MEETING MATERIALS

# HOWARD COUNTY RETIREMENT PLANS

April 30, 2020

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# NEPC UPDATE

**Continuing to operate remotely and focused on helping clients**

**Published New Asset Allocation Letter**

***COMING SOON:***

**CIO Conversations: Market Impacts of COVID-19 with Industry Leaders**

May 5th – Bob Prince, Bridgewater Associates

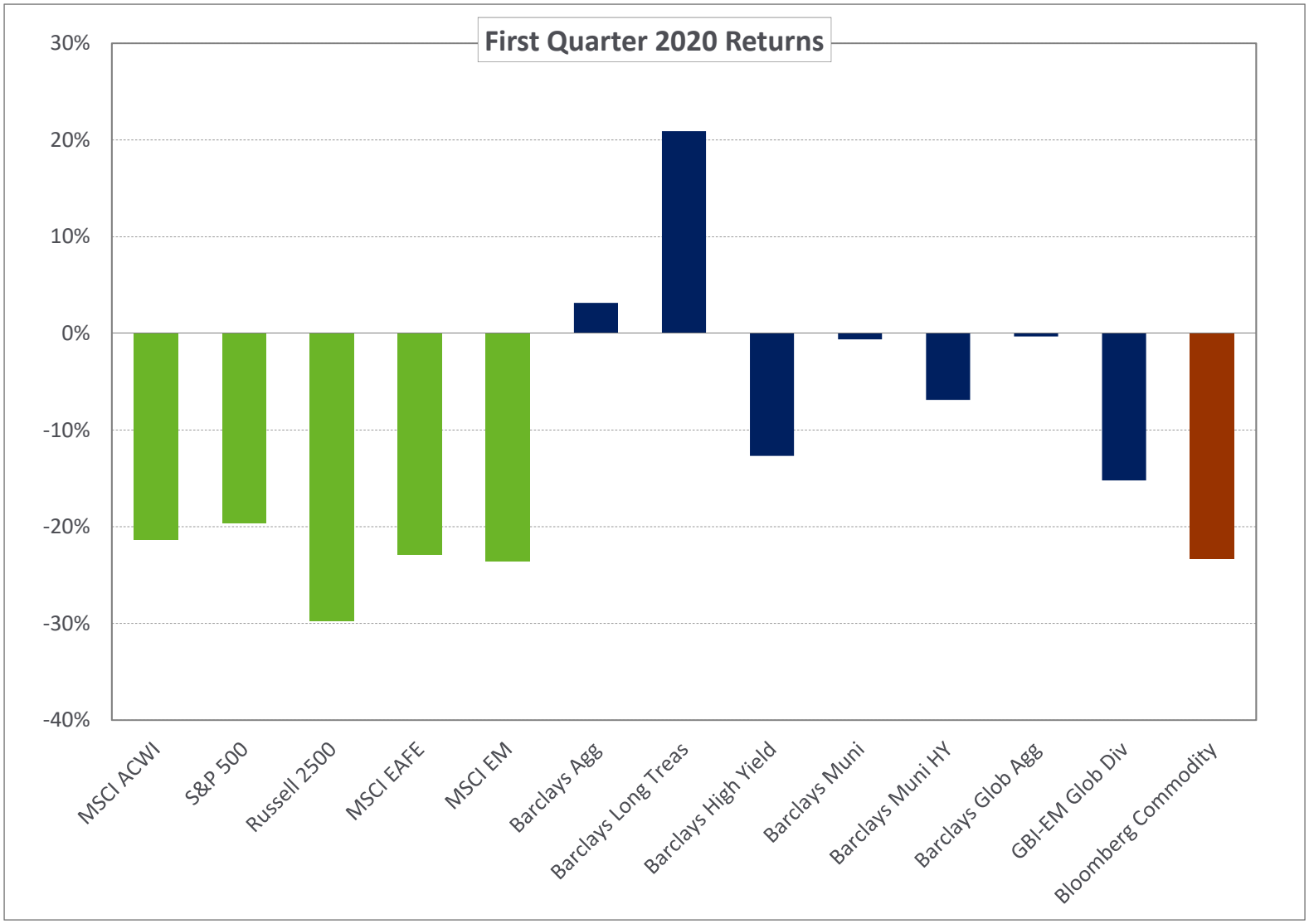
May 12th – Rajiv Jain, GQG Partners

May 19th – Rick Reider, BlackRock

# MARKET THOUGHTS

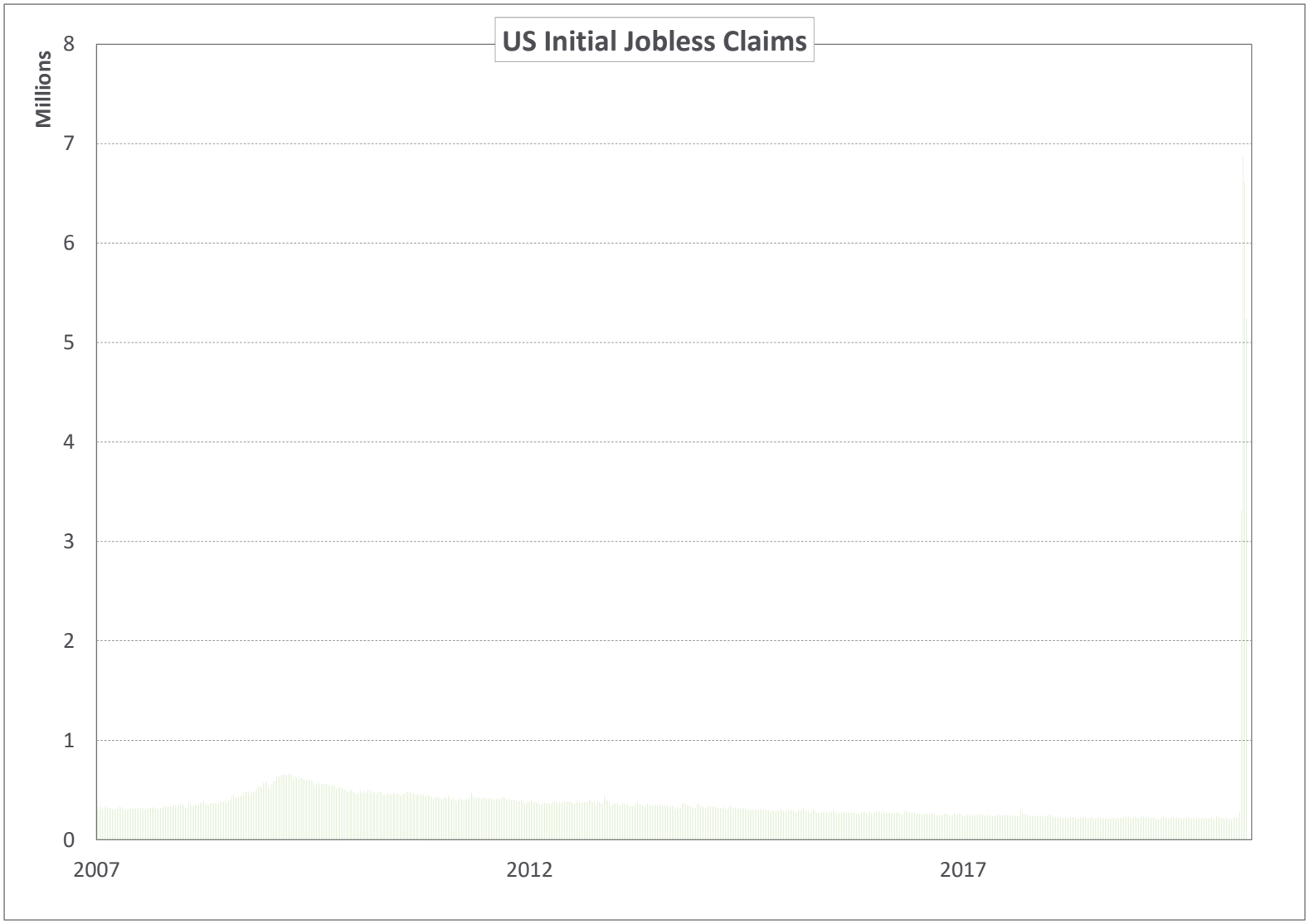
NEPC, LLC

# COVID-19 FEARS IMPACTING MOST ASSETS



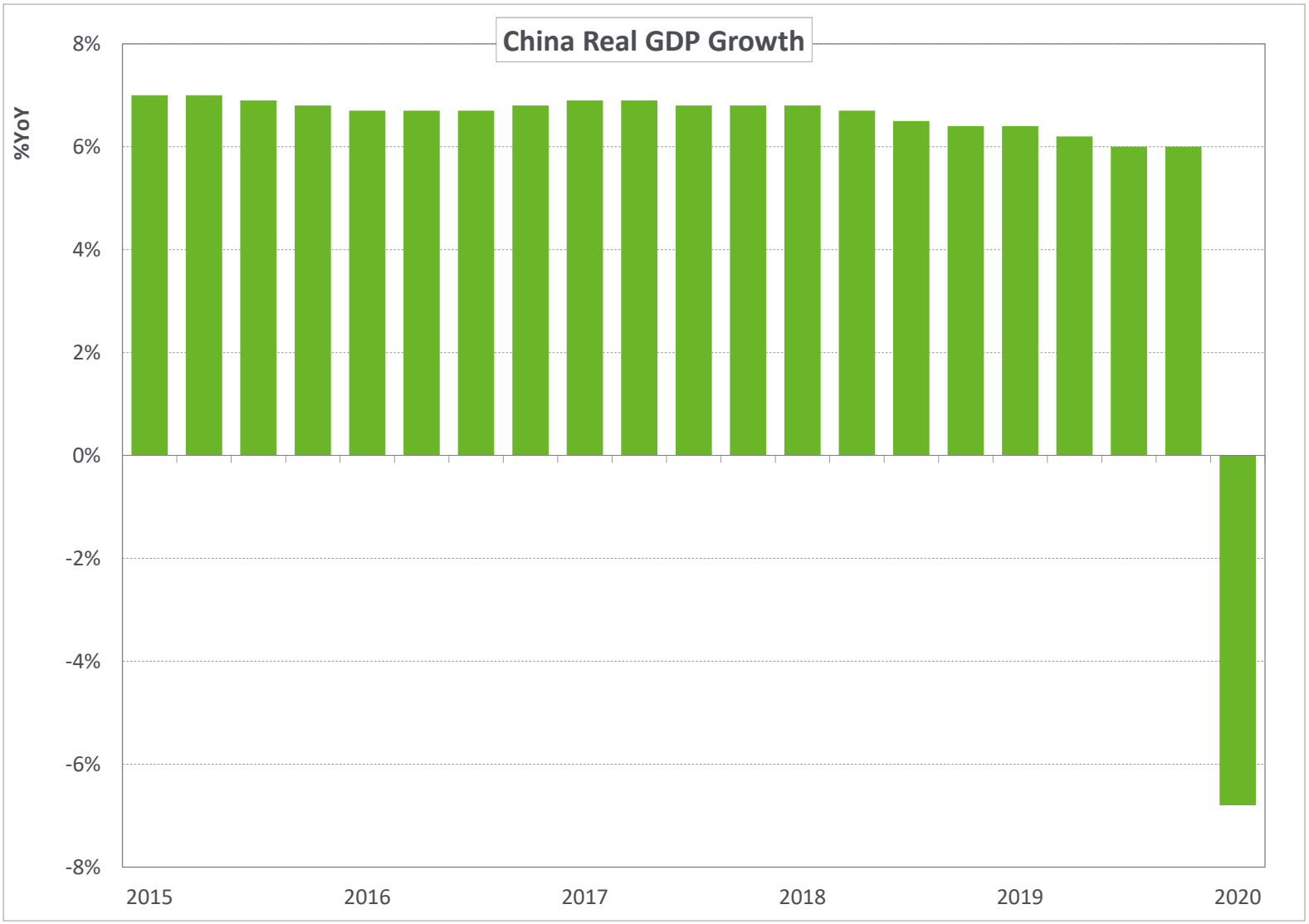

Source: S&P, Russell, MSCI, JPM, Bloomberg, FactSet

# UNEMPLOYMENT SPIKES



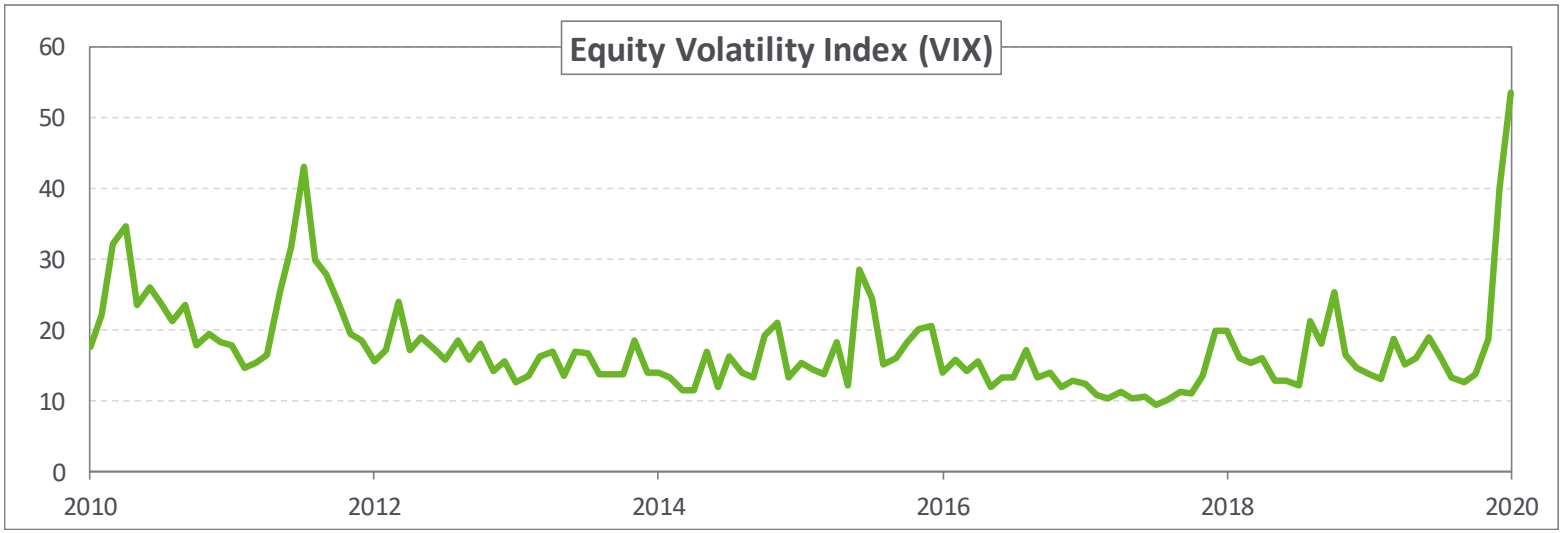

Source: Department of Labor, FactSet
Data as of 4/17/2020

# ECONOMIC GROWTH EXPECTED TO FALL

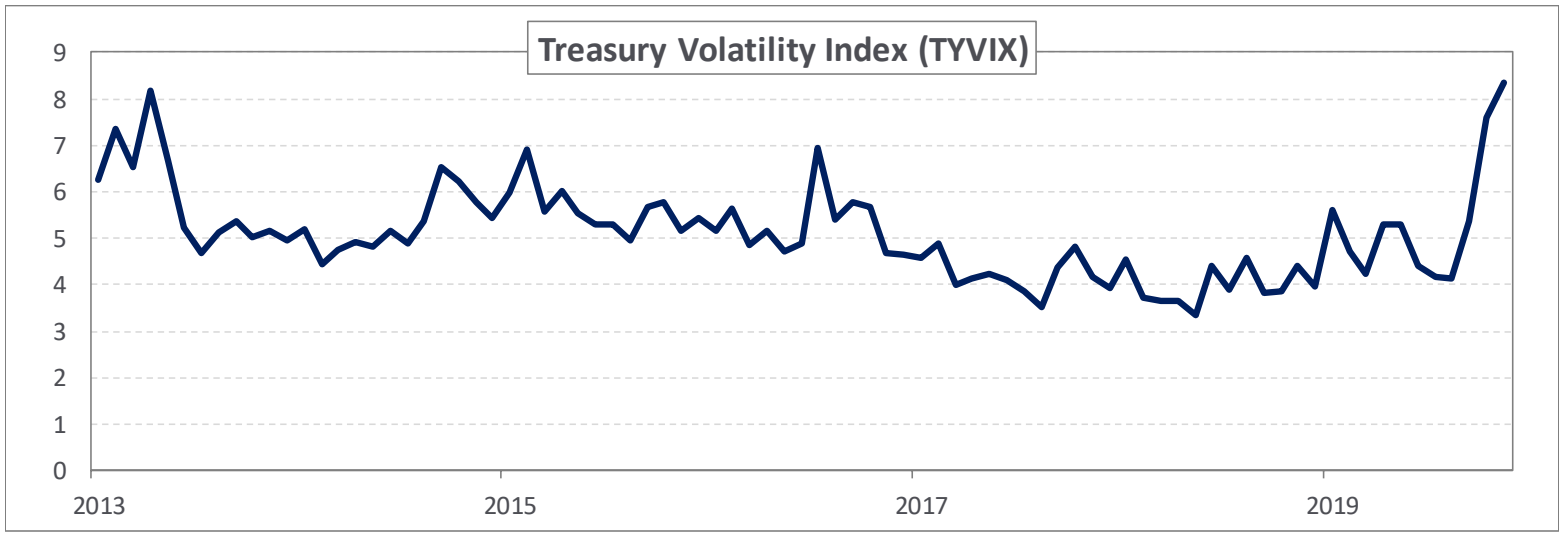



Source: FactSet
Data as of 4/17/2020

# VOLATILITY

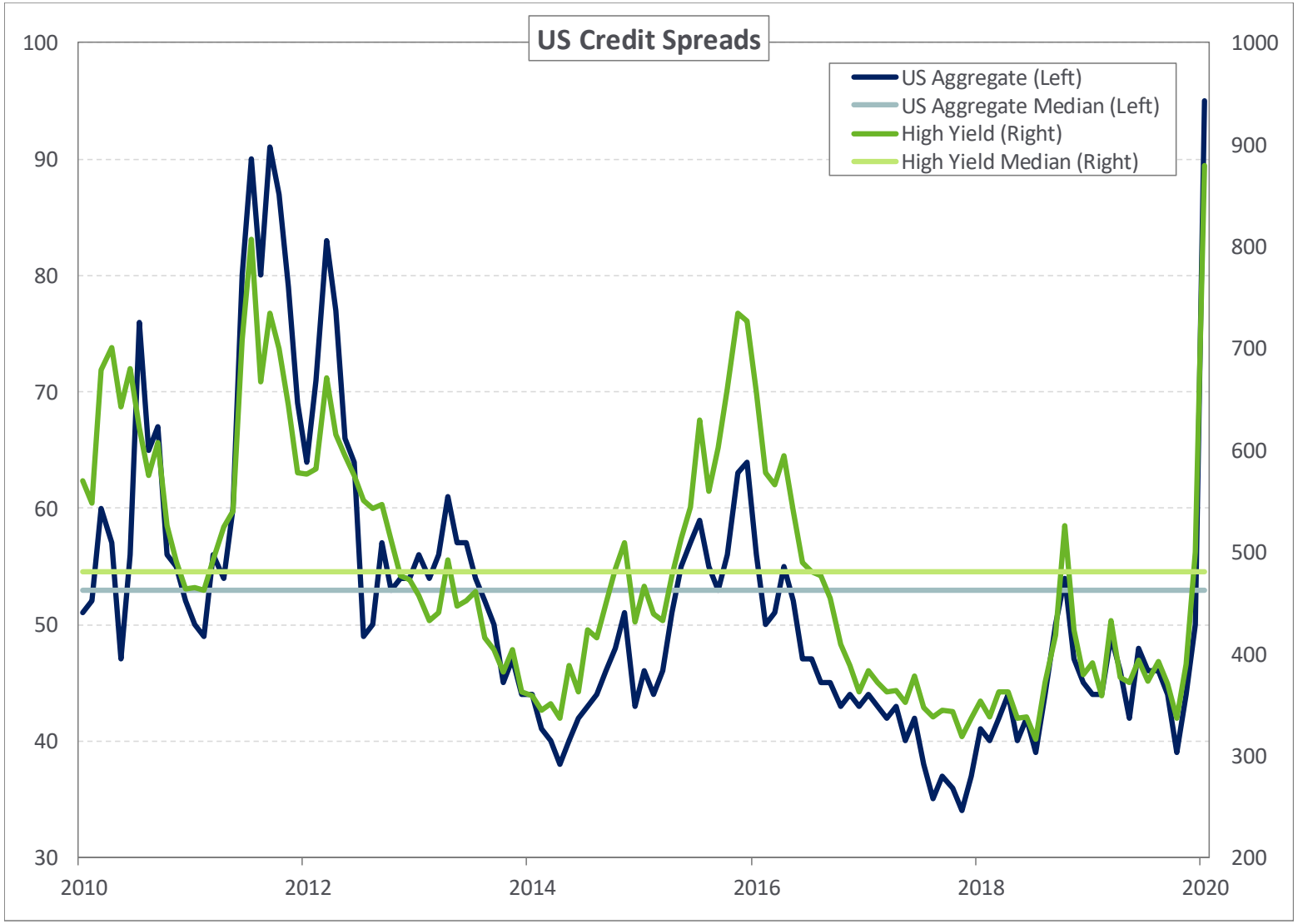



Source: CBOE, FactSet



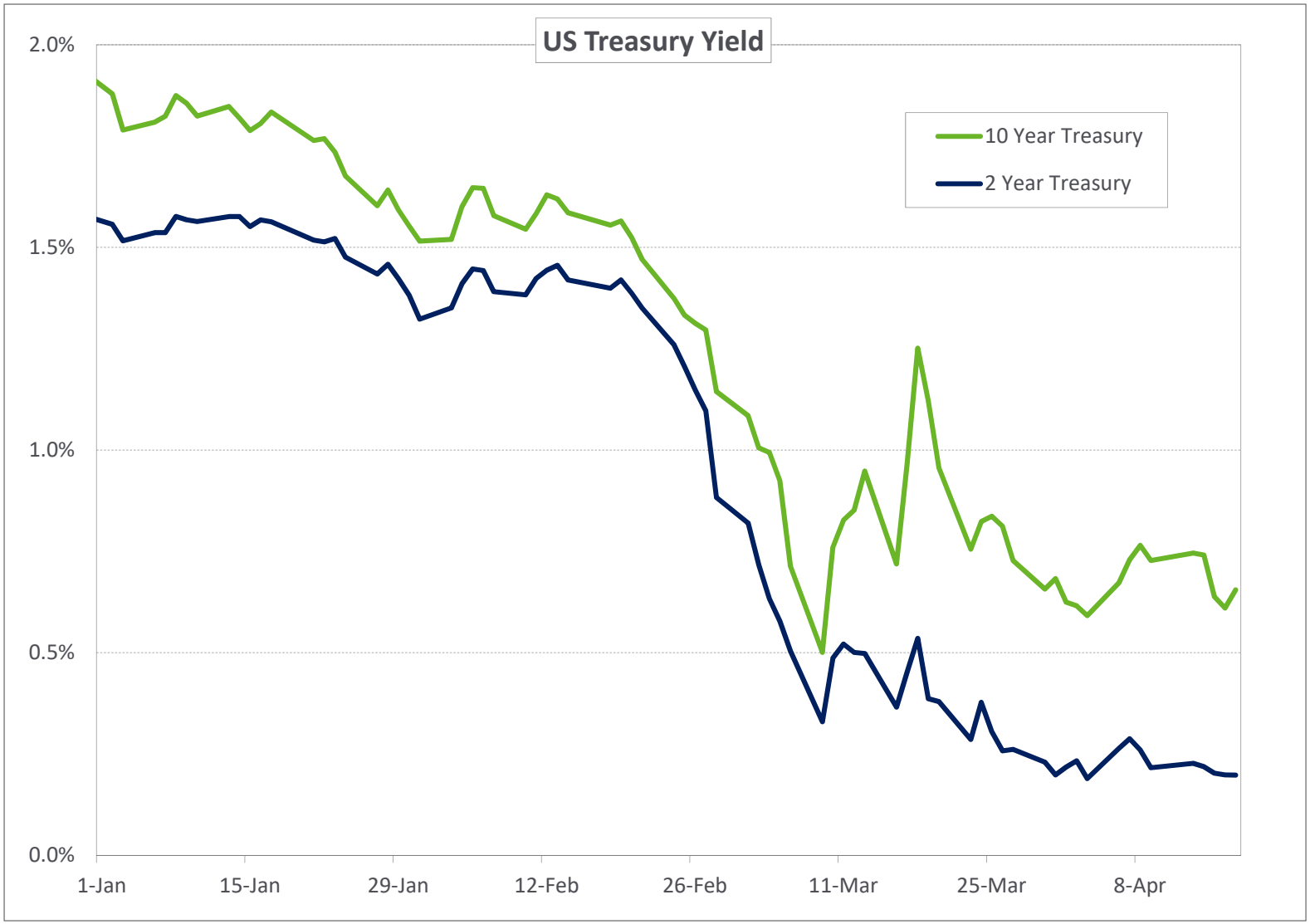

Source: CBOE, FactSet

# CREDIT SPREADS



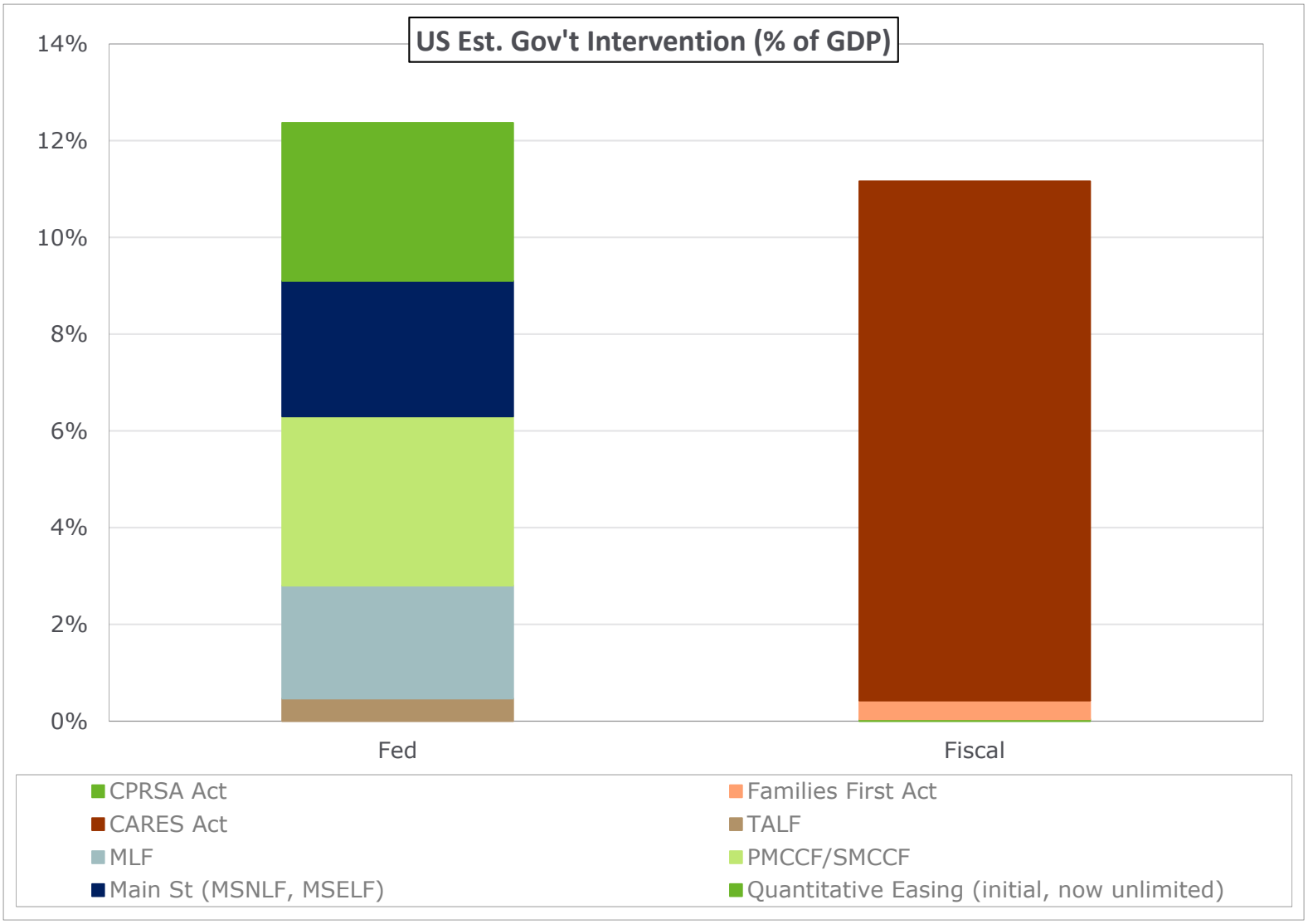

Source: Barclays, FactSet

# U.S. TREASURY YIELDS "LOWER FOR LONGER"



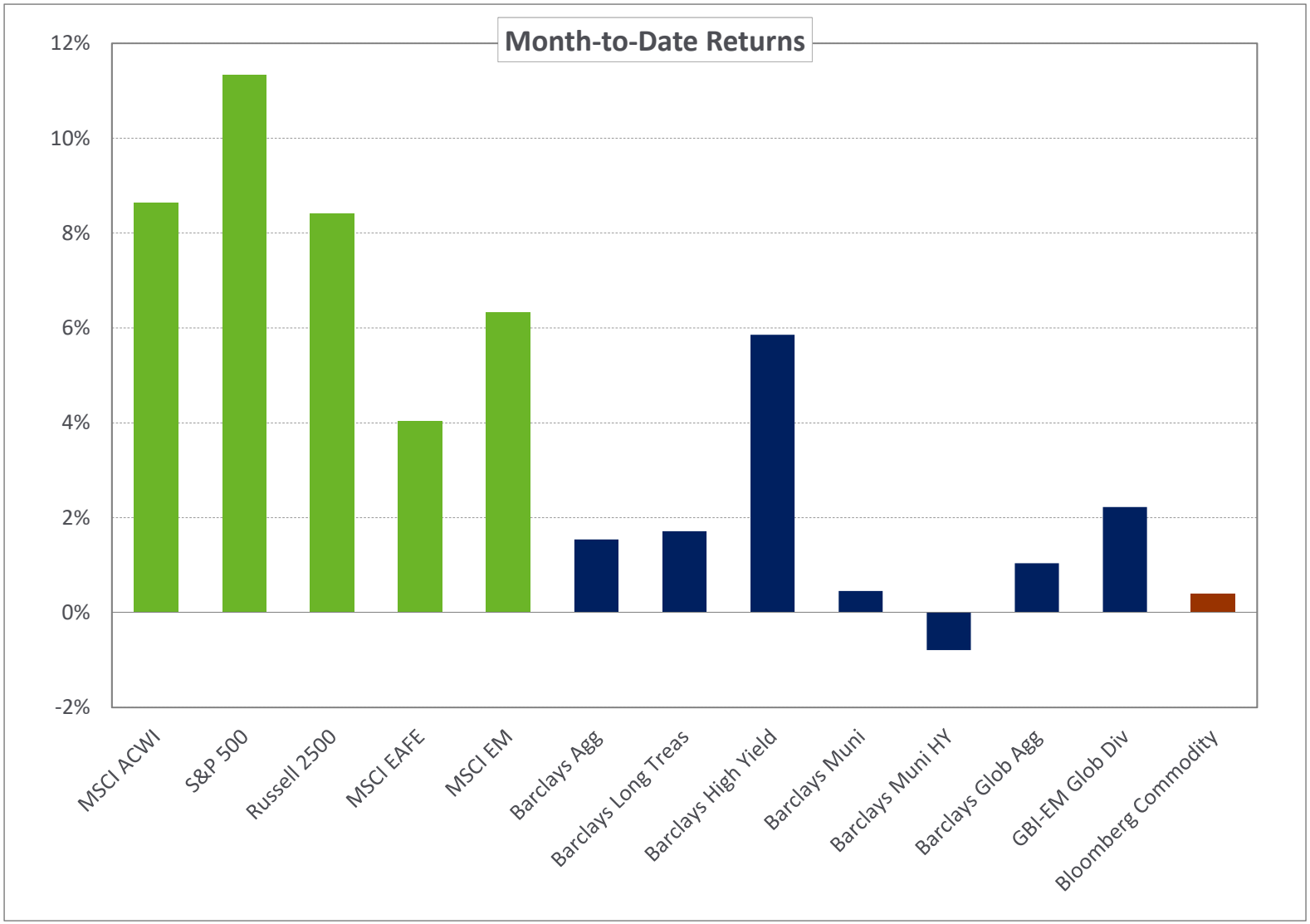

Source: FactSet
Data as of 4/17/2020

# ELEVATED PERMANENT INTERVENTIONS




*Source: NEPC, Federal Reserve*

# COVID-19 FEARS IMPACTING MOST ASSETS




Source: S&P, Russell, MSCI, JPM, Bloomberg, FactSet
Data as of 04/17/2020

# EXPECTATIONS FOR THE COMING WEEKS

**We should prepare for shocking economic statistics**

- Q2 GDP, unemployment, etc.
- Continued near-term acceleration in virus cases

**We expect additional policy responses**

**Important Characteristics of Successful Investors:**

**Diversified – it has helped during this recent decline**

**Disciplined - Look to rebalance toward equity targets**

**Dynamic – Opportunities will emerge from market challenges**

**Dry Powder – Preserve a quarter of spending needs**

# HOWARD COUNTY POLICY CHANGES

NEPC, LLC

# HOWARD COUNTY CHANGES TO LONG TERM TARGET

| Asset Class | Prior Policy | 2019-20 Current Policy | Δ | Commentary |
|---|---|---|---|---|
| Large Cap Equities | 15% | 19% | +4% | • Total equity allocation remains at 50%<br>• Restructure equity allocation to align with global equity market capitalization<br>• Continue funding private equity through a direct program |
| Small/Mid Cap Equities | 5% | 4% | -1% | |
| Int'l Equities | 13% | 12% | -1% | |
| Emerging Int'l Equities | 7% | 5% | -2% | |
| Private Equity | 10% | 10% | -- | |
| **Total Equity** | **50%** | **50%** | **--** | |
| Core Bonds | 25% | 20% | -5% | • Increase fixed income diversification by adding absolute return active strategy<br>• Add Private Credit for yield and capital appreciation – on today's agenda |
| TIPS | 0% | 2% | +2% | |
| Emerging Market Debt | 5% | 4% | -1% | |
| Absolute Return Fixed Income | 0% | 4% | +4% | |
| Private Credit | 0% | 5% | +5% | |
| **Total Fixed Income** | **30%** | **35%** | **+5%** | • Continue to fund real estate as an inflation hedge and income producing strategy |
| Core/Non-Core Real Estate | 5% | 5% | -- | |
| Private Infrastructure/Land | 2.5% | 2% | -0.5% | |
| **Total Real Assets** | **7.5%** | **7%** | **-0.5%** | • Reduce hedge funds to lower fees and fund higher conviction strategies |
| Hedge Funds | 12.5% | 8% | -4.5% | |
| **Total Multi-Asset** | **12.5%** | **8%** | **-4.5%** | |

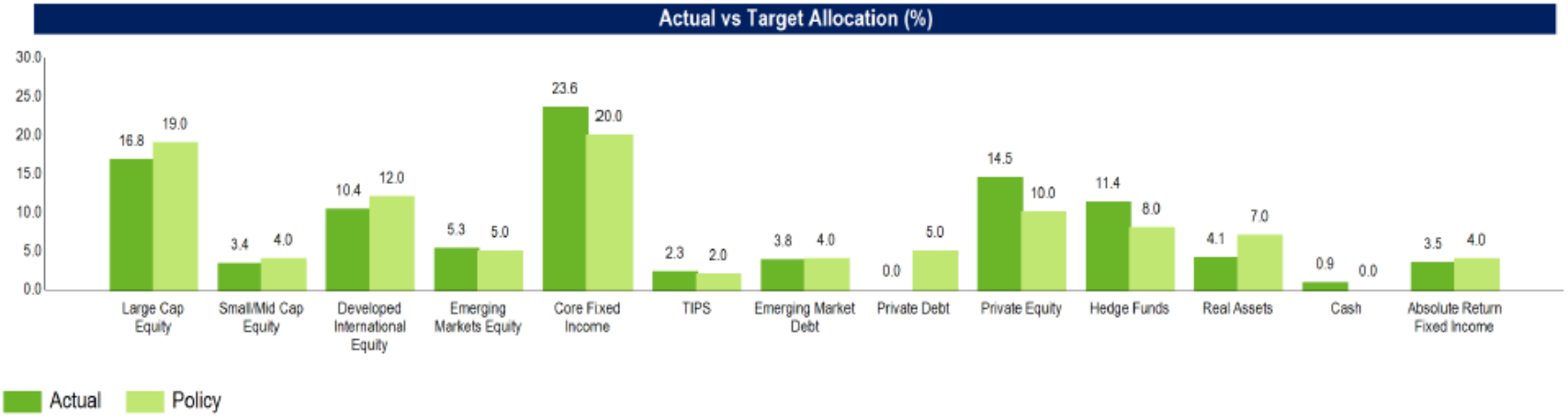
# TOTAL FUND PERFORMANCE RANKING

NEPC, LLC

**Howard County Retirement Plans**

# TOTAL FUND PERFORMANCE SUMMARY (GROSS)

| | | | | | | | | | | | | | | | | Ending March 31, 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Market Value | 3 Mo | Rank | Fiscal YTD | Rank | 1 Yr | Rank | 3 Yrs | Rank | 5 Yrs | Rank | 10 Yrs | Rank | Inception | Inception Date |
| **Total Fund Composite** | **$1,025,992,269** | **-10.9%** | **14** | **-5.8%** | **9** | **-2.5%** | **1** | **4.5%** | **1** | **4.9%** | **1** | **6.7%** | **25** | **6.8%** | **Apr-97** |
| *Policy Index* | | *-9.9%* | *1* | *-5.0%* | *1* | *-2.1%* | *1* | *4.1%* | *4* | *4.3%* | *15* | *6.3%* | *54* | *6.8%* | *Apr-97* |
| *Allocation Index* | | *-9.7%* | *1* | *-4.8%* | *1* | *--* | *--* | *--* | *--* | *--* | *--* | *--* | *--* | *--* | *Apr-97* |
| *InvMetrics Public DB > $1B Gross Median* | | *-12.4%* | | *-7.9%* | | *-4.8%* | | *2.7%* | | *3.3%* | | *6.4%* | | *6.4%* | *Apr-97* |




Fiscal year-end June 30
Preliminary returns and universe data as of March 31, 2020

# FEBRUARY 2020 FLASH REPORT

NEPC, LLC

# TRAILING ANNUAL INDEX PERFORMANCE

| Equity | | | | | | |
|---|---|---|---|---|---|---|
| | Feb-20 | YTD | 1 YR | 3 YR | 5 YR | 10 YR |
| MSCI ACWI | -8.1% | -9.1% | 3.9% | 7.0% | 5.5% | 8.1% |
| S&P 500 | -8.2% | -8.3% | 8.2% | 9.9% | 9.2% | 12.7% |
| Russell 1000 | -8.2% | -8.1% | 7.8% | 9.7% | 9.0% | 12.6% |
| Russell 2000 | -8.4% | -11.4% | -4.9% | 3.5% | 5.1% | 10.4% |
| Russell 2500 | -8.4% | -10.2% | -1.8% | 5.1% | 5.8% | 11.2% |
| MSCI EAFE | -9.0% | -10.9% | -0.6% | 3.9% | 2.0% | 4.8% |
| MSCI EM | -5.3% | -9.7% | -1.9% | 4.9% | 2.7% | 3.2% |

| Credit | | | | | | |
|---|---|---|---|---|---|---|
| | Feb-20 | YTD | 1 YR | 3 YR | 5 YR | 10 YR |
| BC Global Agg | 0.7% | 2.0% | 7.9% | 4.4% | 2.9% | 2.6% |
| BC US Agg | 1.8% | 3.8% | 11.7% | 5.0% | 3.6% | 3.9% |
| BC Credit | 1.4% | 3.7% | 15.3% | 6.5% | 4.8% | 5.5% |
| BC US HY | -1.4% | -1.4% | 6.1% | 4.9% | 5.2% | 7.3% |
| BC Muni | 1.3% | 3.1% | 9.5% | 5.3% | 4.0% | 4.5% |
| BC Muni HY | 2.1% | 4.6% | 14.4% | 8.6% | 6.6% | 7.3% |
| BC TIPS | 1.4% | 3.5% | 10.8% | 4.1% | 2.9% | 3.7% |
| BC 20+ STRIPS | 9.3% | 19.7% | 46.6% | 15.3% | 8.1% | 12.1% |
| BC Long Treasuries | 6.7% | 14.0% | 31.6% | 11.0% | 6.3% | 8.1% |
| BC Long Credit | 2.0% | 6.1% | 26.6% | 10.2% | 7.0% | 8.4% |
| BC Govt/Credit 1-3 Yr | 0.8% | 1.4% | 4.9% | 2.5% | 1.9% | 1.6% |
| JPM EMBI Glob Div | -1.0% | 0.5% | 9.7% | 5.7% | 6.0% | 6.8% |
| JPM GBI-EM Glob Div | -3.4% | -4.7% | 3.7% | 3.9% | 2.0% | 2.1% |

| Real Assets | | | | | | |
|---|---|---|---|---|---|---|
| | Feb-20 | YTD | 1 YR | 3 YR | 5 YR | 10 YR |
| BBG Commodity | -5.0% | -12.0% | -11.1% | -5.2% | -6.2% | -5.6% |
| Alerian MLP | -14.0% | -18.9% | -23.5% | -12.4% | -10.6% | 1.5% |
| FTSE NAREIT Equity REITs | -8.0% | -6.9% | 4.2% | 4.4% | 5.1% | 11.2% |

Source: S&P, MSCI, Russell, Barclays, JPM, Alerian, FTSE, FactSet

**Howard County Retirement Plans**

# TOTAL FUND PERFORMANCE SUMMARY (GROSS)

| | | | | Ending February 29, 2020 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Market Value ($) | % of Portfolio | Policy % | 1 Mo (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
| **Total Fund Composite** | **1,112,872,054** | **100.0** | **100.0** | **-3.0** | **-3.4** | **6.8** | **7.7** | **6.5** | **8.0** | **7.2** | **Apr-97** |
| *Policy Index* | | | | *-3.0* | *-3.2* | *6.7* | *6.9* | *5.8* | *7.5* | *7.2* | *Apr-97* |
| *Allocation Index* | | | | *-3.1* | *-3.3* | *--* | *--* | *--* | *--* | *--* | *Apr-97* |
| **Total US Equity Composite** | **243,000,797** | **21.8** | **20.0** | **-8.4** | **-8.9** | **4.3** | **9.5** | **9.0** | **13.0** | **8.3** | **Jul-97** |
| *Russell 3000* | | | | *-8.2* | *-8.3* | *6.9* | *9.3* | *8.7* | *12.5* | *7.6* | *Jul-97* |
| *US Equity Allocation Index* | | | | *-8.1* | *-8.5* | *5.6* | *8.8* | *8.4* | *12.5* | *--* | *Jul-97* |
| **Total International Equity** | **189,821,541** | **17.1** | **20.0** | **-6.1** | **-10.2** | **1.6** | **5.2** | **3.3** | **4.9** | **4.4** | **Jul-97** |
| *MSCI ACWI ex USA* | | | | *-7.9* | *-10.4* | *-0.7* | *4.2* | *2.2* | *4.3* | *4.3* | *Jul-97* |
| **Total Fixed Income Composite** | **356,109,113** | **32.0** | **30.0** | **0.5** | **2.1** | **9.8** | **5.1** | **4.4** | **5.0** | **5.5** | **Jul-97** |
| *Fixed Income Policy Index* | | | | *1.8* | *3.8* | *11.7* | *5.0* | *3.6* | *3.9* | *5.4* | *Jul-97* |
| **Total Real Assets Composite** | **41,916,629** | **3.8** | **7.5** | **0.0** | **0.0** | **-0.7** | **8.8** | **8.4** | **4.8** | **7.1** | **Jul-03** |
| *NCREIF Property Index 1 Qtr. Lag* | | | | *0.0* | *0.0* | *6.2* | *6.8* | *8.6* | *9.8* | *8.7* | *Jul-03* |
| **Cash Composite** | **8,261,045** | **0.7** | | **0.1** | **0.1** | **1.4** | **1.4** | **0.8** | **0.4** | **1.4** | **Dec-03** |
| *91 Day T-Bills* | | | | *0.1* | *0.3* | *1.9* | *1.7* | *1.1* | *0.6* | *1.3* | *Dec-03* |
| **Hedge Fund Composite** | **123,556,880** | **11.1** | **12.5** | **-0.4** | **-0.1** | **5.0** | **4.7** | **3.8** | **--** | **4.6** | **Jan-11** |
| *HFRI FOF: Conservative Index* | | | | *-0.3* | *0.2* | *3.8* | *2.9* | *2.1* | *2.8* | *2.5* | *Jan-11* |
| **Private Equity Composite** | **150,206,048** | **13.5** | **10.0** | **0.0** | **0.0** | **15.2** | **17.6** | **15.7** | **13.4** | **13.0** | **Jul-08** |
| *Cambridge Associates Global All PE (Qtr Lag)* | | | | *0.0* | *0.0* | *7.9* | *13.3* | *11.1* | *13.0* | *9.2* | *Jul-08* |

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 February 29, 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Market Value ($) | % of Portfolio | Policy % | 1 Mo (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
| **Total Fund Composite** | **1,112,872,054** | **100.0** | **100.0** | **-3.0** | **-3.4** | **6.8** | **7.7** | **6.5** | **8.0** | **7.2** | **Apr-97** |
| *Policy Index* | | | | *-3.0* | *-3.2* | *6.7* | *6.9* | *5.8* | *7.5* | *7.2* | *Apr-97* |
| *Allocation Index* | | | | *-3.1* | *-3.3* | *--* | *--* | *--* | *--* | *--* | *Apr-97* |
| **Total US Equity Composite** | **243,000,797** | **21.8** | **23.0** | **-8.4** | **-8.9** | **4.3** | **9.5** | **9.0** | **13.0** | **8.3** | **Jul-97** |
| *Russell 3000* | | | | *-8.2* | *-8.3* | *6.9* | *9.3* | *8.7* | *12.5* | *7.6* | *Jul-97* |
| *US Equity Allocation Index* | | | | *-8.1* | *-8.5* | *5.6* | *8.8* | *8.4* | *12.5* | *--* | *Jul-97* |
| **Large Cap Composite** | **201,412,346** | **18.1** | **19.0** | **-8.4** | **-8.9** | **5.4** | **9.3** | **8.5** | **12.7** | **8.2** | **Apr-01** |
| *Russell 1000* | | | | *-8.2* | *-8.1* | *7.8* | *9.7* | *9.0* | *12.6* | *7.4* | *Apr-01* |
| LSV Asset Management SMA | 58,458,627 | 5.3 | | -10.9 | -15.4 | -5.3 | 2.5 | 5.0 | 11.0 | 9.0 | May-00 |
| *Russell 1000 Value* | | | | *-9.7* | *-11.6* | *0.5* | *3.8* | *5.5* | *10.4* | *6.5* | *May-00* |
| Westfield Capital Management SMA | 78,601,443 | 7.1 | | -6.7 | -3.9 | 14.7 | 16.3 | 11.9 | -- | 15.6 | Jul-10 |
| *Russell 1000 Growth* | | | | *-6.8* | *-4.7* | *15.1* | *15.7* | *12.4* | *14.8* | *16.2* | *Jul-10* |
| BlackRock Equity Index Non-Lendable Fund | 64,352,276 | 5.8 | | -8.2 | -8.3 | -- | -- | -- | -- | -5.5 | Dec-19 |
| *S&P 500* | | | | *-8.2* | *-8.3* | *8.2* | *9.9* | *9.2* | *12.7* | *-5.5* | *Dec-19* |
| **Small/Mid Cap Composite** | **41,588,451** | **3.7** | **4.0** | **-8.2** | **-8.8** | **0.6** | **9.9** | **10.4** | **13.6** | **11.8** | **Apr-93** |
| *Russell 2500* | | | | *-8.4* | *-10.2* | *-1.8* | *5.1* | *5.8* | *11.2* | *9.9* | *Apr-93* |
| William Blair SMA | 14,764,780 | 1.3 | | -5.9 | -5.0 | 6.9 | 14.8 | 11.8 | 15.5 | 11.8 | Jun-06 |
| *Russell 2500 Growth* | | | | *-6.8* | *-6.7* | *3.8* | *10.6* | *8.1* | *13.1* | *9.2* | *Jun-06* |
| ICM Small Company - ICSCX | 13,125,853 | 1.2 | | -10.3 | -14.5 | -6.9 | 2.3 | 6.8 | 10.6 | 11.2 | Apr-93 |
| *Russell 2000 Value* | | | | *-9.7* | *-14.6* | *-9.3* | *-0.8* | *3.6* | *8.7* | *9.2* | *Apr-93* |
| Brown Capital Small Company Strategy SMA | 13,697,818 | 1.2 | | -8.3 | -5.5 | 3.3 | 15.7 | 14.2 | -- | 17.1 | Aug-11 |
| *Russell 2000 Growth* | | | | *-7.2* | *-8.2* | *-0.7* | *7.9* | *6.5* | *12.1* | *10.3* | *Aug-11* |

## Howard County Retirement Plans

# TOTAL FUND PERFORMANCE DETAIL (GROSS)

| | Market Value ($) | % of Portfolio | Policy % | 1 Mo (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Ending February 29, 2020 | |
| **Total International Equity** | **189,821,541** | **17.1** | **17.0** | **-6.1** | **-10.2** | **1.6** | **5.2** | **3.3** | **4.9** | **4.4** | **Jul-97** |
| *MSCI ACWI ex USA* | | | | *-7.9* | *-10.4* | *-0.7* | *4.2* | *2.2* | *4.3* | *4.3* | *Jul-97* |
| **International Developed Markets Composite** | **125,143,303** | **11.2** | **12.0** | **-6.9** | **-10.3** | **3.0** | **5.6** | **2.9** | **5.8** | **2.8** | **Mar-08** |
| *MSCI EAFE* | | | | *-9.0* | *-10.9* | *-0.6* | *3.9* | *2.0* | *4.8* | *1.8* | *Mar-08* |
| Mondrian International Equity Fund, L.P. | 57,633,571 | 5.2 | | -8.5 | -11.7 | -2.4 | 3.5 | 1.7 | 5.1 | 1.4 | Dec-07 |
| *MSCI EAFE* | | | | *-9.0* | *-10.9* | *-0.6* | *3.9* | *2.0* | *4.8* | *0.9* | *Dec-07* |
| Baillie Gifford EAFE Pure K - BGPKX | 67,509,732 | 6.1 | | -5.6 | -9.1 | 8.2 | -- | -- | -- | 1.6 | May-18 |
| *MSCI EAFE* | | | | *-9.0* | *-10.9* | *-0.6* | *3.9* | *2.0* | *4.8* | *-3.9* | *May-18* |
| **International Emerging Markets Composite** | **64,678,238** | **5.8** | **5.0** | **-4.5** | **-10.1** | **-1.2** | **4.7** | **4.1** | **3.1** | **5.4** | **Feb-06** |
| *MSCI Emerging Markets* | | | | *-5.3* | *-9.7* | *-1.9* | *4.9* | *2.7* | *3.2* | *4.2* | *Feb-06* |
| DFA Emerging Markets Value Portfolio Institutional - DFEVX | 24,585,853 | 2.2 | | -5.9 | -13.5 | -10.6 | 0.4 | 1.5 | 1.8 | 4.6 | Feb-06 |
| *MSCI Emerging Markets* | | | | *-5.3* | *-9.7* | *-1.9* | *4.9* | *2.7* | *3.2* | *4.2* | *Feb-06* |
| GQG Partners Emerging Markets Equity Fund | 40,092,385 | 3.6 | | -3.7 | -7.8 | 5.5 | -- | -- | -- | 10.5 | Dec-18 |
| *MSCI Emerging Markets* | | | | *-5.3* | *-9.7* | *-1.9* | *4.9* | *2.7* | *3.2* | *3.3* | *Dec-18* |
| **Total Fixed Income Composite** | **356,109,113** | **32.0** | **30.0** | **0.5** | **2.1** | **9.8** | **5.1** | **4.4** | **5.0** | **5.5** | **Jul-97** |
| *BBgBarc US Aggregate TR* | | | | *1.8* | *3.8* | *11.7* | *5.0* | *3.6* | *3.9* | *5.2* | *Jul-97* |
| **Core Fixed Income Composite** | **270,790,044** | **24.3** | **22.0** | **1.2** | **3.3** | **10.8** | **--** | **--** | **--** | **10.8** | **Mar-19** |
| *BBgBarc US Aggregate TR* | | | | *1.8* | *3.8* | *11.7* | *5.0* | *3.6* | *3.9* | *11.7* | *Mar-19* |
| Dodge & Cox SMA | 122,834,755 | 11.0 | | 1.0 | 2.7 | 10.6 | 5.3 | 4.4 | -- | 4.9 | May-10 |
| *BBgBarc US Aggregate TR* | | | | *1.8* | *3.8* | *11.7* | *5.0* | *3.6* | *3.9* | *3.9* | *May-10* |
| PIMCO Total Return | 124,129,160 | 11.2 | | 1.4 | 3.9 | 11.1 | 5.2 | 3.8 | -- | 4.4 | May-10 |
| *BBgBarc US Aggregate TR* | | | | *1.8* | *3.8* | *11.7* | *5.0* | *3.6* | *3.9* | *3.9* | *May-10* |
| State Street Global Advisors TIPS | 23,826,130 | 2.1 | | 1.4 | 3.5 | 10.7 | 4.0 | 2.9 | 3.7 | 3.6 | Nov-09 |
| *BBgBarc US TIPS TR* | | | | *1.4* | *3.5* | *10.8* | *4.1* | *2.9* | *3.7* | *3.6* | *Nov-09* |
| **Emerging Markets Debt Composite** | **45,351,107** | **4.1** | **4.0** | **-3.7** | **-4.5** | **4.2** | **--** | **--** | **--** | **4.2** | **Mar-19** |
| *JP Morgan GBI EM Global Diversified TR USD* | | | | *-3.4* | *-4.7* | *3.7* | *3.9* | *2.0* | *2.0* | *3.7* | *Mar-19* |
| Colchester Local Markets Debt Fund | 45,351,107 | 4.1 | | -3.7 | -4.5 | 4.2 | 5.1 | -- | -- | 7.8 | Oct-15 |
| *JP Morgan GBI EM Global Diversified TR USD* | | | | *-3.4* | *-4.7* | *3.7* | *3.9* | *2.0* | *2.0* | *5.8* | *Oct-15* |
| **Absolute Return Fixed Income** | **39,967,962** | **3.6** | **4.0** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **Mar-20** |
| *3-Month Libor Total Return USD* | | | | *0.1* | *0.3* | *2.2* | *2.0* | *1.5* | *0.9* | *0.1* | *Mar-20* |
| Payden Absolute Return Bond Fund PYAIX | 39,967,962 | 3.6 | | -- | -- | -- | -- | -- | -- | -- | Mar-20 |
| *3-Month Libor Total Return USD* | | | | *0.1* | *0.3* | *2.2* | *2.0* | *1.5* | *0.9* | -- | *Mar-20* |

## Howard County Retirement Plans

# TOTAL FUND PERFORMANCE DETAIL (GROSS)

| | | | | | | | | | | | Ending February 29, 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Market Value ($) | % of Portfolio | Policy % | 1 Mo (%) | YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
| **Total Real Assets Composite** | **41,916,629** | **3.8** | **7.0** | **0.0** | **0.0** | **-0.7** | **8.8** | **8.4** | **4.8** | **7.1** | **Jul-03** |
| *NCREIF Property Index 1 Qtr. Lag* | | | | *0.0* | *0.0* | *6.2* | *6.8* | *8.6* | *9.8* | *8.7* | *Jul-03* |
| **Cash Composite** | **8,261,045** | **0.7** | **0.0** | **0.1** | **0.1** | **1.4** | **1.4** | **0.8** | **0.4** | **1.4** | **Dec-03** |
| *91 Day T-Bills* | | | | *0.1* | *0.3* | *1.9* | *1.7* | *1.1* | *0.6* | *1.3* | *Dec-03* |
| **Hedge Fund Composite** | **123,556,880** | **11.1** | **8.0** | **-0.4** | **-0.1** | **5.0** | **4.7** | **3.8** | **--** | **4.6** | **Jan-11** |
| *HFRI FOF: Conservative Index* | | | | *-0.3* | *0.2* | *3.8* | *2.9* | *2.1* | *2.8* | *2.5* | *Jan-11* |
| Magnitude International Class A Eligible | 60,856,592 | 5.5 | | -0.4 | -0.1 | 4.6 | 4.4 | 3.3 | -- | 4.5 | Jan-11 |
| *HFRI FOF: Conservative Index* | | | | *-0.3* | *0.2* | *3.8* | *2.9* | *2.1* | *2.8* | *2.5* | *Jan-11* |
| Blackstone Partners Offshore Fund LTD | 62,700,288 | 5.6 | | -0.5 | -0.1 | 5.3 | 4.8 | 4.3 | -- | 4.8 | Mar-11 |
| *HFRI FOF: Conservative Index* | | | | *-0.3* | *0.2* | *3.8* | *2.9* | *2.1* | *2.8* | *2.4* | *Mar-11* |
| **Private Equity Composite** | **150,206,048** | **13.5** | **10.0** | **0.0** | **0.0** | **15.2** | **17.6** | **15.7** | **13.4** | **13.0** | **Jul-08** |
| *Cambridge Associates Global All PE (Qtr Lag)* | | | | *0.0* | *0.0* | *7.9* | *13.3* | *11.1* | *13.0* | *9.2* | *Jul-08* |
| **Private Debt** | **--** | **--** | **5.0** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | |
| *S&P/LSTA Leveraged Loan TR* | | | | *-1.3* | *-0.8* | *3.5* | *3.7* | *3.9* | *4.7* | -- | |

Magnitude International Class A Eligible is preliminary.

# TOTAL FUND PERFORMANCE DETAIL FOOTNOTES

Fiscal year ends 6/30.

Policy index consists of: 19% Russell 1000 / 4% Russell 2500 / 12% MSCI EAFE / 5% MSCI Emerging Markets / 20% BBgBarc US Aggregate TR / 2% BBgBarc US TIPS TR / 4% 3-Month Libor Total Return USD / 4% JP Morgan GBI EM Global Diversified TR USD / 5% S&P/LSTA Leveraged Loan TR / 7.0% NCREIF Property Index 1 Qtr. Lag / 8% HFRI FOF: Conservative Index / 10% 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 and Private Equity investments are valued as of 9/30/2019 and adjusted for capital calls and distributions through 02/29/2020.

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

# MARCH 2020 FLASH REPORT

NEPC, LLC

# TRAILING ANNUAL INDEX PERFORMANCE

| Equity | | | | | | |
|---|---|---|---|---|---|---|
| | Mar-20 | YTD | 1 YR | 3 YR | 5 YR | 10 YR |
| MSCI ACWI | -13.5% | -21.4% | -11.3% | 1.5% | 2.8% | 5.9% |
| S&P 500 | -12.4% | -19.6% | -7.0% | 5.1% | 6.7% | 10.5% |
| Russell 1000 | -13.2% | -20.2% | -8.0% | 4.6% | 6.2% | 10.4% |
| Russell 2000 | -21.7% | -30.6% | -24.0% | -4.6% | -0.2% | 6.9% |
| Russell 2500 | -21.7% | -29.7% | -22.5% | -3.1% | 0.5% | 7.7% |
| MSCI EAFE | -13.3% | -22.8% | -14.4% | -1.8% | -0.6% | 2.7% |
| MSCI EM | -15.4% | -23.6% | -17.7% | -1.6% | -0.4% | 0.7% |

| Credit | | | | | | |
|---|---|---|---|---|---|---|
| | Mar-20 | YTD | 1 YR | 3 YR | 5 YR | 10 YR |
| BC Global Agg | -2.2% | -0.3% | 4.2% | 3.6% | 2.6% | 2.5% |
| BC US Agg | -0.6% | 3.1% | 8.9% | 4.8% | 3.4% | 3.9% |
| BC Credit | -6.6% | -3.1% | 5.1% | 4.2% | 3.3% | 4.7% |
| BC US HY | -11.5% | -12.7% | -6.9% | 0.8% | 2.8% | 5.6% |
| BC Muni | -3.6% | -0.6% | 3.8% | 4.0% | 3.2% | 4.1% |
| BC Muni HY | -11.0% | -6.9% | -0.7% | 4.4% | 4.2% | 6.0% |
| BC TIPS | -1.8% | 1.7% | 6.8% | 3.5% | 2.7% | 3.5% |
| BC 20+ STRIPS | 8.6% | 30.0% | 47.8% | 18.9% | 9.6% | 13.5% |
| BC Long Treasuries | 6.1% | 20.9% | 32.6% | 13.4% | 7.3% | 9.0% |
| BC Long Credit | -10.2% | -4.7% | 9.0% | 6.6% | 4.7% | 7.3% |
| BC Govt/Credit 1-3 Yr | 0.3% | 1.7% | 4.5% | 2.6% | 1.9% | 1.6% |
| JPM EMBI Glob Div | -13.8% | -13.4% | -6.8% | 0.4% | 2.8% | 4.9% |
| JPM GBI-EM Glob Div | -11.1% | -15.2% | -6.5% | -0.8% | 0.3% | 0.5% |

| Real Assets | | | | | | |
|---|---|---|---|---|---|---|
| | Mar-20 | YTD | 1 YR | 3 YR | 5 YR | 10 YR |
| BBG Commodity | -12.8% | -23.3% | -22.3% | -8.6% | -7.8% | -6.7% |
| Alerian MLP | -47.2% | -57.2% | -60.9% | -28.9% | -20.7% | -5.0% |
| FTSE NAREIT Equity REITs | -21.9% | -27.3% | -21.3% | -3.1% | -0.3% | 7.4% |

Source: S&P, MSCI, Russell, Barclays, JPM, Alerian, FTSE, FactSet

## Howard County Retirement Plans

# TOTAL FUND PERFORMANCE SUMMARY (GROSS)

| | | | | | | | | | | | | Ending March 31, 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Market Value ($) | % of Portfolio | Policy % | 1 Mo (%) | 3 Mo (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
| **Total Fund Composite** | **1,025,992,269** | **100.0** | **100.0** | **-7.8** | **-10.9** | **-5.8** | **-2.5** | **4.5** | **4.9** | **6.7** | **6.8** | **Apr-97** |
| *Policy Index* | | | | *-6.9* | *-9.9* | *-5.0* | *-2.1* | *4.1* | *4.3* | *6.3* | *6.8* | *Apr-97* |
| *Allocation Index* | | | | *-6.5* | *-9.7* | *-4.8* | *--* | *--* | *--* | *--* | *--* | *Apr-97* |
| **Total US Equity Composite** | **207,254,551** | **20.2** | **23.0** | **-14.7** | **-22.2** | **-14.7** | **-11.1** | **3.7** | **5.7** | **10.6** | **7.5** | **Jul-97** |
| *Russell 3000* | | | | *-13.8* | *-20.9* | *-12.7* | *-9.1* | *4.0* | *5.8* | *10.1* | *6.9* | *Jul-97* |
| *US Equity Allocation Index* | | | | *-14.1* | *-21.3* | *-13.6* | *-10.2* | *3.4* | *5.3* | *10.1* | *--* | *Jul-97* |
| **Total International Equity** | **161,213,170** | **15.7** | **17.0** | **-15.0** | **-23.7** | **-18.3** | **-14.8** | **-1.3** | **0.3** | **2.5** | **3.7** | **Jul-97** |
| *MSCI ACWI ex USA* | | | | *-14.5* | *-23.4* | *-18.0* | *-15.6* | *-2.0* | *-0.6* | *2.1* | *3.5* | *Jul-97* |
| **Total Fixed Income Composite** | **340,406,089** | **33.2** | **30.0** | **-4.4** | **-2.4** | **0.4** | **3.8** | **3.4** | **3.4** | **4.4** | **5.3** | **Jul-97** |
| *Fixed Income Policy Index* | | | | *-0.6* | *3.1* | *5.7* | *8.9* | *4.8* | *3.4* | *3.9* | *5.3* | *Jul-97* |
| **Total Real Assets Composite** | **42,425,035** | **4.1** | **7.0** | **0.0** | **0.0** | **1.5** | **3.9** | **8.8** | **8.4** | **7.1** | **7.1** | **Jul-03** |
| *NCREIF Property Index 1 Qtr. Lag* | | | | *1.6* | *1.6* | *4.5* | *6.4* | *6.7* | *8.2* | *10.2* | *8.7* | *Jul-03* |
| **Cash Composite** | **8,950,753** | **0.9** | | **0.0** | **0.2** | **0.8** | **1.3** | **1.4** | **0.8** | **0.4** | **1.3** | **Dec-03** |
| *91 Day T-Bills* | | | | *0.1* | *0.4* | *1.3* | *1.9* | *1.7* | *1.1* | *0.6* | *1.3* | *Dec-03* |
| **Hedge Fund Composite** | **116,757,817** | **11.4** | **8.0** | **-5.5** | **-5.6** | **-3.8** | **-1.6** | **2.6** | **2.5** | **--** | **4.0** | **Jan-11** |
| *HFRI FOF: Conservative Index* | | | | *-4.3* | *-4.9* | *-3.4* | *-2.0* | *1.0* | *0.9* | *2.1* | *1.9* | *Jan-11* |
| **Private Equity Composite** | **148,984,855** | **14.5** | **10.0** | **0.0** | **0.0** | **8.0** | **11.2** | **17.4** | **15.8** | **13.1** | **12.9** | **Jul-08** |
| *Cambridge Associates Global All PE (Qtr Lag)* | | | | *5.1* | *5.1* | *9.5* | *14.6* | *14.2* | *11.7* | *12.8* | *9.5* | *Jul-08* |
| **Private Debt** | **--** | **--** | **5.0** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | |
| *S&P/LSTA Leveraged Loan TR* | | | | *-12.4* | *-13.0* | *-10.7* | *-9.2* | *-0.8* | *1.1* | *3.1* | *--* | |

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)

| | Market Value ($) | % of Portfolio | Policy % | 1 Mo (%) | 3 Mo (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Ending March 31, 2020 |
| **Total Fund Composite** | **1,025,992,269** | **100.0** | **100.0** | **-7.8** | **-10.9** | **-5.8** | **-2.5** | **4.5** | **4.9** | **6.7** | **6.8** | **Apr-97** |
| *Policy Index* | | | | *-6.9* | *-9.9* | *-5.0* | *-2.1* | *4.1* | *4.3* | *6.3* | *6.8* | *Apr-97* |
| *Allocation Index* | | | | *-6.5* | *-9.7* | *-4.8* | -- | -- | -- | -- | -- | *Apr-97* |
| **Total US Equity Composite** | **207,254,551** | **20.2** | **23.0** | **-14.7** | **-22.2** | **-14.7** | **-11.1** | **3.7** | **5.7** | **10.6** | **7.5** | **Jul-97** |
| *Russell 3000* | | | | *-13.8* | *-20.9* | *-12.7* | *-9.1* | *4.0* | *5.8* | *10.1* | *6.9* | *Jul-97* |
| *US Equity Allocation Index* | | | | *-14.1* | *-21.3* | *-13.6* | *-10.2* | *3.4* | *5.3* | *10.1* | -- | *Jul-97* |
| **Large Cap Composite** | **172,687,744** | **16.8** | **19.0** | **-14.2** | **-21.8** | **-13.3** | **-10.0** | **3.9** | **5.5** | **10.4** | **7.3** | **Apr-01** |
| *Russell 1000* | | | | *-13.2* | *-20.2* | *-11.8* | *-8.0* | *4.6* | *6.2* | *10.4* | *6.6* | *Apr-01* |
| LSV Asset Management SMA | 46,518,029 | 4.5 | | -20.4 | -32.7 | -25.3 | -23.7 | -4.5 | 0.5 | 7.9 | 7.7 | May-00 |
| *Russell 1000 Value* | | | | *-17.1* | *-26.7* | *-20.2* | *-17.2* | *-2.2* | *1.9* | *7.7* | *5.4* | *May-00* |
| Westfield Capital Management SMA | 69,762,844 | 6.8 | | -11.2 | -14.7 | -4.7 | 0.2 | 11.4 | 9.5 | -- | 14.1 | Jul-10 |
| *Russell 1000 Growth* | | | | *-9.8* | *-14.1* | *-3.6* | *0.9* | *11.3* | *10.4* | *13.0* | *14.8* | *Jul-10* |
| BlackRock Equity Index Non-Lendable Fund | 56,406,871 | 5.5 | | -12.2 | -19.2 | -- | -- | -- | -- | -- | -16.8 | Dec-19 |
| *S&P 500* | | | | *-12.4* | *-19.6* | *-10.8* | *-7.0* | *5.1* | *6.7* | *10.5* | *-17.2* | *Dec-19* |
| **Small/Mid Cap Composite** | **34,566,807** | **3.4** | **4.0** | **-16.9** | **-24.2** | **-20.1** | **-15.6** | **2.8** | **6.1** | **10.7** | **11.0** | **Apr-93** |
| *Russell 2500* | | | | *-21.7* | *-29.7* | *-24.7* | *-22.5* | *-3.1* | *0.5* | *7.7* | *8.9* | *Apr-93* |
| William Blair SMA | 12,418,131 | 1.2 | | -15.9 | -20.1 | -15.6 | -10.2 | 7.6 | 7.7 | 12.8 | 10.3 | Jun-06 |
| *Russell 2500 Growth* | | | | *-17.7* | *-23.2* | *-17.8* | *-14.4* | *3.4* | *3.6* | *10.1* | *7.6* | *Jun-06* |
| ICM Small Company - ICSCX | 9,996,377 | 1.0 | | -23.8 | -34.9 | -29.7 | -27.5 | -6.6 | 0.7 | 6.8 | 10.0 | Apr-93 |
| *Russell 2000 Value* | | | | *-24.7* | *-35.7* | *-30.6* | *-29.6* | *-9.5* | *-2.4* | *4.8* | *8.0* | *Apr-93* |
| Brown Capital Small Company Strategy SMA | 12,152,299 | 1.2 | | -11.3 | -16.2 | -14.8 | -7.8 | 10.1 | 11.2 | -- | 15.3 | Aug-11 |
| *Russell 2000 Growth* | | | | *-19.1* | *-25.8* | *-20.8* | *-18.6* | *0.1* | *1.7* | *8.9* | *7.5* | *Aug-11* |

# TOTAL FUND PERFORMANCE DETAIL (GROSS)

| | Market Value ($) | % of Portfolio | Policy % | 1 Mo (%) | 3 Mo (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Ending March 31, 2020 | |
| **Total International Equity** | **161,213,170** | **15.7** | **17.0** | **-15.0** | **-23.7** | **-18.3** | **-14.8** | **-1.3** | **0.3** | **2.5** | **3.7** | **Jul-97** |
| *MSCI ACWI ex USA* | | | | *-14.5* | *-23.4* | *-18.0* | *-15.6* | *-2.0* | *-0.6* | *2.1* | *3.5* | *Jul-97* |
| **International Developed Markets Composite** | **106,802,487** | **10.4** | **12.0** | **-14.5** | **-23.3** | **-16.0** | **-12.6** | **-0.9** | **0.0** | **3.5** | **1.4** | **Mar-08** |
| *MSCI EAFE* | | | | *-13.3* | *-22.8* | *-17.4* | *-14.4* | *-1.8* | *-0.6* | *2.7* | *0.6* | *Mar-08* |
| Mondrian International Equity Fund, L.P. | 48,021,973 | 4.7 | | -16.5 | -26.2 | -20.0 | -18.8 | -3.6 | -1.6 | 2.7 | -0.1 | Dec-07 |
| *MSCI EAFE* | | | | *-13.3* | *-22.8* | *-17.4* | *-14.4* | *-1.8* | *-0.6* | *2.7* | *-0.3* | *Dec-07* |
| Baillie Gifford EAFE Pure K - BGPKX | 58,780,514 | 5.7 | | -12.9 | -20.8 | -12.4 | -6.7 | -- | -- | -- | -5.5 | May-18 |
| *MSCI EAFE* | | | | *-13.3* | *-22.8* | *-17.4* | *-14.4* | *-1.8* | *-0.6* | *2.7* | *-10.6* | *May-18* |
| **International Emerging Markets Composite** | **54,410,683** | **5.3** | **5.0** | **-15.8** | **-24.3** | **-22.5** | **-19.0** | **-2.1** | **1.1** | **0.5** | **4.1** | **Feb-06** |
| *MSCI Emerging Markets* | | | | *-15.4* | *-23.6* | *-18.2* | *-17.7* | *-1.6* | *-0.4* | *0.7* | *3.0* | *Feb-06* |
| DFA Emerging Markets Value Portfolio Institutional - DFEVX | 19,371,273 | 1.9 | | -21.2 | -31.8 | -30.2 | -29.9 | -8.1 | -2.7 | -1.4 | 2.8 | Feb-06 |
| *MSCI Emerging Markets* | | | | *-15.4* | *-23.6* | *-18.2* | *-17.7* | *-1.6* | *-0.4* | *0.7* | *3.0* | *Feb-06* |
| GQG Partners Emerging Markets Equity Fund | 35,039,410 | 3.4 | | -12.5 | -19.4 | -17.4 | -11.3 | -- | -- | -- | -0.7 | Dec-18 |
| *MSCI Emerging Markets* | | | | *-15.4* | *-23.6* | *-18.2* | *-17.7* | *-1.6* | *-0.4* | *0.7* | *-9.1* | *Dec-18* |
| **Total Fixed Income Composite** | **340,406,089** | **33.2** | **30.0** | **-4.4** | **-2.4** | **0.4** | **3.8** | **3.4** | **3.4** | **4.4** | **5.3** | **Jul-97** |
| *BBgBarc US Aggregate TR* | | | | *-0.6* | *3.1* | *5.7* | *8.9* | *4.8* | *3.4* | *3.9* | *5.2* | *Jul-97* |
| **Core Fixed Income Composite** | **265,029,372** | **25.8** | **22.0** | **-2.1** | **1.1** | **3.6** | **6.7** | **--** | **--** | **--** | **7.8** | **Mar-19** |
| *BBgBarc US Aggregate TR* | | | | *-0.6* | *3.1* | *5.7* | *8.9* | *4.8* | *3.4* | *3.9* | *10.1* | *Mar-19* |
| Dodge & Cox SMA | 118,820,156 | 11.6 | | -3.3 | -0.7 | 2.2 | 5.2 | 4.1 | 3.6 | -- | 4.5 | May-10 |
| *BBgBarc US Aggregate TR* | | | | *-0.6* | *3.1* | *5.7* | *8.9* | *4.8* | *3.4* | *3.9* | *3.8* | *May-10* |
| PIMCO Total Return | 122,809,095 | 12.0 | | -1.0 | 2.8 | 5.0 | 8.3 | 4.8 | 3.5 | -- | 4.2 | May-10 |
| *BBgBarc US Aggregate TR* | | | | *-0.6* | *3.1* | *5.7* | *8.9* | *4.8* | *3.4* | *3.9* | *3.8* | *May-10* |
| State Street Global Advisors TIPS | 23,400,121 | 2.3 | | -1.8 | 1.7 | 3.8 | 6.8 | 3.4 | 2.6 | 3.5 | 3.4 | Nov-09 |
| *BBgBarc US TIPS TR* | | | | *-1.8* | *1.7* | *3.9* | *6.9* | *3.5* | *2.7* | *3.5* | *3.4* | *Nov-09* |
| **Emerging Markets Debt Composite** | **39,420,263** | **3.8** | **4.0** | **-13.0** | **-16.9** | **-13.1** | **-7.9** | **--** | **--** | **--** | **-8.7** | **Mar-19** |
| *JP Morgan GBI EM Global Diversified TR USD* | | | | *-11.1* | *-15.2* | *-11.5* | *-6.5* | *-0.8* | *0.3* | *0.4* | *-7.2* | *Mar-19* |
| Colchester Local Markets Debt Fund | 39,420,263 | 3.8 | | -13.0 | -16.9 | -13.1 | -7.9 | -0.6 | -- | -- | 4.4 | Oct-15 |
| *JP Morgan GBI EM Global Diversified TR USD* | | | | *-11.1* | *-15.2* | *-11.5* | *-6.5* | *-0.8* | *0.3* | *0.4* | *3.0* | *Oct-15* |
| **Absolute Return Fixed Income** | **35,956,454** | **3.5** | **4.0** | **-10.0** | **--** | **--** | **--** | **--** | **--** | **--** | **-10.0** | **Mar-20** |
| *3-Month Libor Total Return USD* | | | | *0.1* | *0.4* | *1.4* | *2.1* | *2.1* | *1.5* | *0.9* | *0.1* | *Mar-20* |
| Payden Absolute Return Bond Fund PYAIX | 35,956,454 | 3.5 | | -10.0 | -- | -- | -- | -- | -- | -- | -10.0 | Mar-20 |
| *3-Month Libor Total Return USD* | | | | *0.1* | *0.4* | *1.4* | *2.1* | *2.1* | *1.5* | *0.9* | *0.1* | *Mar-20* |

**Howard County Retirement Plans**

# TOTAL FUND PERFORMANCE DETAIL (GROSS)

| | | | | | | | | | | | Ending March 31, 2020 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Market Value ($) | % of Portfolio | Policy % | 1 Mo (%) | 3 Mo (%) | Fiscal YTD (%) | 1 Yr (%) | 3 Yrs (%) | 5 Yrs (%) | 10 Yrs (%) | Inception (%) | Inception Date |
| **Total Real Assets Composite** | **42,425,035** | **4.1** | **7.0** | **0.0** | **0.0** | **1.5** | **3.9** | **8.8** | **8.4** | **7.1** | **7.1** | **Jul-03** |
| *NCREIF Property Index 1 Qtr. Lag* | | | | *1.6* | *1.6* | *4.5* | *6.4* | *6.7* | *8.2* | *10.2* | *8.7* | *Jul-03* |
| **Cash Composite** | **8,950,753** | **0.9** | **0.0** | **0.0** | **0.2** | **0.8** | **1.3** | **1.4** | **0.8** | **0.4** | **1.3** | **Dec-03** |
| *91 Day T-Bills* | | | | *0.1* | *0.4* | *1.3* | *1.9* | *1.7* | *1.1* | *0.6* | *1.3* | *Dec-03* |
| **Hedge Fund Composite** | **116,757,817** | **11.4** | **8.0** | **-5.5** | **-5.6** | **-3.8** | **-1.6** | **2.6** | **2.5** | **--** | **4.0** | **Jan-11** |
| *HFRI FOF: Conservative Index* | | | | *-4.3* | *-4.9* | *-3.4* | *-2.0* | *1.0* | *0.9* | *2.1* | *1.9* | *Jan-11* |
| Magnitude International Class A Eligible | 58,680,633 | 5.7 | | -3.6 | -3.7 | -2.7 | -0.4 | 3.0 | 2.4 | -- | 4.1 | Jan-11 |
| *HFRI FOF: Conservative Index* | | | | *-4.3* | *-4.9* | *-3.4* | *-2.0* | *1.0* | *0.9* | *2.1* | *1.9* | *Jan-11* |
| Blackstone Partners Offshore Fund LTD | 58,077,184 | 5.7 | | -7.3 | -7.4 | -4.9 | -2.8 | 2.1 | 2.5 | -- | 3.8 | Mar-11 |
| *HFRI FOF: Conservative Index* | | | | *-4.3* | *-4.9* | *-3.4* | *-2.0* | *1.0* | *0.9* | *2.1* | *1.8* | *Mar-11* |
| **Private Equity Composite** | **148,984,855** | **14.5** | **10.0** | **0.0** | **0.0** | **8.0** | **11.2** | **17.4** | **15.8** | **13.1** | **12.9** | **Jul-08** |
| *Cambridge Associates Global All PE (Qtr Lag)* | | | | *5.1* | *5.1* | *9.5* | *14.6* | *14.2* | *11.7* | *12.8* | *9.5* | *Jul-08* |
| **Private Debt** | **--** | **--** | **5.0** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | |
| *S&P/LSTA Leveraged Loan TR* | | | | *-12.4* | *-13.0* | *-10.7* | *-9.2* | *-0.8* | *1.1* | *3.1* | *--* | |

Magnitude International Class A Eligible is preliminary as of 03/31/2020.

# TOTAL FUND PERFORMANCE DETAIL FOOTNOTES

Fiscal year ends 6/30.

Policy index consists of: 19% Russell 1000 / 4% Russell 2500 / 12% MSCI EAFE / 5% MSCI Emerging Markets / 20% BBgBarc US Aggregate TR / 2% BBgBarc US TIPS TR / 4% 3-Month Libor Total Return USD / 4% JP Morgan GBI EM Global Diversified TR USD / 5% S&P/LSTA Leveraged Loan TR / 7.0% NCREIF Property Index 1 Qtr. Lag / 8% HFRI FOF: Conservative Index / 10% 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 and Private Equity investments are valued as of 09/30/2019 and adjusted for capital calls and distributions through 03/31/2020.

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

# PRIVATE CREDIT EDUCATION

NEPC, LLC

# PRIVATE CREDIT OVERVIEW

- **Private Credit is a source of investment capital provided by institutions and high net worth individuals for the purposes of acquiring interests in companies and/or products**

- **The role in a portfolio is as a return enhancer, with the premium earned over other investment options serving to compensate for the liquidity risk**

- **Large investable universe**
  - Approximately $400 billion raised annually across strategies over the past three years

- **Two components of private debt return:**
  - **Current Income:** Derived from portfolio company operations, loans and leases
  - **Capital Appreciation:** Derived from an increase in the value of an asset between acquisition and sale

- **Investment diversification**
  - Not fully correlated with public fixed income
  - Access to smaller companies and wider range of strategies

Source: Preqin. Fundraising and market size data as of April, 2020

# HOW PRIVATE CREDIT IS DIFFERENT FROM PUBLIC CREDIT

## Public Fixed Income

- Daily liquidity
- Invested immediately
- Daily valuations
- Market pricing
- Fees as a % of NAV
- Regulated reporting
- Benchmark managed
- Some activism

## Private Credit

- Illiquid, 7-10 year funds
- Invested over time
- Quarterly valuations
- Estimated fair value
- Fees as % of commitment/investment
- Transparency varies
- Managed for alpha
- Active value creation

# PRIVATE CREDIT ECONOMIC RETURN DRIVERS

- **Private credit managers have multiple levers to create value:**
  - Interest and fees
  - Buying low and selling high (multiple arbitrage)
  - Restructuring a company
  - Using leverage

- **Portfolio investments are made throughout the capital structure of target companies**

- **Returns are generated through capital appreciation and current income**
  - Capital appreciation is realized through the eventual sale of a company
  - Current income is derived from portfolio company operations, loans and leases, with loans typically structured to have rate adjustments and DEBT kickers

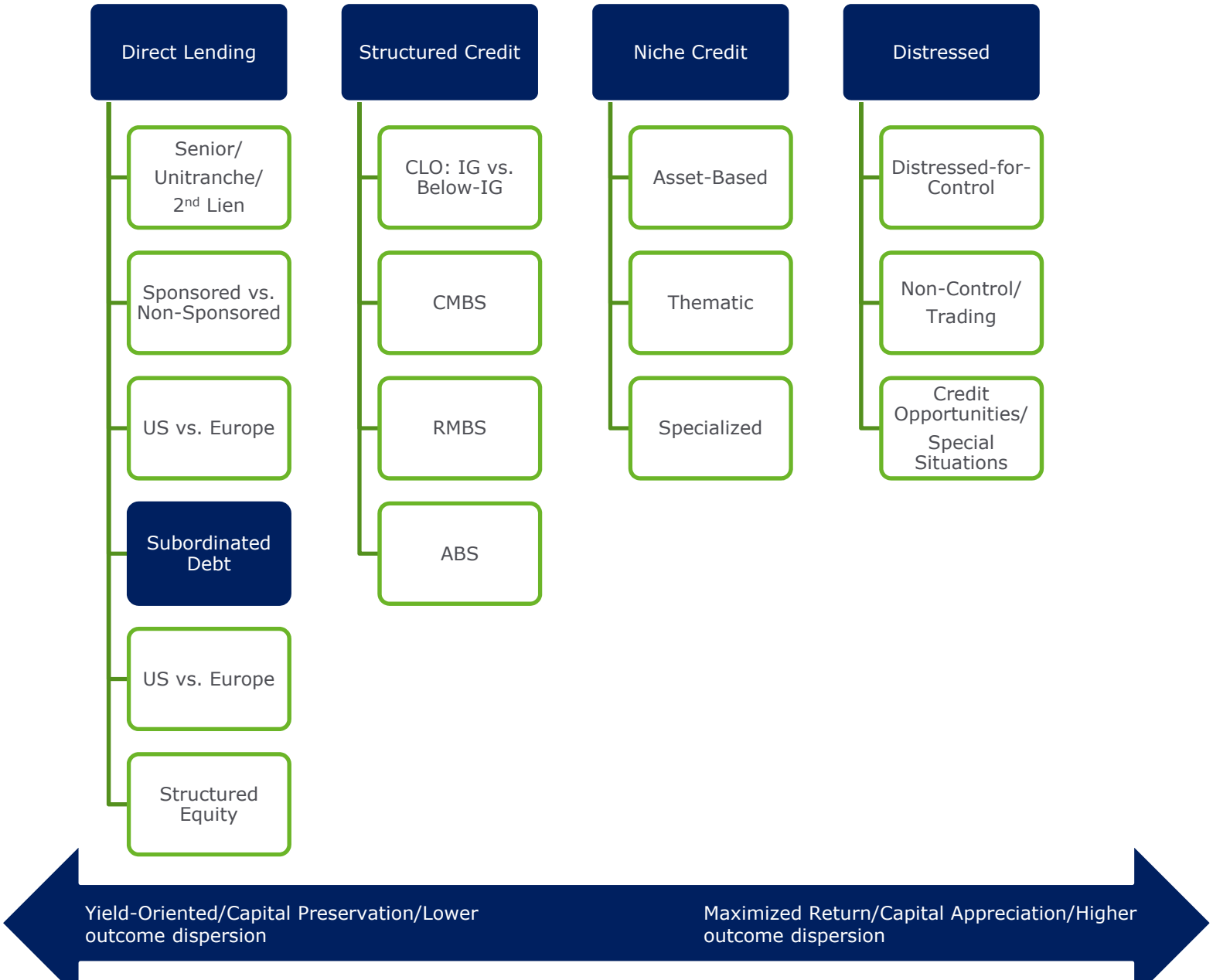
- **Leverage can amplify returns (positively and negatively) from current income and capital appreciation**

# SPECTRUM OF PRIVATE CREDIT STRATEGIES

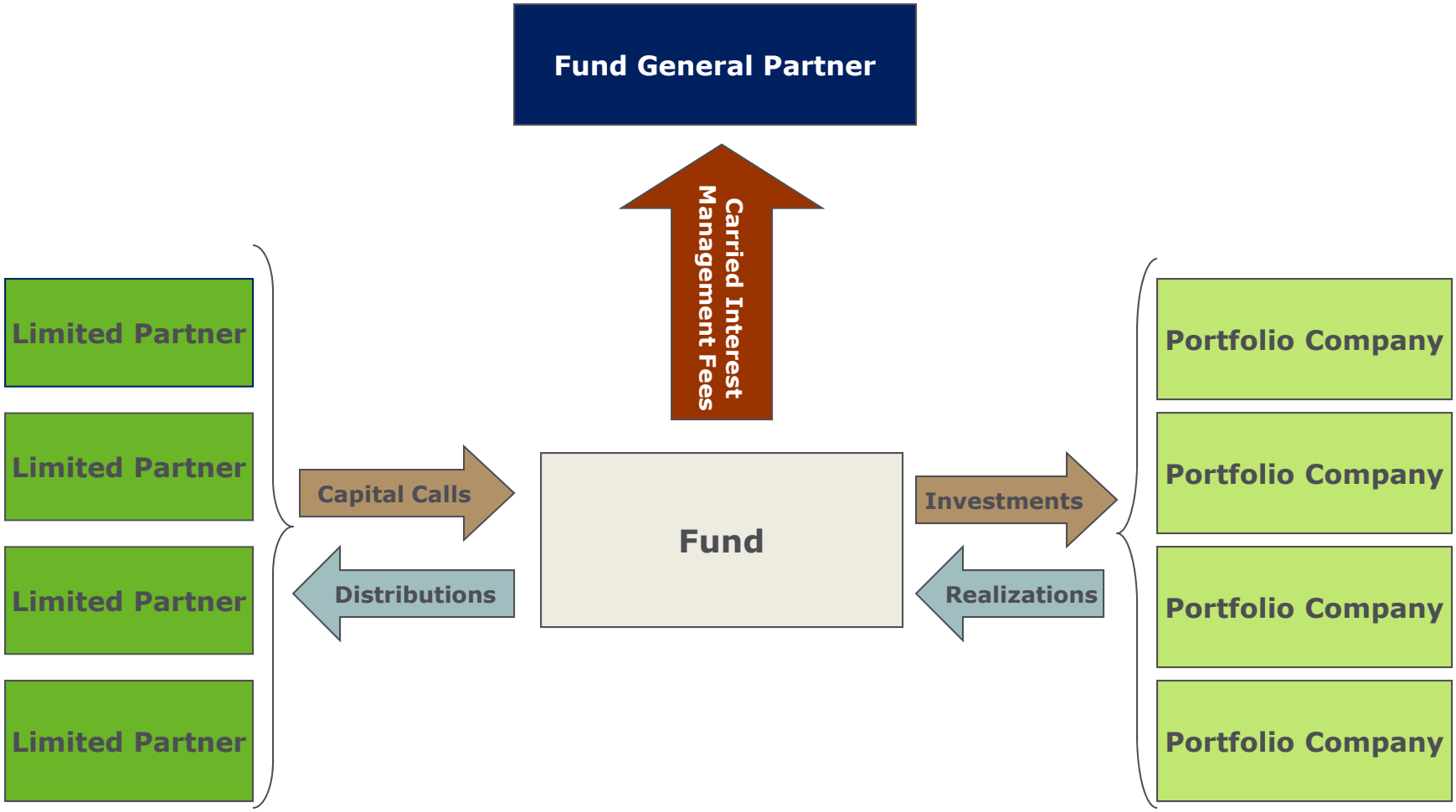
**Private Credit is not a '*one size fits all*' investment class, offering a broad range of strategies that can be customized based on specific investment objectives and risk/return targets**

| Illustrative Strategy Return Targets | | |
|---|---|---|
| **Strategy** | **Description** | **Typical Return Targets** |
| Direct Lending | Primarily floating rate senior and/or unitranche (senior and subordinated debt in one instrument) debt capital used for various situations | 8% - 12% IRR, 1.2x-1.4x TVPI |
| Mezzanine | Subordinated debt to grow or restructure companies | 10% -12% IRR, 1.4x-1.6x TVPI |
| Opportunistic Credit | Investment strategy involving various credit-linked opportunities | 13% - 15% IRR, 1.5x-1.8x TVPI |
| Distressed Debt | Companies with bad balance sheets; can involve more liquid trading strategies and less liquid control strategies | 15% - 18% IRR, 1.7x TVPI |

# PRIVATE CREDIT TAXONOMY



# MECHANICS OF INVESTING IN A PRIVATE CREDIT FUND

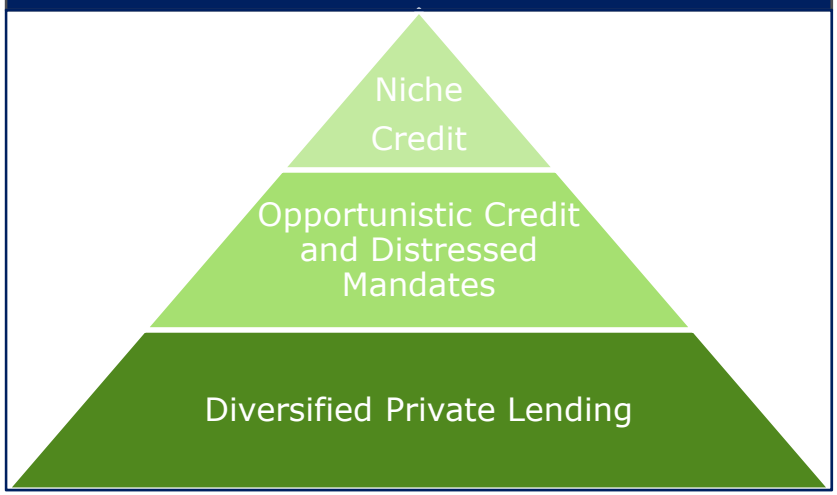


# PRIVATE CREDIT PORTFOLIOS

**Consider private credit as its own allocation, an extension of the private markets allocation, or an illiquid portion of a fixed income portfolio**

- Diversified private lending ("direct lending") exposure in the form of senior secured loans, with mezzanine exposure mixed in, should serve as the foundation of a private credit allocation
  - Middle-market, positive EBITDA companies are the main borrowers
  - Yield/current income represents most of the return, with borrower default as a primary risk
- Opportunistic Credit utilizes strategies that target higher risk/returns and will lend up and down the capital stack
  - May include senior, mezzanine, and unitranche loans as well as exposure to equity and equity-like instruments
- Distressed debt involves purchasing loans/bonds that are trading at stressed or distressed levels (usually below .80) and includes both trading and distressed-for-control strategies
- Niche credit strategies include venture and growth debt, with borrowers typically not producing positive EBITDA
  - Real estate and infrastructure debt are also common, as well as other strategies that have a credit-like income profile such as royalty streams
- Leveraged loan and CLO investments could also be considered a part of a private credit portfolio but are often grouped within a more liquid fixed income allocation

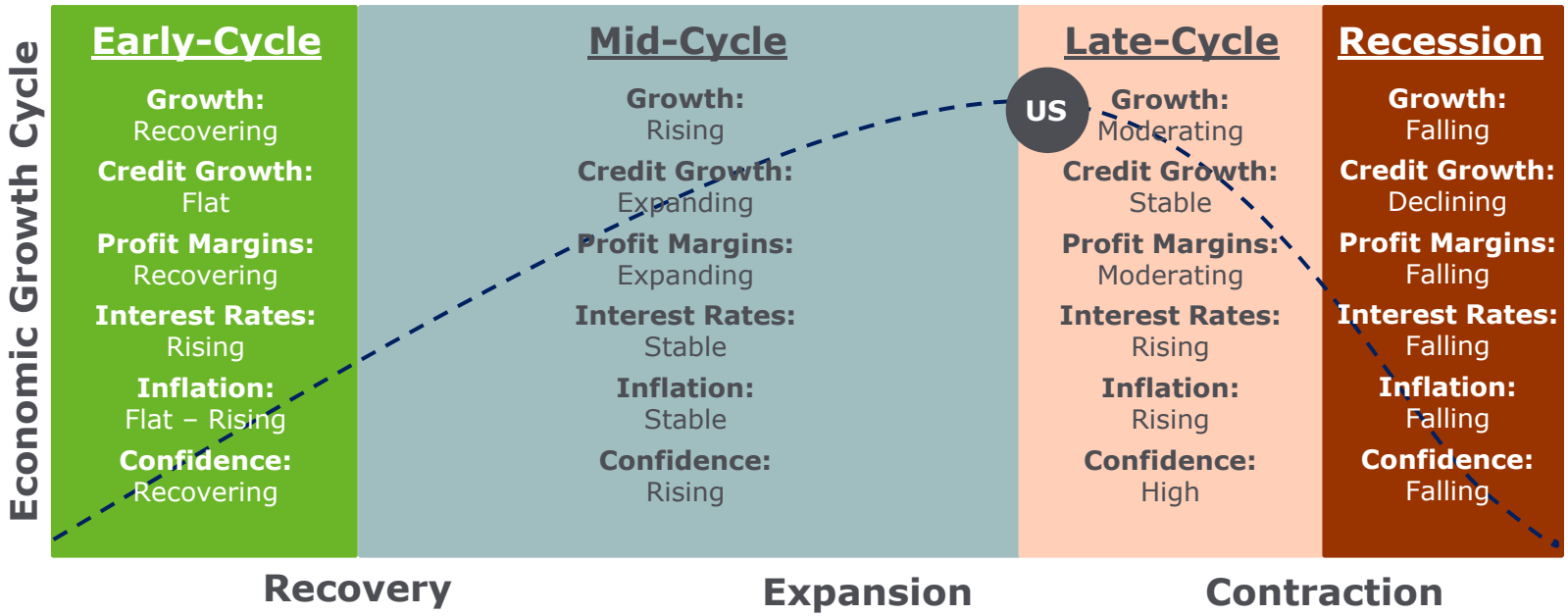
**Portfolio Structuring**

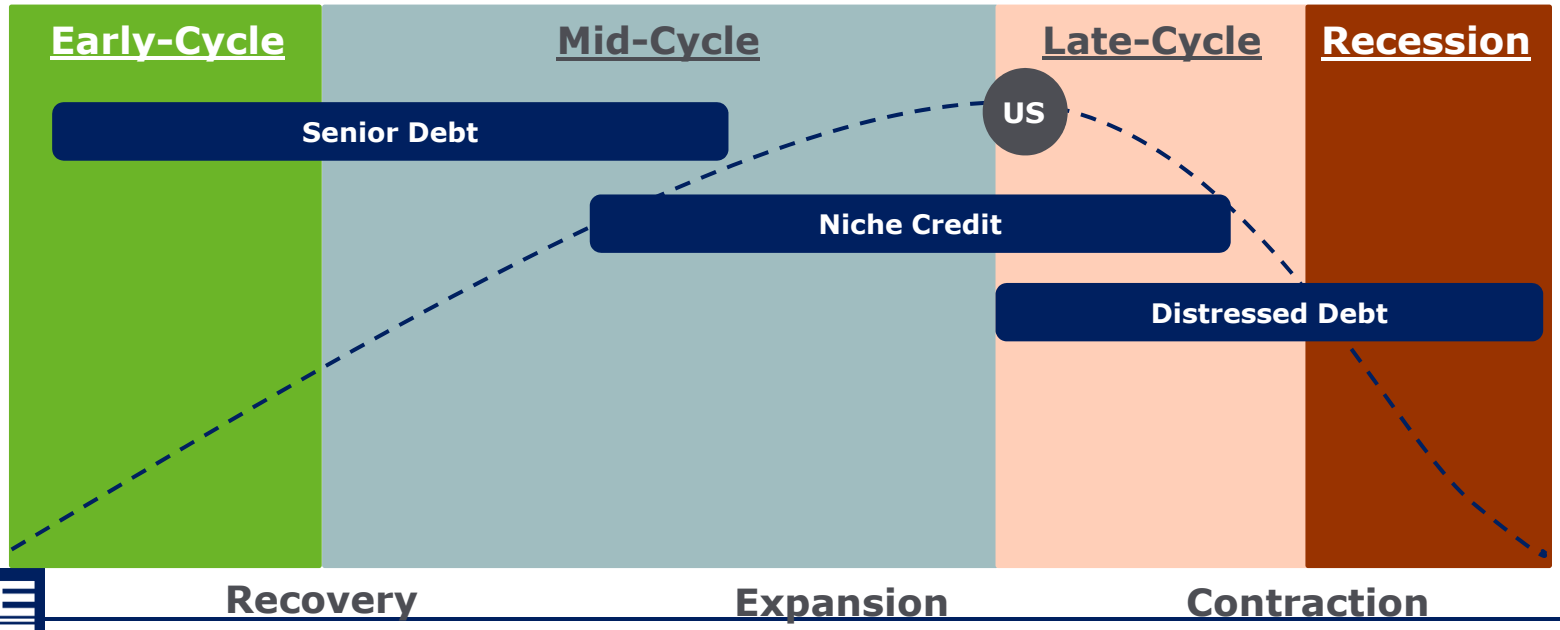



**Opportunity Set**

- **Private Lending (30-50%)**
  - Generally corporate lending in the form of senior and mezzanine loans to middle market companies
- **Distressed Debt/Opportunistic Credit (10-40%)**
  - Strategies that target a higher risk/return profile that may include structured credit, asset-based, thematic or specialized credit
  - Distressed control/non-control
- **Niche Credit (10-30%)**
  - Venture debt, growth debt, real estate debt, infrastructure debt, ABL, royalties, etc.

# ECONOMIC GROWTH CYCLE



# FEES AND FUND STRUCTURES

NEPC, LLC

# FEES FOR PRIVATE CREDIT ARE HIGHER AND MORE COMPLEX THAN PUBLIC FIXED INCOME FUNDS

- **Annual Management Fee**
  - Charged as a percentage of investment (fixed fee) during the investment period
  - Charged as a percentage of net invested capital or NAV after the investment period
  - Generally 1.00%-1.75% fee rates

- **Preferred Return**
  - Rate of return LPs need to achieve <u>before</u> GP can earn carried interest
  - Typically computed on amounts invested and amounts paid for fees to the GP
  - Generally 8%, but can vary by strategy and manager clout

- **Carried Interest**
  - Performance fee paid to the fund manager for profits generated on investments
  - Paid only on realized investments (not on unrealized gains)
  - Generally 10-20% of realized investment gain
  - Can be lower for lower return strategies or higher for "premium" managers

# PRIVATE CREDIT CLOSED-END FUND LIFECYCLE

- **Fundraising, (0 – 2 years)**
  - The time period that managers uses to raise sufficient funds for the strategy
  - Limited Partners make an initial "Commitment" to a fund
- **Investing (years 1 – 5)**
  - The time period that managers use to source investment opportunities. This "Investment Period," generally lasts the first three to five years of a fund's life
  - Business plans are put into place. If investments do not meet expectations managers will take steps to mitigate the impact of losses
  - Current income may be paid out during the Investment Period (depending on the strategy), though early distributions may be recalled
  - Limited Partners fund their initial commitments as capital is called over time
- **Harvesting (years 6 – 10)**
  - The time period that managers use to exit the investments through asset sales, portfolio company sales, IPOs, and other exit opportunities
  - The proceeds of the realizations are distributed to fund investors according to a pre-determined schedule, or "Distribution Waterfall", which includes the payment of carried interest to the manager (if applicable)

# PRIVATE CREDIT RETURN METRICS – PERFORMANCE MULTIPLES

- **Total Value to Paid-In Multiple ("TVPI")**
  - a ratio of the Total Value (TV) of all distributions and current net asset value over the amount of capital called from (or Paid-In by) investors (PI)
  - is >1.0 when sum of distributions and total value are more than capital contributed
  - is often <1.0 during the early year's of a fund as management fees and expenses are greater than appreciation or income earned on investments
  - Sometimes is called "MOIC", or Money on Invested Capital by investors

- **Distributed to Paid-In Multiple ("DPI")**
  - a ratio of all distributions received (D) over the amount of capital called from (or Paid-In by) investors (PI)
  - is >1.0 when fund has distributed more than capital contributed by LPs
  - is often <1.0 for the first half of the fund and longer, as a fund typically does not sell most of its investments until later in the fund's life
  - DPI gets closer to TVPI as a fund matures; at the end of a fund, the DPI and the TVPI are the same

**Both are good metrics for assessing amount of value created and distributed, but neither measure the time value of money**

# PRIVATE CREDIT RETURN METRICS – PERFORMANCE RETURNS

- **Internal Rate of Return ("IRR")**
  - return metric that combines amount and timing of cash flows and remaining value for a fund investment
  - is often <0% in the early years of a fund when fund fees and expenses are greater than the appreciation or income earned on investment
  - almost always reported as a since inception of the fund return percentage
  - commonly used metric of Private Credit benchmark providers
  - a large, early distribution can positively skew & "lock in" the computed IRR

- **Time-Weighted Return ("TWR")**
  - return metric that computes a return for each quarters' cash flows and valuations individually, then equally weights the quarterly returns to create annualized and since inception returns
  - large distributions only impact the returns of one quarter
  - same return metric that is used for public equities and most other asset classes

**Since fund manager controls timing of cash flows, CFA institute recommends using IRR over TWR for PE performance; however CFA institute recognizes need for PE TWR as part of total program return for all investments**

# PORTFOLIO IMPLEMENTATION

NEPC, LLC

# INVESTMENT FRAMEWORK AND PLANNING: BUILDING A PRIVATE DEBT PROGRAM

## In constructing a private markets portfolio there are several key considerations that impact the allocation

| Decision | Implementation Considerations |
|---|---|
| Investment Objectives | • Committee will develop an Investment Policy with goals and guidelines around return objectives, current income and/or capital appreciation, risk and volatility tolerances, liquidity requirements and performance benchmarks<br>• Target allocation will determine commitment pace at a high level<br>• Annual investment plan will determine size of private debt commitments and investment strategy and manager selection based on environment and opportunities available |
| Investment Thesis | • Short term investment objective<br>• Long-term objective<br>• Opportunistic objective |
| Investment Strategy | • Strategy diversification will impact returns and can mitigate the "J-Curve" while managing macro-economic risk<br>• Manager selection has a dramatic impact upon returns; diversification across managers can help mitigate idiosyncratic manager risk |
| Market Opportunity & Vintage Year Considerations | • Vintage year diversification is critical to the program's success<br>• Mitigate vintage year risk through steady commitment pacing<br>• Fund managers control timing of investment acquisitions & dispositions based on market opportunities<br>• LPs can sparingly use secondary sales to lessen exposures |

# CURRENT CREDIT TIMELINE

**Short-Term: Now**

- Forced liquidations: margin calls, redemptions, fire sales
- Indiscriminate selling from ETFs and mutual funds
- Dislocated high-quality, investment-grade corporate credit
- Liquidity provider to senior securitized assets; investment-grade ABS securities

**Near/Medium-Term: 2-4 Months**

- High Yield and BSL downgrades and defaults
- CLO risk buckets
- Overlevered private debt funds and BDCs
- Stressed performing bank debt
- Rescue/bespoke financing
- Debtor-in-Possession loans
- Structured convertible notes

**Longer-Term: 4-6 Months**

- Company bankruptcies and restructurings
- Distressed debt and post-reorganization equity
- Borrowers in need of rebuilding balance sheets
- Orphaned assets
- Non-performing loan portfolios ("NPLs")

| Implementation Views | | |
|---|---|---|
| **Short-Term** | **Near/Medium-Term** | **Longer-Term** |
| • TALF<br>• Corporate dislocation funds<br>• Credit hedge funds | • CLOs<br>• Credit hedge funds<br>• Credit opportunities/special situations private credit | • Distressed private debt<br>• Credit opportunities/special situations private credit |

# PRIVATE CREDIT PACING PLAN

NEPC, LLC

# INTRODUCTION

- **Each year, NEPC will provide a review of the Howard County's private credit allocation to determine the dollars that should be committed**
  - We consider: existing manager commitments and anticipated calls/distributions, adjustments to the target allocation and the Howard County's forecasted net growth rate
  - An annual review provides an opportunity to make adjustments to any of the above factors and assess the program carefully so as to not over-allocate to illiquid investments

- **The strategy is to maintain an active commitment pace in each vintage year going forward, being mindful of the 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

# NEPC RECOMMENDATIONS

- **Based on our review, Howard County should commit approximately $25 million to private credit ("PC") for the upcoming year to achieve the 5% target allocation.**

- **Over the next 2-3 years, we expect Howard County to commit approximately $25 million per year to hit and maintain the target allocation.**

- **Howard County is forecasted to achieve the 5% target in 2024 based on current inputs**

**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.**

# PRIVATE CREDIT

NEPC, LLC

# CURRENT STRATEGY AND VINTAGE YEAR EXPOSURES

($ in millions)

## Private Credit NAVs and Exposures

| Investment Strategy | Current Valuation (NAV) | Capital to be Funded | Total Current Exposure | % of Total Exposure |
|---|---|---|---|---|
| Distressed | $1.66 | $0.00 | $1.66 | 100.0% |
| **Total** | **$1.7** | **$0.0** | **$1.7** | **100.0%** |

## Private Credit 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 |
|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | $10.0 | $10.0 | $0.0 | $9.9 | $1.7 | $11.6 | $1.6 | 100% | 0.99x | 1.16x |
| Total Private Credit | $10.0 | $10.0 | $0.0 | $9.9 | $1.7 | $11.6 | $1.6 | 100% | 0.99x | 1.16x |

## Existing Private Credit Investments

### Distressed

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|
| Siguler Guff Distressed Opportunities Fund III | 2007 | $10.0 | $10.0 | $0.0 | $9.9 | $1.7 | $11.6 | $1.6 | 0.99x | 1.16x |
| Total Distressed | | $10.0 | $10.0 | $0.0 | $9.9 | $1.7 | $11.6 | $1.6 | 0.99x | 1.16x |

# MODEL INPUTS AND ASSUMPTIONS

($ in millions)

## General Portfolio Assumptions

| | |
|---|---|
| Total Portfolio Assets | $1,152.0 |
| Total Private Credit Assets | $1.7 |
| Private Credit Capital to be Funded | $0.0 |
| Total Private Credit Exposure | $1.7 |
| Total Private Credit Assets / Total Portfolio Assets | 0.1% |
| Total Private Credit Exposure / Total Portfolio Assets | 0.1% |
| Target Private Credit Allocation % (Current Target) | 5.0% |

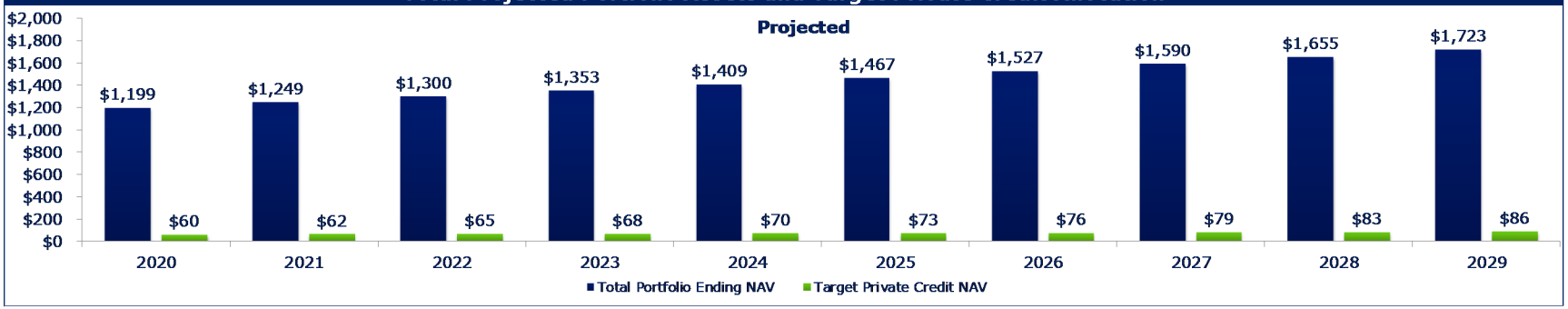
| Portfolio Return Assumptions | 2020 | 2021 | 2022 |
|---|---|---|---|
| Net Growth Rate % | 4.11% | 4.11% | 4.11% |

| | |
|---|---|
| Portfolio Data as of: | 12/31/2019 |
| Private Credit Data as of: | 9/30/2019 |

## Total Projected Portfolio Assets

| | | | | | Projected | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
| Total Portfolio Net Growth Rate | 4.1% | 4.1% | 4.1% | 4.1% | 4.1% | 4.1% | 4.1% | 4.1% | 4.1% | 4.1% |
| Total Portfolio Beginning NAV | $1,152.0 | $1,199.3 | $1,248.6 | $1,299.9 | $1,353.4 | $1,409.0 | $1,466.9 | $1,527.2 | $1,589.9 | $1,655.3 |
| Yearly Net Growth | $47.3 | $49.3 | $51.3 | $53.4 | $55.6 | $57.9 | $60.3 | $62.8 | $65.3 | $68.0 |
| Total Portfolio Ending NAV | $1,199.3 | $1,248.6 | $1,299.9 | $1,353.4 | $1,409.0 | $1,466.9 | $1,527.2 | $1,589.9 | $1,655.3 | $1,723.3 |
| Target Private Credit Allocation | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% |
| Target Private Credit NAV | $60.0 | $62.4 | $65.0 | $67.7 | $70.4 | $73.3 | $76.4 | $79.5 | $82.8 | $86.2 |

## Total Projected Portfolio Assets and Target Private Credit Allocation



# PROJECTED COMMITMENT PACE

($ in millions)

**Private Credit Commitment Projections by Vintage Year**

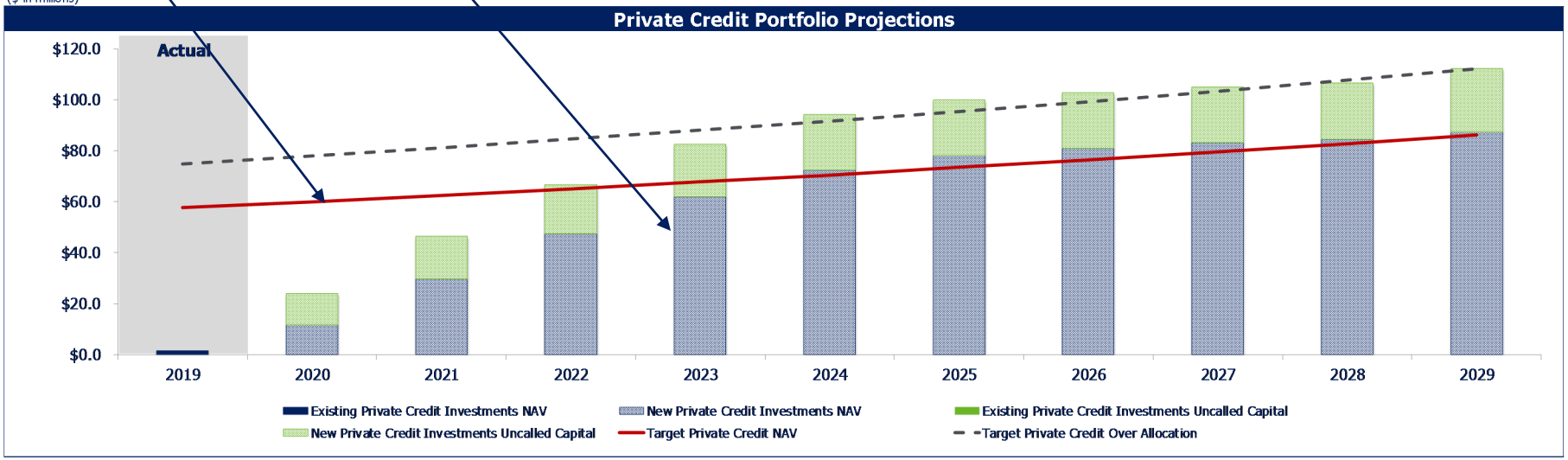
**Private Credit Commitments by Vintage Year**

| | More Certain | | | Less Certain | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Year** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** |
| **Total Commitments** | $25 | $25 | $25 | $25 | $25 | $25 | $25 | $25 | $25 | $30 |

# ASSET LEVEL PROJECTIONS

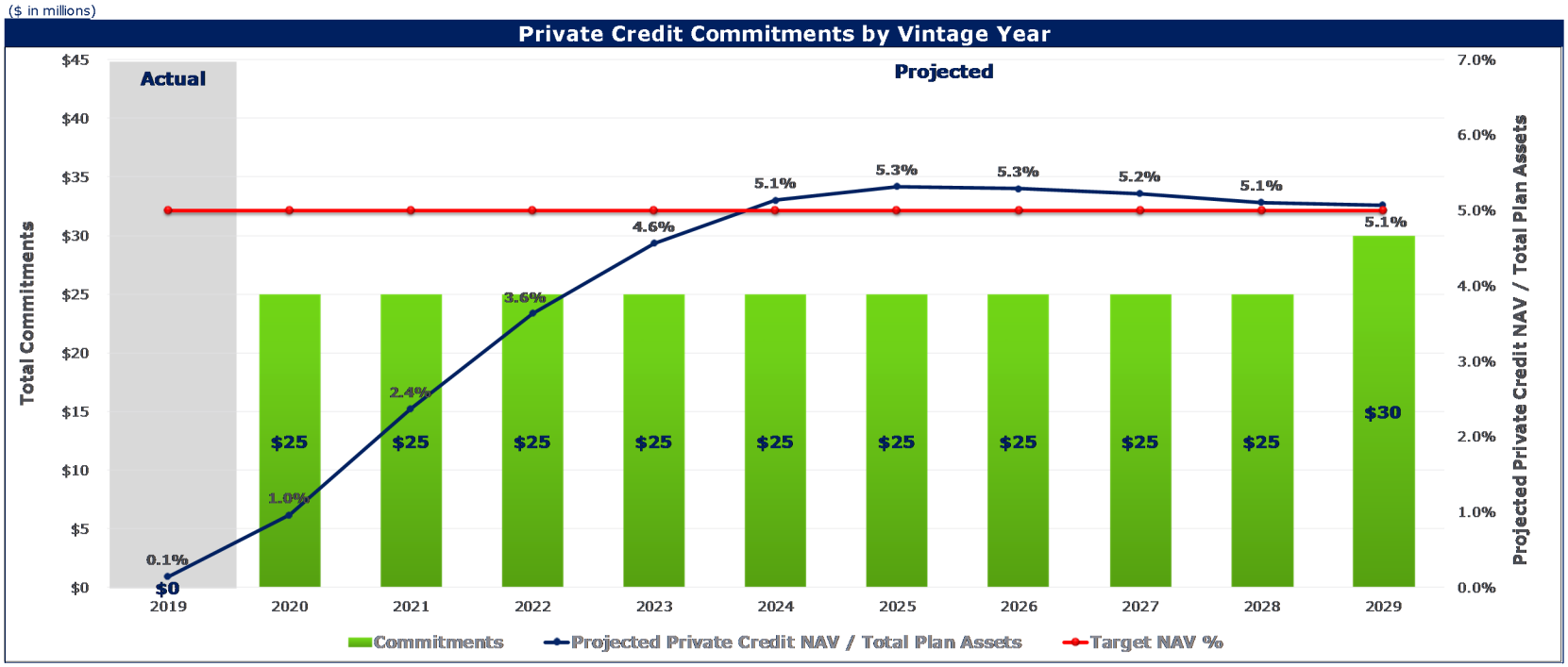
- **Red line** is the **5%** target private credit allocation based on projected plan total NAV; **Black dashed line** is the 1.3x over-commitment pace.
- Goal is to keep the private credit NAV (**blue bar**) plus uncalled capital commitments (**green bar**), between red line and black dashed line while aligning the blue bar with the red target line.

($ in millions)




| | | Projected | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Year** | **2019** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** |
| Private Credit NAV | $1.7 | $11.6 | $29.6 | $47.3 | $61.8 | $72.4 | $78.0 | $80.8 | $83.1 | $84.5 | $87.4 |
| Uncalled Capital Commitments | $0.0 | $12.5 | $16.8 | $19.3 | $20.8 | $21.7 | $22.0 | $22.0 | $22.0 | $22.0 | $24.7 |
| Private Credit NAV + Uncalled Capital Commitments | $1.7 | $24.0 | $46.4 | $66.6 | $82.6 | $94.1 | $100.0 | $102.8 | $105.1 | $106.5 | $112.1 |
| Target Private Credit NAV | $57.6 | $60.0 | $62.4 | $65.0 | $67.7 | $70.4 | $73.3 | $76.4 | $79.5 | $82.8 | $86.2 |
| Over-Commitment Pace | 1.3x | 1.3x | 1.3x | 1.3x | 1.3x | 1.3x | 1.3x | 1.3x | 1.3x | 1.3x | 1.3x |
| Target Private Credit Over Allocation | $74.9 | $78.0 | $81.2 | $84.5 | $88.0 | $91.6 | $95.3 | $99.3 | $103.3 | $107.6 | $112.0 |
| Private Credit Percent of Total Portfolio Assets | | | | | | | | | | | |
| Private Credit NAV | 0.1% | 1.0% | 2.4% | 3.6% | 4.6% | 5.1% | 5.3% | 5.3% | 5.2% | 5.1% | 5.1% |
| Private Credit Uncalled Capital Commitments | 0.0% | 1.0% | 1.3% | 1.5% | 1.5% | 1.5% | 1.5% | 1.4% | 1.4% | 1.3% | 1.4% |
| NAV + Uncalled Capital Commitments | 0.1% | 2.0% | 3.7% | 5.1% | 6.1% | 6.7% | 6.8% | 6.7% | 6.6% | 6.4% | 6.5% |
| Target Private Credit Allocation | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% |

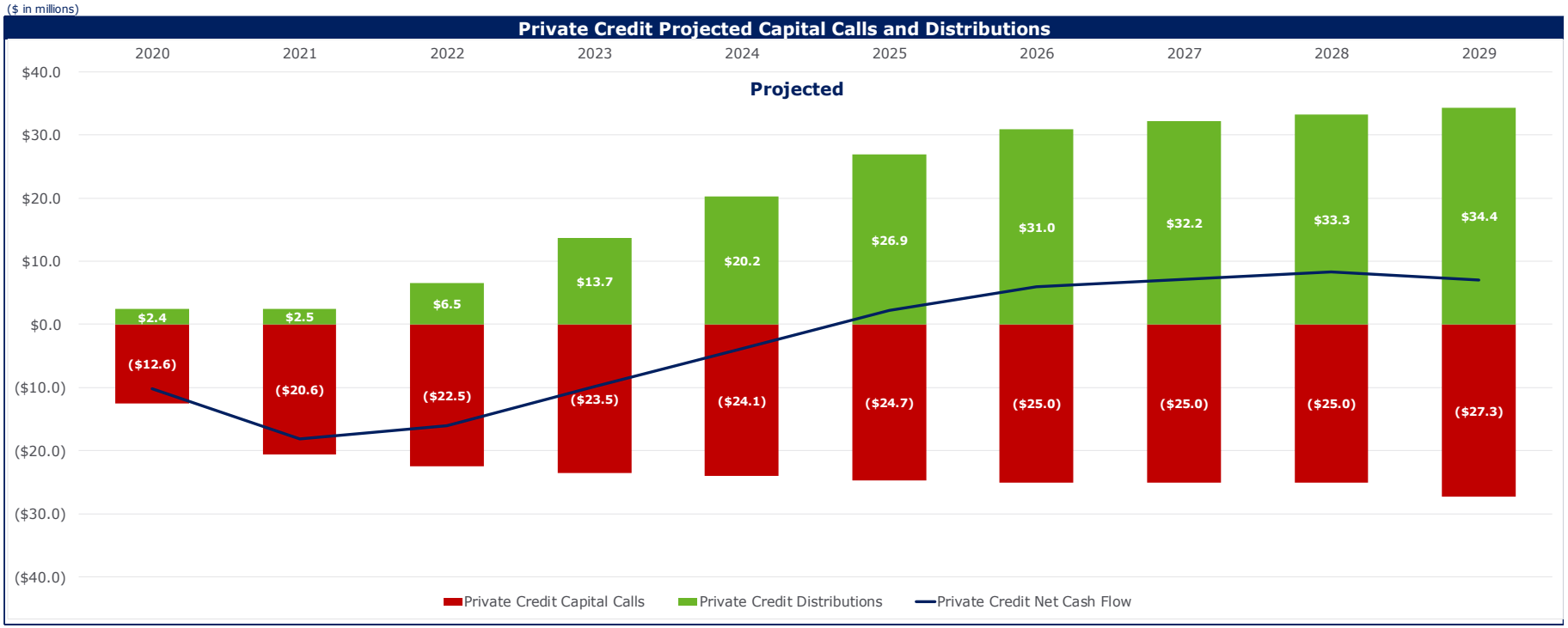
# COMMITMENTS & PROJECTIONS




## Private Credit Commitments by Vintage Year

| | Actual | More Certain | | | Less Certain | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Year** | **2019** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** |
| **Total Commitments** | $0 | $25 | $25 | $25 | $25 | $25 | $25 | $25 | $25 | $25 | $30 |
| **Target Private Credit Allocation (%)** | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% |
| **Projected Private Credit NAV / Total Plan Assets** | 0.1% | 1.0% | 2.4% | 3.6% | 4.6% | 5.1% | 5.3% | 5.3% | 5.2% | 5.1% | 5.1% |

# PROJECTED CASH FLOWS




| | Projected | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Year** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** |
| Private Credit Capital Calls | ($12.6) | ($20.6) | ($22.5) | ($23.5) | ($24.1) | ($24.7) | ($25.0) | ($25.0) | ($25.0) | ($27.3) |
| Private Credit Distributions | $2.4 | $2.5 | $6.5 | $13.7 | $20.2 | $26.9 | $31.0 | $32.2 | $33.3 | $34.4 |
| Private Credit Net Cash Flow | ($10.1) | ($18.2) | ($16.0) | ($9.9) | ($3.8) | $2.2 | $6.0 | $7.2 | $8.3 | $7.0 |

# PRIVATE CREDIT APPENDIX

NEPC, LLC

# PRIVATE DEBT INVESTMENT STRATEGIES (PERFORMING CREDIT)

| Private Credit Strategy Overview | Description | Sector Exposure | Considerations |
|---|---|---|---|
| **Direct Lending**<br>• Return driver: income<br>• Expected IRR: 8%-12%<br>• Expected TVPI Multiple: 1.3x-1.5x<br>• Time Horizon: 2-4 years | Primarily floating rate senior and/or unitranche (senior and subordinated debt in one instrument) debt capital used for various situations: facilitating changes in ownership through leveraged buyouts or recapitalizations, financing acquisitions, or enabling growth | Companies in a variety of industries that are backed by Private Debt Managers (Sponsored) or not backed by a Private Debt Manager (Sponsor-less) | • Fund economics play a role in returns<br>• Vintage year is important<br>• Floating rates, shorter holding periods |
| **Mezzanine**<br>• Return driver: current income and appreciation<br>• Expected IRR: 14%-16%<br>• Expected TVPI Multiple: 1.6x-1.7x<br>• Time Horizon: 5-7 years | Primarily fixed rate subordinated (the level of financing senior to debt and below senior debt) debt obligations made to non-investment grade borrowers to effect buyout, M&A or other growth strategies | Companies in a variety of industries that are backed by Private Debt Managers (Sponsored) or not backed by a Private Debt Manager (Sponsor-less) | • Fund economics play a role in returns<br>• Manager has limited recourse due to subordinated position in capital structure |
| **Opportunistic Credit**<br>• Return driver: current income and appreciation<br>• Expected IRR: 13%-17%<br>• Expected TVPI Multiple: 1.3x-1.8x<br>• Time Horizon: 1-4 years | Investment strategy involving various credit-linked opportunities such as distressed debt, performing and non-performing loans, structured products (CLOs, CDOs), hard assets | Diversified industry exposure. Instruments include publicly traded debt securities, private debt, trade claims, mortgage debt, common and preferred stock and commercial paper | • Thematic<br>• Esoteric investments |

# PRIVATE DEBT INVESTMENT STRATEGIES (DISTRESSED CREDIT)

| Private Credit Strategy Overview | Description | Sector Exposure | Considerations |
|---|---|---|---|
| **Distressed Debt (Control)**<br>• Return driver: appreciation and income<br>• Expected IRR: 15%-17%<br>• Expected TVPI: 1.3x-1.8x<br>• Time Horizon: 3-6 years | Debt investments with the intent to take debt control of companies that have typically defaulted on debt obligations and are in need of financial and operational restructuring. | Diversified | • Window of opportunity tends to be short lived |
| **Distressed Debt (Non-control)**<br>• Return driver: appreciation<br>• Expected IRR: 13%-17%<br>• Expected TVPI Multiple: 1.3x-1.8x<br>• Time Horizon: 1-4 years | Debt investments in companies that have typically defaulted on debt obligations and are in need of financial and operational restructuring. | Diversified exposure through various access points. Securities can include common and preferred shares, bank debt, trade claims (goods owed) and corporate bonds | • Vintage year is important<br>• Window of opportunity tends to be short lived |

# VIEW POINT SUMMARY

## Private Credit

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

Green: Favorable
Gray: Neutral
Red: Negative

# DIRECT LENDING AND MEZZANINE

## General Market Thoughts

- **Overall direct lending market remains overcrowded**
  - Investors should be weary of the US; it is still overly competitive and commoditized; if there is interest, focus more on middle market here
  - Europe continues to close the gap relative to the US as the top firms have all raised mega funds
- **Niche lending can provide opportunities; higher yields and capital appreciation with lower market correlation for investors with existing diversified credit portfolios**
- **Mezzanine opportunity as a whole remains muted; however, the decrease in rates have made the asset class relatively more attractive**

## Implementation Views

| Strategy | Outlook | Commentary |
|---|---|---|
| Direct Lending | Neutral | • Although competitive may serve as a source of current yield<br>• US: Relative attractiveness in the lower-to middle market (companies less than $50m EBITDA); seek managers with historical discipline & transparency<br>• Europe: Tier 1 managers that can navigate multiple markets<br>• Focus on fees and more liquid vehicle structures |
| Niche Lending | Positive | • Sector/industry specialization or areas which require additional expertise; overlooked and passed over by traditional lenders; thematic managers that be flexible: directly originate as well as exploit secondary opportunities |
| Mezzanine | Negative | • There are interesting opportunities on the non-sponsored side where managers can drive deal structures and terms<br>• European subordinated debt differs from the US – loans tend to be secured; analogous to second lien but with equity upside |

# DISTRESSED DEBT AND OPPORTUNISTIC CREDIT

## General Market Thoughts

- **The wait continues with pockets of opportunity along the way**
  - A relatively benign environment for distress has existed for years outside of sector-specific pockets of distress in the US and some international opportunities like NPLs
  - A growing list of metrics and global political changes point to a riskier future for performing credit broadly
    - Increased amount of lower rated bonds; Negative interest rates have reduced monetary policy levers; China GDP growth is slowing; Increasing leverage levels on corp. balance sheets; BDC allowable leverage increased from 1x to 2x; Covenant-lite loan issuance; European sovereign issues; International regulatory reforms; Political volatility
- **Plan ahead**
  - For 2020, clients should consider new distressed commitments given the maturity of the credit cycle and the 2-4 year investment periods for private market funds in the space

## Implementation Views

| Strategy | Outlook | Commentary |
|---|---|---|
| Distressed Debt | Positive | • Consider strategies that can allocate capital opportunistically between geographies and asset classes<br>• Favor distressed-for-control/influence strategies that can succeed in benign and highly distressed markets |
| Opportunistic Credit | Positive | • Find managers who can provide flexible capital solutions that can invest across various market conditions<br>• Opportunistic strategies can enhance returns in a low-rate environment compared to traditional fixed-income strategies |

# PRIVATE DEBT GLOSSARY

- **Carried interest -** the share of profits that the fund manager is due once it has returned the cost of investment to investors
- **Commitment -** every investor in a private DEBT fund commits to investing a specified sum of money in the fund partnership over a specified period of time. The fund records this as the limited partnership's capital commitment. The sum of capital commitments is equal to the size of the fund
- **DPI –** a ratio of the amount of capital distributed (D) to investors over the amount of capital called from (or Paid In by) investors
- **IRR -** a dollar-weighted, since inception return expressed as a percentage. IRR uses the present sum of cash drawdowns (money invested), the present value of distributions (money returned from investments) and the current value of unrealized investments
- **Management fee –** this is the annual fee paid to the general partner. It is typically a percentage of limited partner commitments to the fund and is meant to cover the basic salaries and overhead costs of running a fund
- **Fund expenses –** these are certain administrative, fund formation, reporting, legal and regulatory costs that are paid by the fund in addition to management fees. A fund's Limited Partnership Agreement (LPA) will specify what costs are fund expenses & which are not
- **Preferred return –** minimum returned distributed to the limited partners until the time when the general partner is eligible to deduct carried interest. The preferred return ensures that the general partner shares in the profits of the partnership only after investments have performed well
- **TVPI -** a ratio of the Total Value (TV) of all distributions and current net asset value over the amount of capital called from (or Paid In by) investors (PI)
- **EBITDA –** Earnings Before Interest, Taxes, Depreciation and Amortization. Commonly used as a proxy for operating cash flow

# 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:**

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**

# INFORMATION DISCLAIMER

**Past performance is no guarantee of future results.**

**The goal of this report is to provide a basis for substantiating asset allocation recommendations. 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 on market indices was provided by sources external to NEPC. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.**

**All investments carry some level of risk. Diversification and other asset allocation techniques do not ensure profit or protect against losses.**

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## Reporting Methodology

- The client's custodian bank is NEPC's preferred data source unless otherwise directed. NEPC generally reconciles custodian data to manager data. If the custodian cannot provide accurate data, manager data may be used.
- Trailing time period returns are determined by geometrically linking the holding period returns, from the first full month after inception to the report date. Rates of return are annualized when the time period is longer than a year. Performance is presented gross and/or net of manager fees as indicated on each page.
- For managers funded in the middle of a month, the "since inception" return will start with the first full month, although actual inception dates and cash flows are taken into account in all Composite calculations.
- This report may contain forward-looking statements that are based on NEPC's estimates, opinions and beliefs, but NEPC cannot guarantee that any plan will achieve its targeted return or meet other goals.