

Board of Retirement Regular Meeting

Sacramento County Employees' Retirement System

Agenda Item 22

MEETING DATE: May 18, 2022

SUBJECT: Total Fund Quarterly Investment Performance Report –

First Quarter 2022

		Deliberation		Receive
SUBMITTED FOR: _	_ Consent	and Action	<u> X</u>	_ and File

RECOMMENDATION

Staff recommends the Board receive and file the SCERS Total Fund Investment Performance Review report, prepared by Verus, for the quarter ending March 31, 2022.

PURPOSE

This agenda item complies with SCERS' investment policy statement reporting requirements and contributes to the effective management and oversight of investment activities.

SCERS TOTAL FUND RETURNS

This item summarizes SCERS' Total Fund investment returns as presented in Verus' Investment Performance Review for the period ending March 31, 2022. Please note that returns for SCERS' private equity, private credit, non-core real estate, and real assets portfolios are lagged one quarter. The Verus quarterly performance report will be updated in upcoming quarters to reflect and incorporate the changes to SCERS' strategic asset allocation that were approved in August 2021.

Please note that performance of the asset category composites (Growth, Diversifying, Real Return) have an inception of March 2017 and this quarterly report reflects the full 5-Year historical track record for the asset categories.

May 18, 2022 Page 2 of 7 Agenda Item 22

SCERS TOTAL FUND PERFORMANCE SUMMARY Quarter Reporting Periods Ending March 31, 2022

SCERS ASSET CLASS	Quarter	Fiscal Year- to-Date	1-Year	3-Year	5-Year	Since Inception	Since Inception Date
SCERS TOTAL FUND Return w/Overlay	-2.1%	3.8%	10.2%	12.2%	10.9%	8.7%	Jun-86
Policy Index	-1.7%	3.4%	8.5%	10.5%	9.1%	8.6%	
InvestorForce Public DB > \$1B	-3.5%	1.3%	7.6%	11.1%	9.3%	8.3%	
SCERS TOTAL FUND Return w/o Overlay	-2.1%	4.1%	10.6%	12.0%	10.8%	8.6%	Jun-86
Policy Index	-1.7%	3.4%	8.5%	10.5%	9.1%	8.6%	
GROWTH ASSET CATEGORY	-4.1%	2.7%	11.6%	16.0%	14.0%	14.0%	Mar-17
Custom Benchmark	-3.0%	2.8%	9.7%	14.3%	12.1%	12.1%	
DIVERSIFYING ASSET CATEGORY	-3.2%	-2.9%	-0.6%	3.5%	3.1%	3.1%	Mar-17
Custom Benchmark	-4.1%	-4.0%	-2.2%	2.6%	2.7%	2.7%	
REAL RETURN ASSET CATEGORY	6.0%	18.6%	23.1%	10.5%	10.3%	10.3%	Mar-17
Custom Benchmark	7.1%	17.8%	22.2%	8.8%	7.9%	7.9%	
OPPORTUNITIES PORTFOLIO	-0.6%	0.9%	3.0%	7.9%	6.1%	13.8%	Oct-07
Custom Benchmark	-1.7%	3.4%	8.5%	10.5%	9.1%	8.6%	
DEDICATED CASH	0.0%	0.1%	0.1%	-	-	0.5%	Jun-19
Overnight LIBOR	0.0%	0.1%	0.1%	-	-	0.5%	

SCERS' portfolio performance was negative in the first quarter of 2022, as equity and bond markets both declined to start the year. SCERS' Total Fund return was -2.1% for the quarter, slightly underperforming the Policy Index return of -1.7%, but outperforming the median public fund return of -3.5%. For the trailing 1-Year period, SCERS' portfolio was up +10.2% and significantly outperformed the Policy Index and median public fund returns of +8.5% and +7.6%, respectively. SCERS' Total Fund performance is near the top decile for the trailing 1-, 3-, and 5-Years.

Global geopolitical and economic concerns drove financial markets lower during the first quarter of the year. Russia's invasion of Ukraine in February is the largest military conflict in continental Europe since World War II and has resulted in a severe humanitarian crisis. The global response to Russia was swift and resulted in severe sanctions, which eliminated Russia from major parts of the global economy and resulted in Russian assets being marked to zero across global investment portfolios. Inflation, which was already at multi-decade highs prior to the invasion, continued to move higher as energy and commodity prices spiked in response to the war in Ukraine. Additionally, China instituted a new wave of lock-downs in response to increasing COIVD-19 infection rates, which further heightened concerns around disruption to global supply chains and continued inflationary effects. Global central banks increased interest rates to combat inflation, which reached levels not experienced since the 1980's. The combination of negative macro-economic and geopolitical concerns led to the worst quarter for financial markets, both equities and bonds, since the first quarter of 2020.

SCERS 'Real Return asset category was the top performing segment in the first quarter and over the past year, as Real Assets and Real Estate prices benefited from significant increases in inflation. Annual inflation in the U.S. reached 8.5% in March 2022, as measured by the Consumer Price Index (CPI), the largest 12 month increase since December 1981. Energy was the largest contributor to inflation during the quarter, with the energy commodities up +48%, and the broader Bloomberg commodity index up +26%. SCERS' Real Return asset category was up +6.0% for the quarter and +23.1% for the trailing 1-Year.

SCERS' Growth asset category declined -4.1% for the quarter, led lower by public equity markets, which declined significantly across both U.S. and International equity markets. SCERS' Private Equity portfolio, which is lagged by one quarter, still showed positive results (+3.2%) and helped to offset the negative public equity returns. For the trailing 1-Year, the Growth asset category is still up +11.6% and outperforming its benchmark. The Diversifying asset category was down -3.2% in the quarter, as fixed income markets declined in response to rising interest rates. Absolute Return was a bright spot within the Diversifying asset category, with the portfolio up +1.2%, as managers were able to navigate market volatility and produce positive returns despite declining equity and bond markets.

Growth Asset Category

SCERS GROWTH Performance Summary for the periods ending 3/31/22	Quarter	Fiscal Year- to-Date	1-Year	Since Inception	Since Inception Date
SCERS GROWTH ASSET CATEGORY	-4.1%	2.7%	11.6%	14.0%	Mar-17
Custom Benchmark	-3.0%	2.8%	9.7%	12.1%	
Public Equity	-6.9%	-3.1%	3.7%	10.0%	Jun-11
MSCI ACWI	-5.4%	-0.1%	7.3%	9.2%	
Private Equity (lagged 1 quarter)	3.2%	23.0%	44.8%	8.2%	Feb-08
Cambridge All PE	5.1%	24.1%	35.7%	13.0%	
Public Credit	-1.1%	1.9%	5.4%	5.2%	Nov-13
Custom Benchmark	-2.3%	-0.6%	1.5%	4.4%	
Private Credit (lagged 1 quarter)	1.6%	6.5%	8.6%	7.8%	Mar-17
Credit Suisse Leveraged Loan + 2%	1.2%	4.7%	7.4%	6.6%	
Growth Absolute Return	-8.7%	-6.1%	-2.4%	5.0%	Aug-04
HFRI FoF Composite +1%	-2.6%	-1.0%	2.1%	6.1%	

Performance was negative for the Growth asset category during the quarter, with the category down -4.1% and underperforming the benchmark return of -3.1%. Negative performance was driven primarily by Public Equity, which declined -6.9% versus the MSCI ACWI benchmark return of -5.4%, as growth-oriented active managers declined significantly and underperformed benchmarks. Growth-oriented strategies faced significant pressure during the quarter as concerns over rising interest rates and slowing growth led investors to discount stocks with aggressive future return expectations. The pressure on growth strategies was widespread, across market capitalization (small and large cap) and region (U.S. and International markets). From a style perspective, Value significantly outperformed Growth during the quarter, led by the Energy and Financial sectors, which have greater weight in Value indices. Public credit also declined slightly in the quarter, -1.1%, but outperformed the benchmark return of -2.3%. Growth Absolute Return, which is being wound-down following strategic asset allocation changes in the prior year, declined -8.7% during the quarter and underperformed its benchmark.

SCERS' Private Equity and Private Credit portfolios, where performance is lagged one quarter, continued to show positive results. Private Equity, which is the top performing asset class over the past year, was up +3.2% in the quarter, but trailed the benchmark return of +5.1%. Private

Credit was up +1.6% for the quarter and +8.6% for the trailing 1-Year, outperforming the benchmark by 1.4% and 1.2%, respectively.

Diversifying Asset Category

SCERS DIVERSIFYING Performance Summary for the periods ending 3/31/22	Quarter	Fiscal Year- to-Date	1-Year	Since Inception	Since Inception Date
SCERS DIVERSIFYING ASSET CATEGORY	-3.2%	-2.9%	-0.6%	3.1%	Mar-17
Custom Benchmark	-4.1%	-4.0%	-2.2%	2.7%	
Core/Core Plus Fixed Income	-6.1%	-5.7%	-3.4%	3.1%	Jun-11
Bloomberg Barclays US Aggregate TR	-5.9%	-5.9%	-4.2%	2.6%	
U.S. Treasury	-5.4%	-5.2%	-3.4%	2.4%	Feb-18
Bloomberg Barclays US Treasury TR	-5.6%	-5.3%	-3.7%	2.3%	
Global Fixed Income	-2.4%	-5.9%	-3.4%	2.6%	May-13
Custom Benchmark	-6.4%	-9.2%	-7.9%	0.4%	
Diversifying Absolute Return	1.2%	2.8%	5.4%	2.8%	Nov-11
HFRI FoF Conservative Index	0.5%	2.2%	4.4%	4.9%	

SCERS' Diversifying Asset Category also declined during the quarter as fixed income markets were pressured by rising interest rates and persistent inflation. Global central banks raised interest rates during the quarter as inflation continued to rise toward levels not experienced in several decades. The 10-year treasury increased from 1.51% at the start of the year to 2.47% at the end of the quarter, and increased to over 3% in the second quarter. The U.S. Treasury index was down -5.6% in the quarter and the Bloomberg Barclays Aggregate index declined nearly -6% in the quarter, with SCERS' Core/Core Plus managers just slightly underperforming the index. For the trailing 1-Year period, SCERS' Core/Core Plus, Global Fixed Income, and U.S. Treasury portfolios were all down -3.4%, outperforming their respective benchmarks.

The Diversifying Absolute Return portfolio was up +1.2% in the quarter, outperforming the benchmark return of +0.5%. Performance contributions were distributed across strategies, as most managers did a good job at protecting capital and generating positive returns or minimizing declines. Trend following strategies posted strong returns in the quarter, benefiting from positioning across commodities markets, interest rates, and currencies. For the trailing 1-Year period, the Absolute Return portfolio was a bright spot among diversifying strategies, with the portfolio up +5.4%, outperforming the benchmark return of +4.4%, helping to offset losses in fixed income portfolios. Event-driven and quantitative/systematic strategies were the strongest contributors to performance over the past year. Aside from a few outliers, the majority of SCERS' direct absolute return portfolio generated positive returns, with a few strategies delivering positive double digit returns.

May 18, 2022 Page 5 of 7 Agenda Item 22

Real Return Asset Category

SCERS REAL RETURN Performance Summary	Quarter	Fiscal Year-to- Date	1-Year	Since Inception	Since Inception Date
SCERS REAL RETURN ASSET CATEGORY					
SCERS Real Return w/ SSgA Proxy	6.0%	18.6%	23.1%	10.3%	Mar-17
SCERS Real Return w/o SSgA Proxy	6.0%	18.6%	23.1%	10.8%	Mar-17
Custom Benchmark	7.1%	17.8%	22.1%	7.9%	Mar-17
SCERS Real Estate	6.1%	22.0%	27.4%	12.1%	Jun-11
Custom Benchmark	8.2%	22.2%	26.2%	10.2%	
Core Real Estate (as of 3/31/22)					
Commingled Funds	6.3%	23.8%	31.7%	7.1%	Sep-08
NFI-ODCE	7.4%	23.6%	28.5%	6.9%	Sep-08
Non-Core Real Estate (as of 12/31/21)					
Opportunistic	5.8%	20.3%	18.0%	17.6%	Feb-14
Value Add	3.5%	10.2%	11.4%	0.9%	Sep-08
NFI-ODCE net +1%	9.8%	19.5%	22.0%	10.3%	Feb-14
				8.3%	Sep-08
SCERS Real Assets (as of 12/31/21)	7.0%	21.2%	23.8%	6.4%	Jan-13
Custom Benchmark	6.6%	15.5%	19.9%	6.7%	
SCERS Liquid Real Return (as of 3/31/22)	4.1%	9.4%	14.5%	8.5%	Jun-19
SSgA Real Assets	5.0%	10.4%	15.4%	8.3%	

Real Return was the top performing asset category for the second consecutive quarter, up +6.0%, but trailing the benchmark return of +7.1%. Performance was led by SCERS' Real Assets portfolio, which was up +7.0% and outperformed the benchmark return of +6.6%. The Real Assets portfolio benefited from rising energy and commodity prices, which were up significantly in the first quarter. The Bloomberg Commodity index was up +25.6% in the quarter, with the Bloomberg Energy sub-index up +47.9%. Oil prices ended the quarter at over \$100 per barrel, versus approximately \$75 at the start of the year. Rising energy and commodity prices have contributed to global inflation at multi-decade highs, as noted previously.

SCERS' Real Estate portfolio, which is a mix of Core Real Estate liquid commingled funds valued as of 3/31/22 and Non-Core Real Estate investments in closed end funds valued as of 12/31/21, was up +6.1% in the quarter, trailing the benchmark return of +8.2%. Real estate prices, as measured by the NFI-ODCE benchmark, held up well during the quarter, benefiting from the inflationary environment and despite increasing interest rates. For the trailing 1-Year, SCERS' Real Estate portfolio was up 27.4% and outperformed the benchmark return of +26.2%.

SCERS' Liquid Real Return also benefited from the asset price appreciation across real assets. SCERS' Liquid Real Return portfolio was up +4.1% and 14.5% for the quarter and 1-Year, respectively, slightly underperforming the SSgA Real Assets benchmark.

SCERS' policy index benchmark includes a blended weighted average of the individual asset class benchmarks, as defined within SCERS' Master IPS, and as shown below. No changes to the policy index benchmark were made during the quarter. SCERS is in the process of updating its benchmarks across asset categories and individual asset classes, to reflect the changes approved as part of the revised Strategic Asset Allocation. Changes to the benchmarks will be applied in calendar year 2022.

SCERS BENCHMARK SUMMARY As of March 31, 2022					
Asset Class	Policy Index Benchmark				
Growth Asset Category	Blended Weighted Average of Asset Class Benchmarks				
US Equities	Russell 3000				
International Equities	MSCI ACWI exU.S. IMI				
Private Equity	Cambridge All PE				
Public Credit	50% (BofA High Yield) + 50% (CS High Yield)				
Private Credit	CS Leveraged Loan + 2%				
Growth Absolute Return	HFRI FoF Composite Index +1%				
Diversifying Asset Category	Blended Weighted Average of Asset Class Benchmarks				
Core/Core Plus Fixed Income	Bloomberg Barclays U.S. Aggregate				
U.S. Treasury	Bloomberg Barclays U.S. Treasury				
Global Fixed Income	80% Citi WGBI + 20% JPMorgan GBI EM				
Diversifying Absolute Return	HFRI FoF Conservtive Index				
Real Return Asset Category	Blended Weighted Average of Asset Class Benchmarks				
Real Estate	65% (NFI-ODCE) + 35% (NFI-ODCE +1%)				
Real Assets	45% (Cambridge Infrastructure) + 35% (Cambridge Energy) + 10% (NCREIF Agriculture) + 10% (NCREIF Timber)				
Liquid Real Return	30% (Barclays U.S. TIPS) + 25% (S&P Global Infrastructure Index) + 15% (Global REITs) + 10% (S&P Global Natural Resources Index) + 10% (Bloomberg Commodity Index) + 10% (U.S. Dollar Floating Rate Notes)				
Opportunities Portfolio	SCERS Total Fund				
Dedicated Cash	Overnight LIBOR				

May 18, 2022 Page 7 of 7 Agenda Item 22

ATTACHMENT

- Board Order
- Verus' Investment Performance Review for SCERS for the period ending March 31, 2022.

Prepared by:	
/S/	
Brian Miller Senior Investment Officer	
Reviewed by:	
/S/	/S/
Steve Davis Chief Investment Officer	Eric Stern Chief Executive Officer



Retirement Board Order Sacramento County Employees' Retirement System

Before the Board of Retirement May 18, 2022

AGENDA ITEM:

Total Fund Quarterly Investment Performance Report – First Quarter 2022

THE BOARD OF RETIREMENT hereby accepts the recommendation of staff to receive and file the SCERS Total Fund Investment Performance Review report, prepared by Verus, for the quarter ending March 31, 2022.

I HEREBY CERTIFY that the above order was passed and adopted on May 18, 2022 by the following vote of the Board of Retirement, to wit:

AYES:	
NOES:	
ABSENT:	
ABSTAIN:	
ALTERNATES (Present but not voting):	
B: L LB E L III	F: 0
Richard B. Fowler II Board President	Eric Stern Chief Executive Officer and Board Secretary







PERIOD ENDING: MARCH 31, 2022
Investment Performance Review for

Sacramento County Employees' Retirement System

Table of Contents

Investment Landscape	TAB
Total Fund	TAB II
Policy Index and Benchmark History	TAB III



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Sound thinking

2022: BACK TOWARDS NORMAL?

As we do every year, during January we sit down to think about what might matter for the coming year — and that process always begins with us assessing how we did the previous year. The goal of this is to help boards prioritize their work, whether it is actually allocating money or simply setting the agenda of topics they should be thinking about. In the latest Sound Thinking, our CIO, Ian Toner, CFA will review topics from the previous year and outline the following topics that an investor might want to add to their agenda for the coming year.

Annual research

2022 ACTIVE MANAGEMENT ENVIRONMENT

Active manager dispersion has been very wide recently, as the pandemic-induced global recession and subsequent fast-paced recovery resulted in considerable economic divergence. These dynamics have created interesting opportunities for active managers to show differentiated performance and deliver alpha to clients. We hope that the insights from this unique mathematical approach provide a deeper understanding of active manager behavior and assists investors in their selection process.

Verus business update

Since our last Investment Landscape webinar:

- Verus has hired three employees. Tim McEnery, Managing Director |
 Senior Consultant; Samantha Grant, Senior Consultant; and Kyle Jangard,
 Public Markets Research Analyst.
 - Tim and Samantha will establish a Verus office in Chicago. Expanding our Midwest presence has been a long-term strategic goal to grow our nationwide services.
- We've had success over the last three months in retaining several new clients. Our national client footprint expanded to 25 states, with our recent additions of clients in Hawaii and North Dakota.
- The IIDC grew to 25 consulting firms with over \$42 trillion in assets under advisement. Verus founded the Institutional Investing Diversity Cooperative in December 2020, leading a call to action in the consulting industry for disclosure of asset manager diversity data at the investment team level.



TIM MCENERY, CFAManaging Director | Senior Consultant



SAMANTHA GRANT, CFA, CAIA Senior Consultant



KYLE JANGARDPublic Markets Research Analyst

Table of contents



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Economic environment	6
Fixed income rates & credit	20
Equity	27
Other assets	36
Appendix	42

1st quarter summary

THE ECONOMIC CLIMATE

- Real GDP grew at a 5.5% rate year-over-year in Q4 (+6.9% quarterly annualized rate). Strong expenditures into new inventory boosted growth, as many businesses have struggled to replenish inventory levels in the face of global supply chain issues. Business investment and rising exports also contributed to the strong pace of growth. p. 8
- The rate of unemployment in the U.S. has continued to fall, improving from 3.9% to 3.6% during the quarter. The labor force participation rate has gradually increased, rising from 61.6% to 62.4%. A historic shortage of workers may remain a sticky issue, as 11.3 million job openings are posted, but only 6.0 million Americans are seeking work. *p.* 11

PORTFOLIO IMPACTS

- High yield credit spreads expanded from 2.8% to 3.3%, although default activity is expected to remain historically low. It appears spread movement has been more of an effect of broader risk-off market moves, rather than a specific reflection of changing credit conditions. p. 24
- U.S. core CPI, excluding food & energy, rose by 6.5% year-over-year in March. Headline inflation, which is being closely watched at the moment as this includes energy & food prices, reached 8.5%. Prices in some other areas have stabilized. Many investors believe inflation peaked in March, though there remains much uncertainty around the path from here. p. 9

THE INVESTMENT CLIMATE

- In late February, Russian forces invaded Ukraine—a move which was anticipated by major Western intelligence communities. Ukraine has put together a remarkable defense thus far, as many citizens have taken up arms to defend their country. p. 18
- Multi-year underinvestment in energy, and now the Russia/Ukraine war, has created a shock to energy markets and crisis-level prices in many European countries. Government officials have been hesitant to vocally support increased local energy production, primarily due to climate concerns. In the U.S., many shale firms have opted to increase production on existing land, but have been slow to pursue new projects—partly due to supply chain issues (shortages in labor, truck drivers, and frack sand) and also due to prioritization of profits over growth. p. 38

ASSET ALLOCATION ISSUES

- Nearly every asset class delivered negative performance in Q1. Equity markets pulled back, credit spreads widened, and interest rates headed higher. Certain real assets including commodities were the exception. p. 49
- Value stocks outperformed Growth stocks by a substantial margin during Q1, as the Energy sector outpaced the index by 43.6% (Energy 39.0%, S&P 500 -4.6%). Large capitalization stocks outperformed small capitalization stocks (Russell 1000 +9.8%, Russell 2000 +2.1%). p. 30

Nearly every asset class delivered losses during Q1, as risk assets sold off, credit spreads widened, and interest rates moved higher



What drove the market in Q1?

"U.S. Inflation Accelerated to 8.5% in March, Hitting Four-Decade High"

HEADLINE CONSUMER PRICE INFLATION (YEAR-OVER-YEAR)

Oct	Nov	Dec	Jan	Feb	Mar
6.2%	6.8%	7.0%	7.5%	7.9%	8.5%

Article Source: Wall Street Journal, April 12th, 2022

"Russian Stocks' 33% Crash Is Fifth-Worst in Market History"

MOEX RUSSIA EQUITY INDEX PRICE LEVEL

Oct	Nov	Dec	Jan	Feb	Mar
4150	3891	3787	3530	2470	2704

Article Source: Bloomberg, February 24th, 2022

"Commodity prices surge after Russia's Ukraine invasion

BLOOMBERG COMMODITY SPOT INDEX

Oct	Nov	Dec	Jan	Feb	Mar
525.1	487.3	502.2	546.8	577.7	625.3

Article Source: Axios, March 1st, 2022

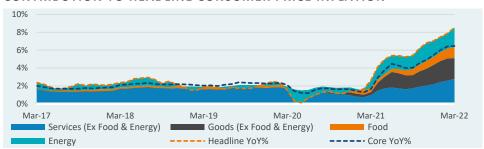
"Global Bond Rout Deepens on Fear Rate Hikes Will Stoke Recession"

BLOOMBERG GLOBAL AGGREGATE TREASURIES TOTAL RETURN

Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021	Q1 2022
3.2%	(5.5%)	0.9%	(1.1%)	(1.0%)	(6.2%)

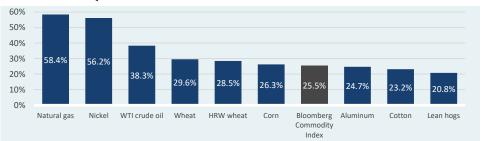
Article Source: Bloomberg, March 27th, 2022

CONTRIBUTION TO HEADLINE CONSUMER PRICE INFLATION



Source: Bureau of Labor Statistics, as of 3/31/22

COMMODITY Q1 PERFORMANCE



Source: Bloomberg, as of 3/31/22

EXPECTED NUMBER OF RATE HIKES BY DECEMBER 2022



Source: Bloomberg, as of 3/31/22



Economic environment



U.S. economics summary

- Real GDP grew at a 5.5% rate year-over-year in the fourth quarter (+6.9% quarterly annualized rate).
 Strong expenditures into new inventory boosted the economy during the quarter, as many businesses had struggled to replenish inventory levels in the face of global supply chain issues.
 Business investment and rising exports also contributed to the strong Q4 pace of growth.
- In economic terms, the effects of COVID-19 seem to be in the rearview mirror. Travel volumes have risen closer to prior levels, credit card transactions are extremely strong, and Americans are once again dining out and spending on entertainment.
- U.S. core CPI, which excludes food & energy prices, rose by 6.5% yearover-year in March. Headline inflation, which is being closely watched at the moment as this includes many of the goods that exhibited the largest prices gains

- (energy & food), reached 8.5%. Price rises have become more broad-based in recent months, with many goods and services experiencing increases.
- U.S. unemployment continued to fall, improving from 3.9% to 3.6%.
 The labor force participation rate has gradually increased, rising from 61.6% to 62.4%. The historic shortage of workers may remain a sticky issue, as 11.3 million job openings are currently posted, but only 6.0 million Americans are seeking work.
- The fast rise of 30-year fixed mortgage rates to near 5.0%, along with skyrocketing home prices, has made homeownership a nearly impossible goal for some Americans, and is squeezing the budgets of many (though at the same time generating much wealth for homeowners). This effect is captured in the Housing Affordability Index, which further deteriorated during Q1.

Most Recent	12 Months Prior
5.5%	(2.3%)
12/31/21	12/31/21
6.5%	1.6%
3/31/22	3/31/21
2.4%	2.3%
3/31/22	3/31/21
0.25% – 0.50%	0.00% – 0.25%
3/31/22	3/31/21
2.34%	1.74%
3/31/22	3/31/21
3.6%	6.0%
3/31/22	3/31/21
6.9%	10.7%
3/31/22	3/31/21
	5.5% 12/31/21 6.5% 3/31/22 2.4% 3/31/22 0.25% - 0.50% 3/31/22 2.34% 3/31/22 3.6% 3/31/22 6.9%



GDP growth

Real GDP grew at a 5.5% rate year-over-year in the fourth quarter (+6.9% quarterly annualized rate). Strong expenditures into new inventory boosted growth, as many businesses had struggled to replenish inventory levels in the face of global supply chain issues. Business investment and rising exports also contributed to strong fourth quarter GDP.

During Q1 2022, concerns rose around the possibility of slowing economic growth or even a recession in the near-term, though the chances of recession appear low. The Atlanta Fed GDPNow real-time forecast for first quarter growth was 1.1%, as of April 11th (seasonally adjusted QoQ annualized rate).

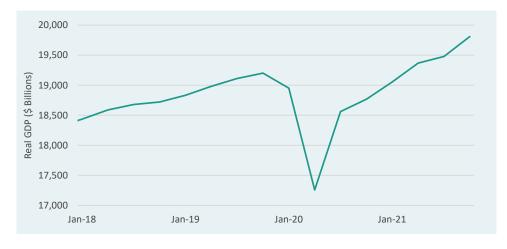
However, it is broadly expected that economic growth picks back up to around 3% throughout the remainder of 2022.

As we mentioned last quarter, U.S. GDP growth is quoted in *inflation-adjusted* terms. This will mean that inflation trends could have large impacts on upcoming U.S. GDP growth numbers. Higher inflation would depress the rate of GDP growth, and falling inflation would likely boost GDP figures, all else equal. Multiple past U.S. recessions were caused at least partially by rising inflation rather than solely by slowing growth (see 1970s, 1980s).

Q4 GDP growth was very strong

Economists expect weak growth in Q1, followed by a mild economic reacceleration

U.S. REAL GROSS DOMESTIC PRODUCT



Source: FRED, as of 12/31/21

U.S. REAL GDP COMPONENTS (QOQ)



Source: FRED, as of 12/31/21



Inflation

U.S. core CPI, which excludes food & energy prices, rose by 6.5% year-over-year in March. Headline inflation, which is being closely watched at the moment as this includes many goods that have exhibited the most notable prices gains (energy & food), reached 8.5%. While price rises in energy and food have been large in recent months, prices in some other areas have stabilized. Many investors believe inflation peaked in March, though much uncertainty exists regarding the path from here.

There are both inflationary and deflationary forces at play in the current environment. On the inflationary side, Russia's invasion of Ukraine has led to substantial disruptions to energy and agricultural markets, which flowed through to price spikes in many commodity markets. These moves can be seen in the March

inflation report. Geopolitical crises tend to result in *upward* commodity price movement, which suggests continued war or wider conflict could have inflationary effects. On the *deflationary* side, large single-month inflation numbers are beginning to *fall out* of the 12-month CPI calculation window. This will naturally have a depressing effect on future CPI figures. Furthermore, many pandemic-specific issues are beginning to be resolved, such as clogged supply chains, unusually high demand for physical goods, and abnormally strong spending patterns. On the next slide we visualize some of these *inflationary* and *deflationary* effects.

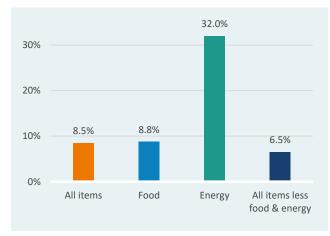
Inflation has proven more sticky (less transitory) than previously expected

Overall, we believe that inflation will most likely begin falling later in 2022, though this could be a slower process than originally believed.

U.S. CPI (YOY)



U.S. CPI (YOY)



MONTHLY PRICE MOVEMENT

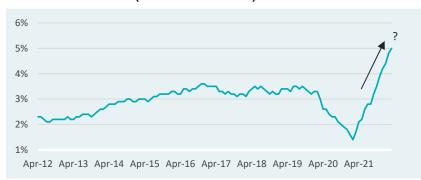


Source: BLS, as of 3/31/22 Source: BLS, as of 3/31/22

Source: BLS, as of 3/31/22

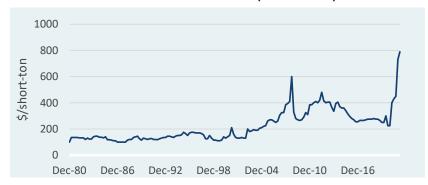
Inflationary & deflationary forces

CPI SHELTER COSTS (YEAR-OVER-YEAR)



Shelter costs, which account for \sim 40% of the core CPI gauge, have continued to track rent prices higher. The continuation of this trend could mute the impact of a potential rollover in prices for consumer durables like used cars, and result in a higher floor for inflation near-term.

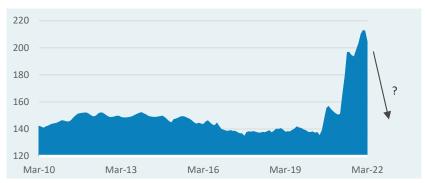
U.S. CORNBELT AMMONIUM NITRATE (FERTILIZER) PRICES



Russia, the world's largest fertilizer exporter, imposed a two-month ban on ammonium nitrate exports, which will threaten the reduction of fertilizer supplies. The export ban is likely to result in higher prices for U.S. farmers.

Source: FRED, as of 3/31/22 (upper), Bloomberg, as of 3/31/22 (lower)

USED CAR & TRUCK PRICES



If certain pandemic-related price rises were to reverse as conditions ease, this could bring inflation down materially

Inflation dynamics are complex. On this slide we take a look at a few potentially inflationary forces (left side) and deflationary forces (right side)

SHIPS AT ANCHOR - PORT OF L.A.



Pandemic-related supply and demand complexities contributed to many supply shortages and price spikes. As these issues are resolved, we would expect prices of some goods to stabilize and perhaps even move closer to prior levels.

Source: FRED, as of 3/31/22 (upper), Port of Los Angeles, as of 4/15/22 (lower)



Labor market

The rate of unemployment in the U.S. has continued to fall, improving from 3.9% to 3.6% during the quarter. The labor force participation rate has gradually increased, rising from 61.6% to 62.4%. The historic shortage of workers may remain a sticky issue, as 11.3 million job openings are posted, but only 6.0 million Americans seeking work.

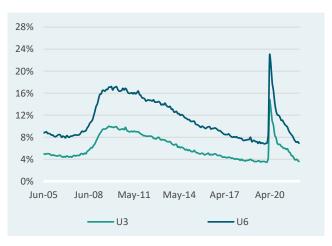
Throughout the latter part of the pandemic, our belief has been that abnormally early retirements have shrunk the overall labor force, and that the U.S. labor participation rate will not likely fully rebound to prior levels. This forecast has proven accurate, as much of the 55+ U.S. worker age cohort remains out of the workforce and not seeking employment. This compares to

younger age cohorts which have made greater progress toward rejoining the labor pool.

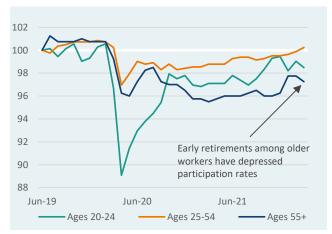
The shortage of workers is likely having a dampening effect on the U.S. economy, as fewer workers means less productive activity, which translates to fewer paychecks and total household income. At the onset of the labor supply shortage, some held the view that fewer workers might mean greater overall wage income if this gave workers more negotiating power with employers. Unfortunately, the results have not met those expectations, as wages have failed to keep up with inflation.

U.S. labor participation continues to see gradual improvement

U.S. UNEMPLOYMENT



LABOR PARTICIPATION RATE



Source: FRED, as of 3/31/22

UNEMPLOYED VS # JOBS AVAILABLE

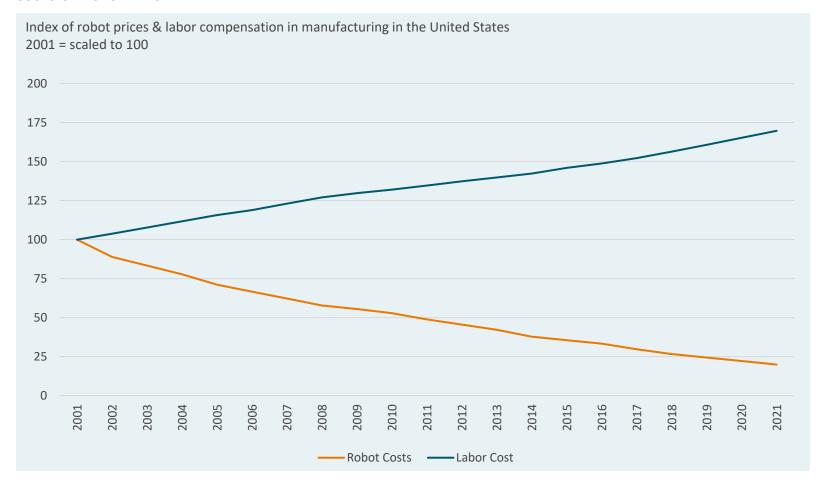


Source: FRED, as of 2/28/22 or most recent data

Source: FRED, as of 3/31/22

Labor costs alternatives

COSTS OF AUTOMATION



With widespread labor shortages, companies are increasingly adopting robotics and automation to stay competitive

Spending on robotics was approximately \$2 billion in 2021 (a 14% increase over the previous high in 2017)

Source: U.S. Bureau of Labor Statistics; ARK Investment Management Ark-investment.com; United Nations Economic Commission; BCG



The consumer

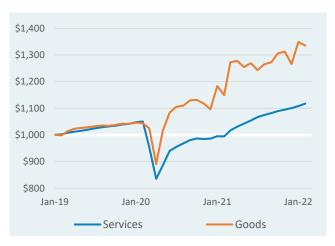
U.S. personal consumption expenditures (PCE) represents consumer spending across a broad basket of goods. Spending boomed during the COVID-19 recovery, with a surprisingly large shift towards purchases of goods and away from services. This substantial shift was believed to be a major contributor to demand/supply imbalances and price inflation of goods during the pandemic. After adjusting for inflation, consumption has risen 1.6% per year since February of 2020.

Auto sales remain depressed relative to pre-pandemic volumes and are at the lowest level since 2011. Sales have likely been hindered by supply chain and therefore inventory issues surrounding new vehicles as well as affordability issues for used vehicles due to the unprecedented rise in prices.

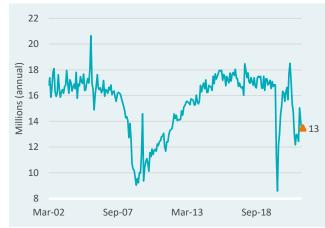
While economic growth and spending appears to be slowing, it is worth noting how significant the increase in U.S. household wealth has been. Asset prices broadly headed higher during the COVID-19 recovery, which included skyrocketing home prices. While these moves certainly create difficulties for new investors (dollars invested today are expected to generate relatively lower long-term returns) and also for future homebuyers (home affordability has been very negatively affected), rising markets have created great profits for many Americans, as indicated by surging total household wealth.

Despite vastly increased American wealth and strong job prospects, sentiment is very depressed as living costs rocket higher

PERSONAL CONSUMPTION EXPENDITURES



AUTO SALES



Source: Federal Reserve, as of 2/28/22

U.S. HOUSEHOLD WEALTH



Source: FRED, as of 12/31/21



Source: FRED, as of 2/28/22

Sentiment

Consumer sentiment has collapsed to levels not seen since the depths of the 2008-2009 Global Financial Crisis. The University of Michigan survey fell from 70.6 to 59.4 during the quarter, as survey respondents indicated deteriorating living conditions due to high inflation and expectations that household financial conditions will worsen throughout the year. On a more positive note, Americans are reportedly optimistic about job prospects and the strong labor market.

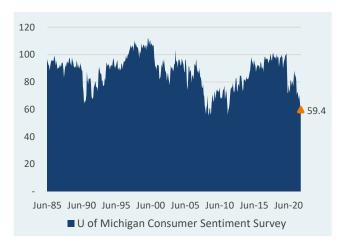
There remain 11.3 million open jobs but only 6.0 million unemployed people in the labor force, indicating significant

labor market tightness. Per the Conference Board, the percentage of Americans who believe it is difficult to land a job right now is at the lowest level since year 2000. A competitive market has led to strong nominal wage gains, but real (adjusted for inflation) average hourly earnings failed to keep up with inflation, and have actually contracted -2.7% over the last year.

The NFIB Small Business Optimism index weakened further. As detailed in the survey, 31% of small businesses see inflation as the largest problem they face. Labor shortages and supply chain issues continue to weigh on business activity.

Sentiment, by some measures, has reached lows not seen since the 2008-2009 Global Financial Crisis

CONSUMER SENTIMENT



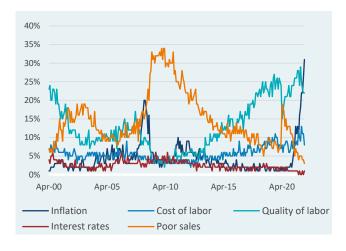
Source: University of Michigan, as of 3/31/22

CONSUMER VIEWS ON THE LABOR MARKET



Source: Conference Board, as of 3/31/22

BIGGEST ISSUES FOR SMALL BUSINESSES



Source: NFIB, as of 3/31/22



Housing

U.S. home prices continued higher, up +19% over the past year ending January, and up a whopping 32% since pre-pandemic. Price appreciation may be set to cool off as the 30-year fixed mortgage rate has risen to 5%, inventories have risen, and sales activity has slowed considerably.

The fast rise of 30-year fixed mortgage rates to near 5%, along with skyrocketing home prices, has made homeownership a nearly impossible goal for some Americans, and is squeezing the budgets of many (though at the same time generating much wealth for homeowners). This effect is captured in the

Housing Affordability Index, which deteriorated during Q1.

The cost of housing has outpaced wage gains for decades, although only mildly so (not as dramatically as some might assume). Lower and lower interest rates had largely counteracted higher home prices in terms of total ownership costs. This rough equilibrium seems to have swung in the other direction over the past year. Lack of affordability may mean a continued slowdown in home sales activity, and perhaps a plateauing or even decline in property values in some areas.

HOUSING AFFORDABILITY INDEX



WAGES VS RENTING COSTS



Source: FRED, as of 2/28/22

CASE-SHILLER HOME PRICE INDEX



Source: FRED, as of 1/31/22

Source: NFIB, as of 2/28/22

International economics summary

- The pace of economic growth has moved further back toward average levels in most economies. In January, the International Monetary Fund cut their 2021 advanced economy growth projections from 5.2% to 4.3%. Growth in 2022 is expected to slow to 3.1%.
- Unemployment continued to fall to, or below, pre-pandemic levels.
 However, in countries such as the United States these data do not tell the whole story, since the total size of the labor pool has shrunk substantially.
- Inflation trends have been surprisingly bifurcated by region.
 While the United States and Europe are generally contending with a spike in prices and inflation not seen in decades, Japan and China are experiencing very low inflation and muted price pressures.
- In late February, Russian forces

- invaded Ukraine—a move which was anticipated by major Western intelligence communities. Ukraine has put together a remarkable defense thus far, as many citizens have taken up arms to defend their country.
- Russia's invasion of Ukraine led to substantial spikes in energy and agricultural prices as concerns grew of a potential supply shock.
 Eurozone producer prices grew 31.4% over the 12 months ending February, reflecting the impact of surging natural gas prices (+58.4%).
- COVID-19 case growth rose to record levels in China, which led CCP officials to reinstate lockdowns in some of the largest provinces in the country. Continued commitment to the "zero-Covid" policy in China could weigh on the outlook for global growth, as well as elongate the process of supply chain normalization, particularly within the freight shipping industry.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	5.5%	8.5%	3.6%
	12/31/21	3/31/22	3/31/22
Eurozone	4.6%	7.5%	6.8%
	12/31/21	3/31/22	2/28/22
Japan	0.4%	1.3%	2.6%
	12/31/21	3/31/22	2/28/22
BRICS	4.0%	3.2%	5.2%
Nations	12/31/21	3/31/22	12/31/21
Brazil	1.6%	10.5%	11.2%
	12/31/21	2/28/22	2/28/22
Russia	5.0%	9.2%	4.1%
	12/31/21	2/28/22	2/28/22
India	5.4%	6.1%	7.6%
	12/31/21	2/28/28	3/31/22
China	4.8%	0.9%	5.8%
	3/31/22	2/28/22	3/31/22

NOTE: India lacks reliable government unemployment data. Unemployment rate shown above is estimated from the Centre for Monitoring Indian Economy. The Chinese unemployment rate represents the monthly surveyed urban unemployment rate in China.



International economics

The pace of economic growth has moved further back towards average levels in most economies. This is reflected in quarter-over-quarter GDP growth figures, as these provide a better gauge of *short-term* growth trends. The International Monetary Fund estimates a 4.3% growth rate for calendar year 2021, and then a slowing to 3.1% in 2022. The IMF reports that recovery strength will likely vary considerably by location, due to access to medical care, types of government policy support, and regional cross-country spillovers.

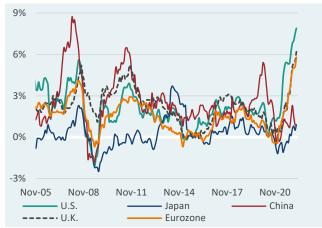
Inflation trends continue to be disparate from country-tocountry, as spiking inflation is a problem for a certain subset of economies. While the United States and Europe are generally contending with a jump in prices and inflation not seen in decades, Japan and China are experiencing very low inflation and muted price pressure.

Unemployment has further improved to, or below, prepandemic levels. Investors should also note the change in labor market *size*. For example, disenfranchised workers falling out of the workforce or early retirements may not be captured in popular unemployment metrics but can have just as deleterious effects on economic activity as traditional job loss.

REAL GDP GROWTH (YOY)



INFLATION (CPI YOY)



Source: Bloomberg, as of 3/31/22 – or most recent release

UNEMPLOYMENT



Source: Bloomberg, as of 3/31/22 – or most recent release



Source: Bloomberg, as of 12/31/21

Assessed control of terrain in Ukraine

3/15/2022 - 12:00PM PST



4/13/2022 - 12:00PM PST



Russian forces have been repelled from Kyiv, and have shifted their focus to consolidating control over area around the separatistcontrolled Donetsk and Luhansk Oblasts in Eastern Ukraine

Source: Institute for the Study of War, as of 4/13/22, 12:00 PM PST



Conflict summary and key themes

Russian forces were unsuccessful in their attempt to take Kyiv, and have since withdrawn to refocus efforts on taking the territory around the Donetsk and Luhansk Oblasts in Eastern Ukraine. What have been the drivers of Ukrainian success thus far?

Ukrainian Tactics

- Effective withdrawal into major population centers which have proven easier to defend
- Efficient utilization of anti-aircraft (Stinger) and anti-armor (Javelin) technology
- Judicious use of airpower to disrupt Russian supply lines

Russian Military Incompetence

- Issues transporting adequate oil and fuel supplies to the front lines to support the advance
- Lack of experienced troops (many conscripts have 1-2 years experience and were not expecting to actually be sent into combat)
- Low morale (many troops have surrendered to Ukrainian forces, or have sabotaged their vehicles to slow the advance
- Poor battlefield intelligence (many Russian troops are wandering into Ukrainian cities with little awareness of those cities,
 which has left them in an incredibly vulnerable positions and made it easier for Ukrainians to use their anti-armor weaponry)
- NATO estimated that between 7-15K Russian troops have been killed, and another 15-30K have been injured

Western Sanctions

- The Federal Reserve and the European Central Bank officially sanctioned the Central Bank of Russia, an unprecedented strategy for containing a G20 economy
- Key Russian banks have been excluded from SWIFT, disconnecting them from sources of foreign capital and preventing them from sending or receiving money from other financial institutions around the world. This is often considered the "nuclear option" relative to the menu of economic sanctions
- Entire industries have instituted export controls, banning the shipment of key technology input goods such as semiconductors, aircraft, aircraft parts, and oil equipment to Russia

Source: Verus, as of 4/13/22



Fixed income rates & credit



Fixed income environment

- The 10-year U.S. Treasury yield jumped during Q1, from 1.51% to 2.34%, as the Federal Reserve signaled that more aggressive tightening is ahead.
- Fixed income broadly delivered losses during the first quarter, as interest rates headed higher and credit spreads expanded. Higher duration exposures (Bloomberg U.S. Aggregate -5.9%) underperformed lower duration exposures (Bloomberg U.S. Corporate High Yield -4.8%). This theme was also visible over the past year.
- The U.S. yield curve has flattened, or even inverted, depending on the measure. The 10-year minus 2-year yield spread ended the quarter at exactly +0.00%. Yield curve inversion is generally believed to be a sign of nearing recession, as in most cases recession occurs within 1 to 2 years following the initial inversion.
- History suggests that interest rate

- rises have been more of an effect of Federal Reserve action rather than solely due to spiking inflation. This likely means that the Fed's plans for moderate tightening will translate to only moderate rate rises. This statement is of course not intended to minimalize the pain of interest rate rises on bond portfolios, which has been notable.
- Credit spreads expanded during the quarter, with U.S. high yield spreads moving from 2.8% to 3.3% and U.S. investment grade spreads heading from 0.9% to 1.2%. Spread movement often occurs alongside broader market risk-off environments, which implies that investors should not necessarily assume that these moves were specific to the credit outlook.
- Write-downs of Russian (-100%) and Ukrainian (-51.4%) bonds weighed heavily on hard-currency emerging market debt (JPM EMBI Global Diversified -10.0%).

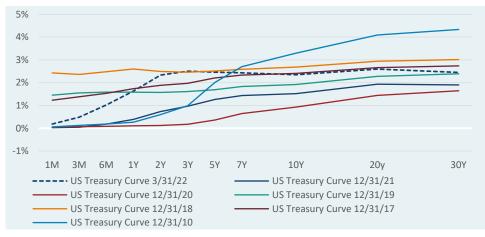
	QTD Total Return	1 Year Total Return
Core Fixed Income (Bloomberg U.S. Aggregate)	(5.9%)	(4.2%)
Core Plus Fixed Income (Bloomberg U.S. Universal)	(6.1%)	(4.2%)
U.S. Treasuries (Bloomberg U.S. Treasury)	(5.6%)	(3.7%)
U.S. High Yield (Bloomberg U.S. Corporate HY)	(4.8%)	(0.7%)
Bank Loans (S&P/LSTA Leveraged Loan)	(0.1%)	3.3%
Emerging Market Debt Local (JPM GBI-EM Global Diversified)	(6.5%)	(8.5%)
Emerging Market Debt Hard (JPM EMBI Global Diversified)	(10.0%)	(7.4%)
Mortgage-Backed Securities (Bloomberg MBS)	(5.0%)	(4.9%)

Source: Bloomberg, as of 3/31/22

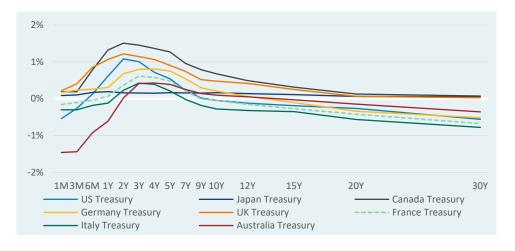


Yield environment

U.S. YIELD CURVE

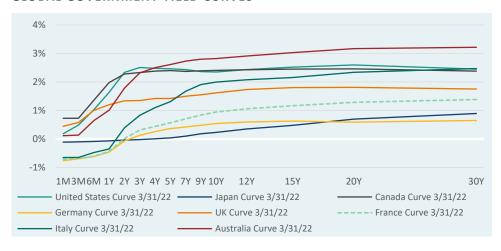


YIELD CURVE CHANGES OVER LAST FIVE YEARS

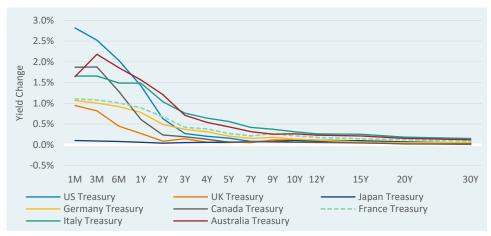


Source: Bloomberg, as of 3/31/22

GLOBAL GOVERNMENT YIELD CURVES



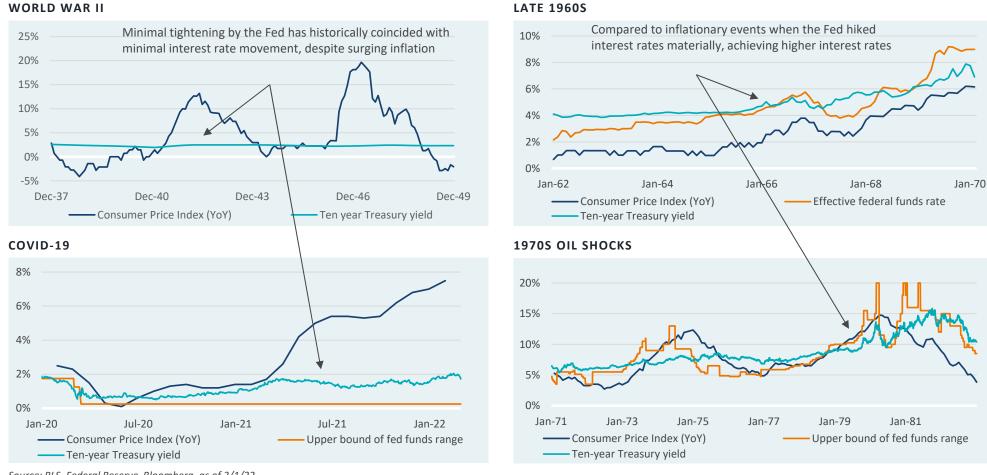
IMPLIED CHANGES OVER NEXT YEAR





What history tells us about rising rates

During historical periods where inflation was rising but the Fed was <u>not</u> hiking rates, interest rate moves were minimal. This may mean that the Federal Reserve's currently moderate interest rate policy suggests only moderate interest rate rises from here.



Source: BLS, Federal Reserve, Bloomberg, as of 3/1/22

NOTE: These conclusions were reached via a broader historical inflation and interest rate analysis. For further information about these findings, please reach out to your Verus consultant.



Credit environment

Fixed income broadly delivered losses during the first quarter, as interest rates headed higher and credit spreads expanded. Higher duration exposures such as core fixed income (Bloomberg U.S. Aggregate -5.9%) underperformed lower duration exposures such as U.S. high yield (Bloomberg U.S. Corporate High Yield -4.8%). This effect was also visible over the past year.

Credit spreads expanded moderately during the quarter, with U.S. high yield spreads moving from 2.8% to 3.3% and U.S. investment grade spreads heading upward from 0.9% to 1.2%. Spread movement of this nature often occurs alongside broader market risk-off environments,

which implies investors should not necessarily assume that these moves are specific to a worsening credit outlook.

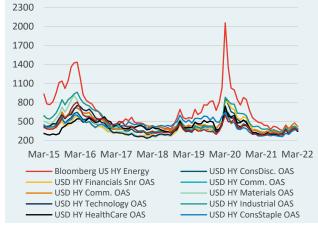
The low yield environment has pushed many investors to search for greater yield, such as through the pursuit of increased private markets exposure and/or taking on riskier holdings. The mild move higher in the yield curve likely helps ease this market environment issue, although high inflation has created new problems for investors. Looking further into the future, following the Fed's planned hiking cycle, markets are expecting interest rates to fall back down, presumably as economic conditions worsen and the Fed begins easing.

SPREADS



Source: Barclays, Bloomberg, as of 3/31/22

HIGH YIELD SECTOR SPREADS (BPS)



Source: Bloomberg, as of 3/31/22

	Credit Spread (OAS)		
Market	3/31/22	3/31/21	
Long U.S. Corp	1.6%	1.3%	
U.S. Inv Grade Corp	1.2%	0.9%	
U.S. High Yield	3.3%	3.1%	
U.S. Bank Loans*	4.3%	4.3%	

Source: Barclays, Credit Suisse, Bloomberg, as of 3/31/22

*Discount margin (4-year life)



Default & issuance

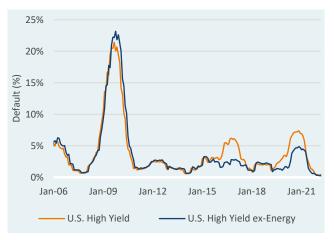
Despite a general increase in volatility and a sell-off across high-yield and leveraged loan markets, default activity remained negligible. Over the first quarter only \$1.6 billion in defaults occurred, marking the third-lowest quarterly total since Q4 2013. Realized recovery rates for high yield bonds over the past 12 months have lingered around 48%, significantly elevated above the 25-year average (39.9%). Loan recovery rates have come in slightly lower than the historical average (58.6% vs. 64.4%).

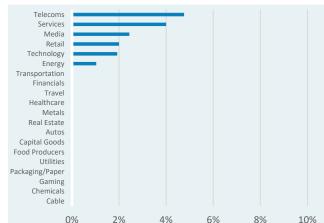
High-yield and loan default rates ended the quarter at 0.50% and 0.86%, respectively, and are expected to rise slightly through the rest of the year. J.P. Morgan forecasts default rates of 0.75% for high yield bonds and loans in 2022, with those rates picking up to 1.25% in 2023. For context, the long-

term average historical default rates for bonds and loans have been around 3.6% and 3.1%, respectively.

High yield issuance hit its lowest level since March 2020 in February, and then fell further in March, as issuers contended with a sharp increase in global bond yields. High-yield issuance totaled just \$46.5 billion so far this year, down from \$158.8 billion (-71%) over the same period a year ago. Year-to-date loan issuance is also down approximately 60% relative to Q1 2021. Extensive capital raises that occurred in 2021, as well as broadly higher interest rates, have likely contributed to very low financing activity so far this year.

HY DEFAULT RATE (ROLLING 1-YEAR)

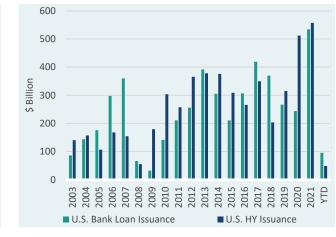




U.S. HY SECTOR DEFAULTS (LAST 12 MONTHS)

Source: BofA Merrill Lynch, as of 3/31/22 – par weighted

U.S. ISSUANCE (\$ BILLIONS)



Source: BofA Merrill Lynch, as of 3/31/22



Source: BofA Merrill Lynch, as of 3/31/22

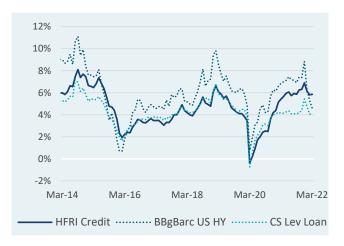
Alternative credit

Credit hedge fund strategies were a bright spot in Q1 relative to fixed income markets. The HFRI Credit Index, which typically tracks between high yield and leveraged loan indices, gained 0.2% during the quarter despite widening credit spreads and rising rates which detracted from the performance of traditional credit.

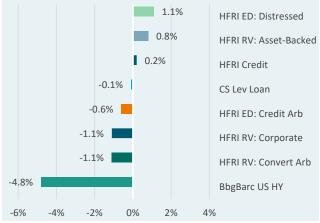
Looking more closely at hedge fund credit, distressed/restructuring strategies, as well as assetbacked, were strong performers during the quarter and have outperformed credit markets over the past year.

Distressed investors have benefitted from out-offavor, deep value assets rebounding over the prior 18 months. Asset-backed strategies have been able to limit duration exposure while finding new ways to maintain access to higher yielding securitized instruments, such as by expanding into origination/ securitization or moving further out on the liquidity spectrum.

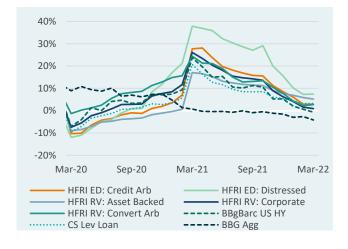
3 YEAR ROLLING RETURN



1Q 2022 QUARTERLY RETURN



1 YEAR ROLLING RETURN



Source: HFRI, as of 3/31/22 Source: HFRI, as of 3/31/22 Source: HFRI, as of 3/31/22



Equity



Equity environment

- U.S. equities held up marginally better during the first quarter (S&P 500 -4.6%), followed by international developed equities (MSCI EAFE -5.9%) and emerging market equities (MSCI Emerging Markets -7.0%), on an unhedged currency basis.
- Currency movement during the quarter detracted from the performance of investors who do not hedge foreign currency exposure. Currency movements in international developed markets generated losses of -2.4% (MSCI EAFE).
- Value stocks outperformed Growth stocks by a substantial margin during Q1 (Russell 1000 Value -0.7% vs Russell 1000 Growth -9.0%) as Growth stocks fell sharply, reversing the gains delivered in the second half of 2021. Large capitalization stocks beat small capitalization stocks by a narrower margin (Russell 1000

- -5.1%, Russell 2000 -7.5%).
- The Cboe VIX Index spiked midquarter during Russia's invasion of Ukraine, as fears of potential broader global conflict, food shortages, and higher inflation roiled markets. The index fell to 20 to end the quarter, moderately above the longer-term average. Realized volatility over the past year was more muted as the pandemic has moved into the rearview mirror.
- Emerging market equities appear attractively priced, as EM equities are in the 8th percentile of cheapness relative to U.S. equities, looking back to 2003. Much of this valuation difference is due to Chinese markets, which have sold off massively over concerns around possible sanctions due to relations with Russia, regulatory crackdowns on the real estate and internet sectors, and major city lockdowns due to COVID-19.

	QTD TOTA	L RETURN	1 YEAR TOT	AL RETURN
	(unhedged)	(hedged)	(unhedged)	(hedged)
U.S. Large Cap (S&P 500)	(4.6	5%)	15.	6%
U.S. Small Cap (Russell 2000)	(7.5	5%)	(5.8	3%)
U.S. Equity (Russell 3000)	(5.3	3%)	11.	9%
U.S. Large Value (Russell 1000 Value)	(0.7	7%)	11.	7%
US Large Growth (Russell 1000 Growth)	(9.0	0%)	15.	0%
Global Equity (MSCI ACWI)	(5.4%)	(4.8%)	7.3%	8.8%
International Large (MSCI EAFE)	(5.9%)	(3.5%)	1.2%	7.1%
Eurozone (Euro Stoxx 50)	(10.9%)	(8.7%)	(3.9%)	2.7%
U.K. (FTSE 100)	0.0%	2.8%	10.7%	16.4%
Japan (NIKKEI 225)	(7.8%)	(2.6%)	(11.9%)	(2.9%)
Emerging Markets (MSCI Emerging Markets)	(7.0%)	(7.0%)	(11.4%)	(11.5%)

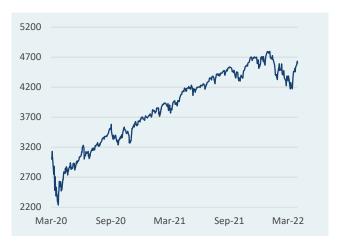
Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 3/31/22

Domestic equity

U.S. equities fell during the first quarter (S&P 500 -4.6%), though less so than other global markets (MSCI ACWI ex-USA -5.4%). Within the U.S. market, sector dispersion was very wide, with large-cap energy companies advancing 39.0% on spiking energy prices, and large-cap technology stocks (-8.4%) and consumer discretionary (-9.0%) selling off on concerns that higher inflation (influenced by spiking energy prices) might result in a much more hawkish outlook for Fed policy and interest rates. Energy sector earnings are expected to bolster overall index level earnings on a year-on-year basis in Q1, primarily due to the average price of oil rising from \$58.14 to \$95.01. If the energy sector were excluded, Q1 year-over-year earnings growth would be expected at -0.6%, instead of +5.1%.

Companies continue to contend with headwinds from supply chain disruptions, surging commodity prices which were given a leg higher by the conflict in Ukraine, ongoing labor shortages and higher prices in general. In Q4 of 2021, 365 S&P 500 companies mentioned "inflation" on earnings calls, which was the highest number in at least 10 years, per FactSet. Under this backdrop, companies are raising their prices to help offset higher costs, and the S&P 500 Index is expected to report a fifth consecutive quarter of revenue growth north of 10% in Q1. Interestingly, analysts expect net profit margins will be higher through the rest of the year than they are expected to be in Q1 (+12.1%).

S&P 500 PRICE INDEX

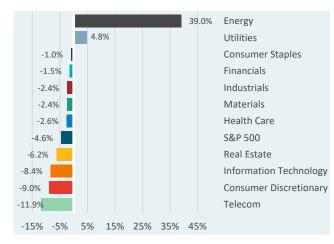


NET PROFIT MARGIN – S&P 500 INDEX



Source: FactSet, as of 4/14/22

Q1 SECTOR PERFORMANCE



Source: Standard & Poor's, as of 3/31/22



Source: Standard & Poor's, as of 3/31/22

Domestic equity size & style

Value stocks outperformed Growth stocks by a substantial margin during the first quarter (Russell 1000 Value -0.7% vs Russell 1000 Growth -9.0%) as Growth stocks fell sharply, reversing the gains delivered in the second half of 2021. Large capitalization stocks outperformed small capitalization stocks by a narrower margin (Russell 1000 -5.1%, Russell 2000 -7.5%).

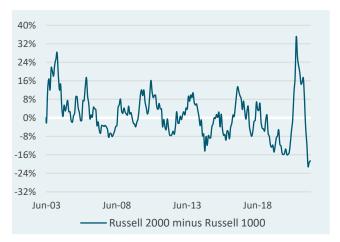
Energy stocks dramatically outperformed during Q1, as global demand has outpaced energy production for quite some time, pushing prices higher. Additionally, Russia's invasion of Ukraine led to widespread fears of an energy supply crunch, which temporarily sent oil to \$123/bbl—the highest level since 2008. Attractive conditions for energy producers coincided with outperformance of

Utilities, Financials, Industrials, and Materials sectors, which tend to have a Value tilt. During Q1, the Information Technology sector, which is tilted towards Growth, underperformed the index.

Further tightening of Fed policy and interest rate hikes will likely impact Value and Growth stock behavior, though these relationships are complex. For example, rate rises that result in a flattening of the yield curve may not be as boosting to financial sector performance, since banks profit from interest curve steepening (banks lend at the long end of the curve and borrow at the short end). The nature of the environment in which interest rates rise will contribute to future style factor behavior.

Value strongly outperformed during Q1

SMALL CAP VS LARGE CAP (YOY)

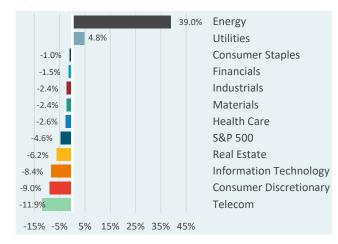


VALUE VS GROWTH (YOY)



Source: FTSE, as of 3/31/22

Q1 SECTOR PERFORMANCE



Source: Standard & Poor's, as of 3/31/22



Source: FTSE, as of 3/31/22

International developed equity

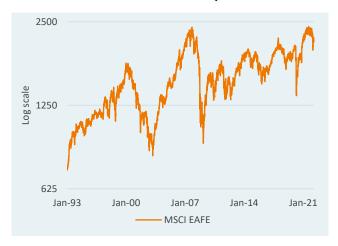
International developed equities fell -5.9% during the quarter, while U.S. equities performed slightly better (S&P 500 -4.6%) and emerging market equities trailed (MSCI Emerging Markets -7.0%), on an unhedged currency basis. Currency movement during the quarter detracted from the performance of investors who do not hedge foreign currency exposure. Currency movements in international developed markets generated losses of -2.4% (MSCI EAFE).

Eurozone and Japanese equities were among the worst performers during the quarter (Euro Stoxx 50 -10.9%, Nikkei 225 -7.8%), though much of these losses were driven by currency market movement. U.K. equities were among the top

performers at 1.8% (MSCI UK). Investors with a currency hedging program would have outperformed unhedged investors by roughly +2.2% in Eurozone equities, +5.2% in Japanese equities, and +2.8% in U.K. equities.

German equities (MSCI Germany -13.1%) detracted significantly from international developed equity returns, as investors expressed concern over the country's large exposure to Russian energy imports. Producer prices in Germany rose 25.9% year-over-year in February, partly due to surging gas prices. It is not yet known the degree to which businesses will be able to pass through higher prices to customers. Inflation in Germany rose to 7.3%—the highest level in decades.

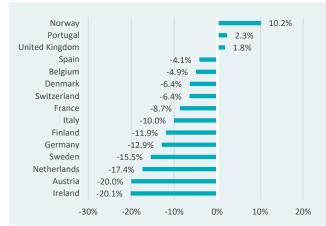
INTERNATIONAL DEVELOPED EQUITY



EFFECT OF CURRENCY (1-YEAR ROLLING)



EUROPEAN EQUITY PERFORMANCE - Q1 2022



Source: MSCI, as of 3/31/22

Source: MSCI, Bloomberg, as of 3/31/22. Returns in USD terms.



Source: MSCI, as of 3/31/22

Emerging market equity

Emerging market equities delivered losses (MSCI EM -7.0%) on an unhedged currency basis, lagging developed markets during the quarter. Latin American markets substantially outperformed Asian markets (MSCI EM Latin America +27.3%, MSCI EM Asia -8.7%).

Chinese equities have seen large losses over the last year. The Nasdaq Golden Dragon China Index recently drew down further than its maximum loss during the Global Financial Crisis. Concerns over imposed sanctions due to relations with Russia, regulatory crackdowns on the real estate and internet sectors, and rising COVID-19 cases resulting in major city lockdowns

have provided the backdrop to the massive sell-off in Chinese equities. More supportive government policies appear to be coming down the pike, which may contribute to a turnaround.

Emerging market equities are attractively priced relative to developed markets. The valuation divide is now extremely large. On a price-to-earnings basis, emerging market equities are in the 8th percentile cheap relative to U.S. equities going back to 2003, meaning they have been cheaper just 7% of the time since 2003. Emerging market equities have also recently fallen back to more average valuations relative to international developed markets.

EMERGING MARKET EQUITY

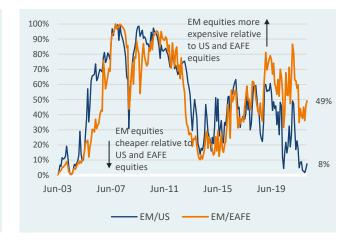


CHINESE EQUITY DRAWDOWNS



Source: MSCI, Nasdaq, as of 3/22/22

VALUATION PERCENTILES



Source: MSCI, forward 12m price multiples, as of 2/28/22



Source: MSCI, as of 12/31/21

Equity valuations

Valuations drifted lower over the first quarter as earnings expectations remained relatively steady and prices moderated. The forward 12-month P/E ratio for the S&P 500 closed the quarter at 19.0—slightly above the five-year average. Forward multiples have fallen back to pre-pandemic levels for most international developed and emerging equity markets.

In the domestic market, analysts appear optimistic about the outlook. If earnings over the next 12 months meet expectations and valuations hold at current levels, the S&P 500 Price Index is forecast to rise 18.5% to around an index level of 5250.

U.S. equity forward P/E valuations remain at historically stretched levels relative to international developed and emerging market equities. U.S. forward price multiples closed the quarter in the 99th percentile relative to EAFE, and in the 92nd percentile relative to EM, using monthly data going back to 2003. The strength of U.S. institutions, the resilience of the U.S. consumer, the United States' energy independence, as well its distance from ongoing conflict in Ukraine may help to tilt international investor flows toward U.S. equities, likely supporting a healthy U.S. equity valuation premium.

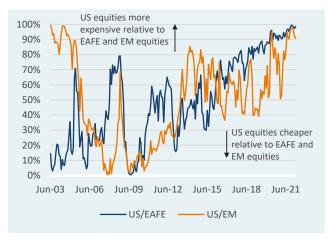
Most equity valuations have moved back towards normal levels, though U.S. prices remain rich

FORWARD P/E RATIOS



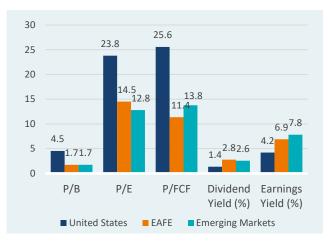
Source: MSCI, 12m forward P/E, as of 3/31/22

RELATIVE FORWARD PRICE MULTIPLES – VALUATION PERCENTILE ANALYSIS



Source: Bloomberg, MSCI, as of 3/31/22

VALUATION METRICS (3-MONTH AVERAGE)



Source: Bloomberg, MSCI as of 3/31/22 - trailing P/E

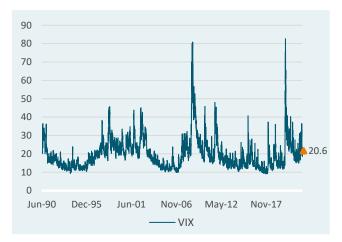


Equity volatility

The Cboe VIX Index spiked mid-quarter during Russia's invasion of Ukraine, as fears of potential global conflict, food shortages, and higher inflation roiled markets. The index fell to 20 to end the quarter—moderately above the longer-term average. Realized volatility over the past year was muted as the pandemic and its associated pain has moved into the rearview mirror. U.S. markets were the most volatile among developed and emerging markets, which has been rare historically. Implied volatility for close-to-the-money put and call options on U.S. large-cap stocks appears to be reflecting fairly-neutral risk positioning. In short, the price of downside protection relative to upside participation is around average.

While realized volatility in emerging market equities was fairly low relative to history in Q1, weakness in tech shares and concerns over potential sanctions resulted in material selloffs in highly-tech-weighted regional markets. In U.S. dollar terms, the MSCI China Index closed the quarter -44% below previous records, and Russian stocks were marked down -100%. Moving forward, the exclusion of Russian equities from MSCI's Emerging Market benchmark will result in an even higher weighting for the Asian segment of the EM complex, which tends to be more growth-tilted and more volatile.

U.S. IMPLIED VOLATILITY (VIX)

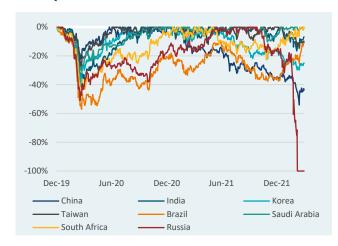


REALIZED VOLATILITY



Source: Standard & Poor's, MSCI, as of 3/31/22

EM EQUITY - MAX DRAWDOWNS FROM PEAKS

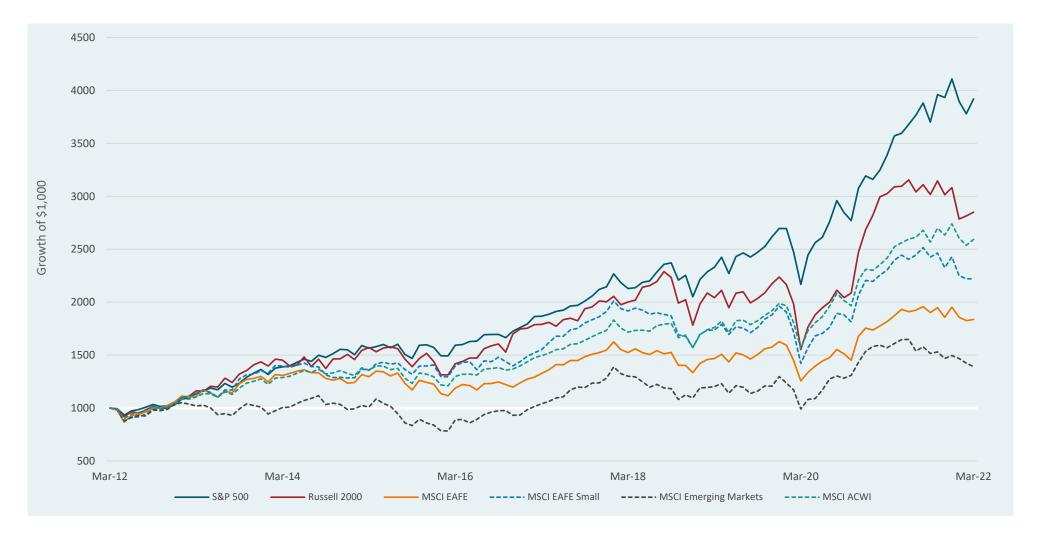


Source: MSCI, Bloomberg, as of 3/31/22, returns in USD



Source: Choe, as of 3/31/22

Long-term equity performance







Other assets



Commodities

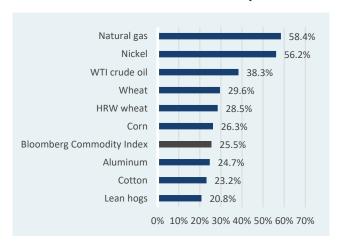
Commodities were by far the best-performing major asset class in Q1 2022 (Bloomberg Commodity Index +25.5%), with every major sector contributing positively to overall index returns. The Energy (+47.9%) and Grains (+24.9%) sectors drove the advance, as investors speculated on what war in the Ukraine and the economic ostracization of Russia might mean for energy access and wheat and corn production.

Industrial metals (+22.7%) also rallied substantially, influenced by clean energy transition efforts that have ramped up in recent months. A short squeeze in nickel (+56.2%) was

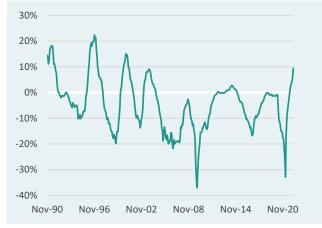
additive to performance.

Improving roll yield has been a huge component of the outsized total return offered by commodities, adding +9.4% to performance over the last twelve months. Massive increases in spot prices relative to further-dated contracts pushed many commodity futures curves into relatively steep backwardation over the near-term, allowing investors to roll their contracts for a profit. In order for this roll yield to be sustainable, spot prices will need to stay elevated relative to futures pricing.

BLOOMBERG COMMODITY INDEX - Q1 2022

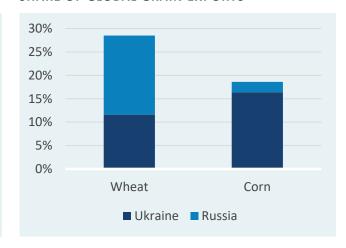


S&P GSCI INDEX ROLL YIELD (LAST 12 MONTHS)



Source: Standard & Poor's, Bloomberg, as of 3/31/22

SHARE OF GLOBAL GRAIN EXPORTS



Source: Food and Agriculture Organization of the United Nations



Source: Bloomberg, as of 3/31/22

How can the Russian oil gap be filled?

Russia produced approximately 11 million barrels of oil per day prior the onset of Covid-19 and the recent economic sanctions. Since then, many countries have imposed embargoes on Russian oil, and higher prices have incentivized policymakers to reopen discussions with other producers, including Venezuela and Iran.

Prior to the imposition of sanctions on Venezuelan and Iranian oil in January 2019 and June 2019, respectively, the two countries were producing around 5.8 million barrels per day. Today, they are producing around 3.2 million barrels per day. Even if the two countries were able to ramp up production back to pre-sanction levels, which would be an impressive feat both diplomatically and physically, that would only replace roughly a quarter of Russian output.

Increased energy production is needed to alleviate high prices, but this conflicts with the West's climate priorities. U.S. government officials have given mixed signals to oil producers. For example, the administration announced in April that it will resume its sale of leases for drilling on federal land, though 80% less land will be leased relative to the footprint that had been originally evaluated. Furthermore, required royalties for energy extraction were raised from 12.5% to 18.75%. In the U.S., many shale firms have opted to increase production on existing land, but have been slow to pursue new projects—partly due to supply chain issues (shortages in labor, truck drivers, and frack sand) and also due to prioritization of profits over growth. This newfound conservatism is reflected by recent comments from Scott Sheffield, CEO of Pioneer Natural Resources Co., who said his company, the largest oil producer in the Permian Basin, is not currently considering raising its long-term goal of increasing oil production by 0-5% per year. As shown on the bottom right, Pioneer's goal this year is to return 80% of cash flow to investors.

WHAT ABOUT VENEZUELA AND IRAN?



TOTAL U.S. SHALE PRODUCTION



Source: Rystad Energy, as of 4/30/22

SHALE PRODUCERS' FOCUS ON DIVIDENDS



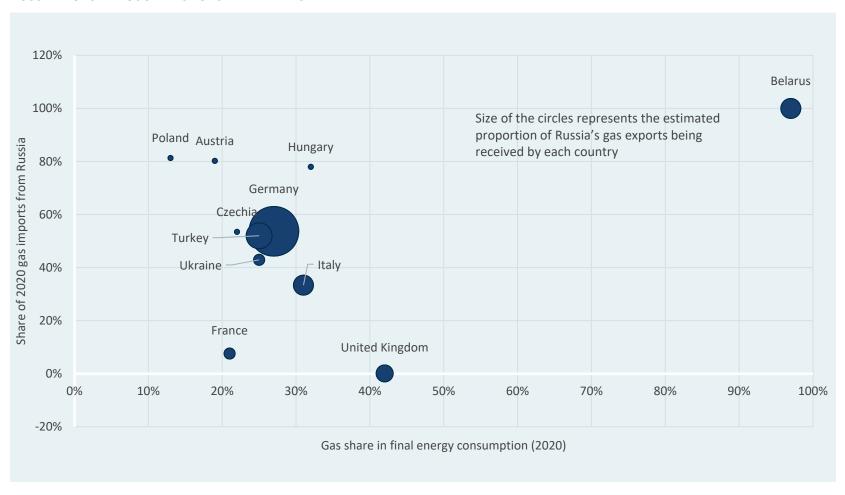
Source: Pioneer Natural Resources, Q4 2021 Earnings Presentation



Source: Bloomberg News, as of 2/28/22

Russian energy embargoes

RUSSIAN GAS EXPOSURE VS. GAS DEPENDENCE



Most
countries
which have
banned
Russian oil
and gas do
not rely
heavily on
Russia for
their energy
resources

Source: Bruegel, as of 2/28/22



Grain supply outlook

Russia, the world's largest fertilizer exporter, imposed a twomonth ban on ammonium nitrate exports, which threatens the availability of fertilizer supplies, especially to South America, as the region enters a critical point in the growing season. Although the United States is not a direct buyer of Russian ammonium nitrate, the export ban is likely to result in higher prices for U.S. farmers.

The outlook for South America's soybean crops has deteriorated as a second year of drought, brought on by La Nina, drags down yield and production forecasts. *Gro*

Intelligence's yield forecast model indicates a production decline which would take soybean stocks to the tightest levels since 2015/2016. The outlook for corn is less dire, as planted acreage is up approximately 5% in Brazil this year, though falling crop yields could offset greater acreage.

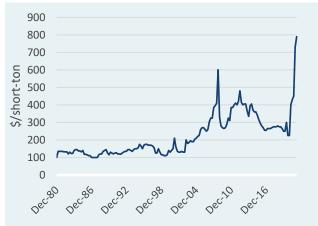
China, the world's largest grain consumer is also facing significant food shortages. Recently, the country's agriculture minister stated that the condition of the winter wheat crop was the "worst in history", and that yields are expected to fall around 20%.

MAJOR DESTINATIONS FOR RUSSIAN AMMONIUM NITRATE EXPORTS (VOLUME)



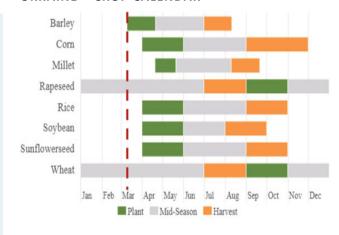
Source: COMTRADE, Gro Intelligence, as of 12/31/20

U.S. CORNBELT AMMONIUM NITRATE PRICES



Source: Bloomberg, as of 3/23/22

UKRAINE - CROP CALENDAR



Source: USDA, Ukraine Ministry of Agriculture



Where will incremental supply come from?

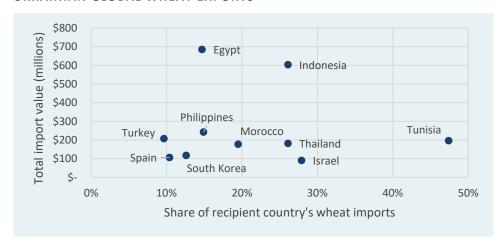
FEBRUARY TO MARCH CHANGE IN 2022 GLOBAL WHEAT EXPORTS



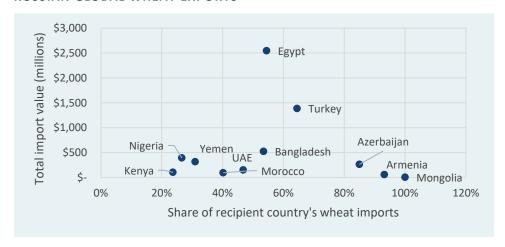
Global production is expected to drop 3.5 million metric tons in 2022, as substitution from farmers in Australia, India, and Canada is not expected to be able to fully offset production declines in the Black Sea region

Source: USDA March 2022 World Agricultural Supply and Demand Estimates. Export change based on revised projections from the USDA World Agricultural Supply and Demand Estimates

UKRAINIAN GLOBAL WHEAT EXPORTS



RUSSIAN GLOBAL WHEAT EXPORTS



Source: OEC, BACI



Appendix



Periodic table of returns

Small Cap Value

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	YTD	5-Year	10-Year
Commodities	31.8	14.0	25.9	56.3	26.0	34.5	32.6	39.8	5.2	79.0	29.1	14.3	18.6	43.3	13.5	13.3	31.7	37.3	6.7	36.4	38.5	28.3	15.6	20.2	17.0
Real Estate	22.8	8.4	10.3	48.5	22.2	21.4	26.9	16.2	1.4	37.2	26.9	7.8	18.1	38.8	13.2	5.7	21.3	30.2	1.9	31.4	34.6	27.6	0.0	15.1	14.5
Cash	12.2	7.3	6.7	47.3	20.7	20.1	23.5	15.8	-6.5	34.5	24.5	2.6	17.9	34.5	13.0	0.9	17.3	25.0	0.0	28.5	21.0	27.1	0.0	10.5	11.7
US Bonds	11.6	3.3	1.6	46.0	18.3	14.0	22.2	11.8	-21.4	32.5	19.2	1.5	17.5	33.5	11.8	0.6	12.1	22.2	-1.5	26.5	20.0	26.5	-3.2	9.5	11.4
Large Cap Value	7.0	2.8	1.0	39.2	16.5	7.5	18.4	11.6	-25.9	28.4	16.8	0.4	16.4	33.1	6.0	0.0	11.8	21.7	-3.5	25.5	18.3	25.2	-3.5	9.5	11.2
Hedge Funds of Funds	4.1	-2.4	-6.0	29.9	14.3	6.3	15.5	10.3	-33.8	23.3	16.1	-2.1	15.3	23.3	4.9	-0.8	11.2	14.6	-6.0	22.4	14.0	17.7	-3.5	8.0	10.7
Small Cap Value	6.0	2.5	-5.9	30.0	14.5	7.1	16.6	10.9	-28.9	27.2	16.7	0.1	16.3	32.5	5.6	-0.4	11.3	17.1	-4.8	22.0	10.3	14.8	-4.3	8.0	9.3
Emerging Markets Equity	-3.0	-5.6	-11.4	29.7	12.9	5.3	15.1	7.0	-35.6	20.6	15.5	-2.9	14.6	12.1	4.2	-1.4	8.0	13.7	-8.3	18.6	7.8	11.3	-4.8	7.8	6.5
60/40 Global Portfolio	-7.3	-9.1	-15.5	25.2	11.4	4.7	13.3	7.0	-36.8	19.7	13.1	-4.2	11.5	11.0	3.4	-2.5	7.1	7.8	-9.3	18.4	7.5	8.9	-5.7	7.2	6.2
International Equity	-7.8	-9.2	-15.7	23.9	9.1	4.6	10.4	5.8	-37.6	18.9	10.2	-5.5	10.5	9.0	2.8	-3.8	5.7	7.7	-11.0	8.7	4.6	6.5	-6.5	7.0	3.8
Large Cap Equity	-14.0	-12.4	-20.5	11.6	6.9	4.6	9.1	4.4	-38.4	11.5	8.2	-5.7	4.8	0.1	0.0	-4.4	2.6	7.0	-11.2	7.8	2.8	2.8	-8.2	6.6	3.2
Small Cap Equity	-22.4	-19.5	-21.7	9.0	6.3	4.2	4.8	-0.2	-38.5	5.9	6.5	-11.7	4.2	-2.0	-1.8	-7.5	1.0	3.5	-12.9	7.7	0.5	0.0	-8.7	4.5	2.5
Large Cap Growth	-22.4	-20.4	-27.9	4.1	4.3	3.2	4.3	-1.6	-43.1	0.2	5.7	-13.3	0.1	-2.3	-4.5	-14.9	0.5	1.7	-13.8	6.4	0.5	-1.5	-12.5	2.7	0.6
Small Cap Growth	-30.6	-21.2	-30.3	1.0	1.4	2.4	2.1	-9.8	-53.2	-16.9	0.1	-18.2	-1.1	-9.5	-17.0	-24.7	0.3	0.9	-14.6	2.1	-3.1	-2.5	-13.0	1.1	-1.9
	L	arge C	ap Equ	iity				Sm	nall Ca	p Grov	wth				Cor	mmod	ities								
	L	arge C	ap Val	ue				Int	ternat	ional E	quity				Rea	al Esta	te								
	L	arge C	ap Gro	wth				Em	nergin	g Mark	ets Eq	uity			He	dge Fu	nds of	Funds	5						
	S	mall C	ap Equ	iity				US	Bond	s					609	% MSCI	ACWI	/40%	Bloom	berg G	Global E	Bond			

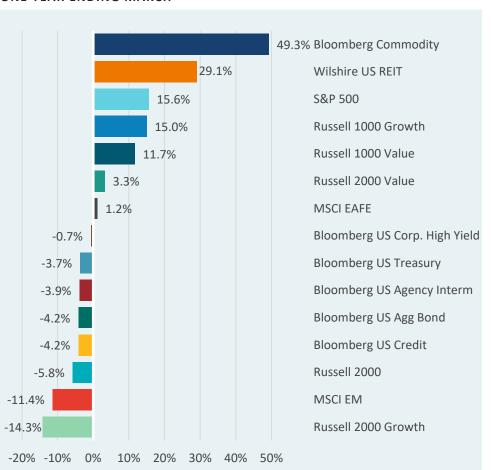
Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, Bloomberg US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, Bloomberg Global Bond. NCREIF Property Index performance data as of 12/31/21.

Cash



Major asset class returns

ONE YEAR ENDING MARCH



TEN YEARS ENDING MARCH



*Only publicly traded asset performance is shown here. Performance of private assets is typically released with a 3- to 6-month delay.

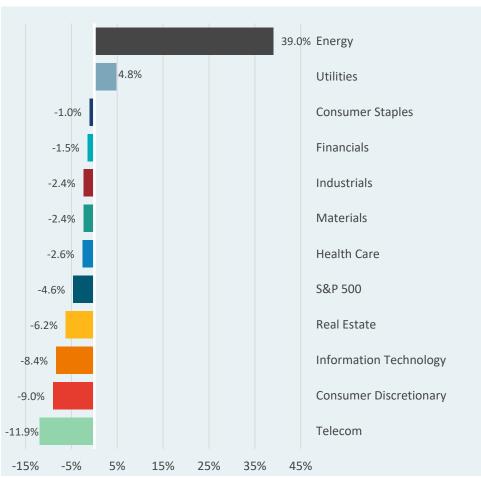
Source: Morningstar, as of 3/31/22

Source: Morningstar, as of 3/31/22

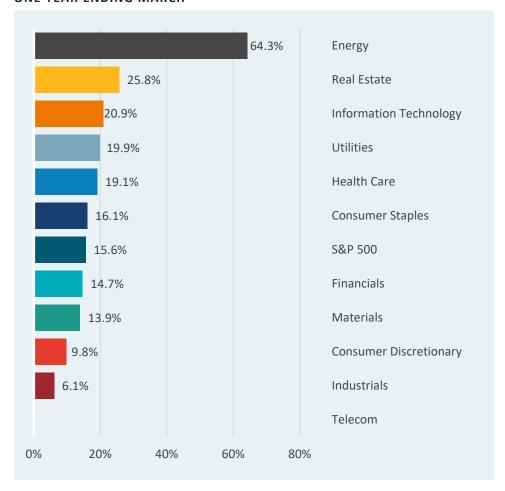


S&P 500 sector returns

Q1 2022



ONE YEAR ENDING MARCH

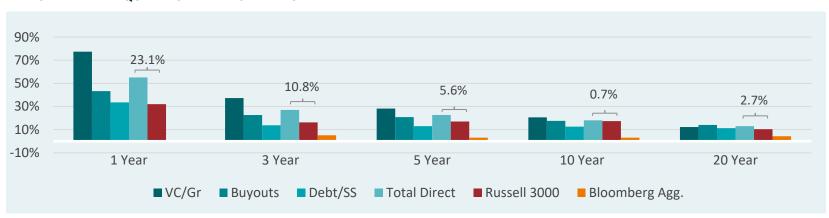


Source: Morningstar, as of 3/31/22 Source: Morningstar, as of 3/31/22



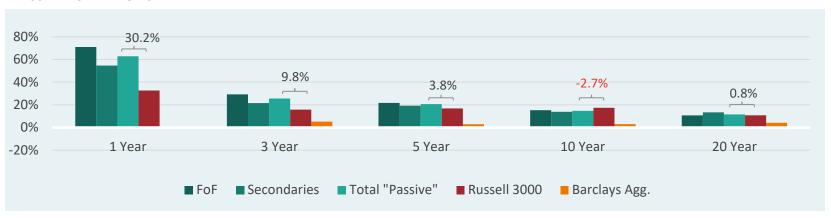
Private equity vs. traditional assets performance

DIRECT PRIVATE EQUITY FUND INVESTMENTS



Direct P.E Fund Investments outperformed comparable public equites across all time periods.

"PASSIVE" STRATEGIES



"Passive" strategies outperformed comparable public equities across all time periods, aside from the 10-year basis.

Sources: C|A PME: U.S. Private Equity Funds sub asset classes as of September 30, 2021. Public Market Equivalent returns resulted from "Total Passive" and Total Direct's identical cash flows invested into and distributed from respective traditional asset comparable.



Private vs. liquid real assets performance

GLOBAL NATURAL RESOURCES FUNDS



N.R. funds underperformed the MSCI World Natural Resources benchmark across all time periods.

GLOBAL INFRASTRUCTURE FUNDS



Infra. funds outperformed the S&P Infra. across all periods, aside from the 1-year basis.

Sources: C/A PME: Global Natural Resources (vintage 1999 and later, inception of MSCI World Natural Resources benchmark) and Global Infrastructure (vintage 2002 and later, inception of S&P Infrastructure benchmark) universes as of September 30, 2021. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real assets universes.



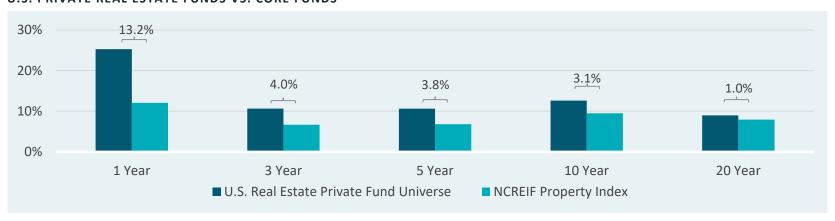
Private vs. liquid and core real estate performance

U.S. PRIVATE REAL ESTATE FUNDS VS. LIQUID UNIVERSE



U.S. Private
R.E. funds
underperformed
the Wilshire
U.S. REIT Index
across all time
periods, aside on
a 5-year basis.

U.S. PRIVATE REAL ESTATE FUNDS VS. CORE FUNDS



U.S. Private R.E. Funds outperformed the NCREIF Property Index across all time periods.

Sources: C/A PME: U.S. Real Estate universes as of September 30, 2021. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real estate universes.



Detailed index returns

DOMESTIC EQUITY								FIXED INCOME							
	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year		Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Core Index								Broad Index							
S&P 500	3.7	(4.6)	(4.6)	15.6	18.9	16.0	14.6	Bloomberg US TIPS	(1.9)	(3.0)	(3.0)	4.3	6.2	4.4	2.7
S&P 500 Equal Weighted	2.6	(2.7)	(2.7)	13.1	17.0	13.9	14.0	Bloomberg US Treasury Bills	(0.0)	(0.0)	(0.0)	(0.0)	0.8	1.1	0.6
DJ Industrial Average	2.5	(4.1)	(4.1)	7.1	12.6	13.4	12.8	Bloomberg US Agg Bond	(2.8)	(5.9)	(5.9)	(4.2)	1.7	2.1	2.2
Russell Top 200	3.7	(4.9)	(4.9)	15.7	20.1	17.0	15.2	Bloomberg US Universal	(2.7)	(6.1)	(6.1)	(4.2)	1.9	2.3	2.6
Russell 1000	3.4	(5.1)	(5.1)	13.3	18.7	15.8	14.5	Duration							
Russell 2000	1.2	(7.5)	(7.5)	(5.8)	11.7	9.7	11.0	Bloomberg US Treasury 1-3 Yr	(1.4)	(2.5)	(2.5)	(3.0)	0.8	1.0	0.8
Russell 3000	3.2	(5.3)	(5.3)	11.9	18.2	15.4	14.3	Bloomberg US Treasury Long	(5.3)	(10.6)	(10.6)	(1.4)	3.3	3.9	4.0
Russell Mid Cap	2.6	(5.7)	(5.7)	6.9	14.9	12.6	12.9	Bloomberg US Treasury	(3.1)	(5.6)	(5.6)	(3.7)	1.4	1.8	1.7
Style Index								Issuer							
Russell 1000 Growth	3.9	(9.0)	(9.0)	15.0	23.6	20.9	17.0	Bloomberg US MBS	(2.6)	(5.0)	(5.0)	(4.9)	0.6	1.4	1.7
Russell 1000 Value	2.8	(0.7)	(0.7)	11.7	13.0	10.3	11.7	Bloomberg US Corp. High Yield	(1.1)	(4.8)	(4.8)	(0.7)	4.6	4.7	5.7
Russell 2000 Growth	0.5	(12.6)	(12.6)	(14.3)	9.9	10.3	11.2	Bloomberg US Agency Interm	(2.1)	(3.7)	(3.7)	(3.9)	0.7	1.1	1.2
Russell 2000 Value	2.0	(2.4)	(2.4)	3.3	12.7	8.6	10.5	Bloomberg US Credit	(2.5)	(7.4)	(7.4)	(4.2)	2.8	3.2	3.4
INTERNATIONAL EQUITY								OTHER							
Broad Index								Index							
MSCI ACWI	2.2	(5.4)	(5.4)	7.3	13.8	11.6	10.0	Bloomberg Commodity	8.6	25.5	25.5	49.3	16.1	9.0	(0.7)
MSCI ACWI ex US	0.2	(5.4)	(5.4)	(1.5)	7.5	6.8	5.6	Wilshire US REIT	6.9	(3.9)	(3.9)	29.1	11.9	10.0	9.9
MSCI EAFE	0.6	(5.9)	(5.9)	1.2	7.8	6.7	6.3	CS Leveraged Loans	0.0	(0.1)	(0.1)	3.2	4.1	4.1	4.5
MSCI EM	(2.3)	(7.0)	(7.0)	(11.4)	4.9	6.0	3.4	S&P Global Infrastructure	5.9	7.5	7.5	16.7	8.0	7.7	7.8
MSCI EAFE Small Cap	(0.0)	(8.5)	(8.5)	(3.6)	8.5	7.4	8.3	Alerian MLP	2.0	18.9	18.9	37.5	1.4	(1.1)	1.2
Style Index								Regional Index							
MSCI EAFE Growth	0.6	(11.9)	(11.9)	(1.5)	9.8	8.9	7.5	JPM EMBI Global Div	(0.9)	(10.0)	(10.0)	(7.4)	0.0	1.7	3.7
MSCI EAFE Value	0.7	0.3	0.3	3.6	5.2	4.2	4.9	JPM GBI-EM Global Div	(1.5)	(6.5)	(6.5)	(8.5)	(1.1)	0.2	(0.7)
Regional Index								Hedge Funds							
MSCIUK	0.1	1.8	1.8	13.6	5.3	5.5	4.5	HFRI Composite	(0.1)	(1.6)	(1.6)	2.6	8.3	6.2	5.1
MSCI Japan	(0.5)	(6.6)	(6.6)	(6.5)	6.8	6.1	6.5	HFRI FOF Composite	0.6	(2.7)	(2.7)	1.3	5.9	4.6	3.9
MSCI Euro	(1.7)	(11.1)	(11.1)	(3.4)	6.8	5.5	5.9	Currency (Spot)							
MSCI EM Asia	(3.1)	(8.7)	(8.7)	(15.2)	6.1	7.2	5.8	Euro	(0.9)	(2.2)	(2.2)	(5.3)	(0.3)	0.8	(1.8)
MSCI EM Latin American	13.1	27.3	27.3	23.5	3.2	4.1	(1.1)	Pound Sterling	(1.9)	(2.8)	(2.8)	(4.6)	0.3	1.0	(1.9)
								Yen	(5.1)	(5.1)	(5.1)	(9.0)	(3.0)	(1.7)	(3.8)

EIVED INCOME

Source: Morningstar, HFRI, as of 3/31/22.



DOMESTIC FOLLITY

Definitions

Bloomberg US Weekly Consumer Comfort Index - tracks the public's economic attitudes each week, providing a high-frequency read on consumer sentiment. The index, based on cell and landline telephone interviews with a random, representative national sample of U.S. adults, tracks Americans' ratings of the national economy, their personal finances and the buying climate on a weekly basis, with views of the economy's direction measured separately each month. (www.langerresearch.com)

University of Michigan Consumer Sentiment Index - A survey of consumer attitudes concerning both the present situation as well as expectations regarding economic conducted by the University of Michigan. For the preliminary release approximately three hundred consumers are surveyed while five hundred are interviewed for the final figure. The level of consumer sentiment is related to the strength of consumer spending. (www.Bloomberg.com)

NFIB Small Business Outlook - Small Business Economic Trends (SBET) is a monthly assessment of the U.S. small-business economy and its near-term prospects. Its data are collected through mail surveys to random samples of the National Federal of Independent Business (NFIB) membership. The survey contains three broad question types: recent performance, near-term forecasts, and demographics. The topics addressed include: outlook, sales, earnings, employment, employee compensation, investment, inventories, credit conditions, and single most important problem. (https://www.nfib-sbet.org/about/)

NAHB Housing Market Index – the housing market index is a weighted average of separate diffusion induces for three key single-family indices: market conditions for the sale of new homes at the present time, market conditions for the sale of new homes in the next six months, and the traffic of prospective buyers of new homes. The first two series are rated on a scale of Good, Fair, and Poor and the last is rated on a scale of High/Very High, Average, and Low/Very Low. A diffusion index is calculated for each series by applying the formula "(Good-Poor + 100)/2" to the present and future sales series and "(High/Very High-Low/Very Low + 100)/2" to the traffic series. Each resulting index is then seasonally adjusted and weighted to produce the HMI. Based on this calculation, the HMI can range between 0 and 100.

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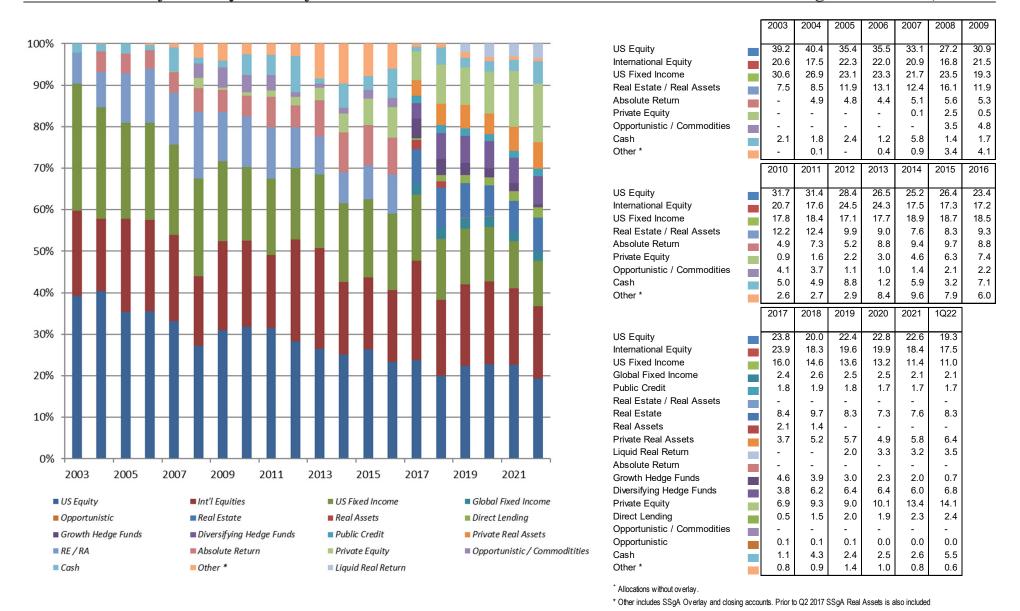
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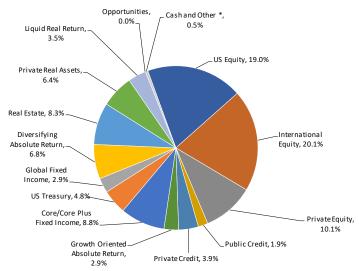


Period Ending: March 31, 2022



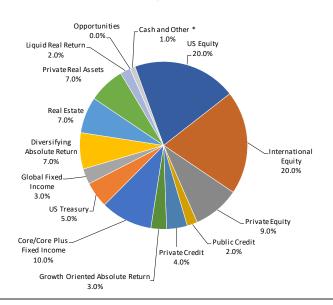
Period Ending: March 31, 2022





ASSET ALLOCATION	MARKET VALUE W/OVERLAY	W/ OVERLAY	W/O OVERLAY
US Equity	2,439,776,948	19.0%	19.3%
International Equity	2,582,822,246	20.1%	17.5%
Private Equity	1,300,634,003	10.1%	14.1%
Public Credit	247,702,042	1.9%	1.7%
Private Credit	499,567,309	3.9%	2.4%
Growth Oriented Absolute Return	368,090,964	2.9%	0.7%
Core/Core Plus Fixed Income	1,129,805,947	8.8%	7.5%
US Treasury	621,653,545	4.8%	3.5%
Global Fixed Income	372,016,063	2.9%	2.1%
Diversifying Absolute Return	874,667,900	6.8%	6.8%
Real Estate	1,063,265,755	8.3%	8.3%
Private Real Assets	827,042,382	6.4%	6.4%
Liquid Real Return	455,848,420	3.5%	3.5%
Opportunities	1,975,845	0.0%	0.0%
Cash and Other *	63,177,410	0.5%	6.1%
TOTAL	12,848,046,781	100.0%	100.0%

Target



ASSET ALLOCATION	ACTUAL	TARGET	DIFF
US Equity	19.0%	20.0%	-1.0%
International Equity	20.1%	20.0%	0.1%
Private Equity	10.1%	9.0%	1.1%
Public Credit	1.9%	2.0%	-0.1%
Private Credit	3.9%	4.0%	-0.1%
Growth Oriented Absolute Return	2.9%	3.0%	-0.1%
Core/Core Plus Fixed Income	8.8%	10.0%	-1.2%
US Treasury	4.8%	5.0%	-0.2%
Global Fixed Income	2.9%	3.0%	-0.1%
Diversifying Absolute Return	6.8%	7.0%	-0.2%
Real Estate	8.3%	7.0%	1.3%
Private Real Assets	6.4%	7.0%	-0.6%
Liquid Real Return	3.5%	2.0%	1.5%
Opportunities	0.0%	0.0%	0.0%
Cash and Other *	0.5%	1.0%	-0.5%



^{*} Other includes closing accounts (Heitman), Transition Account and SSgA Overlay of \$81.4 million.

- The Total Plan returned -2.1% net in the first quarter of 2022 and ranked in the top quartile among other public funds greater than \$1 billion. The Plan underperformed its policy index by 40bps over this time period. Longer-term, the three-year return of 12.0% ranks in the top quartile of large public plan peer group which returned 11.1%. The five-year return of 10.7% ranks in the top decile of the large public plan peer group.
- First quarter results (net) were enhanced by the following factors:
 - The Real Return category returned 5.9% for the quarter, led by private real assets which returned 7.0% and real estate returning 6.0%. With inflation continuing to move higher, the positive results from your inflation protection portfolio reaffirmed the role it plays in SCERS' plan.
 - Diversifying Absolute Return was up in the first quarter (+1.1%), providing a positive return when most other liquid market assets were down meaningfully.
 - Private equity was up 3.2% for the quarter which led performance among the growth asset category investments. Some of that
 outperformance could be a result of lagged valuations, however.
- First quarter results (net) were hindered by the following factors:
 - The Growth Asset Category was down 4.1% during the first quarter, led by public equities which fell 7.0%, largely on concerns around rising interest rates.
 - Diversifying Fixed Income suffered a large drawdown during the first quarter as the specter of rising rates pushed prices lower and thus yields higher. Core Plus Fixed Income was down 6.1% and U.S. Treasuries were down 5.4% as Central Bank Policy tightens amid soaring inflation.



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD F (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date ⁺
Total Fund - Gross* Total Fund - Net**	12,848,046,781	100.0	-2.1 -2.1	12 12	3.8 3.6	9 10	10.2 10.0	10 13	12.2 12.0	13 18	10.9 10.7	5	9.3 9.0	16 31	8.7 8.5	Jun-86
Policy Index ¹			-1.7	9	3.4	18	8.5	34	10.5	61	9.1	63	8.4	56	8.6	Jun-86
InvMetrics Public DB > \$1B Gross Median			-3.5	Ü	1.3	70	7.6	01	11.1	01	9.3	00	8.7	00	8.3	Jun-86
Total Fund ex Overlay - Gross	12,766,647,258	99.4	-2.1	12	4.1	8	10.6	10	12.0	18	10.8	6	9.2	24	8.6	Jun-86
Total Fund ex Overlay - Net		-	-2.1	12	3.9	8	10.4	10	11.8	21	10.6	7	8.9	35	8.4	
Policy Index			-1.7	9	3.4	18	8.5	34	10.5	61	9.1	63	8.4	56	8.6	Jun-86
Growth Asset Category - Gross	7,159,556,058	55.7	-4.1		2.7		11.6		16.0		14.0				14.0	Mar-17
Growth Asset Category - Net			-4.1	-	2.5	-	11.3		15.7	-	13.6	-	-		13.6	
Growth Custom ¹			-3.0		2.8		9.7		14.3		12.1				12.1	Mar-17
Equities - Gross Public	4,720,834,027	36.7	-6.9		-3.1		3.7		13.4		12.0		10.8		10.0	Jun-11
Equities - Net			-7.0	-	-3.4		3.2		12.9	-	11.6		10.4		9.7	
MSCI ACWI			-5.4		-0.1		7.3		13.8		11.6		10.0		9.2	Jun-11
US Equity - Gross	2,476,695,350	19.3	-5.7	68	2.5	62	10.9	54	18.1	20	15.4	15	14.2	25	10.7	Jun-86
US Equity - Net			-5.8	71	2.3	68	10.6	58	17.8	30	15.1	29	13.8	39	10.5	
Russell 3000 ¹			-5.3	50	3.4	46	11.9	32	18.2	13	15.4	18	14.3	19	10.8	Jun-86
InvMetrics All DB US Eq Gross Median			-5.3		3.2		11.2		17.2		14.6		13.6		10.4	Jun-86
Large Cap - Gross	2,236,406,620	17.4	-5.2		3.9		12.7		18.7		15.8		14.5		7.8	Mar-98
Large Cap - Net			-5.3	-	3.7		12.5	-	18.4	-	15.6		14.2		7.6	
Russell 1000			-5.1		4.4		13.3		18.7		15.8		14.5		8.2	Mar-98

^{1.} See Policy Index and Benchmark History



^{*}Total Fund and asset class composites are ranked against InvestorForce universes. Managers are ranked against eVest manager universes. Net Returns are ranked against gross universe. Ranking of 1 is a top ranking and ranking of 100 is a bottom rating.

^{**}Total Fund ex Overlay returns from 2/1/2006-12/31/2010 were calculated using the overlay impact provided by SSgA.

⁺ Since inception date denotes last day of the month.

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD F (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Large Cap - Index - Gross	1,237,702,051	9.6	-5.1		4.4		13.3		18.7		15.8		14.5		12.9	Sep-08
Large Cap - Index - Net			-5.1	-	4.4	-	13.3	-	18.7	-	15.8		14.5		12.9	
Russell 1000			-5.1		4.4		13.3		18.7		15.8		14.5		12.9	Sep-08
AB - Gross	1,237,702,051	9.6	-5.1	68	4.4	78	13.3	77	18.7	67	15.8	68	14.5	69	10.8	Apr-89
AB - Net			-5.1	68	4.4	80	13.3	80	18.7	67	15.8	69	14.5	69	10.7	
Russell 1000 ¹			-5.1	75	4.4	84	13.3	80	18.7	63	15.8	64	14.5	65		Apr-89
eV US Passive Large Cap Equity Gross Median			-4.6		6.2		15.1		18.9		16.0		14.6		10.8	Apr-89
Large Cap - Enhanced - Gross	338,018,494	2.6	-3.1		6.8		14.8		18.6						15.0	Jul-18
Large Cap - Enhanced - Net			-3.2		6.6		14.5		18.3						14.7	
Russell 1000			-5.1		4.4		13.3		18.7		15.8		14.5		15.7	Jul-18
AQR US Enhanced Equity - Gross	338,018,494	2.6	-3.1	7	6.8	17	14.8	39	18.6	44					15.0	Jul-18
AQR US Enhanced Equity - Net			-3.2	8	6.6	23	14.5	42	18.3	50					14.7	
Russell 1000			-5.1	63	4.4	63	13.3	57	18.7	42	15.8	43	14.5	55	15.7	Jul-18
eV US Enh Equity Gross Median			-4.7		5.5		14.1		18.3		15.6		14.6		15.3	Jul-18
Large Cap (130/30) - Gross	337,105,189	2.6	-4.5		6.3		15.0		19.7		15.7		15.4		13.5	Sep-08
Large Cap (130/30) - Net			-4.6		6.0		14.5	-	19.1	-	15.1	-	14.7		12.9	
Russell 1000			-5.1		4.4		13.3		18.7		15.8		14.5		12.9	Sep-08
JP Morgan 130/30 - Gross	172,649,335	1.3	-6.2	94	6.1	74	15.1	67	21.8	8	17.0	20	16.0	28	13.7	Jul-08
JP Morgan 130/30 - Net			-6.4	96	5.6	86	14.4	78	21.0	15	16.3	31	15.2	52	13.0	
Russell 1000			-5.1	83	4.4	96	13.3	89	18.7	44	15.8	43	14.5	68	12.0	Jul-08
eV Extended US Equity Gross Median			-2.7		7.4		17.2		18.0		15.4		15.3		12.8	Jul-08
DE Shaw Broad Mkt Core Alpha Ext - Gross	164,455,854	1.3	-2.7	50	6.6	63	14.9	69	17.5	57					18.3	Jan-19
DE Shaw Broad Mkt Core Alpha Ext - Net			-2.7	51	6.4	68	14.6	77	17.1	65					17.9	
Russell 1000			-5.1	83	4.4	96	13.3	89	18.7	44	15.8	43	14.5	68	19.5	Jan-19
eV Extended US Equity Gross Median			-2.7		7.4		17.2		18.0		15.4		15.3		18.1	Jan-19

^{1.} See Policy Index and Benchmark History.



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD F (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Large Cap Active - Gross	323,580,886	2.5	-8.5		-2.9		6.4		17.2		14.5		13.9		12.1	Sep-08
Large Cap Active - Net			-8.7	-	-3.4		5.6	-	16.4	-	13.6		13.1		11.4	
Russell 1000 ¹			-5.1		4.4		13.3		18.7		13.9		13.5		11.3	Sep-08
Eagle Capital - Gross	323,560,622	2.5	-8.5	92	-2.9	98	6.4	96	17.2	60	15.2	52	14.9	26	15.1	Feb-12
Eagle Capital - Net			-8.7	93	-3.4	98	5.6	97	16.4	73	14.3	69	14.1	55	14.3	
Russell 1000			-5.1	54	4.4	62	13.3	57	18.7	35	13.9	75	13.5	70	13.7	Feb-12
eV US Large Cap Core Equity Gross Median			-4.9		5.3		13.8		17.7		15.3		14.2		14.5	Feb-12
Small Cap - Gross	240,288,730	1.9	-9.9		-9.7		-4.4		13.2		13.2		12.6		12.2	Dec-90
Small Cap - Net			-10.3		-10.5		-5.2		12.5		12.5		11.9		11.4	
Russell 2000			-7.5		-9.7		-5.8		11.7		9.7		11.0		10.7	Dec-90
Small Cap - Growth - Gross	120,607,938	0.9	-15.4		-17.3		-10.8		15.8		19.8		15.1		13.7	Sep-08
Small Cap - Growth - Net			-15.8		-18.2		-11.8		14.9		19.0		14.4		13.0	
Russell 2000 Growth			-12.6		-17.6		-14.3		9.9		10.3		11.2		10.8	Sep-08
Weatherbie - Gross	120,607,938	0.9	-15.4	72	-17.3	71	-10.8	68	15.8	49	21.2	10	17.1	10	14.1	Dec-02
Weatherbie - Net			-15.8	78	-18.2	73	-11.8	69	14.9	58	20.4	13	16.3	14	13.2	
Russell 2000 Growth			-12.6	47	-17.6	72	-14.3	79	9.9	93	10.3	95	11.2	95	10.9	Dec-02
eV US Small Cap Growth Equity Gross Median			-12.9		-12.3		-8.2		15.7		15.9		14.2		13.4	Dec-02
Small Cap - Value - Gross	119,680,792	0.9	-3.2		0.4		3.8		9.0		5.7		9.6		9.1	Sep-08
Small Cap - Value - Net			-3.4		-0.2		3.0		8.4		5.2		8.8		8.3	
Russell 2000 Value			-2.4		-1.2		3.3		12.7		8.6		10.5		9.1	Sep-08
Snyder Capital Management - Gross	119,680,792	0.9	-3.2	55	0.4	65	3.8	68							9.8	Jan-21
Snyder Capital Management - Net			-3.4	57	-0.2	69	3.0	73							9.1	
Russell 2000 Value			-2.4	40	-1.2	77	3.3	70	12.7	67	8.6	74	10.5	81	16.0	Jan-21
eV US Small Cap Value Equity Gross Median			-2.9		2.0		6.1		14.2		9.9		11.7		20.1	Jan-21

^{1.} See Policy Index and Benchmark History.



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD F (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
International Equity - Gross	2,244,138,677	17.5	-8.1	67	-9.1	71	-4.0	69	8.2	44	8.2	20	6.8	35	6.5	Dec-87
International Equity - Net			-8.2	70	-9.5	75	-4.5	75	7.5	62	7.6	30	6.3	51	6.2	
MSCI ACWI ex US ¹			-5.3	15	-6.3	22	-1.0	26	8.0	47	7.3	37	6.0	62	6.3	Dec-87
InvMetrics All DB ex-US Eq Gross Median			-7.2		-7.8		-2.6		7.9		6.9		6.3		6.9	Dec-87
International - Developed - Gross	1,831,904,431	14.3	-7.7	55	-6.0	25	-0.2	22	9.1	42	8.7	32	7.6	42	5.1	Mar-98
International - Developed - Net			-7.8	55	-6.4	30	-0.8	25	8.4	51	8.1	42	7.1	60	4.6	
MSCI World ex US Gross			-4.7	17	-2.2	6	3.6	6	9.1	42	7.7	46	6.8	62	5.2	<i>Mar-</i> 98
InvMetrics All DB Dev Mkt ex-US Eq Gross Median			-6.9		-8.2		-3.1		8.4		7.2		7.3		5.2	Mar-98
Large Cap - Gross	1,611,671,465	12.5	-6.7	56	-4.7	56	1.0	48	9.1	49	8.9	31	7.5	36	5.6	Dec-04
Large Cap - Net			-6.8	57	-5.1	61	0.4	54	8.4	57	8.2	38	7.0	53	5.1	
MSCI World ex US Gross			-4.7	34	-2.2	27	3.6	26	9.1	50	7.7	47	6.8	65	5.6	Dec-04
eV EAFE Large Cap Equity Gross Median			-6.1		-4.0		0.8		9.1		7.3		7.1		6.0	Dec-04
Lazard - Gross	446,268,801	3.5	-6.8	45	-8.1	58	-4.1	68	6.9	83	7.8	63			8.4	Jun-12
Lazard - Net			-6.8	45	-8.3	60	-4.4	69	6.6	85	7.4	68			8.1	
MSCI ACWI ex USA Gross			-5.3	31	-6.3	43	-1.0	43	8.0	73	7.3	70	6.0	83	7.0	Jun-12
eV All ACWI ex-US Equity Gross Median			-7.6		-7.2		-1.8		10.1		8.5		7.8		8.7	Jun-12
Walter Scott & Partners Limited - Gross	620,652,701	4.8	-12.3	50	-6.9	28	1.5	17	10.6	63	11.3	20			11.3	Mar-17
Walter Scott & Partners Limited - Net			-12.4	51	-7.7	30	0.6	27	9.5	85	10.4	54			10.4	
MSCI World ex USA Growth GR USD			-10.9	40	-7.3	29	0.0	29	10.6	64	9.5	77	7.7	85	9.5	Mar-17
eV EAFE Large Cap Growth Gross Median			-12.4		-10.3		-3.5		11.3		10.5		8.7		10.5	Mar-17
LSV - Gross	544,749,963	4.2	0.7	12	1.2	17	5.0	20	9.2	17	6.9	15	7.6	4	5.2	Dec-04
LSV - Net			0.6	12	0.9	19	4.6	24	8.7	27	6.5	25	7.1	17	4.7	
MSCI World ex US Value Gross			1.7	8	2.8	13	6.9	17	7.0	57	5.5	57	5.7	72	4.7	Dec-04
eV EAFE Large Cap Value Gross Median			-2.2		-2.2		2.5		7.4		5.6		6.4		5.3	Dec-04

^{1.} See Policy Index and Benchmark History.



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD F (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Small Cap - Gross	220,232,966	1.7	-14.7	85	-14.5	86	-8.3	81	8.7	60	7.5	58	7.8	86	8.8	Sep-08
Small Cap - Net			-14.9	86	-15.0	87	-9.1	85	7.8	71	6.7	72	7.0	96	7.9	
MSCI World ex US Small Cap GD			-7.1	31	-6.0	34	-1.3	42	10.0	40	8.2	48	8.2	79	8.6	Sep-08
eV EAFE Small Cap Equity Gross Median			-9.2		-7.9		-2.1		9.2		8.0		9.3		9.6	Sep-08
Mondrian Dev Small Cap - Gross	108,889,859	0.8	-10.6	54	-13.1	75	-9.2	93	6.1	93	6.5	83	7.0	98	8.1	Aug-10
Mondrian Dev Small Cap - Net			-10.8	54	-13.6	80	-9.8	94	5.4	97	5.8	86	6.3	99	7.4	
MSCI World ex US Small Cap GD			-7.1	47	-6.0	35	-1.3	47	10.0	70	8.2	65	8.2	70	8.8	Aug-10
eV ACWI ex-US Small Cap Equity Gross Median			-8.7		-8.7		-1.9		11.2		9.5		9.4		10.4	Aug-10
William Blair Dev Small Cap - Gross	111,343,107	0.9	-18.4	85	-15.8	91	-7.6	89	11.4	49	8.5	64	8.6	64	9.4	Sep-08
William Blair Dev Small Cap - Net			-18.6	86	-16.4	91	-8.4	92	10.4	59	7.5	78	7.7	80	8.4	
MSCI World ex US Small Cap GD			-7.1	47	-6.0	35	-1.3	47	10.0	70	8.2	65	8.2	70	8.6	Sep-08
eV ACWI ex-US Small Cap Equity Gross Median			-8.7		-8.7		-1.9		11.2		9.5		9.4		10.0	Sep-08
International - Emerging - Gross	412,230,051	3.2	-9.7	69	-21.0	92	-17.9	90	4.5	73	6.2	45	3.1	79	6.2	Jan-00
International - Emerging - Net			-9.7	69	-21.1	92	-18.1	93	4.2	75	5.9	50	2.8	91	5.7	
MSCI Emerging Markets Gross			-6.9	38	-15.4	59	-11.1	71	5.3	60	6.4	35	3.7	57	6.7	Jan-00
InvMetrics All DB Emg Mkt Eq Gross Median			-8.3		-14.8		-8.9		6.6		5.9		3.9			Jan-00
Baillie Gifford Emg All Cap - Gross	219,483,301	1.7	-13.2	85	-25.3	95	-21.9	96	4.6	78	8.0	34			10.2	Mar-16
Baillie Gifford Emg All Cap - Net			-13.2	85	-25.3	95	-21.9	96	4.6	78	8.0	34			10.2	
MSCI Emerging Markets Gross			-6.9	48	-15.4	57	-11.1	57	5.3	69	6.4	63	3.7	81	8.2	Mar-16
eV Emg Mkts Equity Gross Median			-7.3		-14.2		-9.6		6.8		7.1		4.9		9.2	Mar-16
Mondrian Emg All Cap - Gross	192,746,750	1.5	-5.3	36	-15.3	56	-12.8	65	4.4	80	4.6	89			6.1	Mar-16
Mondrian Emg All Cap - Net			-5.5	37	-15.7	59	-13.3	67	3.8	84	4.0	92			5.5	
MSCI Emerging Markets Gross			-6.9	48	-15.4	57	-11.1	57	5.3	69	6.4	63	3.7	81	8.2	Mar-16
eV Emg Mkts Equity Gross Median			-7.3		-14.2		-9.6		6.8		7.1		4.9		9.2	Mar-16



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD F (%)	Rank	1 Yr (%)	Rank	3 Yrs (%) F	Rank	5 Yrs (%)	Rank	10 Yrs (%) F	Rank	Inception (%)	Inception Date
Private Equity - Gross-+**++	1,810,106,852	14.1	3.2	35	23.0	17	44.8	9	30.3	8	26.9	1	19.0	7	8.2	Feb-08
Private Equity - Net			3.2	35	23.0	17	44.8	9	30.3	8	26.9	1	19.0	7	8.4	
Thomson Reuters C A All PE 1 Qtr Lag			5.1	14	24.1	16	35.7	20	24.5	12	19.8	20	18.7	8	13.0	Feb-08
Russell 3000 +3% 1Q Lag			10.0	1	20.0	27	28.7	32	28.8	9	21.0	19	19.3	6	13.9	Feb-08
InvMetrics All DB Private Eq Net Median			0.8		10.6		24.5		18.7		15.2		11.8		9.2	Feb-08
Abbott VI - Gross*	35,341,832	0.3	0.0		18.9		33.8		24.6		22.3		17.1		8.7	Jul-08
Abbott VI - Net			0.0		18.9	-	33.8		24.6		22.3		17.1			
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		13.9	Jul-08
Accel-KKR IV - Gross	19,991,710	0.2	25.3		104.4		127.9		53.1		65.0				23.0	Jun-13
Accel-KKR IV - Net			25.3		104.4		127.9		53.1		65.0				23.0	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		17.7	Jun-13
Accel-KKR V - Gross	28,326,837	0.2	7.5		27.9		84.6		41.5		28.5				27.5	Jan-17
Accel-KKR V - Net			7.5		27.9	-	84.6		41.5		28.5				27.5	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		20.5	Jan-17
Accel-KKR VI - Gross	7,277,038	0.1	5.4		-9.3	-	-49.6								-46.9	Feb-21
Accel-KKR VI - Net			5.4		-9.3	-	-49.6								-46.9	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		50.6	Feb-21
Accel-KKR Growth Partners II - Gross	11,305,633	0.1	3.6		48.7	-	175.7		57.0		42.3				21.0	Feb-15
Accel-KKR Growth Partners II - Net			3.6		48.7		175.7		57.0		42.3				21.0	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		16.5	Feb-15
Accel-KKR Growth Partners III - Gross	33,231,184	0.3	5.1		30.3		50.5								6.5	Jul-19
Accel-KKR Growth Partners III - Net			5.1		30.3		50.5								6.5	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		26.0	Jul-19

⁺ Returns for private markets are shown on a time-weighted basis and may differ substantially from dollar-weighted returns.



^{1.} See Policy Index and Benchmark History.

^{*} Preliminary quarterly returns as of 3/31/2022. (Returns are not available at reporting period.)

^{**} Private Equity Composite includes the historical returns of Summit Credit and Athyrium Opportunities up to 4/1/17.

⁺⁺ Returns are one-quarter lag.

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD F (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Atalaya Special Opp VI - Gross Atalaya Special Opp VI - Net	5,190,596	0.0	9.9 9.9		16.7 16.7	 	19.4 19.4		25.6 25.6		19.4 19.4	 			16.7 16.7	Apr-16
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		20.3	Apr-16
Canvas Ventures III - Gross	8,568,831	0.1	18.9		11.7	_	6.4			_					-0.2	Nov-20
Canvas Ventures III - Net			18.9		11.7		6.4			_					-0.2	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		49.5	Nov-20
Cortec Group Fund VII - Gross	27,572,869	0.2	4.9		32.7		30.7								33.5	Dec-19
Cortec Group Fund VII - Net			4.9		32.7	-	30.7	-		-					33.5	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		29.1	Dec-19
CRV Select Fund I - Gross	20,394,362	0.2	5.9		18.3										18.3	May-21
CRV Select Fund I - Net			5.9		18.3										18.3	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		35.7	May-21
CRV Select Fund II - Gross	3,712,500	0.0														Mar-22
CRV Select Fund II - Net																
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7			Mar-22
CRV XVIII LP - Gross	16,538,356	0.1	6.2		12.9		8.2								7.5	Feb-21
CRV XVIII LP - Net			6.2		12.9		8.2								7.5	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		50.6	Feb-21
Davidson Kempner LT Dist Opp IV - Gross	39,309,471	0.3	8.9		21.4		25.1		11.6						12.9	Mar-18
Davidson Kempner LT Dist Opp IV - Net			8.9		21.4		25.1		11.6						12.9	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		21.0	Mar-18
Davidson Kempner LT Dist Opp V - Gross	29,726,979	0.2	2.9		10.6		19.5								24.5	May-20
Davidson Kempner LT Dist Opp V - Net			2.9		10.6		19.5								24.5	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		33.6	May-20
Digital Colony Partners II - Gross	16,004,248	0.1	3.4		6.8										6.8	May-21
Digital Colony Partners II - Net			3.4		6.8										6.8	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		35.7	May-21



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD Rank (%)		1 Yr Rank 3 Yrs Ran		ank	5 Yrs Rank		10 Yrs (%) Rank		Inception (%)	Inception Date	
Dyal Capital Partners II - Gross* Dyal Capital Partners II - Net	32,800,964	0.3	0.0 0.0		37.1 37.1		46.9 46.9	 	22.8 22.8		7.4 7.4	 			2.0 2.0	Dec-14
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		16.9	Dec-14
Dyal Capital Partners III - Gross*	23,494,482	0.2	0.0		11.2		14.1		27.0		21.6				24.6	Dec-16
Dyal Capital Partners III - Net			0.0		11.2		14.1	-	27.0		21.6				24.6	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		19.8	Dec-16
Garrison Investment Group - Gross	9,255,058	0.1	21.7	-	36.6		49.7	-	9.1		6.8				3.3	May-12
Garrison Investment Group - Net			21.7	-	36.6		49.7	-	9.1		6.8				3.3	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		17.9	May-12
Gridiron Capital Fund IV - Gross	35,264,277	0.3	4.1	-	39.9		50.2	-							37.0	May-20
Gridiron Capital Fund IV - Net			4.1		39.9		50.2	-							37.0	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		33.6	May-20
Harbourvest VIII - Gross*	9,104,342	0.1	0.0		13.6		30.4		21.4		18.8		15.8		12.1	Dec-07
Harbourvest VIII - Net			0.0		13.6		30.4		21.4		18.8		15.8			
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		12.7	Dec-07
Harbourvest Intl VI - Gross*	30,661,883	0.2	0.0		4.0		19.2	-	20.8		19.6		14.4		-1.5	Mar-09
Harbourvest Intl VI - Net			0.0		4.0		19.2		20.8		19.6		14.4			
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		18.1	Mar-09
H.I.G. Bayside Loan III - Gross	4,203,806	0.0	-5.0		6.7		7.9	_	-1.2		4.4				4.5	Jan-13
H.I.G. Bayside Loan III - Net			-5.0		6.7		7.9		-1.2		4.4				4.5	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		18.5	Jan-13
H.I.G. Capital V - Gross	13,354,076	0.1	8.6		37.9		45.3		26.0		29.7				15.1	Jul-13
H.I.G. Capital V - Net	, ,		8.6		37.9		45.3		26.0		29.7				15.1	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		17.6	Jul-13
H.I.G. Europe Capital II - Gross**	11,148,542	0.1	3.7		15.9		20.1		21.9		17.7					Jan-14
H.I.G. Europe Capital II - Net	, ,-		3.7		15.9		20.1		21.9		17.7					
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5	-	19.8		18.7		17.1	Jan-14

^{*} Preliminary quarterly returns as of 3/31/2022. (Returns are not available at reporting period.)

^{**} Unable to calculate a since inception return due to system limitations when HIG Europe Capital II experienced 2 quarters of negative fund values in 2016.



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD F (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Khosla IV - Gross Khosla IV - Net	25,156,112	0.2	1.3 1.3	 	28.4 28.4	 	55.2 55.2	-	53.2 53.2	-	43.5 43.5		29.5 29.5		26.5 26.5	Jul-11
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		16.9	Jul-11
Khosla V - Gross	56,058,284	0.4	9.2		53.9		155.1		52.7		36.2				25.4	Nov-14
Khosla V - Net			9.2		53.9		155.1		52.7		36.2				25.4	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		16.5	Nov-14
Khosla VI - Gross	50,063,293	0.4	16.6		41.1		48.9		18.1						12.4	Aug-18
Khosla VI - Net			16.6		41.1		48.9		18.1						12.4	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		22.8	Aug-18
Khosla VII - Gross	9,736,443	0.1	18.0		24.6		-3.2								-2.7	Jan-21
Khosla VII - Net			18.0		24.6		-3.2								-2.7	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		46.3	Jan-21
Linden Capital III - Gross	55,857,382	0.4	1.6		41.3		54.1		51.0		41.4				32.5	Jun-16
Linden Capital III - Net			1.6		41.3		54.1		51.0		41.4				32.5	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		19.5	Jun-16
Linden Capital Partners IV - Gross	38,761,128	0.3	7.0		24.8		25.2		-1.0						13.4	Sep-18
Linden Capital Partners IV - Net			7.0		24.8		25.2		-1.0						13.4	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		21.6	Sep-18
Marlin Equity IV - Gross	12,219,076	0.1	1.1		8.3		19.4		13.6		10.9				7.2	Nov-13
Marlin Equity IV - Net			1.1		8.3		19.4	-	13.6		10.9				7.2	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		17.8	Nov-13
Marlin Equity V - Gross	25,055,370	0.2	8.5		18.8		33.8	-	28.9						22.3	Feb-18
Marlin Equity V - Net			8.5		18.8		33.8	-	28.9						22.3	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		21.8	Feb-18
Marlin Heritage - Gross	8,431,150	0.1	5.3		14.5		17.4		28.2		33.9				25.1	Jul-14
Marlin Heritage - Net			5.3		14.5		17.4		28.2		33.9				25.1	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		16.8	Jul-14



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD F (%)	Rank	1 Yr (%)	Rank	3 Yrs (%) F	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Marlin Heritage II - Gross Marlin Heritage II - Net	12,689,795	0.1	8.1 8.1		20.4 20.4	-	28.1 28.1	-	19.8 19.8	-					8.1 8.1	Oct-17
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		20.9	Oct-17
Marlin Heritage Europe - Gross	37,608,083	0.3	18.8		64.6		78.6		46.3						32.4	Aug-17
Marlin Heritage Europe - Net			18.8		64.6		78.6		46.3						32.4	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		20.9	Aug-17
New Enterprise 14 - Gross	58,898,295	0.5	0.9		1.4		68.1		34.6		28.2				19.9	May-12
New Enterprise 14 - Net			0.9		1.4		68.1		34.6		28.2				19.9	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		17.9	May-12
New Enterprise 15 - Gross	53,143,374	0.4	-18.2		-21.9		-0.5	-	15.9		19.9				16.1	Apr-15
New Enterprise 15 - Net			-18.2		-21.9		-0.5		15.9		19.9				16.1	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		17.4	Apr-15
New Enterprise 16 - Gross	45,063,602	0.4	-3.3		-2.4		16.8		18.1						12.5	May-17
New Enterprise 16 - Net			-3.3		-2.4		16.8		18.1						12.5	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		20.6	May-17
New Enterprise 17 - Gross	22,661,005	0.2	1.6		9.4		45.5								23.9	Jul-19
New Enterprise 17 - Net			1.6		9.4		45.5								23.9	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		26.0	Jul-19
OrbiMed Private Investments VIII, LP - Gross	6,674,831	0.1	1.3		4.7		11.0								-4.1	Dec-20
OrbiMed Private Investments VIII, LP - Net			1.3		4.7		11.0								-4.1	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		42.6	Dec-20
Private Equity X - Gross	23,562,012	0.2	-1.0		10.6		20.8		13.3		15.4		13.6		1.7	Jun-08
Private Equity X - Net			-1.0		10.6		20.8		13.3		15.4		13.6			
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		14.2	Jun-08
RCP Multi-Fund Feeder - Gross*	59,921,134	0.5	0.0		15.4		22.7		11.8						7.2	Nov-18
RCP Multi-Fund Feeder - Net			0.0		15.4		22.7		11.8						7.2	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		22.8	Nov-18

^{*} Preliminary quarterly returns as of 3/31/2022. (Returns are not available at reporting period.)



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD F (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
RRJ Capital Master Fund II - Gross RRJ Capital Master Fund II - Net	10,342,979	0.1	7.7 7.7	 	25.6 25.6		38.1 38.1		16.9 16.9		15.9 15.9	 			14.9 14.9	May-13
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		18.1	May-13
RRJ Capital Master Fund III - Gross	13,759,425	0.1	0.3		16.1		22.2		5.4		9.6				-4.4	Dec-15
RRJ Capital Master Fund III - Net	-,,		0.3		16.1		22.2		5.4		9.6				-4.4	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		19.5	Dec-15
Shamrock Capital II - Gross	6,866,788	0.1	-1.3		7.3	_	9.3	_				-			-92.8	Jul-20
Shamrock Capital II - Net			-1.3		7.3	_	9.3								-92.8	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		45.2	Jul-20
Shamrock Capital Growth Fund V - Gross	986,399	0.0	-16.8			_									-44.1	Jul-21
Shamrock Capital Growth Fund V - Net			-16.8												-44.1	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		24.1	Jul-21
Spectrum Equity VII - Gross	64,369,134	0.5	-18.2		13.0	-	35.2		62.3		60.4				30.1	Dec-14
Spectrum Equity VII - Net			-18.2		13.0		35.2		62.3		60.4				30.1	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		16.9	Dec-14
Spectrum Equity Fund VIII - Gross	33,567,563	0.3	0.8		26.9	-	148.1		47.4						-13.1	Jun-18
Spectrum Equity Fund VIII - Net			0.8		26.9	-	148.1		47.4						-13.1	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		21.7	Jun-18
Spectrum Equity Fund IX - Gross	11,870,612	0.1	0.8		-4.3	-	-12.6								-13.2	Sep-20
Spectrum Equity Fund IX - Net			8.0		-4.3		-12.6								-13.2	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		43.0	Sep-20
Strategic Value Spl Fund V - Gross	10,438,778	0.1	10.7												7.7	Aug-21
Strategic Value Spl Fund V - Net			10.7		-										7.7	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		24.1	Aug-21
Summit EUR Growth Equity II - Gross	37,433,107	0.3	47.7		120.9	-	119.0		59.1	-					92.4	Jan-18
Summit EUR Growth Equity II - Net			47.7		120.9		119.0		59.1						92.4	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		21.3	Jan-18



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD F (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%) F	Rank	Inception (%)	Inception Date
Summit EUR Growth Equity III - Gross Summit EUR Growth Equity III - Net	7,491,784	0.1	3.3 3.3	 	0.1 0.1	 	-18.7 -18.7								-16.3 -16.3	Jan-21
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		46.3	Jan-21
Summit Ventures III - Gross	3,715,138	0.0	17.9		14.5		13.1		20.8		19.9				14.5	Jun-12
Summit Ventures III - Net	3,3,.33	0.0	17.9		14.5		13.1		20.8		19.9				14.5	· · · · · · ·
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		17.7	Jun-12
Summit Ventures IV - Gross	58,620,662	0.5	35.7		58.0	_	186.0	_	55.6		52.7				48.4	May-16
Summit Ventures IV - Net	, ,		35.7		58.0		186.0		55.6		52.7				48.4	,
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		20.6	May-16
Summit Ventures V - Gross	6,711,159	0.1	1.5		-7.3										-7.3	May-21
Summit Ventures V - Net			1.5		-7.3										-7.3	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		35.7	May-21
Thoma Bravo XI - Gross	52,522,429	0.4	-11.2		2.8		15.2		44.9		41.5				27.9	Jun-14
Thoma Bravo XI - Net			-11.2		2.8		15.2		44.9		41.5				27.9	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		16.8	Jun-14
Thoma Bravo XII - Gross	49,346,440	0.4	2.9		13.6		16.3		23.8		18.1				11.9	May-16
Thoma Bravo XII - Net			2.9		13.6		16.3		23.8		18.1				11.9	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		20.6	May-16
Thoma Bravo XIII - Gross	65,277,985	0.5	1.0		12.0		17.0		39.1						37.8	Feb-19
Thoma Bravo XIII - Net			1.0		12.0	-	17.0	-	39.1						37.8	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		23.4	Feb-19
Threshold Ventures III - Gross	23,655,422	0.2	2.2		77.5	-	88.5	-		-					19.9	Oct-19
Threshold Ventures III - Net			2.2		77.5	-	88.5	-							19.9	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		27.1	Oct-19
TPG Opp Partners III - Gross	13,156,527	0.1	2.6		20.0		34.3		14.2		13.1				-6.3	Mar-14
TPG Opp Partners III - Net			2.6		20.0	-	34.3		14.2		13.1				-6.3	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		16.6	Mar-14



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD F (%)	ank	1 Yr (%)	Rank	3 Yrs (%) F	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Trinity Ventures XI - Gross	63,069,638	0.5	4.4		34.7		36.5		22.2		24.2				11.6	Apr-13
Trinity Ventures XI - Net			4.4		34.7		36.5		22.2		24.2				11.6	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		18.1	Apr-13
Trinity Ventures XII - Gross	79,033,100	0.6	-3.1		32.8	-	104.1		49.0		46.4				32.7	Apr-16
Trinity Ventures XII - Net			-3.1		32.8		104.1		49.0		46.4				32.7	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		20.3	Apr-16
TSG7 A LP - Gross⁺	30,539,367	0.2	6.5		85.6		106.8		43.6		29.1					Mar-16
TSG7 A LP - Net			6.5		85.6		106.8		43.6		29.1					
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		19.0	Mar-16
TSG7 B LP - Gross	5,129,496	0.0	-11.1		41.7		67.1		26.5		5.8				-2.1	Jan-16
TSG7 B LP - Net			-11.1		41.7		67.1		26.5		5.8				-2.1	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		18.3	Jan-16
TSG8 LP - Gross**	22,694,596	0.2	1.9		0.1		22.5									Jan-19
TSG8 LP - Net			1.9		0.1		22.5									
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		22.7	Jan-19
TSSP Opportunities Partners IV - Gross	30,986,745	0.2	1.5	-	5.2	-	8.1	-	14.5						13.7	Jan-19
TSSP Opportunities Partners IV - Net			1.5		5.2		8.1		14.5						13.7	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		22.7	Jan-19
Waterland V - Gross*	3,336,724	0.0	0.0		5.6		4.0		13.6		23.7		31.7		22.2	Aug-11
Waterland V - Net			0.0		5.6		4.0		13.6		23.7		31.7		22.2	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		17.1	Aug-11
Waterland VI - Gross*	21,104,094	0.2	0.0		23.5		33.0		33.4		30.9				8.9	Jul-15
Waterland VI - Net			0.0		23.5		33.0		33.4		30.9				8.9	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		17.0	Jul-15

^{*} Preliminary quarterly returns as of 3/31/2022. (Returns are not available at reporting period.)



⁺ Unable to calculate a since inception return due to system limitations when TSG7 A LP experienced 1 quarter of negative fund value in 2016.

⁺⁺ Unable to calculate a year to date, 1-year and since inception return due to system limitations when TSG8 LP experienced serveral months of negative fund value in 2019 and 2020.

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD F (%)	lank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Wayzata Opportunities III - Gross	3,719,642	0.0	4.4		10.1		9.6		-2.0		-3.1				-4.6	Feb-13
Wayzata Opportunities III - Net			4.4		10.1		9.6		-2.0		-3.1				-4.6	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		18.6	Feb-13
Wynnchurch Capital Partners V - Gross	7,020,873	0.1	1.8		12.5		42.6								-17.0	Apr-20
Wynnchurch Capital Partners V - Net			1.8		12.5		42.6								-17.0	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		31.9	Apr-20
Public Credit - Gross	220,560,490	1.7	-1.1		1.9		5.4		7.2		5.6				5.2	Nov-13
Public Credit - Net			-1.1		1.9	-	5.4		7.2	-	5.6	-			5.2	
Brigade Custom ¹			-2.3		-0.6		1.5		4.3		4.3				4.4	Nov-13
Brigade Capital - Gross	220,560,490	1.7	-1.1	5	1.9	2	5.4	2	7.2	6	5.6	18			5.2	Nov-13
Brigade Capital - Net			-1.1	5	1.9	2	5.4	2	7.2	6	5.6	18			5.2	
Brigade Custom			-2.3	23	-0.6	21	1.5	19	4.3	74	4.3	80			4.4	Nov-13
eV US High Yield Fixed Inc Gross Median			-3.8		-2.2		0.5		4.9		4.9		5.9		5.1	Nov-13
Private Credit - Gross***	311,714,943	2.4	1.6		6.5		8.6		10.4		8.7		14.1		7.8	Oct-11
Private Credit - Net			1.6		6.5		8.6		10.4		8.7		14.1		7.8	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			1.2		4.7		7.4		7.4		6.3		6.9		6.6	Oct-11
Ares Capital Europe Fund V - Gross	17,529,274	0.1	2.5		-										11.6	Jul-21
Ares Capital Europe Fund V - Net			2.5												11.6	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			1.2		4.7		7.4		7.4		6.3		6.9		4.2	Jul-21
Athyrium Opp II - Gross	10,504,027	0.1	-3.0		-3.7		0.0		9.9		9.4				7.8	Jun-15
Athyrium Opp II - Net			-3.0		-3.7		0.0		9.9		9.4				7.8	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			1.2		4.7		7.4		7.4		6.3		6.9		6.3	Jun-15
Athyrium Opp III - Gross	13,135,993	0.1	-0.5		-1.6		-0.9		7.4						2.6	May-17
Athyrium Opp III - Net			-0.5		-1.6		-0.9		7.4						2.6	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			1.2		4.7		7.4		7.4		6.3		6.9		6.2	May-17

⁺ Returns for private markets are shown on a time-weighted basis and may differ substantially from dollar-weighted returns.



^{1.} See Policy Index and Benchmark History.

⁺⁺ Private Credit returns are one-quarter lag.

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD F (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	ank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Benefit St Pr Sr Secure Opp - Gross	29,500,709	0.2	1.5		4.8	-	9.5		7.2						5.9	Jan-18
Benefit St Pr Sr Secure Opp - Net			1.5		4.8		9.5	-	7.2						5.9	I 40
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag	02 044 505	0.0	1.2		4.7		7.4		7.4		6.3		6.9		6.3	Jan-18
Benefit St Pr Sr Secure Opp II - Gross	23,841,585	0.2	2.3		18.4		-2.1			-					8.1	Dec-19
Benefit St Pr Sr Secure Opp II - Net			2.3	-	18.4	-	-2.1			-					8.1	5 40
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			1.2	-	4.7		7.4		7.4	-	6.3		6.9		6.4	Dec-19
IFM US Infrastructure DB FD LP - Gross	12,246,186	0.1	2.0	-	9.2	-	9.2								9.2	Mar-21
IFM US Infrastructure DB FD LP - Net			2.0		9.2		9.2								9.2	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			1.2		4.7		7.4		7.4		6.3		6.9		7.4	Mar-21
MCP Private Capital IV - Gross	13,710,677	0.1	2.3	-	3.6	-	1.2								-0.7	Apr-20
MCP Private Capital IV - Net			2.3		3.6		1.2								-0.7	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			1.2		4.7		7.4		7.4		6.3		6.9		6.0	Apr-20
OrbiMed Royalty & Credit Opp III - Gross	11,987,608	0.1	-1.7		-13.4		-18.8								21.4	Sep-19
OrbiMed Royalty & Credit Opp III - Net			-1.7		-13.4	-	-18.8								21.4	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			1.2		4.7		7.4		7.4		6.3		6.9		6.4	Sep-19
Shamrock Capital Debt Fund I - Gross	2,022,052	0.0	-1.0												-74.0	Jul-21
Shamrock Capital Debt Fund I - Net			-1.0												-74.0	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			1.2		4.7		7.4		7.4		6.3		6.9		4.2	Jul-21
Silver Point Specialty Credit Fund II - Gross	29,420,783	0.2	2.3		7.1		8.8								19.2	Jul-20
Silver Point Specialty Credit Fund II - Net			2.3		7.1		8.8								19.2	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			1.2		4.7		7.4		7.4		6.3		6.9		13.4	Jul-20
Summit Credit - Gross	403,830	0.0	0.0		1.1	_	6.7		5.7		4.5		12.5		6.3	Oct-11
Summit Credit - Net	·		0.0		1.1		6.7		5.7		4.5		12.5		6.3	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			1.2		4.7		7.4		7.4	_	6.3		6.9		6.6	Oct-11
Summit Credit II - Gross	14,989,271	0.1	11.1		15.4		21.3		8.1		7.9				6.8	Nov-14
Summit Credit II - Net	, ,		11.1		15.4		21.3		8.1		7.9				6.8	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			1.2		4.7		7.4		7.4	-	6.3		6.9		6.1	Nov-14



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD F (%)	Rank	1 Yr (%) F	Rank	3 Yrs (%) F	Rank	5 Yrs (%)	Rank	10 Yrs (%) F	Rank	Inception (%)	Inception Date
Summit Credit III - Gross	28,607,178	0.2	4.9		15.7	-	19.9		18.6						16.5	Oct-18
Summit Credit III - Net			4.9		15.7		19.9		18.6						16.5	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			1.2		4.7		7.4		7.4		6.3		6.9		6.2	Oct-18
Summit Credit IV - Gross	6,224,637	0.0	-1.3			-		-							-1.3	Nov-21
Summit Credit IV - Net			-1.3					-							-1.3	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			1.2		4.7		7.4		7.4		6.3		6.9		2.1	Nov-21
TCP Direct Lending VIII - Gross*	97,591,133	0.8	0.0		6.4		10.5		9.4						7.6	Feb-18
TCP Direct Lending VIII - Net			0.0		6.4		10.5		9.4						7.6	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			1.2		4.7		7.4		7.4		6.3		6.9		6.4	Feb-18
Growth Oriented Absolute Return - Gross** **	96,339,746	0.7	-8.7		-6.1		-2.4		6.8		5.4		5.9		5.0	Aug-04
Growth Oriented Absolute Return - Net			-8.7		-6.1	-	-2.4	-	6.8		5.4		5.9		5.0	
HFRI FoF Composite Index + 1%			-2.6		-1.0		2.1		6.9		5.7		5.4		6.1	Aug-04
Grosvenor SCARF Growth - Gross*	27,075,571	0.2	-4.8	72	-4.9	70	-1.0	60	3.6	83	3.9	75	4.8	62	5.1	Nov-11
Grosvenor SCARF Growth - Net			-4.8	72	-4.9	70	-1.0	60	3.6	83	3.9	75	4.8	62	5.1	
HFRI FoF Composite Index + 1%			-2.6	56	-1.0	54	2.1	49	6.9	44	5.7	48	5.4	48	5.4	Nov-11
eV Alt Fund of Funds - Multi-Strategy Median			-1.2		-0.3		1.4		6.2		5.3		5.3		5.5	Nov-11
Third Point Offshore Fund - Gross	69,264,175	0.5	-11.6	99	-5.3	86	-1.7	81	13.1	13	9.3	21			10.2	Apr-12
Third Point Offshore Fund - Net			-11.6	99	-5.3	86	-1.7	81	13.1	13	9.3	21			10.2	
HFRI FoF Composite Index + 1%			-2.6	77	-1.0	64	2.1	59	6.9	42	5.7	46	5.4	55	5.4	Apr-12
eV Alt All Event Driven Median			-0.5		0.4		3.2		5.6		5.5		6.4		6.4	Apr-12
Diversifying Asset Category - Gross	2,556,080,703	19.9	-3.2		-2.9		-0.6		3.5		3.1				3.1	Mar-17
Diversifying Asset Category - Net			-3.2		-3.0	-	-0.7	-	3.4	-	3.0	-	-		3.0	
Diversifying Custom ¹			-4.1		-4.0		-2.2		2.6		2.7				2.7	Mar-17

^{*} Preliminary quarterly returns as of 3/31/2022. (Returns are not available at reporting period.)



^{1.} See Policy Index and Benchmark History.

⁺⁺ Absolute Return managers are ranked in the eVest net of fee universe.

^{**} Composite reflects net returns from Cliffwater up to March 2017. Composite includes the historical returns of Sculptor Domestic II up to 12/31/21.

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD F (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Core/Core Plus Fixed Income - Gross	959,233,317	7.5	-6.1		-5.7		-3.4		2.8		3.1		3.0		3.1	Jun-11
Core/Core Plus Fixed Income - Net			-6.1		-5.9		-3.6		2.6		3.0		2.8		3.0	
Bloomberg US Aggregate TR			-5.9		-5.9		-4.2		1.7		2.1		2.2		2.6	Jun-11
Prudential - Gross	476,932,530	3.7	-6.5	96	-6.0	76	-3.2	12	2.8	19	3.3	5			3.6	Jul-14
Prudential - Net			-6.5	97	-6.2	86	-3.3	19	2.6	27	3.2	12			3.4	
Bloomberg US Aggregate TR			-5.9	66	-5.9	67	-4.2	82	1.7	93	2.1	94	2.2	95	2.2	Jul-14
eV US Core Fixed Inc Gross Median			-5.8		-5.7		-3.8		2.3		2.6		2.8		2.7	Jul-14
TCW MetWest Fixed - Gross	482,300,787	3.8	-5.7	35	-5.4	24	-3.6	35	2.9	16	3.1	14	3.3	10	5.4	Dec-01
TCW MetWest Fixed - Net			-5.7	37	-5.6	36	-3.8	51	2.7	22	2.9	21	3.1	19	5.2	
Bloomberg US Aggregate TR			-5.9	66	-5.9	67	-4.2	82	1.7	93	2.1	94	2.2	95	4.0	Dec-01
eV US Core Fixed Inc Gross Median			-5.8		-5.7		-3.8		2.3		2.6		2.8		4.5	Dec-01
U.S. Treasury - Gross	452,251,965	3.5	-5.4		-5.2		-3.4		1.5						2.4	Feb-18
U.S. Treasury - Net			-5.4		-5.2		-3.5		1.5						2.3	
Bloomberg US Treasury TR			-5.6		-5.3		-3.7		1.4		1.8		1.7		2.3	Feb-18
Neuberger Berman - Gross⁺	452,251,965	3.5	-5.4	80	-5.2	63	-3.4	25	1.5	61	2.1	39	2.3	9	6.0	Jun-88
Neuberger Berman - Net			-5.4	80	-5.2	63	-3.5	27	1.5	62	2.0	41	2.3	11	5.9	
Bloomberg US Govt TR			-5.5	82	-5.3	77	-3.7	35	1.4	64	1.8	71	1.7	76	5.4	Jun-88
eV US Government Fixed Inc Gross Median			-4.6		-4.9		-3.8		1.6		1.9		1.9		5.7	Jun-88
Global Fixed Income - Gross	267,627,390	2.1	-2.4		-5.9		-3.4		3.4		3.2				2.6	May-13
Global Fixed Income - Net			-2.5		-6.2		-3.7		3.1		2.8				2.2	
Brandywine Custom ¹			-6.4		-9.2		-7.9		-0.2		1.1				0.4	May-13
Brandywine Global - Gross	267,627,390	2.1	-2.4	14	-5.9	51	-3.4	44	3.4	40	3.2	52			2.6	May-13
Brandywine Global - Net			-2.5	15	-6.2	54	-3.7	49	3.1	47	2.8	62			2.2	
Brandywine Custom			-6.4	74	-9.2	88	-7.9	88	-0.2	96	1.1	95			0.4	May-13
eV All Global Fixed Inc Gross Median			-5.2		-5.8		-3.8		2.9		3.3		3.0		2.9	May-13

⁺ Account converted to U.S. Treasury from Core Fixed Income in February 2018. Reflects linked historical returns up to February 2018.



^{1.} See Policy Index and Benchmark History.

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD F (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Diversifying Absolute Return - Gross** **	876,968,032	6.8	1.2		2.8		5.4		5.4		3.1		3.0		2.8	Nov-11
Diversifying Absolute Return - Net			1.1	-	2.7	-	5.3	-	5.3		3.0	-	3.0		2.8	
HFRI FoF Conservative Index			0.5		2.2		4.4		5.9		4.8		4.9		4.9	Nov-11
Aristeia Partners LP - Gross	48,410,782	0.4	-0.6	56	1.7	52	3.4	39							6.0	Dec-20
Aristeia Partners LP - Net			-0.6	56	1.7	52	3.4	39		-					6.0	
HFRI FoF Conservative Index			0.5	54	2.2	50	4.4	31	5.9	56	4.8	66	4.9	33	6.5	Dec-20
eV Alt Relative Value - Multi-Market Arbitrage Median			1.8		2.2		0.7		6.4		5.3		4.0		1.3	Dec-20
BlackRock Event Driven Equity Fund - Gross	53,778,455	0.4	0.4	32	0.5	48	2.8	56							5.5	Feb-20
BlackRock Event Driven Equity Fund - Net			0.1	41	-0.5	59	1.3	62							4.0	
HFRI FoF Conservative Index			0.5	30	2.2	24	4.4	38	5.9	48	4.8	61	4.9	58	7.2	Feb-20
eV Alt All Event Driven Median			-0.5		0.4		3.2		5.6		5.5		6.4		6.9	Feb-20
Davidson Kempner Instl Partners LP - Gross	58,769,670	0.5	0.1	45	0.1	53	3.3	55							6.0	Apr-19
Davidson Kempner Instl Partners LP - Net			0.1	45	0.1	53	3.3	55							6.0	
HFRI FoF Conservative Index			0.5	40	2.2	44	4.4	49	5.9	57	4.8	56	4.9	49	5.7	Apr-19
eV Alt All Multi-Strategy Median			-0.2		0.5		4.2		6.6		5.3		4.8		6.3	Apr-19
Eisler Capital Fund LP - Gross	43,105,447	0.3	0.9	38	-4.2	75									-4.2	Jun-21
Eisler Capital Fund LP - Net			0.9	38	-4.2	75		-		-					-4.2	
HFRI FoF Conservative Index			0.5	40	2.2	44	4.4	49	5.9	57	4.8	56	4.9	49	2.2	Jun-21
eV Alt All Multi-Strategy Median			-0.2		0.5		4.2		6.6		5.3		4.8		0.5	Jun-21
Elliott Associates - Gross*	77,990,839	0.6	5.1	7	12.9	3	16.1	7	12.4	14	9.2	22			8.8	Apr-12
Elliott Associates - Net			5.1	7	12.9	3	16.1	7	12.4	14	9.2	22			8.8	
HFRI FoF Conservative Index			0.5	30	2.2	24	4.4	38	5.9	48	4.8	61	4.9	58	4.9	Apr-12
eV Alt All Event Driven Median			-0.5		0.4		3.2		5.6		5.5		6.4		6.4	Apr-12

^{*} Preliminary quarterly returns as of 3/31/2021.



⁺⁺ Absolute Return managers are ranked in the eVest net of fee universe.

^{**} Composite reflects net returns from Cliffwater up to March 2017.

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD F (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Graham Global Inv II - Gross Graham Global Inv II - Net	46,103,105	0.4	23.6 23.6	10 10	19.1 19.1	21 21	21.0 21.0	28 28	13.4 13.4	30 30	6.6 6.6	50 50			5.8 5.8	Feb-17
HFRI FoF Conservative Index eV Alt All Managed Futures Median			0.5 8.2	78	2.2	62	4.4 8.5	60	5.9 11.2	69	4.8 6.4	58	4.9 4.6	46	4.8 6.3	Feb-17 Feb-17
Grosvenor SCARF Diversifying - Gross* Grosvenor SCARF Diversifying - Net	219,528,741	1.7	0.0	38 38	3.0 3.0	33 33	3.6 3.6	44 44	5.9 5.9	56 56	2.9 2.9	90 90	2.6 2.6	91 91	2.6 2.6	Nov-11
HFRI FoF Conservative Index eV Alt Fund of Funds - Multi-Strategy Median			0.5 -1.2	31	2.2 -0.3	37	4.4 1.4	39	5.9 6.2	57	4.8 5.3	60	4.9 5.3	59	4.9 5.5	Nov-11 Nov-11
Grosvenor SCARF B Diversifying - Gross* Grosvenor SCARF B Diversifying - Net	110,821	0.0	-2.1 -2.1	54 54	-11.3 -11.3	87 87	-14.5 -14.5	97 97	-1.1 -1.1	99 99	-1.6 -1.6	99 99			-0.2 -0.2	Jan-13
HFRI FoF Conservative Index eV Alt Fund of Funds - Multi-Strategy Median			0.5 -1.2	31	2.2 -0.3	37	4.4 1.4	39	5.9 6.2	57	4.8 5.3	60	4.9 5.3	59	4.9 5.2	Jan-13 Jan-13
Laurion Capital - Gross Laurion Capital - Net	57,885,846	0.5	-7.1 -7.1	97 97	-15.4 -15.4	93 93	-8.3 -8.3	81 81	13.2 13.2	41 41	10.7 10.7	32 32			8.6 8.6	Mar-14
HFRI FoF Conservative Index eV Alt Relative Value - Equity Relative Value			0.5	35	2.2	45	4.4	45	5.9	72	4.8	67	4.9	88	4.9	Mar-14
Median	50 000 000	0.4	-1.7	07	-0.9	0.4	0.2	00	12.0		8.9		6.7		7.0	Mar-14
LMR Fund LTD - Gross LMR Fund LTD - Net	50,830,622	0.4	2.2 2.2	27 27	8.3 8.3	21 21	9.8 9.8	30 30							5.2 5.2	Oct-19
HFRI FoF Conservative Index eV Alt All Multi-Strategy Median			0.5 -0.2	40	2.2 0.5	44	4.4 4.2	49	5.9 6.6	57	4.8 5.3	56	4.9 4.8	49	6.7 7.4	Oct-19 Oct-19
MW Global Opportunities Fund - Gross MW Global Opportunities Fund - Net	53,967,900	0.4	3.1 3.1	15 15	4.2 4.2	23 23	4.1 4.1	38 38	6.5 6.5	66 66					6.3 6.3	Dec-18
HFRI FoF Conservative Index eV Alt Fundamental - Long/Short Equity Median			0.5 -4.4	24	2.2 -3.7	29	4.4 0.7	37	5.9 9.3	70	4.8 8.6	79	4.9 7.3	77	6.4 11.7	Dec-18 Dec-18

^{*} Preliminary quarterly returns as of 3/31/2021.



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD F (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
PSquared Event Driven Opp Fund - Gross PSquared Event Driven Opp Fund - Net	52,200,992	0.4	-0.8 -0.8	57 57	2.6 2.6	21 21	3.3 3.3	49 49					 		2.7 2.7	Jul-20
HFRI FoF Conservative Index eV Alt All Event Driven Median			0.5 -0.5	30	2.2 0.4	24	4.4 3.2	38	5.9 5.6	48	4.8 5.5	61	4.9 6.4	58	9.2 10.3	Jul-20 Jul-20
Sculptor Domestic II - Gross Sculptor Domestic II - Net	64,262,612	0.5	-2.7 -2.7	70 70	-3.4 -3.4	73 73	-1.3 -1.3	73 73	9.2 9.2	33 33	8.1 8.1	30 30	7.4 7.4	33 33	7.8 7.7	Dec-11
HFRI FoF Conservative Index eV Alt All Multi-Strategy Median			0.5 -0.2	40	2.2 0.5	44	4.4 4.2	49	5.9 6.6	57	4.8 5.3	56	4.9 4.8	49	4.9 5.4	Dec-11 Dec-11
Two Sigma Risk Premia Enhanced - Gross Two Sigma Risk Premia Enhanced - Net	50,022,200	0.4	1.9 1.9	31 31	12.8 12.8	14 14	27.2 27.2	5 5	 		 		 		4.3 4.3	Sep-19
HFRI FoF Conservative Index eV Alt All Multi-Strategy Median			0.5 -0.2	40	2.2 0.5	44	4.4 4.2	49	5.9 6.6	57	4.8 5.3	56	4.9 4.8	49	6.5 7.4	Sep-19 Sep-19
Real Return (with SSgA RA Overlay Proxy) - Gross Real Return (with SSgA RA Overlay Proxy) - Net	2,346,156,557	18.3	6.0 5.9	-	18.6 18.5	-	23.1 22.9	_	10.5 10.3	-	10.3 10.1			-	10.3 10.1	Mar-17
Real Return Custom ¹			7.1		17.8		22.1		8.8		7.9				7.9	Mar-17
Real Return Asset Category - Gross Real Return Asset Category - Net	2,346,156,557	18.3	6.0 5.9		18.6 18.5		23.1 22.9		10.5 10.3		10.8 10.6				10.8 10.6	Mar-17
Real Return Custom			7.1		17.8		22.1		8.8		7.9				7.9	Mar-17
Real Estate - Gross Real Estate - Net	1,063,265,755	8.3	6.1 6.0	67 68	22.0 21.9	45 46	27.4 27.3	39 40	13.3 13.0	1	12.1 11.9	1	12.1 11.4	4 8	12.1 11.4	Jun-11
Real Estate Custom ¹ InvMetrics All DB Real Estate Priv Net Median			8.2 6.4	4	22.2 21.7	42	26.2 26.5	54	10.6 10.4	45	9.5 9.0	34	10.1 9.6	34	10.2 9.8	Jun-11 Jun-11

^{1.} See Policy Index and Benchmark History.



	Market Value (\$)	% of Portfolio	3 Mo (%)	ank	Fiscal YTD R (%)	ank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Core RE -Limited Partnership - Gross	785,523,253	6.1	6.3		23.8		31.7		14.7		13.2		12.4		7.1	Sep-08
Core RE -Limited Partnership - Net			6.3	-	23.6	-	31.5	-	14.4		12.9	-	11.9		6.6	
NFI-ODCE			7.4		23.6		28.5		11.3		9.9		10.9		6.9	Sep-08
Brookfield Premier RE Partners - Gross*	131,322,311	1.0	8.4		24.9		30.1		13.1						12.4	Sep-18
Brookfield Premier RE Partners - Net			8.4		24.9		30.1		13.1						12.4	
NFI-ODCE			7.4		23.6		28.5		11.3		9.9		10.9		10.6	Sep-18
Clarion Lion Properties - Gross	133,471,491	1.0	7.0		22.4		29.2		12.4						11.8	Sep-18
Clarion Lion Properties - Net			6.8		21.7	-	28.2		11.5						10.9	
NFI-ODCE			7.4		23.6		28.5		11.3		9.9		10.9		10.6	Sep-18
Metlife Core Property - Gross	88,007,925	0.7	8.0		25.9	-	34.2		13.8		11.6				12.5	Dec-13
Metlife Core Property - Net			7.9		25.4	-	33.5		13.3		11.1				11.9	
NFI-ODCE			7.4		23.6		28.5		11.3		9.9		10.9		10.6	Dec-13
Principal US Property - Gross	64,263,386	0.5	7.3		23.9	-	28.4		11.3		10.0				9.9	Oct-15
Principal US Property - Net			7.3		23.9	-	28.4		11.3		10.0				9.9	
NFI-ODCE			7.4		23.6		28.5		11.3		9.9		10.9		9.9	Oct-15
Prologis Targeted Euro Logistics - Gross	75,476,067	0.6	3.4		10.1	-	19.4		16.7		17.8				14.3	Oct-15
Prologis Targeted Euro Logistics - Net			3.4		10.1	-	19.4		16.7		17.8				14.3	
NFI-ODCE			7.4		23.6		28.5		11.3		9.9		10.9		9.9	Oct-15
Prologis Targeted US Logistics - Gross	135,704,970	1.1	11.9		41.6	-	58.4		27.8		23.4				21.5	Jul-15
Prologis Targeted US Logistics - Net			11.9		41.6		58.4		27.8		23.4				21.5	
NFI-ODCE			7.4		23.6		28.5		11.3		9.9		10.9		10.1	Jul-15
Townsend Real Estate - Gross*	157,277,103	1.2	0.0		17.1		23.5		11.5		10.6				10.6	Mar-16
Townsend Real Estate - Net			0.0		17.1		23.5		11.5		10.6				10.6	
NFI-ODCE			7.4		23.6		28.5		11.3		9.9		10.9		9.6	Mar-16

^{*} Preliminary quarterly returns as of 3/31/2022. (Returns are not available at reporting period.)



	Market Value (\$)	% of Portfolio	3 Mo (%)	ank	Fiscal YTD R (%)	ank	1 Yr (%)	Rank	3 Yrs (%) F	Rank	5 Yrs (%) F	Rank	10 Yrs (%) F	Rank	Inception (%)	Inception Date
Non-Core RE -Opportunistic - Gross* ***	183,645,860	1.4	5.8		20.3		18.0	-	8.8		7.8				17.6	Feb-14
Non-Core RE -Opportunistic - Net			5.8		20.3		18.0		8.8		7.8				17.1	
NFI-ODCE net +1% 1Q Lag			9.8		19.5		22.0		9.2		8.8				10.3	Feb-14
Carlyle China Realty - Gross	8,546,477	0.1	-2.8		8.0		0.2		3.9						-1.4	Jun-17
Carlyle China Realty - Net			-2.8		8.0		0.2		3.9						-1.4	
NFI-ODCE net +1% 1Q Lag			9.8		19.5		22.0		9.2		8.8				8.8	Jun-17
Carlyle China Rome Logistics - Gross	37,917,238	0.3	-2.7	-	1.1	-	0.7	-	1.6						-0.9	Jun-17
Carlyle China Rome Logistics - Net			-2.7		1.1		0.7		1.6						-0.9	
NFI-ODCE net +1% 1Q Lag			9.8		19.5		22.0		9.2		8.8				8.8	Jun-17
CIM Opportunity VIII - Gross	30,273,182	0.2	0.5		-3.1	-	-5.2	-	-7.6		-1.8				0.4	Feb-15
CIM Opportunity VIII - Net			0.5		-3.1		-5.2		-7.6		-1.8				-0.3	
NFI-ODCE net +1% 1Q Lag			9.8		19.5		22.0		9.2		8.8				10.0	Feb-15
Kohlberg Kravis Roberts - Gross	1,922,846	0.0	-9.1		18.3	-	22.5	-	-8.7		-17.3				2.5	Feb-14
Kohlberg Kravis Roberts - Net			-9.1		18.3		22.5		-8.7		-17.3				2.3	
NFI-ODCE net +1% 1Q Lag			9.8		19.5		22.0		9.2		8.8				10.3	Feb-14
Lasalle China Logistics Venture LP - Gross	2,847,618	0.0	15.3												-35.7	Sep-21
Lasalle China Logistics Venture LP - Net			15.3			-									-35.7	
NFI-ODCE net +1% 1Q Lag			9.8		19.5		22.0		9.2		8.8				14.5	Sep-21
NREP Nordic Strat II - Gross	34,464,745	0.3	10.3		60.9		56.8		29.7		30.0				23.3	Jun-16
NREP Nordic Strat II - Net			10.3		60.9		56.8		29.7		30.0				23.3	
NFI-ODCE net +1% 1Q Lag			9.8		19.5		22.0		9.2		8.8				8.7	Jun-16
NREP Nordic Strat III - Gross	40,996,689	0.3	12.8		22.5		17.2		13.5						8.9	Jul-18
NREP Nordic Strat III - Net			12.8		22.5		17.2		13.5	-					8.9	
NFI-ODCE net +1% 1Q Lag			9.8		19.5		22.0		9.2		8.8				9.2	Jul-18

^{**} Non-Core RE returns are one-quarter lag.



^{*} Returns for private markets are shown on a time-weighted basis and may differ substantially from dollar-weighted returns.

	Market Value (\$)	% of Portfolio	3 Mo (%)	ank	Fiscal YTD F (%)	ank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
NREP Nordic Strat IV - Gross	13,555,745	0.1	18.6		36.7		15.0								30.0	Jul-20
NREP Nordic Strat IV - Net			18.6		36.7	-	15.0	-							30.0	
NFI-ODCE net +1% 1Q Lag			9.8		19.5		22.0		9.2		8.8				12.8	Jul-20
Sculptor Real Estate Fund III - Gross	7,405,856	0.1	5.3		19.0	-	24.4	-	15.0		19.6				9.9	Sep-14
Sculptor Real Estate Fund III - Net			5.3		19.0	-	24.4	-	15.0		19.6				7.2	
NFI-ODCE net +1% 1Q Lag			9.8		19.5		22.0		9.2		8.8				9.8	Sep-14
Sculptor Real Estate Fund IV - Gross	5,686,501	0.0	3.1		20.1	-	21.4	-							5.0	Jun-20
Sculptor Real Estate Fund IV - Net			3.1		20.1	-	21.4	-							5.0	
NFI-ODCE net +1% 1Q Lag			9.8		19.5		22.0		9.2		8.8				12.3	Jun-20
Non-Core RE -Value Added - Gross +++	94,096,641	0.7	3.5		10.2		11.4		11.2		12.3		11.6		0.9	Sep-08
Non-Core RE -Value Added - Net			3.5		10.2		11.4		11.2		12.3		11.0		-0.1	
NFI-ODCE net +1% 1Q Lag			9.8		19.5		22.0		9.2		8.8		10.7		8.3	Sep-08
Asana Partners Fund II - Gross*	23,224,120	0.2	7.0		34.6		47.7									Apr-19
Asana Partners Fund II - Net			7.0		34.6		47.7									
NFI-ODCE net +1% 1Q Lag			9.8		19.5		22.0		9.2		8.8		10.7		9.5	Apr-19
ECE Euro Prime Shopping II - Gross	35,298,463	0.3	2.5		0.1		-3.0		8.0		5.4				9.0	Jul-15
ECE Euro Prime Shopping II - Net			2.5		0.1		-3.0		8.0		5.4				8.3	
NFI-ODCE net +1% 1Q Lag			9.8		19.5		22.0		9.2		8.8		10.7		9.6	Jul-15
European RE Debt II - Gross	1,569,846	0.0	-37.7		-31.2		-21.3		-36.2		-16.1				-12.4	Nov-13
European RE Debt II - Net			-37.7		-31.2		-21.3		-36.2		-16.1				-12.4	
NFI-ODCE net +1% 1Q Lag			9.8		19.5		22.0		9.2		8.8		10.7		10.6	Nov-13
Hammes II - Gross	3,146,483	0.0	9.4		19.5		22.8		246.7		122.8				90.8	Jul-15
Hammes II - Net			9.4		19.5	-	22.8		246.7		122.8				88.1	
NFI-ODCE net +1% 1Q Lag			9.8		19.5		22.0		9.2		8.8		10.7		9.6	Jul-15

⁺⁺ Non-Core RE returns are one-quarter lag.



^{*} Unable to calculate a since inception return due to system limitations when Asana Partners Fund II experienced a quarter of negative fund value in 2019.

⁺ Returns for private markets are shown on a time-weighted basis and may differ substantially from dollar-weighted returns.

	Market Value (\$)	% of Portfolio	3 Mo (%)	ank	Fiscal YTD F (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%) F	Rank	Inception (%)	Inception Date
Hammes III - Gross	19,789,055	0.2	6.1		11.1		16.0		6.6						-6.8	Oct-18
Hammes III - Net			6.1		11.1		16.0		6.6						-6.8	
NFI-ODCE net +1% 1Q Lag			9.8		19.5		22.0		9.2		8.8		10.7		9.3	Oct-18
Seven Seas Japan Opp Fund - Gross	11,068,674	0.1														Mar-22
Seven Seas Japan Opp Fund - Net																
NFI-ODCE net +1% 1Q Lag			9.8		19.5		22.0		9.2		8.8		10.7			Mar-22
Private Real Assets - Gross+++	827,042,382	6.4	7.0		21.2		23.8		9.0		10.6				6.4	Jan-13
Private Real Assets - Net			7.0		21.2		23.8		9.0		10.6				6.4	
Private Real Assets Custom ¹			6.6		15.5		19.9		7.2		7.1				6.7	Jan-13
ACM II - Gross*	17,691,538	0.1	0.0		-3.8		-4.5		-8.6		-6.9				-7.1	Sep-16
ACM II - Net			0.0		-3.8		-4.5		-8.6		-6.9				-7.1	
NCREIF Farmland 1 Qtr Lag			3.8		6.9		7.8		5.2		5.7		9.7		6.0	Sep-16
ArcLight Energy VI - Gross	26,815,896	0.2	7.0		7.7		15.1		-6.9		1.7				1.8	Aug-15
ArcLight Energy VI - Net			7.0		7.7		15.1		-6.9		1.7				1.8	
Cambridge Associates Private Infrastructure 1 Qtr Lag			6.5		13.0		15.0		11.6		12.2		10.4		12.4	Aug-15
Brookfield Infra III - Gross	35,348,406	0.3	3.0		12.0		12.1		12.4		10.6				11.6	May-16
Brookfield Infra III - Net			3.0		12.0		12.1		12.4		10.6				11.6	
Cambridge Associates Private Infrastructure 1 Qtr Lag			6.5		13.0		15.0		11.6		12.2		10.4		12.1	<i>May-</i> 16
Brookfield Infra IV - Gross	28,869,870	0.2	2.8	-	9.5		15.3	-							8.6	Sep-19
Brookfield Infra IV - Net			2.8		9.5	-	15.3	-				-			8.6	
Cambridge Associates Private Infrastructure 1 Qtr Lag			6.5		13.0		15.0		11.6		12.2		10.4		11.6	Sep-19

^{*} Preliminary quarterly returns as of 3/31/2022. (Returns are not available at reporting period.)



^{1.} See Policy and Benchmark History .

⁺⁺ Private Real Assets returns are one-quarter lag.

⁺ Returns for private markets are shown on a time-weighted basis and may differ substantially from dollar-weighted returns.

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD F (%)	Rank	1 Yr (%)	Rank	3 Yrs (%) F	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Carlyle Power II - Gross	37,528,139	0.3	1.1		12.5		4.4		9.5		10.6				4.1	Oct-15
Carlyle Power II - Net			1.1		12.5		4.4		9.5		10.6				4.1	
Cambridge Associates Private Infrastructure 1 Qtr Lag			6.5		13.0		15.0		11.6		12.2		10.4		11.8	Oct-15
EnCap Energy IX - Gross	13,853,735	0.1	6.0		53.7		82.4		-0.2		0.2				-0.3	Jan-13
EnCap Energy IX - Net			6.0		53.7		82.4		-0.2		0.2				-0.3	
Cambridge Associates Private Energy 1 Qtr Lag			8.1		23.4		33.5		2.5		2.7		1.9		1.7	Jan-13
EnCap Energy X - Gross	35,491,197	0.3	20.0		56.7		70.9		12.1		10.2				4.9	Apr-15
EnCap Energy X - Net			20.0		56.7		70.9		12.1		10.2				4.9	
Cambridge Associates Private Energy 1 Qtr Lag			8.1		23.4		33.5		2.5		2.7		1.9		1.1	Apr-15
EnCap Flatrock Midstream III - Gross	13,580,791	0.1	2.7		12.6		14.6		3.4		7.5				5.9	Jul-14
EnCap Flatrock Midstream III - Net			2.7		12.6		14.6		3.4		7.5				5.9	
Cambridge Associates Private Infrastructure 1 Qtr Lag			6.5		13.0		15.0		11.6		12.2		10.4		10.9	Jul-14
EnCap Flatrock Midstream IV - Gross	8,075,604	0.1	-0.9		4.5		5.0		9.1						1.1	Feb-18
EnCap Flatrock Midstream IV - Net			-0.9		4.5		5.0		9.1						1.1	
Cambridge Associates Private Infrastructure 1 Qtr Lag			6.5		13.0		15.0		11.6		12.2		10.4		11.3	Feb-18
EQT Infrastructure Fund IV - Gross	32,375,952	0.3	4.5		14.6		18.1								0.4	Jun-19
EQT Infrastructure Fund IV - Net			4.5		14.6		18.1								0.4	
Cambridge Associates Private Infrastructure 1 Qtr Lag			6.5		13.0		15.0		11.6		12.2		10.4		11.4	Jun-19
First Reserve - Gross	15,473,680	0.1	0.1		-5.9		-5.8		0.4		11.3				-1.2	Dec-14
First Reserve - Net			0.1		-5.9	-	-5.8	-	0.4		11.3				-1.2	
Cambridge Associates Private Infrastructure 1 Qtr Lag			6.5		13.0		15.0		11.6		12.2		10.4		11.1	Dec-14



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD F (%)	Rank	1 Yr (%)	Rank	3 Yrs (%) F	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Harrison St Social Infra Fd - Gross Harrison St Social Infra Fd - Net	75,533,042	0.6	2.3 2.3		 		 								4.0 4.0	Jul-21
Cambridge Associates Private Infrastructure 1 Qtr Lag			6.5		13.0		15.0		11.6		12.2		10.4		13.0	Jul-21
IFM Global Infrastructure US LP - Gross IFM Global Infrastructure US LP - Net	146,313,633	1.1	3.7 3.7	 	15.8 15.8	 	17.7 17.7	 	11.6 11.6	 					12.6 12.6	Apr-17
Cambridge Associates Private Infrastructure 1 Qtr Lag			6.5		13.0		15.0		11.6		12.2		10.4		12.5	Apr-17
ISQ Global Infrastructure Fund II - Gross ISQ Global Infrastructure Fund II - Net	50,596,147	0.4	4.5 4.5		13.1 13.1		15.1 15.1		15.4 15.4						14.1 14.1	Oct-18
Cambridge Associates Private Infrastructure 1 Qtr Lag			6.5		13.0		15.0		11.6		12.2		10.4		11.3	Oct-18
ISQ Global Infrastructure Fund III - Gross ISQ Global Infrastructure Fund III - Net	3,092,125	0.0	1.5 1.5												1.5 1.5	Dec-21
Cambridge Associates Private Infrastructure 1 Qtr Lag			6.5		13.0		15.0		11.6		12.2		10.4		6.5	Dec-21
Meridiam Infra N America III - Gross Meridiam Infra N America III - Net	16,518,394	0.1	0.8 0.8		108.6 108.6		132.9 132.9		-15.3 -15.3						-66.9 -66.9	Sep-17
Cambridge Associates Private Infrastructure 1 Qtr Lag			6.5		13.0		15.0		11.6		12.2		10.4		11.3	Sep-17
Meridiam Sa Infra Euro IV - Gross Meridiam Sa Infra Euro IV - Net	3,994,836	0.0	-34.4 -34.4	 	 		 								-78.8 -78.8	Jul-21
Cambridge Associates Private Infrastructure 1 Qtr Lag			6.5		13.0		15.0		11.6	-	12.2		10.4		13.0	Jul-21
NGP Royalty Partners - Gross NGP Royalty Partners - Net	18,411,668	0.1	11.3 11.3		36.1 36.1		70.3 70.3								27.5 27.5	Aug-20
Cambridge Associates Private Energy 1 Qtr Lag			8.1		23.4		33.5		2.5		2.7		1.9		29.0	Aug-20



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD F (%)	ank	1 Yr (%)	Rank	3 Yrs (%)	ank	5 Yrs (%)	Rank	10 Yrs (%) F	Rank	Inception (%)	Inception Date
Paine Schwartz Food Chain V - Gross	29,703,384	0.2	22.1		47.2		48.4								7.9	Jan-20
Paine Schwartz Food Chain V - Net			22.1	-	47.2	-	48.4	-							7.9	
NCREIF Farmland 1 Qtr Lag			3.8		6.9		7.8		5.2		5.7		9.7		6.1	Jan-20
Pantheon Ventures - Gross	50,231,080	0.4	4.4	-	14.2	-	17.3	-	8.2		9.7				17.4	Jul-14
Pantheon Ventures - Net			4.4		14.2	-	17.3	-	8.2		9.7				17.4	
Cambridge Associates Private Infrastructure 1 Qtr Lag			6.5		13.0		15.0		11.6		12.2		10.4		10.9	Jul-14
Quantum Energy VI - Gross	49,699,073	0.4	15.7		54.9	-	54.7		19.1		23.8				23.8	Nov-14
Quantum Energy VI - Net			15.7		54.9	-	54.7		19.1		23.8				23.8	
Cambridge Associates Private Energy 1 Qtr Lag			8.1		23.4		33.5		2.5		2.7		1.9		-1.0	Nov-14
Quantum Energy VII - Gross	39,089,943	0.3	18.1		52.8	_	44.6	-	19.2						11.9	Aug-17
Quantum Energy VII - Net			18.1		52.8	_	44.6	_	19.2						11.9	-
Cambridge Associates Private Energy 1 Qtr Lag			8.1		23.4		33.5		2.5		2.7		1.9		2.5	Aug-17
Tailwater Energy Fund III - Gross	32,234,967	0.3	10.5		21.3	_	25.8		0.3						0.8	Sep-18
Tailwater Energy Fund III - Net			10.5		21.3		25.8		0.3						0.8	•
Cambridge Associates Private Energy 1 Qtr Lag			8.1		23.4		33.5		2.5		2.7		1.9		0.6	Sep-18
Tailwater Energy IV - Gross	26,115,386	0.2	16.5		36.5	_	50.4	_							-3.6	Oct-19
Tailwater Energy IV - Net	, ,		16.5		36.5		50.4								-3.6	
Cambridge Associates Private Energy 1 Qtr Lag			8.1		23.4		33.5		2.5		2.7		1.9		3.3	Oct-19
Wastewater Opportunity - Gross	20,403,896	0.2	25.1		26.9		29.8		8.1		3.5				-11.7	Dec-15
Wastewater Opportunity - Net	_==, ===,		25.1		26.9		29.8		8.1		3.5				-11.7	
Cambridge Associates Private Infrastructure 1 Qtr Lag			6.5		13.0		15.0		11.6		12.2		10.4		11.8	Dec-15



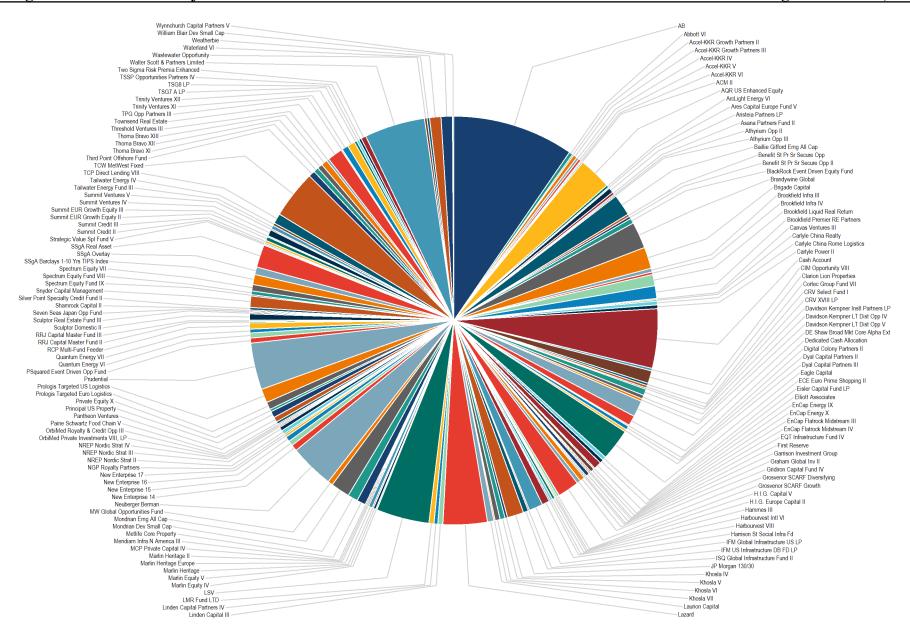
	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD F (%)	lank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	lank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Liquid Real Return - Gross	455,848,420	3.5	4.1	-	9.4	-	14.5								8.5	Jun-19
Liquid Real Return - Net			4.0		9.2		14.2								8.2	
SSgA Real Asset ¹			5.0		10.4		15.4		8.4		6.4		3.6		8.3	Jun-19
Brookfield Liquid Real Return - Gross	118,256,573	0.9	1.0		5.9		11.1								8.2	Nov-19
Brookfield Liquid Real Return - Net			0.8		5.4		10.4								7.6	
Brookfield Real Return Custom ¹			-2.9		1.5		6.1								5.2	Nov-19
SSgA Passive Real Return Proxy - Gross	337,591,847	2.6	5.2		10.7		15.7		8.7		6.7		3.8		3.0	Jan-08
SSgA Passive Real Return Proxy - Net			5.2		10.5		15.5		8.3		6.5		3.6		2.8	
SSgA Real Asset			5.0		10.4		15.4		8.4		6.4		3.6			Jan-08
Opportunities Asset Category - Gross** ++	1,975,845	0.0	-0.6		0.9	-	3.0		7.9		6.1		13.8		13.8	Oct-07
Opportunities Asset Category - Net			-0.6		0.9		3.0		7.9		6.1		13.8		13.8	
Policy Index ¹			-1.7		3.4		8.5		10.5		9.1		8.4		8.3	Oct-07
Atalaya Special Opportunities V - Gross	1,975,845	0.0	-0.6		0.9		3.0		7.9		6.1				6.1	Jul-13
Atalaya Special Opportunities V - Net			-0.6		0.9		3.0		7.9		6.1				6.1	
Thomson Reuters C A All PE 1 Qtr Lag			5.1		24.1		35.7		24.5		19.8		18.7		17.6	Jul-13
Cash - Gross	702,864,722	5.5	0.1		0.4		0.7		1.4		1.7		1.3		3.0	Jun-92
Cash - Net			0.1		0.4		0.7		1.4		1.7		1.3			
91 Day T-Bills			0.0		0.1		0.1		0.7		1.1		0.6		2.3	Jun-92
Cash Account - Gross	606,453,058	4.7	0.1		0.5	-	0.9		1.7		1.9		1.4		3.1	Jun-92
Cash Account - Net			0.1		0.5		0.9		1.7		1.9		1.4			
91 Day T-Bills			0.0		0.1		0.1		0.7		1.1		0.6		2.3	Jun-92
Dedicated Cash Allocation - Gross	96,411,664	0.8	0.0	-	0.1		0.1	-							0.5	Jun-19
Dedicated Cash Allocation - Net			0.0		0.1		0.1								0.5	
ICE LIBOR Spot/Next Overnight USD			0.0		0.1		0.1		0.7		1.1		0.6		0.5	Jun-19

⁺⁺ Oportunities Asset returns are one-quarter lag.



^{1.} See Policy and Benchmark History .

^{**} Composite reflects net returns from Cliffwater up to March 2017.





	Current	%
AB	\$1,237,702,051	9.6%
AQR US Enhanced Equity	\$338,018,494	2.6%
JP Morgan 130/30	\$172,649,335	1.3%
DE Shaw Broad Mkt Core Alpha Ext	\$164,455,854	1.3%
Eagle Capital	\$323,560,622	2.5%
Huber Capital	\$20,264	0.0%
Weatherbie	\$120,607,938	0.9%
Snyder Capital Management	\$119,680,792	0.9%
Lazard	\$446,268,801	3.5%
Walter Scott & Partners Limited	\$620,652,701	4.8%
LSV	\$544,749,963	4.2%
Mondrian Dev Small Cap	\$108,889,859	0.8%
William Blair Dev Small Cap	\$111,343,107	0.9%
Baillie Gifford Emg All Cap	\$219,483,301	1.7%
Mondrian Emg All Cap	\$192,746,750	1.5%
CBRE Clarion	\$4,195	0.0%
Abbott VI	\$35,341,832	0.3%
Accel-KKR IV	\$19,991,710	0.2%
Accel-KKR V	\$28,326,837	0.2%
Accel-KKR VI	\$7,277,038	0.1%
Accel-KKR Growth Partners II	\$11,305,633	0.1%
Accel-KKR Growth Partners III	\$33,231,184	0.3%
Atalaya Special Opp VI	\$5,190,596	0.0%
Canvas Ventures III	\$8,568,831	0.1%
Cortec Group Fund VII	\$27,572,869	0.2%
CRV Select Fund I	\$20,394,362	0.2%
CRV Select Fund II	\$3,712,500	0.0%
CRV XVIII LP	\$16,538,356	0.1%



	Current	%
Davidson Kempner LT Dist Opp IV	\$39,309,471	0.3%
Davidson Kempner LT Dist Opp V	\$29,726,979	0.2%
Digital Colony Partners II	\$16,004,248	0.1%
Dyal Capital Partners II	\$32,800,964	0.3%
Dyal Capital Partners III	\$23,494,482	0.2%
Garrison Investment Group	\$9,255,058	0.1%
Gridiron Capital Fund IV	\$35,264,277	0.3%
Harbourvest VIII	\$9,104,342	0.1%
Harbourvest Intl VI	\$30,661,883	0.2%
H.I.G. Bayside Loan III	\$4,203,806	0.0%
H.I.G. Capital V	\$13,354,076	0.1%
H.I.G. Europe Capital II	\$11,148,542	0.1%
Khosla IV	\$25,156,112	0.2%
Khosla V	\$56,058,284	0.4%
Khosla VI	\$50,063,293	0.4%
Khosla VII	\$9,736,443	0.1%
Linden Capital III	\$55,857,382	0.4%
Linden Capital Partners IV	\$38,761,128	0.3%
Marlin Equity IV	\$12,219,076	0.1%
Marlin Equity V	\$25,055,370	0.2%
Marlin Heritage	\$8,431,150	0.1%
Marlin Heritage II	\$12,689,795	0.1%
Marlin Heritage Europe	\$37,608,083	0.3%
New Enterprise 14	\$58,898,295	0.5%
New Enterprise 15	\$53,143,374	0.4%
New Enterprise 16	\$45,063,602	0.4%
New Enterprise 17	\$22,661,005	0.2%
OrbiMed Private Investments VIII, LP	\$6,674,831	0.1%



	Current	%
Private Equity X	\$23,562,012	0.2%
RCP Multi-Fund Feeder	\$59,921,134	0.5%
RRJ Capital Master Fund II	\$10,342,979	0.1%
RRJ Capital Master Fund III	\$13,759,425	0.1%
Shamrock Capital II	\$6,866,788	0.1%
Shamrock Capital Growth Fund V	\$986,399	0.0%
Spectrum Equity VII	\$64,369,134	0.5%
Spectrum Equity Fund VIII	\$33,567,563	0.3%
Spectrum Equity Fund IX	\$11,870,612	0.1%
Strategic Value Spl Fund V	\$10,438,778	0.1%
Summit EUR Growth Equity II	\$37,433,107	0.3%
Summit EUR Growth Equity III	\$7,491,784	0.1%
Summit Ventures III	\$3,715,138	0.0%
Summit Ventures IV	\$58,620,662	0.5%
Summit Ventures V	\$6,711,159	0.1%
Thoma Bravo XI	\$52,522,429	0.4%
Thoma Bravo XII	\$49,346,440	0.4%
Thoma Bravo XIII	\$65,277,985	0.5%
Threshold Ventures III	\$23,655,422	0.2%
TPG Opp Partners III	\$13,156,527	0.1%
Trinity Ventures XI	\$63,069,638	0.5%
Trinity Ventures XII	\$79,033,100	0.6%
TSG7 A LP	\$30,539,367	0.2%
TSG7 B LP	\$5,129,496	0.0%
TSG8 LP	\$22,694,596	0.2%
TSSP Opportunities Partners IV	\$30,986,745	0.2%
Waterland V	\$3,336,724	0.0%
Waterland VI	\$21,104,094	0.2%



	Current	%
Wayzata Opportunities III	\$3,719,642	0.0%
Wynnchurch Capital Partners V	\$7,020,873	0.1%
Brigade Capital	\$220,560,490	1.7%
Ares Capital Europe Fund V	\$17,529,274	0.1%
Athyrium Opp II	\$10,504,027	0.1%
Athyrium Opp III	\$13,135,993	0.1%
Benefit St Pr Sr Secure Opp	\$29,500,709	0.2%
Benefit St Pr Sr Secure Opp II	\$23,841,585	0.2%
IFM US Infrastructure DB FD LP	\$12,246,186	0.1%
MCP Private Capital IV	\$13,710,677	0.1%
OrbiMed Royalty & Credit Opp III	\$11,987,608	0.1%
Shamrock Capital Debt Fund I	\$2,022,052	0.0%
Silver Point Specialty Credit Fund II	\$29,420,783	0.2%
Summit Credit	\$403,830	0.0%
Summit Credit II	\$14,989,271	0.1%
Summit Credit III	\$28,607,178	0.2%
Summit Credit IV	\$6,224,637	0.0%
TCP Direct Lending VIII	\$97,591,133	0.8%
Grosvenor SCARF Growth	\$27,075,571	0.2%
Third Point Offshore Fund	\$69,264,175	0.5%
Prudential	\$476,932,530	3.7%
TCW MetWest Fixed	\$482,300,787	3.8%
Neuberger Berman	\$452,251,965	3.5%
Brandywine Global	\$267,627,390	2.1%
Aristeia Partners LP	\$48,410,782	0.4%
BlackRock Event Driven Equity Fund	\$53,778,455	0.4%
Davidson Kempner Instl Partners LP	\$58,769,670	0.5%
Eisler Capital Fund LP	\$43,105,447	0.3%



	Current	%
Elliott Associates	\$77,990,839	0.6%
Graham Global Inv II	\$46,103,105	0.4%
Grosvenor SCARF Diversifying	\$219,528,741	1.7%
Grosvenor SCARF B Diversifying	\$110,821	0.0%
Laurion Capital	\$57,885,846	0.5%
LMR Fund LTD	\$50,830,622	0.4%
MW Global Opportunities Fund	\$53,967,900	0.4%
PSquared Event Driven Opp Fund	\$52,200,992	0.4%
Sculptor Domestic II	\$64,262,612	0.5%
Two Sigma Risk Premia Enhanced	\$50,022,200	0.4%
Brookfield Premier RE Partners	\$131,322,311	1.0%
Clarion Lion Properties	\$133,471,491	1.0%
Metlife Core Property	\$88,007,925	0.7%
Principal US Property	\$64,263,386	0.5%
Prologis Targeted Euro Logistics	\$75,476,067	0.6%
Prologis Targeted US Logistics	\$135,704,970	1.1%
Townsend Real Estate	\$157,277,103	1.2%
Carlyle China Realty	\$8,546,477	0.1%
Carlyle China Rome Logistics	\$37,917,238	0.3%
CIM Opportunity VIII	\$30,273,182	0.2%
Kohlberg Kravis Roberts	\$1,922,846	0.0%
Lasalle China Logistics Venture LP	\$2,847,618	0.0%
NREP Nordic Strat FCP-FIS	\$28,963	0.0%
NREP Nordic Strat II	\$34,464,745	0.3%
NREP Nordic Strat III	\$40,996,689	0.3%
NREP Nordic Strat IV	\$13,555,745	0.1%
Sculptor Real Estate Fund III	\$7,405,856	0.1%
Sculptor Real Estate Fund IV	\$5,686,501	0.0%



	Current	%
Asana Partners Fund II	\$23,224,120	0.2%
ECE Euro Prime Shopping II	\$35,298,463	0.3%
European RE Debt II	\$1,569,846	0.0%
Hammes II	\$3,146,483	0.0%
Hammes III	\$19,789,055	0.2%
Seven Seas Japan Opp Fund	\$11,068,674	0.1%
ACM II	\$17,691,538	0.1%
ArcLight Energy VI	\$26,815,896	0.2%
Brookfield Infra III	\$35,348,406	0.3%
Brookfield Infra IV	\$28,869,870	0.2%
Carlyle Power II	\$37,528,139	0.3%
EnCap Energy IX	\$13,853,735	0.1%
EnCap Energy X	\$35,491,197	0.3%
EnCap Flatrock Midstream III	\$13,580,791	0.1%
EnCap Flatrock Midstream IV	\$8,075,604	0.1%
EQT Infrastructure Fund IV	\$32,375,952	0.3%
First Reserve	\$15,473,680	0.1%
Harrison St Social Infra Fd	\$75,533,042	0.6%
IFM Global Infrastructure US LP	\$146,313,633	1.1%
ISQ Global Infrastructure Fund II	\$50,596,147	0.4%
ISQ Global Infrastructure Fund III	\$3,092,125	0.0%
Meridiam Infra N America III	\$16,518,394	0.1%
Meridiam Sa Infra Euro IV	\$3,994,836	0.0%
NGP Royalty Partners	\$18,411,668	0.1%
Paine Schwartz Food Chain V	\$29,703,384	0.2%
Pantheon Ventures	\$50,231,080	0.4%
Quantum Energy VI	\$49,699,073	0.4%
Quantum Energy VII	\$39,089,943	0.3%



	Current	%
Tailwater Energy Fund III	\$32,234,967	0.3%
Tailwater Energy IV	\$26,115,386	0.2%
Wastewater Opportunity	\$20,403,896	0.2%
Brookfield Liquid Real Return	\$118,256,573	0.9%
SSgA Barclays 1-10 Yrs TIPS Index	\$101,022,237	0.8%
SSgA Real Asset	\$236,569,610	1.8%
Atalaya Special Opportunities V	\$1,975,845	0.0%
Cash Account	\$606,453,058	4.7%
Dedicated Cash Allocation	\$96,411,664	0.8%
Transition Account	\$4,983	0.0%
Heitman Adv JMB V	\$8,390	0.0%
SSgA Overlay	\$81,399,522	0.6%
Total	\$12,848,046,781	100.0%



Statistics Summary

3 Years

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Information Ratio	Information Ratio Rank	Tracking Error	Tracking Error Rank
Total Fund	12.2%	13	8.4%	21	1.4	13	0.5	17	3.6%	99
Policy Index	10.5%	61	7.9%	12	1.2	22			0.0%	1
Total Fund ex Overlay	12.0%	18	8.4%	21	1.3	14	0.4	26	3.6%	99
Policy Index	10.5%	61	7.9%	12	1.2	22			0.0%	1

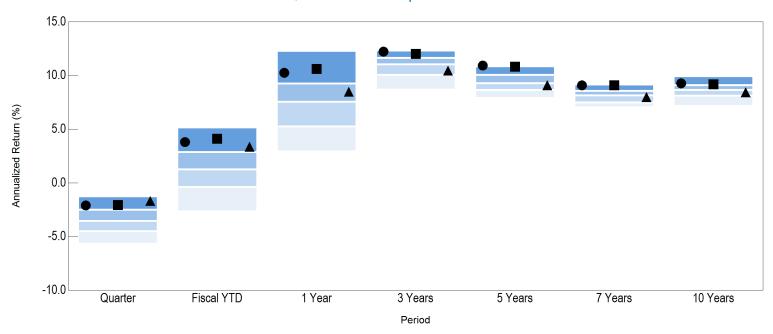
Statistics Summary

5 Years

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Information Ratio	Information Ratio Rank	Tracking Error	Tracking Error Rank
Total Fund	10.9%	5	7.5%	21	1.3	7	0.6	13	2.9%	99
Policy Index	9.1%	63	6.9%	11	1.2	21			0.0%	1
Total Fund ex Overlay	10.8%	6	7.4%	15	1.3	8	0.6	15	3.0%	99
Policy Index	9.1%	63	6.9%	11	1.2	21			0.0%	1



InvMetrics Public DB > \$1B Gross Return Comparison



Total Fund

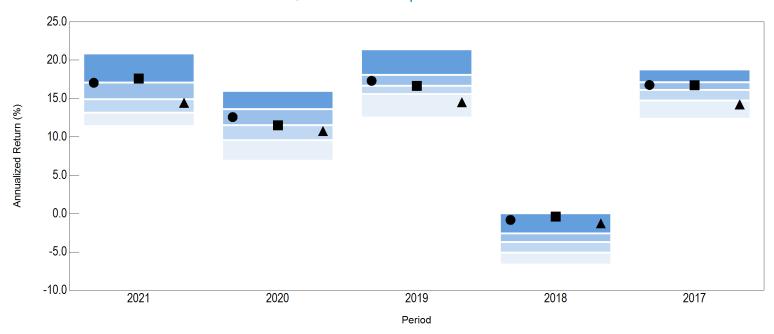
■ Total Fund ex Overlay

▲ Policy Index

-1.2		5.2		12.3		12.3		10.8		9.1		9.9	
-2.5		2.9		9.3		11.6		10.1		8.6		9.1	
-3.5		1.3		7.6		11.1		9.3		8.2		8.7	
-4.5		-0.4		5.3		10.1		8.7		7.5		8.1	
-5.6		-2.6		3.0		8.7		7.9		7.1		7.2	
42		41		41		41		41		41		40	
-2.1	(12)	3.8	(9)	10.2	(10)	12.2	(13)	10.9	(5)	9.1	(9)	9.3	(16)
-2.1	(12)	4.1	(8)	10.6	(10)	12.0	(18)	10.8	(6)	9.1	(9)	9.2	(24)
-1.7	(9)	3.4	(18)	8.5	(34)	10.5	(61)	9.1	(63)	8.0	(56)	8.4	(56)



InvMetrics Public DB > \$1B Gross Return Comparison



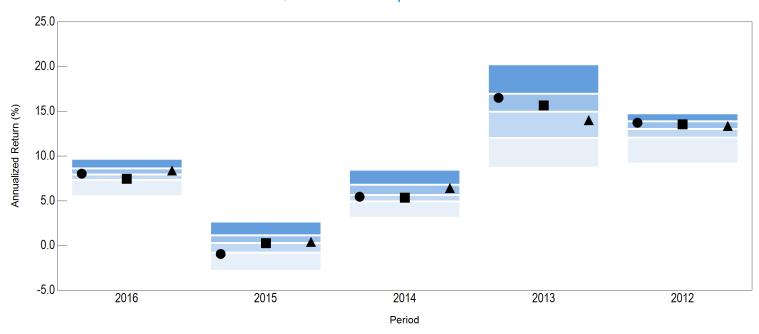
5th Percentile
25th Percentile
Median
75th Percentile
95th Percentile
of Portfolios
Total Fund
Total Fund ov (

- 1	om Percenne										
95th Percentile											
#	of Portfolios										
lacktriangle	Total Fund										
	Total Fund ex Overlay										
	Policy Index										

Return (Rank)									
20.9		16.0		21.4		0.0		18.8	
17.1		13.6		18.1		-2.6		17.2	
14.9		11.5		16.7		-3.7		16.2	
13.2		9.6		15.6		-5.1		14.8	
11.4		6.9		12.5		-6.6		12.4	
84		94		81		71		98	
17.0	(27)	12.6	(36)	17.3	(40)	-0.8	(7)	16.8	(38)
17.6	(15)	11.5	(51)	16.6	(52)	-0.4	(6)	16.7	(39)
14.4	(58)	10.8	(61)	14.5	(88)	-1.3	(10)	14.2	(82)



InvMetrics Public DB > \$1B Gross Return Comparison



	Return (Rank)			
5th Percentile	9.7		2.7	
25th Percentile	8.6		1.1	
Median	8.0		0.3	
75th Percentile	7.4		-0.7	
95th Percentile	5.5		-2.8	
# of Portfolios	92		98	
Total Fund	8.0	(46)	-0.9	(83)
Total Fund ex Overlay	7.5	(73)	0.3	(51)
▲ Policy Index	8.4	(34)	0.4	(46)

Return (Rank)									
9.7		2.7		8.5		20.2		14.7	
8.6		1.1		6.8		17.0		13.9	
8.0		0.3		5.7		15.0		13.0	
7.4		-0.7		4.9		12.0		12.1	
5.5		-2.8		3.1		8.7		9.2	
92		98		79		67		74	
8.0	(46)	-0.9	(83)	5.5	(61)	16.5	(31)	13.7	(36)
7.5	(73)	0.3	(51)	5.3	(65)	15.6	(43)	13.6	(41)
8.4	(34)	0.4	(46)	6.4	(34)	14.0	(64)	13.4	(42)



Total Plan Policy Index	As of:									
	7/1/19	7/1/17	4/1/17	1/1/14	1/1/12	1/1/08	2/1/06	9/1/04	1/1/00	7/1/86
91-day UST Bill +5% (AR)			10.0%	10.0%	10.0%	5.0%	5.0%	5.0%		
Bloomberg Aggregate	10.0%	10.0%	10.0%	15.0%	20.0%	20.0%	25.0%	25.0%	30.0%	
Bloomberg US Treasury	5.0%	5.0%	5.0%							
ICE BofA ML High Yield II	1.0%	1.0%	1.0%	1.0%						
Bloomberg Commodity		2.0%	2.0%			5.0%				
Cambridge Associates Private Energy 1 Qtr Lag	2.5%	2.5%								
Cambridge Associates Private Infrastructure 1 Qtr Lag	3.2%	3.2%								
FTSE BIG										23.0%
FTSE WGBI ex US Unhedged	2.4%	2.4%	2.4%	2.4%						
CPI-U +5% (PRA)			7.0%	15.0%	15.0%					
Credit Suisse Leveraged Loans	1.0%	1.0%	1.0%	1.0%						
Credit Suisse Leveraged Loans +2% 1 Qtr Lag	4.0%	4.0%	4.0%							
JPM GBI EM Diversified	0.6%	0.6%	0.6%	0.6%						
HFRI FoF Composite Index + 1%	3.0%	3.0%								
HFRI FoF Conservative Index	7.0%	7.0%								
MSCI ACW ex US	20.0%	20.0%	20.0%	22.5%	22.5%	20.0%				
MSCI EAFE							15.0%	15.0%	15.0%	15.0%
MSCI Emerging Markets							5.0%	5.0%	5.0%	
NAREIT						3.0%	3.0%			
NFI-ODCE	4.6%	4.6%								
NFI-ODCE net +1% 1Q Lag	2.5%	2.5%								
NCREIF			7.0%			12.0%	12.0%	15.0%	10.0%	15.0%
NCREIF Farmland 1 Qtr Lag	0.7%	0.7%								
NCREIF Timberland Index Lagged	0.7%	0.7%								
Russell 1000							30.0%	30.0%	35.0%	
Russell 1000 +3% 1QL (PE)				10.0%	10.0%					
Russell 2000							5.0%	5.0%	5.0%	
Russell 3000	20.0%	21.0%	21.0%	22.5%	22.5%	30.0%				47.0%
S&P 500 +2% 1QL (PE)						5.0%				
Thomson Reuters C A All PE 1 Qtr Lag	9.0%	9.0%	9.0%							
Bloomberg Roll Select Commodity Total Return	0.2%									
Bloomberg Barclays U.S. Floating Rate Note < 5 Yr	0.2%									
S&P Global LargeMidCap Commodity and Resources	0.2%									
S&P Global Infrastructure Index - Net of Tax on Dividend	0.5%									
Bloomberg Barclays U.S. Government Inflation-Linked 1-10 Yrs	0.6%									
FTSE EPRA Nareit Developed Liquid Index	0.3%									
ICE LIBOR Spot/Next Overnight USD	1.0%									
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



Policy Index and Benchmark History

Period Ending: March 31, 2022

Growth Benchmark	As of:				Private Credit Benchmark	As of:	
	7/1/19	7/1/17	4/1/17			4/1/17	
01 Day T-Bill +5%			5.08%		Credit Suisse Leveraged Loan + 2% 1 Qtr Lag	100.0%	
CE BofA ML High Yield II	1.73%	1.70%	1.70%			100.0%	
Credit Suisse Leveraged Loans	1.73%	1.70%	1.70%				
redit Suisse Leveraged Loan + 2% 1 Qtr Lag	6.90%	6.78%	6.78%		Growth Oriented Absolute Return Benchmark	As of:	
FRI FoF Composite Index + 1%	5.17%	5.08%				7/1/17	4/1/
ISCI ACWI ex US	34.48%	33.90%	33.90%		91-day UST Bill +5%		100.0
ussell 3000	34.48%	35.59%	35.59%		HFRI FoF Composite Index + 1%	100.0%	
homson Reuters C A All PE 1 Qtr Lag	15.52%	15.25%	15.25%			100.0%	100.0
	100.0%	100.0%	100.0%				
	1001070	1001070	1001070		Diversifying Benchmark	As of:	
S Equity Benchmark	As of:					7/1/17	4/1/
o Equity Delicilinark	1/1/08	9/1/04	1/1/00	7/1/86	91 Day T-Bill +5%		28.0
ussell 1000	1/1/00	85.71%	87.5%	77 1700	Bloomberg US Aggregate	40.0%	40.0
ussell 2000		14.29%	12.5%		Bloomberg US Treasury	20.0%	20.0
ussell 3000	400.00/	14.29%	12.5%	400.00/	FTSE WGBI ex US Unhedged	9.6%	9.6
usseii 3000	100.0%	400.00/	400.00/	100.0%	HFRI FoF Conservative Index	28.0%	
	100.0%	100.0%	100.0%	100.0%	JPM GBI EM Diversified	2.4%	2.4
						100.0%	100.0
arge Cap Active Benchmark	As of:						
	2/1/19	9/1/08			Global Fixed Income Benchmark	As of:	
ussell 1000 Value		100.0%			ETOE WORL HOLL I	6/1/13	
ussell 1000	100.0%				FTSE WGBI ex US Unhedged	80.0%	
	100.0%	100.0%			JPM GBI EM Diversified	20.0% 100.0%	
						100.076	
ternational Equity Benchmark	As of:				Diversifying Absolute Return Benchmark	As of:	
	1/1/08	1/1/00	7/1/86		Diversifying Absolute Return Benchmark	AS 01. 7/1/17	4/1/
ISCI ACWI ex US	100.0%				91-day UST Bill +5%	1/1/11	100.09
ISCI EAFE		75.0%	100.0%		HFRI FoF Conservative Index	100.0%	100.0
SCI Emerging Markets		25.0%			THIN TO CONSTITUENT HIGEX	100.0%	100.0
	100.0%	100.0%	100.0%			100.070	100.0
					Real Return Benchmark	As of:	
rivate Equity Benchmark	As of:				Real Retain Denomina R	4/1/19	4/1/
. ,	4/1/17	1/1/12	1/1/08		Real Estate Benchmark	43.75%	43.75%
ussell 1000 +3% 1QL		100.0%			Private Real Assets Benchmark	43.75%	43.75
&P 500 +2% 1QL		100.070	100.0%		Bloomberg Commodity	40.1070	12.509
nomson Reuters C A All PE 1 Qtr Lag	100.0%				Liquid Real Return Custom Benchmark	12.50%	.2.00
nombon roddio o promi e i et eag	100.0%	100.0%	100.0%		Equid Float Floatiff & dolotti Bollottiffatt	100.0%	100.0
	100.070	100.070	100.070			1001070	100.0
ublic Credit Benchmark	As of:				Real Estate Benchmark	As of:	
unite of eart Deficilliant	AS 01. 4/1/17					7/0 GH. 7/1/17 7	1/2011
NE Doff MI High Viold II	4 /1/17 50.0%				NCREIF	7,411 1	100.0
CE BofA ML High Yield II					NFI-ODCE	65.0%	.00.0
redit Suisse Leveraged Loans	50.0%				NFI-ODCE net +1% 1Q Lag	35.0%	
	100.0%				, 0502 Lug	100.0%	100.0



Policy Index and Benchmark History

Period Ending: March 31, 2022

RE-Value Added Benchmark	As of:	
	7/1/16	10/1/08
NCREIF +2% 1Q Lag		100.0%
NFI-ODCE net +1% 1Q Lag	100.0%	
	100.0%	100.0%
Private Real Assets Benchmark	As of:	
	7/1/17	4/1/17
CPI-U Headline +5%		100.0%
Cambridge Associates Private Energy 1 Qtr Lag	35.0%	
Cambridge Associates Private Infrastructure 1 Qtr Lag	45.0%	
NCREIF Farmland 1 Qtr Lag	10.0%	
NCREIF Timberland Index Lagged	10.0%	
	100.0%	100.0%
Liquid Real Return Custom Benchmark	As of:	
	7/1/19	
Bloomberg Roll Select Commodity Total Return	10.0%	
Bloomberg Barclay's U.S. Floating Rate Note < 5 Yr	10.0%	
S&P Global LargeMidCap Commodity and Resources	10.0%	
S&P Global Infrastructure Index - Net of Tax on Dividend	25.0%	
Bloomberg Barclays U.S. Government Inflation-Linked 1-10 Yrs	30.0%	
FTSE EPRA Nareit Developed Liquid Index	15.0%	
	100.0%	

AllianceBernstein Benchmark	As of: 1/1/01	1/1/98	5/1/89
Russell 1000	100.0%	1/1/90	3/1/09
Russell 3000	100.070	100.0%	
Wilshire 2500		100.070	100.0%
	100.0%	100.0%	100.0%
Eagle Capital Benchmark	As of:		
	2/1/19	9/1/08	
Russell 1000 Value		100.0%	
Russell 1000	100.0%		
	100.0%	100.0%	
Brandywine Benchmark	As of:		
ETCE WORL UC Habadard	6/1/13		
FTSE WGBI ex US Unhedged	80.0%		
JPM GBI EM Diversified	20.0% 100.0%		
	100.0%		
Brigade Benchmark	As of:		
Dilguad Bollomian	12/1/13		
ICE BofA ML High Yield II	50.0%		
Credit Suisse Leveraged Loans	50.0%		
	100.0%		
Brookfield Real Return Custom	As of:		
Brookfield Real Return Custom	As of: 12/1/2019		
Brookfield Real Return Custom FTSE Global Core Infrastructure 50/50 Index			
	12/1/2019		
FTSE Global Core Infrastructure 50/50 Index	12/1/2019 30.0% 20.0%		
FTSE Global Core Infrastructure 50/50 Index FTSE EPRA Nareit Developed Index ICE BofA 7% Constrained REIT Preferred Securities Index ICE BofA USD Real Asset High Yield Custom Index	12/1/2019 30.0% 20.0% 10.0% 16.0%		
FTSE Global Core Infrastructure 50/50 Index FTSE EPRA Nareit Developed Index ICE BofA 7% Constrained REIT Preferred Securities Index	12/1/2019 30.0% 20.0% 10.0% 16.0% 24.0%		
FTSE Global Core Infrastructure 50/50 Index FTSE EPRA Nareit Developed Index ICE BofA 7% Constrained REIT Preferred Securities Index ICE BofA USD Real Asset High Yield Custom Index	12/1/2019 30.0% 20.0% 10.0% 16.0%		
FTSE Global Core Infrastructure 50/50 Index FTSE EPRA Nareit Developed Index ICE BofA 7% Constrained REIT Preferred Securities Index ICE BofA USD Real Asset High Yield Custom Index ICE BofA USD Real Asset Corporate Custom Index	12/1/2019 30.0% 20.0% 10.0% 16.0% 24.0%		
FTSE Global Core Infrastructure 50/50 Index FTSE EPRA Nareit Developed Index ICE BofA 7% Constrained REIT Preferred Securities Index ICE BofA USD Real Asset High Yield Custom Index	12/1/2019 30.0% 20.0% (10.0% 16.0% 24.0% 100.0% As of:	10/1/15	2/1/08
FTSE Global Core Infrastructure 50/50 Index FTSE EPRA Nareit Developed Index ICE Bof4 7% Constrained REIT Preferred Securifies Index ICE Bof4 USD Real Asset High Yield Custom Index ICE Bof4 USD Real Asset Corporate Custom Index SSgA Real Asset Benchmark	12/1/2019 30.0% 20.0% 10.0% 16.0% 24.0%	10/1/15	2/1/08
FTSE Global Core Infrastructure 50/50 Index FTSE EPRA Nareit Developed Index ICE BofA 7% Constrained REIT Preferred Securities Index ICE BofA USD Real Asset High Yield Custom Index ICE BofA USD Real Asset Corporate Custom Index SSgA Real Asset Benchmark Bloomberg US Govt Inflation-Linked 1-10 Yrs	12/1/2019 30.0% 20.0% (10.0% 16.0% 24.0% 100.0% As of:	10.0%	
FTSE Global Core Infrastructure 50/50 Index FTSE EPRA Nareit Developed Index ICE BofA 7% Constrained REIT Preferred Securities Index ICE BofA USD Real Asset High Yield Custom Index ICE BofA USD Real Asset Corporate Custom Index SSgA Real Asset Benchmark Bloomberg US Govt Inflation-Linked 1-10 Yrs Bloomberg US TIPS	12/1/2019 30.0% 20.0% (10.0% 16.0% 24.0% 100.0% As of: 3/2/2018		2/1/08 20.0%
FTSE Global Core Infrastructure 50/50 Index FTSE EPRA Nareit Developed Index ICE BofA 7% Constrained REIT Preferred Securities Index ICE BofA USD Real Asset High Yield Custom Index ICE BofA USD Real Asset Corporate Custom Index ICE BofA USD Real Asset Benchmark SSgA Real Asset Benchmark Bloomberg US Govt Inflation-Linked 1-10 Yrs Bloomberg US TIPS Bloomberg 1-10 Yr US TIPS	12/1/2019 30.0% 20.0% (10.0% 16.0% 24.0% 100.0% As of: 3/2/2018	10.0% 10.0%	
FTSE Global Core Infrastructure 50/50 Index FTSE EPRA Nareit Developed Index ICE BofA 7% Constrained REIT Preferred Securities Index ICE BofA USD Real Asset High Yield Custom Index ICE BofA USD Real Asset Corporate Custom Index ICE BofA USD Real Asset Corporate Custom Index SSgA Real Asset Benchmark Bloomberg US Govt Inflation-Linked 1-10 Yrs Bloomberg US TIPS Bloomberg 1-10 Yr US TIPS Bloomberg Roll Select Commodity TR	12/1/2019 30.0% 20.0% (10.0% 16.0% 24.0% 100.0% As of: 3/2/2018	10.0%	
FTSE Global Core Infrastructure 50/50 Index FTSE EPRA Nareit Developed Index ICE BofA 7% Constrained REIT Preferred Securities Index ICE BofA USD Real Asset High Yield Custom Index ICE BofA USD Real Asset Corporate Custom Index ICE BofA USD Real Asset Benchmark SSgA Real Asset Benchmark Bloomberg US Govt Inflation-Linked 1-10 Yrs Bloomberg US TIPS Bloomberg 1-10 Yr US TIPS Bloomberg Roll Select Commodity TR Bloomberg USD Floating Rate Note <5yr	12/1/2019 30.0% 20.0% (10.0% 16.0% 24.0% 100.0% As of: 3/2/2018	10.0% 10.0%	
FTSE Global Core Infrastructure 50/50 Index FTSE EPRA Nareit Developed Index ICE BofA 7% Constrained REIT Preferred Securities Index ICE BofA USD Real Asset High Yield Custom Index ICE BofA USD Real Asset Corporate Custom Index ICE BofA USD Real Asset Corporate Custom Index SSgA Real Asset Benchmark Bloomberg US Govt Inflation-Linked 1-10 Yrs Bloomberg US TIPS Bloomberg 1-10 Yr US TIPS Bloomberg Roll Select Commodity TR Bloomberg USD Floating Rate Note <5yr DJ US Select REIT	12/1/2019 30.0% 20.0% (10.0% 16.0% 24.0% 100.0% As of: 3/2/2018	10.0% 10.0%	20.0%
FTSE Global Core Infrastructure 50/50 Index FTSE EPRA Nareit Developed Index ICE BofA 7% Constrained REIT Preferred Securities Index ICE BofA USD Real Asset High Yield Custom Index ICE BofA USD Real Asset Corporate Custom Index ICE BofA USD Real Asset Benchmark SSgA Real Asset Benchmark Bloomberg US Govt Inflation-Linked 1-10 Yrs Bloomberg US TIPS Bloomberg 1-10 Yr US TIPS Bloomberg Roll Select Commodity TR Bloomberg USD Floating Rate Note <5yr	12/1/2019 30.0% 20.0% (10.0% 16.0% 24.0% 100.0% As of: 3/2/2018 30.0% 10.0%	10.0% 10.0% 20.0%	20.0%
FTSE Global Core Infrastructure 50/50 Index FTSE EPRA Nareit Developed Index ICE BofA 7% Constrained REIT Preferred Securities Index ICE BofA USD Real Asset High Yield Custom Index ICE BofA USD Real Asset Corporate Custom Index SSgA Real Asset Benchmark Bloomberg US Govt Inflation-Linked 1-10 Yrs Bloomberg US TIPS Bloomberg 1-10 Yr US TIPS Bloomberg Roll Select Commodity TR Bloomberg USD Floating Rate Note <5yr DJ US Select REIT FTSE EPRA/NAREIT Developed Liquid MSCI World Natural Resources	12/1/2019 30.0% 20.0% (10.0% 16.0% 24.0% 100.0% As of: 3/2/2018 30.0% 10.0%	10.0% 10.0% 20.0%	20.0%
FTSE Global Core Infrastructure 50/50 Index FTSE EPRA Nareit Developed Index ICE BofA 7% Constrained REIT Preferred Securities Index ICE BofA USD Real Asset High Yield Custom Index ICE BofA USD Real Asset Corporate Custom Index ICE BofA USD Real Asset Corporate Custom Index SSgA Real Asset Benchmark Bloomberg US Govt Inflation-Linked 1-10 Yrs Bloomberg US TIPS Bloomberg 1-10 Yr US TIPS Bloomberg Roll Select Commodity TR Bloomberg USD Floating Rate Note <5yr DJ US Select REIT FTSE EPRA/NAREIT Developed Liquid	12/1/2019 30.0% 20.0% 10.0% 10.0% 10.0% 100.0% As of: 3/2/2018 30.0% 10.0% 10.0%	10.0% 10.0% 20.0%	20.0%
FTSE Global Core Infrastructure 50/50 Index FTSE EPRA Nareit Developed Index ICE BofA 7% Constrained REIT Preferred Securities Index ICE BofA USD Real Asset High Yield Custom Index ICE BofA USD Real Asset Corporate Custom Index SSgA Real Asset Benchmark Bloomberg US Govt Inflation-Linked 1-10 Yrs Bloomberg US TIPS Bloomberg US TIPS Bloomberg Roll Select Commodity TR Bloomberg USD Floating Rate Note <5yr DJ US Select REIT FTSE EPRA/NAREIT Developed Liquid MSCI World Natural Resources S&P Global Large Mid Cap Commodity Resources	12/1/2019 30.0% 20.0% 10.0% 10.0% 10.0% 100.0% As of: 3/2/2018 30.0% 10.0% 15.0% 10.0%	10.0% 10.0% 20.0% 10.0% 20.0%	20.0%
FTSE Global Core Infrastructure 50/50 Index FTSE EPRA Nareit Developed Index ICE BofA 7% Constrained REIT Preferred Securities Index ICE BofA USD Real Asset High Yield Custom Index ICE BofA USD Real Asset Corporate Custom Index ICE BofA USD Real Asset Corporate Custom Index SSgA Real Asset Benchmark Bloomberg US Govt Inflation-Linked 1-10 Yrs Bloomberg US TIPS Bloomberg US TIPS Bloomberg Roll Select Commodity TR Bloomberg USD Floating Rate Note <5yr DJ US Select REIT FTSE EPRA/NAREIT Developed Liquid MSCI World Natural Resources S&P Global Large Mid Cap Commodity Resources S&P Global Infrastructure	12/1/2019 30.0% 20.0% 10.0% 10.0% 10.0% 100.0% As of: 3/2/2018 30.0% 10.0% 15.0% 10.0%	10.0% 10.0% 20.0% 10.0% 20.0%	20.0% 30.0% 25.0%
FTSE Global Core Infrastructure 50/50 Index FTSE EPRA Nareit Developed Index ICE BofA 7% Constrained REIT Preferred Securities Index ICE BofA USD Real Asset High Yield Custom Index ICE BofA USD Real Asset Corporate Custom Index ICE BofA USD Real Asset Corporate Custom Index SSgA Real Asset Benchmark Bloomberg US Govt Inflation-Linked 1-10 Yrs Bloomberg US TIPS Bloomberg US TIPS Bloomberg USD Floating Rate Note <5yr DJ US Select REIT FTSE EPRA/NAREIT Developed Liquid MSCI World Natural Resources S&P Global Large Mid Cap Commodity Resources S&P Global Infrastructure S&P GS Commodities	12/1/2019 30.0% 20.0% 10.0% 10.0% 10.0% 100.0% As of: 3/2/2018 30.0% 10.0% 15.0% 10.0%	10.0% 10.0% 20.0% 10.0% 20.0%	20.0% 30.0% 25.0%



Glossary

Allocation Effect: An attribution effect that describes the amount attributable to the managers' asset allocation decisions, relative to the benchmark.

Alpha: The excess return of a portfolio after adjusting for market risk. This excess return is attributable to the selection skill of the portfolio manager. Alpha is calculated as: Portfolio Return - [Risk-free Rate + Portfolio Beta x (Market Return - Risk-free Rate)].

Beachmark R-squared: Measures how well the Benchmark return series fits the manager's return series. The higher the Benchmark R-squared, the more appropriate the benchmark is for the manager. **Beta:** A measure of systematic, or market risk; the part of risk in a portfolio or security that is attributable to general market movements. Beta is calculated by dividing the covariance of a security by the variance of the market.

Book-to-Market: The ratio of book value per share to market price per share. Growth managers typically have low book-to-market ratios while value managers typically have high book-to-market ratios. Capture Ratio: A statistical measure of an investment manager's overall performance in up or down markets. The capture ratio is used to evaluate how well an investment manager performed relative to an index during periods when that index has risen (up market) or fallen (down market). The capture ratio is calculated by dividing the manager's returns by the returns of the index during the up/down market, and multiplying that factor by 100.

Correlation: A measure of the relative movement of returns of one security or asset class relative to another over time. A correlation of 1 means the returns of two securities move in lock step, a correlation of -1 means the returns of two securities move in the exact opposite direction over time. Correlation is used as a measure to help maximize the benefits of diversification when constructing an investment portfolio.

Excess Return: A measure of the difference in appreciation or depreciation in the price of an investment compared to its benchmark, over a given time period. This is usually expressed as a percentage and may be annualized over a number of years or represent a single period.

Information Ratio: A measure of a manager's ability to earn excess return without incurring additional risk. Information ratio is calculated as: excess return divided by tracking error.

Interaction Effect: An attribution effect that describes the portion of active management that is contributable to the cross interaction between the allocation and selection effect. This can also be explained as an effect that cannot be easily traced to a source.

Portfolio Turnover: The percentage of a portfolio that is sold and replaced (turned over) during a given time period. Low portfolio turnover is indicative of a buy and hold strategy while high portfolio turnover implies a more active form of management.

Price-to-Earnings Ratio (P/E): Also called the earnings multiplier, it is calculated by dividing the price of a company's stock into earnings per share. Growth managers typically hold stocks with high price-to-earnings ratios whereas value managers hold stocks with low price-to-earnings ratios.

R-Squared: Also called the coefficient of determination, it measures the amount of variation in one variable explained by variations in another, i.e., the goodness of fit to a benchmark. In the case of investments, the term is used to explain the amount of variation in a security or portfolio explained by movements in the market or the portfolio's benchmark.

Selection Effect: An attribution effect that describes the amount attributable to the managers' stock selection decisions, relative to the benchmark.

Sharpe Ratio: A measure of portfolio efficiency. The Sharpe Ratio indicates excess portfolio return for each unit of risk associated with achieving the excess return. The higher the Sharpe Ratio, the more efficient the portfolio. Sharpe ratio is calculated as: Portfolio Excess Return / Portfolio Standard Deviation.

Sortino Ratio: Measures the risk-adjusted return of an investment, portfolio, or strategy. It is a modification of the Sharpe Ratio, but penalizes only those returns falling below a specified benchmark. The Sortino Ratio uses downside deviation in the denominator rather than standard deviation, like the Sharpe Ratio.

Standard Deviation: A measure of volatility, or risk, inherent in a security or portfolio. The standard deviation of a series is a measure of the extent to which observations in the series differ from the arithmetic mean of the series. For example, if a security has an average annual rate of return of 10% and a standard deviation of 5%, then two-thirds of the time, one would expect to receive an annual rate of return between 5% and 15%.

Style Analysis: A return based analysis designed to identify combinations of passive investments to closely replicate the performance of funds

Style Map: A specialized form or scatter plot chart typically used to show where a Manager lies in relation to a set of style indices on a two-dimensional plane. This is simply a way of viewing the asset loadings in a different context. The coordinates are calculated by rescaling the asset loadings to range from -1 to 1 on each axis and are dependent on the Style Indices comprising the Map.

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