



OPEN SESSION MEETING MATERIALS

HOWARD COUNTY RETIREMENT
PLAN

MAY 27, 2021

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OPEN SESSION AGENDA

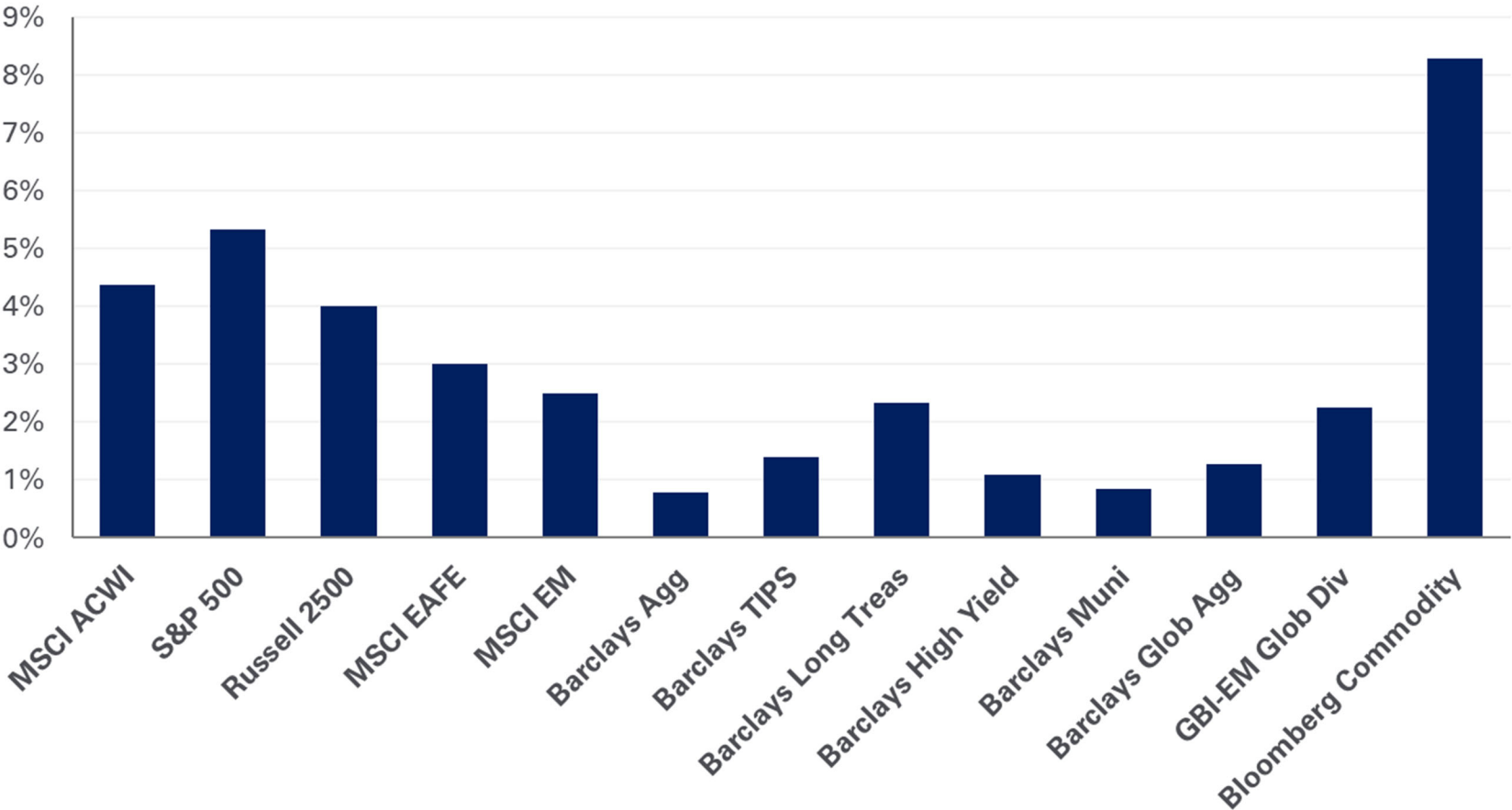
Slide

- **April Preliminary Performance Report** **3**
- **NEPC's Unfavorable News Committee** **15**
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US EQUITIES OUTPERFORMED

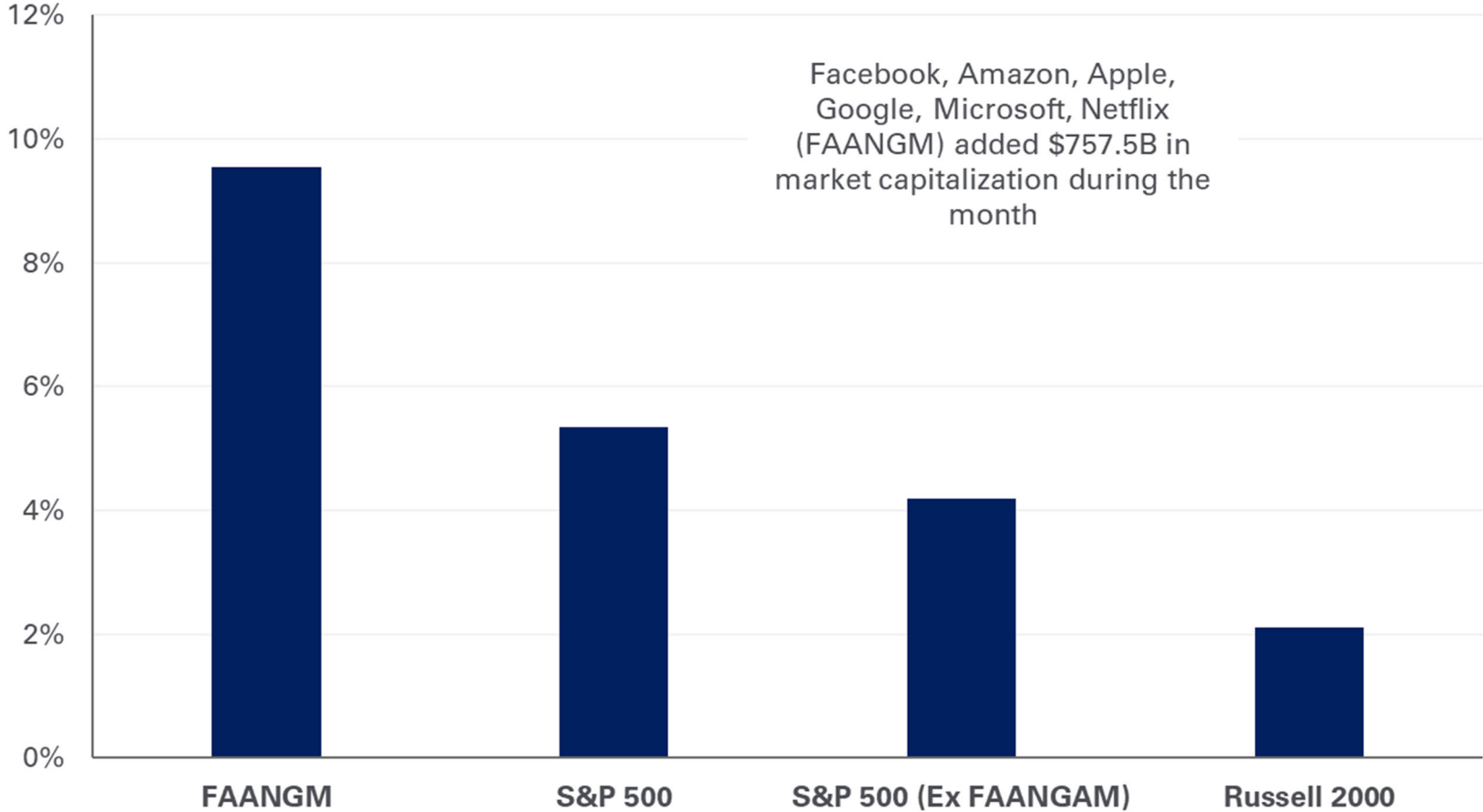
MONTHLY RETURNS



Source: S&P, Russell, MSCI, JPM, Bloomberg, FactSet

FAANGM STOCKS OUTPERFORMED

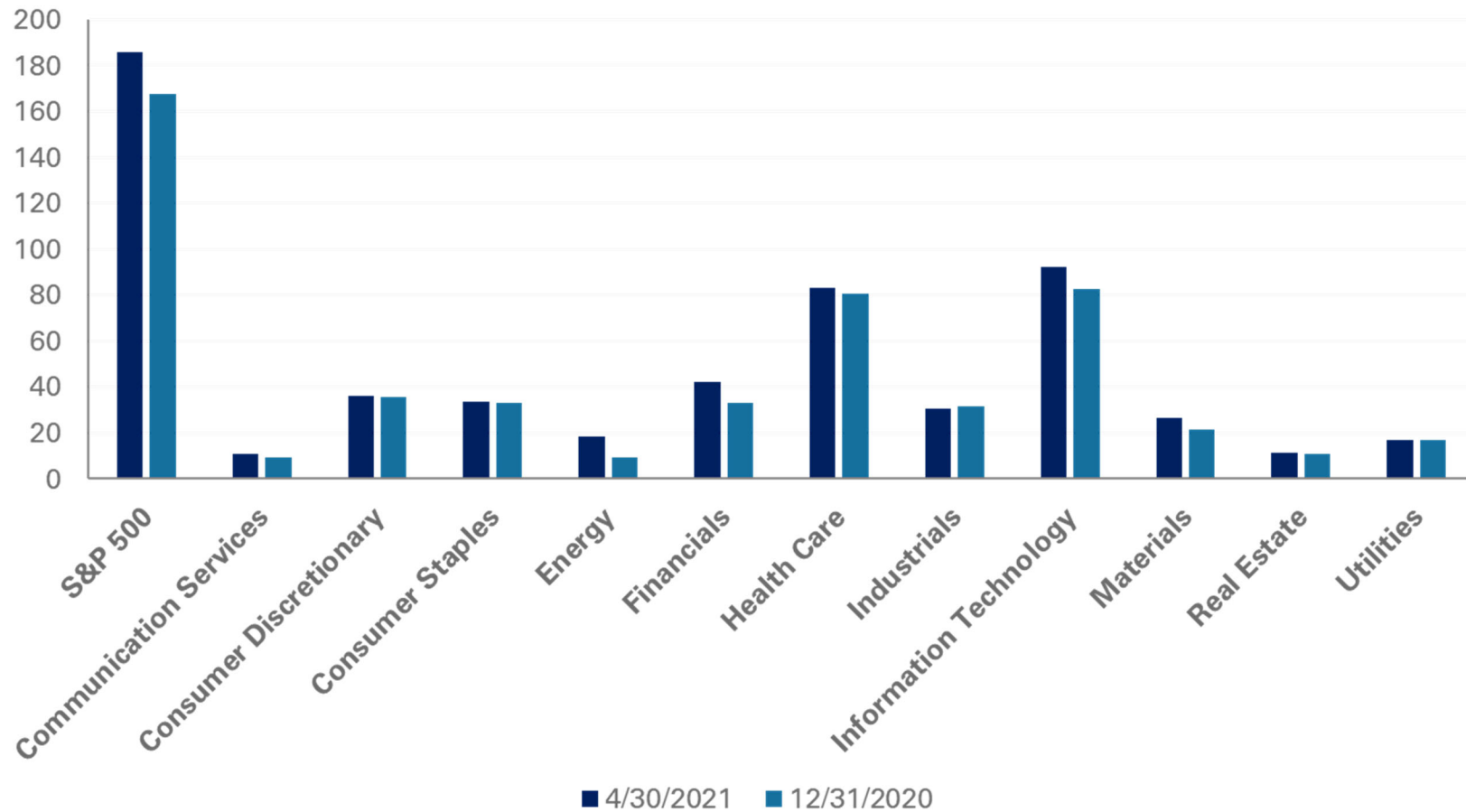
MONTHLY RETURNS



Source: S&P, Russell, FactSet

S&P 500 EARNINGS EXPECTATIONS IMPROVE

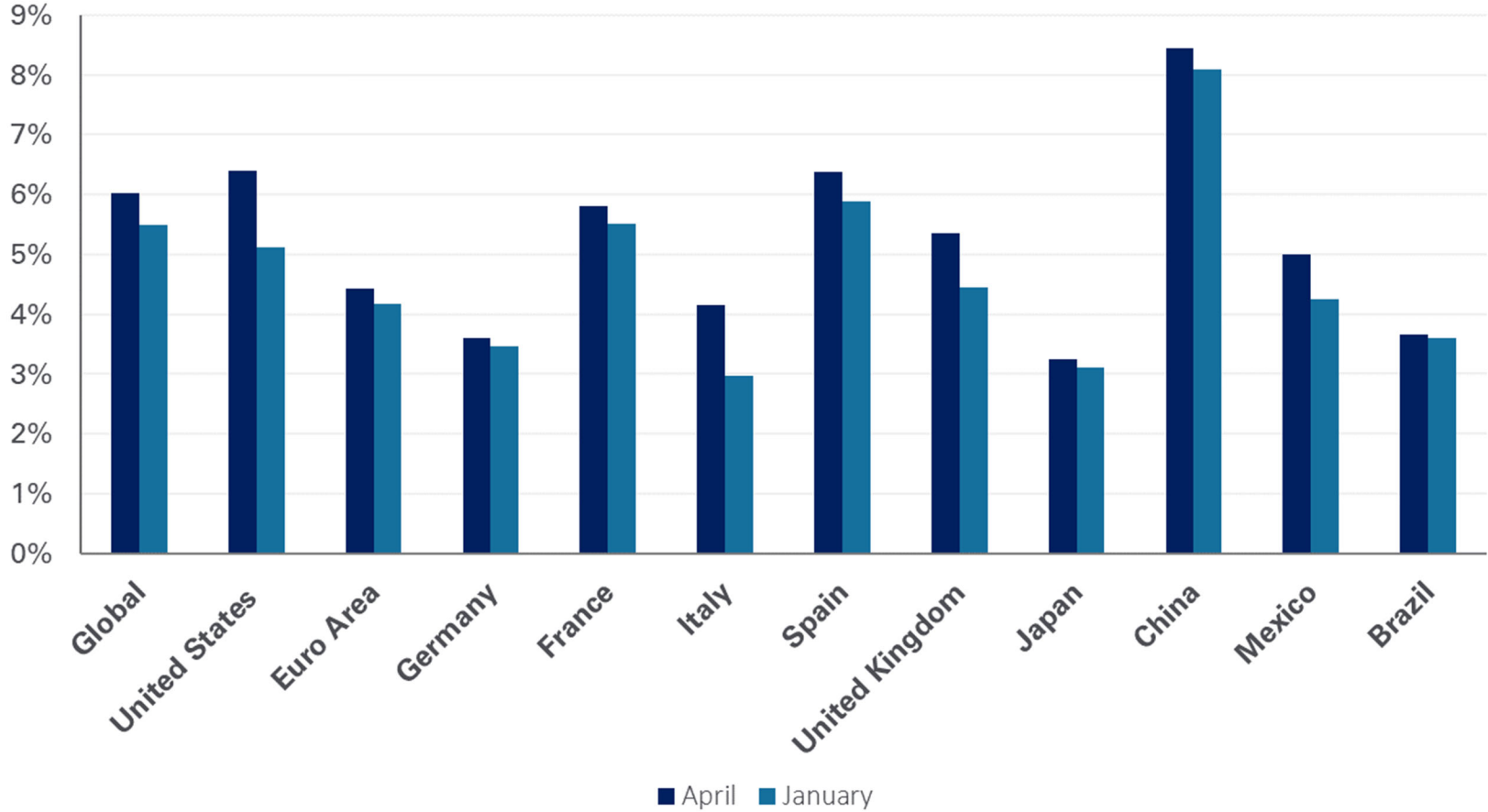
2021 EARNING PER SHARE ESTIMATES



Source: S&P, FactSet

ECONOMIC OUTLOOK FOR 2021 IMPROVED

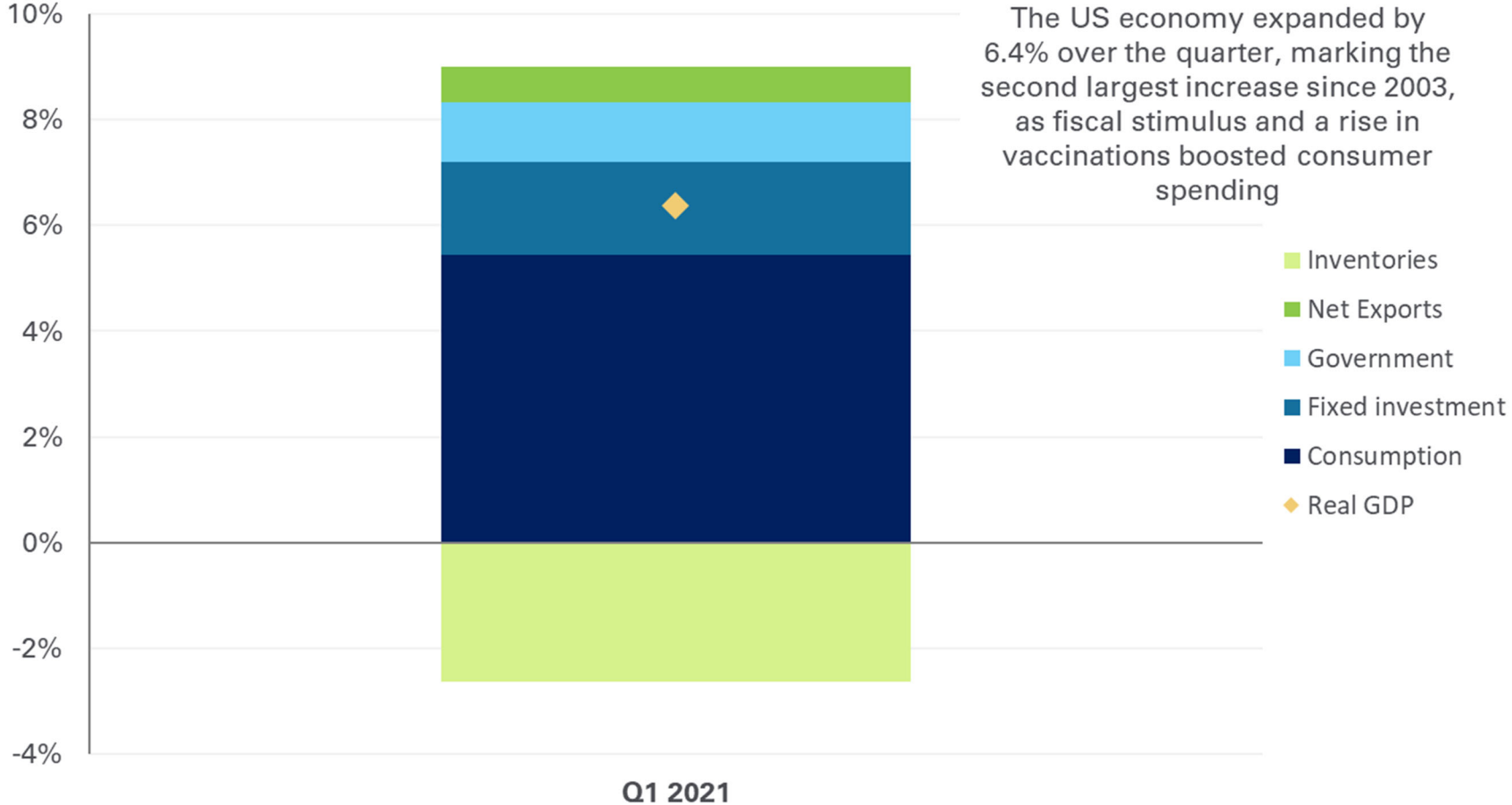
2021 IMF REAL GDP PROJECTIONS



Source: IMF World Economic Outlook

CONSUMER SPENDING FUELED GDP GROWTH

CONTRIBUTIONS TO Q1 US REAL GDP



Source: Bureau of Economic Analysis

Howard County Retirement Plans

TOTAL FUND PERFORMANCE SUMMARY (GROSS)

	Ending April 30, 2021											
	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund Composite	1,382,234,357	100.0	100.0	2.3	6.4	22.8	27.3	10.9	11.0	8.3	7.8	Apr-97
<i>Policy Index</i>				2.3	5.2	19.9	23.8	9.8	9.6	7.6	7.7	Apr-97
<i>Allocation Index</i>				2.2	5.6	22.1	28.3	--	--	--	--	Apr-97
Total US Equity Composite	386,826,009	28.0	27.5	5.1	12.5	40.8	52.7	17.7	18.1	14.2	9.6	Jul-97
<i>Russell 3000</i>				5.2	11.8	40.1	50.9	18.9	17.7	14.0	9.0	Jul-97
<i>US Equity Allocation Index</i>				5.0	11.3	40.3	51.9	18.5	17.6	13.7	--	Jul-97
Total International Equity	235,062,095	17.0	17.5	2.6	6.2	35.6	49.8	9.6	11.9	5.6	5.6	Jul-97
<i>MSCI ACWI ex USA</i>				2.9	6.5	32.5	43.0	7.0	9.8	4.7	5.3	Jul-97
Total Fixed Income Composite	376,652,771	27.2	23.0	1.1	-1.7	3.2	6.7	5.6	4.6	4.4	5.4	Jul-97
<i>Fixed Income Policy Index</i>				0.8	-2.6	-1.4	-0.3	5.2	3.2	3.4	5.1	Jul-97
Total Real Assets Composite	44,458,112	3.2	6.0	0.0	0.8	6.9	-6.2	1.1	5.5	6.0	6.3	Jul-03
<i>NCREIF Property Index 1 Qtr. Lag</i>				0.0	1.2	0.9	1.6	4.9	5.9	9.0	8.3	Jul-03
Cash Composite	9,672,870	0.7		0.0	0.0	0.0	0.1	1.1	0.8	0.4	1.3	Dec-03
<i>91 Day T-Bills</i>				0.0	0.0	0.1	0.1	1.3	1.1	0.6	1.2	Dec-03
Hedge Fund Composite	137,213,257	9.9	8.0	1.2	3.4	12.1	15.7	5.9	5.8	5.2	5.2	Jan-11
<i>HFRI FOF: Conservative Index</i>				1.6	5.3	14.4	18.7	5.4	5.0	3.3	3.3	Jan-11
Private Equity Composite	188,599,243	13.6	13.0	0.0	18.1	39.4	31.7	21.3	19.5	15.8	14.6	Jul-08
<i>CJA US All PE (1 Qtr Lag)</i>				0.0	13.2	36.7	22.9	15.7	15.5	14.0	11.5	Jul-08
Private Debt	3,750,000	0.3	5.0	0.0	0.0	0.0	--	--	--	--	0.0	Jun-20
<i>S&P/LSTA Leveraged Loan TR</i>				0.0	2.3	10.6	16.1	4.2	5.0	4.2	10.6	Jun-20

Fiscal year end 6/30.

All history prior to 3/1/2019 was provided by AndCo.



Howard County Retirement Plans

TOTAL FUND PERFORMANCE DETAIL (GROSS)

	Ending April 30, 2021											
	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund Composite	1,382,234,357	100.0	100.0	2.3	6.4	22.8	27.3	10.9	11.0	8.3	7.8	Apr-97
<i>Policy Index</i>				2.3	5.2	19.9	23.8	9.8	9.6	7.6	7.7	Apr-97
<i>Allocation Index</i>				2.2	5.6	22.1	28.3	--	--	--	--	Apr-97
Total Equity Composite	621,888,105	45.0	45.0	4.1	10.0	38.8	51.6	14.2	15.4	10.6	8.2	Apr-00
<i>MSCI ACWI IMI</i>				4.3	9.7	37.2	48.1	13.1	13.8	9.2	5.7	Apr-00
Total US Equity Composite	386,826,009	28.0	27.5	5.1	12.5	40.8	52.7	17.7	18.1	14.2	9.6	Jul-97
<i>Russell 3000</i>				5.2	11.8	40.1	50.9	18.9	17.7	14.0	9.0	Jul-97
<i>US Equity Allocation Index</i>				5.0	11.3	40.3	51.9	18.5	17.6	13.7	--	Jul-97
Large Cap Composite	324,602,874	23.5	22.0	5.4	13.3	40.5	51.4	17.8	17.7	14.2	9.8	Apr-01
<i>Russell 1000</i>				5.4	11.6	38.9	49.5	19.2	17.8	14.2	9.0	Apr-01
<i>LSV Asset Management SMA</i>	90,881,042	6.6		3.7	21.5	52.3	58.1	10.7	13.1	12.2	10.3	May-00
<i>Russell 1000 Value</i>				4.0	15.7	42.0	45.9	12.3	12.2	11.1	7.6	May-00
<i>Westfield Capital Management SMA</i>	121,147,866	8.8		6.9	9.6	37.0	52.1	24.5	22.7	16.0	18.5	Jul-10
<i>Russell 1000 Growth</i>				6.8	7.8	36.0	51.4	25.4	22.9	17.0	19.1	Jul-10
<i>BlackRock Equity Index Non-Lendable Fund</i>	112,573,966	8.1		5.3	11.8	36.6	46.0	--	--	--	24.5	Dec-19
<i>S&P 500</i>				5.3	11.8	36.6	46.0	18.7	17.4	14.2	24.5	Dec-19
Small/Mid Cap Composite	62,223,135	4.5	5.5	3.3	8.5	42.0	59.2	17.6	19.7	14.6	13.0	Apr-93
<i>Russell 2500</i>				4.0	15.4	55.6	71.9	16.8	16.5	12.3	11.2	Apr-93
<i>William Blair SMA</i>	22,494,859	1.6		4.5	9.2	43.9	60.2	21.7	21.9	16.4	14.0	Jun-06
<i>Russell 2500 Growth</i>				3.5	6.1	46.1	67.3	21.6	20.5	14.2	11.9	Jun-06
<i>ICM Small Company - ICSCX</i>	19,688,372	1.4		2.9	24.9	66.2	76.1	12.8	15.4	12.1	12.4	Apr-93
<i>Russell 2000 Value</i>				2.0	23.6	69.1	79.0	11.7	13.5	10.1	10.4	Apr-93
<i>Brown Capital Small Company Strategy SMA</i>	20,039,904	1.4		2.5	-4.3	22.8	44.4	19.6	23.5	--	19.7	Aug-11
<i>Russell 2000 Growth</i>				2.2	7.2	48.8	69.2	18.0	18.9	12.9	14.2	Aug-11



Howard County Retirement Plans

TOTAL FUND PERFORMANCE DETAIL (GROSS)

	Ending April 30, 2021											
	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total International Equity	235,062,095	17.0	17.5	2.6	6.2	35.6	49.8	9.6	11.9	5.6	5.6	Jul-97
<i>MSCI ACWI ex USA</i>				2.9	6.5	32.5	43.0	7.0	9.8	4.7	5.3	Jul-97
International Developed Markets Composite	147,729,723	10.7	11.0	2.9	7.1	33.7	48.2	9.7	10.6	6.5	4.9	Mar-08
<i>MSCI EAFE</i>				3.0	6.6	29.6	39.9	6.3	8.9	5.2	3.6	Mar-08
Mondrian International Equity Fund, L.P.	75,272,250	5.4		2.0	9.4	30.9	37.2	3.4	6.9	4.8	2.6	Dec-07
<i>MSCI EAFE</i>				3.0	6.6	29.6	39.9	6.3	8.9	5.2	2.7	Dec-07
Baillie Gifford EAFE Pure K - BGPX	72,457,473	5.2		3.9	5.0	35.9	57.2	15.3	--	--	15.3	May-18
<i>MSCI EAFE</i>				3.0	6.6	29.6	39.9	6.3	8.9	5.2	6.3	May-18
International Emerging Markets Composite	87,332,372	6.3	6.5	2.0	4.7	38.8	51.9	9.4	14.3	3.7	7.4	Feb-06
<i>MSCI Emerging Markets</i>				2.5	4.8	37.5	48.7	7.5	12.5	3.6	6.1	Feb-06
GQG Partners Emerging Markets Equity Fund	44,389,772	3.2		1.4	0.4	36.9	51.9	--	--	--	23.5	Dec-18
<i>MSCI Emerging Markets</i>				2.5	4.8	37.5	48.7	7.5	12.5	3.6	15.9	Dec-18
Arga Emerging Markets Equity Fund	42,942,600	3.1		2.6	9.3	--	--	--	--	--	9.3	Jan-21
<i>MSCI Emerging Markets Value NR USD</i>				2.3	6.5	37.1	43.8	3.1	8.6	1.0	6.5	Jan-21
Total Fixed Income Composite	376,652,771	27.2	23.0	1.1	-1.7	3.2	6.7	5.6	4.6	4.4	5.4	Jul-97
<i>BBgBarc US Aggregate TR</i>				0.8	-2.6	-1.4	-0.3	5.2	3.2	3.4	5.0	Jul-97
Core Fixed Income Composite	280,782,073	20.3	11.0	1.0	-1.5	2.1	4.6	--	--	--	7.2	Mar-19
<i>BBgBarc US Aggregate TR</i>				0.8	-2.6	-1.4	-0.3	5.2	3.2	3.4	5.7	Mar-19
Dodge & Cox SMA	125,416,259	9.1		0.9	-1.6	2.6	5.7	6.5	5.0	4.7	4.8	May-10
<i>BBgBarc US Aggregate TR</i>				0.8	-2.6	-1.4	-0.3	5.2	3.2	3.4	3.6	May-10
PIMCO Total Return	129,866,916	9.4		1.0	-1.7	1.2	3.3	6.1	4.3	3.9	4.3	May-10
<i>BBgBarc US Aggregate TR</i>				0.8	-2.6	-1.4	-0.3	5.2	3.2	3.4	3.6	May-10
State Street Global Advisors TIPS	25,498,899	1.8		1.4	-0.1	4.5	6.0	6.2	4.1	3.3	3.9	Nov-09
<i>BBgBarc US TIPS TR</i>				1.4	-0.1	4.6	6.1	6.2	4.1	3.3	3.9	Nov-09
Emerging Markets Debt Composite	46,732,103	3.4	4.0	2.4	-5.5	7.4	15.1	--	--	--	3.7	Mar-19
<i>JP Morgan GBI EM Global Diversified TR USD</i>				2.3	-4.6	5.3	11.2	1.0	3.0	0.3	3.0	Mar-19
Colchester Local Markets Debt Fund	46,732,103	3.4		2.4	-5.5	7.4	15.1	1.8	4.5	--	6.9	Oct-15
<i>JP Morgan GBI EM Global Diversified TR USD</i>				2.3	-4.6	5.3	11.2	1.0	3.0	0.3	5.1	Oct-15



Howard County Retirement Plans

TOTAL FUND PERFORMANCE DETAIL (GROSS)

	Ending April 30, 2021											
	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Absolute Return Fixed Income	49,138,595	3.6	4.0	0.5	1.1	5.4	11.8	--	--	--	2.9	Mar-20
3-Month Libor Total Return USD				0.0	0.1	0.2	0.2	1.6	1.5	0.9	0.4	Mar-20
Payden Absolute Return Bond Fund PYAIX	49,138,595	3.6		0.5	1.1	5.4	11.8	--	--	--	2.9	Mar-20
3-Month Libor Total Return USD				0.0	0.1	0.2	0.2	1.6	1.5	0.9	0.4	Mar-20
High Yield	--	--	4.0	--	--	--	--	--	--	--	--	May-21
Total Real Assets Composite	44,458,112	3.2	6.0	0.0	0.8	6.9	-6.2	1.1	5.5	6.0	6.3	Jul-03
NCREIF Property Index 1 Qtr. Lag				0.0	1.2	0.9	1.6	4.9	5.9	9.0	8.3	Jul-03
Cash Composite	9,672,870	0.7		0.0	0.0	0.0	0.1	1.1	0.8	0.4	1.3	Dec-03
91 Day T-Bills				0.0	0.0	0.1	0.1	1.3	1.1	0.6	1.2	Dec-03
Hedge Fund Composite	137,213,257	9.9	8.0	1.2	3.4	12.1	15.7	5.9	5.8	5.2	5.2	Jan-11
HFRI FOF: Conservative Index				1.6	5.3	14.4	18.7	5.4	5.0	3.3	3.3	Jan-11
Magnitude International Class A Eligible	68,183,770	4.9		0.8	2.4	10.9	13.7	5.4	5.0	5.0	5.1	Jan-11
HFRI FOF: Conservative Index				1.6	5.3	14.4	18.7	5.4	5.0	3.3	3.3	Jan-11
Blackstone Partners Offshore Fund LTD	69,029,486	5.0		1.6	4.4	13.3	17.7	6.4	6.4	5.3	5.3	Mar-11
HFRI FOF: Conservative Index				1.6	5.3	14.4	18.7	5.4	5.0	3.3	3.3	Mar-11
Private Equity Composite	188,599,243	13.6	13.0	0.0	18.1	39.4	31.7	21.3	19.5	15.8	14.6	Jul-08
C A US All PE (1 Qtr Lag)				0.0	13.2	36.7	22.9	15.7	15.5	14.0	11.5	Jul-08
Private Debt	3,750,000	0.3	5.0	0.0	0.0	0.0	--	--	--	--	0.0	Jun-20
S&P/LSTA Leveraged Loan				0.0	2.3	10.6	16.1	4.2	5.0	4.2	10.6	Jun-20



Howard County Retirement Plans

TOTAL FUND PERFORMANCE DETAIL FOOTNOTES

Performance is preliminary for 4/30/2021.

Fiscal year ends 6/30.

Policy index consists of: 22% Russell 1000 / 5.5% Russell 2500 / 11% MSCI EAFE / 6.5% MSCI Emerging Markets / 9% BBgBarc US Aggregate TR / 2% BBgBarc US TIPS TR / 4% 3-Month Libor Total Return USD / 4% BBgBarc US High Yield TR / 4% JP Morgan GBI EM Global Diversified TR USD / 5% S&P/LSTA Leveraged Loan TR / 6.0% NCREIF Property Index 1 Qtr. Lag / 8% HFRI FOF: Conservative Index / 13% Private Equity Composite.

Allocation index consists of: Weighted index of underlying managers to their respective benchmark.

Fixed Income Policy index consists of: 100% BBgBarc US Aggregate TR.

Real Estate, Real Assets, Private Debt and Private Equity investments are valued as of 12/31/2020 and adjusted for capital calls and distributions through 3/31/2021.

All history prior to 3/1/2019 was provided by AndCo.





NEPC UNFAVORABLE NEWS COMMITTEE



NEPC UNFAVORABLE NEWS COMMITTEE

SUMMARY

There is an increasing incidence of negative news events surrounding the financial services industry. Given the increasing incidence of sexual harassment and other ethics-related allegations at investment managers, NEPC added a process around our response to the non-investment events. In January, 2019, a committee was created to assess significant negative press events unrelated to a fund manager's investment approach. Examples include sexual harassment, drug use, harassment, etc. The committee does not intend to consider news events related to a manager's investment approach, or generic non-investment news events.

FREQUENCY

The committee will meet ad-hoc in response to eligible news events, with the intention of having a call or meeting within 24 hours of our knowledge of the news item.

PROCESS

Analysts with eligible events will present the relevant media article(s) to the committee as quickly as reasonably possible, prior to speaking with the manager directly. While it's impossible to predict the variety of negative news events we could encounter, the goal is to preserve the ability to evaluate each instance on a case-by-case basis, while also following a consistent decision-making process. The following considerations provide a sample framework for evaluating news events and determining NEPC's response (in no particular order):

- Trust factor of the breaking news source (ex. National Enquirer vs. WSJ)
- Severity of accusation(s)
- Number of accusers
- Did the alleged events happen in the workplace or on personal time?
- Were these events first reported internally? Were they handled responsibly?
- What is the likelihood the behavior represents a cultural issue rather than a single-person issue?
- What are the reputational risks to NEPC for each possible response?
- What is the potential impact to the manager's business and investment results?
- What is the potential impact to NEPC clients?



NEPC UNFAVORABLE NEWS COMMITTEE, CONT.

To date, 16 firms have been brought to the UNC since its inception

- The outcomes have ranged from recommending no action to termination

IFM was brought to the UNC in October 2019

- NEPC had spent a significant amount of time addressing the headline risk associated with the firm. By May 2020, NEPC felt comfortable moving forward with assigning the IFM Global Infrastructure Fund a 1-rating. Within NEPC's AIM (alternative investment memo), this risk was documented as follows:

"Risks associated with growth are front of mind following a sexual harassment allegation against an IFM executive which was followed by a comprehensive organizational review conducted by Korn Ferry in 2019. Following this review, Korn Ferry provided IFM with an assessment of recommendations and key findings. A main theme that emerged from this study was that IFM was struggling to maintain its historical culture and evolve the Firm's policies and procedures as Firm assets have increased rapidly. IFM is in the process of implementing several new firm-wide policies that are aimed at enhancing communication within the firm, promoting diversity and inclusion, enhancing risk controls, formalizing behavioral expectations and management responsibilities, and incorporating compliance with firm directives into employee performance assessments. Following the retirement of Brett Himbury, Chief Executive Officer, IFM announced that David Neal will assume the role starting March 30, 2020. It is important that the new CEO continue to build on the recommendations of the Korn Ferry study that recommended that the Firm put an enhanced focus on risk management, operations, systems, technology, and company culture. Mr. Neal will be tasked with continuing IFM's transition to a large, global asset manager"

- A more comprehensive review of the litigation can be found in NEPC's AIM under "Litigation, Regulation and Compliance (found in the closed session materials)





HOWARD COUNTY PRIVATE EQUITY PACING PLAN



EXECUTIVE SUMMARY: PRIVATE MARKETS

- **NEPC has updated the Howard County Retirement Private Equity Plans' pacing to reflect the recent Private Equity target increase, from 10% to 13%**
- **The pacing plan considers: existing manager commitments and anticipated calls/distributions, the target allocation and the forecasted net growth rate.**
- **The Private Equity strategy is to maintain an active commitment pace in each vintage year going forward, being mindful of Howard County's liquidity needs.**
 - Fund and manager recommendations are made in the context of the existing portfolio along with NEPC's market views.
 - Our goal is to develop a program that will invest in various strategies and achieve returns in excess of public market returns.
- **Based on our review, Howard County should commit approximately \$35M in 2021**
- **NEPC Recommends a \$10M commitment to Linden Capital Partners IV***

Note: Pacing recommendations are based on annual forecasts, independent of when the model is run during the calendar year. For example, commitment recommendations based on June 30 data will encompass NEPC recommendations for the time period July 1 of the current year through June 30 of next year.

***A full due diligence report by NEPC is available in the closed session materials**



PRIVATE EQUITY THOUGHTS & ACTIONS

Private Markets Thoughts

- Despite the rebound in the public markets, many public and private companies are still experiencing significantly impacted fundamentals
- The longer business disruption continues, private companies will be more likely to need new infusions of private capital to sustain operations or capitalize on opportunities
- Private investment valuations remain depressed for companies in heavily impacted industries. More resilient companies, particularly in tech sectors, have seen valuation increases
- Deal activity is rebounding from a slower start to the year, but 2020 totals for both capital calls and distributions will decrease markedly from 2019 levels
- While valuation declines will negatively impact current holdings, new capital deployed in recession-era vintages have historically generated higher alpha and illiquidity premia
- New fundraises for high quality managers remain very efficient

Private Markets Actions

- Maintain new commitments to capture higher illiquid returns; continue to back high performing managers but look for opportunities to access other top tier managers
- If you have to reduce your pacing, decrease commitment size and don't drop high quality managers and risk losing access to their future funds
- Consider severity of existing portfolio issues before committing to any manager's next fund
- Both private equity and private credit look more attractive relative to their historical levels; seek exposure to both but don't sacrifice longer term appreciation in favor of shorter term dislocation opportunities
- Seek managers with demonstrated industry expertise or other value-add capabilities to capture more consistent and reliable returns
- Build growth exposure in regions that have better managed the pandemic, as those economies have experienced less interruption



VIEW POINT SUMMARY

Private Equity

US Early Stage Venture	Europe Early Stage Venture	Asia Pacific Early Stage Venture	US Large/Mega Buyout	Europe Large/Mega Buyout	Asia Pacific Buyout
US Late Stage Venture	Europe Late Stage Venture	Asia Pacific Late Stage Venture	US Small/Mid Buyout	Europe Small/Mid Buyout	Secondaries
US Growth Equity	Europe Growth Equity	Asia Pacific Growth Equity	US Special Situations	Europe Special Situations	Co-Investment Funds

Private Credit

Distressed Debt	Opportunistic Credit	US Direct Lending	European Direct Lending	Niche Lending	Mezzanine
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Key: **Green: Positive** **Front: 2021 View Point**
Gray: Neutral **Back: 2020 View Point**
Red: Negative



STRATEGY IMPLEMENTATION: PRIVATE EQUITY

Strategy		Outlook	Commentary
North American Buyout and Special Situations	Mega & Large	Neutral	This end of the market is the most efficient and correlated with public markets; look for sector specialists and groups with a proven edge to improve operations and increase profitability.
	Mid & Small	Positive	Target managers with a proven ability to scale undermanaged businesses to drive EBITDA growth and multiple expansion at exit. With higher manager dispersion in this part of the market, look for experienced teams with a demonstrable edge in sourcing.
	Special Situations	Positive	While this area has the greatest opportunity for inefficiencies, choosing managers with good asset selection and the ability to turn around underperforming businesses is paramount.
European Buyout and Special Situations	Mega & Large	Neutral	In these relatively efficient markets, look for managers with some competitive advantage/angle in their deals; sector specialists and managers with the ability to deal with large complex deals.
	Mid & Small	Positive	Seek managers that can source smaller founder-owned companies, or local GPs that can take local/regional champions and turn them into Pan-European leaders.
	Special Situations	Positive	Evaluate opportunistic special situations managers with flexible and nimble approaches able to capitalize on market, industry and/or specific company volatility; outperformers skew to smaller fund sizes.
Asia Pacific Buyout and Growth	Buyout	Positive	Buyout capital is a good source of transition capital for family-owned businesses and industries undergoing rapid structural changes. Opportunities differ by country. Invest with managers with strong sourcing channels and ability to drive value creation within their portfolios.
	Growth	Positive	China should be central to growth investing Asia-Pacific given the size of the country and the consumption spending of its rising middle class. Invest with groups that have strong local reputations and networks with local entrepreneurs.





HOWARD COUNTY PRIVATE EQUITY PACING PLAN



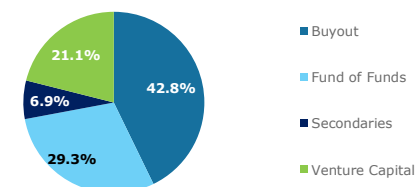
CURRENT STRATEGY AND VINTAGE YEAR EXPOSURES

(\$ in millions)

Private Equity NAVs and Exposures

Investment Strategy	Current Valuation (NAV)	Capital to be Funded	Total Current Exposure	% of Total Exposure
Buyout	\$73.3	\$31.8	\$105.0	42.8%
Fund of Funds	\$57.0	\$14.8	\$71.9	29.3%
Secondaries	\$13.1	\$3.8	\$16.9	6.9%
Venture Capital	\$44.5	\$7.2	\$51.7	21.1%
Total	\$187.9	\$57.6	\$245.5	100.0%

Private Equity Exposures



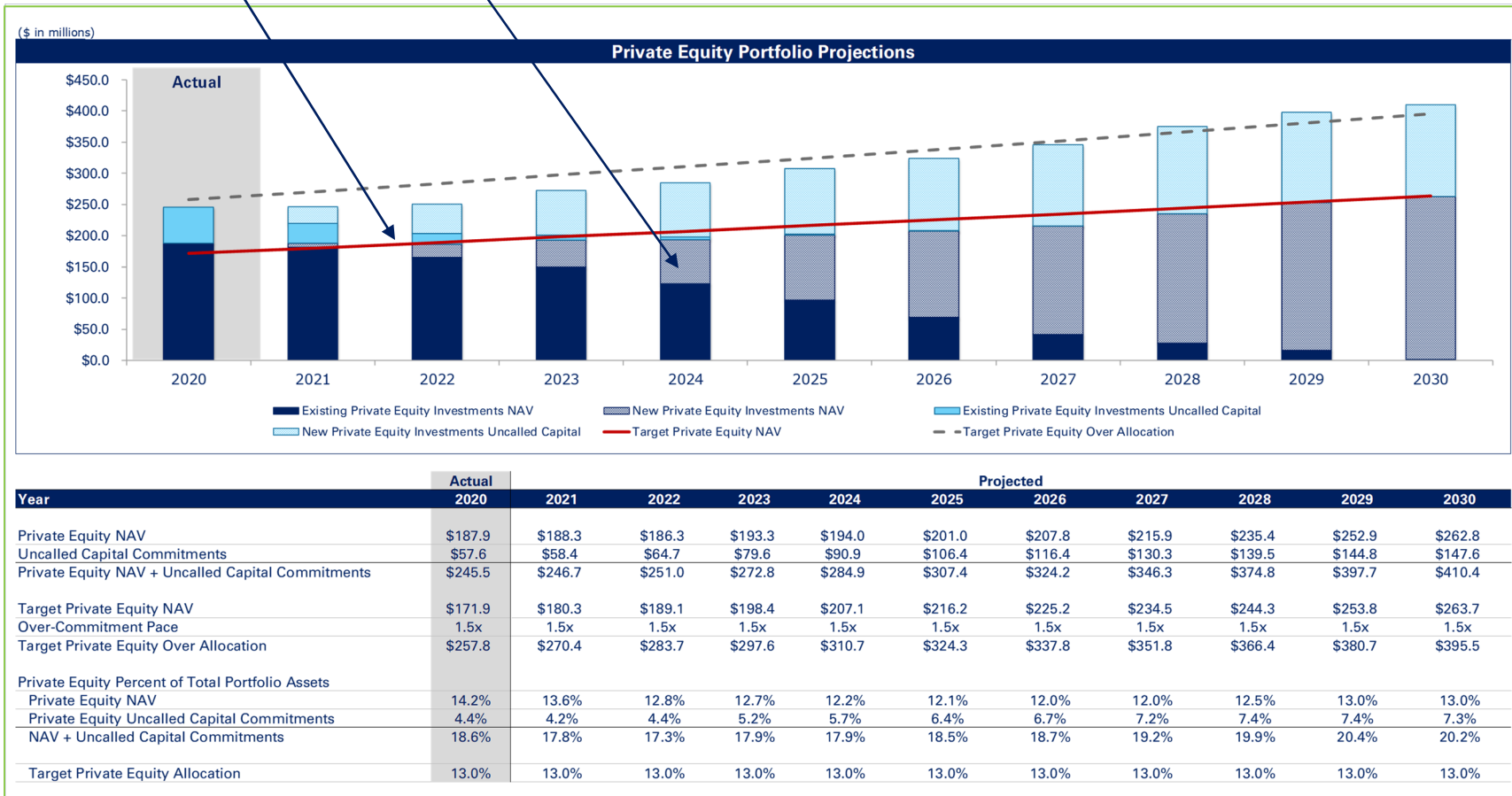
Private Equity Investments by Vintage Year

Vintage Year	Commitment	Paid In Capital	Capital to be Funded	Cumulative Distributed	Current Valuation (NAV)	Total Value	Net Benefit	Call Ratio	DPI Ratio	TVPI Ratio
2008	\$4.0	\$3.8	\$0.2	\$7.5	\$3.7	\$11.2	\$7.4	96%	1.95x	2.91x
2010	\$3.0	\$2.0	\$1.0	\$2.7	\$0.4	\$3.1	\$1.2	66%	1.37x	1.58x
2011	\$21.0	\$19.3	\$1.7	\$19.2	\$26.6	\$45.9	\$26.6	92%	1.00x	2.38x
2012	\$19.2	\$15.5	\$3.7	\$12.7	\$11.2	\$23.9	\$8.4	81%	0.82x	1.54x
2013	\$30.0	\$29.5	\$0.5	\$31.1	\$23.5	\$54.5	\$25.0	98%	1.05x	1.85x
2014	\$30.0	\$27.4	\$2.6	\$14.3	\$52.8	\$67.2	\$39.8	91%	0.52x	2.45x
2015	\$28.9	\$20.2	\$8.8	\$1.3	\$32.3	\$33.6	\$13.4	70%	0.06x	1.67x
2017	\$19.4	\$14.8	\$4.7	\$2.6	\$23.4	\$25.9	\$11.2	76%	0.17x	1.76x
2018	\$5.8	\$1.9	\$3.9	\$0.0	\$2.7	\$2.7	\$0.8	33%	0.00x	1.39x
2019	\$12.3	\$6.4	\$5.9	\$0.0	\$8.7	\$8.7	\$2.3	52%	0.00x	1.37x
2020	\$27.0	\$2.3	\$24.7	\$0.0	\$2.6	\$2.6	\$0.3	8%	0.00x	1.14x
Total Private Equity	\$200.6	\$143.0	\$57.6	\$91.4	\$187.9	\$279.4	\$136.4	71%	0.64x	1.95x

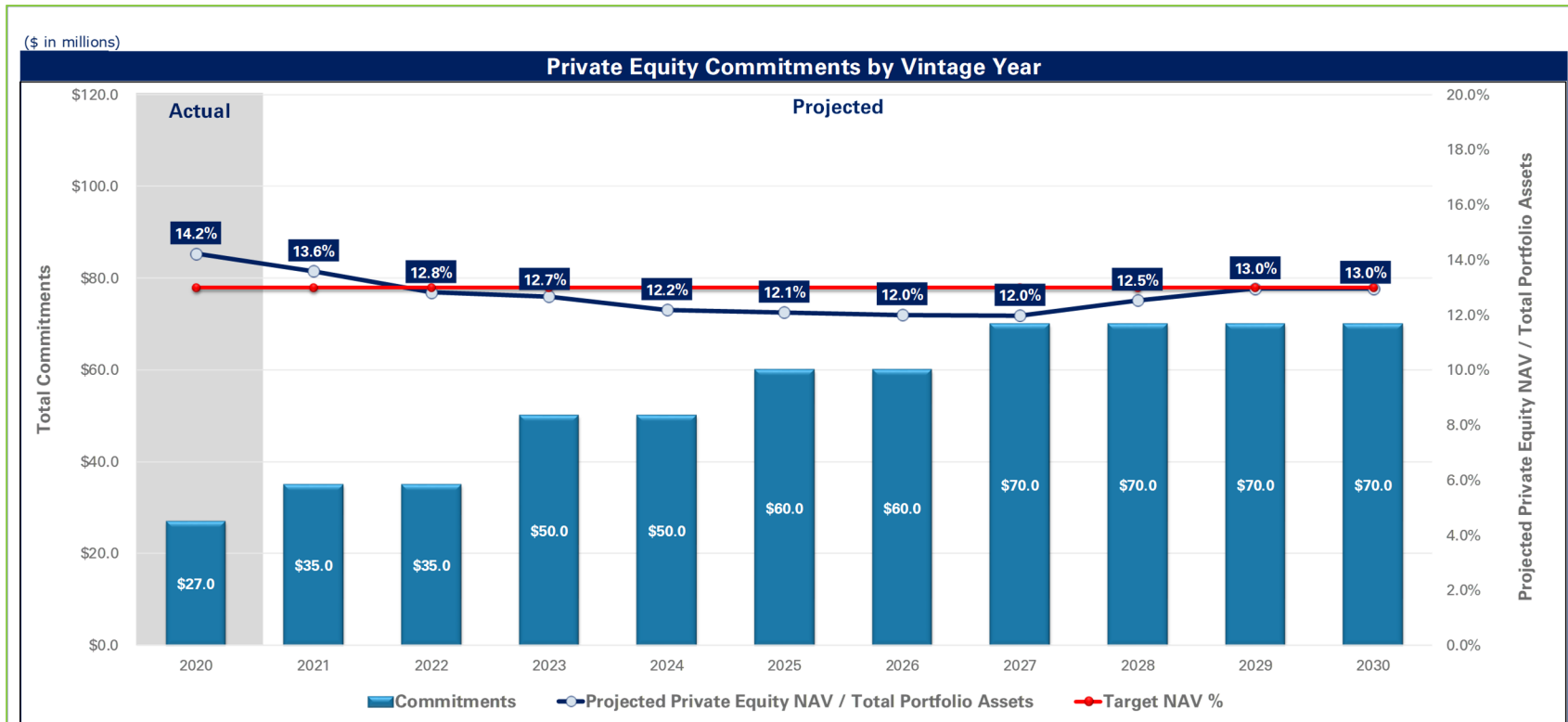


ASSET PROJECTIONS

- **Red line** is the **13.0%** target private equity allocation based on projected plan total NAV; **Black dashed line** is the 1.5x recommended over-commitment pace.
- Goal is to keep the private equity NAV (**navy blue bar**) plus uncalled capital commitments (**light blue bar**), between red line and black dashed line while aligning the blue bar with the target red line.



COMMITMENTS & ALLOCATION PROJECTIONS



Private Equity Commitments by Vintage Year

Year	Actual	More Certain			Less Certain						
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total Commitments	\$27.0	\$35.0	\$35.0	\$50.0	\$50.0	\$60.0	\$60.0	\$70.0	\$70.0	\$70.0	\$70.0
Target Private Equity Allocation (%)	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%
Projected Private Equity NAV / Total Portfolio Assets	14.2%	13.6%	12.8%	12.7%	12.2%	12.1%	12.0%	12.0%	12.5%	13.0%	13.0%



PROJECTED CASH FLOWS





APPENDIX



PACING MODEL INPUTS AND ASSUMPTIONS

(\$ in millions)

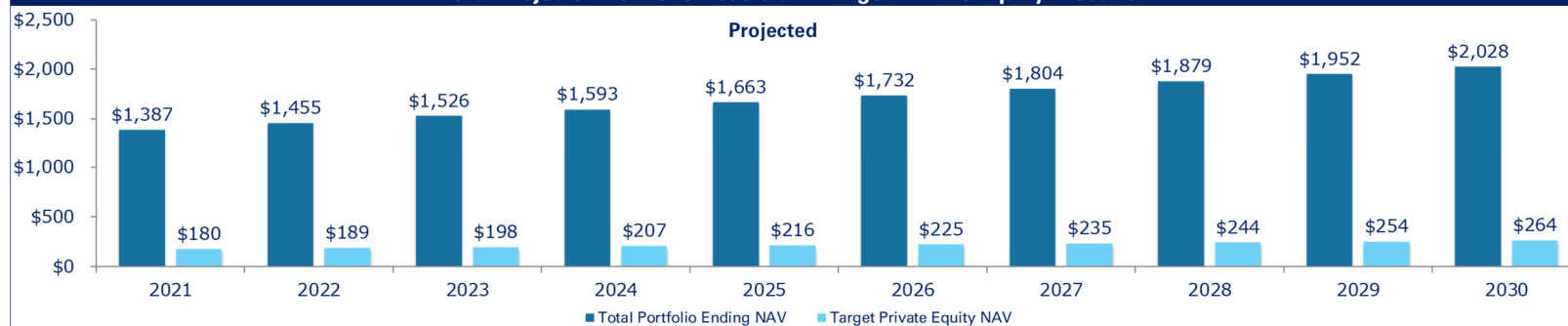
General Portfolio Assumptions

Total Portfolio Assets	\$1,321.9	Portfolio Return Assumptions	2021	2022	2023
Total Private Equity Assets	\$187.9	Target Investment Return %	5.90%	5.90%	5.90%
Private Equity Capital to be Funded	\$57.6	Payouts %	-1.00%	-1.00%	-1.00%
Total Private Equity Exposure	\$245.5	Net Growth Rate %	4.90%	4.90%	4.90%
Total Private Equity Assets / Total Portfolio Assets	14.2%				
Total Private Equity Exposure / Total Portfolio Assets	18.6%				
Target Private Equity Allocation % (Current Target)	13.0%	Portfolio Data as of:	3/31/2021		
		Private Equity Data as of:	12/31/2020		

Total Projected Portfolio Assets

	Projected									
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total Portfolio Net Growth Rate	4.9%	4.9%	4.9%	4.4%	4.4%	4.2%	4.2%	4.2%	3.9%	3.9%
Total Portfolio Beginning NAV	\$1,321.9	\$1,386.7	\$1,454.7	\$1,525.9	\$1,593.1	\$1,663.2	\$1,732.2	\$1,804.1	\$1,879.0	\$1,952.2
Yearly Net Growth	\$64.8	\$67.9	\$71.3	\$67.1	\$70.1	\$69.0	\$71.9	\$74.9	\$73.3	\$76.1
Total Portfolio Ending NAV	\$1,386.7	\$1,454.7	\$1,525.9	\$1,593.1	\$1,663.2	\$1,732.2	\$1,804.1	\$1,879.0	\$1,952.2	\$2,028.4
Target Private Equity Allocation	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%
Target Private Equity NAV	\$180.3	\$189.1	\$198.4	\$207.1	\$216.2	\$225.2	\$234.5	\$244.3	\$253.8	\$263.7

Total Projected Portfolio Assets and Target Private Equity Allocation



EXISTING COMMITMENTS

Existing Private Equity Investments										
Buyout										
Fund Name	Vintage Year	Committed	Paid In Capital	Capital To Be Funded	Cumulative Distributions	Current Valuation (NAV)	Total Value	Net Benefit	DPI Ratio	TVPI Ratio
Schroder Adveq Europe V L.P.	2012	\$9.2	\$8.2	\$1.0	\$5.6	\$6.7	\$12.3	\$4.1	0.69x	1.50x
Aberdeen U.S. Private Equity V, L.P.	2013	\$15.0	\$15.0	\$0.0	\$10.8	\$14.6	\$25.4	\$10.4	0.72x	1.69x
HarbourVest Partners 2013 Direct Fund L.P.	2013	\$15.0	\$14.5	\$0.5	\$20.3	\$8.9	\$29.2	\$14.7	1.40x	2.01x
Aberdeen U.S. Private Equity VI, L.P.	2014	\$15.0	\$14.0	\$1.0	\$6.1	\$15.6	\$21.7	\$7.7	0.43x	1.55x
Schroder Adveq Europe VI L.P.	2015	\$6.9	\$5.2	\$1.7	\$0.9	\$7.1	\$8.0	\$2.8	0.17x	1.53x
Aberdeen U.S. Private Equity VII, L.P.	2017	\$5.0	\$3.1	\$2.0	\$0.9	\$3.8	\$4.7	\$1.6	0.30x	1.54x
HarbourVest Partners Co-Investment Fund IV L.P.	2017	\$9.4	\$7.5	\$2.0	\$1.7	\$13.8	\$15.5	\$8.0	0.22x	2.08x
HarbourVest Partners Co-Investment Fund IV AIV L.P.	2018	\$0.6	\$0.3	\$0.3	\$0.0	\$0.3	\$0.3	\$0.1	0.00x	1.32x
Schroder Adveq Europe Direct II S.C.S.	2018	\$1.1	\$0.5	\$0.6	\$0.0	\$0.7	\$0.7	\$0.2	0.00x	1.47x
Schroder Adveq Europe VII S.C.S.	2018	\$4.2	\$1.2	\$3.0	\$0.0	\$1.6	\$1.6	\$0.4	0.00x	1.38x
MPE III	2020	\$10.0	\$0.0	\$10.0	\$0.0	\$0.0	\$0.0	\$0.0	NA	NA
Vista Foundation Fund IV, LP	2020	\$10.0	\$0.2	\$9.8	\$0.0	\$0.0	\$0.0	(\$0.1)	0.00x	0.21x
Total Buyout		\$101.3	\$69.6	\$31.8	\$46.2	\$73.3	\$119.5	\$49.9	0.66x	1.72x
Fund of Funds										
Fund Name	Vintage Year	Committed	Paid In Capital	Capital To Be Funded	Cumulative Distributions	Current Valuation (NAV)	Total Value	Net Benefit	DPI Ratio	TVPI Ratio
LGT Crown Asia-Pacific II	2011	\$14.0	\$12.9	\$1.1	\$8.5	\$14.3	\$22.8	\$9.9	0.66x	1.77x
LGT Crown Asia-Pacific III	2014	\$5.0	\$4.2	\$0.8	\$1.0	\$8.8	\$9.8	\$5.6	0.24x	2.33x
57 Stars Global Opportunity Fund 4 (U.S.), L.P.	2015	\$7.0	\$5.2	\$1.8	\$0.0	\$8.2	\$8.2	\$3.0	0.00x	1.58x
NB Crossroads Fund XXI - Asset Allocation LP	2015	\$15.0	\$9.8	\$5.3	\$0.4	\$17.0	\$17.4	\$7.7	0.04x	1.79x
Greenspring Global Partners IX-B, L.P.	2019	\$7.3	\$3.7	\$3.6	\$0.0	\$5.3	\$5.3	\$1.6	0.00x	1.43x
NB Crossroads Fund XXII Asset Allocation	2019	\$5.0	\$2.7	\$2.3	\$0.0	\$3.5	\$3.5	\$0.8	0.00x	1.28x
Total Fund of Funds		\$53.3	\$38.4	\$14.8	\$9.9	\$57.0	\$67.0	\$28.6	0.26x	1.74x
Secondaries										
Fund Name	Vintage Year	Committed	Paid In Capital	Funded	Distributions	Valuation	Total Value	Net Benefit	DPI Ratio	TVPI Ratio
Pantheon Global Secondary Fund IV L.P.	2010	\$3.0	\$2.0	\$1.0	\$2.7	\$0.4	\$3.1	\$1.2	1.37x	1.58x
LGT Crown Global Secondaries III	2012	\$10.0	\$7.3	\$2.7	\$7.1	\$4.5	\$11.6	\$4.3	0.97x	1.59x
Greenspring Secondaries Fund I, L.P.	2014	\$2.5	\$2.4	\$0.1	\$3.8	\$8.1	\$11.9	\$9.5	1.58x	4.97x
Total Secondaries		\$15.5	\$11.7	\$3.8	\$13.6	\$13.1	\$26.7	\$15.0	1.17x	2.28x
Venture Capital										
Fund Name	Vintage Year	Committed	Paid In Capital	Funded	Distributions	Valuation	Total Value	Net Benefit	DPI Ratio	TVPI Ratio
Greenspring Global Partners IV-A, L.P.	2008	\$4.00	\$3.84	\$0.16	\$7.50	\$3.69	\$11.19	\$7.35	1.95x	2.91x
Greenspring Global Partners V-B, L.P.	2011	\$7.00	\$6.37	\$0.63	\$10.72	\$12.33	\$23.04	\$16.67	1.68x	3.62x
Greenspring Global Partners VI, L.P.	2014	\$7.50	\$6.75	\$0.75	\$3.45	\$20.24	\$23.69	\$16.94	0.51x	3.51x
Greenspring Global Partners VIII-B, L.P.	2017	\$5.00	\$4.25	\$0.75	\$0.00	\$5.73	\$5.73	\$1.48	0.00x	1.35x
Greenspring Opportunities VI	2020	\$7.00	\$2.10	\$4.90	\$0.00	\$2.55	\$2.55	\$0.45	0.00x	1.22x
Total Venture Capital		\$30.50	\$23.31	\$7.19	\$21.67	\$44.54	\$66.21	\$42.90	0.93x	2.84x





BUYOUTS MARKET UPDATE



NORTH AMERICAN BUYOUT & SPECIAL SITUATIONS

General Market Thoughts

- **Fundraising momentum maintained through first quarter before tailing off**
 - Strong GPs with established LP bases were still able to raise funds; small and emerging managers had more difficulty in this environment
 - Fundraising timelines were extended
- **Managers balancing between defense and offense**
 - Early 2020 spent triaging portfolios to understand and manage financial impact of the shutdowns
 - New platform activity slowed, but managers well-positioned to pursue add-ons have done so
- **Quarterly valuations in flux**
 - After the Q1 downturn, EBITDA has largely stabilized. Valuations are likely to be flat to slightly up for the remainder of 2020
 - Large buyouts have held up better than small
- **Exit activity slowed, with a higher mix of IPO exits in 2020**
- **Recent fully invested vintages most likely to be negatively impacted; new funds raised in this environment should outperform**

Implementation Views

Strategy	Outlook	Commentary
US Mega & Large	Neutral	This end of the market is the most efficient and correlated with public markets; look for sector specialists and groups with a proven edge to improve operations and increase profitability.
US Mid & Small	Positive	Target managers with a proven ability to scale undermanaged businesses to drive EBITDA growth and multiple expansion at exit. With higher manager dispersion in this part of the market, look for experienced teams with a sourcing edge.
Special Situations	Positive	While this area has the greatest opportunity for inefficiencies, choosing managers with good asset selection and the ability to turn around underperforming businesses is paramount.

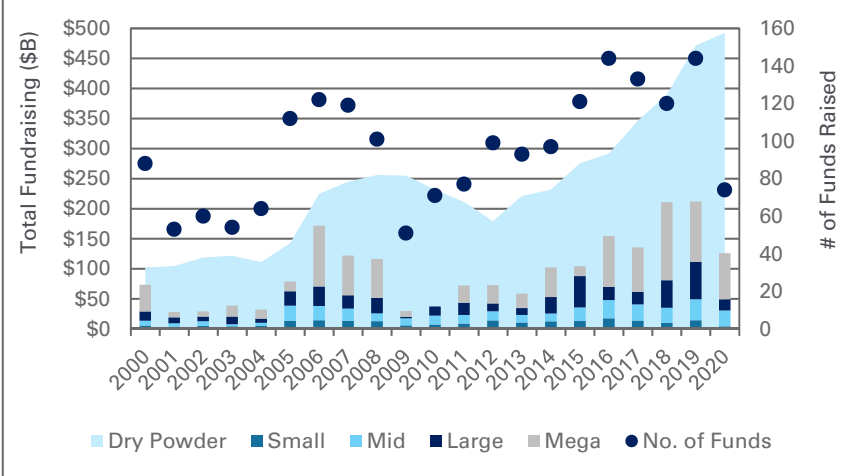


NORTH AMERICAN BUYOUT & SPECIAL SITUATIONS FUNDRAISING & RETURNS

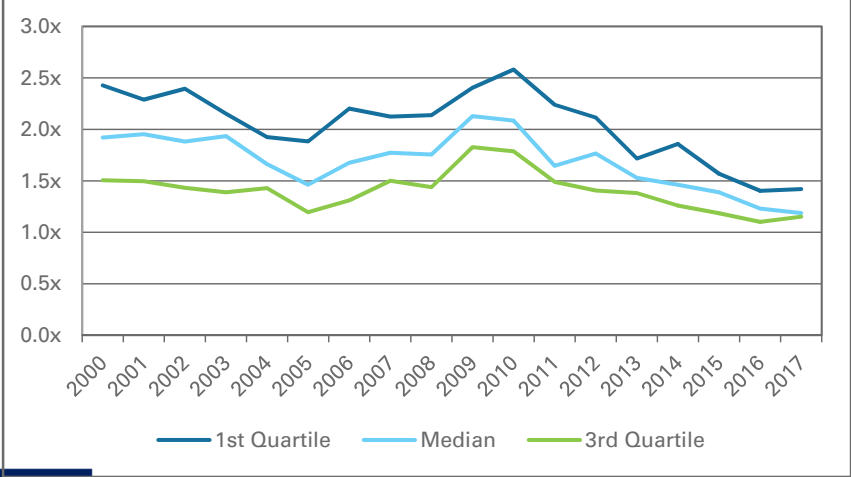
Comments

- Fundraising has unsurprisingly fallen from the 2019 peak. Mega funds continue to drive fundraising totals, with five mega funds representing 60% of 2020 fundraising totals
- Recent fundraising trends have shown a flight to quality, with more established buyout managers taking a larger share of capital raised
- Illiquidity premium shows clear outperformance in years following a downturn

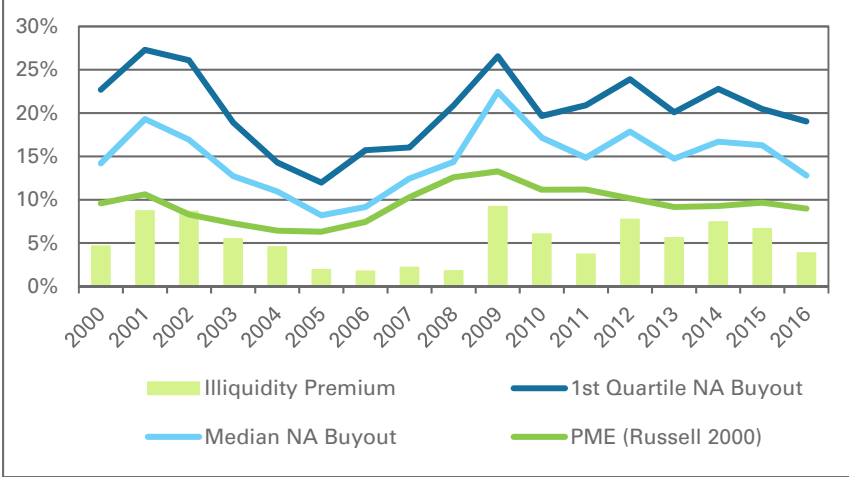
Annual Fundraising



Net TVPI



Net IRR



Source: Thomson One/CJA as of 06/30/2020. Performance for 2018-2020 vintage funds not yet meaningful

Fundraising data from Preqin as of 11/30/2020

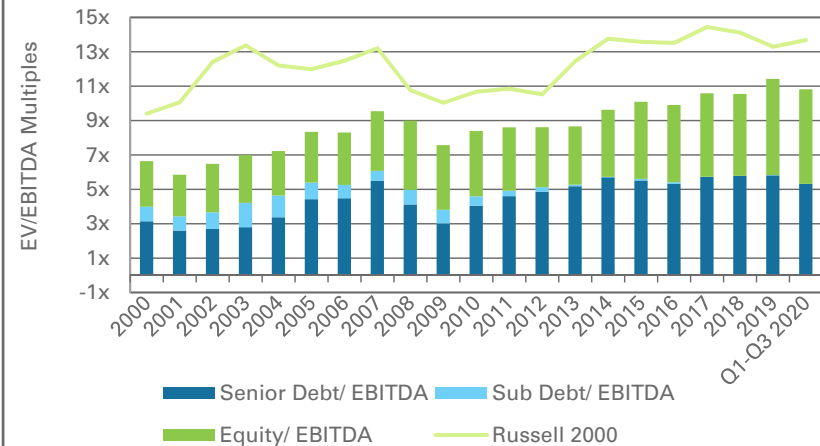


NORTH AMERICAN BUYOUT & SPECIAL SITUATIONS TRANSACTION ENVIRONMENT

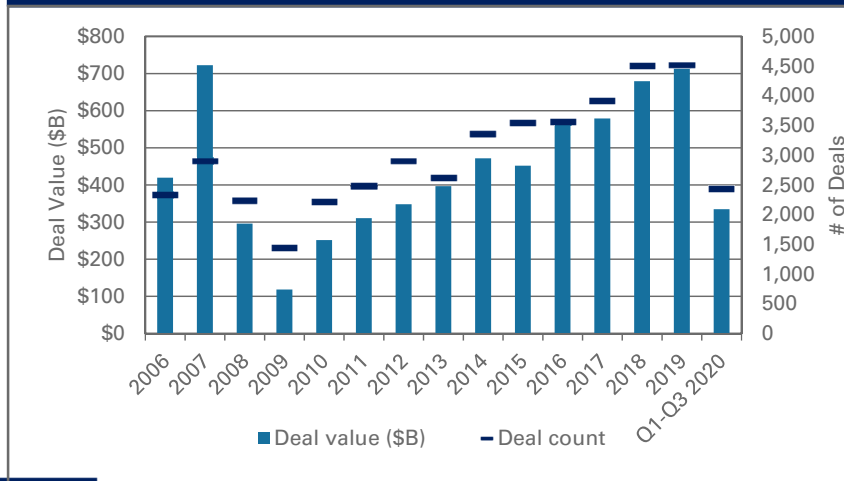
Comments

- **Valuations are slightly down but remain high, with average EBITDA multiples around 11x for all LBOs in 2020. Large “quality” deals make up the majority of transaction value to date**
- **Better interest coverage on 2020 transactions than in the last several years**
- **Deal activity is unsurprisingly down in 2020, reflecting hesitancy to transact. Add-ons represent a higher portion of total activity. Exits are down significantly from 2019, with IPOs constituting a higher mix than recent years**

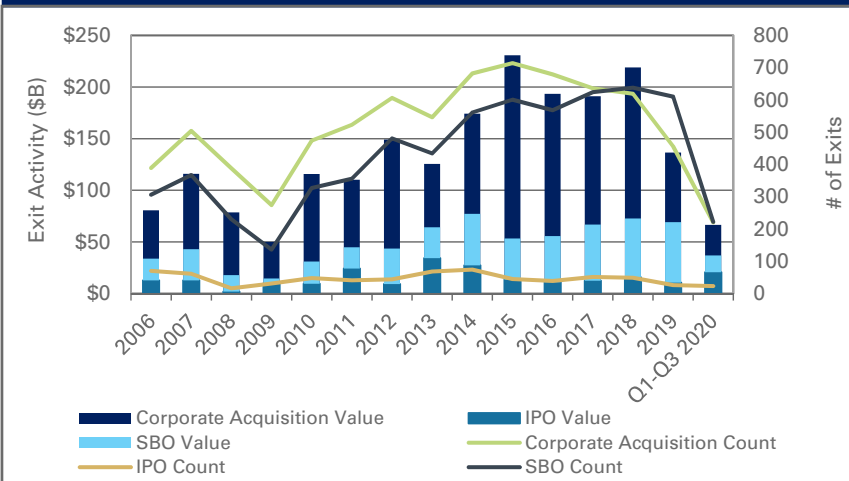
Valuations



Deal Activity



US PE Exit Activity



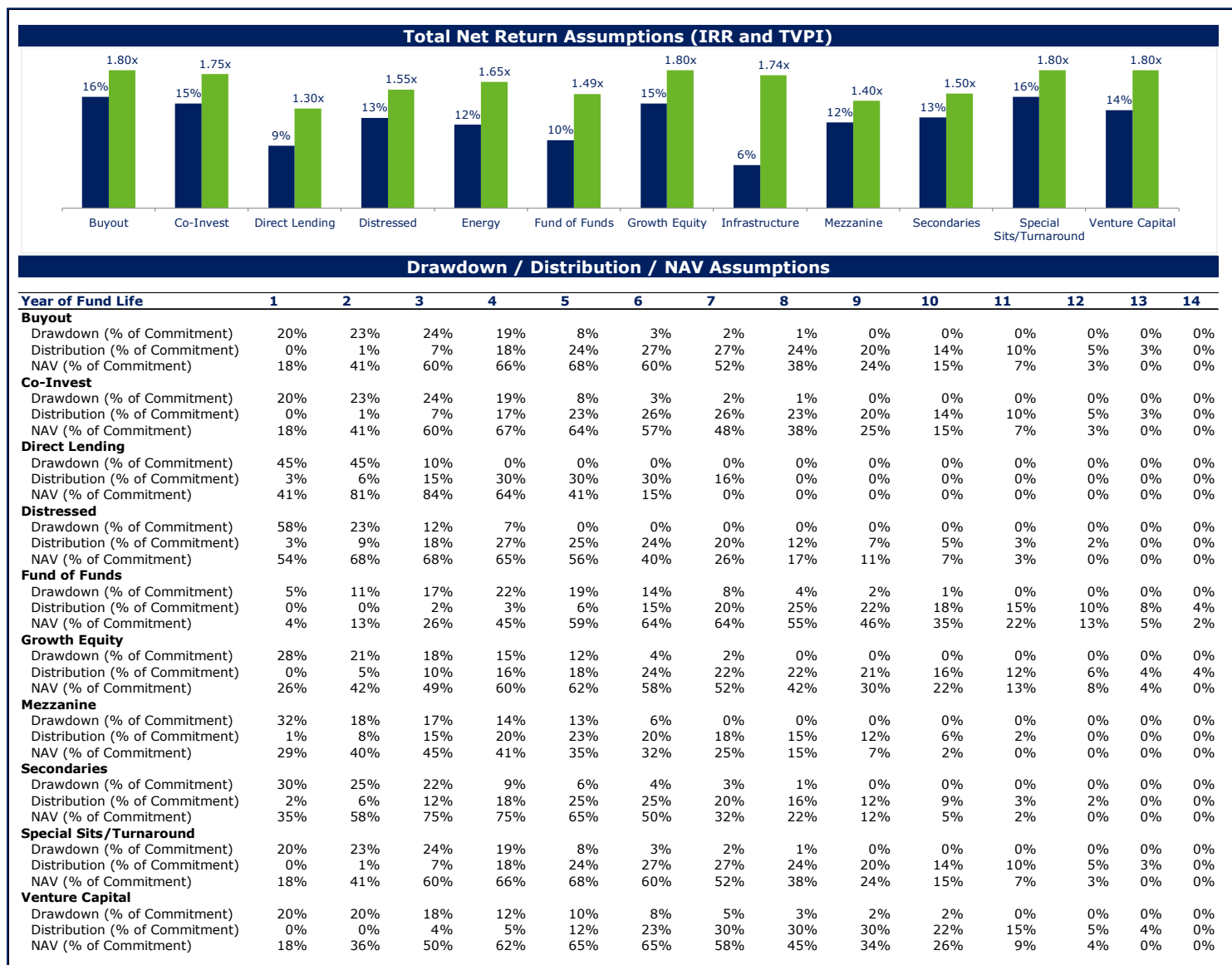
Source: S&P Global Market Intelligence as of 9/30/2020, FactSet as of 10/20/2020. Pitchbook as of 9/30/2020



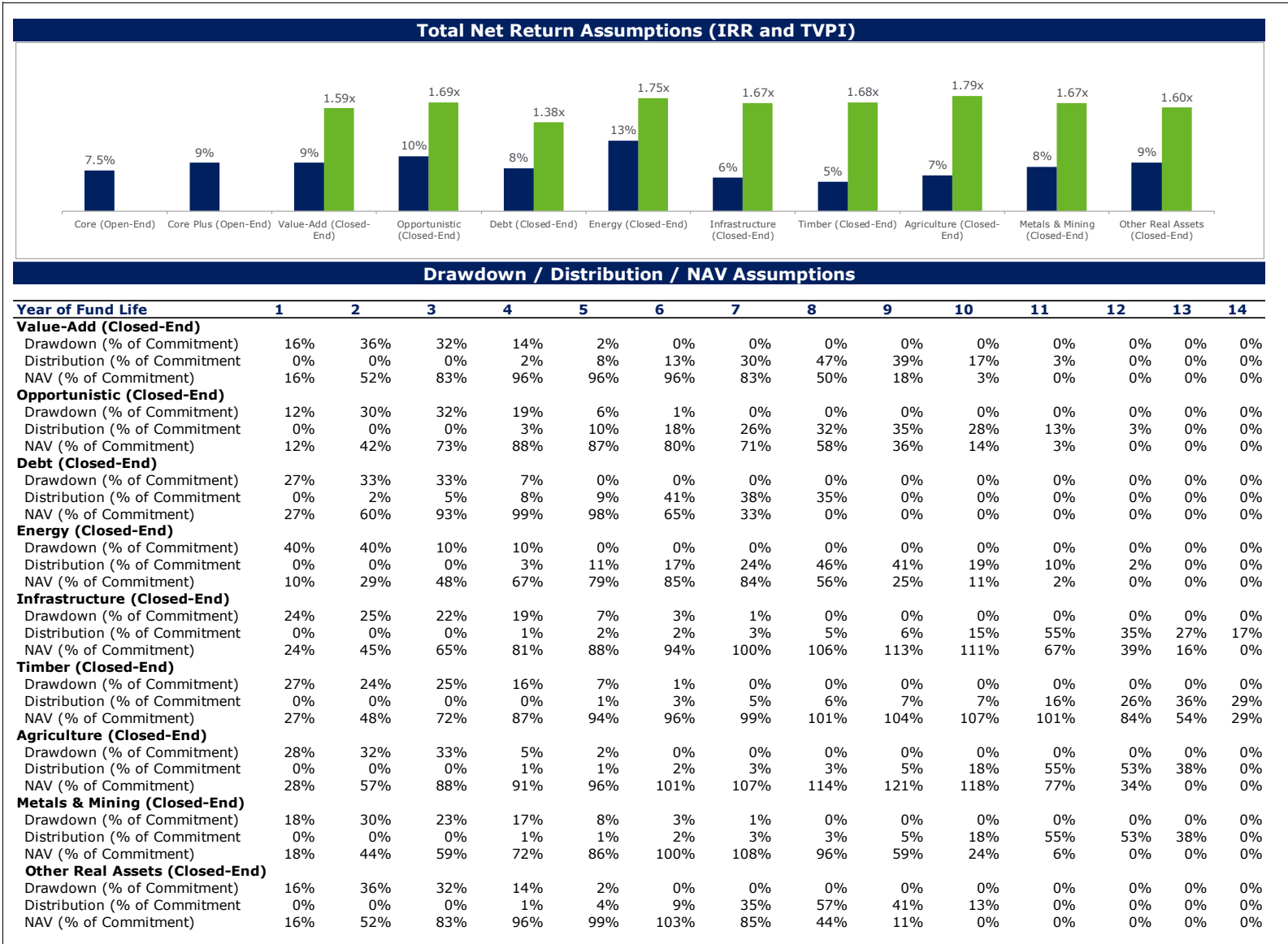
NEPC MODEL ASSUMPTIONS



PACING ASSUMPTIONS BY STRATEGY



PACING ASSUMPTIONS BY STRATEGY



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.

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ALTERNATIVE INVESTMENT DISCLOSURES

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

Performance can be volatile and investors could lose all or a substantial portion of their investment

Leverage and other speculative practices may increase the risk of loss

Past performance may be revised due to the revaluation of investments

These investments can be illiquid, and investors may be subject to lock-ups or lengthy redemption terms

A secondary market may not be available for all funds, and any sales that occur may take place at a discount to value

These funds are not subject to the same regulatory requirements as registered investment vehicles

Managers may not be required to provide periodic pricing or valuation information to investors

These funds may have complex tax structures and delays in distributing important tax information

These funds often charge high fees

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



NEPC DISCLOSURES

Past performance is no guarantee of future results.

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