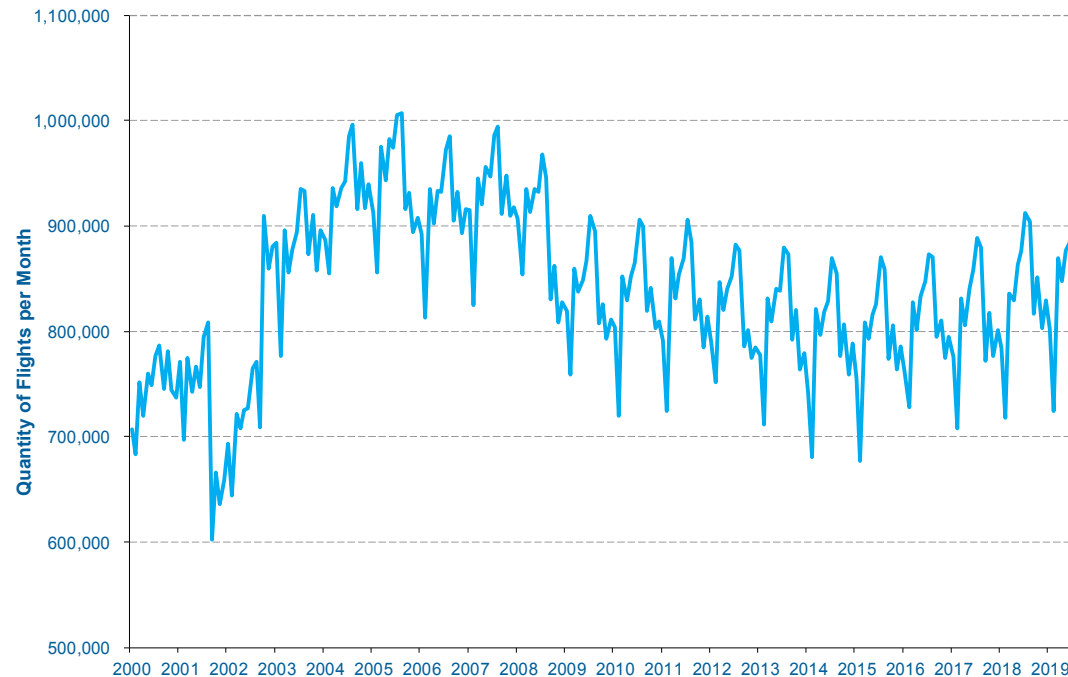
### U.S. Port Activity – Container Trade in TEUs



The chart represents the top three U.S. ports by container volume, as measured by twenty-foot equivalent units (TEU). Activity at the three ports provides a high-level representation of the volume of imports received into the U.S. more broadly.

During the third quarter of 2019, volumes at the three ports increased by 54,000 units relative to the same period in 2018. On a year-over-year basis, the combined port volumes increased by 500,434 TEU, or 2.2%, over the prior 12 month period. All three ports saw an increase in year-over-year activity. The Port of Long Beach recorded a decrease of 3.1% (253,678 TEU), the Port of NY/NJ reported an increase of 3.9% (196,996 TEU) and the Port of Los Angeles recorded an increase of 6.0% (557,116 TEU) from the prior 12 months.

### Total U.S. Domestic and International Flights<sup>1</sup>

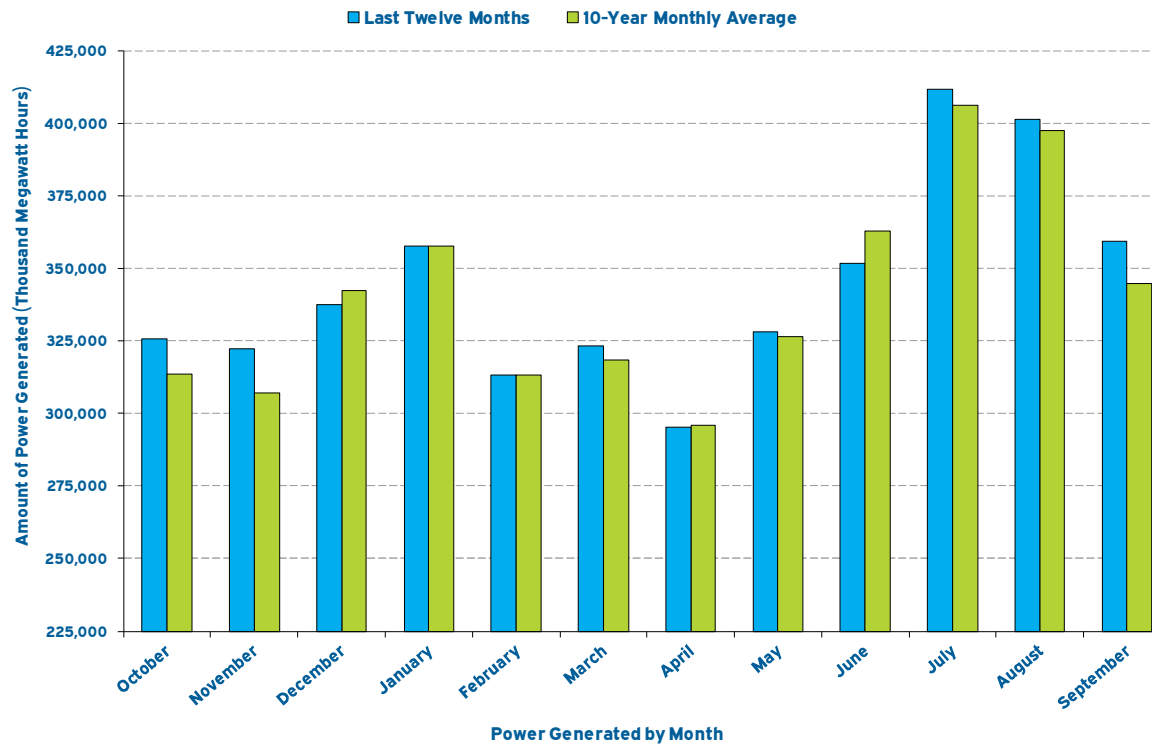


The chart above represents all U.S. domestic and international flights, excluding foreign point-to-point flights by month. Air traffic is cyclical with peaks in the summer months and declines in the winter months.

There were nearly 30,000 more flights during the third quarter of 2019, representing a 1.1% increase compared to the same period in 2018. Air traffic activity also increased by 2.2% for the 12 months ending September 30, 2019 over the previous period. In addition to the number of flights during the third quarter increasing year-over-year, the total number of passengers travelling on U.S. and international airlines increased by 3.9% from 2018 to 2019, which indicates higher capacity factors among airlines compared to the prior period.

<sup>1</sup> Source: Bureau of Transportation Statistics: Flights, All U.S., and Foreign Carriers.

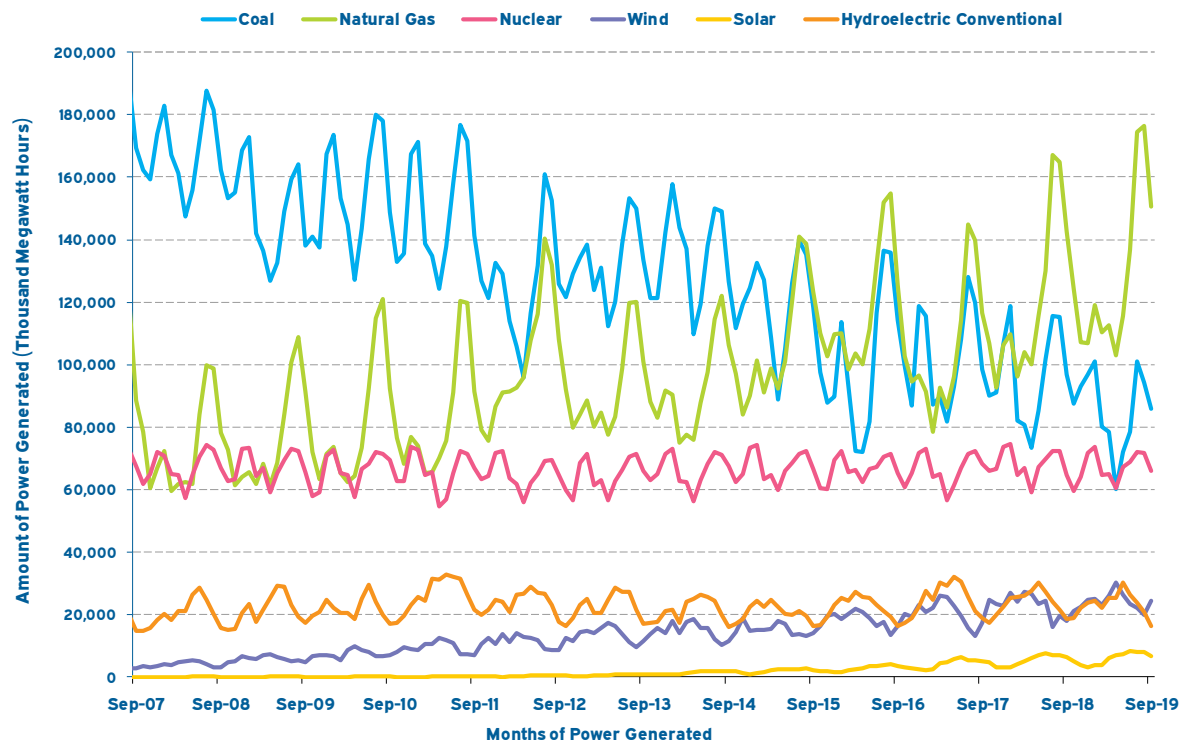
### Total U.S. Power Generation<sup>1</sup>



The graph above represents the total net generation for the past 12 months compared to the 10-year average for each month. Over the past year, power generation exceeded the 10-year average in 9 out of the 12 months. Net energy generation in the U.S. decreased by 0.6% during the third quarter, compared to the same period in 2018. For the 12 months ended September 30, 2019, net energy generation decreased by 0.9% over the previous 12 months.

<sup>1</sup> Source: U.S. Energy Information Administration: Electric Power Monthly, September 2019.

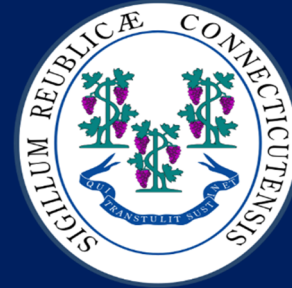
### U.S. Power Generation by Source<sup>1</sup>



When comparing individual generation sources in the U.S., natural gas, nuclear, wind, and solar increased 5.6%, 0.3%, 23.7%, and 11.3% respectively in the third quarter of 2019 as compared to the same period in the previous year. Generation from coal and hydroelectric conventional dropped by 14.2% and 5.0% respectively, during the same period. Wind and utility scale solar continue to make up a small portion of total net energy generation in the U.S., accounting for only 5.6% and 1.9% of energy generation in the third quarter, while coal, natural gas, and nuclear accounted for 24.0%, 42.8%, and 17.9%, respectively. However, the growth of wind and solar as sources of energy generation continues to increase at a faster rate than coal and natural gas, especially over the last couple of years.

<sup>1</sup> Source: U.S. Energy Information Administration: Electric Power Monthly, September 2019.

# CONNECTICUT RETIREMENT PLANS & TRUST FUNDS



## REAL ESTATE MARKET REVIEW & 2020 INVESTMENT PLAN

May 2020



BOSTON | ATLANTA | CHARLOTTE | CHICAGO | DETROIT | LAS VEGAS | PORTLAND | SAN FRANCISCO

# EXECUTIVE SUMMARY

- **The State of Connecticut Retirement Plans & Trust Funds (“State of CT”) has a current target allocation to real estate of 10%**
  - This target was increased in 2019 from 7%
  - The State of CT has an actual allocation to real estate of 7.4%
- **This presentation will review the 2020 Investment Plan, which includes:**
  - A review of the current portfolio composition and existing investments
  - Forecasted commitment amounts per year, with the goal of increasing the allocation towards the long-term target of 10%
- **This presentation also discusses the current market environment and NEPC’s real estate portfolio construction thoughts**
- **NEPC will continue to work with the State of CT investment team to source new investment ideas and implement the real estate Investment Plan**



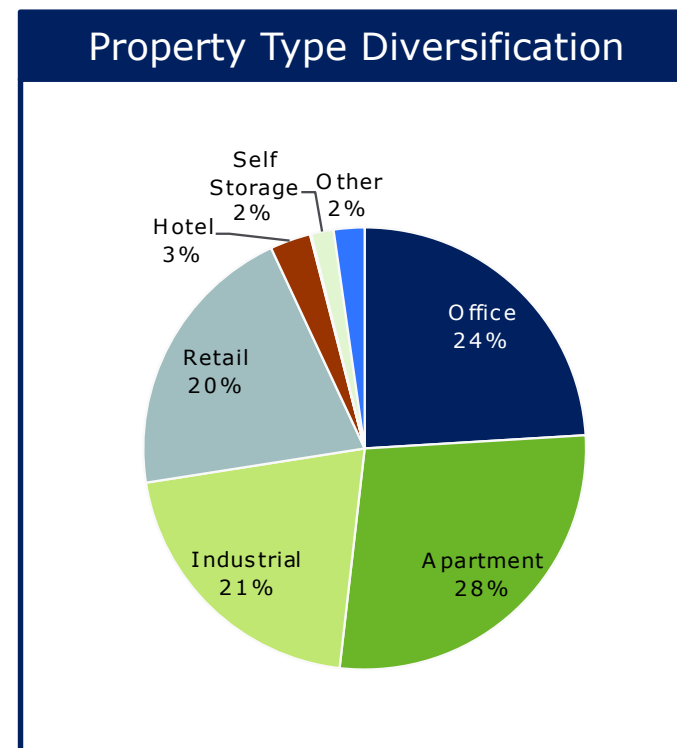
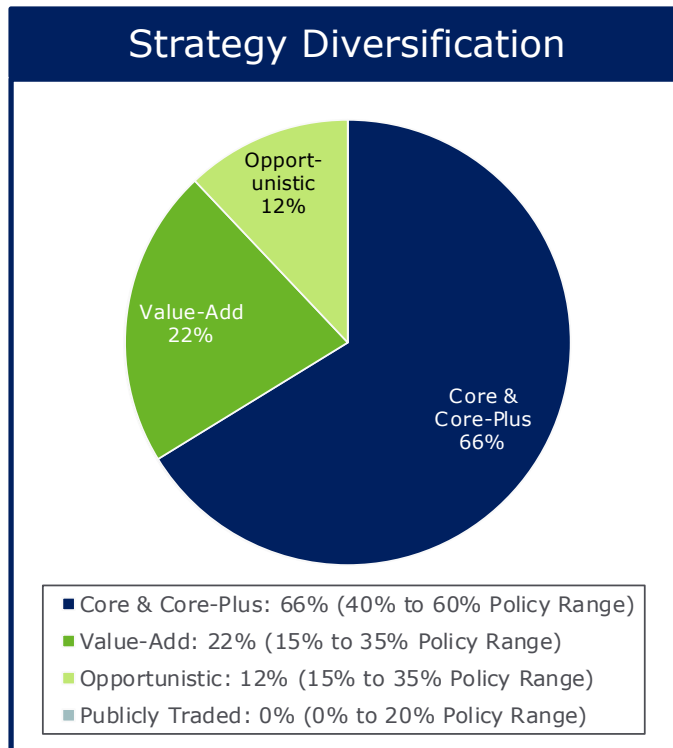
# **PORTFOLIO REVIEW & 2020 INVESTMENT PLAN**

NEPC, LLC

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# CURRENT REAL ESTATE PORTFOLIO

- **As of September 30, 2019, the State of CT had approximately \$2.4 billion in real estate net asset value, or 7.4% of total plan assets**
  - In addition, there were \$752 million of uncalled capital commitments, resulting in total potential exposure of \$3.1 billion (or 9.8% of total plan assets)
- **The charts below depict the portfolio allocations by strategy and property type as of September 30, 2019**



Total plan-level data as of March 31, 2020; Real Estate Fund-level data as of September 30, 2019, the most recent available. Policy target ranges are as dictated by the Investment Policy Statement.



# CURRENT REAL ESTATE PORTFOLIO

Existing Real Estate Investments										
Core & Core-Plus (Open-End)										
Fund Name	Vintage Year	Committed	Paid In Capital	Capital to be Funded	Cumulative Distributed	Current Valuation (NAV)	Total Value	% of Dividends Reinvested	Current Redemption Requests	Redemption Request Year
AEW Core Real Estate Separate Account	2005	\$250.0	\$243.5	\$0.0	\$245.2	\$0.0	\$245.2	50%	\$0.0	NA
Prime Property Fund	2007	\$225.0	\$225.0	\$0.0	\$133.3	\$284.7	\$418.0	50%	\$0.0	NA
Barings Core Property Fund	2008	\$250.0	\$250.0	\$0.0	\$122.5	\$262.1	\$384.6	50%	\$0.0	NA
Hart Realty Advisors-Core Separate Account	2011	\$180.0	\$414.0	\$37.5	\$327.2	\$198.5	\$525.8	0%	\$0.0	NA
American Core Realty Separate Account	2012	\$150.0	\$223.2	\$0.0	\$121.1	\$173.6	\$294.7	50%	\$0.0	NA
USAA Eagle Real Estate Fund	2013	\$100.0	\$100.0	\$0.0	\$19.3	\$151.1	\$170.4	50%	\$0.0	NA
UBS Trumbull Property Fund	2013	\$75.0	\$75.0	\$0.0	\$13.0	\$85.7	\$98.8	0%	\$92.3	2022
UBS Trumbull Property Income Fund	2013	\$50.0	\$50.0	\$0.0	\$9.5	\$62.4	\$71.9	0%	\$0.0	NA
PRISA	2014	\$185.0	\$185.0	\$0.0	\$29.1	\$215.2	\$244.4	50%	\$0.0	NA
JP Morgan Strategic Property Fund	2015	\$90.0	\$90.0	\$0.0	\$15.1	\$105.3	\$120.4	0%	\$0.0	NA
USAA Eagle Real Estate Fund	2018	\$50.0	\$40.4	\$9.6	\$0.0	\$41.8	\$41.8	50%	\$0.0	NA
Oak Street Net Lease Property Fund	2019	\$100.0	\$0.0	\$100.0	\$0.0	\$0.0	\$0.0	50%	\$0.0	NA
Ares Enhanced Income Fund	2019	\$100.0	\$0.0	\$100.0	\$0.0	\$0.0	\$0.0	50%	\$0.0	NA
<b>Total Core &amp; Core-Plus (Open-End)</b>		<b>\$1,805.0</b>	<b>\$1,896.1</b>	<b>\$247.1</b>	<b>\$1,035.3</b>	<b>\$1,580.5</b>	<b>\$2,615.8</b>	<b>NA</b>	<b>\$92.3</b>	<b>NA</b>
Core & Core-Plus (Closed-End)										
Fund Name	Vintage Year	Committed	Paid In Capital	Capital to be Funded	Cumulative Distributed	Current Valuation (NAV)	Total Value	Net benefit	DPI Ratio	TVPI Ratio
Capri Select Income II	2005	\$30.0	\$30.5	\$0.0	\$15.7	\$0.2	\$15.9	(\$14.6)	0.52x	0.52x
Artemis Income and Growth Fund	2019	\$100.0	\$0.0	\$100.0	\$0.0	\$0.0	\$0.0	\$0.0	NA	NA
<b>Total Core &amp; Core-Plus (Closed-End)</b>		<b>\$130.0</b>	<b>\$30.5</b>	<b>\$100.0</b>	<b>\$15.7</b>	<b>\$0.2</b>	<b>\$15.9</b>	<b>(\$14.6)</b>	<b>0.52x</b>	<b>0.52x</b>
Value-Add (Open-End)										
Fund Name	Vintage Year	Committed	Paid In Capital	Capital to be Funded	Cumulative Distributed	Current Valuation (NAV)	Total Value	% of Dividends Reinvested	Current Redemption Requests	Redemption Request Year
Lion Industrial Trust	2014	\$102.3	\$102.3	\$0.0	\$17.7	\$151.7	\$169.3	0%	\$0.0	NA
<b>Total Value-Add (Open-End)</b>		<b>\$102.3</b>	<b>\$102.3</b>	<b>\$0.0</b>	<b>\$17.7</b>	<b>\$151.7</b>	<b>\$169.3</b>	<b>NA</b>	<b>\$0.0</b>	<b>NA</b>

Real Estate Fund-level data as of September 30, 2019. All dollars in millions.  
 Note: The JP Morgan Strategic Property Fund has subsequently been liquidated.



# CURRENT REAL ESTATE PORTFOLIO

## Existing Real Estate Investments (Continued)

### Value-Add (Closed-End)

Fund Name	Vintage Year	Committed	Paid In Capital	Capital to be Funded	Cumulative Distributed	Current Valuation (NAV)	Total Value	Net benefit	DPI Ratio	TVPI Ratio
New Boston Real Estate Individual and Inst	1998	\$15.0	\$15.0	\$0.0	\$17.3	\$0.0	\$17.3	\$2.3	1.16x	1.16x
Rockwood Capital Real Estate Partners Func	2004	\$40.0	\$40.8	\$0.0	\$57.0	\$0.0	\$57.0	\$12.3	1.40x	1.40x
Rockwood Capital VI	2005	\$20.0	\$20.5	\$0.0	\$22.0	\$0.1	\$22.1	(\$1.1)	1.08x	1.08x
Colony Realty Partners II	2006	\$50.0	\$51.0	\$0.0	\$13.2	\$0.0	\$13.2	(\$37.8)	0.26x	0.26x
Urban Strategy America Fund	2006	\$50.0	\$50.0	\$0.0	\$42.6	\$0.8	\$43.3	(\$6.7)	0.85x	0.87x
Rockwood Capital VII	2006	\$50.0	\$50.0	\$0.0	\$27.5	\$6.9	\$34.3	(\$23.5)	0.55x	0.69x
Covenant Apartment Fund V	2007	\$25.0	\$25.0	\$0.0	\$30.3	\$0.0	\$30.3	\$5.1	1.21x	1.21x
Covenant Apartment Fund VI	2008	\$25.0	\$25.2	\$0.0	\$39.5	\$0.0	\$39.5	\$14.4	1.57x	1.57x
Blackstone Real Estate Special Situations Fi	2011	\$74.1	\$72.1	\$2.0	\$84.8	\$1.4	\$86.3	\$14.2	1.18x	1.20x
UBS Trumbull Property Growth & Income Fur	2013	\$50.0	\$50.0	\$0.0	\$7.8	\$77.4	\$85.3	\$35.3	0.16x	1.71x
Cypress Acquisition Partners Retail Fund	2014	\$50.0	\$56.4	\$2.1	\$14.1	\$43.2	\$57.3	\$0.9	0.25x	1.02x
Gerding Edlen Green Cities II	2014	\$30.0	\$29.5	\$2.0	\$29.3	\$12.7	\$42.0	\$11.5	0.99x	1.42x
Covenant Apartment Fund VIII	2015	\$30.0	\$30.0	\$0.0	\$22.2	\$22.9	\$45.1	\$15.3	0.74x	1.50x
Crow Holdings Realty Partners VII	2016	\$75.0	\$67.3	\$7.7	\$43.8	\$50.3	\$94.0	\$21.8	0.65x	1.40x
Gerding Edlen Green Cities III	2017	\$50.0	\$48.6	\$2.3	\$6.2	\$53.3	\$59.5	\$9.5	0.13x	1.23x
Crow Holdings Realty Partners VIII	2018	\$75.0	\$42.7	\$32.3	\$0.9	\$45.2	\$46.1	\$3.4	0.02x	1.08x
Covenant Apartment Fund IX	2018	\$50.0	\$20.0	\$30.0	\$0.0	\$20.2	\$20.2	(\$0.5)	0.00x	1.01x
Gerding Edlen Green Cities IV	2018	\$75.0	\$2.7	\$72.3	\$0.0	\$1.6	\$1.6	(\$0.9)	0.00x	0.59x
Basis Investment Group (BIG) Real Estate F	2018	\$65.0	\$43.3	\$34.1	\$15.5	\$30.8	\$46.3	\$2.5	0.36x	1.07x
<b>Total Value-Add (Closed-End)</b>		<b>\$899.1</b>	<b>\$739.9</b>	<b>\$184.8</b>	<b>\$474.0</b>	<b>\$366.6</b>	<b>\$840.6</b>	<b>\$77.9</b>	<b>0.64x</b>	<b>1.14x</b>

### Opportunistic (Closed-End)

Fund Name	Vintage Year	Committed	Paid In Capital	Capital to be Funded	Cumulative Distributed	Current Valuation (NAV)	Total Value	Net benefit	DPI Ratio	TVPI Ratio
Westport Senior Living Investment Fund	1998	\$100.0	\$140.8	\$0.0	\$84.0	\$0.0	\$84.0	(\$56.8)	0.60x	0.60x
AEW Partners III	1998	\$100.0	\$101.7	\$0.0	\$150.7	\$0.0	\$150.7	\$49.0	1.48x	1.48x
Apollo Real Estate Investment Fund III	1998	\$75.0	\$78.8	\$0.0	\$116.2	\$0.1	\$116.2	\$37.4	1.47x	1.47x
Canyon Johnson Urban Fund II	2005	\$50.0	\$44.9	\$5.1	\$19.9	\$0.2	\$20.0	(\$24.9)	0.44x	0.45x
Starwood Global Opportunity Fund VII	2006	\$50.0	\$50.0	\$0.0	\$39.0	\$1.5	\$40.5	(\$9.5)	0.78x	0.81x
MacFarlane Urban Real Estate Fund II	2007	\$100.0	\$102.2	\$0.0	\$27.7	\$0.0	\$27.7	(\$74.5)	0.27x	0.27x
Blackstone Real Estate Partners VI	2007	\$100.0	\$99.6	\$4.9	\$215.0	\$8.3	\$223.3	\$111.6	2.16x	2.24x
IL&FS India Realty Fund II	2008	\$50.0	\$50.0	\$0.0	\$24.2	\$5.8	\$29.9	(\$20.1)	0.48x	0.60x
Blackstone Real Estate Partners Europe III	2009	\$50.0	\$45.9	\$6.6	\$68.9	\$8.1	\$77.0	\$24.9	1.50x	1.68x
WLR IV PPIP Co-Invest	2009	\$100.0	\$127.4	\$0.0	\$161.5	\$5.1	\$166.6	\$39.2	1.27x	1.31x
Starwood Global Opportunity Fund VIII	2009	\$50.0	\$53.0	\$4.6	\$76.1	\$6.8	\$82.9	\$29.9	1.44x	1.56x
Canyon-Johnson Urban Fund III	2010	\$50.0	\$50.6	\$0.0	\$66.7	\$0.0	\$66.7	\$16.1	1.32x	1.32x
Lone Star Real Estate Fund II	2011	\$75.0	\$75.1	\$8.5	\$108.8	\$3.0	\$111.8	\$36.7	1.45x	1.49x
Starwood Distressed Opportunity Fund IX	2013	\$50.0	\$46.5	\$3.5	\$59.2	\$17.2	\$76.4	\$29.9	1.27x	1.64x
Blackstone Real Estate Partners VIII	2015	\$100.0	\$97.4	\$23.0	\$33.0	\$99.3	\$132.3	\$29.7	0.34x	1.36x
Landmark Real Estate Fund VII	2015	\$40.0	\$36.1	\$3.9	\$24.9	\$19.1	\$44.0	\$7.9	0.69x	1.22x
Starwood Global Opportunity Fund X	2015	\$100.0	\$90.0	\$50.5	\$73.2	\$49.9	\$123.1	\$33.1	0.81x	1.37x
Blackstone Real Estate Partners Europe V	2017	\$50.0	\$32.2	\$18.3	\$1.6	\$38.6	\$40.3	\$6.1	0.05x	1.25x
Landmark Real Estate Fund VIII	2017	\$65.0	\$21.2	\$47.5	\$7.3	\$17.5	\$24.9	\$3.8	0.35x	1.17x
Starwood Opportunity Fund XI	2017	\$50.0	\$7.5	\$43.5	\$2.0	\$7.5	\$9.5	\$2.0	0.27x	1.27x
<b>Total Opportunistic (Closed-End)</b>		<b>\$1,405.0</b>	<b>\$1,350.9</b>	<b>\$219.9</b>	<b>\$1,359.9</b>	<b>\$287.7</b>	<b>\$1,647.6</b>	<b>\$271.4</b>	<b>1.01x</b>	<b>1.22x</b>



Real Estate Fund-level data as of September 30, 2019. All dollars in millions.

# 2020 INVESTMENT PLAN

- **The State of CT's current exposure to real estate is as follows:**
  - \$2,386 million net asset value (7.4% of total plan assets)
  - \$752 million in uncalled capital commitments (2.4% of total plan assets)
  - Potential total real estate exposure of \$3,138 million (9.8% of total plan assets)
  - The State of CT has a target real estate allocation of 10%
- **NEPC recommends the following investment pacing over the next few years to achieve the target allocations:**
  - 2020: Commit \$300 million to core-plus real estate funds and \$650 million to non-core real estate funds
    - Evaluate real estate secondaries managers for \$200 million of the non-core real estate allocation
      - *Secondaries strategies allow for faster deployment of capital while maintaining a high level of diversification (including vintage year diversification)*
    - Includes \$150 million commitment already made to Carlyle Property Investors and \$150 million commitment already made to Rockpoint Real Estate Fund VI in 2020
  - 2021: Commit \$400 million to non-core real estate funds and \$100 million to core or core-plus real estate
  - 2022: Commit \$400 million to non-core real estate funds
- **This Investment Plan was developed with the following goals in mind:**
  - Build towards the target 10% allocation to real estate
  - Reduce the relative over-weight to core real estate
  - Maintain regular annual commitments to value-add and opportunistic strategies

Total plan-level data as of March 31, 2020; Real Estate Fund-level data as of September 30, 2019, the most recent available.

Notes: "Core real estate" includes core and core-plus real estate strategies; "non-core real estate" includes value-add and opportunistic real estate strategies; actual allocations per year may depend on market conditions, manager availability, and portfolio construction considerations.



# GENERAL PLAN ASSUMPTIONS

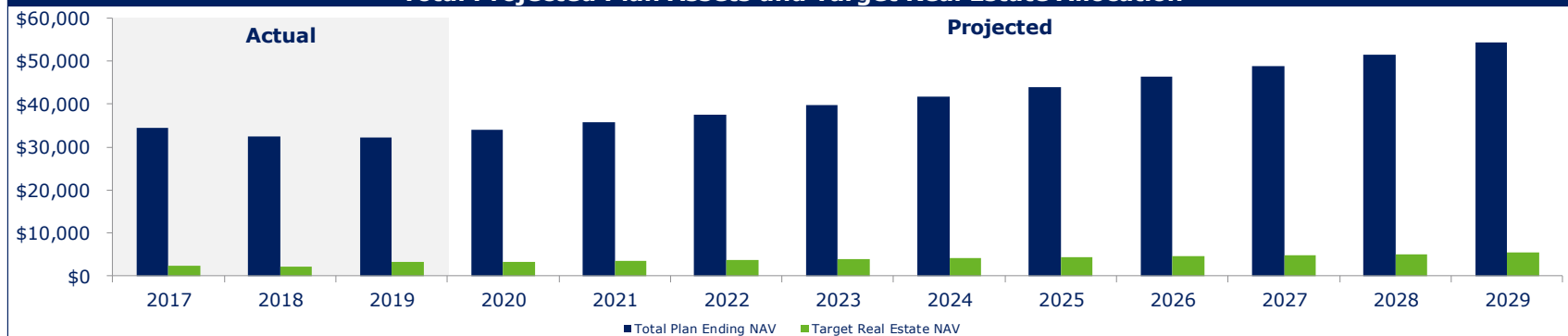
## General Plan Assumptions

Total Plan Assets	\$32,180	Plan Return Assumptions	2020	2021	2022
Total Real Estate NAV	\$2,386	Target Investment Return	6.9%	6.9%	6.9%
Total Real Estate Capital to be Funded	\$752	Contributions	0.0%	0.0%	0.0%
Total Real Estate Exposure	\$3,138	Payouts	(1.5%)	(1.5%)	(1.5%)
Total Real Estate NAV / Total Plan Assets	7.4%	Expenses	0.0%	0.0%	0.0%
Total Real Estate Exposure / Total Plan Assets	9.8%	Reserve for Expenses	0.0%	0.0%	0.0%
Target Real Estate Allocation % (Current Target)	10.0%	Net Growth Rate	5.4%	5.4%	5.4%
		Plan-Level data as of			03/31/20
		Fund-Level data as of			09/30/19

## Total Projected Plan Assets

	Actual			Projected									
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Total Plan Net Growth Rate	13.8%	(5.3%)	(1.2%)	5.4%	5.4%	5.4%	5.4%	5.4%	5.4%	5.4%	5.4%	5.4%	5.4%
Total Plan Beginning NAV	\$30,241	\$34,411	\$32,574	\$32,180	\$33,908	\$35,729	\$37,648	\$39,670	\$41,800	\$44,045	\$46,410	\$48,902	\$51,528
Yearly Net Growth	\$4,170	(\$1,837)	(\$394)	\$1,728	\$1,821	\$1,919	\$2,022	\$2,130	\$2,245	\$2,365	\$2,492	\$2,626	\$2,767
Total Plan Ending NAV	\$34,411	\$32,574	\$32,180	\$33,908	\$35,729	\$37,648	\$39,670	\$41,800	\$44,045	\$46,410	\$48,902	\$51,528	\$54,295
Target Real Estate Allocation	7.0%	7.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Target Real Estate NAV	\$2,409	\$2,280	\$3,218	\$3,391	\$3,573	\$3,765	\$3,967	\$4,180	\$4,404	\$4,641	\$4,890	\$5,153	\$5,430

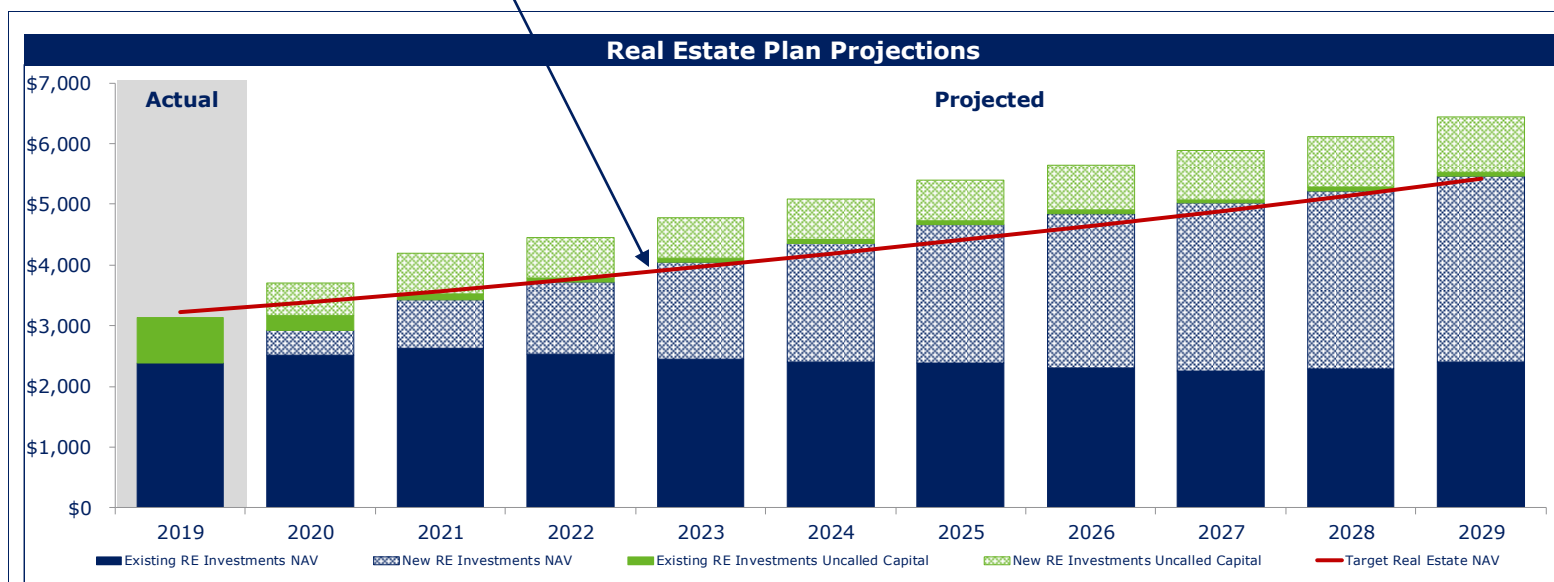
## Total Projected Plan Assets and Target Real Estate Allocation



All dollars in millions. Total plan-level data as of March 31, 2020; 2017-2018 plan-level NAVs as of year-end. Real Estate Fund-level data as of September 30, 2019, the most recent available.

# REAL ESTATE PLAN PROJECTIONS

- **Red line** is the 10% target private real estate allocation based on projected plan total NAV.
- Goal is to keep private real estate NAV (**blue bars**) at the red line.

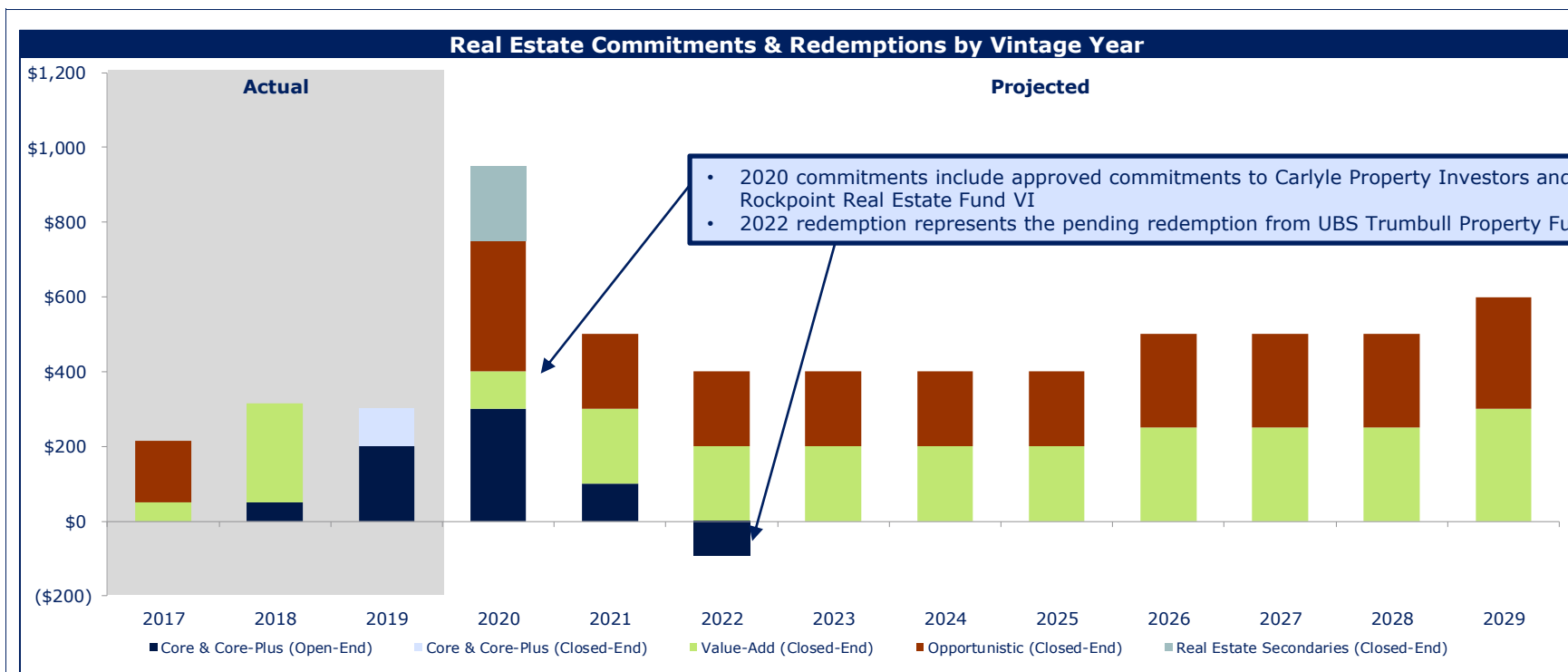


		Projected										
Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	
Real Estate NAV	\$2,386	\$2,930	\$3,425	\$3,721	\$4,048	\$4,358	\$4,668	\$4,840	\$5,016	\$5,224	\$5,465	
Uncalled Capital Commitments	\$752	\$770	\$768	\$739	\$732	\$724	\$722	\$808	\$861	\$882	\$973	
Real Estate NAV + Uncalled Capital Commitments	\$3,138	\$3,700	\$4,193	\$4,461	\$4,780	\$5,082	\$5,390	\$5,648	\$5,878	\$6,106	\$6,438	
Target Real Estate NAV	\$3,218	\$3,391	\$3,573	\$3,765	\$3,967	\$4,180	\$4,404	\$4,641	\$4,890	\$5,153	\$5,430	
Weighted Over-Commitment Pace	1.2x	1.2x	1.2x	1.2x	1.2x	1.2x	1.2x	1.2x	1.2x	1.2x	1.2x	
Target Real Estate Over Allocation	\$3,862	\$4,069	\$4,288	\$4,518	\$4,760	\$5,016	\$5,285	\$5,569	\$5,868	\$6,183	\$6,515	
Percent of Total Plan Assets												
Real Estate NAV (%)	7.4%	8.6%	9.6%	9.9%	10.2%	10.4%	10.6%	10.4%	10.3%	10.1%	10.1%	
Real Estate Uncalled Capital Commitments (%)	2.3%	2.3%	2.2%	2.0%	1.8%	1.7%	1.6%	1.7%	1.8%	1.7%	1.8%	
NAV + Uncalled Capital Commitments (%)	9.8%	10.9%	11.7%	11.8%	12.0%	12.2%	12.2%	12.2%	12.0%	11.9%	11.9%	
Target Real Estate Allocation (%)	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	
Target Real Estate Over Allocation (%)	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	



Total plan-level data as of March 31, 2020; Real Estate Fund-level data as of September 30, 2019, the most recent available. All dollars in millions.

# REAL ESTATE COMMITMENTS & REDEMPTIONS



## Real Estate Commitments & Redemptions by Vintage Year

Commitments	Actual			More Certain			Less Certain						
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Core & Core-Plus (Open-End)	\$0	\$50	\$200	\$300	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Core & Core-Plus (Closed-End)	0	0	100	0	0	0	0	0	0	0	0	0	0
Value-Add (Closed-End)	50	265	0	100	200	200	200	200	200	250	250	250	300
Opportunistic (Closed-End)	165	0	0	350	200	200	200	200	200	250	250	250	300
Real Estate Secondaries (Closed-End)	0	0	0	200	0	0	0	0	0	0	0	0	0
<b>Total Commitments</b>	<b>\$215</b>	<b>\$315</b>	<b>\$300</b>	<b>\$950</b>	<b>\$500</b>	<b>\$400</b>	<b>\$400</b>	<b>\$400</b>	<b>\$400</b>	<b>\$500</b>	<b>\$500</b>	<b>\$500</b>	<b>\$600</b>

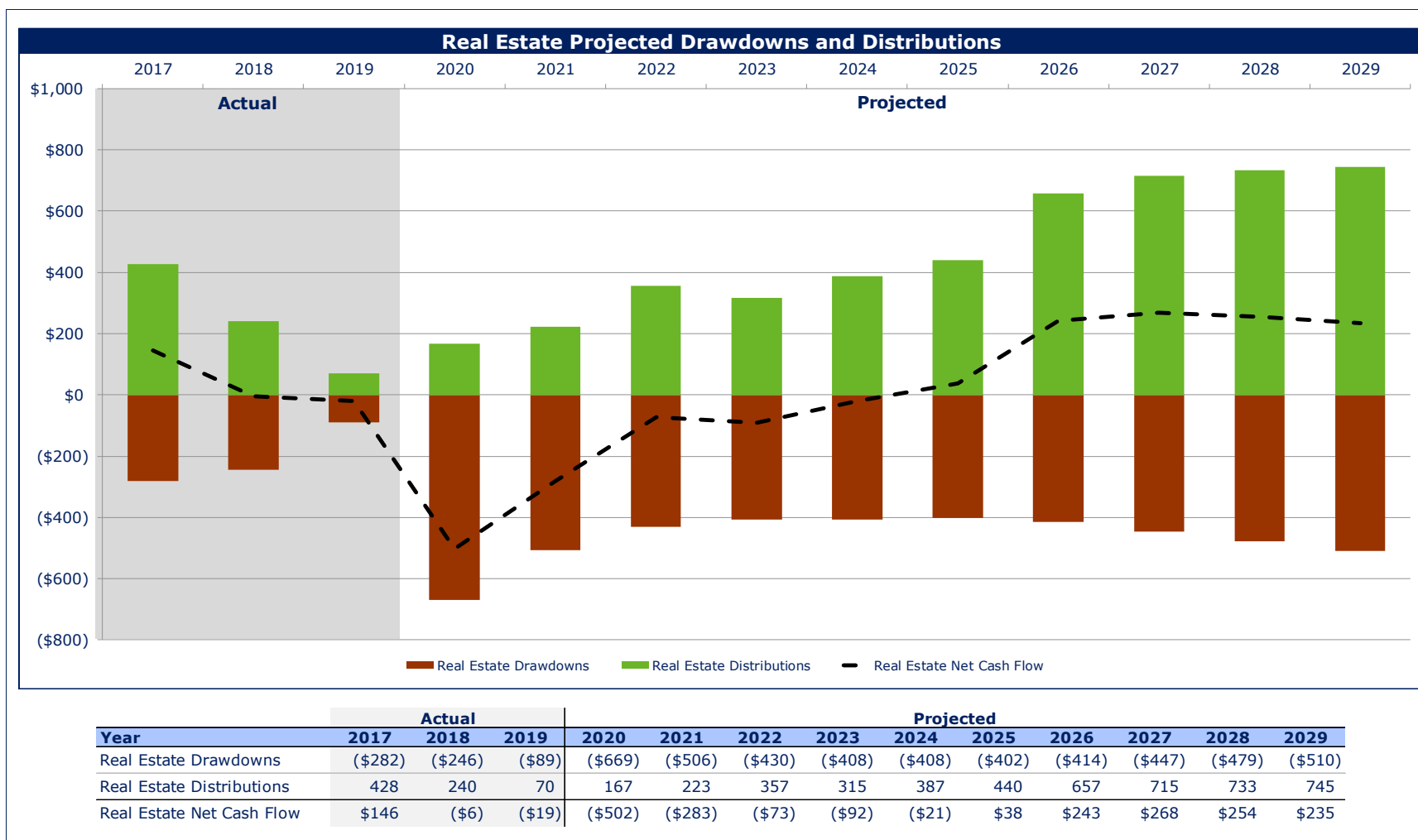
  

Redemptions	Actual			More Certain			Less Certain						
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Core & Core-Plus (Open-End)	NA	NA	NA	\$0	\$0	(\$92)	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Redemptions</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>\$0</b>	<b>\$0</b>	<b>(\$92)</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>



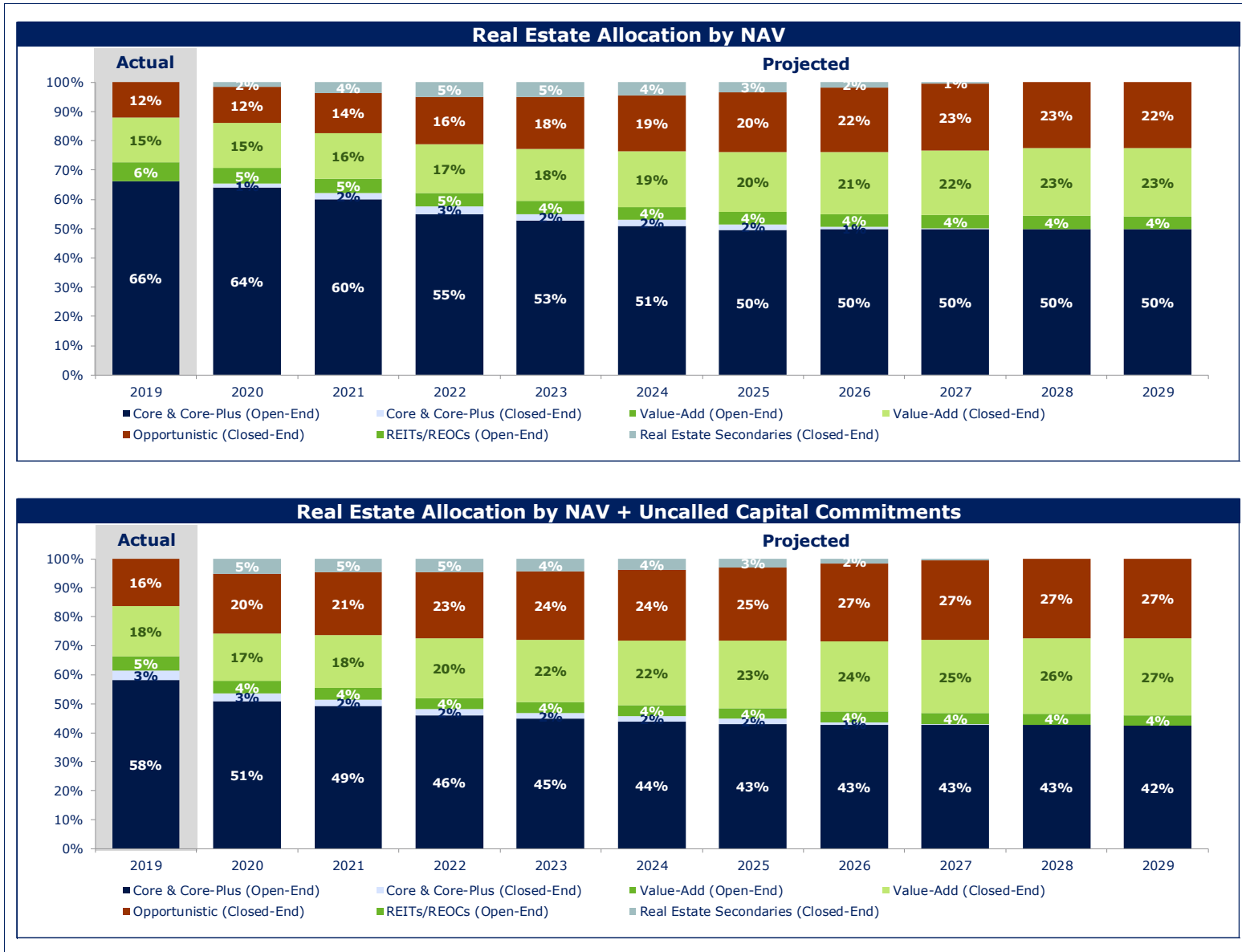
All dollars in millions.

# REAL ESTATE DRAWDOWNS AND DISTRIBUTIONS



Real Estate Fund-level data as of September 30, 2019, the most recent available. All dollars in millions.

# REAL ESTATE SUB-SECTOR ALLOCATIONS



Real Estate Fund-level data as of September 30, 2019, the most recent available.



# **CURRENT MARKET ENVIRONMENT**

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# REAL ESTATE MARKET UPDATE MAY 2020

## COVID-19 Impact on Real Estate

- **Severity of impact on real estate portfolios will depend on sector exposures**
  - Hotels and non-grocery retail assets have been the hardest hit thus far, with senior housing, student housing, and any non-stabilized assets also impacted
- **Real estate transaction volumes have cratered; debt financing remains elusive except for high quality, stabilized assets**
- **Distressed investment opportunities may pick up in non-core strategies**
  - More attractive entry point to deploy capital
  - Given lack of transactions, the exact opportunity set (both in terms of strategy and return potential) remain to be seen

## Real Estate Implementation Views

Strategy		Outlook	Commentary
Core	Private	Neutral	Q1 NAV's not fully reflecting new reality; some funds have put redemption gates in place
	Public REITs	Neutral	Consider rebalancing existing exposure; expect continued volatility
Non-Core	Value-Add	Positive	New construction or value-add projects likely delayed; opportunities will likely be significant over the next 12-18 months; select investments outside the US provide additional diversification
	Opportunistic	Positive	
Real Estate Debt		Positive	Near-term opportunities to buy existing real estate debt and for new originations as some lenders face liquidity challenges; spreads have widened



# IMPACT ON VALUATIONS

- **The impact on real estate valuations has been muted thus far**
  - Private market valuations tend to be smoothed, reducing volatility
  - Important to keep in mind that Q1 only had a partial month of impact – January and February were not impacted
- **Through Q1, investment managers have made valuation adjustments based on what they have observed at individual assets, such as:**
  - Extending timelines for lease-up
  - Decreasing rental growth assumptions
  - Increasing budget for late or missed rent
- **Adjustments to market-wide valuation assumptions have not yet been incorporated**
  - Capitalization rates and discount rates have largely been unchanged
  - These inputs are generally derived from comparable transactions, and very few assets have been sold
- **While income is likely to fall, lower interest rates may partially offset**
  - Cap rates and interest rates tend to be correlated; lower cap rates increase asset pricing

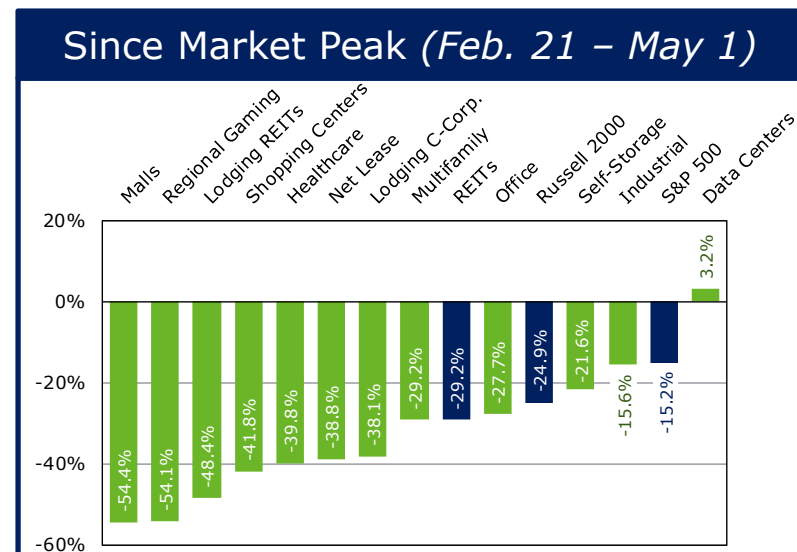
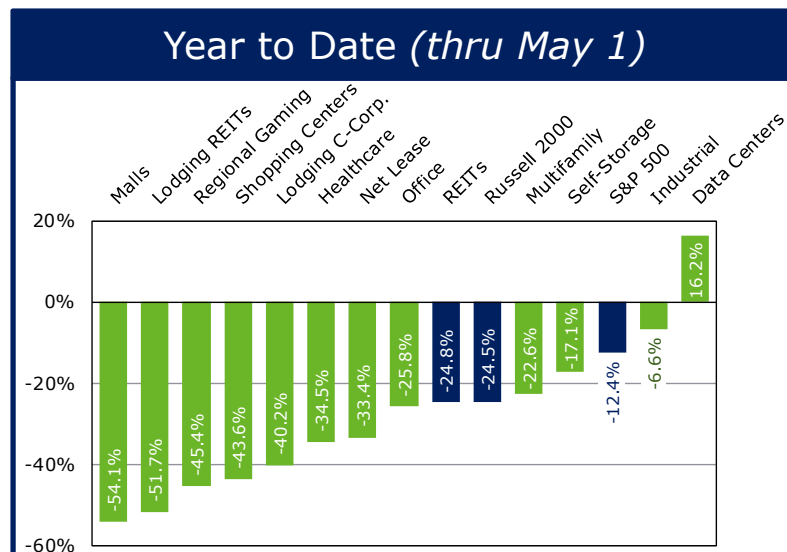
Q1 2020 Unlevered Private Core Real Estate Appreciation	
Apartment	-0.10%
Office	0.19%
Industrial	1.46%
Retail	-3.22%
Hotel	-4.75%
All Property Index	-0.39%



Source: NCREIF. Data as of March 31, 2020.

# PUBLIC REAL ESTATE RETURNS

- **The charts below show REIT returns over the course of 2020**
  - REITs (publicly traded real estate) tend to be volatile and correlated with public equities in the short-term
  - The magnitude of losses (and the volatility) are therefore not expected to result in comparable losses in private markets
- **There are clear winners and losers among property types, however:**
  - Malls, lodging, and gaming have been performing the worst
  - Healthcare REITs have performed poorly, driven largely by negative sentiment on senior housing, while medical office should hold up better
  - Secular winners are likely to include data centers, self-storage, and industrial assets
  - Apartments, single family housing, and manufactured housing should hold up reasonably well, though some tenants may be unable to pay rent in the near-term



Source: Goldman Sachs, Bloomberg. Data as of May 1, 2020.

# PROPERTY TYPE IMPACTS & OUTLOOK

Property Type	Impact	Comments
Office	Low	<ul style="list-style-type: none"> <li>Leasing activity slowed, renewals increased</li> <li>Office tenants largely still paying rent; layoffs or bankruptcies likely to have longer-term impacts</li> <li>Trend towards more remote working or flexible schedules likely to accelerate, may slow demand growth over long-term</li> </ul>
Multifamily	Low	<ul style="list-style-type: none"> <li>"Virtual leasing" taking place; more tenants opting to renew leases vs. moving</li> <li>Tenant make-up is a factor in rent collections; more affluent tenants are more likely to still have income while workforce housing tenants may have more trouble paying rent</li> <li>Many jurisdictions have forbidden evictions due to missed rent</li> </ul>
Industrial	Low	<ul style="list-style-type: none"> <li>Assets linked to e-commerce or essential goods likely to see demand growth</li> <li>Assets tied to traditional/discretionary retail will be more challenged</li> <li>Over long-term, demand for industrial likely to remain strong as e-commerce growth continues and some industries may move more manufacturing onshore</li> </ul>
Retail	Severe	<ul style="list-style-type: none"> <li>Grocery, pharmacy, and quick-service restaurants holding up well, all other retail are suffering greatly (and in many cases are closed entirely)</li> <li>Malls and other large-format retail centers were already facing challenges, and the decline of traditional retailers is likely to accelerate</li> <li>Recovery for assets with retailers facing heavy e-commerce competition may be very challenging</li> </ul>
Hotel	Severe	<ul style="list-style-type: none"> <li>Hotel occupancy and revenue down 50-90% depending on type and location</li> <li>Many hotels have closed in response; re-opening should be fairly quick process when appropriate, but return to pre-pandemic revenue and profitability likely to take years</li> </ul>
Senior Housing	Moderate	<ul style="list-style-type: none"> <li>Senior housing sector under close scrutiny given dense populations of high-risk individuals</li> <li>Restricting non-essential visitors, limiting tenant interactions, and strict cleaning measures have been focus points</li> <li>Leasing vacant space is a challenge in the near-term</li> <li>Aging population should continue to fuel demand over long-term, though consumer worries over safety may be a risk</li> </ul>

# LOOKING FORWARD

- **While some sectors will hold up better through (and after) the worst of the pandemic, the overall recovery in real estate will depend on the trajectory of recovery for the broader economy**
- **In addition to broader health and economic questions, several “unknowns” remain with real estate:**
  - What will rent collections look like for May, June, and beyond?
  - How much capital will flow into or out of real estate?
  - How will preferences change among users of real estate?
    - Will more office workers work from home?
    - Will high-density urban living become less desirable?
    - Will companies increase inventory volumes on-hand in fear of supply chain disruption?
- **Attractive investment opportunities are expected to emerge**
  - Given muted transaction volumes, opportunities have been limited to date
  - Near-term opportunities may include buying existing debt or public securities
  - Banks and other lenders have shown a willingness (or in some cases have been mandated) to grant loan forbearances and to work with borrowers
  - Depending on the severity and length of economic disruption, the option of “waiting it out” may not be sustainable, resulting in more distressed transactions
- **Vintage years during and following recessions tend to produce strong private market fund returns**

# **APPENDIX: REAL ESTATE OVERVIEW**

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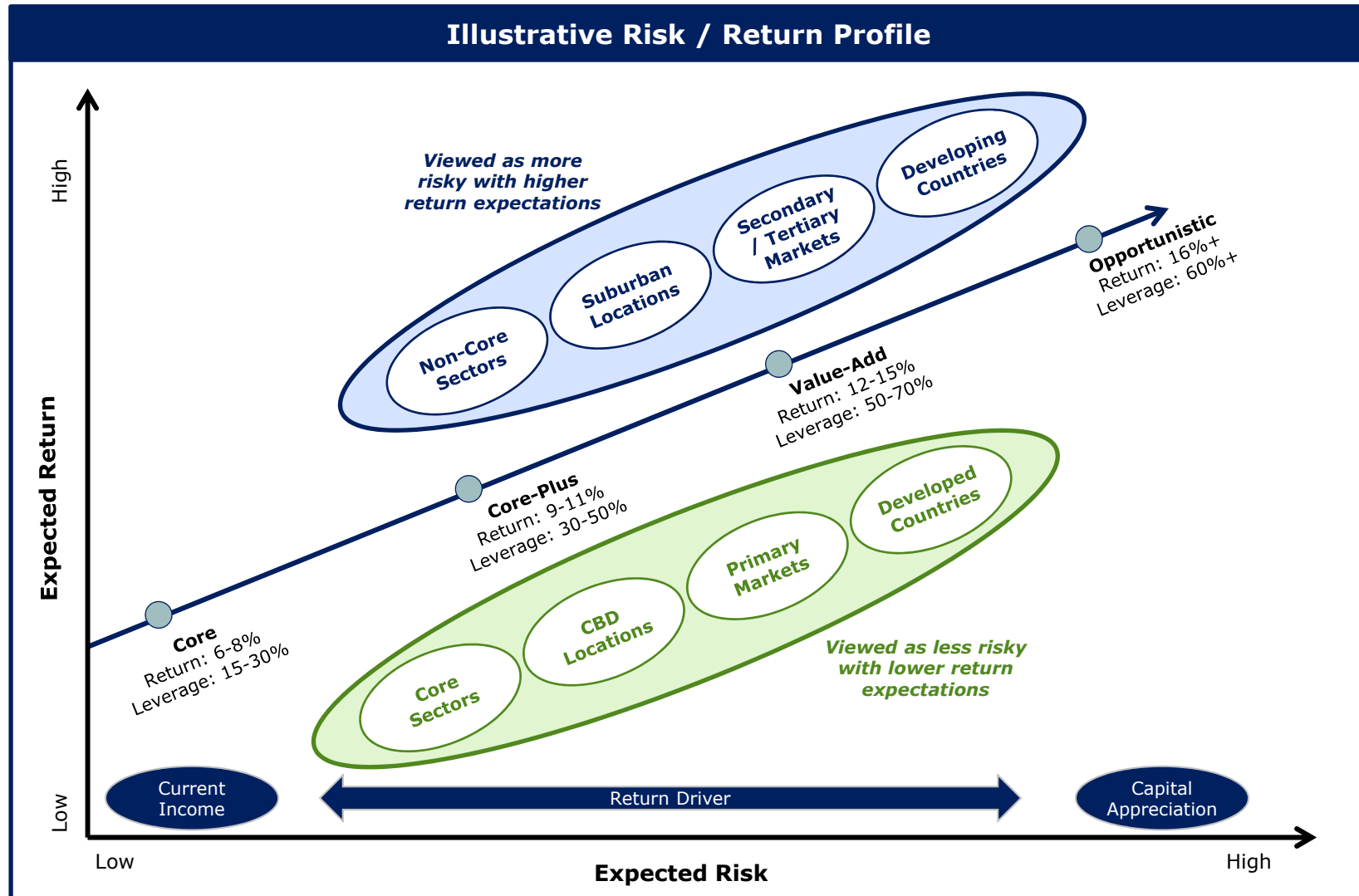
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# SPECTRUM OF REAL ESTATE STRATEGIES

	Real Estate Investment Style / Overview	Investment Strategy	Portfolio Role	Considerations
Core Strategies	<b>Core</b> <ul style="list-style-type: none"> <li>Return driver: income</li> <li>Primary vehicle: open-end funds</li> <li>Historical avg. returns: 7-8%</li> <li>Leverage: 15-30%</li> <li>Hold period: long-term</li> </ul>	Stabilized income producing assets	<ul style="list-style-type: none"> <li>Current income</li> <li>Broad exposure to commercial real estate (asset class beta)</li> <li>Inflation protection</li> </ul>	<ul style="list-style-type: none"> <li>Vehicles are semi-liquid (entrance/exit queues)</li> <li>Limited alpha producing opportunities</li> </ul>
	<b>REITs</b> <ul style="list-style-type: none"> <li>Return driver: income</li> <li>Primary vehicle: REIT funds</li> <li>Historical avg. returns: 7-9%</li> <li>Leverage: 30-50%</li> <li>Hold period: long-term</li> </ul>	Stabilized income producing assets	<ul style="list-style-type: none"> <li>Current income (dividends)</li> <li>Long-term exposure to commercial real estate (beta)</li> <li>Long-term inflation protection</li> </ul>	<ul style="list-style-type: none"> <li>Volatility</li> <li>Equity correlation</li> </ul>
Non-Core Strategies	<b>Value-Add</b> <ul style="list-style-type: none"> <li>Return driver: income/appreciation</li> <li>Primary vehicle: varies</li> <li>Historical avg returns: 8-10%</li> <li>Leverage: 40-70%</li> <li>Hold period: 3-5 years</li> </ul>	Properties requiring lease-up, repositioning, renovation or rehabilitation	<ul style="list-style-type: none"> <li>Provides part current income and capital appreciation</li> <li>Some inflation protection</li> </ul>	<ul style="list-style-type: none"> <li>Vehicles are semi-liquid or illiquid</li> <li>Vintage year is important</li> <li>Higher leverage vs core</li> <li>Poor benchmarks</li> </ul>
	<b>Opportunistic</b> <ul style="list-style-type: none"> <li>Return driver: appreciation</li> <li>Primary vehicle: closed-end funds</li> <li>Historical avg. returns: 10-12%</li> <li>Leverage: 60%+</li> <li>Hold period: varies</li> </ul>	Distressed investments, recapitalizations, development, etc.	<ul style="list-style-type: none"> <li>Real estate alpha through capital appreciation with minimal current income</li> </ul>	<ul style="list-style-type: none"> <li>Vehicles are illiquid</li> <li>Vintage year is important</li> <li>High leverage</li> <li>Poor benchmarks</li> </ul>
	<b>Real Estate Debt</b> <ul style="list-style-type: none"> <li>Return driver: varies</li> <li>Primary vehicle: closed-end funds</li> <li>Historical avg. returns: 8-10%</li> <li>Leverage: varies</li> <li>Hold period: varies</li> </ul>	Varying risk/return profiles (senior loans to higher risk structures)	<ul style="list-style-type: none"> <li>Mixed strategies:                             <ul style="list-style-type: none"> <li>Current income w/downside protection</li> <li>Higher risk opportunistic/mezz. debt strategies</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Limited return upside (asymmetric risk profile)</li> <li>Minimal inflation protection</li> <li>Vintage year is important</li> <li>Poor benchmarks</li> </ul>



# RELATIVE EXPECTED RISK RETURN PROFILE



Notes:

- Debt-related strategies can span the illustrative risk / return spectrum depending on the specific strategy
- Manager-specific risk, operations and leverage can skew expected risk / return profile



# LIQUID & SEMI-LIQUID VEHICLE STRUCTURES

- **Open-end investment structures**

- Assets are valued on a quarterly basis (except REITs, which have daily market prices)
- Open-end funds typically provide quarterly liquidity, subject to commitment or redemption queues

Investment Type	Description
<b>Publicly Traded REIT Funds</b>	Comprised of REITs and REOCs (Real Estate Operating Companies) that file with the SEC and whose shares trade on national stock exchanges such as the NYSE, AMEX or NASDAQ; publicly traded security provides significant liquidity to investors. May be structured as a commingled fund, separate account, or mutual fund.
<b>Separate Accounts</b>	An exclusive investment vehicle designed and managed by a third party fiduciary for an individual institution (generally created to allow the institution to pursue a specific investment strategy or individual property). Investors have significant control over investments.
<b>Direct Investments</b>	Non-intermediated (or direct) investment in an individual real estate asset. Owners have complete control over investment.
<b>Open-End Funds</b>	Typically an insurance company separate accounts, trust, or private REIT that allow ERISA plans to commingle their capital. Most vehicles are large (\$2+ billion of net asset value) and focus on core and/or value added strategies. Lock-up periods of one-two years are common and redemptions are usually permitted with 90 days notice, but are subject to available cash.

# ILLIQUID VEHICLE STRUCTURES

- **Closed-end investment structures**

- Structured like private equity funds where investors make a commitment which is drawn down over time
- Valuations and performance is reported on a quarterly basis
- Liquidity is defined by the life of the fund
- Investors have limited rights as defined by the limited partner agreement (LPA)
- Funds are typically smaller in size (\$100M to \$1B) with ten-year terms on average
- Funds typically focus on higher risk/return strategies or specific sectors where the manager has expertise
- Funds typically include asset management fees and promote structures

Investment Type	Description
<b>Sector Focused Equity Funds</b>	An investment strategy targeting specific market segments, including individual property sectors (i.e. office, multifamily, retail, industrial, self storage, senior housing, land, etc.).
<b>Diversified Equity Funds</b>	Diversified investment strategy that targets multiple sectors. More typical in the value-add or opportunistic space.
<b>Debt / Mezzanine Funds</b>	An investment strategy focusing on income producing and/or structured products (i.e. not pure equity). Investment strategies can range from new origination of debt to the acquisition of existing debt.
<b>Fund-of-Funds</b>	An investment strategy of holding a portfolio of other investment funds.
<b>Secondary Funds</b>	An investment strategy targeting investor LP interests which are generally purchased at a discount from valuation from motivated sellers. Generally, the interests purchased have limited exposure to unfunded capital commitments.

# REAL ESTATE PORTFOLIO CONSTRUCTION

## Core Real Estate Allocation

- **Typically includes open-end core funds and REIT funds**
  - Over the long-term (5+ years) open-end core funds and REIT funds are highly correlated; however, over the short-term REIT funds have a low correlation to core funds and are much more volatile
- **Open-end core funds**
  - Private semi-liquid commingled vehicles with entrance and exit queues
  - We generally recommend investing in two-to-three funds to limit manager concentration risk and decrease volatility
- **REIT Mutual Funds**
  - REIT funds have historically slightly outperformed open-end core funds over the long-term, partially the result of higher leverage
  - REIT mutual funds offer almost daily liquidity but are more volatile and more correlated with equities over the short-term

## Non-Core Real Estate Allocation

- **Includes value-add, opportunistic and debt funds**
- **Market timing risk is a significant factor**
- **Our portfolio construction philosophy is two-fold:**
  - Create a pacing model for consistent commitments at regular intervals
  - Evaluate individual commitments based on market conditions and existing portfolio concentrations
- **Two additional considerations are:**
  - Target number of manager/fund relationships in ten years
  - Concentration/risk tolerance for individual commitments

# **APPENDIX: DISCLAIMERS**

NEPC, LLC

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# DISCLAIMER

- **Past performance is no guarantee of future results.**
- **The opinions presented herein represent the good faith views of NEPC as of the date of this report and are subject to change at any time.**
- **Information used to prepare this report was obtained directly from the investment managers or custodians, and market index data was provided by other external sources. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.**
- **This report may contain confidential or proprietary information and may not be copied or redistributed to any party not legally entitled to receive it.**





**State of Connecticut**  
Office of the Treasurer

SHAWN T. WOODEN  
TREASURER

May 8, 2020

Members of the Investment Advisory Council ("IAC")

Re: **Stellex Capital Partners Fund II L.P.**

Dear Fellow IAC Member:

At the May 13, 2020 meeting of the IAC, I will present for your consideration a private equity opportunity for the Private Investment Fund ("PIF") in the Connecticut Retirement Plans and Trust Funds (the "CRPTF"): Stellex Capital Partners Fund II L.P. ("Stellex II" or the "Fund"). The Fund has a target size of \$1.25 billion and is being raised by Stellex Capital Management ("Stellex"), based in New York, NY.

I am considering an investment of up to \$100 million in Stellex II, a fund that will execute a control-oriented private investment strategy with a focus on special situations and distressed investments in underperforming or undervalued middle-market companies located in the United States and Europe. Stellex's expertise in providing operating and capital support to improve and transform companies facing financial, operational, and/or cyclical stress should prove particularly advantageous for the Fund during a market cycle that is expected to create numerous challenges for many middle-market companies. A commitment to Stellex II would provide the CRPTF with an opportunity to add a new manager to the PIF portfolio consistent with my goal of increasing our exposure to the highest quality, specialized firms in the industry.

Attached for your review is the recommendation from Laurie Martin, Chief Investment Officer, and the due diligence report prepared by StepStone. I look forward to our discussion of these materials at next week's meeting.

Sincerely,

A handwritten signature in blue ink that reads "Shawn T. Wooden".

Shawn T. Wooden  
State Treasurer

OFFICE OF THE STATE TREASURER  
**MEMORANDUM**



**DECISION**

**TO:** Shawn T. Wooden, Treasurer

**FROM:** Laurie Martin, Chief Investment Officer

**CC:** Darrell V. Hill, Deputy Treasurer  
Raynald D. Leveque, Deputy Chief Investment Officer  
Kevin Cullinan, Chief Risk Officer  
Mark E. Evans, Principal Investment Officer  
Casi Kroth, Investment Officer

**DATE:** April 21, 2020

**SUBJECT:** Stellex Capital Partners Fund II L.P. – Final Due Diligence

**Summary**

The purpose of this memorandum is to recommend that the Connecticut Retirement Plans and Trust Funds (“CRPTF”) consider a commitment of up to \$100 million to Stellex Capital Partners Fund II L.P. (“Stellex II”, or the “Fund”). Stellex II will pursue a control-oriented private investment strategy with a particular focus on special situations and distressed investments in underperforming or undervalued middle-market companies located in the United States and Europe.

The Fund’s general partner, Stellex Partners II LP (the “GP”), is targeting a \$1.25 billion Fund size with a \$1.75 billion hard cap that is expected to be oversubscribed. The GP is an affiliate of Stellex Capital Management LP (“Stellex” or the “Firm”), a New York, NY based investment management firm formed in 2014 by Ray Whiteman and Michael Stewart.

**Strategic Allocation within the Private Investment Fund**

The Fund’s distressed and special situations strategy falls under the Corporate Finance allocation of the Private Investment Fund (“PIF”). The Investment Policy Statement (“IPS”) establishes target allocation ranges of 70% to 100% to Corporate Finance investments within the PIF portfolio as measured by a percentage of total exposure, defined as market value plus unfunded commitments. The PIF’s total exposure to Corporate Finance strategies was approximately 84%, as of December 31, 2019.

The Stellex II sub-strategy is categorized further as a distressed/restructuring fund, which represented approximately 9% of the PIF’s estimated total market value as of December 31, 2019. A Fund commitment would be consistent with the PIF’s Strategic Pacing Plan objectives of maintaining a target allocation of 9% of the PIF’s market value managed by high-quality executing distressed/restructuring strategies. An investment in Stellex II would be a new relationship for CRPTF and provide exposure to an experienced investment team with demonstrated expertise investing in complex restructurings and reorganizations across multiple market cycles.



## **Investment Strategy and Market Opportunities**

Stellex specializes in making control-oriented, deep value investments in middle-market businesses and operating assets that are often underperforming, undervalued, or operating under some form of financial, operational, or cyclical stress. The Fund will follow the same special situations strategy successfully executed by the Firm's co-founders, Raymond Whiteman and Michael Stewart (the "Co-Founders"), since founding Stellex in 2014 and previously as co-heads of Carlyle Strategic Partners from 2003 to 2013. The Firm seeks opportunities in both the US and Europe, with expectations that 80% of the Fund's capital will be invested in companies headquartered, or with significant operations, in the US.

Stellex targets deep value investment opportunities that are available due to a variety of factors that can exist regardless of economic and market conditions. While the COVID-19 related credit market disruption and economic downturn may create an unprecedented number of challenged companies fitting the Stellex strategy, the Co-Founders have successfully executed the Firm's strategy through a variety of market conditions. The Firm has consistently found that market- or company-specific challenges persist through expansionary and recessionary markets. Stellex seeks to invest in those opportunities that may develop due to a variety of factors, including undermanagement, overleverage, shareholder dysfunction, out of favor sectors, or non-core business divestments.

Stellex II will target 15 to 20 investments of \$25 million to \$100 million in companies with \$100 million to \$500 million in total enterprise value. Stellex focuses on the middle market because it finds that companies of this size are often not well equipped, whether due to the lack of management capability or capital resources, to deal effectively with internally or externally generated challenges or macro developments. Within the broad middle market opportunity set, Stellex generally focuses on investments in companies or operating assets with the following criteria.

- Situations that allow Stellex to take control or exert significant influence on the target's oversight, management, and operations.
- Operating in the Firm's core industry sectors where the team has significant expertise and experience. These core sectors include manufacturing and basic industry, industrial and business services, defense, aerospace and government services, automotive, consumer products, and distribution and transportation.
- Allow Stellex to acquire companies or assets at discounts to intrinsic value, which provides the Firm with both downside protection and upside return potential.
- Targets that will benefit from the Firm's proven enterprise improvement practices to increase the company's financial strength, competitive positioning, and strategic value to attract buyers of the transformed company.

Given the variety of deep value situations that the Firm identifies, Stellex has developed an expertise in offering flexible capital solutions that are best suited to the particular target's needs and condition while providing Stellex with the opportunity to generate attractive, risk-mitigated returns. Stellex generally seeks to acquire a controlling interest in a company or operating assets through more traditional buyout or carve-out transactions, specifically those involving significant complexity. Stellex may also seek control or significant influence positions through the purchase of a distressed company's debt or bonds with the objective of leading the company through a

reorganization. In addition, Stellex will structure preferred equity or junior debt investments that provide downside protection and upside potential while Stellex retains significant negative controls and influence on the company. To gain access to management and information as part of its due diligence process, Stellex may establish toehold positions in a company's stressed or distressed bank debt or bonds prior to seeking control or significant influence of the company. These toehold positions may be unwound if due diligence proves the control opportunity is less compelling, or control becomes unattainable due to a recovery in the target's business or a successful refinancing.

A central component of the Stellex investment strategy is the Firm's active, hands-on engagement with portfolio companies supported by Stellex's extensive network of senior level, middle-market operating executives that the Co-Founders have worked with or known for decades. Stellex leverages its executive network to identify the target's significant challenges during due diligence as well as to develop and execute a stabilization plan created for each acquired company. These stabilization plans are often focused on near-term tactical improvements such as cash management, financial budgeting and oversight practices, and selling non-core assets. Stellex also works with its executive partners and portfolio company management to develop and execute a medium-term value creation strategy focused on improving customer and revenue profit analysis, supply chain, and capital spending practices.

With operations stabilized, Stellex and its management teams turn toward growth strategies designed to increase the company's operating and strategic value while positioning the company for a successful exit. Organic growth strategies may include expanding into new markets, enhancing distribution channels, or increasing product development capabilities. Stellex often develops corporate develop plans for its companies, particularly in fragmented industries where add-on acquisition opportunities are plentiful and often available at accretive values. Stellex has found that both financial and strategic buyers, which may have shied away from a company at the time of Stellex's original investment due to the challenges and complexities then involved, are interested buyers of the company that has now been successfully stabilized and transformed under Stellex's ownership.

### **Firm and Management Team**

Stellex Capital Partners is led by Co-Founders Raymond Whiteman and Michael Stewart, the Firm's Managing Partners who have worked together for over 17 years. Prior to founding Stellex in 2014, Whiteman and Stewart were the co-heads of Carlyle Strategic Partners ("CSP"). Ray Whiteman joined The Carlyle Group in 1996 and initially focused on buyout investments in the aerospace and defense sectors. Whiteman was a founder and co-head of CSP, which Carlyle formed in 2003 to focus on distress for control and special situations opportunities. Whiteman subsequently recruited Stewart to CSP in 2003 and Stewart named co-head of CSP in 2012. Stewart had prior significant experience as both a control investor in and advisor to distressed companies though his tenure at Sunrise Capital and Houlihan Lokey's restructuring group, respectively. The Managing Partners are joined by Partner Karthik Achar, who leads Stellex's European team in London and was previously the head of Europe for Wayzata Investment Partners, an investment firm focused on stressed and distressed debt and special situations opportunities. Whiteman, Stewart, and Achar comprise the Firm's investment committee with two-thirds approval required for all investment decisions.

In addition to the Co-Founders and Achar, the Stellex investment team currently includes 17 professionals. The Co-Founders have focused on thoughtfully expanding the Firm’s investment team over the past year with the objective of creating three to four deal teams operating under their oversight. Stellex has made several investment team hires in 2020 and will continue to add investment professionals. The Co-Founders also plan on expanding the Firm’s deal sourcing resources with plans to open satellite offices in such industrial hubs as Detroit, Pittsburgh, and Cleveland. In addition to professionals focused on portfolio company investments, Mark Alter leads Stellex’s secondary market trading efforts. The Co-Founders previously worked with Alter at CSP, where he was the head of trading. Many members of the Stellex team have prior experience at the same organizations or through professional interactions at prior firms. Currently, the majority of the Firm’s employees are located in Stellex’s New York office with three investment professionals located in London.

## **Track Record**

As of September 30, 2019, Stellex I had invested \$528 million in ten platform companies as well as approximately \$2 million in various toehold investments. Through the same date, Stellex I had generated a gross internal rate of return (“IRR”) of 54% and a gross total value multiple (“TVM”) of 2.0x. Stellex I had realized one platform investment as of September 30, 2019, which generated a gross IRR of 80% and total value of \$270 million, or 5.7x invested capital. The fund’s toehold investments generated more modest returns as expected the shorter hold period for such investments.

While Stellex has a limited track record since its inception in 2014, PFM investment professionals note that the Co-Founders have a well-proven track record at CSP dating back to 2004. The Co-Founders were responsible for investing approximately \$3 billion of capital at CSP that had generated a net IRR of 17% and a net TVM of 1.5x at the time they departed CSP. Before leaving CSP, the Co-Founders’ track record included four realized control investments that returned an average of 5x invested capital and approximately \$1.9 billion invested in non-control transactions that returned 1.3x capital. Nearly all of the Co-Founders’ CSP investments have now been successfully exited.

On a net basis, Stellex I had generated a net TVM of 1.6x and a net IRR of 37% as outlined in the table below.

*(US\$ in millions, as of September 30, 2019)*

Stellex Capital Partners													
Investment Performance Summary													
Fund	Vintage Year	Fund Size	# Deals <sup>1</sup>	Invested Capital	Realized Value	Unrealized Value	Total Value	Gross / Net			Quartile Rank		
								TVM	IRR	DPI	TVM	IRR	DPI
Stellex I	2015	\$870	11	\$529	\$288	\$756	\$1,044	2.0x / 1.6x	54% / 37%	0.5x / 0.2x	1 <sup>st</sup>	1 <sup>st</sup>	2 <sup>nd</sup>

Source: Stellex, StepStone, Burgiss Private iQ All Private Equity (ex-Venture Capital) Benchmark. Quartile Rank based on net returns.

1. Includes ten platform investments and various realized toehold securities investments.

While the Stellex I portfolio is still maturing, the fund has demonstrated strong early absolute and relative performance. As of September 30, 2019, Stellex I ranked as a first quartile fund as measured by IRR and TVM for vintage year 2015 funds in the Burgiss iQ All Private Equity (ex-Venture Capital) benchmark. Stellex I achieved its second platform company exit in October 2019, which returned more than 5x invested capital. Pro forma of this exit, Stellex I had generated realized value of more than 1x the fund’s total capital invested with eight platform companies remaining. While the fund’s net distributed to paid in (“DPI”) ratio of 0.2x as of September 30,

2019 ranked it in the second Burgiss quartile, the fund's DPI pro forma of the October 2019 exit would move the fund into a first quartile ranking.

Stellex's successful investment in Morbark Holdings Group, LLC ("Morbark") exemplifies the Stellex strategy. Morbark is a designer, manufacturer and marketer of grinding, chipping and debarking equipment serving customers in the industrial, tree care, bio-mass and municipal markets. At the time of Stellex's acquisition of Morbark, the company had been a family-owned business for multiple generations. Stellex, working with one of its executive network members, identified that the company was not operating efficiently and lacked key strategic and tactical initiatives to effectively capture the company's potential. Under Stellex's ownership, a comprehensive business stabilization and improvement plan was developed and executed, which led to expanded revenues, reduced manufacturing and operational costs, and management upgrades. In addition, Stellex supported the new executive team in the execution of two accretive acquisitions, which expanded product offerings, dealer networks, and geographic presence. In addition, Morbark's product development practices and product lines were revamped. In the three and one-half years that Stellex owned Morbark, the company's revenues increased by more than 60% while its operating and EBITDA margins expanded by more than 80% and 200%, respectively. Stellex's operational and strategic transformation of Morbark allowed the Firm to generate a very strong return on its investment through the sale of the company to a strategic buyer in October 2019.

### **Key Strengths**

1. **Experienced Senior Investment Team.** The Stellex Co-Founders have 45 years of combined private equity experience investing and working with companies going through some form of financial, operational, or organizational stress or distress. Whiteman and Stewart have successfully executed the Stellex strategy since they began working together at CSP in 2003, where they were responsible for successfully investing approximately \$3 billion of capital before, during, and after the Global Financial Crisis. The Co-Founders have an extensive network of operating executives, advisors, and intermediaries that Stellex can leverage to source, diligence, and manage investments to the benefit of the Firm. Since founding Stellex in 2013, the Co-Founders have expanded the depth and breadth of the Firm's investment expertise through the recruitment of several mid and senior level investment team members, many of whom the Co-Founders have known through prior professional experience. The Stellex team's specialized expertise with special situations, middle market investments combined with a strong, positive reputation should continue to provide the Firm with significant competitive advantages as it executes the Fund's strategy.
2. **Flexible, Value-Oriented Investment Strategy.** The Stellex strategy is purposefully designed to allow the Firm to capture a variety of opportunities underpinned by the team's strong credit and private equity skillset. While Stellex generally seeks to acquire control of a company through traditional buyout or carve-out transaction, the Firm has the expertise to underwrite and structure debt and non-control equity investments that provide Stellex with downside protection while retaining attractive upside return potential. Central to Stellex's strategy is the Firm's ability to identify opportunities to enter transactions at valuations supported by strong intrinsic value, most often through substantial tangible assets. Per StepStone's research, the Firm acquired its Stellex I investments at purchase price multiples 29% lower than market averages. Importantly, Stellex marries its value-oriented buying strategy with a strong value

creation capability, based on transforming the financial and strategic strength of each Stellex company through investments in operating and management improvements.

### **Major Risks and Mitigants**

- 1. Increased Fund Size.** Stellex II will be significantly larger than the Firm's first fund. Such a substantial increase in fund sizes raises concerns, including team capacity and manager's drifting from their core strategy in an effort to deploy a larger pool of capital. From a capacity perspective, the Co-Founders have been adding investment professionals to the Firm, including the addition of two experienced private equity investors at the Principal level as well as two Vice Presidents that have joined, or will join, in 2020. In addition, the Co-Founders are expected to add another senior level investment professional that the Co-Founders have known professionally for more than a decade. With the increased experience level of its existing team and the recently completed and planned investment team hires, the Co-Founders believe the Firm will double its investment capacity for Stellex II. The Fund will seek to make 15 to 20 platform investments in the same size range as those made in Stellex I, which is expected to have 12 platforms when fully invested. PFM investment professionals have gained comfort that the Co-Founders have invested, and will continue to invest, to substantially increase the Firm's resources and capacity to effectively deploy Stellex II consistent with the Fund's stated strategy.
- 2. LPA Terms.** The draft Stellex II limited partnership agreement initially included certain GP-friendly terms, including a weak Key Person provision and an American, or deal by deal, carry waterfall. Through negotiations with prospective Stellex II limited partners, the GP has improved these terms. The Key Person provision will now be triggered by the departure of either Co-Founder. While Stellex II will retain an American carried interest structure, the GP's have agreed to more LP-friendly clawback provisions. Any Fund commitment approved by the Treasurer will be subject to the satisfactory negotiation and documentation of these and other terms.

### **Legal and Regulatory Disclosure (provided by Legal)**

In its disclosure to the Office of the Treasurer, Stellex Capital Management LP ("Stellex" or the "Company"), states there are no material legal or non-routine regulatory matters. The Company states it has no material claims under its fidelity, fiduciary or E&O insurance policies, and no ongoing internal investigations to report.

Stellex's ADV is consistent with its disclosure to the Office of the Treasurer.

The Company states it has adequate procedures and protocols to undertake internal investigations of its employees, officers and directors. The Company maintains a Code of Ethics and Compliance Manual. Stellex also maintains a Conflicts and Compliance Committee that meets at least quarterly. The members of the Committee may use outside counsel or consultants as they deem necessary to undertake any internal investigations of its employees, officers and directors. Under the Stellex Employee Handbook, employees may follow procedures to report alleged harassment and threatening behavior using a toll-free number, which may then initiate investigations.

**Compliance Review (provided by Compliance)**

The Chief Compliance Officer's Workforce Diversity & Corporate Citizenship review is attached.

**Environment, Social & Governance Analysis ("ESG") (provided by Policy)**

The Assistant Treasurer for Policy's Evaluation and Implementation of Sustainable Principles review is attached.

**COMPLIANCE REVIEW FOR STELLEX CAPITAL PARTNERS II LP**  
**SUMMARY OF LEGAL AND POLICY<sup>1</sup> ATTACHMENTS**  
 SUBMITTED BY  
**STELLEX CAPITAL MANAGEMENT LP**

**I. Review of Required Legal and Policy Attachments**

STELLEX CAPITAL MANAGEMENT LP (“Stellex Capital”), a New York-based and minority-owned firm, completed all required legal and policy attachments. It disclosed no third party fees, campaign contributions, known conflicts, gifts or legal/regulatory proceedings.

**II. Workforce Diversity (See Also 3 year Workforce Diversity Snapshot Page Attached)**

As of December 2019, Stellex Capital employed 21, 6 more than the 15 employed in December 2017. Stellex Capital identified 1 woman and 3 minority males as Executive/Senior Level Officials and Managers. No women or minorities were promoted within the ranks of professionals or managers for the period 2017-2019. Minorities are well represented at all levels of the firm. Women are not as well represented.

*Workforce Statistics*

**For Executive/Senior Level Officials and Managers:**

- Women held 17% (1 of 6) of these positions in all 3 years reported (2019, 2018 and 2017).
- Minorities held 50% (3 of 6) of these positions (16.7% Black, 16.7% Asian and 16.7% Two or More Races) in all 3 years reported (2019, 2018 and 2017).

**At the Level overall:**

- Women held 17% (1 of 6) of these positions in all 3 years reported (2019, 2018 and 2017).
- Minorities held 50% (3 of 6) of these positions (16.7% Black, 16.7% Asian and 16.7% Two or More Races) in all 3 years reported (2019, 2018 and 2017).

**At the Professional Level:**

- Women held 13% (2 of 15) of these positions in 2019, down from 20% (2 of 10) in 2018, and 22% (2 of 9) in 2017.
- Minorities held 33.3% (5 of 15) of these positions in 2019 (13.3% Asian, 13.3% Black and 1% Hispanic), down from 40% (20% Asian and 20% Hispanic) in 2018, and 44.4% (11.1% Asian, 11.1% Black and 22.2% Hispanic) in 2017.

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<sup>1</sup> The Treasury’s Policy Unit will prepare a separate Summary with respect to Stellex Capital’s ESG submission.



**Company-wide:**

- Women held 14% (3 of 21) of these positions in 2019, down from 19% (3 of 16) in 2018, and 20% (3 of 15) in 2017.
- Minorities held 38.1% (8 of 21) of these positions in 2019 (14.3% Asian, 14.3% Black, 4.8% Hispanic and 4.8% Two or More Races), down from 43.8% (7 of 16) (18.8% Asian, 6.3% Black, 12.5% Hispanic and 6.3% Two or More Races) in 2018, and 46.7% (7 of 15) (13.3% Asian, 13.3% Black, 13.3% Hispanic and 6.7% Two or More Races) in 2017.

**III. Corporate Citizenship***Charitable Giving:*

The firm supports a number of initiatives, including many that focus on enhancing diversity. For example, it is a member the National Association of Investment Companies, Seizing Every Opportunity, the Robert Toigo Foundation, Women in Funds, and the National Association of Securities Professionals. The firm also provides “on-going financial support” to Heartland Capital Strategies, which promotes responsible investing.

*Internships/Scholarships:*

Stellex Capital currently hosts one intern from the University of Chicago MBA program. The firm did not identify any scholarships.

*Procurement:*

Stellex Capital does not currently have a written procurement policy or program to foster relationships with women/ minority/and/or emerging-owned businesses.



## STELLEX CAPITAL MANAGEMENT LP

### 3 YEAR WORKFORCE DIVERSITY (SNAPSHOT)

#### WOMEN

	EXECUTIVE	MANAGEMENT	PROFESSIONAL	FIRMWIDE
2019	17%	17%	13%	14%
2018	17%	17%	20%	19%
2017	17%	17%	22%	20%

December 2019: 17% or 1 of 6 Executives is a Woman; Total Employees Firm Wide 21

#### MINORITIES

	EXECUTIVE	MANAGEMENT	PROFESSIONAL	FIRMWIDE
2019	50%	50%	33%	38%
2018	50%	50%	40%	44%
2017	50%	50%	44%	47%

December 2019: 50% or 3 of 6 Executives are Minorities; Total Employees Firm Wide 21

Prepared by Compliance Unit 3/12/20

**SUMMARY OF RESPONSES FROM  
STELLEX CAPITAL MANAGEMENT LP**

**TO ATTACHMENT M: EVALUATION AND IMPLEMENTATION OF SUSTAINABLE  
PRINCIPLES**

**SUBMITTED BY THE TREASURY'S POLICY UNIT**

Stellex Capital is not a signatory to the Principles of Responsible Investment (“PRI”). The firm disclosed that it has developed its own core ESG principles and ESG policy, and that it actively uses resources provided by PRI in its research.

The firm’s Investment Committee considers ESG issues prior to investment, and relies on guidance from the Sustainability Accounting Standards Board for ongoing monitoring of ESG-related metrics (e.g., workplace safety, energy consumption) for each investment. Stellex uses a proprietary ESG matrix system which is updated quarterly, which is used to engage with portfolio companies and measure progress.

Overall, Stellex’s disclosure reflects a solid integration of ESG considerations into its investment process.

**State of Connecticut  
Retirement Plans and Trust Funds**

**Recommendation Report**

**Stellex Capital Partners II**

**April 13<sup>th</sup>, 2020**

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## Executive Summary

<b>Fund</b>	Stellex Capital Partners II (the “Fund” or “Fund II”)
<b>General Partner</b>	Stellex Capital Management LP (“Stellex”, the “Firm”, or the “GP”)
<b>Report Date</b>	Data as of September 30, 2019
<b>Fundraising</b>	A first closing is targeted for late-April 2020, and StepStone expects the Fund to be oversubscribed. Although not yet formalized, Stellex stated that Fund II’s hard cap will be around US\$1.7 billion.
<b>Source</b>	Connecticut Retirement Plans and Trust Funds (“CRPTF”) sourced the investment opportunity directly for evaluation for the Private Investment Fund (“PIF”).
<b>Key Terms</b>	<p><u>Management Fee</u>: The Management Fee shall equal 2% per annum of the Non-Affiliated Partners’ Percentage of the aggregate Commitments during the Investment Period. Thereafter, the Management Fee shall be reduced to 2% per annum of the Non-Affiliated Partners’ Percentage of an amount equal to (x) the aggregate amount of unrecouped Bridge Financing Contributions plus (y) the aggregate amount of Investment Contributions with respect to Investments that have not been disposed of or completely written-off.</p> <p><u>Carried Interest</u>: The Carried Interest allocation will be 20% after an 8% Preferred Return for Limited Partners (with 100% GP catch-up), subject to clawback.</p> <p><u>Termination Provisions</u>: For cause termination of the Fund permitted upon Limited Partners and Parallel Fund Limited Partners holding at least a majority of the Aggregate Commitments electing to dissolve the Partnership by delivering a written notice to the General Partner. No fault termination of the Fund upon Limited Partners and Parallel Fund Limited Partners holding at least 75% of the Aggregate Commitments choosing to dissolve the Partnership and the Parallel Fund for any reason by delivering a written notice to such effect to the General Partner.</p> <p><u>Key Person</u>: During the Investment Period, the General Partner shall give the Limited Partners and the Parallel Fund Limited Partners written notice promptly after either Michael Stewart or Ray Whiteman, each in his capacity as an Approved Executive Officer, ceases to be active in the Partnership’s affairs.</p>
<b>Investment Strategy</b>	Stellex will target control-oriented distressed and special situations investments in Middle Market companies in the U.S. and Europe, with TEV between US\$50-500 million and revenue between US\$100-500 million. The Firm will seek to employ a strategy consistent with Fund I and what was implemented by Ray Whiteman and Michael Stewart (the “Managing Partners”) for over ten years while at Carlyle Strategic Partner (“CSP”). For more than 15 years, Messrs. Whiteman and Stewart have invested in

mismanaged and underperforming companies that were experiencing some form of financial, operational and/or cyclical distress. Stellex will seek to invest US\$25-100 million per transaction and enter through direct equity investments, debt for control investments, or structured transactions. Investments may evolve from bankruptcy auctions, out-of-court reorganizations, or distressed buyouts. The Fund will seek control or significant influence in the vast majority of its investments to drive both operational and balance sheet improvements within its portfolio companies. While the Fund will implement a transatlantic strategy focusing on both U.S. and European opportunities, Stellex expects the Fund to be weighted primarily towards North American opportunities and will invest in Europe opportunistically (10-15% expected, but no cap). European investments will typically be in industries that are familiar to the Managing Partners.

## Management Team

Stellex was formed in January 2014 by Ray Whiteman and Michael Stewart (the “Managing Partners” and “Co-Founders”). Prior to founding Stellex, they were both Co-Heads of Carlyle Strategic Partners (the control-oriented Distressed private equity arm of The Carlyle Group) and worked together for approximately ten years. The Co-Founders have 45 years of collective distressed private equity experience investing in Middle Market companies. Mr. Whiteman founded CSP in 2003, after seven years working with Carlyle’s corporate buyout group focused on aerospace and defense under Bill Conway, one of the co-founders of The Carlyle Group. He was one of Mr. Conway’s most successful investment professionals, having led several of Carlyle’s aerospace/industrial deals that generated high cash multiples. Mr. Whiteman hired Mr. Stewart out of Sunrise Capital in 2003 as a Principal, where he made control investments in distressed companies. Prior to that, Mr. Stewart worked for eight years in Houlihan Lokey’s restructuring group. In aggregate, CSP invested US\$3 billion across 15 platform control investments and a portfolio of non-control distressed debt positions (but where the intent was to gain significant equity influence/control).

## Track Record

Stellex raised Fund I in 2015 with US\$870 million of capital commitments and has since invested US\$529 million across 10 platform investments and a collection of distressed debt toehold positions. As of September 30, 2019, Fund I has realized US\$288 million, although a subsequent realization brings this number to US\$574 million. Fund I has generated a gross TVM/IRR of 2.0x/54% and a net TVM/IRR/DPI of 1.6x/32%/0.2x. Stellex has generated this performance with very low overall losses of 2%. While Stellex has generated solid second quartile DPI performance of 0.2x as of September 30, 2019, StepStone notes that the DPI increases to approximately 0.9x pro forma for the sale of Morbark post 9/30/2019. This would place the Fund’s DPI well into the top decile relative to vintage year peers.

(US\$ in millions, as of September 30, 2019)

Stellex Investment Performance													
Fund	Vintage Year	Fund Size	# of Deals	Invested Capital	Realized Value	Unrealized Value	Total Value	Gross TVM	Gross IRR	Loss Ratio	Net TVM	Net IRR	Net DPI
Fund I	2015	\$870	11	\$529	\$288	\$756	\$1,044	2.0x	54%	2%	1.6x	32%	0.2x
<b>Total Realized Companies</b>			2	49	255	17	272	5.5x	84%	0%			
<b>Total Unrealized Companies</b>			9	480	33	739	772	1.6x	41%	2%			
<b>Total</b>		<b>\$870</b>	<b>11</b>	<b>\$529</b>	<b>\$288</b>	<b>\$756</b>	<b>\$1,044</b>	<b>2.0x</b>	<b>54%</b>	<b>2%</b>	<b>1.6x</b>	<b>32%</b>	<b>0.2x</b>

## Investment Evaluation

**(+) Experienced and Cohesive Senior Team:** The Managing Partners have over 45 years of combined experience investing in and working with companies undergoing some form of financial or operational distress. Prior to forming Stellex, they led CSP, investing nearly US\$3 billion executing on a similar Middle Market debt-for-control and equity turnaround strategy. Mr. Whiteman founded CSP in 2003 after spending seven years in Carlyle's corporate buyout group under Bill Conway where he focused on the aerospace and defense sectors. He was one of Mr. Conway's most successful investment professionals, having led several of Carlyle's aerospace/industrial deals that generated high cash multiples. Mr. Whiteman hired Mr. Stewart out of Sunrise Capital in 2003 and the two have worked together ever since. Prior to that, Mr. Stewart worked for eight years in Houlihan Lokey's restructuring group. While a commitment to Fund I was predicated entirely on the confidence prospective LPs had in Messrs. Whiteman and Stewart, StepStone has observed strong growth in the mid/senior level team over the last five years. The professionals under Messrs. Whiteman and Stewart have now managed one fund and have more experience working alongside the Managing Partners.

**(+) Strong Fund I Performance with Low Losses, Demonstrated Ability to Return Capital Quickly:** Fund I has generated strong absolute and relative performance. As of September 30, 2019, the fund has generated a gross TVM/IRR of 2.0x/54% and net TVM/IRR/DPI of 1.6x/32%/0.2x. Pro forma for a realization that occurred subsequent to quarter end, Fund I's DPI increases to approximately 0.9x, which places Fund I in the top quartile across all metrics relative to vintage year peers. This performance has been generated with de minimis (sub-1%) losses, which is very attractive for an equity turnaround strategy

**(+) Disciplined Purchase Price Multiples:** Stellex has been able to make investments at valuations below the broader Middle Market average. Stellex's median purchase price multiple since 2015 is 6.5x, representing a 29% discount to Middle Market median of 9.2x. While Stellex is acquiring assets at below-market prices, this is generally a product of transaction complexity and/or operational undermanagement rather than fundamental asset quality. The team's ability to manage this complexity well is evidenced in the strong revenue and EBITDA growth characteristics across mature portfolio companies.

**(+) Strong Operating Performance/EBITDA Growth Across Mature Portfolio Companies:** The Firm has executed well against both topline growth and margin expansion initiatives to increase EBITDA and revenue across its Fund I investments. As of Q2 2019, Stellex has generated organic revenue and EBITDA growth of 17% and 72% on an absolute (non-annualized) basis; excluding the three most recent investments made out of Fund I.

**(+) Flexible Strategy:** The GP is able to invest in distressed companies through the debt (with a view toward control) or equity. During periods of market dislocation, entering through the debt can present more attractive value. Although this is not a significant driver of deal flow today, it could be an attractive channel for the GP later in the investment period.

**(-) Significant Fund Size Increase May Strain Team Capacity:** Fund II is targeting US\$1.25 billion of commitments, representing a 44% increase from Fund I. Although not yet formalized, Stellex stated that Fund II's hard cap will be around US\$1.7 billion. Stellex will target 15-20 investments in Fund II vs. the 10-15 in Fund I. Including four investments that were made within the past 18 months out of Fund I, there will be significantly more portfolio companies to manage in Fund II. Stellex will hire four to five new mid/senior-level professionals during the first half of 2020 to support the larger fund. Additionally, much of the operational 'heavy lift' has already been completed at five of the eight remaining Fund I portfolio companies. Stellex plans to pursue exits in two of these companies, which will reduce the overall burden on the team. Further, StepStone has observed strong growth in the mid/senior level team over the last five years. The professionals under Messrs. Whiteman and Stewart have now managed one fund and have more experience working alongside the Managing Partners. Fund II will be less reliant on the Managing Partners for origination/execution than it was in Fund I, and StepStone expects this trend to continue over time as Principals/Vice Presidents gain experience within Stellex.

**(-) Planned Lateral Hires, Potential Impact on Cohesion/Culture:** In order to support a larger fund, Stellex began an effort in 2019 to expand its investment team at the mid/senior levels, with the goal of hiring four to five professionals during the first half of 2020. Stellex expects to add two Principals, two Vice Presidents, and possibly one Managing Director to its team (likely all in the U.S.). While StepStone believes team expansion at the mid/senior levels is prudent in light of the increased fund size, lateral hires at these levels reduce overall team cohesion and have the potential to impact culture. StepStone generally prefers GPs who promote from within. The Managing Partners, aware of the potential impact of lateral hires on an organization's culture/morale, have taken measures to mitigate any friction caused by mid/senior level team buildout. They have spent considerable time with junior professionals (particularly at the Senior Associate level) to map out a clear career/firm progression timelines. The Managing Partners indicated that mid/senior level team members have been unanimously supportive of the hiring plan, acknowledging that the larger fund will require additional resources, and recognizing that these hires will ultimately increase carry dollars for everyone at the Firm.

**(-) Deal-by-Deal Waterfall:** The initial Fund II LPA has been structured with certain GP favorable terms, namely an American (deal-by-deal) carry waterfall. Stellex employs a deal by deal waterfall with losses carried forward. StepStone prefers fund-level European waterfalls, noting that this structure can lead to increased risk taking at the end of a fund's life if the GP hasn't received carried interest on prior deals yet.

## Recommendation

StepStone believes that a commitment to Stellex Capital Partners II represents an attractive opportunity to back an emerging special situations manager that is led by an experienced and cohesive senior investment team and is pursuing a flexible investment strategy that positions the Firm well in the event of a market dislocation. The Firm has generated strong returns on an absolute and relative basis in their first fund and have demonstrated the ability to generate liquidity quickly. As of September 30, 2019, the fund has



generated a gross TVM/IRR of 2.0x/54% and net TVM/IRR/DPI of 1.6x/32%/0.2x. Pro forma for a realization that occurred subsequent to quarter end, Fund I's DPI increases to approximately 0.9x, which places Fund I in the top quartile across all metrics relative to vintage year peers. This performance has been generated with de minimis (2%) losses, which is very attractive for an equity turnaround strategy.

## Investment Strategy

Stellex will target control-oriented distressed and special situations investments in Middle Market companies in the U.S. and Europe, with TEV between US\$50-500 million and revenue between US\$100-500 million. The Firm will seek to employ a strategy consistent with Fund I and what was implemented by the Managing Partners over ten years while at CSP. For more than 15 years, Messrs. Whiteman and Stewart have invested in mismanaged and underperforming companies that were experiencing some form of financial, operational and/or cyclical distress.

Stellex will seek to invest US\$25-100 million per transaction and enter through direct equity investments, debt for control investments, or structured transactions. Investments may evolve from bankruptcy auctions, out-of-court reorganizations, or distressed buyouts. The Fund will seek control or significant influence in the vast majority of its investments to drive both operational and balance sheet improvements within its portfolio companies.

While the Fund will implement a transatlantic strategy focusing on both U.S. and European opportunities, Stellex expects the Fund to be weighted primarily towards North American opportunities and will invest in Europe opportunistically (10-15% expected, but no cap). European investments will typically be in industries that are familiar to the Managing Partners.

Stellex will employ an activist strategy and pursue controlling interests when possible and/or appropriate. Stellex will target 15 to 20 investments in Fund II compared to the 10 to 15 core platform investments in Fund I. For its platform investments, the Fund will target gross returns of 2.0 to 4.0x TVM and expects to complete four to five deals per year. The Firm will continue to focus on asset-intensive businesses, including those in cyclical industries where the team has prior experience, that allow for meaningful downside protection through collateral value, including: manufacturing (i.e., automotive, aerospace, chemicals, paper/packaging, etc.); services; consumer/hospitality; and operating assets (aircraft, power/infrastructure and shipping).

The Fund will focus on opportunities in the Middle Market, a segment that offers attractive distressed investment opportunities because companies of this size often lack the capability to prevent or contain threats to their business, particularly those competing with larger, better-capitalized companies. Whether resulting from poorly-executed growth strategies, significant changes to operational processes, corporate inertia and inaction or poor leadership/human capital deficits, Stellex seeks to diagnose and rehabilitate troubled Middle Market businesses and effectuate operational turnarounds.

Although periods of high defaults (e.g., the Global Financial Crisis of 2008 to 2009) create a larger supply of actionable debt for control deal flow for firms like Stellex, the Fund is not beholden to periods of distress or mass market inefficiencies. A majority of the Managing Partners' track record has focused on company-specific and/or industry-specific circumstances and were executed throughout the cycle. Stellex's flexible entry approach allows the Firm to invest into such companies through either debt or equity, or a combination of both. This is important because the team is able to invest through market cycles in order to produce attractive risk-adjusted returns.

## Portfolio Characteristics

**Transaction Types:** Stellex will pursue three primary transaction types.

- Special situation equity deals are transactions where Stellex does not initiate entry through secondary debt. Instead, the Firm invests directly in common/preferred equity or a hybrid debt security in post-reorganized companies or unique situations where Stellex believes the debt is "money good" but the Fund has a particularly attractive value proposition that allows it to generate upside on the equity. In many cases, the Firm uses structuring as a risk mitigation tool, providing additional ways to protect against downside/principal loss. These transactions represent eight of the ten unique investments in Fund I, excluding debt and publicly traded investments, and 80% of invested capital. Stellex will primarily focus on special situation equity deals in Fund II.

- Stellex will opportunistically invest in debt for control transactions through various distressed or defaulted debt instruments, including bank loans, publicly and privately traded bonds, trade claims and/or direct capital investments. Stellex will seek to position the Fund to acquire material stakes in the debt instruments (the “fulcrum security”, in particular) such that the team can convert its debt stake into an influential or control equity stake of the reorganized company. The only debt for control investment in Fund I is Stellex’s investment in AFGlobal, a manufacturer of equipment and components for the oil and gas, industrial, aerospace, and power generating industries. This deal represented 13% of Fund I’s invested capital.
- The Firm will also pursue structured investments, in which the Firm will alter the risk/reward characteristics of transactions by limiting downside (through, for instance, a liquidation preference) or reducing the Firm’s last-dollar at risk by taking a senior position in the capital structure that still offers equity-like upside potential. Stellex has completed one structured investment in Fund I, which represents 6% of Fund I’s invested capital.

**Sector Focus:** Stellex remains opportunistic with regard to sector, although the Firm prefers to make investments in asset-intensive businesses in manufacturing, services, and hospitality or a combination thereof. The Firm has extensive experience across many end markets, some of which are cyclical, including: automotive, aerospace/defense, chemicals, paper/packaging, general industrial and financials. Stellex will avoid real estate (other than derivative real estate exposure through hospitality investments), biotechnology and technology businesses without proven applications or markets, as well as industries that face paradigm changes that threaten their existence. In Fund I, manufacturing investments have outpaced other sectors, comprising six of ten platform investments and 51% of invested capital. While the manufacturing sector is highly cyclical, Stellex typically targets manufacturing companies that produce higher value products that are critical parts of the supply chain. Manufacturing investments are followed by those in the services and hospitality sectors, which comprise 45% and 4% of invested capital, respectively.

**Purchase Prices:** Given that Stellex’s investments are typically underperforming/undervalued, the Firm has been able to make control-investments at valuations below the broader Middle Market average. Stellex’s median purchase price multiple since 2015 is 6.5x (as a multiple of EBITDA), representing a 29% discount to median Middle Market purchase prices of 9.2x.

**Use of Leverage:** Stellex does not utilize fund-level leverage. StepStone expects Stellex to play an active role in optimizing portfolio company balance sheets. As a distressed and special situations investor, Stellex’s investment can be deleveraging event for the company. StepStone analyzed Stellex’s use of leverage in its Fund I deals for which EBITDA is a meaningful metric. The Middle Market median leverage ratio for deals completed over the same period (between 2015 and 2019) is 4.0x net debt/EBITDA. Stellex’s median leverage ratio was 3.8x over the same time period. The Firm has historically used leverage levels at or below market levels, with median net debt multiples falling below the Middle Market median in each year dating back to 2015.

### **Competitive Landscape**

StepStone analyzed debt for control and special situations funds that target the Middle Market and have a control-oriented mandate. This precludes some non-control Distressed funds that operate in the Middle Market, who may compete with Stellex on the purchase of distressed debt but do not seek to/cannot obtain operational control of companies. Compared to such funds, Stellex has a broader and more flexible mandate, a deeper and longer track record and one of the more experienced senior teams. However, each fund has its unique attribute and the GPs do not often compete directly with each other.

## Evaluation of the Strategy

### *Merits*

- ▲ **Flexible Strategy within Distressed:** Stellex has the ability to invest in distressed companies either through the debt (with a view toward control) or directly through equity. During periods of market dislocation, entering through the debt can be more attractive on a risk-adjusted basis. Although this is less of a driver of deal flow today, it could be an attractive channel for Stellex later in the investment period.
- ▲ **Below-Market Purchase Price Multiples:** Stellex has been able to make control-investments at valuations below the broader Middle Market average. Stellex's median purchase price multiple since 2015 is 6.5x, representing a 29% discount to Middle Market median of 9.2x. While Stellex is acquiring assets at below-market prices, this is generally a product of transaction complexity and/or operational undermanagement rather than fundamental asset quality. This is evidenced in the strong revenue and EBITDA growth characteristics across mature portfolio companies.
- ▲ **Strong Operating Performance/EBITDA Growth Across Mature Portfolio Companies:** The Firm has executed well against both topline growth and margin expansion initiatives to increase EBITDA and revenue across its Fund I investments. As of Q2 2019, Stellex has generated organic revenue and EBITDA growth of 17% and 72% on an absolute (non-annualized) basis; excluding the three most recent investments made out of Fund I.
- ▲ **Focus on Companies with Hard Assets:** Stellex prefers investments in companies that have meaningful underlying physical assets (i.e., inherent liquidation value). This allows the Firm to better value and gain recourse to attractive collateral in a worst-case scenario. Physical assets can offer significant downside protection during restructurings or liquidations.

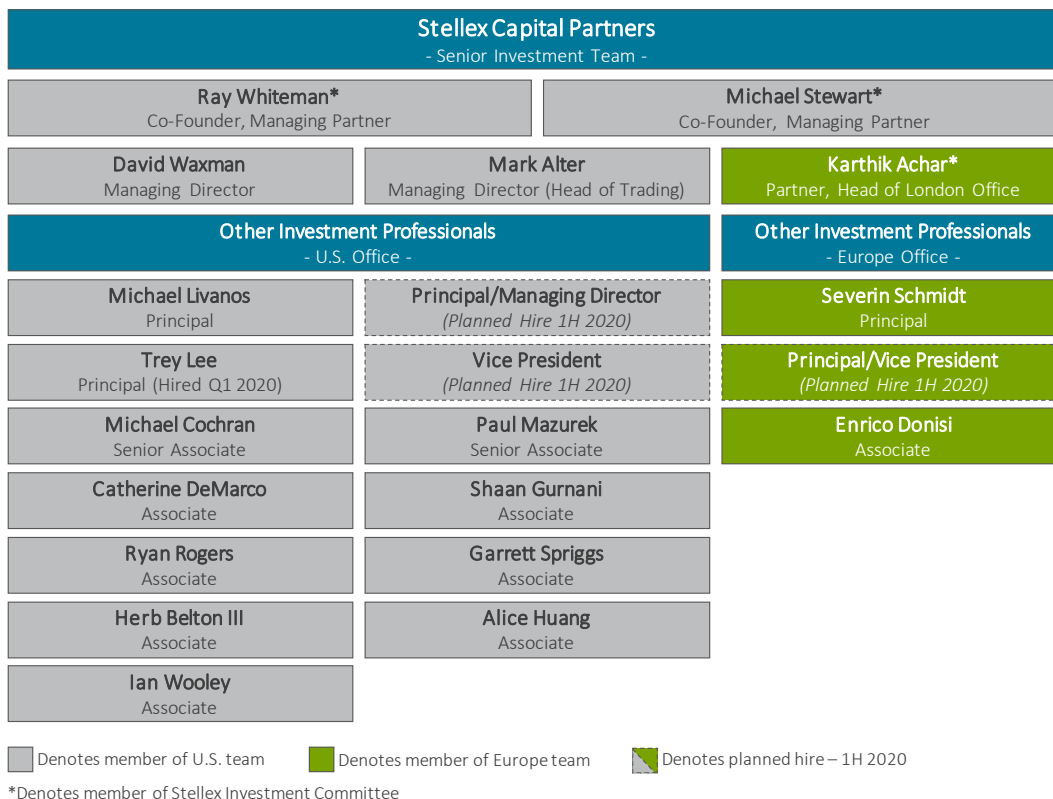
## Management Team

Stellex was formed in January 2014 by Ray Whiteman and Michael Stewart (the “Managing Partners”). Prior to founding Stellex, they were both Co-Heads of Carlyle Strategic Partners (the control-oriented Distressed private equity arm of The Carlyle Group) and worked together for approximately ten years. The Co-Founders have 45 years of collective distressed private equity experience investing in Middle Market companies. Mr. Whiteman founded CSP in 2003, after seven years working with Carlyle’s corporate buyout group focused on aerospace and defense under Bill Conway. He was one of Mr. Conway’s most successful investment professionals, having led several of Carlyle’s aerospace/industrial deals that generated high cash multiples. Mr. Whiteman hired Mr. Stewart out of Sunrise Capital in 2003 as a Principal, where he made control investments in distressed companies. Prior to that, Mr. Stewart worked for eight years in Houlihan Lokey’s restructuring group. In aggregate, CSP invested US\$3 billion across 15 platform control investments and a portfolio of non-control distressed debt positions (but where the intent was to gain significant equity influence/control).

### Professionals

Stellex is managed by a team of 18 investment professionals, eight of whom are senior professionals/deal leads (Principal or above). StepStone believes Stellex’s senior team is strong and cohesive. The Managing Partners have worked together for 17 years, and have personally known and/or worked with each of the other current Stellex professionals for a period spanning many years (with few exceptions). Ray Whiteman and David Waxman have known each other since 2002, having worked together at The Carlyle Group. The Managing Partners first met Mike Livanos when he worked for the investment bank representing the seller of an asset that CSP purchased. Mark Alter worked with both Managing Partners as the head of trading for CSP beginning in 2003 and has more than 20 years of trading experience and a broad network of market contacts. Karthik Achar was first introduced to the Managing Partners in 2009 during the formation and launch of CSP’s European activities.

### Stellex Team Structure



The investment team is split into two offices, North America and Europe. Every deal in Europe is managed day-to-day by

Mr. Achar, but with significant involvement and oversight by the Managing Partners.

Stellex's North America office is led/overseen by Messrs. Whiteman and Stewart. They are supported by David Waxman (Managing Director), Michael Livanos (Principal), and Trey Lee (Principal) who serve as deal leads and manage a team of nine junior professionals at the Associate/Senior Associate levels. David Waxman joined Stellex at its inception as a Principal, but has since been promoted to Managing Director.

Stellex's European office is led by Karthik Achar, who formerly served as head of Wayzata Europe. He is supported by Severin Schmidt (Principal) and one Associate. Mr. Schmidt joined Stellex in 2016 after spending two years at TPG Sixth Street Partners ("TSSP") and had spent three years at Providence Equity prior to that.

While Messrs. Whiteman and Stewart play a critical role in decision making across European deals and serve on the boards of European portfolio companies, the two offices generally operate independently from a sourcing and execution standpoint.

In order to support a larger fund, Stellex has begun an effort to expand its investment team at the mid/senior levels, with the goal of hiring four to five professionals during the first half of 2020. Stellex expects to add two Principals, two Vice Presidents, and possibly one Managing Director to its team (likely all in the U.S.). Through this process, the Managing Partners hope to add two full deal teams to the organization, and is focusing on Principal (and possibly MD) candidates who bring sourcing networks/origination capabilities to the Firm. Stellex has retained a search firm and is in the process of interviewing candidates. One of these planned hires has already been made, with Trey Lee joining the team at the Principal level in Q1 2020.

#### **Turnover**

Since Stellex was formed in early 2014, there has been one departure at the VP level. In April 2017, Marcel Koch left the Firm after three years. The Managing Partners stated that Mr. Koch's separation from the firm was mutual. StepStone believes that the limited turnover at Stellex over the course of Fund I is favorable, and speaks to the Firm's ability to retain strong performers.

#### **Capacity**

Due to the operationally intensive nature of equity turnaround strategies, StepStone believes that capacity is a risk for Stellex. This is particularly true in light of the increased fund size and desire to increase deal count (more than check size) in Fund II. StepStone evaluates capacity in several ways. First, we estimate the level of involvement required across the current portfolio. Second, we review the fund size increase and resources available to deploy capital/monitor unrealized portfolio companies. Third, we consider the difficulties in scaling equity turnaround strategies compared to traditional buyout strategies. This helps us determine a hard cap we would be comfortable with, which is US\$1.7 billion.

At Fund II's US\$1,250 million target size, capacity is not a significant concern because deal count per deal lead is similar to Fund I. StepStone believes that this holds true to a fund size of US\$1.7 billion, as Stellex would likely be able to stay within its stated 15 to 20 investment target by flexing check size up marginally (and staying within the upper bands of deals sourced in Fund I from a size standpoint). Beyond US\$1.7 billion, StepStone believes Stellex would need to either move up-market from a deal size standpoint, or make 20+ investments out of Fund II, which would strain the team's

capacity.

Fund Size & Capacity Analysis

Stellex Fund Size & Capacity Analysis			
	Fund I	Fund II Target	Fund II Hardcap
Vintage Year	2015	2020	2020
Fund Size	\$870	\$1,250	\$1,600
Investment Period (years) <sup>1</sup>	5	5	5
<b>Average Capital Invested per Year<sup>2</sup></b>	<b>\$157</b>	<b>\$225</b>	<b>\$288</b>
<b>Total Number of Investments<sup>3</sup></b>	<b>10-15</b>	<b>15-20</b>	<b>15-20</b>
<b>Average Equity Check</b>	<b>\$58-87</b>	<b>\$63-83</b>	<b>\$80-107</b>
Total Number of Deal Leads <sup>4</sup>	3	5	5
<b>Average Number of Deals per Deal Lead</b>	<b>3.3-5.0</b>	<b>3.0-4.0</b>	<b>3.0-4.0</b>
<b>Average Annual Investment per Deal Lead</b>	<b>\$52</b>	<b>\$45</b>	<b>\$58</b>
Total Deal Leads PF for Potential MD Hire <sup>4</sup>		6	6
<b>Average Annual Investment per Deal Lead PF for New Hires</b>		<b>2.5-3.3</b>	<b>2.5-3.3</b>
Total Investment Team Size	17	21-22	21-22

Source: GP, StepStone Analysis

1. Investment Period for Fund I based on actual deployment period (4-year investment period was extended by 1 year). Fund II investment period set at 5 years

2. Assumes 90% of fund commitments are actually deployed

3. Ultimate number of Fund II investments based on GP's stated targets

4. Deal leads are senior investment professionals (Principal and above) who the Managing Partners believe can lead a deal process independently. In Fund I, this was each of the Managing Partners and Mr. Achar. In Fund II, this will be expanded to include Messrs. Waxman and Livanos, and potentially a new Managing Director (if hired).

### GP Commit

Stellex investment professionals will invest the lower of US\$25 million or 2% of total commitments.

### Investment Committee

The Fund II Investment Committee will comprise Messrs. Whiteman, Stewart and Achar, although all investment team members will have significant input given the flat culture. This has not changed from Fund I. Approval of two of the three members is required for all Fund investments and exits. In practice, Messrs. Whiteman and Stewart are the two votes that matter most. StepStone would like to see the Investment Committee expand to additional members of the team over time – particularly deal leads such as David Waxman and Michael Livanos. However, StepStone is satisfied with the current structure and believes the Managing Partners should retain ultimate decision-making authority for Fund II while the rest of the team continues to mature.

## Evaluation of the Management Team

### Merits

- ▲ **Strong and Experienced Team within Special Situations:** The Managing Partners have over 45 years of combined experience investing in and working with companies undergoing some form of financial or operational distress. Prior to forming Stellex, they founded and led CSP, investing nearly US\$3 billion executing on a similar Middle Market debt-for-control and equity turnaround strategy. Mr. Whiteman founded CSP in 2003 after spending seven years in Carlyle's corporate buyout group under Bill Conway where he focused on the aerospace and defense sectors. He was one of Mr. Conway's most successful investment professionals, having led several of Carlyle's aerospace/industrial deals that generated high cash multiples. Mr. Whiteman hired Mr. Stewart out of Sunrise Capital in 2003 and the two have worked together ever since. Prior to that, Mr. Stewart worked for eight years in Houlihan Lokey's restructuring group. While a commitment to Fund I was predicated entirely on the confidence prospective LPs had in Messrs. Whiteman and Stewart, StepStone has observed strong growth in the mid/senior level team over the last five years. The professionals under Messrs. Whiteman and Stewart now have a full fund under their belts and have many reps working alongside the Managing Partners.
- ▲ **Cohesive and Highly Motivated Team:** Despite being a relatively new firm, the Managing Partners have worked together for 17 years, and have personally known and/or worked with each of the other current Stellex professionals for a period spanning many years (with a few exceptions). Ray Whiteman and David Waxman have known each other since 2002, having worked together at The Carlyle Group. The Managing Partners first met Mike Livanos when he worked for the investment bank representing the seller of an asset that CSP purchased. Mark Alter worked with both Managing Partners as the head of trading for CSP beginning in 2003 and has more than 20 years of trading experience and a broad network of market contacts. Karthik Achar was first introduced to the Managing Partners in 2009 during the formation and launch of CSP's European activities. In addition to being cohesive and experienced, StepStone believes the investment team is highly motivated and aligned with LPs, noting that 100% of the Fund's economics accrue to the team responsible for deploying it. All professionals from the Senior Associate level up receive a share of the carried interest.

### Risks

- ▼ **Team Capacity:** Stellex will target 15 to 20 investments in Fund II vs. the 10 to 15 in Fund I. Including four investments that were made within the past 18 months out of Fund I, there will be significantly more portfolio companies to manage in Fund II. Equity turnaround strategies tend to scale less efficiently than traditional buyout strategies, as investment require more operational involvement. Although not yet formalized, Stellex stated that Fund II's hard cap will be around US\$1.7 billion, which StepStone expects the GP to reach. This hard cap represents a 95% increase from Fund I. Stellex will hire four to five new mid/senior-level professionals during the first half of 2020 to support the larger fund. One of these hires has already been made, with Trey Lee joining the team at the Principal level in Q1 2020. The GP is working with a search firm to identify candidates for the remaining open positions, and expects to fill them by the time Fund II is activated. Much of the operational 'heavy lift' has already been completed at five of the eight remaining Fund I portfolio companies. Stellex plans to pursue exits in two of these companies, which will reduce the overall burden on the team. While a commitment to Fund I was predicated entirely on the confidence prospective LPs had in Messrs. Whiteman and Stewart, StepStone has observed strong growth in the mid/senior level team over the last five years. The professionals under Messrs. Whiteman and Stewart have now managed one fund and have more experience working alongside the Managing Partners. Fund II will be less reliant on the Managing Partners for origination/execution than it was in Fund I, and StepStone expects this trend to continue over time as Principals/Vice Presidents gain experience within Stellex.
- ▼ **Planned Lateral Hires May Impact Culture:** In order to support a larger fund, Stellex has begun an effort to expand its investment team at the mid/senior levels, with the goal of hiring four to five professionals during the first half of 2020. Stellex expects to add two Principals, two Vice Presidents, and possibly one Managing Director to its team (likely all in the U.S.). While StepStone believes team expansion at the mid/senior levels is prudent in light of the



increased fund size, lateral hires at these levels reduce overall team cohesion and have the potential to impact culture. StepStone generally prefers GPs who promote from within. The Managing Partners, aware of the potential impact of lateral hires on an organization's culture/morale, have taken measures to mitigate any friction caused by mid/senior level team buildout. They have spent considerable time with junior professionals (particularly at the Senior Associate level) to map out a clear career/firm progression timelines. The Managing Partners indicated that mid/senior level team members have been unanimously supportive of the hiring plan, acknowledging that the larger fund will require additional resources, and recognizing that these hires will ultimately increase carry dollars for everyone at the Firm.

- ▼ **European Team:** Stellex hired Karthik Achar to build out the Firm's European office and capitalize on the attractive (and less efficient) Small Market opportunity that exists there. While Stellex only completed one European investment in Fund I, the transaction pipeline was robust. The Firm was in the final rounds of bidding on four additional companies, three of which traded away for unique circumstances that could not be foreseen or entirely mitigated by the European team. The one European investment in Fund I was the smallest investment in the fund and represents 4% of invested capital but has not performed as expected. Europe has always represented a relatively small portion of Stellex's target geographical mix, and the Managing Partners expect it to comprise only 10-15% of Fund II. The Stellex North America team has managed to source sufficient deal flow to deploy Fund I, and StepStone does not believe the Firm is reliant on European deal flow (but would benefit from strong execution/selective deployment there).
- ▼ **Deal by Deal Carry:** Stellex employs a deal by deal waterfall with losses carried forward. StepStone prefers fund-level European waterfalls, noting that this structure can lead to increased risk taking at the end of a fund's life if the GP hasn't received carried interest on prior deals yet.

## Track Record

Stellex raised Fund I in 2015 with US\$870 million of capital commitments and has since invested US\$529 million across 10 platform investments and a collection of distressed debt toehold positions. As of September 30, 2019, Fund I has realized US\$288 million, although a subsequent realization brings this number to US\$574million. Fund I has generated a gross TVM/IRR of 2.0x/54% and a net TVM/IRR/DPI of 1.6x/32%/0.2x. Stellex has generated this performance with very low overall losses of 2%. While Stellex has generated solid second quartile DPI performance of 0.2x as of September 30, 2019, StepStone notes that the DPI increases to approximately 0.9x pro forma for the sale of Morbark in October 2019. This would place the Fund's DPI well into the top decile relative to vintage year peers.

Prior to forming Stellex, the Messrs. Whiteman and Stewart's track record includes deals completed as Co-Heads of CSP. Between 2004 and 2013, CSP completed 14 control-oriented investments, of which 13 were led by Mr. Whiteman and/or Stewart, including a significant majority of the profits. The non-control investments generated a 1.2x gross TVM while the control investments generated a 2.5x gross TVM.

### Stellex Performance Summary

(US\$ in millions, as of September 30, 2019)

Fund	Vintage Year	Fund Size	# of Deals	Stellex Investment Performance									
				Invested Capital	Realized Value	Unrealized Value	Total Value	Gross TVM	Gross IRR	Loss Ratio	Net TVM	Net IRR	DPI
Fund I	2015	\$870	11	\$529	\$288	\$756	\$1,044	2.0x	54%	2%	1.6x	32%	0.2x
<b>Total Realized Companies</b>			<b>2</b>	<b>49</b>	<b>255</b>	<b>17</b>	<b>272</b>	<b>5.5x</b>	<b>84%</b>	<b>0%</b>			
<b>Total Unrealized Companies</b>			<b>9</b>	<b>480</b>	<b>33</b>	<b>739</b>	<b>772</b>	<b>1.6x</b>	<b>41%</b>	<b>2%</b>			
<b>Total</b>		<b>\$870</b>	<b>11</b>	<b>\$529</b>	<b>\$288</b>	<b>\$756</b>	<b>\$1,044</b>	<b>2.0x</b>	<b>54%</b>	<b>2%</b>	<b>1.6x</b>	<b>32%</b>	<b>0.2x</b>

### Relative Performance

StepStone compared Stellex's net and relative performance compared to Burgiss Private iQ's Private Equity Excluding Venture Capital benchmark for funds of the same vintage year. Fund I has generated strong performance relative to vintage year peers, ranking in the first quartile by net TVM/IRR and second quartile by DPI. Pro-forma for the Morbark and MHI proceeds distributions, Fund I's DPI will increase to ~0.9x and move well into the top quartile.

### Relative Performance

(US\$ in millions, as of September 30, 2019)

Stellex Net Relative Performance						Private iQ					
Fund	Vintage	Fund Size	Stellex			All Geographies			Stellex		
			Net TVM	Net IRR	DPI	First Quartile			Quartile Rank		
						Net TVM	Net IRR	DPI	Net TVM	Net IRR	DPI
Fund I	2015	\$870	1.6x	32%	0.2x	1.4x	19%	0.3x	First	First	Second
<b>Total</b>		<b>\$870</b>	<b>1.6x</b>	<b>32%</b>	<b>0.2x</b>						

Source: GP, Burgiss Private iQ, StepStone Analysis

### Performance by Equity Check Size

In Fund I, Stellex has focused on investments with check sizes in the US\$25 to 75 million range, which collectively represent 76% of invested capital. In Stellex II, the Firm is targeting 15 to 20 investments implying check sizes in the range of US\$60 to 80 million at the Fund's US\$1,250 million target. StepStone is confident that Stellex can source and create value across a range of investments with varying characteristics that fit the Fund II target equity check size.

## Evaluation of the Track Record

### Merits

- ▲ **Strong Fund I performance:** Fund I has generated strong absolute and relative performance. As of September 30, 2019, the fund has generated a gross TVM/IRR of 2.0x/54% and net TVM/IRR/DPI of 1.6x/32%/0.2x. Pro forma for a realization that occurred subsequent to the quarter's end, this places Fund I in the top quartile across all metrics relative to vintage year peers. This performance has been generated with de minimis (sub-1%) losses.
- ▲ **Ability to Generate Outsized Early Returns:** Stellex has had two early realizations that will return ~0.9x contributed capital. Pro forma for these realizations, Stellex's DPI is in the 95th percentile for vintage year peers. Both realizations returned more than 5.0x invested capital.
- ▲ **Strong Unrealized Portfolio:** StepStone believes that Fund I's unrealized investments are well positioned to generate strong returns. The unrealized portfolio has had average revenue and EBITDA CAGRs of 16% and 6%, respectively. The remaining portfolio companies are in the sectors and size ranges where Stellex has proven it can create value.

### Risks

- ▼ **Underperformance of Dominion and Paragon:** Although Fund I has generated strong performance to date, two investments have underperformed: Dominion Hospitality and Paragon Metals (collectively representing 13% of invested capital in Fund I). Both companies are marked slightly below cost as of September 30, 2019. Stellex expects to exit Dominion in the near term and return approximately the fund's cost basis if not slightly more. Stellex opted to 'cut bait' rather than invest good money after bad, which StepStone believes exemplifies the Firm's disciplined approach and careful management of LP capital/Firm resources. Paragon, which Stellex invested in during January 2019, suffered from unforeseen headwinds early in the investment period, namely issues related to the GM strike and select program volume declines. The investment was also hurt by the trade war, which was unforeseen. This risk is mitigated by recent new business wins, amounting to US\$160 million, and expansion of higher margin business lines, such as framing and aftermarket.

### Fundraising

A first closing is targeted for late-April 2020, and StepStone expects the Fund to be oversubscribed. Although not yet formalized, Stellex stated that Fund II's hard cap will be around US\$1.7 billion.

### Portfolio Fit

The Fund meets the investment criteria and guidelines set forth in CRPTF's Investment Policy Statement. Stellex Capital Partners II would be considered a 2020 commitment to the Distressed/Restructuring portfolio within the Private Investment Fund. As of September 30, 2019, Connecticut's investments in Distressed/Restructuring funds represented 8% of aggregate PIF exposure, defined as NAV plus unfunded, and has generated a net IRR of 10%. Inclusive of PIF investments approved after September 30, 2019, a US\$100 million commitment to the Fund would increase PIF's Distressed/Restructuring exposure to 9%.

Stellex Capital Partners II	CRPTF Current Exposure	IRR	CRPTF Pro Forma Exposure
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### Strategy

Distressed/Restructuring	8%	10%	9%
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*Note: Table reflects active investments only, liquidated funds excluded.*

### Environmental, Social & Governance

Stellex Capital Partners does have an ESG policy. This policy was made independently of the UNPRI and the group is not a signatory of TCFD. The GP has not mentioned an intention to sign with the TCFD. Stellex has not integrated ESG into its fund formation contracts, LPA, or side letters. The ESG policy that is in place is largely based on the GP's understanding of ESG principles and hasn't been heavily influenced by thought leaders in this space, like the UN or TCFD.

The GP has appointed the founding partners as co-heads of the Stellex ESG Committee and Tony Braddock as the ESG officer. These three individuals conduct ESG training for all investment team members, so that the topic can be fully incorporated into an investment's life cycle. The team does implement ESG KPIs when applicable and provided an example ESG KPI reporting document from its investment in Morbark. At Morbark, Stellex tracked the number of workers comp incidents, and the electrical, natural gas, and water consumption at the factory. The ESG committee meets quarterly to review all ESG reporting from portfolio companies and address any material issues that arise.

When the investment team brings an opportunity to Stellex's Investment Committee, it needs to fill out a corresponding ESG questionnaire. If there are any material deficiencies that arise, Stellex will include it in the Firm's 100-day plan. Portfolio company boards discuss the relevant ESG issues for each company. Due to the industrial nature of Stellex's investment, worker safety is an almost universal ESG theme.

Of the Firm's three Partners, one Partner is Black, and one Partner is Asian. There MD, Principal and VP are all caucasian men. At the Associate level, there are 10 professionals, including five individuals that are either a minority or female. The GP does not have specific diversity initiatives outlined, but the GP commented that it might start an analyst program to help recruit the highest performing female and minority candidates directly from college. The GP does not have specific policies regarding diversity at the c-suite level in portfolio companies.

The GP does not have any published ESG papers, nor has it made known that it is a member of any ESG related committees.

The one material ESG issue at the portfolio company level occurred at Grammer Industries, the transporter of specialty chemicals. There was a butane fire at one of Grammer's processing facilities and four people were injured in the accident. Two employees were unharmed, but two were brought to the hospital. Of the two that went to the hospital, only one has serious injuries. This individual will need to remain in the hospital for at least a few weeks. The incident was very

recent, so Stellex is working with the company to properly address the accident.

StepStone notes that the GP is not a signatory of UNPRI but does have an implemented ESG policy. The policy is very broad, and the GP is still very early on in integrating ESG processes throughout the investment life cycle. However, Stellex has made some positive early strides, such as mandating an ESG questionnaire with every IC memo and action steps to solve any material ESG issues. Looking ahead, key ESG issues that the GP will grapple with are around employee safety and environmental waste because of the heavily industrial angle to most of its investments.

#### **Recommendation**

StepStone believes that a commitment to Stellex Capital Partners II represents an attractive opportunity to back an emerging special situations manager that is led by an experienced and cohesive senior investment team that is pursuing a flexible investment strategy that positions the Firm well in the event of a market dislocation. The Firm has generated strong returns on an absolute and relative basis in their first fund and have demonstrated the ability to generate liquidity quickly. As of September 30, 2019, the fund has generated a gross TVM/IRR of 2.0x/54% and net TVM/IRR/DPI of 1.6x/32%/0.2x. Pro forma for a realization that occurred subsequent to quarter end, Fund I's DPI increases to approximately 0.9x, which places Fund I in the top quartile across all metrics relative to vintage year peers. This performance has been generated with de minimis (sub-2%) losses, which is very attractive for an equity turnaround strategy.

**Appendix I**  
**Summary of Due Diligence Performed**

In our review of the offering, we conducted the following additional due diligence:

- October 2019
  - Attended GP's AGM
- January – February 2020
  - Met onsite with members of the Fund's investment team
  - Prepared and completed an investment memorandum

## **Appendix II**

### **Investment Team Member Biographies**

#### **Ray Whiteman, Co-Founder and Managing Partner**

Mr. Whiteman has over 22 years of private equity and distressed investing experience. Previously, Mr. Whiteman was a Partner of The Carlyle Group and a Managing Director and Co-Head of Carlyle Strategic Partners. Prior to joining Carlyle in May 1996, Mr. Whiteman was a Vice President and Group Head in the Leveraged Finance Department of Credit Lyonnais. Mr. Whiteman has also held several positions at both Citicorp and The Chase Manhattan Bank, N.A. Mr. Whiteman previously served on the Board of Diversified Machine Inc., RPK Capital Partners, LLC, Metaldyne, LLC, Stellex Aerostructures, Inc., Brintons Carpet Limited and Service King, as well as the investment committee of RW Equity Partners, an affiliate of TCG. In addition, he expects to continue to serve on the Board of DPG Aerospace. He has also been a member of the Executive Committee of the National Symphony Orchestra of The John F. Kennedy Center and the Smithsonian's National Museum of African Art. Mr. Whiteman graduated with a B.A. in political science from Williams College, where he was a Lehman Scholar, and holds an M.B.A. in finance and accounting from New York University.

#### **Michael Stewart, Co-Founder and Managing Partner**

Mr. Stewart has over 28 years of experience working with and investing in distressed companies, including 15 years of direct distressed investing experience. Mr. Stewart was a Partner of The Carlyle Group and a Managing Director and Co-Head of Carlyle Strategic Partners. Prior to joining Carlyle, Mr. Stewart was one of the original Principals of Sunrise Capital Partners, L.P., a private investment fund focused on making control investments in distressed companies. Prior to joining Sunrise Capital Partners, Mr. Stewart worked in the financial restructuring group of Houlihan Lokey Howard & Zukin for eight years. Mr. Stewart previously served as Director of Famous Brands International (Mrs. Fields), Permian Tank & Manufacturing, Inc., Sterling LLC, Diversified Machine, Inc., Metaldyne, LLC, Stellex Aerostructures, Inc., Airwalk International, LLC, Day Runner Inc., NEXIQ Technologies, Inc., Klenk Holz AG and Riverside Millwork Company. Mr. Stewart received a B.S. in finance and entrepreneurial studies from the University of Southern California.

#### **Karthik Achar, Partner and Head of Europe**

Mr. Achar has over 15 years of experience in the sourcing, trading, execution, and oversight of stressed credit, distressed direct lending, distressed non-control and distressed for-control investments within Europe. Most recently, Mr. Achar was Head of the European Investment Team for Wayzata Investment Partners in London where he led and executed numerous investments in European middle-market distressed and stressed companies. Prior to joining Wayzata in 2008, Mr. Achar was an Executive Director at Morgan Stanley where he created and headed a team focused on direct lending to distressed, stressed and middle-market companies via senior secured bridge loans, mezzanine and payment-in-kind preferred debt. Prior to joining Morgan Stanley, Mr. Achar was a senior distressed analyst and a Credit Fund Manager with EBF & Associates in London and ADI Gestion in Paris, respectively. Mr. Achar previously served on the boards of Midgard Shipping Ltd., Midgard International Ltd. and FAN Engine Securitization Limited. Mr. Achar earned a B.A. cum laude in economics from Middlebury College and holds an M.B.A. in finance and international business from Columbia Business School.

#### **Mark Alter, Managing Director and Head of Trading**

Mr. Alter has over 25 years of experience in all aspects of credit trading and portfolio management. Mr. Alter was previously a Partner of The Carlyle Group and a Founding Member of its Leverage Finance Group, which successfully created and funded one of the first-ever \$1B Market Value CDO in 1998. Assets traded in this fund included high-yield bonds, leveraged loans, mezzanine debt and private equity. Mr. Alter joined Carlyle Strategic Partners in 2007 and concentrated solely on trading and sourcing distressed investments, namely bank loans, funded and unfunded revolvers, distressed bonds, and reorganized equities. Prior to joining Carlyle, Mr. Alter was a Founder Member, Managing Director and Head of Fixed Income Trading at PPM America, Inc., where he traded or had oversight of trading in investment grade

and non-investment grade bonds, mortgage backed securities, US Treasuries and commercial paper. He was also a Voting Member on various Committees, namely –Portfolio Management, Relative Value, and Asset Allocation. Mr. Alter has traded in excess of \$20B in corporate assets during his career. Mr. Alter graduated with a B.A. in economics from Stonehill College and holds an M.B.A from Northwestern University.

**David Waxman, Vice President**

Mr. Waxman has over 18 years of private equity and distressed investing experience. Previously, Mr. Waxman was a Principal of Quadrant Management, a private equity firm focused on Middle Market restructurings and turnarounds, and Stone Tower Capital's private equity arm. Before that, Mr. Waxman was a Vice President of The Carlyle Group, focusing on corporate private equity opportunities. Prior to joining Carlyle, Mr. Waxman worked in the mergers, acquisitions and restructuring division of Morgan Stanley and was a founding member of the Grow Network, which was acquired by McGraw Hill. Mr. Waxman previously served on the Board of Amquip Crane Rental LLC, AHN International LLC, Ford Models, Inc., VHSC Cement LLC, and the Grow Network. He also sat on the Board of Directors of Rwanda Works, a non-profit dedicated to prosperity creation in Rwanda through health initiatives and economic development. Mr. Waxman graduated with a B.A. in history from Yale College.

**Michael Livanos, Principal**

Mr. Livanos has over 11 years of experience financing stressed and distressed companies and advising clients on restructuring matters. Mr. Livanos was previously a Vice President at Barclays in the Restructuring and Finance Group. Prior to Barclays, he was an associate at Houlihan Lokey in the Financial Restructuring Group. Mr. Livanos was recruited to Houlihan Lokey while an M.B.A. student at Columbia Business School, where he graduated in 2008 on the Dean's List. Mr. Livanos remains active with the school's Private Equity Program as a mentor and he lectures regularly on restructuring and distressed investing. Prior to Columbia, Mr. Livanos worked at Citigroup's Corporate Headquarters and at Citigroup International within the finance and corporate development functions. In addition to an M.B.A. from Columbia Business School, Mr. Livanos holds a B.S. from Carnegie Mellon with double majors in Computer Science and Business Administration. He is a member of the Dean's alumni advisory board to the School of Computer Science.

**Severin Schmidt, Principal**

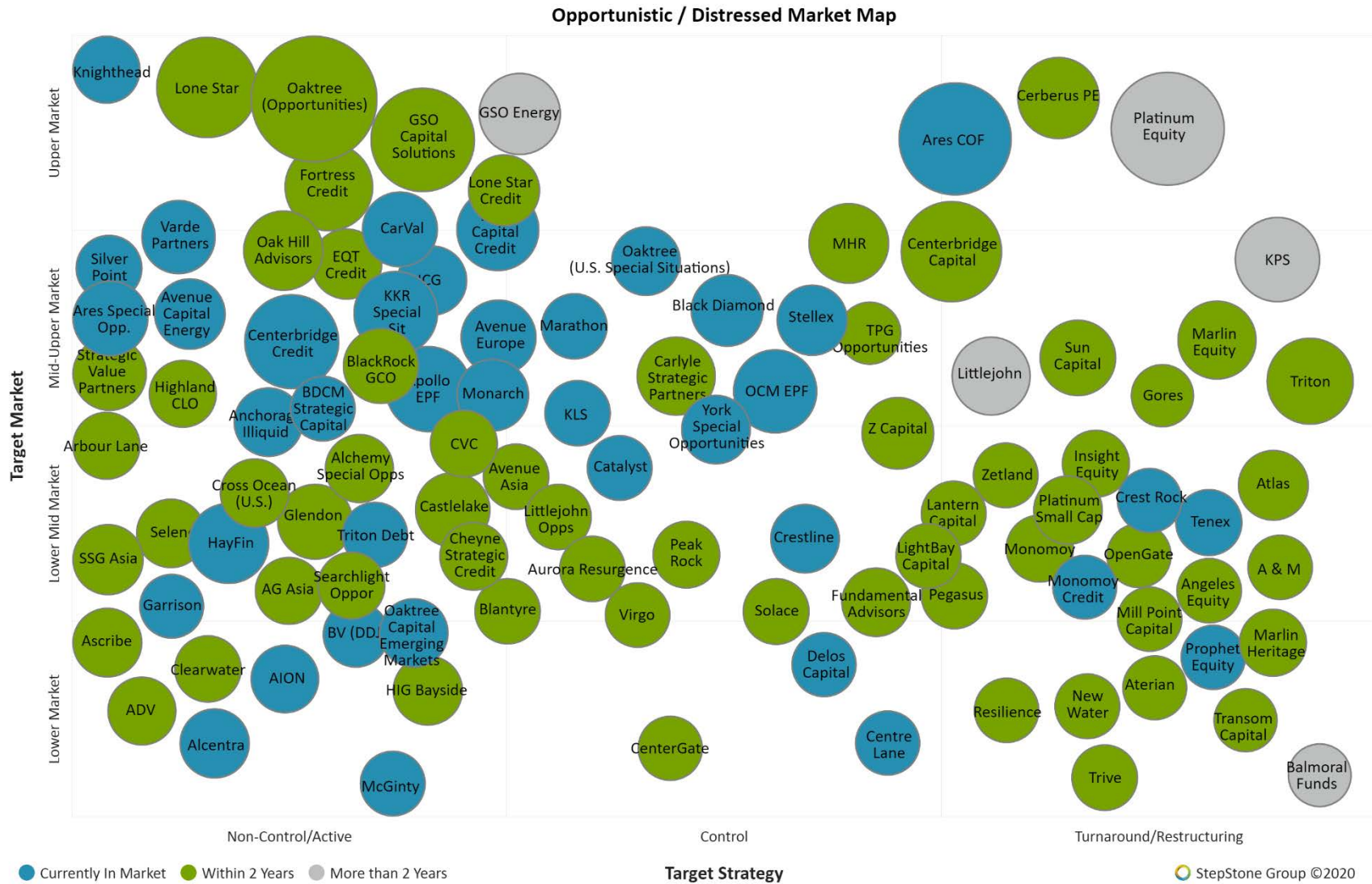
Mr. Schmidt is a member of Stellex's investment team. Based in London, he is responsible for the sourcing, analysis, execution and monitoring of investments across Europe. Before joining Stellex in 2016, Mr. Schmidt was a Vice President at TPG Special Situation Partners. Prior to that, Mr. Schmidt was a Senior Associate at Providence Equity Partners and he started his career as an Analyst in the investment banking division of Morgan Stanley. Mr. Schmidt currently serves as an observer of Dominion Hospitality Topco Limited. Mr. Schmidt previously served on the board of HSE24 (Germany) and the Ambassador Theatre Group (UK). Mr. Schmidt received his MBA (Diplom-Kaufmann) from the University of Mannheim, Germany.

**Tony Braddock, Chief Financial Officer**

Mr. Braddock has over 15 years of experience in the organization, oversight and management of private investment groups. Before joining Stellex, Mr. Braddock founded Oculus Resource Group, Inc. a family-office advisor focused on private investments in natural resources and real estate. Prior to Oculus, he was a Founder and Managing Partner of Merel Capital Management LP, a principal investing group with offices in the US and Mexico. Preceding Merel, Mr. Braddock served as a Vice-President in Houlihan Lokey Howard & Zuckin's Distressed private equity group, Sunrise Capital Partners LP, as an associate in its financial restructuring group, and as a Workout Officer for First Union National Bank, N.A. Mr. Braddock currently is a Director on the board of The Potomac Foundation in Washington, D.C. Mr. Braddock received his B.A. in political science from The George Washington University and M.B.A. in finance and accounting from Columbia Business School.



### Appendix III Market Map



## Glossary

Term	Definition
<b>Balanced Stage Venture Capital</b>	A Venture Capital fund focused on both Early Stage and Late Stage companies
<b>Bridge Financing</b>	Temporary funding that will eventually be replaced by permanent capital from equity investors or debt lenders
<b>Buyout</b>	Fund whose strategy is to acquire controlling interests in companies
<b>Carried Interest</b>	The general partner's share of the profits. The carried interest, rather than the management fee, is designed to be the general partner's chief incentive to strong performance.
<b>Co/Direct Investment</b>	Investment made directly into a company, rather than indirectly through a fund
<b>Committed Capital</b>	Total dollar amount of capital pledged to a fund
<b>Contributed Capital</b>	Total capital contributed to a fund for investments, fees and expenses, including late closing interest paid, less returns of excess capital called and bridge financing
<b>Cost Basis</b>	Remaining amount of invested capital
<b>Debt</b>	Security type that signifies a repayment obligation by a company (e.g. senior debt, subordinated debt, bridge loan etc.)
<b>Distressed</b>	A company's final Stage of development. Company is generally experiencing operational or financial distress
<b>Distressed / Turnaround</b>	Fund whose strategy it is to acquire the Equity or Debt of companies experiencing operational or financial distress
<b>Distributed Capital</b>	Capital distributed to the limited partners, including late closing interest earned
<b>Dow Jones US Total Stock Market Total Return Index</b>	The Dow Jones US Total Stock Market Total Return Index measures all U.S. equity securities with readily available prices. It is a free float-adjusted market capitalization weighted index and is calculated with dividend reinvestment
<b>DPI (Distributions to Paid In / The Realization Multiple)</b>	Total gross distributions divided by total gross contributions
<b>Early Stage</b>	A company's first Stage of development. Company is generally generating modest or no revenues
<b>Equity</b>	Security type that signifies ownership of a company (e.g. common stock, preferred stock, warrants, etc.)
<b>Expansion Stage</b>	A company's third Stage of development. Company is generally experiencing high growth and nearing profitability
<b>Exposure</b>	Sum of Remaining Value plus Unfunded Commitment
<b>Fund-of-Funds</b>	Fund whose strategy is to make investments in other funds
<b>Fund Stage</b>	A fund progresses through three stages over its life: investment (investment period), distribution (post-investment period), and liquidation
<b>Geographic Region</b>	Market location of a company: North America, Western Europe, Africa/Middle East, Latin America, Asia/Pacific Rim
<b>Growth Equity</b>	Fund whose strategy is to invest in companies to expand or restructure operations, enter new markets or finance an acquisition without a change of control of the business
<b>Infrastructure</b>	Fund whose strategy is to acquire interests in physical structures and networks that provide the essential services for society's economic and social needs, e.g. roads, tunnels, communication networks, etc.
<b>Internal Rate of Return (IRR)</b>	The discount rate that results in a net present value of zero of a series of cash flows. The IRR considers both cash flow timing and amount and is the preferred performance measure for private market funds
<b>Invested Capital</b>	Capital invested by a fund in portfolio holdings
<b>Investment Type</b>	Classification of an investment vehicle: Primary Fund, Secondary Fund, Fund-of-Funds
<b>J-Curve</b>	Refers to the shape of the curve illustrating a fund's performance over time. During the initial years of a fund's life, as a result of illiquidity, stagnant valuations, fees and expenses, a fund's performance tends to be negative (the bottom of the "J"). Eventually, as portfolio companies are realized or increase in value and fees become a smaller percentage of overall contributions, performance improves and investors' returns move up the "J" shaped curve
<b>Large</b>	Company with a Size greater than \$1 billion
<b>Late Stage</b>	A company's second Stage of development. Company is generally generating high revenue growth and high losses

Term	Definition
<b>Loss Ratio</b>	The percentage of capital in deals with a total value below cost, over total invested capital
<b>Lower-Mid</b>	Company with a Size greater than \$100 million, but less than \$250 million
<b>Lower Quartile</b>	The point at which 75% of all returns in a group are greater and 25% are lower.
<b>Mature</b>	A company's fourth Stage of development. Company is generally generating modest to no growth and operating profitably
<b>Mega Buyout</b>	Fund whose strategy is to acquire or recapitalize Large businesses, Fund size over \$6 billion
<b>Mezzanine</b>	Fund whose strategy is to acquire subordinated debentures issued by companies
<b>Middle-Market Buyout</b>	Fund whose strategy is to acquire or recapitalize middle-market businesses, Fund size between \$1-\$3 billion
<b>MSCI ACWI Index - Total Return</b>	The MSCI ACWI Total Return is a reflection of the performance of the MSCI ACWI Index, including dividend reinvestment, as calculated by Bloomberg. The MSCI ACWI Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets. The MSCI ACWI consists of 45 country indices comprising 24 developed and 21 emerging market country indices
<b>Multi-Strategy</b>	A Fund that invests across multiple strategies
<b>Natural Resources</b>	Fund whose strategy is to acquire interests in naturally occurring, economically valuable raw materials and all physical facilities and capabilities required for the extraction, refinement, and delivery to end users, e.g. oil and gas properties, timberland, etc.
<b>Net Asset Value ("NAV")</b>	In the context of this report, represents the fair value of an investment, as defined within each limited partnership agreement, yet in compliance with the governmental regulation, generally prepared on a GAAP basis
<b>Net IRR</b>	Annualized effective compound rate of return using daily contributions, distributions and Remaining Value as of the Report Date, net of all fees and expenses, including late closing interest
<b>Percent Interest</b>	Represents an investor's economic interest in a fund based upon the investor's commitment divided by total fund commitments
<b>Primary Investment</b>	An interest in a private equity fund acquired directly from the fund manager during the fundraising period
<b>Public Market Equivalent (PME)</b>	A private equity benchmark that represents the performance of a public market index expressed in terms of an IRR, using the same cash flows and timing as the investor's investment activity in private equity. The PME serves as a proxy for the return the investor could have achieved by investing in the public market. The PME benchmark return assumes cash flows are invested at the end of each day
<b>Publication Date</b>	Refers to the date this report was created as reflected in the Executive Summary
<b>Quartile</b>	Segment of a sample representing a sequential quarter (25%) of the group.
<b>Real Assets</b>	Fund whose strategy is to invest in assets that are tangible or physical in nature such as land, machinery, and livestock
<b>Real Estate</b>	Fund whose strategy is to acquire interests in real estate property
<b>Realized Capital</b>	Capital distributed to a fund from portfolio holdings
<b>Recallable / Recyclable Capital</b>	Capital that has been previously distributed by a fund to investors but may be called again for investment purposes. It is generally associated with realizations that have occurred in the early years of a fund or refers to uninvested capital that has been temporarily returned (i.e. returns of excess capital)
<b>Recapitalization</b>	The reorganization of a company's capital structure
<b>Remaining Value</b>	Capital account balance as reported by the General Partner, generally on a fair value basis
<b>Report Date</b>	Refers to the end date of the reporting period as reflected on the cover page
<b>Return on Investment (ROI)</b>	Ratio of Realized Capital plus Unrealized Value to Invested Capital

Term	Definition
<b>Russell 1000® Total Return Index</b>	The Russell 1000® Total Return Index measures the performance, including dividend reinvestment, of the large-cap segment of the U.S. equity universe. It is a subset of the Russell 3000® Index and includes approximately 1000 of the largest securities based on a combination of their market cap and current index membership. The Russell 1000 represents approximately 92% of the U.S. market.
<b>Russell 3000® Total Return Index</b>	The Russell 3000® Total Return Index measures the performance, including dividend reinvestment, of the largest 3000 U.S. companies representing approximately 98% of the investable U.S. equity market.
<b>RVPI (Residual Value to Paid In)</b>	The current value of all remaining investments within a fund divided by total gross contributions
<b>S&amp;P 500 Price Index</b>	The S&P 500 Price Index is a capitalization-weighted index of 500 stocks. The index is designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing all major industries.
<b>S&amp;P 500 Total Return Index</b>	The S&P 500 Total Return Index is a reflection of the performance of the S&P 500 Index, including dividend reinvestment. All regular cash dividends are assumed to be reinvested in the S&P 500 Index on the ex-date. Special cash dividends trigger a price adjustment in the price return index.
<b>Secondary Investment</b>	Investments that involve the purchase of private equity fund interests or portfolios of direct investments in privately held companies from existing institutional Investors
<b>Sector</b>	Industry in which the company operates: technology, telecommunications, healthcare, financial services, diversified, industrial, consumer, energy, etc.
<b>Size</b>	Capitalization size of a company: Large, Upper-Mid, Lower-Mid, Small
<b>Small</b>	Company with a Size of less than \$100 million
<b>Small Business Investment Company (SBIC)</b>	Lending and investment firms that are licensed and regulated by the Small Business Administration (SBA). The licensing enables them to borrow from the federal government to supplement the private funds of their Investors
<b>Small Buyout</b>	Fund whose strategy is to acquire or recapitalize Small businesses
<b>Stage</b>	The course of development through which a company passes from its inception to its termination: Early, Late, Expansion, Mature, Distressed
<b>Sub-Asset Class</b>	Private equity investments are generally classified as Buyout, Venture Capital, Mezzanine, Distressed/Turnaround, and Fund-of-Funds
<b>Subordinated Debt</b>	Debt with inferior liquidation privileges to senior debt in case of a bankruptcy and consequently, will carry higher interest rates than senior debt to compensate for the subordination.
<b>Term Sheet</b>	A summary of key terms between two or more parties. A non-binding outline of the principal points which definitive agreements will supercede and cover in detail.
<b>TVM (Total Value Multiple) / TVPI (Total Value to Paid In)</b>	Net asset value plus gross distributions divided by total gross contributions
<b>Unfunded Commitment</b>	Amount of capital that remains to be contributed to a fund as defined in a fund's limited partnership agreement
<b>Unrealized Value</b>	Holding value of a portfolio company assigned by the General Partner, which generally represents fair value
<b>Upper-Mid</b>	Company with a Size greater than \$250 million but less than \$1 billion
<b>Upper Quartile</b>	The point at which 25% of all returns in a group are greater and 75% are lower.
<b>Venture Capital</b>	Fund whose strategy is to make investments in Early Stage and/or Late Stage companies
<b>Vintage Year</b>	The calendar year in which an investor first contributes capital to a fund
<b>Vintage Year</b>	The calendar year in which an investor first contributes capital to a fund
<b>Write-Down</b>	A reduction in the value of an investment.
<b>Write-Off</b>	The write-down of a portfolio company's holdings to a valuation of zero and the venture capital investors receive no proceeds from their investment.
<b>Write-Up</b>	An increase in the value of an investment.

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## Stellex Capital Management

*Deep Value & Special Situations Private Equity*



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*Tax treatment depends on the individual circumstances of each client and may be subject to change in the future.*

# Executive Summary

<p><b>Experienced Investment Team</b></p>	<ul style="list-style-type: none"> <li>• The Managing Partners of Stellex have over 45 years combined experience investing in and working with businesses in dislocation             <ul style="list-style-type: none"> <li>– Strategic focus on middle-market, deep value buyouts and special situations</li> <li>– Consistently implemented through Stellex Capital Partners LP and Stellex Capital Investors LP (collectively, “Fund I”), closed in 2017</li> <li>– Refinement of the strategy employed at Carlyle Strategic Partners (“CSP”) from 2003 to 2013</li> </ul> </li> <li>• Significant experience investing in deep value operating businesses with financial, operational or cyclical complexity</li> </ul>
<p><b>Strong Fund I Performance</b></p>	<ul style="list-style-type: none"> <li>• \$870 million of total commitments from high quality institutional investors and consultants             <ul style="list-style-type: none"> <li>– Five of the twenty-five largest pension funds in the world</li> </ul> </li> <li>• Top quartile investment performance as of December 31, 2019<sup>(1)</sup> <ul style="list-style-type: none"> <li>– Realized: 5.4x gross MOIC and 71.2% gross IRR<sup>(2)</sup></li> <li>– Overall: 1.9x gross MOIC and 45.1% gross IRR; 1.6x net MOIC and 28.5% net IRR<sup>(2)</sup></li> </ul> </li> </ul>
<p><b>Compelling, Value-oriented Strategy</b></p>	<ul style="list-style-type: none"> <li>• Target businesses in out-of-favor, often overlooked industries</li> <li>• Invest across the capital structure to minimize binary outcomes and seek to maintain downside protection</li> <li>• Drive favorable transaction dynamics in complex and illiquid situations</li> </ul>
<p><b>Extensive Operating Playbook</b></p>	<ul style="list-style-type: none"> <li>• Focus on mismanaged, undervalued and underperforming companies that often suffer from flawed strategies</li> <li>• Draw on extensive experience with crisis management – including inventory, working capital, customer, production, pricing and/or labor issues</li> <li>• Leverage broad operating network to source C-suite officers, turnaround specialists and industry veterans</li> </ul>

Past performance is not indicative of future results.

(1) Fund I Net IRR and Net TVPI per Cambridge Associates US Private Equity Index and Selected Benchmark Statistics, Since Inception IRR & Multiples By Fund Vintage Year, September 30, 2019. The Cambridge Associates sample size for the vintage year of Fund I (2015) is 79, (2) For further information on how Gross and Net MOIC and IRRs are calculated, please refer to page 7.

# Deep and Experienced Team

## Investment Committee Members



**Raymond Whiteman**  
Managing Partner  
Founder

- Carlyle
- Credit Lyonnais
- Citicorp
- Chase Manhattan



**Michael Stewart**  
Managing Partner  
Founder

- Carlyle
- Sunrise Capital
- Houlihan Lokey



**Karthik Achar**  
Partner  
Head of Europe

- Wayzata
- Morgan Stanley
- EBF & Associates

## U.S. Investment Professionals

**David Waxman**  
Managing Director

**Mike Livanos**  
Principal

**Carl Barcoma**  
Principal

**Trey Lee**  
Principal

**Michael Cochran**  
Vice President

**Olivia Zhao**  
Vice President

**Michael Minchella**  
Vice President

**Catherine DeMarco**  
Senior Associate

**Paul Mazurek**  
Senior Associate

**Herb Belton**  
Associate

**Shaan Gurnani**  
Associate

**Alice Huang**  
Associate

**Ryan Rogers**  
Associate

**Garrett Spriggs**  
Associate

**Ian Wooley**  
Associate

## Europe Investment Professionals

**Severin Schmidt**  
Principal

**Enrico Donisi**  
Associate

## Operations

**Tony Braddock**  
CFO

**Mark Alter**  
Secondary Markets  
Execution

**Tracy Sigal**  
General Counsel & CCO

**Investor Relations**  
Identified

**Joe Posillico**  
Controller

**Melvin Menye**  
Assistant Controller

# Investment Strategy Overview

- Target investments: deep value middle-market companies/operating assets experiencing some form of financial, operational or cyclical underperformance
  - \$25 – \$100 million target investment size
  - \$100 – \$500 million in revenue
- Drive incremental value through operational improvements, turnaround management and strategic repositioning
- Focus on situations with potential to take control or exert significant influence
- Avenues include:
  - Buyout
  - Debt for control
  - Platform
- Seek opportunities at significant discount to fundamental value
- Businesses domiciled in North America or Western Europe

## Leverage Industry Experience

- Sound businesses in dislocation due to cyclical or sector-specific downturns and experiencing industry disfavor
- Asset-intensive businesses that are expected to provide for downside protection
- Sector expertise in manufacturing, business services and operating assets

## Acquire Undervalued Companies

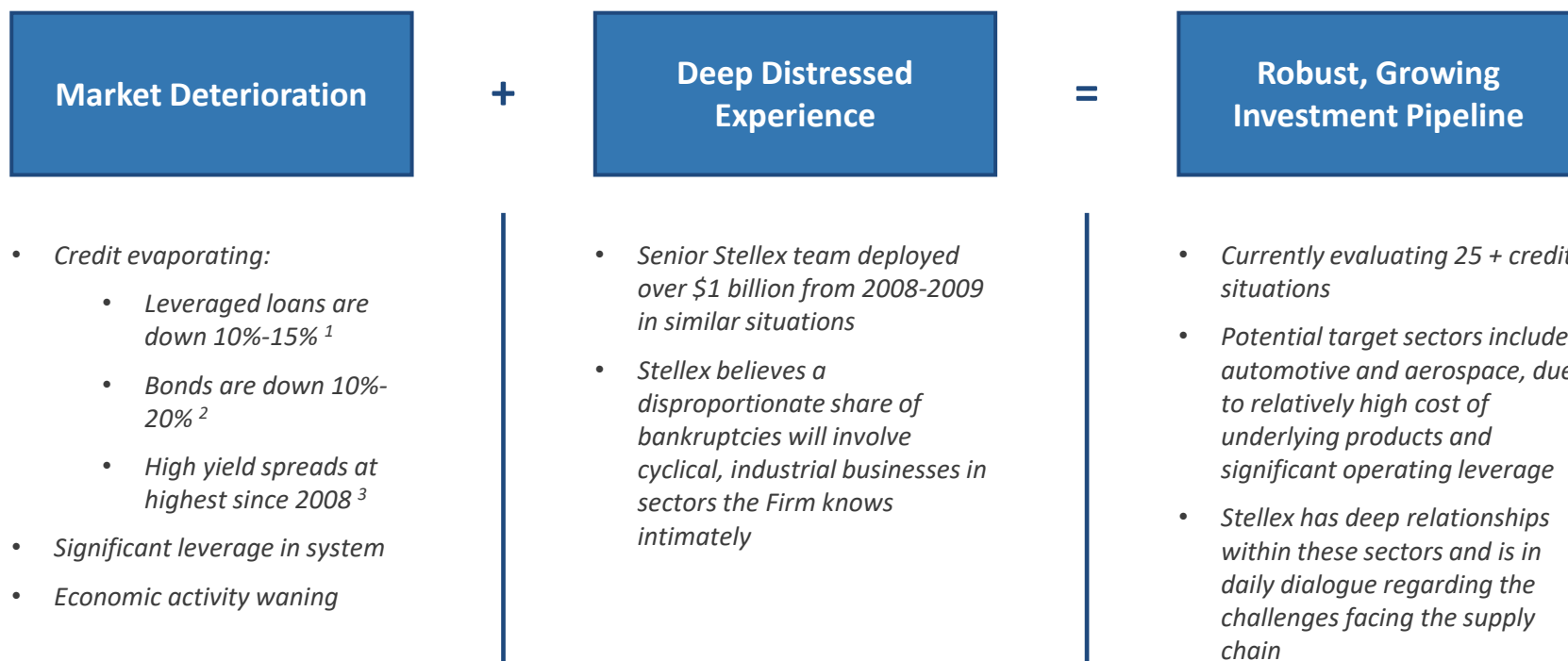
- Family-owned, mismanaged, undervalued and underperforming companies
- Smaller, less liquid situations that are not the target of larger deep value investors
- Investing across various parts of the capital structure tailored to the opportunity and circumstance

## Drive Operational Improvements

- Overhaul and augment management team
- Leverage extensive network of operators
- Restructure balance sheet with emphasis on downside protection and financial flexibility
- Where appropriate, drive growth initiatives

# Current Market Opportunity





- Stellex believes its capability to create investments from stressed or distressed situations will be beneficial in the current market environment
- The Firm believes the turmoil catalyzed by COVID-19 will generate reverberations over the coming months, creating significant opportunities through debt-for-control deals and bankruptcy acquisitions



(1) Source: Invesco Senior Loan ETF range of performance, March 1, 2020 to March 27, 2020; (2) Source: Vanguard Intermediate-Term Corporate Bond Index Fund ETF Shares range of performance, March 1, 2020 to March 27, 2020; (3) Source: Morningstar. *Corporate bonds at Second-Widest level in 20 Years*. March 23, 2020.

# Versatility of Investment Approach

- Stellex believes its core target of underperforming businesses are available for investment at most parts of economic cycle through a variety of strategies which we believe has allowed for consistent capital deployment by the Managing Partners over the last 15 years
- Start with the attractiveness of the business, not the form of the investment
- Multi-disciplined investment team able to adapt to specific transactional circumstances thereby expanding investment universe

Scenario	Experience	Representative Sourcing Channels	Fund I Example(s)
<b>Buyout &amp; Special Situations</b>	<ul style="list-style-type: none"> <li>• Investments with control and/or other rights of significant influence over the strategic direction of the business</li> <li>• Family or founder owned businesses</li> </ul>	Management relationships, industry consultants	
<b>Platform</b>	<ul style="list-style-type: none"> <li>• Buy and build strategies to capitalize on specific dynamics associated within an economic sector</li> </ul>	Industry- or asset-specific management teams	
<b>Carve-out</b>	<ul style="list-style-type: none"> <li>• Non-core business divestitures</li> </ul>	Restructuring advisors, M&A bankers	
<b>Turnarounds &amp; Corporate Reorganization</b>	<ul style="list-style-type: none"> <li>• Situations that will necessitate active involvement in the reorganization process</li> <li>• Crisis management expertise</li> <li>• Operational overhaul</li> <li>• Negative cash flow</li> </ul>	Internal research, bank desks	

Fund I investments presented herein are for illustrative purposes only, have been selected in order to provide examples of the types of investments made by Fund I. References to the investments herein should not be construed as a recommendation of any particular investment or security.

# Leveraging the Stellex Operator Network

- The Stellex investment model targets situations where there is significant overlap of good fundamental value, deep industry expertise and the requisite managerial skillsets and shared interest to pursue within Stellex's 200+ member operator network
- The Stellex operator network was established by the Managing Partners over a combined 45 years of deal making experience
- This operator network has demonstrated to be incredibly useful in sourcing, diligence, execution and value creation within the investment portfolio

## Representative Stellex Operating Partners' Network Experiences

Deal	Morbark	Fenix Auto Parts
Source	Operating Partners	Stellex & Operating Partners
Stellex Operator Advantage	Our operator had been inside Morbark for three months pre-transaction in a consulting capacity and had already identified main cost/productivity opportunities	Extremely difficult transaction without new management experienced with the idiosyncrasies of the industry
Operating Team	<ul style="list-style-type: none"> <li>• Operator plus five colleagues ("Turnaround Team")</li> <li>• Permanent CEO sourced from network</li> </ul>	<ul style="list-style-type: none"> <li>• Three industry veterans who could serve in Board capacity</li> <li>• Two operating execs currently running salvage operations</li> <li>• One recognized leader in consulting to the industry</li> </ul>
Diligence	<ul style="list-style-type: none"> <li>• Fully developed 100 day plan including focus on:               <ul style="list-style-type: none"> <li>• Plant &amp; work flow improvements</li> <li>• Complete sales channel opportunity assessment</li> <li>• Excess asset identification &amp; monetization plan</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Faulty accounting required complete recreation of P&amp;L</li> <li>• Needed accurate assessment of inventory deficiencies</li> <li>• Plan developed to fully integrate fragmented yard management and bidding systems chain-wide</li> </ul>
Deployment	<ul style="list-style-type: none"> <li>• Turnaround Team took formal Morbark roles on Day 1</li> <li>• Initiated and drove 100-day plan</li> <li>• Permanent CEO stepped in at latter stages of process after shadowing efforts from Board level</li> </ul>	<ul style="list-style-type: none"> <li>• All six operators took formal Fenix roles on Day 1</li> <li>• Each team member assigned specific responsibilities including onsite improvement initiatives, system integration, command &amp; control over inventory purchasing, negotiating vendor settlements and non-core site disposition</li> </ul>

Fund I investments presented herein are for illustrative purposes only, have been selected in order to provide examples of the types of investments made by Fund I and do not purport to be a complete list thereof. References to the investments herein should not be construed as a recommendation of any particular investment or security.

# Realized Case Study: Morbark Holdings

## Company

- Morbark Holdings LLC is a designer, manufacturer and marketer of grinding, chipping and debarking equipment serving customers in the industrial, tree care, biomass and municipal markets
- Style: Control – Private Buyout – Limited Auction

## Investment Summary (\$ in millions)

Investment Date	March 2016
Exit Date	October 2019
Status	Realized
Industry	Industrial Machinery
Geography	North America
Purchase Multiple <sup>(1)</sup>	7.5x
Exit Multiple <sup>(2)</sup>	8.8x
Fund Ownership <sup>(3)</sup>	89.4%
Board Representation <sup>(4)</sup>	5 of 6
Stellex Board Members	Whiteman, Waxman
Invested Capital	\$57.2
Realized Proceeds <sup>(5)</sup>	\$293.7
Unrealized Value (at Exit) <sup>(6)</sup>	\$7.3
Gross MOIC	5.3x

## Investment Thesis and Value Creation

### Investment Thesis

- Stellex identified a growing niche market with limited competition from a small number of suppliers dominated by domestic producers with dealer networks and high service levels
- Potential for margin improvement through near-term operational improvements
- Opportunity to improve capital efficiency
- Ability to scale revenue through dealer network expansion and new product development
- Multiple acquisition opportunities to increase equity investment

### Value Creation

- Transitioned from a family-run business culture by installing a professional management team to execute on strategic initiatives
- Implemented lean initiatives and standardized manufacturing processes, significantly reducing quality defects and improved delivery performance
- Introduced automation to the manufacturing process by installing robotic welders for processes that had historically been time and labor intensive and installing lasers which allowed for insourcing production costs that were traditionally outsourced
- Investments in operations and engineering staff allowed the Company to introduce new equipment models based on customer demand and redesign existing equipment models that generated higher margin
- Acquired and integrated two complementary mobile tree care equipment providers, Rayco Manufacturing (November 2017) and Denis Cimaf (December 2018), expanding the Company's product offering, dealer base, and geographic presence
- On October 24, 2019, Stellex completed the sale of Morbark to Alamo Group for \$352 million

## Financial Results (\$ in millions)

	2016A	2017A <sup>(7)</sup>	2018A <sup>(7)</sup>	At Exit <sup>(8)</sup>
<b>Revenue</b>	\$135.7	\$191.5	\$224.5	\$236.2
<b>EBITDA</b>	\$12.2	\$24.8	\$32.2	\$40.2
<b>Margin</b>	9.0%	13.0%	14.4%	17.0%
<b>Net Debt</b>	\$24.8	\$48.9	\$41.4	\$29.3
<b>Net Lev. Multiple</b>	2.0x	2.0x	1.3x	0.7x

Past performance of investments described herein is provided for illustrative purposes only, and is not indicative of the Fund's future investment results.

(1) The purchase multiple presented is based on TEV (defined as total uses of funds) divided by March 2016 LTM EBITDA, (2) The exit multiple is defined as Purchase Price divided by September 2019 LTM EBITDA, (3) Represents distribution of closing equity proceeds, net of escrow and seller holdback, (4) Includes CEO and outside board members appointed by Stellex, (5) Realized Proceeds includes tax distributions, (6) Fair Value at Exit includes proceeds held in escrow and seller holdback accounts attributable to Stellex, (7) 2017A Pro-Forma for Rayco Acquisition, 2018A Pro-Forma for Denis Cimaf Acquisition, (8) At Exit financials LTM as of 9/30/2019



# Team Biographies

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# Managing Partners / Founders



## Ray Whiteman

Mr. Whiteman is a Founder and Managing Partner of Stellex. Prior to establishing Stellex, Mr. Whiteman was a partner of The Carlyle Group and a managing director and co-head of Carlyle Strategic Partners. Prior to joining Carlyle in May 1996, Mr. Whiteman was a vice president and group head in the Leveraged Finance Department of Credit Lyonnais. Mr. Whiteman has also held several positions at both Citicorp and The Chase Manhattan Bank, N.A.

Mr. Whiteman currently serves as a director on the board of Titan Acquisition Holdings L.P. and Cisco Investment Holdings LLC. In the past, Mr. Whiteman served as the Chairman of the boards of MHI Holdings LLC and Morbark Holdings LLC and on the boards Diversified Machine, Inc., RPK Capital Partners, LLC, Metaldyne, LLC, Stellex Aerostructures, Inc., Brintons Carpet Limited, DPG Aerospace and Service King, as well as the investment committee of RLJ Equity Partners, an affiliate of TCG and Robert L. Johnson. Previously, Mr. Whiteman has served on the boards of Carlyle portfolio companies such as US Marine Repair, Norfolk Drydock and Shipping Company, Key Plastics, Breed Technologies and The Aerostructures Corporation. He has also been a member of the Executive Committee of the National Symphony Orchestra of The John F. Kennedy Center and the Smithsonian's National Museum of African Art.

Mr. Whiteman received his B.A. in political science from Williams College, where he was a Lehman Scholar, and M.B.A. from New York University Stern School of Business.



## Michael Stewart

Mr. Stewart is a Founder and Managing Partner of Stellex. Prior to establishing Stellex, Mr. Stewart was a partner of The Carlyle Group and a managing director and co-head of Carlyle Strategic Partners. Prior to joining Carlyle, Mr. Stewart was one of the original principals of Sunrise Capital Partners, L.P. Before that, Mr. Stewart spent eight years at Houlihan Lokey in the Financial Restructuring Group.

Mr. Stewart currently serves as a director of AFG Holdings, Inc., Custom Glass Parent, LLC, Dominion Hospitality Topco Limited, Fenix Parent LLC, Grammer Investment Holdings, LLC and Paragon Metals Holdings LLC. Mr. Stewart previously served as director of Famous Brands International (Mrs. Fields), Permian Tank & Manufacturing, Inc., Sterling LLC, Diversified Machine, Inc., Metaldyne, LLC, Stellex Aerostructures, Inc., Airwalk International, LLC, Day Runner Inc., NEXIQ Technologies, Inc., Klenk Holz AG and Riverside Millwork Company.

Mr. Stewart received his B.S. in finance and entrepreneurial studies from the University of Southern California.

# Senior Professionals



## **Karthik Achar, Partner**

Mr. Achar is the head of Stellex's European office. Prior to joining Stellex in 2014, Mr. Achar was head of the European investment team for Wayzata Investment Partners in London. Prior to joining Wayzata in 2008, Mr. Achar was an Executive Director at Morgan Stanley where he headed a team focused on direct lending to middle-market companies. Prior to joining Morgan Stanley, Mr. Achar was a senior analyst and credit fund manager with certain investment funds in London and Paris.

Mr. Achar currently serves as a director of Dominion Hospitality Topco Limited.

Mr. Achar received his B.A. in economics from Middlebury College and his M.B.A. from Columbia Business School.



## **Mark Alter, Managing Director, Secondary Market Sourcing & Execution**

Mr. Alter is the head of Secondary Market Sourcing & Execution for Stellex. Prior to joining Stellex in 2014, Mr. Alter was a partner of The Carlyle Group and a founding member of its Leverage Finance Group, which successfully created and funded one of the first-ever \$1B Market Value CDO in 1998. Prior to Carlyle, Mr. Alter was a founding member, managing director and head of Fixed Income Trading at PPM America, Inc., where he traded or had oversight of trading in investment grade and non-investment grade bonds, mortgage backed securities, US Treasuries and commercial paper. He was also a voting member on various committees, namely – Portfolio Management, Relative Value, and Asset Allocation. Mr. Alter has traded in excess of \$20B in corporate assets during his career.

Mr. Alter received his B.A. in economics from Stonehill College and M.B.A. from Northwestern University.



## **Tony Braddock, Chief Financial Officer**

Mr. Braddock is the Chief Financial Officer of Stellex Capital Management and its affiliates. Prior to joining Stellex in 2014, Mr. Braddock founded Oculus Resource Group, Inc., a family-office advisory firm focused on private investments in natural resources and real estate. Prior to Oculus, Mr. Braddock was a Founder and Managing Partner of Merel Capital Management LP, a principal investing group with offices in the United States and Mexico. Preceding Merel, Mr. Braddock served as a Vice President at Sunrise Capital Partners LP. Before that, Mr. Braddock was an Associate at Houlihan Lokey in the Financial Restructuring Group, and a workout officer at First Union National Bank, N.A.

Mr. Braddock currently serves as a director on the board of The Potomac Foundation in Washington, D.C.

Mr. Braddock received his B.A. in political science from The George Washington University and his M.B.A. from Columbia Business School.

# Senior Professionals (cont'd)



## **David Waxman, Managing Director**

Mr. Waxman is a member of Stellex's investment team. Before joining Stellex in 2014, Mr. Waxman was a Principal at Quadrant Management and Stone Tower Capital's private equity arm. Before that, Mr. Waxman was a Vice President of The Carlyle Group. Prior to joining Carlyle, Mr. Waxman worked in the mergers, acquisitions and restructuring division of Morgan Stanley and was a Founding Member of the Grow Network, which was acquired by McGraw Hill.

Mr. Waxman currently serves as a director of Titan Acquisition Holdings L.P., and Paragon Metals Holdings LLC. Mr. Waxman previously served on the board of MHI Holdings LLC, Morbark Holdings LLC, Amquip Crane Rental LLC, AHN International LLC, Ford Models, Inc., VHSC Cement LLC and the Grow Network. He also sat on the board of Directors of Rwanda Works, a non-profit dedicated to prosperity creation in Rwanda through health initiatives and economic development.

Mr. Waxman received his B.A. in history from Yale College.

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## **Carl Barcoma, Principal**

Mr. Barcoma is a member of Stellex's investment team. Prior to joining Stellex in 2020, Mr. Barcoma was a Principal at Graycliff Partners where he focused on middle-market leveraged buyouts and credit investments. While at Graycliff, Mr. Barcoma led numerous control equity investments in the industrial sector and served on the boards of several Graycliff portfolio companies. Additionally, Mr. Barcoma executed and managed mezzanine debt and structured equity investments across a variety of industries. Prior to Graycliff, Mr. Barcoma was an analyst at Houlihan Lokey.

Mr. Barcoma received a B.S. in Commerce with concentrations in finance and accounting from the McIntire School of Commerce at the University of Virginia, and completed an economics major at the College of Arts & Sciences. Mr. Barcoma is a CFA charter holder.



## **Trey Lee, Principal**

Mr. Lee is a member of Stellex's investment team. Prior to joining Stellex in 2020, Mr. Lee was a Principal at Eos Partners where he led investments in the Food & Consumer, Transportation & Logistics and Business Services sectors. Before Eos, Mr. Lee as a Vice President at Kamylon Capital.

Mr. Lee previously served on the boards of RCG Global Services Inc., Country Fresh Inc., BeavEx Inc., South Mill Mushrooms Holding Corp., and Legacy Supply Chain Services Inc.

Mr. Lee received his B.B.A. in finance from the University of Georgia.

# Senior Professionals (cont'd)



## **Michael Livanos, Principal**

Mr. Livanos is a member of Stellex's investment team. Prior to joining Stellex in 2014, Mr. Livanos was a Vice President at Barclays in the Restructuring and Finance Group. Prior to Barclays, Mr. Livanos was an Associate at Houlihan Lokey in the Financial Restructuring Group.

Mr. Livanos currently serves as a director on the board of Custom Glass Parent, LLC, Dominion Hospitality Topco Limited and Fenix Parent, LLC.

Mr. Livanos received his B.S. in Computer Science and Business Administration from Carnegie Mellon University and his M.B.A. from Columbia Business School. He is a member of the alumni advisory board of Carnegie Mellon's School of Computer Science and remains active with Columbia Business School's Private Equity Program.



## **Severin Schmidt, Principal**

Mr. Schmidt is a member of Stellex's investment team. Based in London, he is responsible for the sourcing, analysis, execution and monitoring of investments across Europe. Before joining Stellex in 2016, Mr. Schmidt was a Vice President at TPG Special Situation Partners. Prior to that, Mr. Schmidt was a Senior Associate at Providence Equity Partners and he started his career as an Analyst in the investment banking division of Morgan Stanley.

Mr. Schmidt currently serves as an observer of Dominion Hospitality Topco Limited. Mr. Schmidt previously served on the board of HSE24 (Germany) and the Ambassador Theatre Group (UK).

Mr. Schmidt received his master in business administration (Diplom-Kaufmann) from the University of Mannheim, Germany.



## **Tracy Sigal, General Counsel and Chief Compliance Officer**

Ms. Sigal is the General Counsel and Chief Compliance Officer of Stellex. Prior to joining Stellex in 2016, Ms. Sigal was the General Counsel and Chief Compliance Officer of Seneca Capital Investments, L.P., a hedge fund focusing on event driven strategies. Prior to Seneca, Ms. Sigal was a corporate associate at Kramer Levin Naftalis & Frankel LLP.

Ms. Sigal received her B.A. in English from the University of Pennsylvania and her J.D. from Fordham University.



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**State of Connecticut**  
Office of the Treasurer

SHAWN T. WOODEN  
TREASURER

May 8, 2020

Members of the Investment Advisory Council ("IAC")

Re: **Leeds Equity Partners VII, L.P.**

Dear Fellow IAC Member:

At the May 13, 2020 meeting of the IAC, I will present for your consideration a private equity opportunity for the Private Investment Fund ("PIF") in the Connecticut Retirement Plans and Trust Funds (the "CRPTF"): Leeds Equity Partners VII, L.P. ("Leeds VII" or the "Fund"). The Fund has a target size of \$1.0 billion and is being raised by Leeds Equity Partners ("Leeds"), based in New York, NY.

I am considering an investment of up to \$75 million in Leeds VII, a fund that will make control-oriented private equity investments in the education, training, and information services sectors with a primary focus on middle market North American companies. The Leeds investment strategy is focused on companies providing critical services or products that deliver positive, measurable outcomes for a wide range of constituents, attributes that become increasingly important during an economic downturn. Leeds will seek to utilize its deep sector expertise to identify attractive investment opportunities for the Fund in targeted sectors that have proven to be largely resilient across economic cycles. A Fund commitment would provide the CRPTF with additional exposure to an existing PIF manager that has generated attractive investment returns through the execution of the same, sector focused strategy.

Attached for your review is the recommendation from Laurie Martin, Chief Investment Officer, and the due diligence report prepared by StepStone. I look forward to our discussion of these materials at next week's meeting.

Sincerely,

A handwritten signature in blue ink that reads "Shawn T. Wooden".

Shawn T. Wooden  
State Treasurer

OFFICE OF THE STATE TREASURER  
MEMORANDUM



**DECISION**

**TO:** Shawn T. Wooden, Treasurer

**FROM:** Laurie Martin, Chief Investment Officer

**CC:** Darrell V. Hill, Deputy Treasurer  
Raynald D. Leveque, Deputy Chief Investment Officer  
Kevin Cullinan, Chief Risk Officer  
Mark E. Evans, Principal Investment Officer  
Casi Kroth, Investment Officer

**DATE:** March 13, 2020

**SUBJECT:** Leeds Equity Partners VII, L.P. – Final Due Diligence

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**Summary**

The purpose of this memorandum is to recommend that the Connecticut Retirement Plans and Trust Funds (“CRPTF”) consider a commitment of up to \$75 million to Leeds Equity Partners VII, L.P. (“Leeds VII”, or the “Fund”). Leeds VII will pursue control-oriented private equity investments in the education, training, and information services sectors with a primary focus on middle market North American companies.

The Fund’s general partner, Leeds Equity Associates VII, L.P. (the “GP”), is targeting a \$1.0 billion Fund size, with a \$1.25 billion hard cap. The GP is an affiliate of Leeds Equity Partners (“Leeds”, or the “Firm”), a New York, NY based investment management firm formed in 1993. The Firm currently has approximately \$1.6 billion in assets under management across its two active funds.

**Strategic Allocation within the Private Investment Fund**

The Fund’s buyout strategy falls under the Corporate Finance allocation of the Private Investment Fund (“PIF”). The Investment Policy Statement (“IPS”) establishes target allocation ranges of 70% to 100% to Corporate Finance investments within the PIF portfolio as measured by a percentage of total exposure, defined as market value plus unfunded commitments. The PIF’s total exposure to Corporate Finance strategies was approximately 81%, as of September 30, 2019.

The Fund’s sub-strategy is categorized as a small buyout fund, which represented approximately 23% of the PIF’s estimated total market value as of September 30, 2019. The PIF’s Strategic Pacing Plan objectives targets a long-term exposure to the small buyout sub-strategy of 12% of the PIF’s total market value. While the PIF portfolio is currently overweight to the small buyout target, Pension Funds Management (“PFM”) investment professionals note that more than one-third of the PIF’s current small buyout market value is attributable to designated fund-of-funds programs. In addition, the majority of the PIF’s remaining direct small buyout exposure is derived from commitments to managers that the CRPTF no longer invests with or are now raising middle market funds.



The recommended Fund commitment would be consistent with the PIF’s strategic objective of partnering with high quality, lower middle-market managers. An investment in Leeds VII would provide the CRPTF with increased exposure to a Firm that has utilized its sector expertise and evolved investment strategy to generate attractive returns for the CRPTF as summarized in the table below.

*(\$US in millions, as of September 30, 2019)*

Fund	Vintage Year	Fund Status	CRPTF Commitment	Net	
				TVM	IRR
Leeds Equity Partners V	2008	Harvesting	\$40	2.4x	19.9%
Leeds Equity Partners VI	2016	Active	\$75	1.2X	18.1%

### **Investment Strategy and Market Opportunities**

Leeds pursues lower middle-market buy-out investments exclusively within the education, training, and information services sectors, which the Firm refers to as the “Knowledge Industries.” Within the targeted sectors, Leeds seeks to identify leading education and training providers, content developers, and information service providers that offer innovative solutions driving value for students, educators, and administrators as well as employees and employers. Leeds believes these service providers are integral to the changing labor markets, particularly those that are experiencing a widening skills gap as a result of the increasing importance of knowledge and service-based employees in developed economies.

While Leeds has focused on investments in the Knowledge Industries for more than two decades, the Firm has refined its investment strategy significantly as a result of changing market dynamics and lessons learned. Prior to Leeds V, the Firm made venture, minority growth equity, and private investments in public company investments in addition to buyout transactions. Also, Leeds previously invested in hardware and durable goods companies serving the Knowledge Industries as well as sub-sectors that were highly regulated and/or dependent on public funding. Starting with Leeds V, the Firm has been focused exclusively on small buyout and opportunistic growth equity transactions under the direction of the Firm’s current leadership team. Consistent with Leeds V and VI, the Fund will invest primarily in companies based in the U.S. However, Leeds expects to continue to invest selectively in opportunities outside of the U.S., specifically in companies that have a significant presence in the U.S. or international add-on acquisitions for an existing U.S.-based portfolio company.

The Knowledge Industries market opportunity in the U.S. is large, diverse and exhibits positive and resilient long-term growth profiles. According to independent research, annual spending in the U.S. preschool through postsecondary education markets exceeds \$779 billion exclusive of teacher and instructor compensation. Spending on training in the U.S. is estimated to exceed \$167 billion annually while the U.S. information services market represents more than a trillion dollars of annual spend. Leeds believes the continued need for increased individual and organizational effectiveness and efficiencies will be positive, long-term demand drivers for the Knowledge Industries and generate a large and attractive pool of investment opportunities for the Fund.

Based on its sector expertise and investment experience, Leeds targets investments with companies that provide differentiated, mission critical services or products that provide positive, measurable outcomes for its users/clients. Leeds believes that companies meeting these criteria have sustainable competitive advantages based on efficacy and outcomes, which the Firm has found to

be a key value creation driver. Through its long-term presence and reputation for being a supportive and strategic partner to Knowledge Industry entrepreneurs and executives, Leeds believes it has created several competitive advantages in its targeted markets. Leeds has developed a large proprietary database of opportunities built over many years, which is continuously populated and updated through information and insights generated through former and current portfolio company executives, frequent attendance of key industry conferences and trade shows, and sector-focused advisors and bankers. The Firm seeks to leverage its deep sector expertise and networks to identify and close investment opportunities outside of traditional auctions, where purchase price multiples are generally higher due to competitive dynamics.

The Fund will generally focus on companies with total enterprise values between \$125 million to \$300 million. Leeds VII will target 10 to 14 portfolio company investments, each requiring total equity investments of \$80 million to \$125 million from the Fund. The GP expects to offer co-investment opportunities to the Fund's limited partners as it has done with investors in Leeds V and VI.

Leeds seeks to be the control or lead investor in its portfolio companies and plays an active role in supporting the development and growth of each portfolio company. Leeds professionals, in concert with members of the Leeds Board of Advisors (the "Board"), provide portfolio companies with strategic guidance, management team resources, key new customer and relationship introductions, sourcing and execution of M&A opportunities, and access to best practices and cost savings opportunities across the Leeds portfolio.

### **Firm and Management Team**

Leeds Equity Partners was founded in 1993 by Jeffery Leeds and Robert Bernstein. Jeffery Leeds has over 27 years of experience investing in private equity transactions in the Knowledge Industry. Prior to co-founding the Firm, Leeds spent seven years specializing in mergers and acquisitions and corporate finance at Lazard Freres & Co, where he and Bernstein worked together. Jeffery Leeds remains active with the Firm and has championed its transition from a founder-led organization to a true partnership. As a result of this process, the Firm is now led by Leeds and along with three senior Partners: Jacques Galante, Scott VanHoy, and Peter Lyons. Bernstein stepped back from day-to-day activities at the Firm in 2016 and has transitioned to an Advisor role on the Leeds Board.

Jacques Galante and Scott VanHoy have worked together at Leeds for more than ten years and have an average of 20 years of relevant investing experience. While Galante and VanHoy were promoted to Partner with Leeds VI, both have been leading investments at Leeds for some time and, together with Jeffery Leeds, have been responsible for most of the investments in Leeds V and VI. Peter Lyons, Partner & CFO, has been with Leeds for more than 20 years. Leeds, Galante, VanHoy, and Lyons are members of the Firm's Management Committee, which is responsible for the Firm's strategy, personnel and staffing decisions, and day-to-day operations. These four senior Partners also comprise the Leeds Investment Committee.

In addition to the four senior Partners, the Leeds investment team is comprised of two Managing Directors, two Principals, one Senior Associate, and four Associates. Consistent with the Leeds practices of hiring and developing junior investment professionals, the Firm's two Managing Directors and two Principals have been with Leeds for an average tenure of over 10 years and have

been promoted several times, and have been investing for the past 15 years. The Leeds' investment and operations professionals are located in the Firm's New York office.

During 2019, Leeds recruited Susan Cates to lead the Firm's new growth initiatives team, which focuses on identifying and implementing strategic growth initiatives for the Leeds portfolio companies. Cates was well-known to the Firm through her more than 20 years of experience as an advisor, investor and operator in the Knowledge Industries. Prior to joining Leeds as a Partner, Cates had prior experience as the Chief Operating Officer of 2U Inc., an education technology company, and the President of Executive Development at the University of North Carolina Kenan-Flagler Business School. Elizabeth Chou also joined the Leeds growth initiative team in 2019 after spending nearly a decade investing in high growth companies in the Knowledge Industries. Cates and Chou work from a satellite office in North Carolina.

The Leeds investment team is further supported by an active Board that is led by Tim Shriver, the Chairman of the Special Olympics. The Board frequently consults on a broad array of activities and decisions including individual investments, business growth opportunities, market trends, and regulatory policies.

### **Track Record**

As of September 30, 2019, Leeds had invested more than \$1.5 billion in 47 transaction across its six prior funds. The Firm's investments generated a gross internal rate of return ("IRR") of 20% and a gross total value multiple ("TVM") of 2.0x as of September 30, 2019. Through the same date, Leeds had realized 33 investments, which generated a gross IRR of 21% and returned \$1.8 billion of total value, or 2.3x invested capital of \$786 million.

On a net basis, Leeds overall track record showed an IRR of 13% and a TVM of 1.7x as of September 30, 2019. While a summary of the Firm's inception to date track record is provided in the table below, PFM investment professionals note that the Firm's investment returns prior to Leeds V were impacted by venture capital and other investments that are no longer part of the Leeds investment strategy.

(\$US in millions, as of September 30, 2019)

Leeds Equity Partners													
Investment Performance Summary													
Fund	Vintage Year	Fund Size	# Deals	Invested Capital	Realized Value	Unrealized Value	Total Value	Gross/Net			Quartile Rank		
								TVM	IRR	DPI	TVM	IRR	DPI
Leeds Equity Partners I	1995	\$48	7	\$43	\$130	-	\$130	3.0x / 2.2X	26% / 17%	3.0x / 2.2x	1 <sup>st</sup>	2 <sup>nd</sup>	1 <sup>st</sup>
Leeds Equity Partners II	1996	\$13	1	\$13	\$47	-	\$47	3.6x / 3.3X	79% / 72%	3.6x / 3.3x	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>
Leeds Equity Partners III	1999	\$158	11	\$138	\$219	-	\$219	1.6x / 1.3X	21% / 10%	1.6x / 1.3x	3 <sup>rd</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
Leeds Equity Partners IV	2003	\$430	8	\$382	\$595	-	\$595	1.6x / 1.3X	8% / 4%	1.6x / 1.3x	3 <sup>rd</sup>	3 <sup>rd</sup>	3 <sup>rd</sup>
Leeds Equity Partners V	2008	\$522	11	\$452	\$813	\$582	\$1,395	3.1x / 2.4X	28% / 19%	1.8x / 1.4x	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
Leeds Equity Partners VI	2016	\$760	9	\$509	\$2	\$691	\$693	1.4x / 1.2X	31% / 20%	0.0x / 0.0x	2 <sup>nd</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
<b>Total</b>		<b>\$1,931</b>	<b>47</b>	<b>\$1,537</b>	<b>\$1,806</b>	<b>\$1,273</b>	<b>\$3,079</b>	<b>2.0x / 1.7X</b>	<b>20% / 13%</b>	<b>1.2x 1.0x</b>			

Source: Leeds, CRPTF, Burgiss Private IQ 9/30/19 U.S. Private Equity Buyouts Benchmark. Quartile Rank based on net returns.

Prior to Leeds V, the Firm's investment performance was inconsistent with stronger returns dampened or offset by significant losses or underperforming investments. Through strategy refinements implemented under the Firm's current senior leadership, the absolute and relative performance of Leeds V and VI have improved along with a significant decline in loss ratios.

Relative to vintage year peers, Leeds V ranked as first and second quartile fund across the relevant TVM and IRR metrics, respectively, as of September 30, 2019. The Leeds V portfolio was constructed with eight control buyout investments and three structured debt or equity investments. As of September 30, 2019, the fund had realized five control buyouts and one structured debt investment, which generated strong results with a combined gross TVM in excess of 3.5x and a gross IRR greater than 35%.

Despite the strong performance of the Leeds V realized investments, the fund's distribution rate lagged the average for 2008 vintage year funds. This is largely because Leeds V made its first investment in 2008 with all other fund investments made between 2011 and 2016. This protracted investment period also contributes to the fund's relatively wide gross and net return spread. However, the fund's distribution rate is expected to continue to improve as Leeds seeks liquidity for the fund's remaining investments. In fact, Leeds V closed on the sale of Edcentric in March 2020 at a valuation that exceeded the fund's September 30, 2019 mark by 40%. Pro forma of the Edcentric exit, the Leeds V portfolio had returned more than 2.2x total capital invested with substantial value to be realized in the four remaining fund investments.

Fund VI, while still developing, is off to a solid start. The fund made its first investment in December 2016, with nine platform companies held for an average of 1.5 years as of September 30, 2019. Leeds recently closed on one of the two remaining platform investments expected to be added to the Leeds VI portfolio before it is fully committed. The Leeds VI portfolio is performing well with companies generating average revenue and EBITDA growth rates in excess of 15% and 20%, respectively, with a leverage multiple of 3.9x EBITDA, which is in line with the average leverage multiple in the small buyout market per Step Stone's SPI database.

### **Key Strengths**

- 1. Experienced, Sector-Focused Team.** The Firm's senior team members have an average tenure of more than 16 years at Leeds, which has been focused on investments in the Knowledge Industries for more than two decades. The Firm's deep sector expertise and investment experience allows Leeds to identify important trends impacting and creating attractive investment opportunities for the Leeds funds. Leeds seeks to create information advantages gained from prior investments and due diligence performed in the relevant subsector as well as its vast network of relationships with vendors, management teams, and advisors throughout the Knowledge Industries. These deep industry insights and long-term perspectives provide Leeds with competitive advantages used to source, diligence, transact and manage investment opportunities. Further, Leeds' brand recognition has positioned the Firm to be the partner of choice for many founder and management led companies seeking a capital partner that has successfully supported the growth of other Knowledge Industry companies.
- 2. Strong Performance through Strategy Refinements.** While Leeds I through IV generated an overall gross return of 1.7x invested capital, the Firm's performance with these funds was inconsistent. Leeds incorporated lessons learned from these earlier funds over time and had completely refined its investment strategy by Leeds V, including the elimination of venture stage investments as well as investments in Knowledge Industries sub-sectors involving hardware/durable goods or significant regulatory risks. The portfolio construction and performance of Leeds V and VI have demonstrated the positive impact of the Firm's maturation and willingness to drive continued improvements across its professionals and investment practices. Leeds V had generated a net TVM of 2.4x as of September 30, 2019,

with Leeds anticipating additional value appreciation with the fund's remaining investments. Leeds VI, while a less mature fund, is off to a strong start with companies executing against organic and M&A-driven growth initiatives. These attractive returns have been generated with the modest use of leverage and a zero loss ratio across Leeds V and VI as of September 30, 2019.

### **Major Risks and Mitigants**

- 1. Increased Fund Size.** The GP is targeting limited partner commitments of \$1.0 billion for Leeds VII with a hard cap of \$1.25 billion, which would represent increases of 32% and 64%, respectively, over the size of Leeds VI. The larger anticipated size of Leeds VII raises concerns that Leeds may be looking to shift its strategy toward larger, more competitive deals or lack the capacity to effectively deploy a larger pool of capital. Despite the likely increase in the size of Leeds VII, Leeds is expected to continue to focus on the same middle market investment opportunities it has historically targeted. The GP anticipates that the Fund will make total investments of \$80 million to \$125 million per company, including the original platform investments and equity for add-on acquisitions. As of December 31, 2019, the nine Leeds VI platform investments had been funded with an average equity investment of over \$85 million provided by Leeds VI and limited partner co-investment capital. This average is expected to increase as several of the Leeds VI will continue to make add-on acquisitions.

PFM investment professionals gained comfort that Leeds has the necessary capacity to effectively deploy Leeds VII. The GP expects to construct the Fund's portfolio with 10 to 14 portfolio companies, which would result in a slightly larger portfolio than the 11 companies in Leeds V and anticipated for Leeds VI. The Firm has continued to add resources, including the growth initiative team, which are expected to provide more than enough capacity to invest and manage the Fund. In addition, Leeds continues to pursue exit opportunities for several Leeds V companies, which should create additional team capacity as the investment activities for Leeds VII ramp up.

- 2. Unrealized Fund VI Portfolio Investments.** Leeds VI is a 2016 vintage fund that was 87% committed across nine companies and fully unrealized as of September 30, 2019. While the fund's investments are generally performing well, the portfolio is relatively immature with an average hold period of less than 1.5 years and there is a risk that the Leeds VI investments will not be realized in line with the Firm's underwriting expectations. This risk is mitigated by several factors. Leeds has assembled the fund's portfolio consistent with its strategy, including a focus on companies exhibiting strong organic growth in the Knowledge Industries. Leeds believes it has acquired the fund's companies at attractive multiples relative to Knowledge Industries comps while the portfolio was prudently levered with an average 3.6x net debt to EBITDA multiple as of September 30, 2019. Over the last five years, Leeds has generally realized its portfolio companies at actual values in excess of the interim valuation two quarters prior to exit. Lastly, there are several Leeds VI companies that may provide near-term partial liquidity through dividend recaps with one potential full exit possible during 2020. The combination of these factors provides confidence that Leeds will continue to grow and extract value from the unrealized Leeds VII portfolio.

### **Legal and Regulatory Disclosure (provided by Legal)**

In its disclosure, Leeds Equity Advisors, Inc. (the “Advisor”) references a lawsuit involving a buyout by Leeds Equity IV of Instituto de Banca y Comercio, Inc. (“IBC”) in March 2007. It is alleged that there was a prior dispute at IBC with FirstBank Corp., where First Bank Corp. claimed an economic interest in IBC in connection with a loan. Leeds acquired this suit through the acquisition of IBC. Leeds received an indemnification provision from FirstBank Corp. in connection with the merger agreement, whereby Leeds put the full amount of any damages in escrow. Despite this provision, a suit was filed in the U.S. District Court of Puerto Rico in October 2009 against Leeds Equity IV and Jeffrey Leeds. The case is ongoing, and counsel is actively negotiating to release Leeds from the suit. Leeds indicates there will be no impact to Leeds or its funds.

Another suit involved a merger agreement to acquire control of Staffing Solutions Holdings, Inc. by Leeds Equity IV. The suit was filed in Delaware State Court. Leeds Equity IV sold its interest in Staffing Solutions to TrueBlue, Inc. The suit arose as a result of a provision that required a specified accounting to be concluded. The dispute surrounded who was responsible for the accounting. The Court dismissed most of the claims against Leeds and the case was resolved in 2016 with TrueBlue accepting a \$3.75 million payment from Leeds’ escrow accounts to cover its expected losses.

Leeds indicates that it does not have any material claims under its fidelity, fiduciary or E&O insurance policies; or ongoing investigations to report.

The Advisor’s ADV is consistent with its disclosure to the Office of the Treasurer.

The Advisor states it has adequate procedures to undertake internal investigations of its employees, officers and directors.

### **Compliance Review (provided by Compliance)**

The Chief Compliance Officer’s Workforce Diversity & Corporate Citizenship review is attached.

### **Environment, Social & Governance Analysis (“ESG”) (provided by Policy)**

The Assistant Treasurer for Policy’s Evaluation and Implementation of Sustainable Principles review is attached.

**SUMMARY OF RESPONSES FROM  
LEEDS EQUITY ADVISORS**

**TO ATTACHMENT M: EVALUATION AND IMPLEMENTATION OF SUSTAINABLE  
PRINCIPLES**

**SUBMITTED BY THE TREASURY'S POLICY UNIT**

Leeds became a signatory to the UN Principles of Responsible Investment in January 2020. Otherwise, the firm is not a member of any of the sustainability-oriented organizations identified by the Treasury (e.g., Carbon Disclosure Project; International Corporate Governance Network; Investor Network on Climate Risk or UK Stewardship Code).

The firm recently established its own ESG policy, which includes examples of the types of risks considered during the investment decision-making process, including environmental, public health, safety, and social factors associated with potential investments. Its deal teams are responsible for evaluating and monitoring investment performance; and while there is no attempt to quantify ESG metrics, teams may “hire third party subject matters experts to assist in the evaluation of the potential impact,” such as environmental engineers or compensation consultants.

Leeds recently established a standing ESG Committee (its first meeting will be held in April of 2020) which will evaluate material ESG issues relevant to long-term sustainable investing, which include ESG factors, governance structures, and adequate compliance. Leeds intends to engage with their portfolio companies on ESG issues, where appropriate, and encourage progress against ESG metrics along with encouraging sufficient internal and external reporting. According to the company's ESG Policy, portfolio companies will be required to present their ESG risks and opportunities to the committee on a periodic basis.

Overall, Leeds' disclosure reflects good integration of ESG considerations into its investment process, as well as a commitment to growing and evolving its approach to these factors.

## COMPLIANCE REVIEW FOR LEEDS EQUITY PARTNERS VII, LP

SUMMARY OF LEGAL AND POLICY<sup>1</sup> ATTACHMENTS

SUBMITTED BY

LEEDS EQUITY ADVISORS, INC.**I. Review of Required Legal and Policy Attachments**

LEEDS EQUITY ADVISORS, INC. ("Leeds") completed all necessary attachments. It disclosed no third party fees, campaign contributions, known conflicts, or gifts. Its disclosure of legal/regulatory proceedings is being reviewed by the Legal Unit.

**II. Workforce Diversity (See Also 3 year Workforce Diversity Snapshot Page Attached)**

As of December 2019, Leeds, a New York-based firm, employed 21, an increase of 4 employees since December 2017. The firm identified 1 woman as an Executive/Senior Level Official and Manager (the senior-most level of the firm). No minorities serve at this level, however 1 minority male serves at the Management Level. Over the 3 year period reported (2017 through 2019) 1 minority male was promoted into a Professional or Managerial position. Overall, women and minorities are better represented at levels below Management.

The firm reported that it "typically hires only one or two individuals over a three-year period and has prioritized the hiring of women and minorities. Since 2017, five of the last seven new hires have been either women or minorities including three female investment professionals."

*Workforce Statistics***For Executive/Senior Level Officials and Managers:**

- Women held 17% (1 of 6) of these positions in 2019, 0% (0 of 5) in 2018, and 0% (0 of 2) in 2017.
- Minorities held 0% (0 of 6) of these positions in the 3 year period reported (2017 through 2019).

**At the Management Level Overall:**

- Women held 18% (2 of 11) of these positions in 2019, 0% (0 of 9) in 2018, and 0% (0 of 6) in 2017.
- Minorities held 9% (9% Black) or 1 of 11 of these positions in 2019, 11% (1% Black) or 1 of 9 in 2018, and 0% (0 of 6) in 2017).

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<sup>1</sup> The Treasury's Policy Unit will prepare a separate Summary with respect to Leeds's ESG submission.



**At the Professional Level:**

- Women held 29% (2 of 7) of these positions in 2019, up from 17% (1 of 6) in 2018, and 11% (1 of 9) in 2017.
- Minorities held 57% (57% Asian) or 4 of 7 of these positions in 2019, up from 33% (33% Asian) or 2 of 6 of these positions in 2018, and 22% (11% Asian and 11% Black) or 2 of 9 of these positions in 2017.

**Firm-wide:**

- Women held 38% (8 of 21) of these positions in 2019, up from 22% (4 of 18) in 2018, and 24% (4 of 17) in 2017.
- Minorities held 24% (19% Asian and 5% Black) or 5 of 21 of these positions in 2019, up from 17% (11% Asian and 6% Black) or 3 of 18 of these positions in 2018, and 12% (6% Asian and 6% Black) or 2 of 17 of these positions in 2017.

**III. Corporate Citizenship**

*Charitable Giving:*

Leeds has prioritized its corporate citizenship on “supporting educational causes”. Some of the organizations supported include: Green Dot, The Edible Schoolyard<sup>2</sup>, the Hetrick Martin Institute, and Friends of the Children of NY. The nature of the firm’s support ranges from serving on boards, on-going financial support and event support.

*Internships/Scholarships:*

The firm did not submit a response.

*Procurement:*

Leeds does not have a written procurement program with respect to women-owned, minority-owned and/or emerging businesses. However, the firm reported that “such [a] policy is under consideration.”

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<sup>2</sup> The Edible Schoolyard network includes several locations in Connecticut.

OFFICE OF THE STATE TREASURER  
MEMORANDUM



**INFORMATION**

**TO:** Shawn T. Wooden, Treasurer

**FROM:** Laurie Martin, Chief Investment Officer

**CC:** Darrell V. Hill, Deputy Treasurer  
Raynald D. Leveque, Deputy Chief Investment Officer  
Kevin Cullinan, Chief Risk Officer  
Mark E. Evans, Principal Investment Officer  
Casi Kroth, Investment Officer

**DATE:** April 15, 2020

**SUBJECT:** Leeds Equity Partners VII, L.P. – Update

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**Summary**

The purpose of this memorandum is to provide you with information on the Leeds Equity Partners VII, L.P. (“Leeds VII”, or the “Fund”) investment opportunity in light of potential impacts of the COVID-19 pandemic. The Fund will be managed by Leeds Equity Partners (“Leeds”, or the “Firm”), a New York, NY based investment management firm formed in 1993.

StepStone has also provided a memorandum on the expected impact of COVID-19 on Leeds and the Fund, which is attached for your reference.

**Impact on Leeds Strategy and Market Opportunity**

While the full economic and societal impact of COVID-19 on the Leeds investment strategy is not knowable, the Firm’s sector focus and expertise combined with its value creation practices should continue to be an advantage to Leeds and the Fund. Over its history, Leeds has continued to refine its focus to now include only Knowledge Industries sub-sectors that exhibit positive and resilient growth profiles driven by favorable long-term, macro trends. Economic disruptions caused by COVID-19 are unlikely to derail the increased importance of and need for knowledge and service-based employees in developed economies.

The U.S. PreK-12 and higher education sectors have generally proven to be resilient during historical recessionary periods. Most recently, U.S. PreK-12 spending increased from 2007 through 2010 despite a recessionary period caused by the Global Financial Crisis (“GFC”). While a prolonged economic downturn may have a negative impact on birth rates, a leading indicator for future enrollments, and spending on private education, the expected demand for improved education outcomes, quality content and tools, and specialized services is not expected to abate over the long-term. Higher education also proved to be counter-cyclical during the GFC as displaced workers seeking education opportunities to expand their future career opportunities led to increased U.S. enrollment and higher ed spending from 2007 through 2010.

The long-term demand drivers for training are like those of the U.S. education market: organizations and individuals are expected to continue to invest in training to fill core skills gaps while also allowing employees to advance their careers and employers to benefit from improved productivity. U.S. training expenditures, estimated to be \$96 billion in 2018, did decline by approximately 13% from 2007 to 2009 but returned to pre-GFC levels by 2011. Within the broader training market, Leeds has focused on specific sub-sectors, including e-learning, software, and professional certifications that are expected to continue to grow faster than the overall training market. While corporate spending on training would be expected to decline in the near-term aftermath of COVID-19, the long-term growth drivers remain favorable for the types of training companies that Leeds targets: those that allow individuals to retool skillsets for new or advanced employment opportunities while delivering demonstrable returns on investment for employers.

At nearly \$1.5 trillion in annual spend, the U.S. information services market is large and diverse with spending increasingly on software and information services that are critical to the on-going operations of businesses and organizations across all sectors and sizes. While spending may be negatively impacted during a recession due to organizational budget tightening, the long-term growth profile remains positive due to the many benefits provided to users and organizations, including improved employee efficiency and productivity, increased ability to manage and analyze data, and the automation of increasingly complex compliance or regulatory requirements. Leeds tends to focus on information services providing “pain point” solutions, proprietary content, or workforce productivity tools that are difficult to displace while delivering attractive ROIs. While any one information services company or sub-sector could be negatively impacted for an extended period, Leeds should continue to find attractive investments in this large and diverse opportunity set.

The sector expertise of the Leeds team should provide a stronger competitive advantage and prove particularly valuable during times of uncertain market conditions. The Leeds team has followed or developed relationships with many Knowledge Industries companies for years, which should allow the Firm to exploit its information advantages of perspective and insights not available to most other private equity firms. Faced with a challenging economic outlook, founders and management teams are likely to place an increased value on Leeds’ well-established track record of successfully supporting companies with organic and M&A growth strategies.

Lastly, Leeds investment strategy and practices are not dependent on excessive leverage to drive returns. In fact, Leeds continued to use leverage levels in line with its market averages while its average purchase price multiples were higher than industry averages across Leeds V and VI. Despite this dynamic, Leeds has delivered strong realized returns from the more mature Leeds V portfolio due to value creation driven by stronger financial performance and increased strategic value of its portfolio companies and not financial engineering. Going forward, Leeds and the Fund should benefit from moderated entry price expectations and the Firm’s historical discipline of building value without the excessive use of leverage. Z tighter credit markets are likely until sometime after the economy begins recovering from the impacts of COVID-19.

**State of Connecticut  
Retirement Plans and Trust Funds**

**Recommendation Report**

**Leeds Equity Partners VII**

**March 13<sup>th</sup>, 2020**

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## Executive Summary

<b>Fund</b>	Leeds Equity Partners VII (“Leeds VII”, “Fund VII” or the “Fund”)
<b>General Partner</b>	Leeds Equity Partners (“Leeds”, the “GP” or the “Firm”)
<b>Report Date</b>	Data as of September 30, 2019
<b>Fundraising</b>	Leeds is currently in market with its seventh institutional fund, Leeds Equity Partners VII, targeting US\$1.0 billion in commitments. There is no formal hardcap stated in the LPA; however, Leeds has verbally communicated that an informal hardcap will be set at US\$1.3 billion.
<b>Source</b>	Connecticut Retirement Plans and Trust Funds (“CRPTF”) sourced the investment opportunity directly for evaluation for the Private Investment Fund (“PIF”). Leeds is an existing manager in the PIF portfolio.
<b>Key Terms</b>	<p><u>Management Fee</u>: 2.00% Management Fee per annum of an amount equal to the Non Affiliated Partners’ Percentage of the aggregate Commitment during the Investment Period. Thereafter, 2.00% per annum of the Non-Affiliated Partners’ Percentage of an amount equal to the aggregate amount of Investment Contributions made.</p> <p><u>Carried Interest</u>: The Carried Interest allocation will be 20% after an 8% Preferred Return for Limited Partners (with 100% General Partner catch-up), subject to clawback.</p> <p><u>Termination Provisions</u>: For cause termination of the Fund permitted upon written notice of the Limited Partners holding at least a majority of the Aggregate Commitments. No fault termination of the Fund permitted after the second anniversary of the Effective Date with written notice of Limited Partners and Parallel Fund Limited Partners holding at least 80% of the Aggregate Commitments</p> <p><u>Key Person</u>: In Leeds VII, a key person event will generally be triggered if two of Jeffrey Leeds, Jacques Galante and Scott VanHoy ceases to devote substantially all of their business time and attention to the affairs of the Partnership, the Executive Fund, the Parallel Fund, any Alternative Investment Vehicle and any Person formed primarily to invest side-by-side with the Partnership in one or more Portfolio Companies, for any reason (a “Cessation Event”).</p>
<b>Investment Strategy</b>	Leeds is a Lower Middle Market private equity firm focused primarily on control buyout investments in the Knowledge Industry, which Leeds defines as the education, training, and information services markets. Fund VII will target profitable North American businesses offering a differentiated, mission-critical product or service that can be sourced outside of broad auction processes through existing relationships such as past or present portfolio companies, the Firm’s Board of Advisors, intermediaries, and through proactive outreach at industry conferences and trade shows. Leeds’

target companies are often owned and operated by management teams that will have a significant continuing equity stake. In Fund VII, the Firm will seek to build a portfolio of 10-14 investments, with equity check sizes ranging from US\$80-125 million in companies with TEVs ranging from US\$125-300 million.

## Management Team

The Firm was founded in 1993 by Jeffrey Leeds and Robert Bernstein (the “Co-Founders”). Prior to the Firm’s formation, the Co-Founders worked together at Lazard Frères. Mr. Leeds is now the Managing Partner at the Firm, while Mr. Bernstein serves in an Advisor role. The GP’s investment team (the “Investment Team”) is comprised of a Managing Partner, two Partners, two Managing Directors, two Principals, one Senior Associate, and four Associates. The Firm also recently added a two-person Portfolio Growth Team, including one non-investment Partner, that are focused on sourcing and identifying unique diligence and value-creation angles. The Firm also has a six-person Operations Team that includes its CFO. All Leeds professionals apart from the Portfolio Growth Team professionals are based in the GP’s New York City office. The Portfolio Growth Team is based in North Carolina.

## Track Record

Since inception, Leeds has raised US\$1.9 billion across five institutional funds and one single transaction vehicle. The GP has invested US\$1.5 billion across 47 investments since inception, generating a gross TVM/IRR of 2.0x/20% and a net TVM/IRR of 1.7x/12% as of September 30, 2019. Across its portfolio, Leeds has generated a DPI of 1.0x. Leeds is currently investing out of Leeds Equity Partners VI LP (“Leeds VI” or “Fund VI”), which is a 2016 vintage fund with US\$760 million in capital commitments. Fund VI has invested US\$509 million across nine platform investments and is 81% committed. It is marked at a 1.4x/31% gross TVM/IRR and a 1.2x/20% net TVM/IRR. Fund VI is completely unrealized.

(US\$ in millions, as of September 30, 2019)

Fund	Vintage Year	Fund Size	# of Deals	Leeds Investment Performance									
				Invested Capital	Realized Value	Unrealized Value	Total Value	Gross TVM	Gross IRR	Loss Ratio	Net TVM	Net IRR	DPI
Leeds I	1995	\$48	7	\$43	\$130	-	\$130	3.0x	26%	10%	2.2x	17%	2.2x
Leeds II	1996	13	1	13	47	-	47	3.6x	79%	0%	3.3x	72%	3.3x
Leeds III	1999	158	11	138	219	-	219	1.6x	21%	47%	1.3x	10%	1.3x
Leeds IV	2003	430	8	382	595	-	595	1.6x	8%	44%	1.3x	4%	1.3x
<b>Realized Funds</b>		<b>\$649</b>	<b>27</b>	<b>\$576</b>	<b>\$991</b>	<b>-</b>	<b>\$991</b>	<b>1.7x</b>	<b>17%</b>	<b>41%</b>			
Leeds V	2008	\$522	11	\$452	\$813	\$582	\$1,395	3.1x	28%	0%	2.4x	19%	1.4x
Leeds VI	2016	760	9	509	2	691	693	1.4x	31%	0%	1.2x	20%	0.0x
<b>Unrealized Funds</b>		<b>\$1,282</b>	<b>20</b>	<b>\$961</b>	<b>\$814</b>	<b>\$1,273</b>	<b>\$2,088</b>	<b>2.2x</b>	<b>28%</b>	<b>0%</b>			
<b>Total Realized Companies</b>			<b>33</b>	<b>786</b>	<b>1,736</b>	<b>34</b>	<b>1,770</b>	<b>2.3x</b>	<b>21%</b>	<b>30%</b>			
<b>Total Unrealized Companies</b>			<b>14</b>	<b>751</b>	<b>69</b>	<b>1,240</b>	<b>1,309</b>	<b>1.7x</b>	<b>18%</b>	<b>0%</b>			
<b>Total</b>		<b>\$1,931</b>	<b>47</b>	<b>\$1,537</b>	<b>\$1,805</b>	<b>\$1,273</b>	<b>\$3,079</b>	<b>2.0x</b>	<b>20%</b>	<b>15%</b>	<b>1.7x</b>	<b>12%</b>	<b>1.0x</b>

## Investment Evaluation

**(+) Tenured & Experienced Senior Team:** Leeds is led and managed by Managing Partner and Co-Founder Jeffery Leeds, who is joined by two additional investment partners, Jacques Galante and Scott VanHoy. Together, Leeds' three investment Partners have an average tenure of 15 years with the Firm and average 22 years of private equity experience. The three Partners have been investing together for a decade and are nearly entirely responsible for deploying the last two funds, Funds V and VI, which are most reflective of the Firm’s go-forward strategy. Beneath Messrs. Galante and Vanhoy, the Firm’s two Managing Directors, Eric Geveda and

Chris Mairs, are similarly tenured, having been with the Firm for eight and 11 years, respectively. The Leeds senior team and capabilities of Messrs. Galante, Vanhoy, Geveda and Maris are regarded highly by portfolio company CEOs and LPs.

**(+) Sector Specialized Manager with Strong Brand and Network:** Leeds has been investing in companies operating in the Knowledge Industry since 1993. The Firm has completed multiple transactions and has gained extensive experience and a broad network across the industry. Leeds' longstanding track record in the Knowledge Industry and theme-based sourcing positions the Firm as the partner of choice in competitive situations often as a result of the Firm's knowledge and experience with a particular industry and business model, as well as the conviction and speed with which the Firm can transact. The Firm's experience in the Knowledge Industry and ability to leverage its network to attract value-add board members to its companies has been cited as a key reason among references with portfolio company CEOs that the Firm has been chosen as a preferred partner.

**(+) Strong Recent Performance:** Leeds has posted strong returns in Funds V and VI, which both rank in the first or second quartile on a net TVM and net IRR basis, as of September 30, 2019. Both Fund V and Fund VI have also generated zero losses, to-date. Fund V's six realized investments have collectively generated a gross TVM of 3.0x+. While Fund V's DPI is third quartile, the fund is expected to realize three portfolio companies in the next six months, and each are expected to be realized at mark-ups to their current carrying values. Leeds VI is immature and unrealized, but is experiencing early momentum and strong growth across the portfolio. Average EBITDA growth across the portfolio is 15%, and all investments are performing on or ahead of plan, with the exception of one company, which experienced early miss-steps in its add-on strategy, but has since course corrected and is marked at cost.

**(+) Attractive Realized Returns:** Fund V has realized six portfolio companies that have generated an aggregate gross TVM of 3.0x+. While Fund IV was volatile, with three deals that suffered significant capital impairment, Leeds has incorporated lessons learned from these investments into their go-forward strategy that have led to improved loss ratios across Fund V and VI portfolios (though StepStone notes that the Fund VI portfolio remains immature). Excluding the three loss-generating deals in Fund IV that would not be targeted under the Firm's current strategy, the remaining five realized deals in Fund IV were also strong performers, having generated an aggregate gross TVM of 2.0x+.

**(-) Historical Turnover:** Leeds has seen the departure of eight Managing Directors and three Principals since 2001. In the last five years there has only been one Managing Director departure. Diligence has highlighted fit issues with Leeds as a recurring motivation for many of the senior-level departures. However, StepStone notes that in the last five years the Firm has only seen the departure of one Managing Director. Apart from this one individual, the current Partners and Managing Directors have been with the Firm for approximately 10 years and are largely responsible for the deployment of Fund V and Fund VI. No departed professional has been the primary or secondary deal lead on any Fund VI or Fund V investment. This provides



StepStone with some comfort around the stability of the team. Further, StepStone believes there is more consensus-driven decision making at the Firm across the two recent funds. StepStone believes this mitigates some of the historical concern around concentrated decision-making authority in Jeffrey Leads, which motivated some of the historical departures before Leeds transitioned from a founder-led Firm to a partnership model.

**(-) Poor Performance of Cycle Funds:** Funds III and IV, which were 1999-vintage and 2003-vintage funds, respectively, were deployed over a period of time leading up to a cycle and generated unattractive returns on an absolute and relative basis. Both funds also recorded above-market loss ratios of 47% and 44%, respectively. The underperformance of Funds III and IV were primarily driven by the funds' off-strategy venture/growth-equity investments, as well as investments completed in deals with binary regulatory risk or companies that sold hardware products subject to technological disruption. StepStone notes that Funds I-IV were each deployed over a decade ago and were also largely invested and managed by a different senior team, as two of three active Partners and the two Managing Directors, who will be responsible for leading deals in Fund VII, had not yet joined the Firm or had held more junior roles at the time of Fund IV's launch. Leeds incorporated lessons learned from its underperforming deals across Funds III and IV into a refined strategy beginning in Fund V. Since Fund V, Leeds has executed primarily controlled buyout transactions operating within the Knowledge Industry and has avoided investing in companies exposed to binary regulatory risk, or that sell hardware products or durable goods. Fund V and VI have generated zero losses to-date. Despite Fund VI's immaturity, the overall active portfolio is healthy, and no investment has been identified by the GP as at risk of being marked under cost. StepStone believes the GP has been thoughtful in constructing a Fund VI portfolio that exhibits defensibility during a downturn. Key to the GP's investment criteria are companies that provide products with a strong value proposition and discernable ROI for customers. Additionally, the majority of companies are high margin businesses with recurring revenue models.

**(-) Unrealized Fund V and Fund VI:** Funds V and VI remain largely unrealized and have provided relatively limited liquidity to-date. Both funds rank in the third quartile by DPI, and StepStone prefers to see greater exits out of the Firm's prior funds ahead of a fundraise. Additionally, there are limited proof points in the Firm's ability to generate attractive returns among its higher priced deals given the relatively immaturity of its more expensive deals completed out of Fund VI. The Firm's active portfolio appears healthy, and certain assets are experiencing strong momentum. Fund VI's portfolio has grown EBITDA at an average CAGR of 15%. All investments, with the exception of Simplify Compliance, are progressing on or ahead of plan. The Firm has continued to execute on M&A across the Fund VI portfolio as a way to scale and diversify its companies. Value drivers in the Fund VI portfolio, including Exterro, Fusion, BARBRI and CeriFi, continue to progress positively. Leeds anticipates exiting three Fund V investments over the next six months, including Edcentric, which the Firm announced the sale of in December 2019, BARBRI and Prosci. Leeds anticipates exiting each investment at mark-ups relatively to their valuations, as of September 30, 2019.

**(-) Above-Market Purchase Prices:** Over the last three funds, Leeds has purchased assets for an average of 10.8x EBITDA, which is noticeably above the market average of 8.2x EBITDA over the same time period. Per StepStone's SPI database, Leeds' average purchase price by fund has increased over each fund cycle since Fund IV. StepStone is concerned that the Firm's increase in purchase prices over time will adversely impact Leeds' ability to generate outsized investment returns, particularly in today's high-valuation environment that is likely to experience market-wide multiple contraction in the coming years. However, despite an increase in average purchase prices, Leeds has demonstrated an ability to identify high-quality and scalable assets that justify above-market valuations. Moreover, the Firm has demonstrated an ability to create value across the portfolio and transform its portfolio companies into more attractive platforms of scale. This is evidenced by Leeds' successful recent sales of Fund V portfolio companies to both strategic and financial buyers at multiples that represent uplifts to Leeds' entry multiple. While the Firm's purchase prices have increased over each of the last three fund cycles, StepStone notes that they have increased at a rate that is mostly in-line with the valuation increases across the broader market. StepStone also learned through reference calls with groups that have co-invested alongside the GP that the Firm has underwritten multiple contraction in a number of Fund VI deals.

**(-) Fund Size Increase:** The Fund's target fund size of US\$1.0 billion represents over a 30% increase from Fund VI's US\$760 million capitalization. The GP has verbally communicated a hard cap of US\$1.25 billion, which represents a 64% increase over Fund VI. A larger fund size may have an impact on the Firm's strategy, as it may necessitate participation in larger deals or in a more competitive part of the market. A larger fund size could also cause capacity issues as it relates to the Investment Team's ability to deploy the Fund. StepStone is comforted given the GP has historically syndicated a significant amount of equity capital to LP co-investors. Leeds has used LP co-invest in all but two of the Fund VI platform investments. On average, Fund VI used more than US\$45 million of LP co-invest capital in each platform investment where LP co-investment was used. Inclusive of LP co-invest, the average equity check size in Fund VI is US\$92 million, which is consistent with the anticipated equity check size per platform in Fund VII. Given this historical use of co-investor equity, StepStone is more comfortable with the anticipated increase in the equity check size for Fund VII. The GP anticipates that the average equity check size for Fund VII will be US\$80-125 million, which is only slightly larger than what was presented for Fund VI during its fundraise. Fund VII is expected to have a slightly larger portfolio size of 10 to 14 platform investments, compared to Fund VI, which is expected to ultimately have 11 platform investments. Leeds' target company profile will remain consistent with Fund VI, with Fund VII seeking investments in companies with US\$125-300 million of total enterprise value. Fund VI's average entry valuation for a platform is US\$215 million. Fund VII's anticipated target valuation range at entry suggests that the Fund will continue the Firm's strategy of investing in the LMM. With the promotions of Messrs. Galante and VanHoy to Partner over the life of Fund VI, across the Managing Partner, Partner and Managing Director tranches, Leeds currently has five professionals. All of these professionals are responsible for leading

deals in Fund VII. As such, with these promotions, the number of deal leads at Leeds has remained consistent since the activation of Fund VI. The GP is also expecting some near-term exits across the portfolio, which should free up some capacity within the Investment Team.

**(-) Early Fund VI Valuation Mark Ups:** Fund VI has benefited from early mark-ups in three assets that have been held for less than a year. StepStone generally views mark-ups for investments held under a year as aggressive, but notes that the mark-ups among the three assets are minimally driven by multiple inflation, with the three companies being held at an average multiple that is 0.5x turns higher than entry. StepStone views the majority of mark-ups as supported by strong operating metrics.

## **Recommendation**

StepStone believes that a commitment to Leeds Equity Partners represents an attractive opportunity to back a sector specialist Lower Middle Market manager led by a tenured and experienced senior team that has invested alongside each other in the Knowledge Industry for nearly a decade. StepStone believes Leeds has built a robust network within its sectors of focus that have enabled it to avoid competitive processes and be chosen often by management teams as the preferred partner of choice. The Firm has generated strong returns across its two most recent funds, Funds V and VI, which each rank first or second quartile by net IRR and TVM. Fund V has generated a number of strong exits and has line of sight into a number of additional liquidity events, all at expected mark-ups to their current valuations.

## Investment Strategy

Leeds is a Lower Middle Market private equity firm focused primarily on control buyout investments in the Knowledge Industry: Education, Training, and Information Services. Fund VII will target profitable North American businesses offering a differentiated, mission-critical product or service that can be sourced outside of broad auction processes through existing relationships: past or present portfolio companies, the Firm's Board of Advisors, intermediaries, and through proactive outreach at industry conferences and trade shows. Leeds' target companies are often owned and operated by management teams that will have a significant continuing equity stake. Excluding the impact of management incentive plans, the average ongoing ownership of Leeds' portfolio companies' management teams was 18%. Leeds will seek to scale these companies organically and through add-on acquisitions. In Fund VII, the Firm will seek to build a portfolio of 10-14 investments, with equity check sizes ranging from US\$80-125 million in companies with TEVs ranging from US\$125-300 million.

While Leeds has always invested in the Knowledge Industry, The Firm's investment strategy has evolved over time. The Firm's first fund consisted entirely of growth equity investments. Leeds' second fund consisted of one deal, a late-stage venture investment in an education company. Because of Leeds' underperformance with venture capital and minority investments, the Firm has focused almost entirely on control buyout investments since Fund IV's inception in 2003.

### Portfolio Characteristics

**Purchase Prices:** Across all deals since the inception of Fund IV, Leeds has paid an average purchase price of 10.8x EBITDA, noticeably above the market average over the same time period of 8.2x EBITDA, as per Step Stone's SPI database. While the Firm's proprietary and limited auction purchase prices are above-market, Leeds has been able to purchase assets sourced via these approaches for approximately three turns of EBITDA less than its broad auctions deals. However, the above market entry valuations evident in the GP's portfolio generates some risk around potential multiple contraction at exit. This is especially relevant in the current market environment, which is characterized by an extended market expansion that is expected to be followed by a market downcycle. A potential downcycle could result in valuation multiple contraction across the broader market, and investments made at above-market entry valuations could see outsized adverse impacts. As such, while StepStone views Leeds' focus on sourcing opportunities on a proprietary basis as favorable, it sees some risk around the Firm's general willingness to pay above market prices. However, despite these elevated purchase prices, the Firm has been able to consistently sell its portfolio companies for even higher multiples upon exit. Further, though Fund V's assets have been purchased for the largest premiums of 36%, the Firm's realizations from Fund V have experienced the largest average exit multiple expansion of 4.7x. This demonstrates Leeds' ability to identify quality, scalable assets, grow these companies into platforms of scale and sell them at uplifted valuation multiples.

**Use of Leverage:** Leeds' approach to using leverage across its portfolio is largely in line with the broader market. Since Fund IV, Leeds' portfolio companies have had an average net debt/EBITDA multiple at entry of 3.9x, which is equivalent to the Middle and Small Market average over the same time period, per StepStone's SPI database. Fund IV's average leverage multiple of 4.9x was the highest over the time period, while Fund V's average leverage multiple of 3.0x was the most conservative. To date, the average leverage multiple across the Fund VI portfolio is 4.0x, which is below the market average over the fund's investment period of 4.5x, per StepStone's SPI database.

### Competitive Landscape

While the Lower Middle Market ("LMM") for Leeds' provides ample investment opportunities it is highly competitive, largely fragmented and exhibiting various secular tailwinds. Leeds competes for attractive assets with a variety of capital sources including sector-focused sponsors, generalist sponsors, and strategic acquirers. While Leeds does not repeatedly compete with any specific LMM private equity firms for investments, there are a number of firms who pursue similarly sized investments with a similar sector-focused approach out of comparably-sized funds.

- **Generalist LMM Managers:** While many firms grow out of the LMM with larger funds, there are a number of generalist North American private equity firms focused on the small end of the market. Generalist funds invest

across multiple industries, targeting businesses with healthy fundamentals that may not require robust industry expertise to implement value creation plans. Repeat competition between a generalist and industry-focused manager is therefore unlikely as their target portfolios are not expected to frequently overlap. Leeds employs a sector-focused approach and a strategy that is more focused on industry-specific operational value-add in its portfolio companies relative to generalist managers.

- **Sector-Focused Funds:** Fund VII may compete with other funds targeting investments within the same or adjacent industries. However, differences in size and niche strategy will reduce overlap with such funds. Leeds is differentiated from many of its competitors given the Firm's reputation, relationships, and industry insights it has developed over its 25-year history of investing in the Knowledge Industry. While there may be some overlap amongst these managers, each has niche strategies and areas of focus that differentiate these firms from each other. StepStone conducted a number of reference calls with former and current portfolio company CEOs that stressed the value Leeds helped create by introducing management to other thought leaders and market participants in their respective industries. Additionally, in many instances, larger, sector-focused managers are potential buyers of Leeds' portfolio companies.
- **Strategic M&A:** Leeds may compete with strategic buyers. Given the Firm's industry expertise and network-based approach to sourcing, StepStone believes Leeds is well positioned to capture proprietary deal flow, which has represented approximately 41% of the Firm's deal flow since inception. Additionally, the GP's value-add approach differentiates it from strategic acquirers. StepStone believes that founders and entrepreneurs in the lower end in the market would likely prefer to work with Leeds over being acquired by a larger competitor.

StepStone believes that Leeds' experience and network built through having invested in the Knowledge Industry for approximately 25 years gives the Firm a competitive advantage in the Small Market and LMM. The Leeds brand name is well recognized and respected in the market, which was confirmed through reference calls with portfolio company CEOs, banks, and acts a differentiator to win deals based on being the partner of choice rather than the highest price.

StepStone notes that Leeds has been outbid on valuation on multiple occasions by other sponsors, but that prevailed in processes due to the perceived value-add the Firm brings from its sector experience and industry relationships. These factors have been frequently cited in reference calls conducted by StepStone as the deciding factor that allows Leeds to win processes despite having a lower valuation. Leeds has also sourced various opportunities outside of processes on a proprietary basis due to its ability to leverage those same industry relationships that it has established over time.

## Evaluation of the Strategy

### Merits

- ▲ **Sector Specialist Focused on the Knowledge Industry:** Leeds invests solely in the Knowledge Industry and, as a result, has established a reputation in the space as a specialized, value-add investor. The team has an expansive network of relationships within the Education/Training space, which has allowed the Firm to source deals and facilitate exits to financial and strategic buyers.
- ▲ **Advantaged Sourcing via Industry Network:** Since inception, the Firm has sourced a majority of its investments via proprietary and limited processes. StepStone believes the Firm's sourcing benefits from its long-standing reputation of investing in the space and deep network of Knowledge Industry executives, which has allowed the Firm to identify attractive investment opportunities that fit its mandate and engage in dialogue with management teams often prior to the company wanting to transact. StepStone believes While the Firm's purchase prices across each of its sourcing channels remain above market, the Firm has derived benefits in valuation across its deals sourced via proprietary processes and limited auctions. Assets sourced via proprietary processes and limited auctions have been acquired for an average TEV/EBITDA multiple 3.0x turns less than that of assets purchased via broad auctions.

### Risks

- ▼ **Above-Market Purchase Prices:** Over the last three funds, Leeds has purchased assets for an average of 10.8x EBITDA, which is noticeably above the market average of 8.2x EBITDA over the same time period, per StepStone's SPI database. Leeds' average purchase price by fund has increased over each fund cycle since Fund IV. StepStone is concerned that Leeds' increased purchase prices will adversely impact the Firm's ability to generate outsized investment returns. This is particularly important in today's high-valuation environment that is likely to experience market-wide multiple contraction in the coming years. Despite an increase in average purchase price, Leeds has demonstrated an ability to identify high-quality and scalable assets that justify above-market valuations. Moreover, the Firm has demonstrated an ability to create value across the portfolio and transform its portfolio companies into more attractive platforms of scale. This is evidenced by Leeds' successful recent sales of Fund III-Fund V portfolio companies to both strategic and financial buyers at multiples that represent uplifts to Leeds' entry multiple. Across the Firm's 10 most recent exits to both strategic and financial buyers, Leeds has sold its portfolio companies for multiples that represent an average uplift 2.4x EBITDA relative to its entry multiples. While the Firm's purchase prices have increased over each of the last three fund cycles, StepStone notes that they have increased at a rate that is mostly in-line with the valuation increases across the broader market.

**Fund Size Increase:** The Fund's target fund size of US\$1.0 billion represents over a 32% increase from Fund VI's US\$760 million capitalization. The Fund's informal hard cap of US\$1.25 billion represents a 64% increase over Fund VI. A larger fund size may have an impact on the Firm's strategy, as it may necessitate participation in larger deals or in a more competitive part of the market and could cause capacity issues as it relates to the Investment Team's ability to deploy the Fund. StepStone is comforted given the GP has historically syndicated a significant amount of equity capital to LP co-investors. Leeds has used LP co-invest in all but two of the Fund VI platform investments. On average, Fund VI used more than US\$45 million of LP co-invest capital in each platform investment where LP co-investment was used. Inclusive of LP co-invest, the average equity check size in Fund VI is US\$92 million, which is consistent with the anticipated equity check size per platform in Fund VII. Given this historical use of co-investor equity, StepStone is more comfortable with the anticipated increase in the equity check size for Fund VII. The GP anticipates that the average equity check size for Fund VII will be US\$80-125 million, which is only slightly larger than what was presented for Fund VI during its fundraise. Fund VII is expected to have a slightly larger portfolio size of 10 to 14 platform investments, compared to Fund VI, which is expected to ultimately have 11 platform investments. Leeds' target company profile will remain consistent with Fund VI, with Fund VII seeking investments in companies with US\$125-300 million of total enterprise value. Fund VI's average entry valuation for a platform

is US\$215 million. Fund VII's anticipated target valuation range at entry suggests that the Fund will continue the Firm's strategy of investing in the LMM. With the promotions of Messrs. Galante and VanHoy to Partner over the life of Fund VI, across the Managing Partner, Partner and Managing Director tranches, Leeds currently has five professionals. All of these professionals are responsible for leading deals in Fund VII. As such, with these promotions, the number of deal leads at Leeds has remained consistent since the activation of Fund VI. The GP is also expecting some near-term exits across the portfolio, which should free up some capacity within the Investment Team.

## Management Team

Leeds is led and managed by Managing Partner and Co-Founder Jeffery Leeds and two additional investment Partners, Jacques Galante and Scott VanHoy. Together, Leeds' three investment Partners have an average tenure of 15 years with the Firm and average 22 years of private equity experience. The three Partners have been investing together for a decade and nearly entirely responsible for deploying the last two funds, Funds V and VI, which are most reflective of the Firm's go-forward strategy. The Firm's two Managing Directors, Eric Geveda and Chris Mairs, are similarly tenured, having been with the Firm for eight and 11 years, respectively.

In late 2019, the GP added a Portfolio Growth Team to the organization. This includes a non-investment Partner, Susan Cates, as well as one Growth Initiatives resource. These Portfolio Growth Team professionals have the industry experience and networks that are expected to provide the Firm with unique angles in sourcing, diligence and value creation.

### Leeds Organizational Chart

Investment Team				Growth Team
Jeffrey Leeds <i>Managing Partner</i> (26 years)	Jacques Galante <i>Partner</i> (10 years)	Scott VanHoy <i>Partner</i> (10 years)		Susan Cates <i>Partner</i> (<1 years)
Eric Geveda <i>Managing Director</i> (8 years)	Chris Mairs <i>Managing Director</i> (11 years)			Elizabeth Chou <i>Growth Initiatives</i> (<1 years)
Kevin Malone <i>Principal</i> (10 years)	David Neverson <i>Principal</i> (9 years)			
Brendan Kelley <i>Senior Associate</i> (5 years)				
Matt Blum <i>Associate</i> (2 years)	Priyanka Chodhari <i>Associate</i> (1 year)	Hiral Pithadia <i>Associate</i> (4 years)	Theo Zang <i>Associate</i> (2 years)	
Operations Team				
Peter Lyons <i>CFO / Partner</i> (20 years)	Joe Kennedy <i>Fund Controller</i>	Elias Karis <i>Mgt. Co. Accountant</i>	Elle Sukalic <i>Fund Accountant</i>	Danielle Derrico <i>Investor Relations</i>

Source: Leeds.

### Professionals

Leeds has a Senior Team that includes a Managing Partner and two Partners. Jeffery Leeds is the Co-Founder and Managing Partner of Leeds. He has historically led the management of the Firm's operations and investment process. Mr. Leeds has 26 years of private equity investment experience. Mr. Leeds is 64 years old but remains actively involved in all operations of the Firm. While he has no near-term plans to retire, Mr. Leeds is no longer regularly a primary diligence lead on new opportunities and spends more of his time around sourcing, portfolio company board responsibilities and Firm management. Based on StepStone's diligence and reference calls, the Firm has begun succession planning, as demonstrated by the promotion of Messrs. Galante and VanHoy to Partner as well as the development of these individuals' roles around managing the Firm.

Messrs. Galante and VanHoy have an average tenure of 10 years at Leeds and an average of 20 years of relevant experience. In StepStone's reference calls, many individuals indicated that Messrs. Galante and VanHoy have been



operating in Partner roles since the tail end of Fund V. Both have existing, sizable track records deals that they have led at the Firm, where they were operating independently from the Co-Founders. The Firm's Partners have independently led transactions, navigated management team relationships, and executed on value creation initiatives without oversight from the Co-Founders in Fund VI. Messrs. Galante and VanHoy have been the primary deal leads on the majority of Fund VI deals.

The Firm's Managing Directors, Eric Geveda and Chris Mairs, have been with Leeds for an average tenure of nearly 10 years and have an average of 15 years of relevant experience. Both joined Leeds as junior professionals, developing internally at the Firm. Prior to joining Leeds Equity in 2011, Mr. Geveda worked at Arsenal Capital Partners as a Senior Associate and Lightyear Capital as an Associate. Mr. Mairs worked as an M&A Analyst at Greenhill & Co prior to joining Leeds. As Managing Directors, Messrs. Geveda and Mairs, are responsible for sourcing, executing diligence, deal negotiations and structuring, as well as portfolio company monitoring at the board level. However, Messrs. Mairs and Geveda will spend considerably less time sourcing deals relative to the Firm's Partners. Both are considered the next tranche of investment Partners at the Firm.

Messrs. Mairs and Geveda have not historically been the primary deal leads on platform investments. However, both referenced well with both Leeds portfolio company executives and co-investors highlighting the Managing Directors' acumen and ability to be leading deals going forward. While Messrs. Mairs and Geveda have led diligence workflows and serve as the main point of contact for portfolio companies as it relates to post-close value add, they continue to have oversight from a Partner or Co-Founder.

#### Leeds Investment Team

Leeds Equity Partners Investment Team					
Professional	Title	Year Joined	Leeds Tenure	Years of Experience	Age
Jeffrey Leeds	Managing Partner & Co-Founder	1993	26	26	64
Jacques Galante	Partner	2009	10	22	45
Scott VanHoy	Partner	2010	10	18	43
Eric Geveda	Managing Director	2011	8	16	40
Chris Mairs	Managing Director	2008	11	14	38
Kevin Malone	Principal	2010	10	12	37
David Neverson	Principal	2011	9	15	39
Brendan Kelley	Senior Associate	2015	5	7	30
Matt Blum	Associate	2018	2	3	26
Priyanka Chodhari	Associate	2019	1	2	25
Hiral Pithadia	Associate	2016	4	5	29
Theo Zhang	Associate	2018	2	5	29

Source: Leeds.

In 2019, Leeds formed a separate Portfolio Growth Team with the intent to have professionals at the Firm that are dedicated to identifying strategic growth opportunities for Leeds portfolio companies, leverage their industry networks for the Firm's sourcing and value creation efforts, and identify relevant industry trends for the Firm to explore. As part of this effort, the Firm hired Susan Cates as a Partner. Ms. Cates has over 25 years of experience in investment banking, private equity and education leadership. In addition to Ms. Cates, the GP also added Elizabeth Chou to the Portfolio Growth Team. Ms. Chou has over 15 years of investment experience, most recently as a General Partner at New Markets Venture Partners. Ms. Chou will support Ms. Cates on the Portfolio Growth Team. Ms. Chou is also based in North Carolina and is not considered a part of the Investment Team.

The role of the Portfolio Growth Team at Leeds is to leverage its network to source opportunities as well as for diligence purposes, and provide industry insights around new trends that may benefit the portfolio or Leeds' investment strategy. This is especially the case in the lower end of the middle market, where this team will be helpful in sourcing potential add-on opportunities for Leeds portfolio company. The GP also believes the introduction of this team helps to add

industry relationships that the Firm did not previously have. Ms. Cates has already sourced two add-ons for Leeds' portfolio companies since joining, and Ms. Chou has been meaningfully involved in diligence processes.

### Turnover

Since inception, Leeds has experienced significant turnover but has seen a stabilization in the last five years. Eight Managing Directors and three Principals have departed the Firm since 2001. However, in the last five years there has only been one Managing Director departure.

### Capacity

StepStone analyzed Leeds' historical investment pace and how Fund VII is likely to be invested, at both the target fund size of US\$1.0 billion and the informal hardcap set by the GP of US\$1.3 billion.

At the Fund's target fund size of US\$1.0 billion, Fund VII will be 32% larger than Fund VI. At its hard cap of US\$1.3 billion, the Fund would be 64% larger than Fund VI. The GP anticipates that the average equity check size for Fund VII will be at US\$80-125 million, which is only slightly larger than what was presented for Fund VI during its fundraise. The more meaningful expected change in portfolio construction in Fund VII will be a slightly larger portfolio size of 10 to 14 platform investments. Fund VI is expected to ultimately have 11 platform investments.

Despite the turnover that the Firm has seen historically, the number of deal leads has remained consistent over time. Through internal promotions, the Firm has developed its talent to replace some of the more senior level departures that Leeds has seen. With the increase in fund size, the average annual invested capital per deal lead and the overall size of the portfolio will increase in Fund VII. StepStone has some concern around this as well as the size of the Investment Team at 12 professionals for a fund that will be at least US\$1.0 billion in size. StepStone typically sees a larger Investment Team for a fund of this size. While this may raise some concern, the profile of the deal leads at Leeds has shifted towards a younger and more driven group compared to some of the departed deal leads.

#### Fund Size & Capacity Analysis

Leeds Equity Partners Capacity Analysis						
Professional	Fund III	Fund IV	Fund V	Fund VI	Fund VII	
					Target	Hard Cap
Vintage Year	1999	2003	2008	2016	2020	2020
Fund Size	\$158	\$430	\$522	\$760	\$1,000	\$1,250
Invested Capital (+ Projected) <sup>1</sup>	\$138	\$382	\$452	\$684	\$900	\$1,125
Investment Period <sup>2</sup>	5	5	8	5	5	5
Avg. Capital Committed per Year	\$27	\$71	\$54	\$137	\$180	\$225
# of Platform Investments (+ Projected)	11	8	11	10	12	12
Avg. Investment Size	\$13	\$48	\$41	\$68	\$75	\$94
Number of Deal Leads <sup>3</sup>	2	3	3	5	5	5
Avg. # of Deals per Deal Lead	6	3	4	2	2	2
Avg. Annual Invested Capital per Deal Lead	\$13	\$24	\$18	\$27	\$36	\$45

Source: Leeds.

1. Represents actual invested capital for Funds III-V, and assumes 90% of total committed capital is invested for Fund VI and Fund VII.

2. Represents actual number of years required to deploy Funds III-V.

3. Represents Partners and Managing Directors on the Leeds Investment Team.

### GP Commit

The Fund's formal GP commitment will be a minimum of US\$20 million or 2% of the Fund's target size. This is in line with the market, which is 2%, providing for sufficient LP alignment.

### Investment Committee

The Firm considers the investment decision-making process to be an iterative process that involves significant deliberation within the deal team, the Firm and the Firm's Investment Committee. The Firm holds weekly meetings to discuss new and active potential investment opportunities, sourcing activities, market trends and recently completed transactions, and portfolio company progress towards strategic and financial goals. During these weekly meetings, investment teams solicit feedback from the Investment Committee on new investment opportunities. All potential deals are presented and discussed for consideration by the Investment Committee, which consists of the Messrs. Leeds, Galante, VanHoy and the Firm's CFO, Peter Lyons.

**Management Committee**

The Management Committee at the Firm is responsible for strategic and operational decisions at the Firm. The Management Committee comprises of Messrs. Leeds, Galante, VanHoy and Lyons. These individuals share management authority at the Firm. This includes managing junior investment professionals as well as personnel, staffing and compensation decisions.

## Evaluation of the Management Team

### Merits

- ▲ **Tenured & Experienced Senior Team:** The Senior Team is comprised of Messrs. Leeds, Galante and VanHoy who have an average tenure of 15 years at Leeds and an average of 22 years of relevant experience. These individuals have been investing together at Leeds for approximately 10 years and have been primarily responsible for the deployment of Fund V and Fund VI. The Firm's Managing Directors who are also expected to lead deals in Fund VII have an average tenure of nearly 10 years at Leeds and an average of 15 years of relevant experience.
- ▲ **Sector Specialized Manager with Strong Brand and Network:** Leeds has been investing within the Knowledge Industry for over 25 years. The GP's longstanding track record in this space has afforded it with extensive experience and a broad network across its sectors of focus. This domain expertise and networking not only benefits the Firm's sourcing effort and positions the Firm well as a partner of choice for management teams in competitive situations, but also provides a competitive advantage as it relates to diligence resources and value creation angles.

### Risks

- ▼ **Historical Turnover:** Leeds has seen the departure of eight Managing Directors and three Principals since 2001. In the last five years there has only been one Managing Director departure. Diligence identified fit issues with Leeds as a recurring motivation for many of the senior-level departures. The departed professionals have in aggregate, generated strong returns. This raises concerns around the Firm's ability to retain high-performing individuals. In the last five years the Firm has only seen the departure of one Managing Director. Apart from this one individual, the current Partners and Managing Directors have been with the Firm for approximately 10 years and are largely responsible for the deployment of Fund V and Fund VI. No departed professional has been the primary or secondary deal lead on any Fund VI or Fund V investment. This provides StepStone with some comfort around the stability of the team, which demonstrates a recent stabilization within the Investment Team. Further, StepStone believes there is more consensus-driven decision making at the Firm across the two recent funds. StepStone believes this mitigates some of the historical concern around concentrated decision-making authority before Leeds transitioned from a founder-led Firm to a partnership model.
- ▼ **Key Person Provision:** Following feedback the GP received from LPs, Leeds amended its key person provision from being triggered when all three of Messrs. Leeds, Galante and VanHoy fail to meet the time and attention requirements, to now being triggered if two of three individuals among Messrs. Leeds, Galante and VanHoy are no longer able to devote substantially all of their professional time to the Fund. StepStone believes the change is an improvement, but would prefer to see a key person event triggered by the departure of any single individual among Messrs. Leeds, Galante and VanHoy. StepStone views each individual as equally important to the Firm and believes the departure of any single person would be highly detrimental to the ongoing operations of the Firm.

## Track Record

Since the Firm's founding in 1993, Leeds has raised six funds and invested US\$1.5 billion across 47 transactions. In aggregate, Leeds' since inception track record has generated a gross TVM/IRR of 2.0x/20% and net TVM/IRR of 1.7x/12%, as of September 30, 2019. The Firm's overall track record has been inconsistent and has resulted in strategy refinements throughout the Firm's first four funds. Over the course of Funds I-IV, Leeds pursued investments outside of the Knowledge Industry, as well as venture, minority and PIPE investments in small-cap companies. The Firm had also invested in companies exposed to binary regulatory risk that the Firm has stated it will no longer make on a go-forward basis. Funds I-IV, which were each deployed over a decade ago and are fully realized, were also largely invested and managed by a different senior team, as two of three active Partners and the two Managing Directors, who will be responsible for leading deals in Fund VII, had not yet joined the Firm or had held more junior roles at the time of Fund IV's launch. As such, StepStone has focused its track record analysis on Funds V and VI, given they are most reflective of the Fund VII investment strategy and the Firm's current Investment Team.

### Leeds Performance Summary

(US\$ in millions, as of September 30, 2019)

Leeds Investment Performance													
Fund	Vintage Year	Fund Size	# of Deals	Invested Capital	Realized Value	Unrealized Value	Total Value	Gross TVM	Gross IRR	Loss Ratio	Net TVM	Net IRR	DPI
Leeds I	1995	\$48	7	\$43	\$130	-	\$130	3.0x	26%	10%	2.2x	17%	2.2x
Leeds II	1996	13	1	13	47	-	47	3.6x	79%	0%	3.3x	72%	3.3x
Leeds III	1999	158	11	138	219	-	219	1.6x	21%	47%	1.3x	10%	1.3x
Leeds IV	2003	430	8	382	595	-	595	1.6x	8%	44%	1.3x	4%	1.3x
<b>Realized Funds</b>		<b>\$649</b>	<b>27</b>	<b>\$576</b>	<b>\$991</b>	<b>-</b>	<b>\$991</b>	<b>1.7x</b>	<b>17%</b>	<b>41%</b>			
Leeds V	2008	\$522	11	\$452	\$813	\$582	\$1,395	3.1x	28%	0%	2.4x	19%	1.4x
Leeds VI	2016	760	9	509	2	691	693	1.4x	31%	0%	1.2x	20%	0.0x
<b>Unrealized Funds</b>		<b>\$1,282</b>	<b>20</b>	<b>\$961</b>	<b>\$814</b>	<b>\$1,273</b>	<b>\$2,088</b>	<b>2.2x</b>	<b>28%</b>	<b>0%</b>			
<b>Total Realized Companies</b>			<b>33</b>	<b>786</b>	<b>1,736</b>	<b>34</b>	<b>1,770</b>	<b>2.3x</b>	<b>21%</b>	<b>30%</b>			
<b>Total Unrealized Companies</b>			<b>14</b>	<b>751</b>	<b>69</b>	<b>1,240</b>	<b>1,309</b>	<b>1.7x</b>	<b>18%</b>	<b>0%</b>			
<b>Total</b>		<b>\$1,931</b>	<b>47</b>	<b>\$1,537</b>	<b>\$1,805</b>	<b>\$1,273</b>	<b>\$3,079</b>	<b>2.0x</b>	<b>20%</b>	<b>15%</b>	<b>1.7x</b>	<b>12%</b>	<b>1.0x</b>

### Relative Performance

Beginning in Fund V, Leeds refined its investment strategy as primarily control-investing in growth-oriented businesses within the Knowledge Industry that provide differentiated products and services. Funds V and VI have generated attractive relative returns on a net TVM and IRR basis, each ranking first or second quartile across the two metrics. Fund V and VI's DPI performance is weak on a relative basis, as both rank in the third quartile by DPI. Fund V is a 2008-vintage fund that remains 42% unrealized. However, the fund is anticipated to generate meaningful liquidity in the near term through three full exits, including the announced sale of one portfolio, which will be exited a substantial mark-up to the investment's current valuation.

### Relative Performance

(US\$ in millions, as of September 30, 2019)

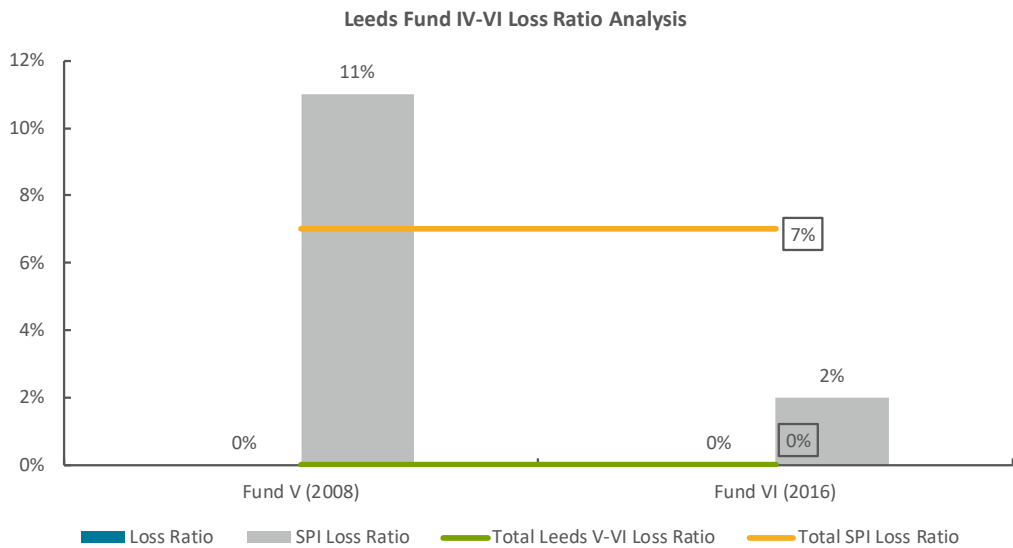
Leeds Net Relative Performance						Private iQ					
Fund	Vintage	Fund Size	Leeds			United States			Leeds		
			Net TVM	Net IRR	DPI	First Quartile			Quartile Rank		
						Net TVM	Net IRR	DPI	Net TVM	Net IRR	DPI
Leeds I	1995	\$48	2.3x	17%	2.3x	2.1x	22%	2.1x	First	Second	First
Leeds II	1996	13	3.3x	72%	3.3x	2.1x	21%	2.1x	First	First	First
Leeds III	1999	158	1.3x	10%	1.3x	1.9x	15%	1.8x	Third	Second	Third
Leeds IV	2003	430	1.3x	4%	1.3x	2.3x	27%	2.2x	Fourth	Fourth	Fourth
Leeds V	2008	522	2.4x	19%	1.4x	2.1x	20%	1.7x	First	Second	Third
Leeds VI	2016	760	1.3x	20%	0.0x	1.4x	21%	0.3x	Second	Second	Third
<b>Total</b>		<b>\$1,931</b>	<b>1.7x</b>	<b>12%</b>	<b>1.0x</b>						

Source: GP; Burgiss Private iQ Private Equity; Buyout (US) benchmarks

### Loss Ratio Analysis

StepStone assessed Leeds' loss ratio across the Firm's three most recent funds. Across Funds V-VI, Leeds has generated a total loss ratio of 0%, as of September 30, 2019, which is below the overall loss ratio among Small Buyout managers over the same time frame per StepStone's SPI database of 7%. As previously discussed, the Firm incorporated lessons learned from underperforming deals in Funds I-IV, such as avoiding investing in highly-regulated sub-sectors or companies that provide hardware products or durable goods, which StepStone believes has helped the Firm reduce its volatility.

Leeds Loss Ratio



## Evaluation of the Track Record

### Merits

- ▲ **Strong Recent Performance:** Leeds has posted strong returns in Funds V and VI, which both rank in the first or second quartile on a net IRR and net TVM basis, as of September 30, 2019. Both funds have also generated zero losses, to-date. Fund V's six realized investments have collectively generated a gross TVM of 3.0x+. While Fund V's DPI is third quartile, the fund is expected to realize three portfolio companies in the next six months, and each are expected to be realized at mark-ups to their current carrying values. Leeds VI is immature and unrealized but is experiencing early momentum and strong growth across the portfolio. Average EBITDA growth across the portfolio is 15%, and all investments are performing on or ahead of plan, with the exception of one company, Simplify Compliance, which experienced early miss-steps in its add-on strategy, but has since course corrected and is not anticipated to be marked below cost.
- ▲ **Attractive Realized Returns:** Fund V has realized six portfolio companies that have generated an aggregate gross TVM of 3.0x+. While Fund IV was volatile, with three deals that suffered significant capital impairment, Leeds has incorporated lessons learned from these investments into their go-forward strategy that have led to improved loss ratios across the Fund V and VI portfolio (though StepStone notes that the Fund VI portfolio is still maturing). Excluding the three loss-generating deals in Fund IV that would not be targeted under the Firm's current strategy, the remaining five realized deals in Fund IV were also strong performers, having generated an aggregate gross TVM of 2.0x+.

### Risks

- ▼ **Poor Performance of Cycle Funds:** Funds III and IV, which were 1999-vintage and 2003-vintage funds, respectively, were deployed over a period of time leading up to a cycle and generated unattractive returns on an absolute and relative basis. Both funds also recorded above-market loss ratios of 47% and 44%, respectively. The underperformance of Funds III and IV were primarily driven by the funds' off-strategy venture/growth-equity investments, as well as investments completed in deals with binary regulatory risk or sold hardware products that were subject to technological disruption. Funds I-IV were each deployed over a decade ago and were also largely invested and managed by a different senior team, as two of three active Partners and the two Managing Directors, who will be responsible for leading deals in Fund VII, had not yet joined the Firm or had held more junior roles at the time of Fund IV's launch. Leeds incorporated lessons learned from its underperforming deals across Funds III and IV into a refined strategy beginning in Fund V. Since Fund V, Leeds has executed primarily controlled buyout transactions operating within the Knowledge Industry and has avoided investing in companies exposed to binary regulatory risk, or that sell hardware products or durable goods. Fund V and VI have generated zero losses to-date. Despite Fund VI's immaturity, the overall active portfolio is healthy, and no investment has been identified by the GP as at risk of being marked under cost. StepStone believes the GP has been thoughtful in constructing Fund VI portfolio that exhibits defensibility during a downturn. Key to the GP's investment criteria are companies that provide products with strong value propositions and discernable ROI for customers. Additionally, the majority of companies are high margin businesses with recurring revenue models.
- ▼ **Unrealized Fund V and VI:** Funds V and VI remain largely unrealized. Both funds rank in the third quartile by DPI. StepStone prefers to see greater exits out of the a firm's prior funds ahead of a fundraise and notes that there are limited proof points in the Firm's ability to generate attractive returns among its higher priced deals given the relatively immaturity of its more expensive deals completed out of Fund VI. The Firm's active portfolio appears healthy, and certain assets are experiencing strong momentum. Fund VI's portfolio has grown EBITDA at an average CAGR of 15%. All investments, with the exception of Simplify Compliance, are progressing on or ahead of plan. The Firm has continued to execute on M&A across the Fund VI portfolio as a way to scale and diversify its companies. Value drivers in the Fund VI portfolio, including Exterro, Fusion, BARBRI and CeriFi, continue to progress positively. Leeds anticipates exiting three Fund V investments over the next six months, including

Edcentric, which the Firm announced the sale of in December 2019, BARBRI and Prosci. Leeds anticipates exiting each investment at mark-ups relatively to their valuations, as of September 30, 2019.

- ▼ **Early Fund VI Valuation Mark Ups:** Fund VI has benefited from early mark-ups in three assets that have been held for less than a year. StepStone generally views mark-ups for investments held under a year as aggressive. The mark-ups among the three assets are minimally driven by multiple inflation, with the three companies being held at an average multiple that is 0.5x turns higher than entry. StepStone views the majority of mark-ups as supported by strong operating metrics.



## Fundraising

Leeds is currently in market with its seventh institutional fund, Leeds Equity Partners VII, targeting US\$1.0 billion in commitments. There is no formal hardcap stated in the LPA; however, Leeds has verbally communicated that an informal hardcap will be set at US\$1.3 billion.

## Portfolio Fit

The Fund meets the investment criteria and guidelines set forth in CRPTF's Investment Policy Statement. Leeds Equity Partners VII would be considered a 2020 commitment to the Small Buyout portfolio within the Private Investment Fund. As of September 30, 2019, Connecticut's direct investments in Small Buyout funds (exclusive of Small Buyout exposure gained through components of the in-state program and/or CHF designated allocations) represented 14% of aggregate PIF exposure, defined as NAV plus unfunded, and has generated a net IRR of 14%. Inclusive of PIF investments approved after September 30, 2019, a US\$75 million commitment to the Fund would increase PIF's Small Buyout exposure to 15%.

Leeds Equity Partners VII	Direct CRPTF Current Exposure	IRR	Direct CRPTF Pro Forma Exposure	Total CRPTF Current Exposure <sup>(1)</sup>	Total CRPTF Pro Forma Exposure <sup>(1)</sup>
<b>Strategy</b>					
Small Buyout	14%	14%	15%	23%	24%

*(1) Includes PIF's small buyout exposure gained through commitments from the in-state program and/or CHF designated allocations*

*Note: Table reflects active investments only, liquidated funds excluded.*

## Environmental, Social & Governance

In 2019, Leeds became a signatory of the UN PRI and initiated the process of implementing a formal ESG policy. The Firm expects this policy to be fully functioning before the end of 2020. Leeds has also created an ESG Committee that will oversee the implementation of the Firm's ESG policy. The Firm's ESG Committee currently has its first meeting scheduled for April 2020.

The Firm's implementation of its ESG Policy will be overseen by the Firm's ESG Committee. This committee is led by Timothy Shriver, the Chairman of the Special Olympics, and Dov Seidman, the Chairman of LRN Corporation, a Leeds portfolio company and one that is well-known for being a leader in ethics and compliance. In addition to Messrs. Shriver and Seidman, the committee will consist of Leeds' CFO, Peter Lyons, as well as a large Leeds LP.

The ESG Committee's first meeting is scheduled for April 2020, when it plans to set ESG-related goals for the firm and determine how the committee will operate going forward. Currently, the committee plans to develop specific ESG-related goals for each portfolio company and have each company report back to the committee at least annually on its progress towards those goals. Starting in 2020, the committee will also ensure that all Leeds employees are trained on ESG matters prior to making any investments.

The ESG Committee will ensure the Firm's ESG policy is implemented with respect to both pre-investment ESG considerations as well as engagement during Leeds' ownership period. As the Firm is still developing its ESG policy, the policy does not yet establish guidelines for considering ESG-related factors in exit planning. In the pre-investment phase, the ESG Committee will ensure that all material ESG issues are identified and discussed with the Investment Committee and ESG Committee. On an as-needed basis, the ESG Committee may engage external advisors to conduct additional ESG-related due diligence, and will ensure that Leeds and any external advisors work alongside company management to develop and implement a corrective action plan to address any material issues. During the Firm's ownership, the ESG Committee will monitor and document the progress of portfolio companies where material ESG concerns have been identified and continue to work alongside management to iterate upon any corrective action plans to ensure any issues are addressed during Leeds' ownership.

As the Firm's ESG policies are still nascent, Leeds has not yet established any formal reporting practices around its ESG-related initiatives. Similarly, Leeds is not currently considering reporting on TCFD. However, the Firm has expressed

interest in using StepStone as a resource in learning more about industry standard best practices with respect to ESG-related reporting as Leeds continues to iterate upon and enhance its ESG practices over time.

Though Leeds does not have any diversity-focused initiatives in place, the Firm takes the general stance that diversity leads to better investment and social outcomes across its portfolio. Leeds' investment team consists of three females, including a Partner, a mid-level professional, and an associate, who was the Firm's most recent associate-level hire. Additionally, the Partner and mid-level professionals were recent additions to the Firm's investment team, as they were the first hires on the Firm's newly formed Portfolio Growth team. Leeds stated that these professionals were hired because they were the most qualified candidates for the positions and not because they were looking to hire more females. In aggregate, six of the Firm's 15 investment professionals are of minority status.

StepStone is encouraged by Leeds' advocacy of responsible investing, underpinned by its newfound status as a signatory of UNPRI. StepStone believes Leeds' policies and monitoring tools to be appropriate and has conviction in the Firm's ability to enforce and continuously improve upon its ESG policy and best practices given its internal ESG Committee. While the Firm does not yet consider ESG factors in the exit strategy of its investment and has not yet implanted ESG-specific reporting practices, StepStone notes that the Firm's adoption of a formal ESG policy is nascent and believes that the Firm's ESG implementation and reporting practices will only improve as the team continues to expand upon its efforts at the firm and portfolio company level.

### **Recommendation**

StepStone believes that a commitment to Leeds Equity Partners represents an attractive opportunity to back a sector specialist Lower Middle Market manager led by a tenured and experienced senior team that has invested alongside each other in the Knowledge Industry for nearly a decade. StepStone believes Leeds has built a robust network within its sectors of focus that have enabled it to avoid competitive processes and be chosen often by management teams as the preferred partner of choice. The Firm has generated strong returns across its two most recent funds, Funds V and VI, which each rank first or second quartile by net IRR and TVM. Fund V has generated a number of strong exits and has line of sight into a number of additional liquidity events, all at expected mark-ups to their current valuations.

**Appendix I**  
**Summary of Due Diligence Performed**

In our review of the offering, we conducted the following additional due diligence:

- October 2019
  - Interim update with GP
- January 2020
  - Met onsite with members of the Fund's investment team
  - Prepared and completed an investment memorandum

## **Appendix II**

### **Investment Team Member Biographies**

#### **Jeffrey Leeds, Managing Partner**

Mr. Leeds has over 26 years of experience investing in private equity transactions in the Knowledge Industries. Prior to co-founding Leeds Equity, Mr. Leeds spent seven years specializing in mergers and acquisitions and corporate finance at Lazard Freres & Co. Prior to Lazard, Mr. Leeds served as a law clerk to the Hon. William J. Brennan, Jr. of the Supreme Court of the United States. Jeffrey also worked in the corporate department of the law firm of Cravath, Swaine & Moore in New York after graduating from law school. Mr. Leeds graduated summa cum laude from Yale University with a B.A. in History and attended Oxford University as a Marshall Scholar. Mr. Leeds earned his J.D., magna cum laude, from Harvard Law School.

#### **Jacques Galante, Partner**

Mr. Galante has over 22 years of private equity and investment banking experience. Prior to joining Leeds Equity in 2009, Mr. Galante spent over 9 years with The Carlyle Group where he worked as a Principal in the firm's U.S. Buyout team. During his tenure at Carlyle, Mr. Galante was an integral member of the team which founded the firm's Global Communications and Media Group. Prior to joining Carlyle, Mr. Galante was an investment banker in the Mergers and Acquisitions Group at Salomon Smith Barney. Mr. Galante graduated summa cum laude from the University of Illinois at Champaign-Urbana with a B.S. in Finance with a concentration in accounting.

#### **Scott VanHoy, Partner**

Mr. VanHoy has over 18 years of private equity and investment banking experience. Prior to joining Leeds Equity in 2010, Mr. VanHoy worked at DLJ Merchant Banking Partners as a Principal and Quad-C Management as an Associate. He started his career as an investment banker in the Leveraged Finance Group at Bank of America. Mr. VanHoy graduated with highest distinction from the University of North Carolina with a B.A. in Economics and graduated with high honors from the University of Chicago Graduate School of Business with an M.B.A. in Entrepreneurship & Finance.

#### **Peter Lyons, Partner & Chief Financial Officer**

Mr. Lyons has over 20 years of private equity investing experience. His areas of responsibility at Leeds Equity include financial and tax management, financial reporting, investor relations, compliance and risk. Prior to joining Leeds Equity in 1999, Mr. Lyons spent 10 years at Ernst & Young where he led the audits of some of the firm's largest clients in the retail and consumer products industry. Mr. Lyons graduated from Saint Michael's College with a B.S. in Accounting and earned an M.B.A. from New York University's Leonard N. Stern School of Business.

#### **Susan Cates, Partner**

Mrs. Cates has over 25 years of experience in investment banking, private equity and education leadership. Prior to joining Leeds Equity, Mrs. Cates was Chief Operating Officer at 2U, Inc., where she oversaw all product and service delivery operations. She was a founding team member of ThinkEquity Partners, where she led the education banking vertical, and later led investments in education platforms in the sector across the U.S. and Latin America. Mrs. Cates served as President of Executive Development at the University of North Carolina Kenan-Flagler Business School, which designs and delivers executive leadership programs for Fortune 500 companies. While at UNC, Mrs. Cates also led the creation and growth of the school's ground-breaking online MBA program, MBA@UNC. Mrs. Cates began her career as an investment banker at Wachovia Bank and Merrill Lynch. Mrs. Cates received a B.A. in Public Studies from Duke University and a M.B.A. from the University of North Carolina Kenan-Flagler Business School.

#### **Eric Geveda, Managing Director**

Mr. Geveda has over 16 years of private equity and investment banking experience. Prior to joining Leeds Equity in 2011, Mr. Geveda worked at Arsenal Capital Partners as a Senior Associate and Lightyear Capital as an Associate. He started his career at Credit Suisse First Boston, where he was an Analyst in the Mergers and Acquisitions Group. Mr. Geveda graduated with a B.A. in Finance and Economics, magna cum laude, from the University of Notre Dame and an M.B.A. from the Stanford University Graduate School of Business.

**Chris Mairs, Managing Director**

Mr. Mairs has over 14 years of private equity and investment banking experience. Prior to joining Leeds Equity in 2008, Mr. Mairs worked in both London and New York for Greenhill & Co. as an Analyst in the Mergers and Acquisitions Group. Mr. Mairs graduated with First Class honors from the University of St. Andrews, Scotland, with a BSc in Mathematics.

**Kevin Malone, Principal**

Mr. Malone has over 12 years of private and investment banking experience. Mr. Malone joined Leeds Equity in 2010 as an Associate and was previously an investment banking Analyst at Harris Williams & Co. Mr. Malone graduated from the Olin Business School at Washington University, with a B.S. in Business Administration.

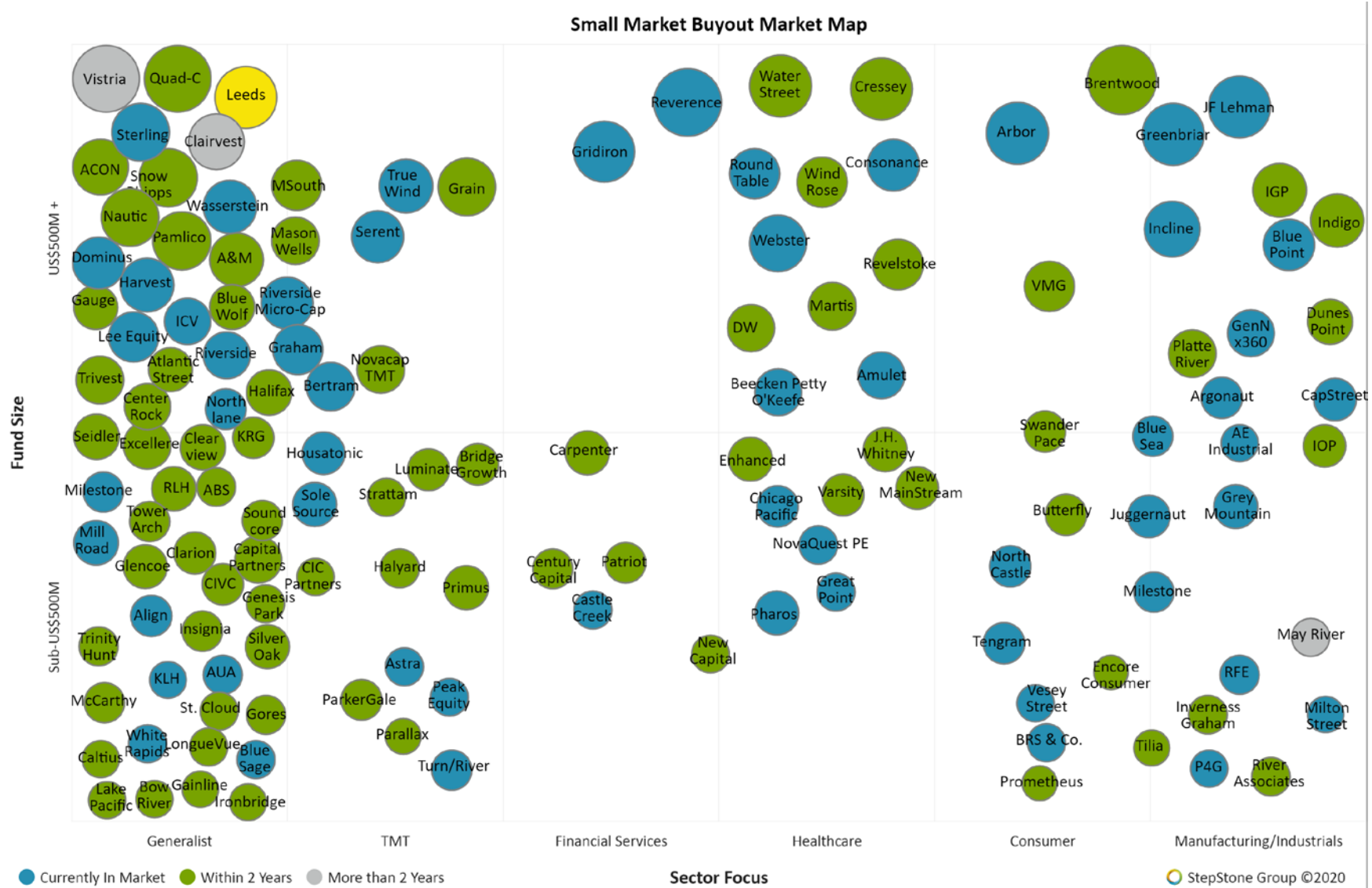
**David Neverson, Principal**

Mr. Neverson has over 15 years of private equity and investment banking experience. Prior to joining Leeds Equity in 2011, Mr. Neverson worked at ICV Partners as an Associate and was a GOTV Organizer with the Ohio Campaign for Change. Mr. Neverson began his career at Lehman Brothers, where he was an investment banker in the Global Consumer / Retail Group. Mr. Neverson graduated magna cum laude from Morehouse College with a B.A. in Business Administration and received his MBA from The Wharton School at the University of Pennsylvania.

**Elizabeth Chou, Growth Initiatives**

Ms. Chou has over 15 years of investment experience across the capital structure from equity to senior and mezzanine debt. Prior to joining Leeds Equity, Ms. Chou was a General Partner at New Markets Venture Partners where she spent nearly a decade investing in early and growth stage companies in K12, higher education and workforce development. Prior to joining New Markets, Ms. Chou was a Senior Associate at The Gladstone Companies where she focused on control equity and mezzanine debt investments. Ms. Chou began her career as an Account Executive with M&T Bank's Commercial & Industrial Middle Market Lending Group.

### Appendix III Market Map



## Glossary

Term	Definition
<b>Balanced Stage Venture Capital</b>	A Venture Capital fund focused on both Early Stage and Late Stage companies
<b>Bridge Financing</b>	Temporary funding that will eventually be replaced by permanent capital from equity investors or debt lenders
<b>Buyout</b>	Fund whose strategy is to acquire controlling interests in companies
<b>Carried Interest</b>	The general partner's share of the profits. The carried interest, rather than the management fee, is designed to be the general partner's chief incentive to strong performance.
<b>Co/Direct Investment</b>	Investment made directly into a company, rather than indirectly through a fund
<b>Committed Capital</b>	Total dollar amount of capital pledged to a fund
<b>Contributed Capital</b>	Total capital contributed to a fund for investments, fees and expenses, including late closing interest paid, less returns of excess capital called and bridge financing
<b>Cost Basis</b>	Remaining amount of invested capital
<b>Debt</b>	Security type that signifies a repayment obligation by a company (e.g. senior debt, subordinated debt, bridge loan etc.)
<b>Distressed</b>	A company's final Stage of development. Company is generally experiencing operational or financial distress
<b>Distressed / Turnaround</b>	Fund whose strategy it is to acquire the Equity or Debt of companies experiencing operational or financial distress
<b>Distributed Capital</b>	Capital distributed to the limited partners, including late closing interest earned
<b>Dow Jones US Total Stock Market Total Return Index</b>	The Dow Jones US Total Stock Market Total Return Index measures all U.S. equity securities with readily available prices. It is a free float-adjusted market capitalization weighted index and is calculated with dividend reinvestment
<b>DPI (Distributions to Paid In / The Realization Multiple)</b>	Total gross distributions divided by total gross contributions
<b>Early Stage</b>	A company's first Stage of development. Company is generally generating modest or no revenues
<b>Equity</b>	Security type that signifies ownership of a company (e.g. common stock, preferred stock, warrants, etc.)
<b>Expansion Stage</b>	A company's third Stage of development. Company is generally experiencing high growth and nearing profitability
<b>Exposure</b>	Sum of Remaining Value plus Unfunded Commitment
<b>Fund-of-Funds</b>	Fund whose strategy is to make investments in other funds
<b>Fund Stage</b>	A fund progresses through three stages over its life: investment (investment period), distribution (post-investment period), and liquidation
<b>Geographic Region</b>	Market location of a company: North America, Western Europe, Africa/Middle East, Latin America, Asia/Pacific Rim
<b>Growth Equity</b>	Fund whose strategy is to invest in companies to expand or restructure operations, enter new markets or finance an acquisition without a change of control of the business
<b>Infrastructure</b>	Fund whose strategy is to acquire interests in physical structures and networks that provide the essential services for society's economic and social needs, e.g. roads, tunnels, communication networks, etc.
<b>Internal Rate of Return (IRR)</b>	The discount rate that results in a net present value of zero of a series of cash flows. The IRR considers both cash flow timing and amount and is the preferred performance measure for private market funds
<b>Invested Capital</b>	Capital invested by a fund in portfolio holdings
<b>Investment Type</b>	Classification of an investment vehicle: Primary Fund, Secondary Fund, Fund-of-Funds
<b>J-Curve</b>	Refers to the shape of the curve illustrating a fund's performance over time. During the initial years of a fund's life, as a result of illiquidity, stagnant valuations, fees and expenses, a fund's performance tends to be negative (the bottom of the "J"). Eventually, as portfolio companies are realized or increase in value and fees become a smaller percentage of overall contributions, performance improves and investors' returns move up the "J" shaped curve
<b>Large</b>	Company with a Size greater than \$1 billion
<b>Late Stage</b>	A company's second Stage of development. Company is generally generating high revenue growth and high losses

Term	Definition
<b>Loss Ratio</b>	The percentage of capital in deals with a total value below cost, over total invested capital
<b>Lower-Mid</b>	Company with a Size greater than \$100 million, but less than \$250 million
<b>Lower Quartile</b>	The point at which 75% of all returns in a group are greater and 25% are lower.
<b>Mature</b>	A company's fourth Stage of development. Company is generally generating modest to no growth and operating profitably
<b>Mega Buyout</b>	Fund whose strategy is to acquire or recapitalize Large businesses, Fund size over \$6 billion
<b>Mezzanine</b>	Fund whose strategy is to acquire subordinated debentures issued by companies
<b>Middle-Market Buyout</b>	Fund whose strategy is to acquire or recapitalize middle-market businesses, Fund size between \$1-\$3 billion
<b>MSCI ACWI Index - Total Return</b>	The MSCI ACWI Total Return is a reflection of the performance of the MSCI ACWI Index, including dividend reinvestment, as calculated by Bloomberg. The MSCI ACWI Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets. The MSCI ACWI consists of 45 country indices comprising 24 developed and 21 emerging market country indices
<b>Multi-Strategy</b>	A Fund that invests across multiple strategies
<b>Natural Resources</b>	Fund whose strategy is to acquire interests in naturally occurring, economically valuable raw materials and all physical facilities and capabilities required for the extraction, refinement, and delivery to end users, e.g. oil and gas properties, timberland, etc.
<b>Net Asset Value ("NAV")</b>	In the context of this report, represents the fair value of an investment, as defined within each limited partnership agreement, yet in compliance with the governmental regulation, generally prepared on a GAAP basis
<b>Net IRR</b>	Annualized effective compound rate of return using daily contributions, distributions and Remaining Value as of the Report Date, net of all fees and expenses, including late closing interest
<b>Percent Interest</b>	Represents an investor's economic interest in a fund based upon the investor's commitment divided by total fund commitments
<b>Primary Investment</b>	An interest in a private equity fund acquired directly from the fund manager during the fundraising period
<b>Public Market Equivalent (PME)</b>	A private equity benchmark that represents the performance of a public market index expressed in terms of an IRR, using the same cash flows and timing as the investor's investment activity in private equity. The PME serves as a proxy for the return the investor could have achieved by investing in the public market. The PME benchmark return assumes cash flows are invested at the end of each day
<b>Publication Date</b>	Refers to the date this report was created as reflected in the Executive Summary
<b>Quartile</b>	Segment of a sample representing a sequential quarter (25%) of the group.
<b>Real Assets</b>	Fund whose strategy is to invest in assets that are tangible or physical in nature such as land, machinery, and livestock
<b>Real Estate</b>	Fund whose strategy is to acquire interests in real estate property
<b>Realized Capital</b>	Capital distributed to a fund from portfolio holdings
<b>Recallable / Recyclable Capital</b>	Capital that has been previously distributed by a fund to investors but may be called again for investment purposes. It is generally associated with realizations that have occurred in the early years of a fund or refers to uninvested capital that has been temporarily returned (i.e. returns of excess capital)
<b>Recapitalization</b>	The reorganization of a company's capital structure
<b>Remaining Value</b>	Capital account balance as reported by the General Partner, generally on a fair value basis
<b>Report Date</b>	Refers to the end date of the reporting period as reflected on the cover page
<b>Return on Investment (ROI)</b>	Ratio of Realized Capital plus Unrealized Value to Invested Capital



Term	Definition
<b>Russell 1000® Total Return Index</b>	The Russell 1000® Total Return Index measures the performance, including dividend reinvestment, of the large-cap segment of the U.S. equity universe. It is a subset of the Russell 3000® Index and includes approximately 1000 of the largest securities based on a combination of their market cap and current index membership. The Russell 1000 represents approximately 92% of the U.S. market.
<b>Russell 3000® Total Return Index</b>	The Russell 3000® Total Return Index measures the performance, including dividend reinvestment, of the largest 3000 U.S. companies representing approximately 98% of the investable U.S. equity market.
<b>RVPI (Residual Value to Paid In)</b>	The current value of all remaining investments within a fund divided by total gross contributions
<b>S&amp;P 500 Price Index</b>	The S&P 500 Price Index is a capitalization-weighted index of 500 stocks. The index is designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing all major industries.
<b>S&amp;P 500 Total Return Index</b>	The S&P 500 Total Return Index is a reflection of the performance of the S&P 500 Index, including dividend reinvestment. All regular cash dividends are assumed to be reinvested in the S&P 500 Index on the ex-date. Special cash dividends trigger a price adjustment in the price return index.
<b>Secondary Investment</b>	Investments that involve the purchase of private equity fund interests or portfolios of direct investments in privately held companies from existing institutional Investors
<b>Sector</b>	Industry in which the company operates: technology, telecommunications, healthcare, financial services, diversified, industrial, consumer, energy, etc.
<b>Size</b>	Capitalization size of a company: Large, Upper-Mid, Lower-Mid, Small
<b>Small</b>	Company with a Size of less than \$100 million
<b>Small Business Investment Company (SBIC)</b>	Lending and investment firms that are licensed and regulated by the Small Business Administration (SBA). The licensing enables them to borrow from the federal government to supplement the private funds of their Investors
<b>Small Buyout</b>	Fund whose strategy is to acquire or recapitalize Small businesses
<b>Stage</b>	The course of development through which a company passes from its inception to its termination: Early, Late, Expansion, Mature, Distressed
<b>Sub-Asset Class</b>	Private equity investments are generally classified as Buyout, Venture Capital, Mezzanine, Distressed/Turnaround, and Fund-of-Funds
<b>Subordinated Debt</b>	Debt with inferior liquidation privileges to senior debt in case of a bankruptcy and consequently, will carry higher interest rates than senior debt to compensate for the subordination.
<b>Term Sheet</b>	A summary of key terms between two or more parties. A non-binding outline of the principal points which definitive agreements will supercede and cover in detail.
<b>TVM (Total Value Multiple) / TVPI (Total Value to Paid In)</b>	Net asset value plus gross distributions divided by total gross contributions
<b>Unfunded Commitment</b>	Amount of capital that remains to be contributed to a fund as defined in a fund's limited partnership agreement
<b>Unrealized Value</b>	Holding value of a portfolio company assigned by the General Partner, which generally represents fair value
<b>Upper-Mid</b>	Company with a Size greater than \$250 million but less than \$1 billion
<b>Upper Quartile</b>	The point at which 25% of all returns in a group are greater and 75% are lower.
<b>Venture Capital</b>	Fund whose strategy is to make investments in Early Stage and/or Late Stage companies
<b>Vintage Year</b>	The calendar year in which an investor first contributes capital to a fund
<b>Vintage Year</b>	The calendar year in which an investor first contributes capital to a fund
<b>Write-Down</b>	A reduction in the value of an investment.
<b>Write-Off</b>	The write-down of a portfolio company's holdings to a valuation of zero and the venture capital investors receive no proceeds from their investment.
<b>Write-Up</b>	An increase in the value of an investment.

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## Memorandum

RE: Leeds Equity Partners, VII COVID Impact  
TO: File  
FROM: SSG Deal Team  
DATE: April 2, 2020

Like nearly all private equity portfolios, Leeds Equity's investments will be impacted by COVID-19 and the impending recession. But StepStone's view is that this impact will be temporal and less severe in the existing active portfolio given the GP's refocusing on software and tech-enabled services investments into the "Knowledge Industries". Leeds is an investor in the education sector, which has been impacted by the closure of schools as a result of shelter-in-place mandates and the like that have limited public gatherings during the current pandemic. However, in more recent funds, the GP has transitioned its focus to what it describes as the Knowledge Industries, which it defines as industries that include companies seeking to enable individuals and organizations to be more effective and efficient in an increasingly information intensive, fast changing, global and competitive marketplace. A function of this sector focus is Leeds targeting tech-enabled businesses that provide training and information services to a variety of end markets. StepStone believes these types of businesses are more insulated from shocks to the market like COVID-19 as well as more recession resilient.

Several of the GP's Fund VI and Fund V portfolio companies are providers of software related to compliance, productivity, data and process management, and training for corporations and higher education institutions (e.g., LRN, Astra/Campus Insights, Exterro, Knowledge Factor). These types of businesses have recurring revenue models and are better insulated from recessions. Other Leeds portfolio companies provide mission critical services or are relatively cycle resilient (e.g., INTO, Vital Smart, Prosci), or sell into resilient industries (e.g., BARBRI, Simplify Compliance). The GP has also been focused on investments in virtual modalities across the portfolio, which have enabled some portfolio companies to adjust to the current environment of restricted in-person engagement. Leeds' school businesses (e.g., Endeavor, Fusion) are now making efforts to teach students in virtual classrooms and Leeds' training businesses (e.g., CeriFi) have pivoted to virtual sessions.

On a portfolio-wide basis, the GP stands to benefit from more virtual learning as well as the introduction of new offerings (e.g., COVID-19 specific content, general response training). There is also an argument to be made around more individuals turning towards continuing education as we enter a recession and unemployment increases. This trend would benefit a number of Leeds portfolio companies. Leeds is also focused on prudent capitalization with an average net leverage ratio of 3.6x across the portfolio, and ample liquidity over the next quarter.

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**Past performance is not necessarily indicative of future results. Actual performance may vary.**

# LEEDS | Equity Partners

Private Equity Investing in the Knowledge Industries

Presentation to the State of Connecticut  
May 13, 2020



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# Investing and innovating within the Knowledge Industries

First day of school to the last day of work

Private equity firm focused on the Knowledge Industries

Education | Training | Information Services

Middle market control buyouts

# Leeds Equity Partners

## The Knowledge Industries

- Hyper-competitive, fast paced, knowledge-based, global economy requires more and better education, training and greater ability to harness information
- Vast, diverse, high growth, defensive and impactful
- Focus on providers of “must have” products that drive access to and success in the workplace
- Opportunity for positive social impact, while generating superior returns

## Competitive Advantage Driven By Deep Sector Immersion

- Domain expertise of a strategic operator
- Enhanced ability to originate opportunities
- Differentiated ability to assess risks and opportunities
- Partner of choice
- Unique capacity to drive value creation

## Strong Track Record

- Leeds V – \$522M fund with \$160M of co-investment
    - 7 of 11 investments are realized
- |  |   |   |  |
|--|---|---|--|
|  | <b>3.6x</b><br>Realized Gross MOIC <sup>1</sup> | <b>38%</b><br>Realized Gross IRR <sup>1</sup> | <b>1.7x</b><br>DPI Generated from<br>53% of Committed Capital <sup>1</sup> |
|--|---|---|--|
- Leeds VI – \$760M fund with \$307M of co-investment to-date
- |                          |  |   |                                     |
|--------------------------|--|---|-------------------------------------|
| <b>100%</b><br>Committed | <b>26%</b><br>Acquired at a Discount to Avg. of Comparable<br>Public Companies <sup>2</sup> and Precedent Transactions | <b>73%</b><br>Growing at a Premium to<br>Comparable Public Companies <sup>2</sup> | <b>26% / 17%</b><br>Gross / Net IRR |
|--------------------------|--|---|-------------------------------------|



# Team Committed to Excellence



**Jeffrey Leeds**  
Managing Partner



**Jacques Galante**  
Partner



**Scott VanHoy**  
Partner



**Peter Lyons**  
Partner/CFO



**Susan Cates**  
Partner



**Eric Geveda**  
Managing Director



**Chris Mairs**  
Managing Director



**Elizabeth Chou**  
Growth



**Kevin Malone**  
Principal



**David Neversion**  
Principal



**Brendan Kelley**  
Senior Associate



**Hiral Pithadia**  
Senior Associate



**Matt Blum**  
Associate



**Theo Zhang**  
Associate



**Priyanka Chodhari**  
Associate



**Joe Kennedy**  
Fund Controller



**Gwen Yang**  
Assistant Controller



**Elle Sukalic**  
Fund Accountant



**Danielle Derrico**  
Investor Relations



**Experienced Leadership Team**  
Average tenure at Leeds Equity of 15 years  
19 total professionals



**Best Practices From Prior Firms**  
Carlyle, DLJ Merchant Banking, Quad-C, Arsenal, Lightyear, ICV



**Collaboration and Accountability**  
Transparency, respect and teamwork are the foundations of our culture



**Economic Alignment**  
Carried interest allocated broadly  
Significant GP commitment



**Commitment to ESG and Impact**  
Positive social impact, while seeking to generate attractive returns



# Most Recent Additions To Our Leads Team



**Susan Cates**  
*Partner*



**Elizabeth Chou**  
*Growth*



**Hiral Pithadia**  
*Senior Associate*



**Matt Blum**  
*Associate*



**Theo Zhang**  
*Associate*



**Priyanka Chodhari**  
*Associate*



**Gwen Yang**  
*Assistant Controller*

# Leeds V – Overview

\$522M

## Fund Size

2007 vintage fund  
11 platform and 27 add-on investments

\$160M

## Co-Investment

35% of Leeds V invested capital  
Co-investment increases total capital managed to \$682M

38%

## Realized Gross IRR

7 realizations generating \$986M achieving a 3.6x MOIC and 38% IRR

3.2x / 2.5x

## Gross / Net MOIC<sup>1</sup>

28% / 20%

## Gross / Net IRR<sup>1</sup>

Top quartile per Cambridge Associates

(1) MOIC and IRR statistics are pro forma for the sale of Edcentric, which closed on 2/28/2020.

# Leeds VI – Overview

\$760M

## Fund Size

2016 vintage year

10 platform investments at an average of **11.8x EBITDA**<sup>1</sup>

100%

## Capital Committed

**\$138M** reserved for follow-on investments to drive growth

\$306M

## Co-Investment

Co-investment increases total capital managed to **\$1,066M**

**48%** of Leeds VI invested capital

26%

## Purchase Price Discount<sup>2</sup>

Robust EBITDA growth of **17.0%** representing a **73%** premium to publicly traded Knowledge Industries companies

1.4x / 1.2x

## Gross / Net MOIC<sup>3</sup>

26% / 17%

## Gross / Net IRR<sup>3</sup>

# State of Connecticut – Leeds Equity Partnership

*A productive relationship beginning over 10 years ago...*

## Leeds Equity Partners V, L.P.

\$40M | State of CT Commitment

3.2x / 2.5x | Gross / Net MOIC

28% / 20% | Gross / Net IRR  
Top quartile per Cambridge Associates

\$96M | Total Value of St of CT Investment

\$67M  
of returned capital

## Leeds Equity Partners VI, L.P.

\$75M | State of CT Commitment

1.4x / 1.2x | Gross / Net MOIC

26% / 17% | Gross / Net IRR

\$61M | Total Value of St of CT Investment<sup>1</sup>

\$157M  
of combined fund value

(1) Total value for Leeds Equity Partners VI, L.P. is measured off invested capital of \$50M.

# Large, High Growth Addressable Market Opportunity

Today's fast changing, global and competitive market requires more and better education, training and information

EDUCATION



TRAINING



INFORMATION SERVICES



Vast

Diverse

High Growth

Defensive

Impact

12%  
of U.S. GDP

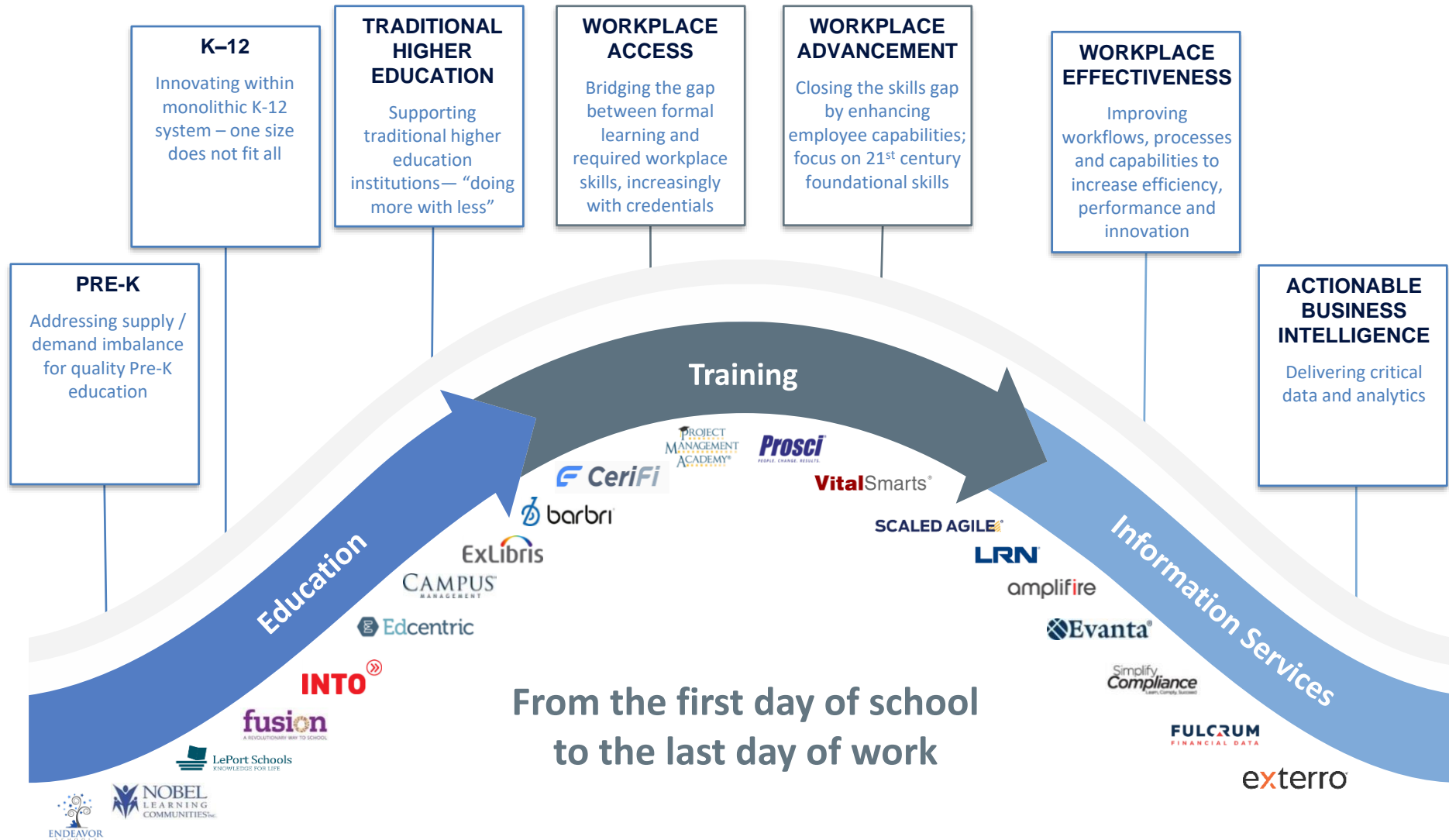
200K+  
Companies

2x  
GDP Growth

Must Have  
Solutions

Structural  
Social Change

# Proprietary Market Initiatives Within the Knowledge Industries



# Pursuing a Strategy of Sector Immersion

## Deep Sector Theses and Relationships

- Combine the sector expertise of a strategic operator with the skills of a private equity firm
- Pursue market theses developed over two decades of sector work
- Leverage cumulative learnings of our sector immersion and prior investments

## Unique Sourcing

- Create sourcing advantages through focus and specialization
- Build long-term relationships with business owners
- Cultivate mission-oriented partnerships
- Develop proprietary and advantaged opportunities

## Differentiated Assessment and Risk Management

- Drive enhanced assessment and due diligence through immersion
- Utilize proprietary insights - know where to focus and what to diligence
- Leverage experience with a prospect's competitors, customers and vendors
- Build upon shared portfolio company eco-system
- Apply portfolio risk management framework

## Tailored Value Creation

- Invest in people and product and drive innovation
- Support known industry talent to drive initiatives
- Enhance and augment product offering
- Serve customers more holistically
- Scale through acquisitions

# Representative Leeds VI Investments

*Investing across the learning lifecycle from “first day of school to last day of work”*

**Astra**

**Enhancing Overall Institutional Effectiveness in Higher Education**

 **barbri**

**Driving Higher Educational Results and Enabling Workforce Access  
within the Legal Sector**

**LRN**

**Elevating Employee Behavior to Comply with Regulatory Requirements,  
Manage Risk and Drive Organizational Outcomes**

**exterro**

**Enabling Robust Insights from Actionable Business Intelligence  
that Enable Enhanced Decision Making**