PRIVATE EQUITY STRATEGIC INVESTMENT PLAN

SAN BERNARDINO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

January 2020

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

PRIVATE EQUITY OVERVIEW

PRIVATE MARKETS THOUGHTS & ACTIONS

Private Markets Thoughts

- Fundraising has continued to be robust and efficient—and early
- Valuations are still at cyclical highs, but capital put to work in 2019 vintage funds may see better buying opportunities
- Rising rates, deteriorating credit quality and overall credit levels portend a riskier future for performing credit
- Late cycle commitments often outperform mid-cycle ones that have not had the opportunity to de-risk

Private Markets Actions

- Actively manage portfolios: continue to deploy capital thoughtfully, with an eye toward preserving liquidity
- Prepare for distressed cycles with commitments to control- / influence-oriented managers with flexible mandates
- Continue to seek special situations and credit opportunity strategies predicated on flexibility, value and complexity
- Consider building venture exposure with both new and established top quartile managers

Exhibit A: Page 4

NEPC VIEW POINT SUMMARY

Private Equity

US Large & Mega Buyout	US Mid & Small Buyout	Special Situations	European Buyout	US Early Stage Venture	US Mid & Late Stage Venture
US Growth Equity	European Venture	European Growth Equity	Secondaries	Co-Investment	Asia

Private Credit

Distressed Debt	Opportunistic Credit	US Direct Lending	European Direct Lending	Niche Lending	Mezzanine

Green: Favorable View
Gray: Neutral View
Red: Negative View

STRATEGY IMPLEMENTATION: PRIVATE EQUITY

<table>
<tr><th colspan="2">Strategy</th><th colspan="2">Outlook</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>North America</td><td>Europe</td><td></td></tr>
<tr><td rowspan="3">Venture Capital & Growth Equity</td><td>Early Stage</td><td>Positive</td><td>Positive</td><td>• In US and Europe, target managers with broad and relevant networks and expertise. Due to the lack of scalability at this stage, focus on appropriately sized funds (<$500 million).</td></tr>
<tr><td>Mid & Late Stage</td><td>Negative</td><td>Neutral</td><td>• With US valuations still high, target managers that have a sector-focused strategy whose value-add goes beyond that of a capital provider. In Europe, target managers with strong networks and ample deal flow.</td></tr>
<tr><td>Growth Equity</td><td>Neutral</td><td>Neutral</td><td>• Seek managers that can consistently execute a strategy of scaling and professionalizing previously bootstrapped companies. Alternatively, target managers that are well equipped to fuel continued growth in VC-backed companies</td></tr>
<tr><td rowspan="3">Buyouts & Special Situations</td><td>Mega & Large</td><td>Neutral</td><td>Neutral</td><td rowspan="3">• In the large relatively efficient markets, look for managers with some competitive advantage/angle in their deals; sector specialists can still outperform
• In Europe, look for managers who have local knowledge and presence as well as experience professionalizing a business
• Evaluate opportunistic special situations managers with flexible and nimble approaches able to capitalize on market, industry and/or specific company volatility</td></tr>
<tr><td>Mid & Small</td><td>Neutral</td><td>Neutral</td></tr>
<tr><td>Special Sits & Turnarounds</td><td>Positive</td><td>Positive</td></tr>
<tr><td colspan="2">Secondaries</td><td colspan="2">Neutral</td><td>• Invest with groups demonstrating sourcing advantages to minimize competition for deals</td></tr>
</table>

STRATEGY IMPLEMENTATION: PRIVATE EQUITY

Strategy		Outlook	Commentary
Asia	Developed Economies *(Australia, South Korea and Japan)*	Positive	• Emphasize buyout strategies with managers that have strong sourcing networks, disciplined capital deployment and ability to drive value • Middle market funds provide attractive growth potential while larger funds can invest in industry leaders to drive consolidation or pursue cross-border expansion opportunities
	Developing Economies *(China, India and Southeast Asia)*	Positive	• Emphasize growth equity strategies by partnering with strong entrepreneurs to expand businesses and develop management teams • Early stage venture capital in China and India shifting from copy-cat business models to technology innovation • Control deals are becoming more frequent as PE industry matures and growth slows, providing acquisition targets for buyout groups
Fund of Funds & Co-Investment Funds	Primary FOFs	Neutral	• Use specialists to gain exposure to difficult to access segments and/or geographies; be aware of how co-investments and secondaries are being used within a primary fund of fund before committing
	Co-Investment Funds	Positive	• Seek managers with demonstrated access to deal flow from high quality GPs and have a differentiated viewpoint on how they evaluate opportunities

STRATEGY IMPLEMENTATION: PRIVATE CREDIT

Strategy		Outlook	Commentary
Distressed Debt & Opp. Credit.	Distressed Debt	Positive	• Consider strategies that can allocate capital opportunistically between geographies and asset classes • Favor distressed-for-control/influence strategies that can succeed in benign and highly distressed markets
	Opportunistic Credit	Positive	• Opportunistic strategies can enhance returns in a low-rate environment compared to traditional fixed-income strategies • Find managers who can provide flexible capital solutions that can invest across various market conditions
Mezzanine & Direct Lending	Mezzanine	Negative	• There are interesting opportunities on the non-sponsored side where managers can drive deal structures and terms
	Niche Lending	Positive	• Look for managers with specialization in particular sectors, industries and market segments which require additional expertise and which are often overlooked by traditional lenders
	US Lending	Negative	• Relative attractiveness in the lower-to middle market (companies less than $50m EBITDA); seek managers with historical discipline and transparency • Focus on fees and more liquid vehicle structures
	Europe Lending	Neutral	• Look for managers with an established platform and strong historical market share (“Tier 1” managers) that can navigate multiple markets

SBCERA PACING RECOMMENDATION

NEPC RECOMMENDATIONS

- **San Bernardino County Employee's Retirement Association ("SBCERA") should consider committing $600 million to private equity in 2020 to achieve and maintain the target allocation.**

- **Private Equity Allocation**
  - The investment policy has a target allocation to private markets of 16.0% with a permitted range of 6% to 21%.
  - As of 9/30/19, there was approximately $1.8 billion in private equity Net Asset Value ("NAV"), which translated to approximately 16.8% of the total SBCERA portfolio and was within the policy range.

PRIVATE EQUITY RECOMMENDATION

- **NEPC recommends committing approximately $600 million to private equity in 2020 with current MCA obligations included in this amount. Historical and expected MCA commitments are shown below.**

Manager / Fund Name	2018	2019	2020
Total PE Budget (Pacing Plan)	**$ 500,000,000**	**$ 500,000,000**	**$ 600,000,000**
Abderdeen Standard SOF IV	$ 40,000,000		
Aberdeen Standard European Co-Investment Fund II (new)			$ 50,000,000
Adams Street MCA (new)			$ 50,000,000
Alcentra SMA	$ 25,000,000	$ -	$ -
Ares PE/RE MCA	$ 15,000,000	$ 15,000,000	$ -
Crestline Portfolio Financing Fund	$ 50,000,000		
Crestline MCA/Portfolio Financing Fund II (new)			$ 100,000,000
Gramercy MCA	$ 70,000,000	$ 25,000,000	$ 25,000,000
Industry Ventures MCA	$ 75,000,000	$ 100,000,000	$ 50,000,000
Kayne Anderson MCA	$ 30,000,000	$ 100,000,000	$ 50,000,000
Partners Group MCA PE	$ 40,000,000	$ -	$ 50,000,000
Pathway Capital MCA	$ 40,000,000	$ 102,000,000	$ 70,000,000
Tennenbaum MCA	$ 50,000,000	$ 30,000,000	$ -
Waterfall MCA	$ 65,000,000	$ -	$ -
Allocated PE Budget	**$ 500,000,000**	**$ 372,000,000**	**$ 445,000,000**
Unallocated PE Budget	**$ -**	**$ 128,000,000**	**$ 155,000,000**

- **The allocations will continue to be biased toward strategies with stronger early distribution characteristics. The $600 million target will allow SBCERA to maintain target exposures while investing in private assets across all the sub-strategies including but not limited to distressed debt, direct lending, mezzanine debt, equity buyout, growth equity, and venture capital.**
- **These recommendations are intended to be used as a directional guideline based on market conditions and revisited annually.**

PACING MODEL INPUTS AND ASSUMPTIONS

($ in millions)

General Portfolio Assumptions

Total Portfolio Assets	$10,748
Total Private Equity Assets	$1,811
Private Equity Capital to be Funded	$631
Total Private Equity Exposure	$2,442
Total Private Equity Assets / Total Portfolio Assets	16.8%
Total Private Equity Exposure / Total Portfolio Assets	22.7%
Target Private Equity Allocation % (Current Target)	16.0%

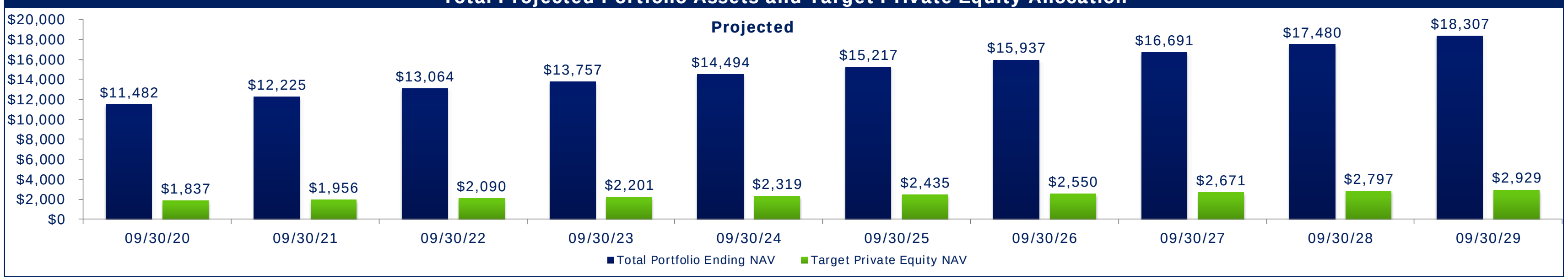
Portfolio Return Assumptions	2020	2021	2022
Target Investment Return %	7.6%	7.6%	7.6%
Contributions %	5.6%	5.2%	4.8%
Payouts %	-6.3%	-6.3%	-5.5%
Expenses %	-0.1%	-0.1%	-0.1%
Reserve for Expenses %	0.0%	0.0%	0.0%
Net Growth Rate %	6.8%	6.5%	6.9%

Portfolio Data as of:	9/30/2019
Private Equity Data as of:	6/30/2019

Total Projected Portfolio Assets

	Projected									
	09/30/20	09/30/21	09/30/22	09/30/23	09/30/24	09/30/25	09/30/26	09/30/27	09/30/28	09/30/29
Total Portfolio Net Growth Rate (Year Ending)	6.8%	6.5%	6.9%	5.3%	5.4%	5.0%	4.7%	4.7%	4.7%	4.7%
Total Portfolio Beginning NAV	$10,748	$11,482	$12,225	$13,064	$13,757	$14,494	$15,217	$15,937	$16,691	$17,480
Yearly Net Growth	$734	$743	$839	$692	$737	$723	$720	$754	$789	$827
Total Portfolio Ending NAV	$11,482	$12,225	$13,064	$13,757	$14,494	$15,217	$15,937	$16,691	$17,480	$18,307
Target Private Equity Allocation	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%
Target Private Equity NAV	$1,837	$1,956	$2,090	$2,201	$2,319	$2,435	$2,550	$2,671	$2,797	$2,929

Total Projected Portfolio Assets and Target Private Equity Allocation



COMMITMENT PACE GOING FORWARD

($ in millions)

Private Equity Commitment Projections by Vintage Year

Private Equity Commitments by Vintage Year

	Actual			More Certain			Less Certain						
Year	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
Total Commitments	$395	$500	$372	$600	$600	$625	$625	$650	$650	$700	$800	$800	$800

Exhibit A: Page 13

COMMITMENTS VS. PROJECTED ALLOCATION

($ in millions)

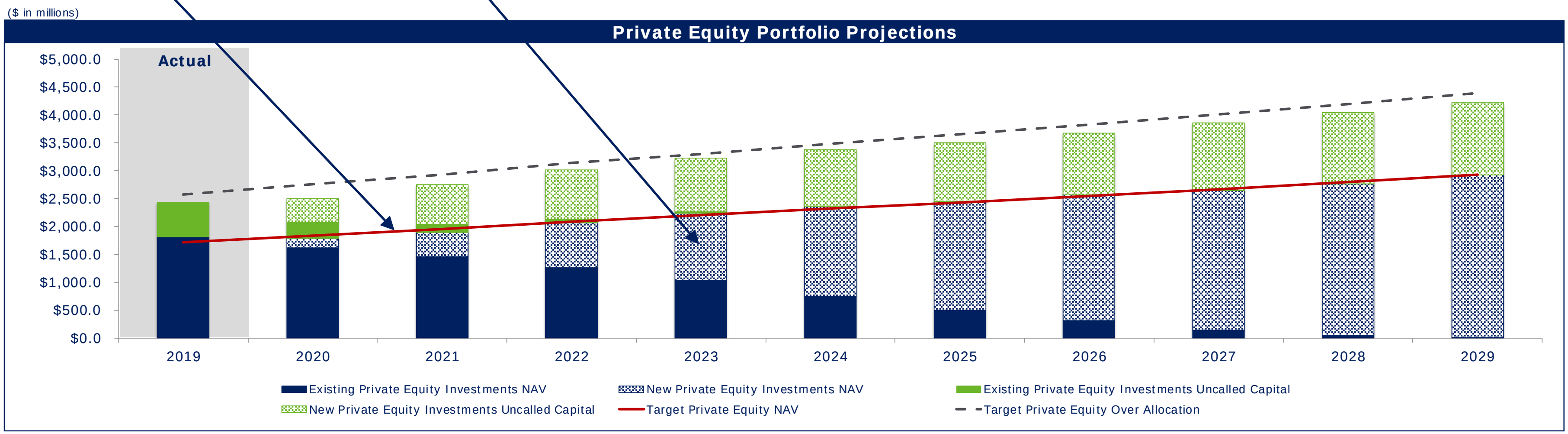
Private Equity Commitments by Vintage Year

Private Equity Commitments by Vintage Year

	Actual			More Certain			Less Certain						
Year	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
Total Commitments	$395	$500	$372	$600	$600	$625	$625	$650	$650	$700	$800	$800	$800
Target Private Equity Allocation (%)	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%
Projected Private Equity NAV / Total Plan Assets	14.1%	14.9%	16.8%	15.6%	15.6%	15.8%	16.3%	16.2%	16.1%	16.1%	15.8%	15.8%	15.9%

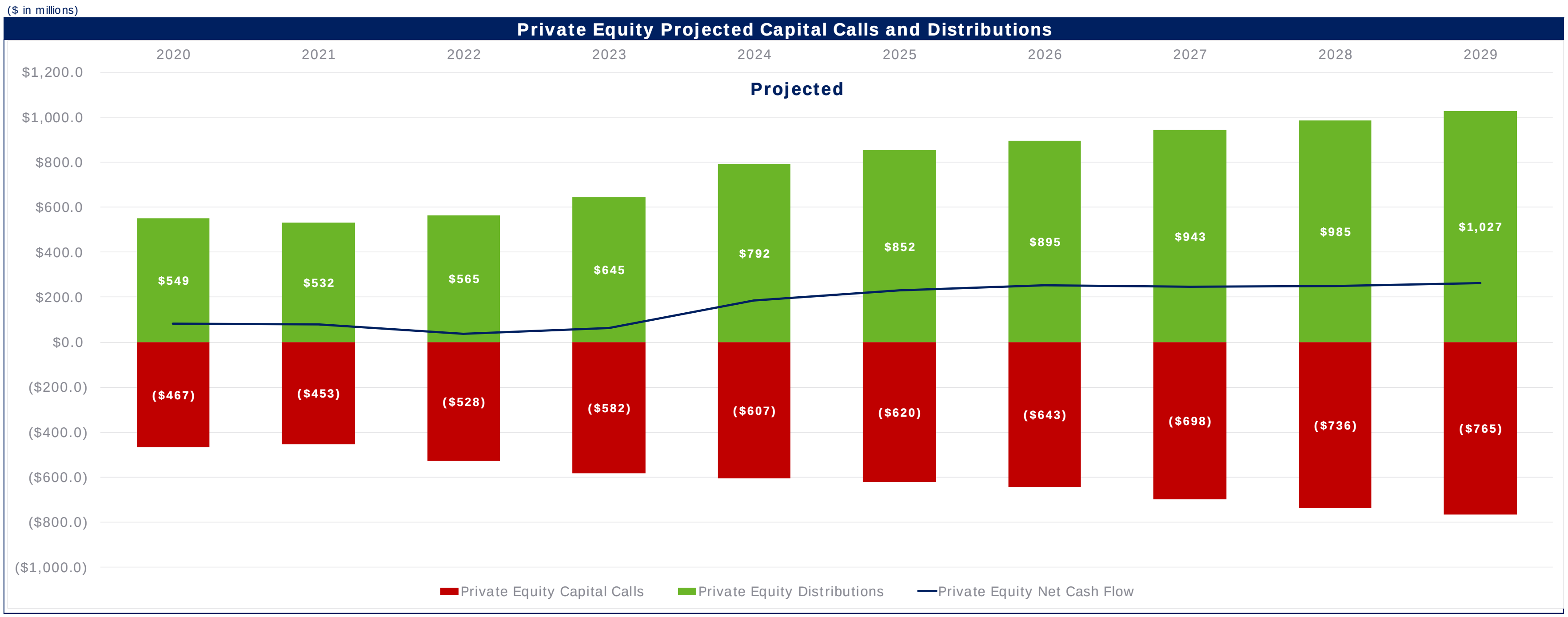
ASSET LEVEL PROJECTIONS

- **Red line** is the **16%** target private market allocation based on projected plan total NAV; **Black dashed line** is the 1.5x recommended over-commitment target line. Goal is to keep private markets NAV (**blue bar**) at or near the red target line.



		Projected									
Year	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
Private Equity NAV	$1,811	$1,789	$1,901	$2,069	$2,242	$2,351	$2,447	$2,563	$2,644	$2,768	$2,918
Uncalled Capital Commitments	$631	$711	$855	$951	$989	$1,031	$1,058	$1,115	$1,218	$1,281	$1,317
Private Equity NAV + Uncalled Capital Commitments	$2,442	$2,500	$2,757	$3,020	$3,231	$3,382	$3,505	$3,678	$3,861	$4,049	$4,235
Target Private Equity NAV	$1,720	$1,837	$1,956	$2,090	$2,201	$2,319	$2,435	$2,550	$2,671	$2,797	$2,929
Over-Commitment Pace	1.5x	1.5x	1.5x	1.5x	1.5x	1.5x	1.5x	1.5x	1.5x	1.5x	1.5x
Target Private Equity Over Allocation	$2,580	$2,756	$2,934	$3,135	$3,302	$3,479	$3,652	$3,825	$4,006	$4,195	$4,394
Private Equity Percent of Total Portfolio Assets											
Private Equity NAV	16.8%	15.6%	15.6%	15.8%	16.3%	16.2%	16.1%	16.1%	15.8%	15.8%	15.9%
Private Equity Uncalled Capital Commitments	5.9%	6.2%	7.0%	7.3%	7.2%	7.1%	7.0%	7.0%	7.3%	7.3%	7.2%
NAV + Uncalled Capital Commitments	22.7%	21.8%	22.5%	23.1%	23.5%	23.3%	23.0%	23.1%	23.1%	23.2%	23.1%
Target Private Equity Allocation	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%

PROJECTED CASH FLOWS



	Projected									
Year	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
Private Equity Capital Calls	($467)	($453)	($528)	($582)	($607)	($620)	($643)	($698)	($736)	($765)
Private Equity Distributions	$549	$532	$565	$645	$792	$852	$895	$943	$985	$1,027
Private Equity Net Cash Flow	$82	$80	$37	$63	$185	$232	$252	$245	$249	$262

PACING PLAN DISCLAIMERS

- NEPC's private markets pacing analysis projects a potential level of future assets and cash flows for a single scenario based on a series of assumptions. This analysis is intended to help estimate future exposure levels. It is not a guarantee of future cash flows, appreciation or returns.
- The timing and amounts of projected future cash flows and market values of investments could vary significantly from the amounts projected in this pacing analysis due to manager-specific and industry-wide macroeconomic factors.
- Estimates of projected cash flows and market values for existing private markets commitments were made at the Fund level and do not incorporate any underlying portfolio company projections or analysis.
- 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.
- Data used to prepare this report was obtained directly from the investment managers and other third parties. 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 is intended only for the designated recipient(s). If you are not a designated recipient, you may not copy or distribute this document.

ALTERNATIVE INVESTMENT DISCLOSURES

It is important that investors understand the following characteristics of non-traditional investment strategies including hedge funds and private equity:

1. **Performance can be volatile and investors could lose all or a substantial portion of their investment**
2. **Leverage and other speculative practices may increase the risk of loss**
3. **Past performance may be revised due to the revaluation of investments**
4. **These investments can be illiquid, and investors may be subject to lock-ups or lengthy redemption terms**
5. **A secondary market may not be available for all funds, and any sales that occur may take place at a discount to value**
6. **These funds are not subject to the same regulatory requirements as registered investment vehicles**
7. **Managers may not be required to provide periodic pricing or valuation information to investors**
8. **These funds may have complex tax structures and delays in distributing important tax information**
9. **These funds often charge high fees**
10. **Investment agreements often give the manager authority to trade in securities, markets or currencies that are not within the manager's realm of expertise or contemplated investment strategy**