Increased Volatility: Is here to stay
Quarterly Review

• What caused the snap back rally in the first quarter?
• How do the economy and markets look now?
• What are the challenges in the fixed income markets?
• What are the risks and opportunities facing investors today?
Equity Markets

- Strong 1st quarter after a weak 4th quarter
- Domestic outpaced international

Source: Zephyr StyleADVISOR, as of March 31, 2019. U.S. Large is represented by the S&P 500 Index, U.S. Mid by the Russell 2500 Index, U.S. Small by the Russell 200 Index, International by the MSCI EAFE Index and Emerging Markets by the MSCI EM Index.
Fixed Income Markets

- Fixed also enjoyed a strong 1st quarter
- Trailing 12 month returns above longer term averages

Source: Zephyr StyleADVISOR, as of March 31, 2019. Long Term Treasury is represented by the Barclays U.S. Treasury Long Index, Medium Term Muni by Barclays Muni 7-Year Index, Medium Term Corporate by the Barclays Intermediate U.S. Government/Credit Index and High Yield by the Barclays U.S. Corporate High Yield Index.
Market Valuation

- Ended 2018 at 14.4x earnings
- Market is currently fairly valued as compared to 25-year valuation metrics

Source: FactSet, FRB, 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 April 1994, and FactSet for March 31, 2019. Average P/E and standard deviations are calculated using 25 years of IBES 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-month 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 data availability. Guide to the Markets – U.S. Data are as of March 31, 2019.
WEALTH MANAGEMENT OUTLOOK

**GDP**

- 4th Quarter GDP increased by 2.6%
- For all of 2018, GDP grew by 2.9%
- GDP growth is predicted to slow to 2.0%-2.5% in 2019
- Any signs of recession?

Source: BEA, FactSet, J.P. Morgan Asset Management. Values may not sum to 100% due to rounding. Quarter-over-quarter percent changes are at an annualized rate. Average represents the annualized growth rate for the full period. Expansion average refers to the period starting in the third quarter of 2009. Guide to the Markets – U.S. Data are as of March 31, 2019.
Unemployment and Wages

Employment growth remains surprisingly strong for this late in an economic cycle
Starting to see real wage growth

Source: BLS, FactSet, J.P. Morgan Asset Management. Guide to the Markets – U.S. Data are as of March 31, 2019
The Consumer

- The consumer remains healthy
- Debt service levels are at historic lows
- Household net worth is up 58% since the previous peak in 3rd quarter 2007

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. **1Q19 figures for debt service ratio and household net worth are J.P. Morgan Asset Management estimates. Guide to the Markets – U.S. Data are as of March 31, 2019.
Cyclical Sectors

- Four of the most volatile sectors of the economy are showing no signs of overheating

Inflation

Inflation remains contained

Source: BLS, FactSet, J.P. Morgan Asset Management. CPI used is CPI-U and values shown are % change vs. one year ago. Core CPI is defined as CPI excluding food and energy prices. The Personal Consumption Expenditure (PCE) deflator employs an evolving chain-weighted basket of consumer expenditures instead of the fixed weight basket used in CPI calculations. Guide to the Markets – U.S. Data are as of March 31, 2019.

- Inflation remains contained
Earnings

- Operating EPS were $151.60 in 2018 and current estimates are $165.34 for 2019
- 9% growth in earnings may prove to be optimistic
The Fed

- What has changed in the last 5 months?
- The Fed has two levers to pull – interest rates and the balance sheet
- Is the Fed on hold?

Source: Bloomberg, FactSet, Federal Reserve, J.P. Morgan Asset Management. Market expectations are the federal funds rates priced into the fed futures market as of the date of the March 2019 FOMC meeting and are through December 2021. *Long-run projections are the rates of growth, unemployment and inflation to which a policymaker expects the economy to converge over the next five to six years in absence of further shocks and under appropriate monetary policy. Guide to the Markets – U.S. Data are as of March 31, 2019.
The Yield Curve

What does the yield curve mean for the economy and the markets?

Federal Finances

The 2019 federal budget
CBO Baseline forecast, USD trillions

Federal budget surplus/deficit
% of GDP, 1990 – 2029, 2019 CBO Baseline

Federal net debt (accumulated deficits)
% of GDP, 1940 – 2029, 2019 CBO Baseline, end of fiscal year

CBO’s Baseline economic assumptions

- The level of Federal debt is becoming a concern
Corporate Debt

We have bond market concerns

Source: J.P. Morgan Asset Management; (Left) Bank for International Settlements (BIS), FactSet; (Top right) Barclays, Bloomberg, FactSet; (Bottom right) J.P. Morgan Credit Research. Government, household and non-financial corporate debt refers to gross debt. General government debt is comprised of core debt instruments that include currency and deposits, loans and debt securities. All debt values are shown at market value. *Baa debt outstanding is based on the Bloomberg Barclays U.S. Aggregate Investment Grade Corporate Credit Index. Baa debt is the lowest credit rating issued by Moody’s for investment-grade debt. **Rising stars and fallen angels refer to the overall high yield and investment grade market. A rising star is defined as a company whose credit rating gets upgraded from non-investment grade to investment grade. A fallen angel is defined as a company whose credit rating gets downgraded from investment grade to non-investment grade. Average rising stars and fallen angels from 2001-2018. Guide to the Markets – U.S. Data are as of March 31, 2019.

- We have bond market concerns
### Interest Rates

#### Yield vs Return

<table>
<thead>
<tr>
<th>Sector</th>
<th>Yield</th>
<th>Return</th>
<th>Avg. Maturity</th>
<th>Correlation to 10-year</th>
<th>Correlation to S&amp;P 500</th>
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<td>2-Year</td>
<td>2.46%</td>
<td>1.89%</td>
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<td>5-Year</td>
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<td>TIPS</td>
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<td>10-Year</td>
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<td>30-Year</td>
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<td>Convertibles</td>
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<td>Floating Rate</td>
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<td>High Yield</td>
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<td>Broad Market</td>
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**Impact of a 1% rise in interest rates**

Assumes a parallel shift in the yield curve and steady spreads.

- Total return
- Price return
- Duration
- Credit

**Source:** Barclays, Bloomberg, FactSet, Standard & Poor’s, U.S. Treasury, J.P. Morgan Asset Management. Sectors shown above are provided by Bloomberg and are represented by – Broad Market: U.S. Aggregate; MBS: U.S. Aggregate Securitized - MBS; Corporate: U.S. Corporates; Municipals: Muni Bond 10-year; High Yield: Corporate High Yield; TIPS: Treasury Inflation-Protection Securities (TIPS); Floating Rate: FRN (BBB); Convertibles: U.S. Convertibles Composite. Yield and return information based on bellwethers for Treasury securities. Sector yields reflect yield to worst. Convertibles yield is based on US portion of Bloomberg Barclays Global Convertibles. Correlations are based on 10-years of monthly returns for all sectors. Change in bond price is calculated using both duration and convexity according to the following formula: New Price = (Price + (Price * Duration * Change in Interest Rates)) + (0.5 * Price * Convexity * (Change in Interest Rates)^2). Chart is for illustrative purposes only. Past performance is not indicative of future results. Guide to the Markets – U.S. Data are as of December 31, 2018.

- What risk should we take – Duration or Credit?
- What about Fixed Income liquidity?
International Markets

Global earnings
EPS, local currency, next 12 months, Jan. 2006 = 100

Global valuations
Current and 25-year historical valuations*

Source: FactSet, MSCI, Standard & Poor’s, Thomson Reuters, J.P. Morgan Asset Management. *Valuations refer to NTMA P/E for Europe, U.S., Japan and developed markets and P/B for emerging markets. Valuation and earnings charts use MSCI indices for all regions/countries, except for the U.S., which is the S&P 500. All indices use IBES aggregate earnings estimates, which may differ from earnings estimates used elsewhere in the book. MSCI Europe includes the eurozone as well as countries not in the currency bloc, such as Norway, Sweden, Switzerland and the UK (which collectively make up 47% of the overall index). Past performance is not a reliable indicator of current and future results. Guide to the Markets – U.S. Data are as of March 31, 2019.

- International valuations are attractive compared to domestic valuations
### Diversification

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<th>REITs</th>
<th>EM Equity</th>
<th>DM Equity</th>
<th>Comdty.</th>
<th>Asset Alloc. 12%</th>
<th>Large Cap</th>
<th>High Yield</th>
<th>Fixed Income</th>
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- Benefits of diversification
Long Term Care: Planning Ahead

- Longevity is increasing
- Long-term care costs have skyrocketed in recent years
- Limited coverage is available through health insurance and Medicaid

Get the Facts: The Reality of Long Term Care

- 47% of men and 58% of women 65+ will need long-term care during their lifetimes.

- 45% of people under the age of 65 require significant long-term care help (assistance with two or more activities of daily living).


- 5.5%: One-year annual inflation rate in private-room nursing home costs, 2017.

Sources

• J.P. Morgan Asset Management
Index Definitions

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

The S&P 500 Index is widely regarded as the best single gauge of the U.S. equities market. This world-renowned index includes a representative sample of 500 leading companies in leading industries of the U.S. economy. Although the S&P 500 Index focuses on the large cap segment of the market, with approximately 75% coverage of U.S. equities, it is also an ideal proxy for the total market. An investor cannot invest directly in an index.

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

The MSCI EAFE (Europe, Australia, Far East) Net Index is recognized as the pre-eminent benchmark in the United States to measure international equity performance. It comprises 21 MSCI country indexes, representing the developed markets outside of North America.

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. As of June 2007, the MSCI Emerging Markets Index consisted of the following 25 emerging market country indices: Argentina, Brazil, Chile, China, Colombia, Czech Republic, Egypt, Hungary, India, Indonesia, Israel, Jordan, Korea, Malaysia, Mexico, Morocco, Pakistan, Peru, Philippines, Poland, Russia, South Africa, Taiwan, Thailand and Turkey.

The FTSE 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 Barclays Capital 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. These major sectors are subdivided into more specific indexes that are calculated and reported on a regular basis.

The 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 Barclays US High Yield Index covers the universe of fixed rate, noninvestment 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 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 Bloomberg Commodity Index is composed of futures contracts on physical commodities and represents 22 separate commodities traded on U.S. exchanges, with the exception of aluminum, nickel and zinc.

Unless otherwise indicated, all illustrations are shown in U.S. dollars. Past performance is no guarantee of comparable future results. Diversification does not guarantee investment returns and does not eliminate the risk of loss.

Bonds are subject to interest rate risks. Bond prices generally fall when interest rates rise.

The price of equity securities may rise or fall because of changes in the broad market or changes in a company's financial condition, sometimes rapidly or unpredictably. These price movements may result from factors affecting individual companies, sectors or industries, or the securities market as a whole, such as changes in economic or political conditions. Equity securities are subject to “stock market risk,” meaning that stock prices in general may decline over short or extended periods of time.

Small capitalization investing typically carries more risk than investing in well established “blue-chip” companies since smaller companies generally have a higher risk of failure. Historically, smaller companies’ stock has experienced a greater degree of market volatility than the average stock.

Mid capitalization investing typically carries more risk than investing in well established “blue-chip” companies. Historically, mid cap companies' stock has experienced a greater degree of market volatility than the average stock.
Index Definitions, Continued

Real estate investments may be subject to a higher degree of market risk because of concentration in a specific industry, sector or geographical sector. Real estate investments may be subject to risks including, but not limited to, declines in the value of real estate, risks related to general and economic conditions, changes in the value of the underlying property owned by the trust and defaults by borrower.

International investing involves a greater degree of risk and increased volatility. Changes in currency exchange rates and differences in accounting and taxation policies outside the U.S. can raise or lower returns. Also, some overseas markets may not be as politically and economically stable as the United States and other nations.

Investments in emerging markets can be more volatile. As mentioned above, the normal risks of investing in foreign countries are heightened when investing in emerging markets. In addition, the small size of securities markets and the low trading volume may lead to a lack of liquidity, which leads to increased volatility. Also, emerging markets may not provide adequate legal protection for private or foreign investment or private property.

Investments in commodities may have greater volatility than investments in traditional securities, particularly if the instruments involve leverage. The value of commodity-linked derivative instruments may be affected by changes in overall market movements, commodity index volatility, changes in interest rates or factors affecting a particular industry or commodity, such as drought, floods, weather, livestock disease, embargoes, tariffs and international economic, political and regulatory developments. Use of leveraged commodity-linked derivatives creates an opportunity for increased return but, at the same time, creates the possibility for greater loss.

Investing in alternative assets involves higher risks than traditional investments and is suitable only for sophisticated investors. Alternative investments involve greater risks than traditional investments and should not be deemed a complete investment program. They are not tax efficient and an investor should consult with his/her tax advisor prior to investing. Alternative investments have higher fees than traditional investments and they may also be highly leveraged and engage in speculative investment techniques, which can magnify the potential for investment loss or gain. The value of the investment may fall as well as rise and investors may get back less than they invested.

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Diversification does not guarantee a profit or protect against loss. Different asset classes present different risks. Some, but not all, of those risks are outlined below.

In general, fixed income and equities investments (domestic or foreign) face certain asset class specific risks, which could include, but are not limited to: market risk, credit risk, inflation risk, currency risk, default risk, interest rate risk and political risk. There are also additional risks and traits attributable to asset classes represented in certain indices.

Asset classes based on international investments have additional risks associated with international investing, including foreign economic, political, monetary and/or legal factors, changing currency exchange rates, foreign taxes and differences in financial and accounting standards. International investing may not be for everyone. These risks may be magnified in emerging markets.

With respect to real estate investments, property values can fall due to environmental, economic or other reasons, and change in interest rates can negatively impact the performance of real estate companies.

Bonds are affected by a number of risks, including fluctuations in interest rates, credit risk and prepayment risk. In general, as prevailing interest rates rise, fixed income securities prices will fall. Bonds face credit risk if a decline in an issuer’s credit rating, or creditworthiness, causes a bond’s price to decline. High yield bonds are subject to additional risks such as increased risk of default and greater volatility because of the lower credit quality of the issues. Finally, bonds can be subject to prepayment risk. When interest rates fall, an issuer may choose to borrow money at a lower interest rate, while paying off its previously issued bonds. As a consequence, underlying bonds will lose the interest payments from the investment and will be forced to reinvest in a market where prevailing interest rates are lower than when the initial investment was made. Depending on your state of residency, some bonds may be exempt from state and local taxes; however, interest may be subject to the federal alternative minimum tax.

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