

# ACG Market Review Third Quarter 2022

#### **Global Highlights:**

- Economy Persistent high inflation has dwarfed any positive economic data and pushed the Fed to an aggressive tightening cycle
- Equities Markets continue to re-price downward as investors struggle to interpret the path of monetary policy
- Fixed Income Further upward pressure on yields has increased year-to-date drawdowns for bond investors

### Inflation is Steering the Ship

The stubbornness of inflation in the face of a hawkish Federal Reserve surprised many market participants during the quarter and added to fears of a looming recession. If the economy is the proverbial ship headed towards an iceberg, market-watchers fear that the Fed began turning the wheel too late to avoid a collision. Thinking back to last fall, the prevailing view was that inflation would be "transitory" as price pressures related to COVID-19 abated. The Fed was reluctant to raise interest rates a year ago due to uncertainty surrounding the pandemic. Data in Q3 2022 has done nothing to assuage fears that the Fed acted too late and has led the central bank to a path of aggressive rate hikes.

Year-over-year readings of the Consumer Price Index (CPI) showed prices increasing +8.30% through the end of August. Stripping out the volatile food and energy portions of the index still saw inflation increase +6.30%. With a stated target of 2.00% inflation over the long term the Fed has made it clear that their sole priority is to reduce price pressures by any means necessary. The bank has already embarked on one of the fastest hiking cycles on record by moving their benchmark rate from 0.25% to 3.00% since March of this year. Most forecasts show multiple more hikes of at least 0.50% moving into 2023.

An aggressive Federal Reserve and persistent inflation have increased the odds of a painful recession. Most measures of the US Treasury yield curve are in forms of inversion, meaning longer term rates sit below shorter-term rates. Inversion along certain points of the yield curve tends to be a reliable indicator of impending recession. One explanation is that bond investors are forecasting that the Fed will need to lower its policy rate in the future to combat a slowing economy. As of today, the Fed is still hoping to engineer a "soft landing" by taming inflation without a prolonged recession.

There are a few positive data points that could help remove some pressure from the Federal Reserve in the next few months. For one, the math of year-over-year inflation calculations shows that the headline CPI number should decrease soon. If month-over-month inflation is flat or even slightly positive (e.g., 0.10%) over the next several months, the headline CPI number that was just +8.30% will be back around +2.00% by Spring 2023. Some of the supply chain strains post-COVID have also shown signs of easing. Shipping costs and supplier delivery times are in sustained downtrends and elevated inventories should relieve some pressure on prices as companies sell excess product.

### **Stocks Firmly in Bear Market**

After a welcome rally during the first half of Q3, equity markets resumed a downtrend toward YTD lows that began in January. The S&P 500 fell -9.21% in September to finish the quarter down - 4.88%. US Large Cap stocks have now fallen around -24.00% for the year. The tech-heavy Russell 1000 Growth Index outperformed the broader market for the quarter by only falling -3.60% but has dropped by more than -30.00% for the year. The counterpart Russell 1000 Value Index fell -5.62% in Q3 and is now down -17.75% YTD. Much of the weakness in growth-oriented names has been attributed to a re-rating of distant cash flows as interest rates increase. Another narrative is that valuations in growthier areas of the market were stretched into bubble territory. Whatever the



explanation, there are signs of a sustained shift from the growth over value trend of the last decade.

Domestic small cap stocks have generally followed the broader market lower, although the Russell 2000 Index provided a small amount of relative outperformance in Q3 by returning -2.19%. There have unfortunately been few places globally for long-biased equity investors to generate returns as well. The MSCI EAFE and MSCI Emerging Markets Indexes fell -9.36% and -11.57% respectively in the quarter and are each down approximately -27.00% so far this year. There has been a rash of bad news overseas including Russia/Ukraine, energy crises in the EU, economic slowdown in China, and policy mistakes in the UK. Headline and geopolitical risks remain high for US investors allocating internationally. On the other hand, any incremental improvement in some of the bad news above could provide a foundation for stocks that are priced for the worst.

Equity markets both globally and domestically seem to be at an inflection point where there is a case for prolonged further weakness, or a rally and beginning of a new bull market. Bearish investors have pointed to 2000-2002 or 2008-2009 as recent examples showing the S&P 500 has further to fall before a true bottom. Alternatively, it feels like markets have been so sensitive to rate policy that any change in central bank rhetoric toward easier monetary policy could shift sentiment toward bulls. Company earnings and forward guidance will be an interesting topic moving into 2023. Recession fears have led analysts to begin cutting earnings estimates for the first time since 2020. Earnings growth projections have also remained relatively resilient but could face headwinds as recession odds increase.

### **Little Cushion from Bonds**

One of the most painful aspects of the year to date for diversified portfolios has been that fixed income allocations have not provided much protection from weak equity markets. Bonds are generally a good diversifier in that they will preserve capital and provide low or negative correlation to other asset classes, especially in times of stress. 2022 has been an outlier. The Bloomberg US Aggregate Index fell a further -4.75% in Q3 and has now lost nearly -15.00% this year. If the YTD loss holds through the end of the year it would make for the worst year for bonds in decades. One relative pocket of safety within fixed income markets has been for investors with tilts toward shorter duration. The Bloomberg US Aggregate 1-3 Yr Bond Index, for example, fell -1.50% for the quarter and is down - 4.58% this year.

The explanation for weakness in fixed income markets is straightforward. The yield curve has reacted to aggressive Fed policy by shifting higher across maturities. Most market strategists have been aware that fixed income investing would be a challenge as markets shifted from historically low rates. The speed and magnitude of the shift likely caught many investors by surprise as markets dealt with rapid rate hikes that overshot initial expectations.

A byproduct and glimmer of hope for fixed income allocations going forward is that higher yields and wider spreads portend better returns. Starting yields tend to be a decent proxy for future bond returns, so forward-looking return assumptions should increase as yields keep rising. Longer-term, investors who have a time horizon longer than the duration of their fixed income portfolio should benefit from the recent spike in rates. Despite





some initial price impairment from higher rates, long-term return streams look more favorable from higher beginning yields than if rates hovered near 1.00% for the foreseeable future.

#### **Housing Market Back in Focus**

Another result of rising interest rates and tighter monetary policy has been a renewed focus on the US housing market. Mortgage rates rose along with bond yields during Q3 to the point that the 30-year fixed mortgage rate topped 7.00%. Home prices began to show signs of deceleration in August, but overall affordability remains low as high mortgage rates and high prices translate into high monthly payments. Supply of single-family homes remains an issue and could stagnate or get worse if homebuilders foresee worsening financial conditions in the broader economy. A housing crisis similar to 2008-2009 is unlikely at this point but housing could be a market that sees increased publicity due to scars from the Great Financial Crisis of the late 2000's.



## **Market Index Review – September 2022**

Major Market Indices	MTD	QTD	YTD	1 Year	3 Years	5 Years	10 Years
S&P 500	-9.21	-4.88	-23.87	-15.47	8.16	9.24	11.70
Russell 2000	-9.58	-2.19	-25.10	-23.50	4.29	3.55	8.55
Russell 3000	-9.27	-4.46	-24.62	-17.63	7.70	8.62	11.38
MSCI ACWI	-9.57	-6.82	-25.63	-20.66	3.75	4.44	7.28
MSCI ACWI ex USA	-9.99	-9.91	-26.50	-25.17	-1.52	-0.81	3.01
Bloomberg US Aggregate TR	-4.32	-4.75	-14.61	-14.60	-3.26	-0.27	0.89

Russell Indices	MTD	QTD	YTD	1 Year	3 Years	5 Years	10 Years
Russell 1000	-9.25	-4.61	-24.59	-17.22	7.94	9.00	11.60
Russell 1000 Growth	-9.72	-3.60	-30.66	-22.59	10.67	12.16	13.70
Russell 1000 Value	-8.77	-5.62	-17.75	-11.36	4.36	5.29	9.17
Russell MidCap	-9.27	-3.44	-24.27	-19.39	5.19	6.48	10.30
Russell MidCap Growth	-8.49	-0.65	-31.45	-29.50	4.26	7.62	10.85
Russell MidCap Value	-9.70	-4.93	-20.36	-13.56	4.50	4.75	9.44
Russell 2000 Growth	-9.00	0.24	-29.28	-29.27	2.93	3.60	8.81
Russell 2000 Value	-10.19	-4.61	-21.12	-17.69	4.72	2.87	7.94

Sector Indices	MTD	QTD	YTD	1 Year	3 Years	5 Years	10 Years
S&P 500 Materials	-9.35	-7.13	-23.74	-12.15	7.62	5.89	8.56
S&P 500 Consumer Discretionary	-8.06	4.36	-29.89	-20.89	6.70	10.51	13.19
S&P 500 Consumer Staples	-7.99	-6.62	-11.83	-0.09	6.24	7.60	9.51
S&P 500 Energy	-9.28	2.35	34.94	45.70	13.44	6.09	3.52
S&P 500 Financials	-7.76	-3.10	-21.25	-17.65	4.92	5.47	11.38
S&P 500 Health Care	-2.60	-5.18	-13.08	-3.37	12.46	10.18	13.94
S&P 500 Industrials	-10.48	-4.72	-20.72	-13.87	4.02	4.87	10.39
S&P 500 Information Technology	-12.01	-6.21	-31.44	-20.00	14.93	16.74	17.09
S&P 500 Real Estate	-13.15	-11.03	-28.85	-16.37	0.40	5.79	
S&P 500 Communication Services	-12.15	-12.72	-39.04	-39.05	-0.05	1.95	3.76
S&P 500 Utilities	-11.34	-5. <b>99</b>	-6.51	5.58	3.66	7.82	9.85

\* Consumer Price Index returns will be reported as of the previous month end due to the delayed release of data.

International Indices	MTD	QTD	YTD	1 Year	3 Years	5 Years	10 Years
MSCI EAFE	-9.35	-9.36	-27.09	-25.13	-1.83	-0.84	3.67
MSCI Europe	-8.70	-10.15	-28.83	-24.80	-1.72	-1.24	3.45
MSCI Pacific	-10.45	-8.09	-23.80	-25.87	-2.15	-0.16	4.11
MSCI EAFE Small Cap	-11.50	-9.83	-32.11	-32.06	-2.16	-1.79	5.28
MSCI Emerging Markets	-11.72	-11.57	-27.16	-28.11	-2.07	-1.81	1.05
MSCI Frontier Markets	-9.26	-6.47	-25.72	-25.20	-1.29	-1.24	3.63

Bond Indices	MTD	QTD	YTD	1 Year	3 Years	5 Years	10 Years
FTSE T-Bill 3 Months	0.20	0.45	0.62	0.63	0.57	1.13	0.66
Bloomberg US Municipal TR	-3.84	-3.46	-12.13	-11.50	-1.85	0.59	1.79
Bloomberg US Govt/Credit TR	-4.08	-4.56	-15.10	-14. <b>9</b> 5	-3.15	-0.05	1.02
Bloomberg US Govt/Credit Int TR	-2.67	-3.06	-9.63	-10.14	-1.64	0.38	1.00
Bloomberg US Credit 1-3 Yr TR	-1.35	-1.31	-4.62	-5.12	-0.17	1.04	1.29
Bloomberg US Credit Long TR	-8.64	-8.57	-29.05	-27.98	-7.02	-1.17	1.73
Bloomberg US Corporate High Yield TR	-3.97	-0.65	-14.75	-14.14	-0.45	1.57	3.94
FTSE WGBI	-5.10	-7.61	-21.27	-22.14	-7.03	-3.07	-1.76

Other Indices	MTD	QTD	YTD	1 Year	3 Years	5 Years	10 Years
HFRI FOF: Diversified Index	-0.37	0.83	-3.87	-3.55	5.00	3.75	3.73
HFRI FOF: Conservative Index	-0.48	0.25	-1.31	-0.61	4.75	3.81	3.66
HFRI Equity Hedge (Total) Index	-4.24	-2.34	-13.81	-13.25	6.24	4.37	5.32
Wilshire Liquid Alternative Equity Hedge T	-4.43	-3.54	-10.72	-7.82	2.03	1.36	1.92
Wilshire Liquid Alternative TR USD	-2.58	-1.88	-7.25	-6.70	0.51	0.72	1.22
FTSE EPRA/NAREIT Global TR USD	-12.04	-11.57	-28.91	-22.38	-6.30	-0.76	3.32
FTSE EPRA/NAREIT Developed NR USD	-12.42	-11.58	-29.89	-22.77	-6.47	-0.85	2.87
Alerian MLP TR USD	-7.62	8.05	18.90	19.56	4.46	1.90	0.66
Bloomberg Commodity Index TR USD	-8.11	-4.11	13.57	11.80	13.45	6.96	-2.14
S&P Global Infrastructure TR USD	-11.78	-9.64	-10.09	-5.98	-0.13	2.10	5.66
Consumer Price Index *	-0.04	-0.05	6.23	8.26	4.90	3.82	2.54



### **Q3 2022: Fed Gets Serious About Taming Inflation**





## **Inflation Remains Stubbornly High**



After a brief slowdown in July, year-over-year inflation readings re-accelerated when the August Consumer Price Index (CPI) data was published in early September. Despite a slowdown in the month-over-month readings, year-over-year headline inflation is running at +8.3% while CPI minus Food & Energy came in at +6.3% annualized. The Federal Reserve's future pace of hikes will be determined by how quickly inflation comes down

#### -- Constant CPI 0.0% m/m CPI y/y Constant CPI +0.1% m/m --- Constant CPI +0.2% m/m --- Constant CPI -0.2% m/m Constant CPI -0.1% m/m 10% 9% 8% 7% 6% 5% 4% 3% 2% 1% 0% -1% -2% -3% Mar-20 Aay-20 Jul-20 Jan-20 Sep-20 Nov-20 Mar-21 May-21 Jul-21 Sep-21 Nov-21 Jan-22 Mar-22 Jul-22 Jan-21 Aay-22 ep-22 Jov-22 Jan-23 lar-23

Future Inflation Paths (Year-over-Year)

- If headline CPI is flat for the next few months, the year-over-year number would decline from +8.3% to +6.2% on an annualized basis by December of 2022. Looking out further, however, shows the length of time it would take for the headline number to drop to less than 3%:
  - +0.1% month-over-month CPI = May 2023
  - +0.2% month-over-month CPI = June 2023
  - -0.1% month-over-month CPI = March 2023
  - -0.2% month-over-month CPI = February 2023



## Supply Chains Starting to Recover



**Shipping Cost Index** 

(40-Foot Ocean Container)

### US manufacturing PMI input prices index 95 85



The cost to ship goods around the world sky-rocketed during the peak of the pandemic. In a sign of normalization, however, many of those prices are down significantly from their peak. For example, the cost to ship a 40-foot container from Shanghai to New York peaked in the summer of 2021 at over \$15,000. Since then, the cost has come down by nearly half

### **Purchasing Managers Index Data**

(Input Prices and Supplier Delivery times)



Falling demand for raw materials has already taken some pressure off of supply chains and helped shift some of the pricing power away from sellers towards purchasers. Average delivery times, which extended during the pandemic and were a major cause of the initial move to higher prices, have also started to ease



## With Inflation Running Hot, Fed Forced to Play Catch-up

 The Federal Reserve was slow to raise rates earlier in 2022 when the consensus view was that inflation was more "transitory." But, as inflation remained stubbornly elevated, the Fed increased the pace and magnitude of rate hikes. During the third quarter, the consensus expectations for rate hikes increased again as the Fed was forced to "catch up" to inflation that was higher for longer than was previously expected



#### **Fed Funds Futures**



### FOMC "Dot Plot"

 The Federal Open Market Committee (FOMC) "Dot Plot" now shows a high degree of consensus for 2022 and 2023, but when you look at 2024 & 2025, the consensus is much less clear. This points to a high degree of uncertainty among the FOMC members regarding whether they will have to turn around and cut rates after this current cycle of hiking



## Looking at Past Rate Cycles

• The Federal Reserve raised short-term rates from 0.25% to 3.00% since March of this year. Compared to other rate hiking cycles of the past, the current pace is one of the fastest rate hiking cycles on record

 Looking back at past Federal Reserve tightening and easing cycles shows that the typical tightening cycle lasts 19.8 months on average. Then, once the final rate hike is in, the average time until the Fed begins to lower rates, or eases, is 7.8 months. The data also finds that bear markets end a median of 13.6 months after a tightening cycle has ended. Only three times in the past have bear markets ended before the tightening cycle: 1978, 1987 and 2016



#### **Historical Fed Funds Rate Hikes**

#### Federal Reserve Tighten & Easing Cycles

4/15/55 9/12/58 7/17/63 11/20/67 No tightenir 1/15/73 8/31/77	8/23/57 9/11/59 12/6/65 4/3/69 ng cycle 4/25/74	11/15/57 6/10/60 No easi 11/13/70 11/19/71	4/18/58 8/12/60 ng cycle 2/19/71	11.9 4.8 35.1	28.3 12.0 28.7	2.8 9.0	5.1 2.1
7/17/63 11/20/67 No tightenir 1/15/73	12/6/65 4/3/69 ng cycle	No easi 11/13/70	ng cycle			9.0	2.1
11/20/67 No tightenir 1/15/73	4/3/69 ng cycle	11/13/70	0 /	35.1	207		
No tightenir 1/15/73	ng cycle		2/19/71		20.7	N/A	N/A
1/15/73		11/19/71		N/A	16.4	19.4	3.2
1 - 1 - 2	4/25/74		12/17/71	N/A	N/A	N/A	0.9
8/31/77		12/9/74	11/22/76	13.0	15.3	7.5	23.5
0/01/11	2/15/80	5/30/80	7/28/80	9.3	29.5	3.4	1.9
9/26/80	5/5/81	11/2/81	12/15/82	2.0	7.3	5.9	13.4
No tightenir	ng cycle	11/21/84	8/21/86	N/A	N/A	N/A	21.0
9/4/87	2/24/89	6/6/89	9/4/92	12.5	17.7	3.4	39.0
2/4/94	2/1/95	7/6/95	1/31/96	17.0	11.9	5.1	6.9
No tightenir	ng cycle	9/29/98	11/17/98	N/A	N/A	N/A	1.6
6/30/99	5/16/00	1/3/01	6/25/03	7.4	10.5	7.6	29.7
6/30/04	6/29/06	9/18/07	10/31/14	12.2	24.0	14.7	85.4
12/16/15	12/19/18	7/31/19	3/15/22	13.5	36.1	7.4	31.5
3/16/22	??	??	??	0.0	??	??	??
Mean				11.6	19.8	7.8	18.9
Median				12.0	17.1	7.4	10.1

## **Bonds Not Providing Typical Protection, But Yields Higher**

Fixed income usually provides diversification to balanced portfolios through capital preservation and low correlation to other traditional asset classes, especially s equities. As we have discussed, this has not been the case in 2022 on both measures. Stocks and bonds have both fallen in 2022 and the typical protection offered by bonds has not occurred

 With bond prices coming down and credit spreads (the compensation bond investors receive for bearing risk) going up, the total yield in fixed income has increased significantly year-to-date and improves the outlook for bonds as an asset class



**Bloomberg Aggregate Bond Index** 

### Investment Grade and High Yield Spreads

#### S&P 500 Dividend Yield vs. 10-Year Yield





## **Effect of Rising Rates on Bond Returns Depends on Horizon**



- While falling bond prices due to rising rates has negatively impacted year-to-date returns, over time higher yields lead to higher total returns
- In the above example, the breakeven occurs at year five. Investors with longer horizons are rewarded by higher compounding over time due to the higher yield



## How Much Will Rising Rates Bring Down Housing Prices?

 One area that has thus far been largely spared from the carnage of the equity and bond markets in 2022 is the housing market. While there is typically a lag in the time it takes for the housing market to react to higher mortgage rates and the broader macro environment, the National Association of Home Builders confidence index is showing sharp recent declines as many homebuilders are getting nervous

 Mortgage rates spiked during the third quarter with 30-year fixed rate mortgages moving above 7.0%. As a result, housing affordability (the ability of someone at the median income to afford a median house at prevailing mortgage rates) fell to its lowest level since the top of the last housing boom in 2006. Housing prices fell in August for the first time in almost a decade









## **Active Manager Headwinds Continue**

 Using Price-to-Cashflow as a proxy for duration shows that long duration stocks (high price-tocashflows ratios) have significantly underperformed during 2022 as interest rates have increased

 MSCI created an index that defines quality companies as those with high quality scores based on three main fundamental variables: high return on equity (ROE), stable year-overyear earnings growth and low financial leverage. This index can be viewed as a proxy for fundamentally driven active managers. Over the long-term, quality companies outperform, however, in 2022 this factor has underperformed significantly causing a headwind for many active managers

### Short vs. Long Duration Stock Performance (High vs. Low Price-to-Cashflow)



### MSCI World Performance

(Annualized Return)





## **Recession Fears Beginning to Impact Earnings Estimates**

 Wall Street analysts have cut their estimates for company earnings for the third quarter by 5.5% since June 30. This marks the largest revision since the second quarter of 2020 – during the height of the COVID pandemic when earnings activity contracted precipitously due to widespread lockdowns and general economic disruptions



Earnings Revisions (All Country World Index)

Consensus S&P 500 Earnings Estimates (Calendar Year)

 While 2022 earnings growth estimates remain resilient, 2023 and 2024 calendar year consensus estimates are coming down. In addition, approximately half of S&P 500 companies mentioned "recession" on their latest quarterly earnings call. That is the highest rate since 2010 according to FactSet and likely speaks to the cautionary tone seen in the latest earnings projections





### Where Do we Go From Here?

## For the Bulls





Market strategists often try to compare current market movements to historical corollaries. The problem with
using historical periods as predictive of the future is the fact that the correlation to many different types of
markets can be quite high





- While bear markets can be stomach churning as markets decline precipitously, they also make good entry points. If you look back at previous bear markets, the median return over the subsequent 12 months is +24%, significantly better than the median return over all periods
- Unconditional Following Start of Past Bear Markets 24

### Median S&P 500 Return Since World War 2





Early by 15

-50

**Days Added to Recovery** 

-100

10%

5%

Trading Days Pre/Post Bear Market Bottom

2 1 10

0

49

50

 Staying the course during bear markets can be very difficult, but history suggests it may be the best strategy – especially if time horizon is long enough and risk tolerance is appropriate. An analysis of past bear markets shows that the cost of being early to a recovery is typically small. For example, being 15% early to a market bottom has only added 49 days to the recovery time on average

85

80

75

70

-250

-200

-150





100

150

200

## **Foreign Equity Market Headwinds**

 Many U.S. investors have grown tired of the relative underperformance of their foreign equity exposure. Looking at the MSCI EAFE index of developed international markets, the current period of underperformance has been 15 years long – more than twice the length of previous cycles



**MSCI USA vs. MSCI EAFE** 

 Emerging Market equities have also underperformed the U.S. for an extended period. Russia's removal from the MSCI EM Index earlier this year and China's large weight in the index and relative underperformance over the last year have compounded this trend

### MSCI EM to S&P 500 Ratio

(Cumulative Return, USD)





## **Risks: Geopolitical Hot Spots**

• The conflict in Ukraine has highlighted Europe's reliance on Russian gas with many countries getting over 20% of their gas from Russia. Germany is particularly exposed to Russia gas. German power prices have skyrocketed and caused many economists to worry about the effect of drastically higher prices on their economy

 U.S House of Representatives Speaker Nancy Pelosi's high-profile visit to Taiwan in August stoked fears an escalation in tensions around U.S. - China relations. The trip came at a time of already heightened tension amid China's tacit support of Russia's invasion of Ukraine. While the Russia Ukraine conflict disrupted a number of global markets from food to energy, a direct conflict between the U.S. and China would have a much larger effect on the global economy. For example, Semiconductors, which are key to almost all modern technologies, are increasingly manufactured in Taiwan & China

## Russian Gas as a % of Total Energy Consumption (2020)



### Share of Global Semiconductor Manufacturing





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Statements herein that reflect projections or expectations of future financial or economic performance of the Fund are forward-looking statements. Such "forward-looking" statements are based on various assumptions, which assumptions may not prove to be correct. Accordingly, there can be no assurance that such assumptions and statements will accurately predict future events or ACG's actual performance. No representation or warranty can be given that the estimates, opinions or assumptions made herein will prove to be accurate. Any projections and forward-looking statements included herein should be considered speculative and are qualified in their entirety by the information and risks disclosed in the confidential offering document. Actual results for any period may or may not approximate such forward-looking statements. You are advised to consult with your independent tax and business advisors concerning the validity and reasonableness of the factual, accounting and tax assumptions. No representations or warranties whatsoever are made by ACG any other person or entity as to the future profitability of investments recommended by ACG.

This report is based on transaction records, portfolio valuations, and performance supplied by the client, the custodian, the investment manager, and investment databases including Bloomberg and Morningstar. Due to the timeliness of this report performance information may be preliminary and therefore subject to audit. This report is complete and accurate to the best of our knowledge.

We urge you to take a moment to compare the account balances contained in this report to those balances reflected on the statements that you receive directly from your account's custodian. Please contact us or the account custodian with any questions you may have. Also, please notify us promptly if you do not receive statements on all accounts from the custodian on at least a quarterly basis.



#### Asset class and reference benchmarks:

ASSET CLASS	BENCHMARK
U.S. Equity	S&P 500 TR
International Developed Equity	MSCI EAFE NR
Emerging Market Equity	MSCI EM NR
U.S. Fixed Income	Bloomberg Barclays U.S. Aggregate Bond TR
Cash & Cash Alternatives	Citi Treasury Bill 3 Mon USD

Alerian MLP: The Alerian MLP Index is the leading gauge of large- and mid-cap energy Master Limited Partnerships (MLPs). The float-adjusted, capitalization- weighted index, which includes 50 prominent companies and captures approximately 75% of available market capitalization, is disseminated real-time on a price-return basis (AMZ) and on a total-return basis (AMZX).

Bloomberg Barclay 10-Year U.S. Treasuries: Measures the performance of U.S. Treasury securities that have a remaining maturity of 10 years.

**Bloomberg Barclays U.S. Aggregate Index:** Represents securities that are SEC-registered, taxable, and dollar denominated. The index covers the U.S. investment- grade fixed rate bond market, with index components for government and corporate securities, mortgage pass-through securities, and asset-backed securities.

**Bloomberg Barclays Global Aggregate ex-U.S. Dollar Bond Index**: Tracks an international basket of bonds that currently contains 65% government, 14% corporate, 13% agency and 8% mortgage-related bonds.

Bloomberg Barclays High Yield: Covers the universe of fixed-rate, non-investment grade debt. Pay-in-kind (PIK) bonds, Eurobonds, and debt issues from countries designated as emerging markets (e.g., Argentina, Brazil, Venezuela, etc.) are excluded, but Canadian and global bonds (SEC-registered) of issuers in non-EMG countries are included. Original issue zeroes, step-up coupon structures and 144-As are also included.

Bloomberg Barclays U.S. Corporate High Yield: Composed of fixed-rate, publicly issued, non-investment grade debt.

The Dow Jones Industrial Average is an unmanaged index of 30 widely held securities.

Dow Jones U.S. Total Stock Market Index, which comprises all U.S. equity securities with readily available prices.

FTSE 3-Month Treasury-Bill Index: This is an unmanaged index of three-month Treasury bills.

**FTSE EPRA/NAREIT Global Real Estate Index**: Designed to represent general trends in eligible listed real estate stocks worldwide. Relevant real estate activities are defined as the ownership, trading and development of income producing real estate.



### **INDEX DEFINITIONS**

Gross Domestic Product (GDP) is the annual market value of all goods and services produced domestically by the US.

HFRI Fund of Funds Conservative: FOFs classified as 'Conservative' exhibit one or more of the following characteristics: seeks consistent returns by primarily investing in funds that generally engage in more 'conservative' strategies such as Equity Market Neutral, Fixed Income Arbitrage, and Convertible Arbitrage; exhibits a lower historical annual standard deviation than the HFRI Fund of Funds Composite Index. A fund in the HFRI FOF Conservative Index shows generally consistent performance regardless of market conditions.

HFRI Fund of Funds Diversified: FOFs classified as 'Diversified' exhibit one or more of the following characteristics: invests in a variety of strategies among multiple managers; historical annual return and/or a standard deviation generally similar to the HFRI Fund of Fund Composite index; demonstrates generally close performance and returns distribution correlation to the HFRI Fund of Fund Composite Index. A fund in the HFRI FOF Diversified Index tends to show minim al loss in down markets while achieving superior returns in up markets.

HFRI Fund of Funds Strategic: FOFs classified as 'Strategic' exhibit one or more of the following characteristics: seeks superior returns by primarily investing in funds that generally engage in more opportunistic strategies such as Emerging Markets, Sector specific, and Equity Hedge; exhibits a greater dispersion of returns and higher volatility compared to the HFRI Fund of Funds Composite Index. A fund in the HFRI FOF Strategic Index tends to outperform the HFRI Fund of Fund Composite Index in up markets and underperform the index in down markets.

**MSCI All Country World Index Ex-U.S Index**.: A market-capitalization-weighted index maintained by Morgan Stanley Capital International (MSCI) and designed to provide a broad measure of stock performance throughout the world, with the exception of U.S.-based companies. It includes both developed and emerging markets.

**MSCI EAFE** Index (Europe, Australasia, Far East): A free-float adjusted market capitalization index that is designed to measure developed market equity performance, excluding the United States and Canada. The EAFE consists of the country indices of 21 developed nations.

**MSCI EAFE Growth Index**: Represents approximately 50% of the free-float adjusted market capitalization of the MSCI EAFE index, and consists of those securities classified by MSCI as most representing the growth style.

MSCI EAFE Small-Cap Index: An unmanaged, market-weighted index of small companies in developed markets, excluding the U.S. and Canada.

**MSCI EAFE Value**: Represents approximately 50% of the free-float adjusted market capitalization of the MSCI EAFE index, and consists of those securities classified by MSCI as most representing the value style.

MSCI Emerging Markets Index: Designed to measure equity market performance in 25 emerging market indexes. The three largest industries are materials, energy and banks.

The NASDAQ Composite Index is an unmanaged index of all stocks traded on the NASDAQ over-the-counter market. Price Earnings Ratio (P/E) is the price of the stock divided by its earnings per share.



### **INDEX DEFINITIONS**

Russell 1000 Index: Measures the performance of the 1,000 largest companies in the Russell 3000 Index, which represents approximately 90% of the investible U.S. equity market.

**Russell 1000 Value Index**: Measures the performance of those Russell 1000 companies with lower price-to-book ratios and lower forecasted growth values.

Russell 1000 Growth Index: Measures the performance of those Russell 1000 companies with higher price-to-book ratios and higher forecasted growth values.

Russell Mid-Cap Index: Measures the performance of the 800 smallest companies of the Russell 1000 Index, which represent approximately 30% of the total market capitalization of the Russell 1000 Index.

Russell Mid-Cap Value Index: Measures the performance of those Russell Mid-cap companies with lower price-to-book ratios and lower forecasted growth values.

Russell Mid-Cap Growth Index: Measures the performance of those Russell Mid-cap companies with higher price-to-book ratios and higher forecasted growth values.

Russell 2000 Index: Measures the performance of the 2,000 smallest companies in the Russell 3000 Index, which represent approximately 8% of the total market capitalization of the Russell 3000 Index.

Russell 2000 Value Index: Measures the performance of those Russell 2000 companies with lower price-to-book ratios and lower forecasted growth values.

Russell 2000 Growth Index: Measures the performance of those Russell 2000 companies with higher price-to-book ratios and higher forecasted growth values.

Russell 3000 Index: Measures the performance of the 3,000 largest U.S. companies based on total market capitalization, which represents approximately 98% of the investable U.S. equity market.

Standard & Poor's 500 (S&P 500): Measures changes in stock market conditions based on the average performance of 500 widely held common stocks. Represents approximately 68% of the investable U.S. equity market.

Wilshire Liquid Alternative Index: The Wilshire Liquid Alternative IndexSM measures the collective performance of the five Wilshire Liquid Alternative strategies that make up the Wilshire Liquid Alternative Universe. The Wilshire Liquid Alternative Index (WLIQA) is designed to provide a broad measure of the liquid alternative market by combining the performance of the Wilshire Liquid Alternative Equity Hedge IndexSM (WLIQAEH), Wilshire Liquid Alternative Global Macro IndexSM (WLIQAGM), Wilshire Liquid Alternative Relative Value IndexSM (WLIQARV), Wilshire Liquid Alternative Multi-Strategy IndexSM (WLIQAMS), and Wilshire Liquid Alternative Event Driven IndexSM (WLIQAED).

