



JULY 2022 – MARKET REVIEW

July 7, 2022

Susan Powers, CFA, CFP®, CPA

AssetGrade Market Summary

July 2022 Review – Tough First Half of 2022, Valuations More Attractive Now?

- **Investor losses in both equities and fixed income accelerated in June** as fears of recession increased. Rising mortgage rates and surges in gas prices contributed to consumer sentiment hitting new lows.
- Among major asset classes, **Commodities posted the only significant gain** while everything else other than Cash posted double digit losses.
- **US Stocks moved into a bear market**, down 20%, as companies expressed concerns about rising wages, higher transportation costs and rising interest rates. International stocks performed only marginally better, down 19.4%. **US Small Cap was the worst performer YTD**, down 23.4%.
- The **Federal Reserve raised its benchmark Fed Funds rate by .75% on June 15th** and signaled their willingness to raise by .50-.75% again this month. Bonds suffered significant declines as the yield curve shifted up with rates increasing by more than 2% on the short end.
- **International and Emerging Market stocks have been negatively impacted by the strong Dollar** in addition to other factors weighing on global markets.

Is a possible recession priced in or is there more downside?

- The **Forward P/E ratio for the S&P 500 is now below the 25-year average** and bond markets have priced in multiple interest rate hikes by the Fed. These declines do not necessarily mean markets cannot go lower, but valuations are much more attractive than they have been recently.
- While consumer sentiment hit a 50 year low in June, history shows that **lows in sentiment often lead to strong returns in the following 12 months**. Consumers drive 68% of GDP, strong balance sheets and the strong job market will help sustain spending levels.
- Mortgage rates have gone up but are still attractive compared to historical rates and lenders are making higher quality loans than in prior years when home values went up dramatically. Cash is finally yielding more than 0% and sectors of fixed income like **Municipal and High Yield are much more attractive**.
- What to do now? Review and rebalance your portfolio. If your goals and time horizon have not changed, do not over-react. By ***attempting to time the market and staying too long in cash, the average investor realized less than half the return vs. a balanced portfolio of stocks and bonds, 3.6. vs. 7.4%, over the last 20 years. Time horizon matters - a balanced portfolio provided a positive return over every 5-year rolling time horizon for the last 50 years!***

Appendix

AssetGrade Market Summary

Asset Class Returns

Year to Date only Commodities and Cash are positive. Diversified portfolios while negative did provide downside protection relative to the sharp declines in Equities .



																2007 - 2021	
2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	YTD	Ann.	Vol.
EM Equity 39.8%	Fixed Income 5.2%	EM Equity 79.0%	REITs 27.9%	REITs 8.3%	REITs 19.7%	Small Cap 38.8%	REITs 28.0%	REITs 2.8%	Small Cap 21.3%	EM Equity 37.8%	Cash 1.8%	Large Cap 31.5%	Small Cap 20.0%	REITs 41.3%	Comdty. 18.4%	Large Cap 10.6%	REITs 23.2%
Comdty. 16.2%	Cash 1.8%	High Yield 59.4%	Small Cap 26.9%	Fixed Income 7.8%	High Yield 19.6%	Large Cap 32.4%	Large Cap 13.7%	Large Cap 1.4%	High Yield 14.3%	DM Equity 25.6%	Fixed Income 0.0%	REITs 28.7%	EM Equity 18.7%	Large Cap 28.7%	Cash 0.2%	Small Cap 8.7%	EM Equity 22.9%
DM Equity 11.6%	Asset Alloc. 25.4%	DM Equity 32.5%	EM Equity 19.2%	High Yield 3.1%	EM Equity 18.6%	DM Equity 23.3%	Fixed Income 6.0%	Fixed Income 0.5%	Large Cap 12.0%	Large Cap 21.8%	REITs -4.0%	Small Cap 25.5%	Large Cap 18.4%	Comdty. 27.1%	Fixed Income -10.3%	REITs 7.5%	Small Cap 22.5%
Asset Alloc. 7.1%	High Yield -26.9%	REITs 28.0%	Comdty. 16.8%	Large Cap 2.1%	DM Equity 17.9%	Asset Alloc. 14.9%	Asset Alloc. 5.2%	Cash 0.0%	Comdty. 11.8%	Small Cap 14.6%	High Yield -4.1%	DM Equity 22.7%	Asset Alloc. 10.6%	Small Cap 14.8%	Asset Alloc. -14.6%	High Yield 6.6%	Comdty. 19.1%
Fixed Income 7.0%	Small Cap -33.8%	Small Cap 27.2%	Large Cap 15.1%	Cash 0.1%	Small Cap 16.3%	High Yield 7.3%	Small Cap 4.9%	DM Equity -0.4%	EM Equity 11.6%	Asset Alloc. 14.6%	Large Cap -4.4%	Asset Alloc. 19.5%	DM Equity 8.3%	Asset Alloc. 13.5%	High Yield -16.9%	Asset Alloc. 6.1%	DM Equity 18.9%
Large Cap 5.5%	Comdty. -35.6%	Large Cap 26.5%	High Yield 14.8%	Asset Alloc. -0.7%	Large Cap 16.0%	REITs 2.9%	Cash 0.0%	Asset Alloc. -2.0%	REITs 8.6%	High Yield 10.4%	Asset Alloc. -5.8%	EM Equity 18.9%	Fixed Income 7.5%	DM Equity 11.8%	EM Equity -17.5%	EM Equity 4.8%	Large Cap 16.9%
Cash 4.8%	Large Cap -37.0%	Asset Alloc. 25.0%	Asset Alloc. 13.3%	Small Cap -4.2%	Asset Alloc. 12.2%	Cash 0.0%	High Yield 0.0%	High Yield -2.7%	Asset Alloc. 8.3%	REITs 8.7%	Small Cap -11.0%	High Yield 12.6%	High Yield 7.0%	High Yield 1.0%	REITs -19.2%	DM Equity 4.1%	High Yield 12.2%
High Yield 3.2%	REITs -37.7%	Comdty. 18.9%	DM Equity 8.2%	DM Equity -11.7%	Fixed Income 4.2%	Fixed Income -2.0%	EM Equity -1.8%	Small Cap -4.4%	Fixed Income 2.6%	Fixed Income 3.5%	Comdty. -11.2%	Fixed Income 8.7%	Cash 0.5%	Cash 0.0%	DM Equity -19.3%	Fixed Income 4.1%	Asset Alloc. 11.7%
Small Cap -1.6%	DM Equity -43.1%	Fixed Income 5.9%	Fixed Income 6.5%	Comdty. -13.3%	Cash 0.1%	EM Equity -2.3%	DM Equity -4.5%	EM Equity -14.6%	DM Equity 1.5%	Comdty. 1.7%	DM Equity -13.4%	Comdty. 7.7%	Comdty. -3.1%	Fixed Income -1.5%	Large Cap -20.0%	Cash 0.8%	Fixed Income 3.3%
REITs -15.7%	EM Equity -53.2%	Cash 0.1%	Cash 0.1%	EM Equity -18.2%	Comdty. -1.1%	Comdty. -9.5%	Comdty. -17.0%	Comdty. -24.7%	Cash 0.3%	Cash 0.8%	EM Equity -14.2%	Cash 2.2%	REITs -5.1%	EM Equity -2.2%	Small Cap -23.4%	Comdty. -2.6%	Cash 0.7%

Source: Bloomberg, FactSet, MSCI, NAREIT, Russell, Standard & Poor's, J.P. Morgan Asset Management.

Large cap: S&P 500, Small cap: Russell 2000, EM Equity: MSCI EME, DM Equity: MSCI EAFE, Comdty: Bloomberg Commodity Index, High Yield: Bloomberg Global HY Index, Fixed Income: Bloomberg US Aggregate, REITs: NAREIT Equity REIT Index, Cash: Bloomberg 1-3m Treasury. The "Asset Allocation" portfolio assumes the following weights: 25% in the S&P 500, 10% in the Russell 2000, 15% in the MSCI EAFE, 5% in the MSCI EME, 25% in the Bloomberg US Aggregate, 5% in the Bloomberg 1-3m Treasury, 5% in the Bloomberg Global High Yield Index, 5% in the Bloomberg Commodity Index and 5% in the NAREIT Equity REIT Index. Balanced portfolio assumes annual rebalancing. Annualized (Ann.) return and volatility (Vol.) represents period from 12/31/2006 to 12/31/2021. Please see disclosure page at end for index definitions. All data represents total return for stated period. The "Asset Allocation" portfolio is for illustrative purposes only. Past performance is not indicative of future returns.

Guide to the Markets – U.S. Data are as of June 30, 2022. Asset Class Returns do not reflect returns in any AssetGrade Portfolio, but show the rate of return for the following asset classes.

AssetGrade Market Summary

Valuation measures now more reasonable

Forward Price Earnings Ratios are below the 25-year average



Source: FactSet, FRB, Refinitiv Datastream, Robert Shiller, Standard & Poor's, Thomson Reuters, J.P. Morgan Asset Management.

Price-to-earnings is price divided by consensus analyst estimates of earnings per share for the next 12 months as provided by IBES since June 1997 and by FactSet since January 2022. Current next 12-months consensus earnings estimates are \$240. Average P/E and standard deviations are calculated using 25 years of history. Shiller's P/E uses trailing 10-years of inflation-adjusted earnings as reported by companies. Dividend yield is calculated as the next 12-months consensus dividend divided by most recent price. Price-to-book ratio is the price divided by book value per share. Price-to-cash flow is price divided by NTM cash flow. EY minus Baa yield is the forward earnings yield (consensus analyst estimates of EPS over the next 12 months divided by price) minus the Moody's Baa seasoned corporate bond yield. Std. dev. over-/under-valued is calculated using the average and standard deviation over 25 years for each measure. *P/CF is a 20-year average due to cash flow availability.

Guide to the Markets – U.S. Data are as of June 30, 2022.

AssetGrade Market Summary

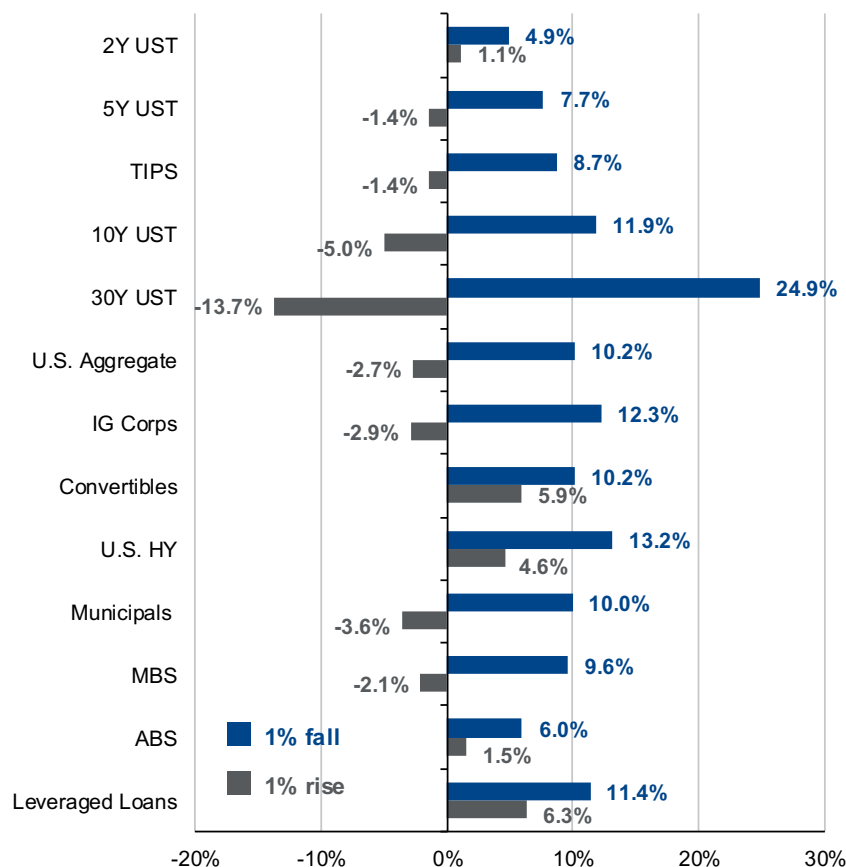
Bonds returns negative across all Sectors, time to take advantage of higher yields?



U.S. Treasuries	Yield		Return			
	6/30/2022	12/31/2021	2022 YTD	Avg. Maturity	Correlation to 10-year	Correlation to S&P 500
2-Year	2.92%	0.73%	-3.05%	2 years	0.69	-0.32
5-Year	3.01%	1.26%	-7.15%	5	0.92	-0.29
TIPS	0.65%	-1.04%	-8.92%	10	0.58	0.24
10-Year	2.98%	1.52%	-11.71%	10	1.00	-0.26
30-Year	3.14%	1.90%	-23.57%	30	0.93	-0.25
Sector						
U.S. Aggregate	3.72%	1.75%	-10.35%	8.6	0.85	0.10
IG Corps	4.70%	2.33%	-14.39%	11.4	0.46	0.43
Convertibles	7.63%	3.66%	-19.41%	-	-0.23	0.87
U.S. HY	8.89%	4.21%	-14.19%	5.9	-0.20	0.74
Municipals	3.21%	1.11%	-8.98%	12.8	0.42	0.14
MBS	3.77%	1.98%	-8.78%	7.8	0.80	-0.04
ABS	4.38%	1.96%	-2.87%	2.4	-0.41	0.62
Leveraged Loans	8.83%	4.60%	-4.06%	2.6	0.06	0.03

Impact of a 1% rise or fall in interest rates

Total return, assumes a parallel shift in the yield curve



Source: Bloomberg, FactSet, Standard & Poor's, U.S. Treasury, J.P. Morgan Asset Management. Sectors shown above are provided by Bloomberg unless otherwise noted and are represented by – U.S. Aggregate; MBS: U.S. Aggregate Securitized – MBS; ABS: J.P. Morgan ABS Index; Corporates: U.S. Corporates; Municipals: Muni Bond; High Yield: Corporate High Yield; Leveraged Loans: J.P. Morgan Leveraged Loan Index; TIPS: Treasury Inflation-Protected Securities; Convertibles: U.S. Convertibles Composite. Convertibles yield is as of most recent month end and is based on U.S. portion of Bloomberg Global Convertibles Index. Yield and return information based on bellwethers for Treasury securities. Sector yields reflect yield-to-worst. Convertibles yield is based on U.S. portion of Bloomberg Global Convertibles. Correlations are based on 15-years of monthly returns for all sectors. Past performance is not indicative of future results.

Guide to the Markets – U.S. Data are as of June 30, 2022.

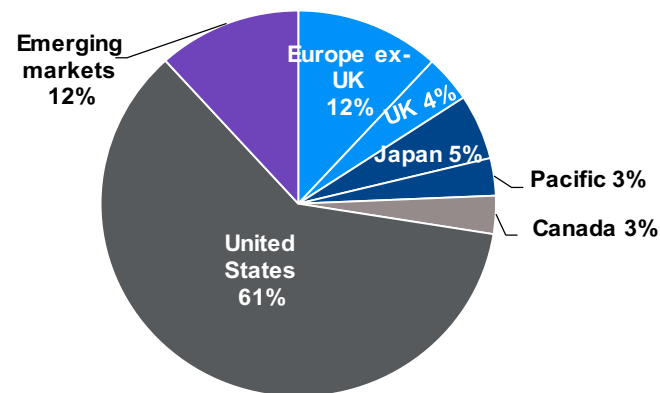
AssetGrade Market Summary

Strength of the USD continues to negatively impact foreign stocks

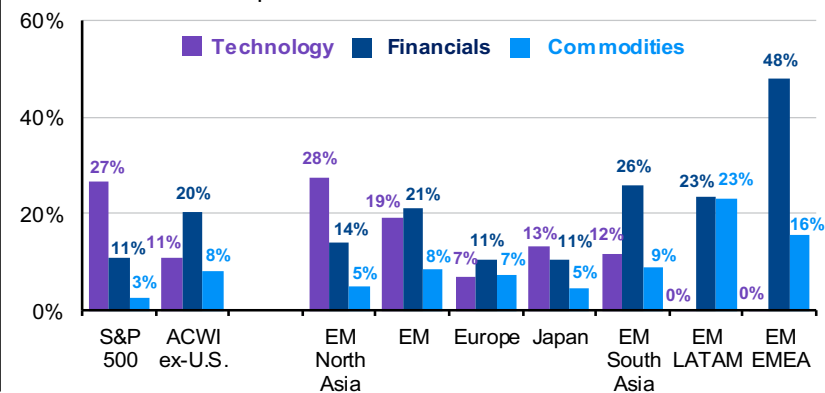


Returns	2022 YTD		2021		15-years	
	Local	USD	Local	USD	Ann.	Beta
Regions						
U.S. (S&P 500)	-	-20.0	-	28.7	10.7	0.90
AC World ex-U.S.	-11.6	-18.2	13.5	8.3	4.2	1.07
EAFE	-10.9	-19.3	19.2	11.8	4.1	1.04
Europe ex-UK	-17.3	-23.6	24.4	16.5	4.8	1.18
Emerging markets	-13.5	-17.5	0.1	-2.2	4.8	1.18
Selected Countries						
United Kingdom	1.7	-8.8	19.6	18.5	2.3	1.02
France	-14.8	-21.7	29.7	20.6	4.7	1.22
Germany	-21.8	-28.1	13.9	5.9	4.7	1.31
Japan	-5.7	-20.1	13.8	2.0	3.4	0.72
China	-9.9	-11.2	-21.6	-21.6	5.8	1.10
India	-9.8	-15.1	28.9	26.7	6.7	1.26
Brazil	-3.4	2.9	-11.2	-17.2	0.9	1.50
Korea	-21.7	-28.3	0.8	-7.9	5.9	1.49

Weights in MSCI All Country World Index
% global market capitalization, float adjusted



Representation of key sectors in international markets
% of index market capitalization



Source: FactSet, Federal Reserve, MSCI, Standard & Poor's, J.P. Morgan Asset Management. All return values are MSCI Gross Index data. 15-year history based on USD returns. 15-year return and beta figures are calculated for the time period 12/31/2006 to 12/31/2021. Beta is for monthly returns relative to the MSCI AC World Index. Annualized volatility is calculated as the standard deviation of quarterly returns multiplied by the square root of 4. Chart is for illustrative purposes only. Please see disclosure page for index definitions. Past performance is not a reliable indicator of current and future results. EM North Asia includes China, Taiwan and South Korea. EM South Asia includes India, Indonesia, Malaysia, Pakistan, Philippines, Taiwan and Thailand.

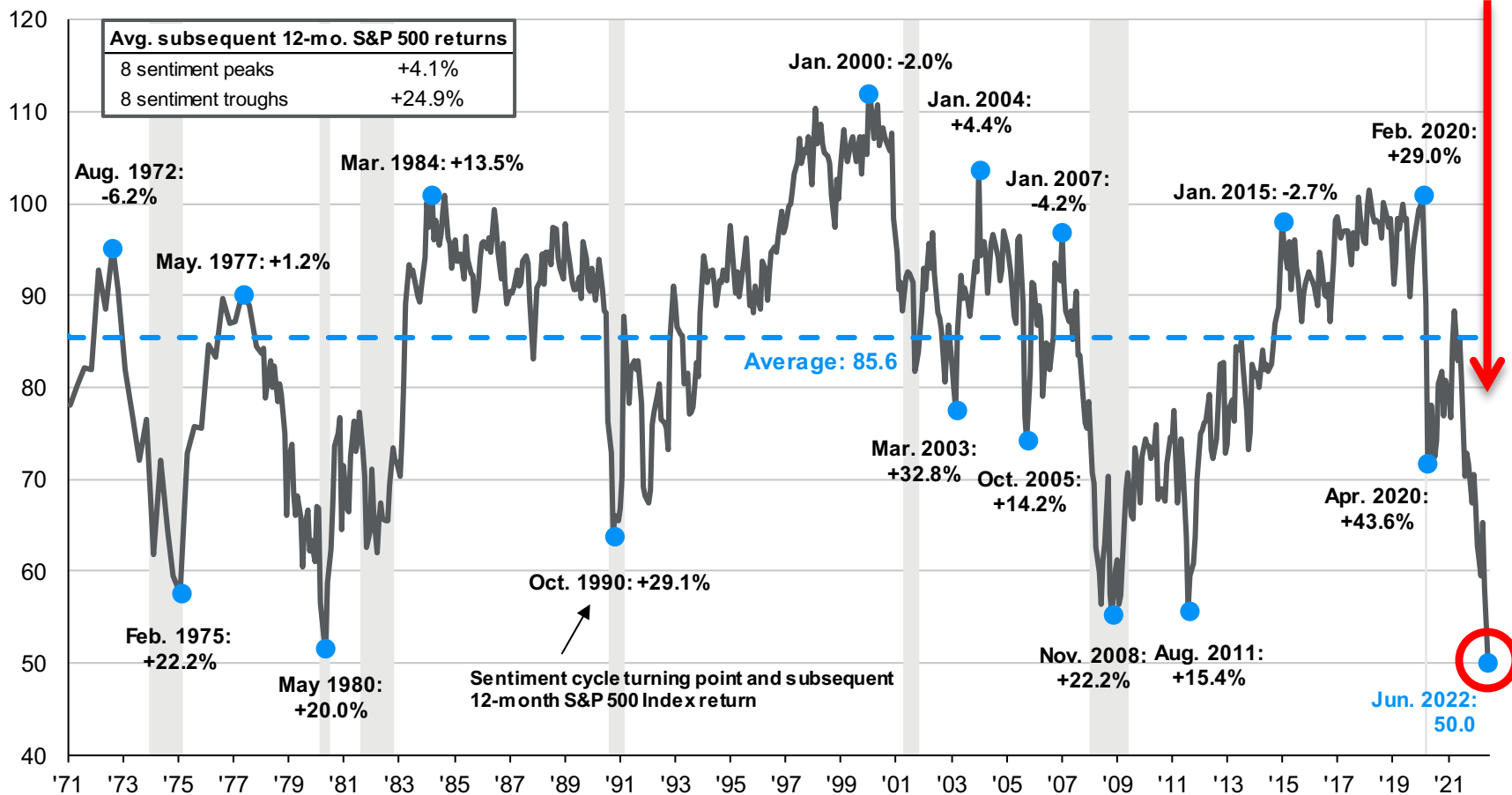
Guide to the Markets – U.S. Data are as of June 30, 2022.

AssetGrade Market Summary

Where might we go from here?

Sentiment hits a
50-year low

Consumer Sentiment Index and subsequent 12-month S&P 500 returns



Source: FactSet, Standard & Poor's, University of Michigan, J.P. Morgan Asset Management.

Peak is defined as the highest index value before a series of lower lows, while a trough is defined as the lowest index value before a series of higher highs. Subsequent 12-month S&P 500 returns are price returns only, which excludes dividends. Past performance is not a reliable indicator of current and future results.

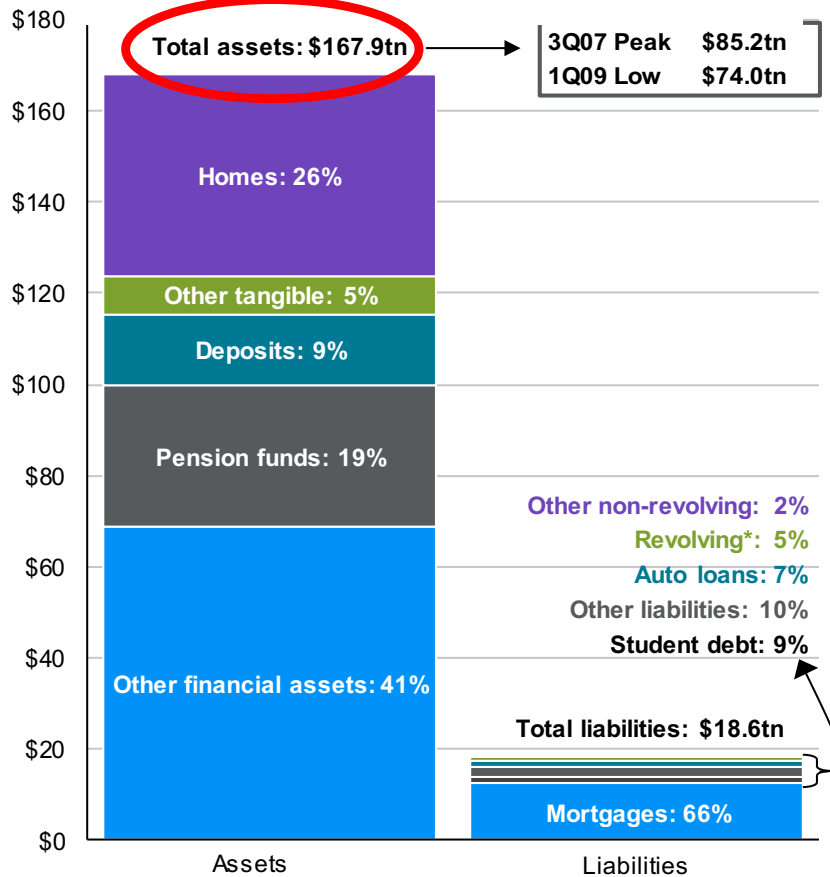
Guide to the Markets – U.S. Data are as of June 30, 2022.

AssetGrade Market Summary

Consumers spending is 65% of GDP, strong balance sheets support continued spending

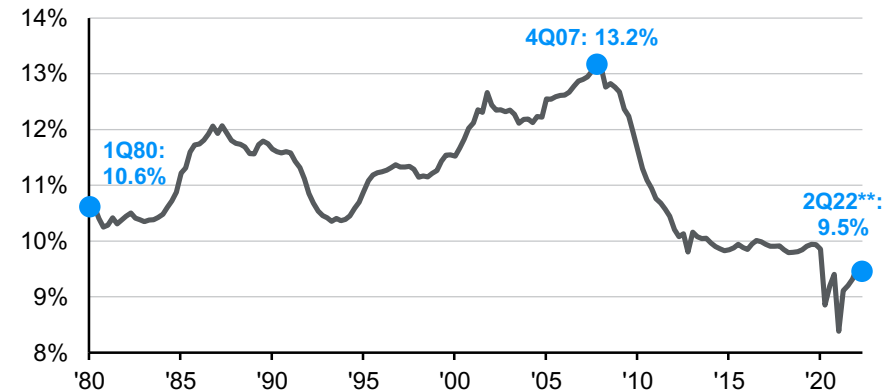
Consumer balance sheet

1Q22, trillions of dollars outstanding, not seasonally adjusted



Household debt service ratio

Debt payments as % of disposable personal income, SA



Excess personal savings relative to pre-pandemic trend

Disposable personal income less consumer outlays, minus pre-pandemic trend growth***, \$ trillions, monthly



Source: FactSet, FRB, J.P. Morgan Asset Management; (Top and bottom right) BEA.

Data include households and nonprofit organizations. SA – seasonally adjusted. *Revolving includes credit cards. Values may not sum to 100% due to rounding. **2Q22 figures for debt service ratio are J.P. Morgan Asset Management estimates. ***Figures reflect the difference in monthly realized savings vs. pre-pandemic trend savings from March 2020 to February 2022. From March 2020 to August 2021, consumers amassed \$2.3 trillion in excess savings. Since August 2021, consumers have begun to draw down on those excess savings, with the remaining reflected in the chart annotation.

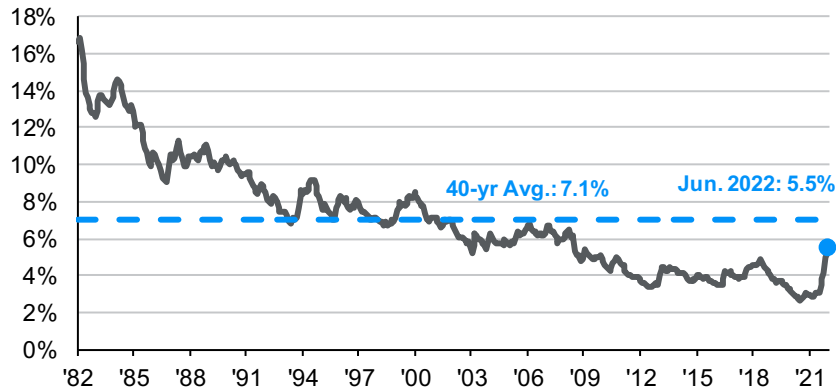
Guide to the Markets – U.S. Data are as of June 30, 2022.

AssetGrade Market Summary

Housing in perspective – rates historically low, record home equity and quality underwriting

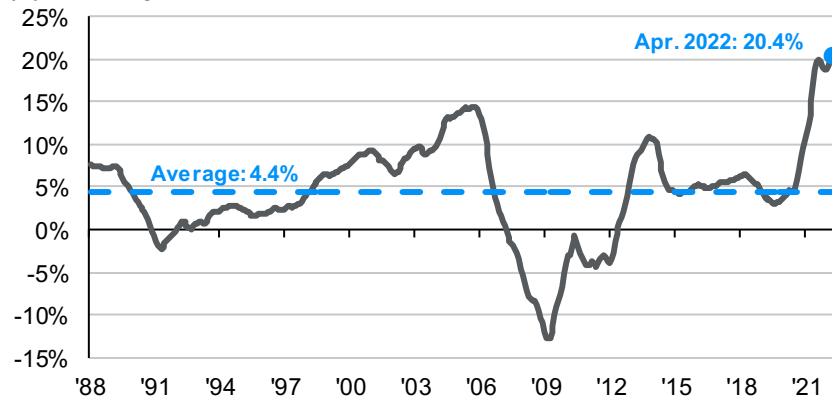
Average interest rate on a U.S. mortgage

30-year fixed-rate mortgage



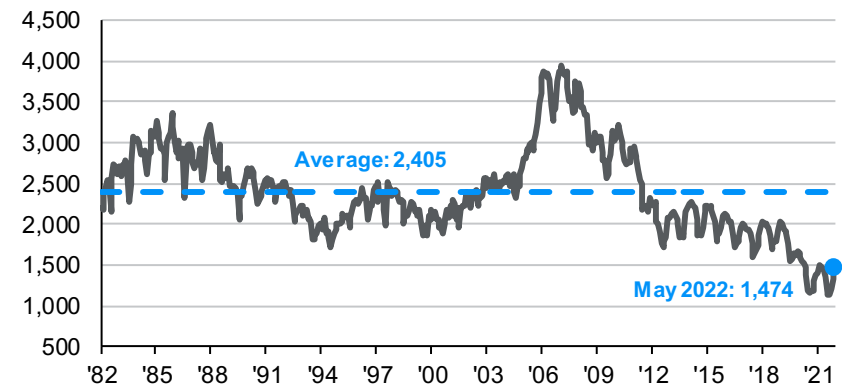
Home prices

y/y % change in Case-Shiller Home Price Index



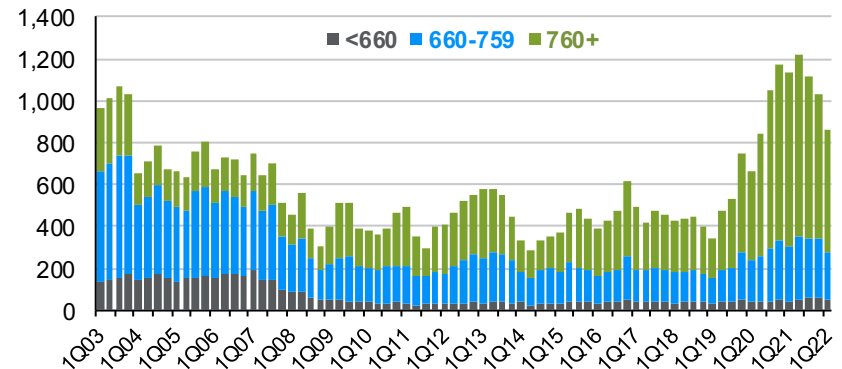
Housing inventories

Inventory of new and existing single family homes for sale, thous, NSA



Mortgage originations by credit score*

Billions of USD



Source: Centers for Disease Control and Prevention, OpenTable, Our World in Data, STR, Transportation Security Administration (TSA), J.P. Morgan Asset Management.

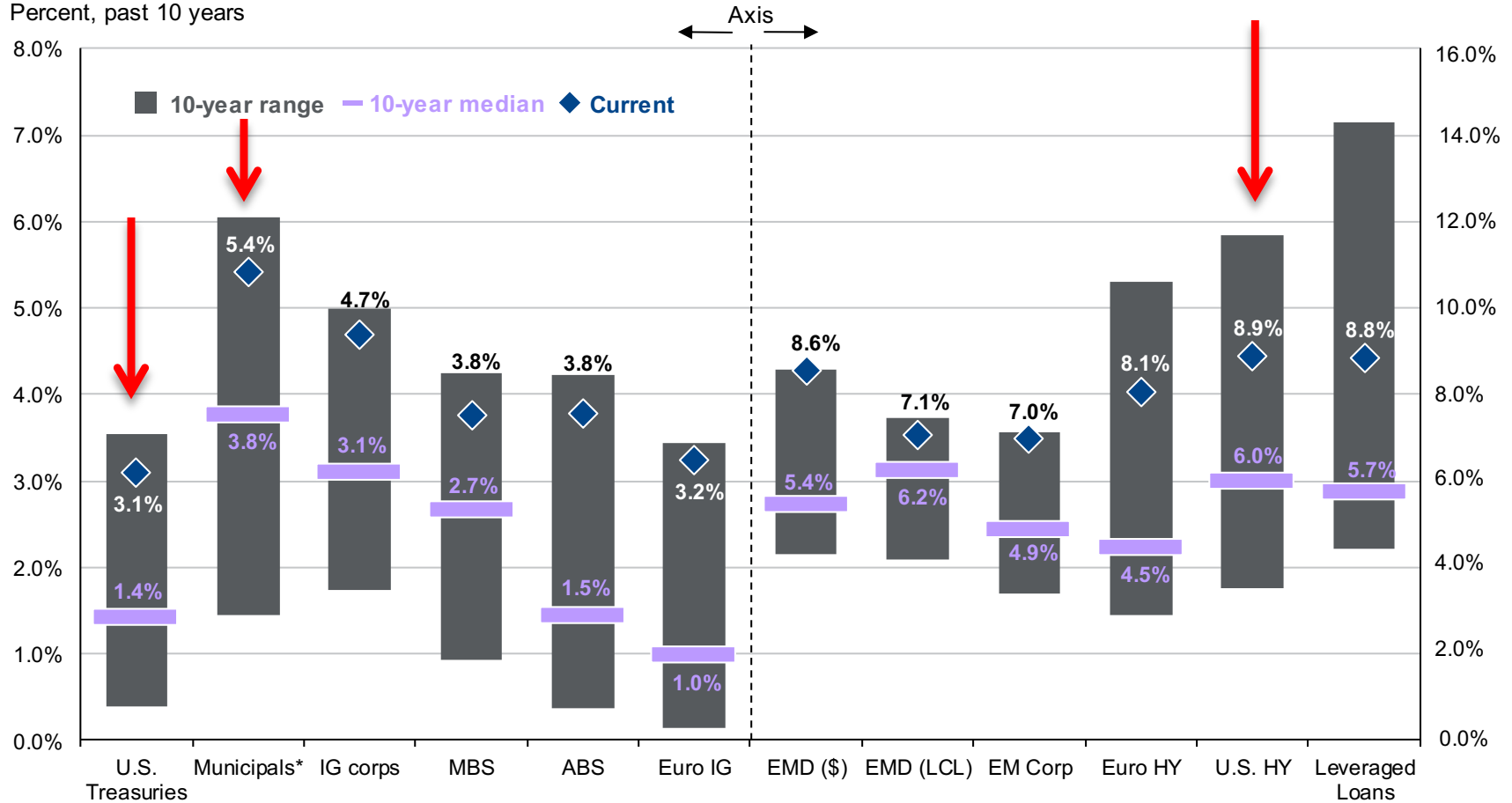
Guide to the Markets – U.S. Data are as of June 30, 2022.

AssetGrade Market Summary

Fixed income sectors near top of 10-year range

Yield-to-worst across fixed income sectors

Percent, past 10 years



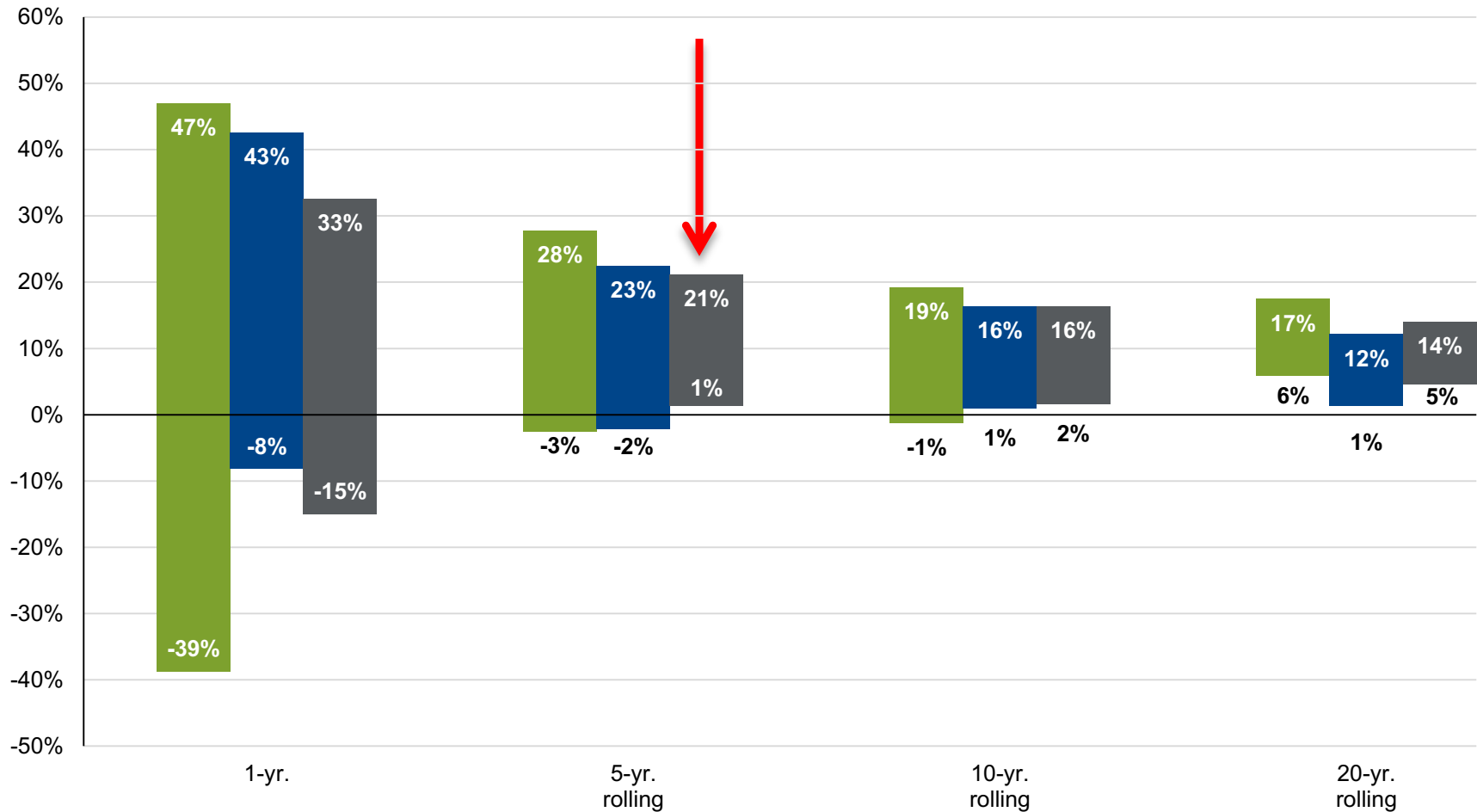
Source: Bloomberg, FactSet, J.P. Morgan Credit Research, J.P. Morgan Asset Management. Indices used are Bloomberg except for emerging market debt and leveraged loans: EMD (\$): J.P. Morgan EMIGLOBAL Diversified Index; EMD (LCL): J.P. Morgan GBI-EM Global Diversified Index; EM Corp.: J.P. Morgan CEMBI Broad Diversified; Leveraged loans: JPM Leveraged Loan Index; Euro IG: Bloomberg Euro Aggregate Corporate Index; Euro HY: Bloomberg Pan-European High Yield Index. Yield-to-worst is the lowest possible yield that can be received on a bond apart from the company defaulting. All sectors shown are yield-to-worst except for Municipals, which is based on the tax-equivalent yield-to-worst assuming a top-income tax bracket rate of 37% plus a Medicare tax rate of 3.8%.

Guide to the Markets – U.S. Data are as of June 30, 2022.

AssetGrade Market Summary

Diversification over time

Range of stock, bond and blended total returns
Annual total returns, 1950 - 2021



Source: Bloomberg, FactSet, Federal Reserve, Robert Shiller, Strategas/Ibbotson, J.P. Morgan Asset Management.

Returns shown are based on calendar year returns from 1950 to 2021. Stocks represent the S&P 500 Shiller Composite and Bonds represent Strategas/Ibbotson for periods from 1950 to 2010 and Bloomberg Aggregate thereafter. Growth of \$100,000 is based on annual average total returns from 1950 to 2021.

Disclosures

Certified Financial Planners™ (CFP®) are licensed by the CFP® Board to use the CFP® mark. CFP® certification requirements include: Bachelor's degree from an accredited college or university, completion of the financial planning education requirements set by the CFP® Board (www.cfp.net), successful completion of the CFP® Certification Exam, comprised of two three-hour sessions, experience requirement: 6,000 hours of professional experience related to the financial planning process, or 4,000 hours of Apprenticeship experience that meets additional requirements, successfully pass the Candidate Fitness Standards and background check, agree annually to be bound by CFP® Board's Standards of Professional Conduct, and complete 30 hours of continuing education every two years, including two hours on the Code of Ethics and Standards of Professional Conduct.

Chartered Financial Analyst® (CFA®) are licensed by the CFA® Institute to use the CFA® mark. CFA® certification requirements: Hold a bachelor's degree from an accredited institution or have equivalent education or work experience, successful completion of all three exam levels of the CFA® Program, have 48 months of acceptable professional work experience in the investment decision-making process, fulfill society requirements, which vary by society. Unless you are upgrading from affiliate membership, all societies require two sponsor statements as part of each application; these are submitted online by your sponsors.

The opinions expressed herein are those of AssetGrade, LLC (AssetGrade) and are subject to change without notice. Nothing in this material should be construed as an offer to purchase or sell any product or security. AssetGrade is an independent investment adviser registered under the Investment Advisers Act of 1940, as amended. Registration does not imply a certain level of skill or training. More information about AssetGrade, including our investment strategies, fees and objectives, can be found in our Form ADV Part 2, which is available upon request.

All indexes are unmanaged and an individual cannot invest directly in an index. Index returns do not include fees or expenses.

Equities:

The **Dow Jones Industrial Average** is a price-weighted average of 30 actively traded blue-chip U.S. stocks.

The **MSCI ACWI (All Country World Index)** is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets.

The **MSCI EAFE Index(Europe, Australasia, Far East)** is a free float-adjusted market capitalization index that is designed to measure the equity market performance of developed markets, excluding the US & Canada.

The **MSCI Emerging Markets Index** is a free float-adjusted market capitalization index that is designed to measure equity market performance in the global emerging markets.

The **MSCI Europe Index** is a free float-adjusted market capitalization index that is designed to measure developed market equity performance in Europe.

The **MSCI Pacific Index** is a free float-adjusted market capitalization index that is designed to measure equity market performance in the Pacific region.

The **Russell 1000 Index®** measures the performance of the 1,000 largest companies in the Russell 3000.

The **Russell 1000 Growth Index®** measures the performance of those Russell 1000 companies with higher price-to-book ratios and higher forecasted growth values.

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

The **Russell 2000 Index®** measures the performance of the 2,000 smallest companies in the Russell 3000 Index.

The **Russell 2000 Growth Index®** measures the performance of those Russell 2000 companies with higher price-to-book ratios and higher forecasted growth values.

The **Russell 2000 Value Index®** measures the performance of those Russell 2000 companies with lower price-to-book ratios and lower forecasted growth values.

The **Russell 3000 Index®** measures the performance of the 3,000 largest U.S. companies based on total market capitalization.

The **Russell Midcap Index®** measures the performance of the 800 smallest companies in the Russell 1000 Index.

The **Russell Midcap Growth Index®** measures the performance of those Russell Midcap companies with higher price-to-book ratios and higher forecasted growth values. The stocks are also members of the Russell 1000 Growth index.

The **Russell Midcap Value Index®** measures the performance of those Russell Midcap companies with lower price-to-book ratios and lower forecasted growth values. The stocks are also members of the Russell 1000 Value index.

The **S&P 500 Index** is widely regarded as the best single gauge of the U.S. equities market. The index includes a representative sample of 500 leading companies in leading industries of the U.S. economy. The **S&P 500 Index** focuses on the large-cap segment of the market; however, since it includes a significant portion of the total value of the market, it also represents the market.

AG-22-17

Disclosures

Fixed income:

The **Bloomberg Barclays 1-3 Month U.S. Treasury Bill Index** includes all publicly issued zero-coupon US Treasury Bills that have a remaining maturity of less than 3 months and more than 1 month, are rated investment grade, and have \$250 million or more of outstanding face value. In addition, the securities must be denominated in U.S. dollars and must be fixed rate and non convertible.

The **Bloomberg Barclays Global High Yield Index** is a multi-currency flagship measure of the global high yield debt market. The index represents the union of the US High Yield, the Pan-European High Yield, and Emerging Markets (EM) Hard Currency High Yield Indices. The high yield and emerging markets sub-components are mutually exclusive. Until January 1, 2011, the index also included CMBS high yield securities.

The **Bloomberg Barclays Municipal Index** consists of a broad selection of investment-grade general obligation and revenue bonds of maturities ranging from one year to 30 years. It is an unmanaged index representative of the tax-exempt bond market.

The **Bloomberg Barclays US Dollar Floating Rate Note (FRN) Index** provides a measure of the U.S. dollar denominated floating rate note market.

The **Bloomberg Barclays US Corporate Investment Grade Index** is an unmanaged index consisting of publicly issued US Corporate and specified foreign debentures and secured notes that are rated investment grade (Baa3/BBB or higher) by at least two ratings agencies, have at least one year to final maturity and have at least \$250 million par amount outstanding. To qualify, bonds must be SEC-registered.

The **Bloomberg Barclays US High Yield Index** covers the universe of fixed rate, non-investment grade debt. Eurobonds and debt issues from countries designated as emerging markets (sovereign rating of Baa1/BBB+/BBB+ and below using the middle of Moody's, S&P, and Fitch) are excluded, but Canadian and global bonds (SEC registered) of issuers in non-EMG countries are included.

The **Bloomberg Barclays US Mortgage Backed Securities Index** is an unmanaged index that measures the performance of investment grade fixed-rate mortgage backed pass-through securities of GNMA, FNMA and FHLMC.

The **Bloomberg Barclays US TIPS Index** consists of Inflation-Protection securities issued by the U.S. Treasury.

The **J.P. Morgan Emerging Market Bond Global Index(EMBI)** includes U.S. dollar denominated Brady bonds, Eurobonds, traded loans and local market debt instruments issued by sovereign and quasi-sovereign entities.

The **J.P. Morgan Domestic High Yield Index** is designed to mirror the investable universe of the U.S. dollar domestic high yield corporate debt market.

The **J.P. Morgan Corporate Emerging Markets Bond Index Broad Diversified (CEMBI Broad Diversified)** is an expansion of the **J.P. Morgan Corporate Emerging Markets Bond Index (CEMBI)**. The CEMBI is a market capitalization weighted index consisting of U.S. dollar denominated emerging market corporate bonds.

The **J.P. Morgan Emerging Markets Bond Index Global Diversified (EMBI Global Diversified)** tracks total returns for U.S. dollar-denominated debt instruments issued by emerging market sovereign and quasi-sovereign entities: Brady bonds, loans, Eurobonds. The index limits the exposure of some of the larger countries.

The **J.P. Morgan GBI EM Global Diversified** tracks the performance of local currency debt issued by emerging market governments, whose debt is accessible by most of the international investor base.

Other asset classes: The **Alerian MLP Index** is a composite of the 50 most prominent energy Master Limited Partnerships (MLPs) that provides investors with an unbiased, comprehensive benchmark for the asset class. The **Bloomberg Commodity Index** and related sub-indices are composed of futures contracts on physical commodities and represents twenty two separate commodities traded on U.S. exchanges, with the exception of aluminum, nickel, and zinc. The **Cambridge Associates U.S. Global Buyout and Growth Index®** is based on data compiled from 1,768 global (U.S. & ex – U.S.) buyout and growth equity funds, including fully liquidated partnerships, formed between 1986 and 2013. The **CS/Tremont Hedge Fund Index** is compiled by Credit Suisse Tremont Index, LLC. It is an asset-weighted hedge fund index and includes only funds, as opposed to separate accounts. The Index uses the Credit Suisse/Tremont database, which tracks over 4500 funds, and consists only of funds with a minimum of US\$50 million under management, a 12-month track record, and audited financial statements. It is calculated and rebalanced on a monthly basis, and shown net of all performance fees and expenses. It is the exclusive property of Credit Suisse Tremont Index, LLC. The **HFRI Monthly Indices (HFRI)** are equally weighted performance indexes, utilized by numerous hedge fund managers as a benchmark for their own hedge funds. The HFRI are broken down into 4 main strategies, each with multiple sub strategies. All single-manager HFRI Index constituents are included in the HFRI Fund Weighted Composite, which accounts for over 2200 funds listed on the internal HFR Database. The **NAREIT EQUITY REIT Index** is designed to provide the most comprehensive assessment of overall industry performance and includes all tax-qualified real estate investment trusts (REITs) that are listed on the NYSE, the American Stock Exchange or the NASDAQ National Market List. The **NFI-ODCE**, short for NCREIF Fund Index - Open End Diversified Core Equity, is an index of investment returns reporting on both a historical and current basis the results of 33 open-end commingled funds pursuing a core investment strategy, some of which have performance histories dating back to the 1970s. The NFI-ODCE Index is capitalization-weighted and is reported gross of fees. Measurement is time-weighted.

The **U.S. Treasury Index** is a component of the U.S. Government index.