INVESTMENT COMMENTARY

The longest economic expansion in U.S. history continued through the fourth quarter, as the U.S. economy extended its winning streak for 127 consecutive months. In mid-December, Bank of America forecasted a late cycle "Risk Asset Melt-Up" through the first couple months of 2020 built on progress in the US-China trade deal, global monetary easing and some clarity around Brexit following a decisive victory by Boris Johnson and the Conservative party in the recent United Kingdom election. The Federal Reserve cut Fed Funds rate for the third time in 2019 to a target range of 1.50% to 1.75%. The Fed further signaled their plan to follow the traditional election year handbook and remain on the sidelines during 2020. Nonetheless, year-end Fed Futures priced in a 60% probability of at least one cut, while PIA suggests caveat emptor (buyer beware) regarding risk assets, given the slowing global economy, valuation concerns across U.S. markets and escalating geopolitical tensions in the Middle East.

Consistent with risk-on optimism, the yield curve steepened as short-term rates fell while long end rates climbed higher. The yield on the 2-year Treasury declined 5 basis points to 1.57%, while 10-year Treasury yields rose by 25 basis points to 1.92%. The rise in longer term interest rates led to a -0.79% Treasury sector quarterly return. However, Investment Grade Corporate bonds returned +1.18% for the quarter, while shorter duration High Yield bonds returned +2.61%, resulting in remarkable 2019 total returns for these sectors of +14.54% and +14.32%, respectively. In the investment grade market, U.S. Agency Securities (+0.49%), Mortgage-backed Securities (+0.71%), and Asset-backed Securities (+0.39%) all posted positive returns during the quarter with only the aforementioned Treasury sector and Commercial MBS (-0.33%) sector posting negative returns.

Headline economic data reversed in the second half of 2019 after a first half downward trend. However, the PIA long-term economic outlook improved only modestly, as we continue to believe the risk of economic contraction outweighs the potential for reacceleration. As we've asserted since the onset of the trade wars, the greatest risk to this remarkably resilient, low-inflation, modest-growth U.S. economy is poor fiscal and/or monetary policy making. However, US policy makers gave the markets a lot to cheer about in the fourth quarter and market momentum continued strong through year-end. The Federal Reserve cut their overnight lending rate for the first time since December 2008, delivering three second half 0.25% rate cuts. Chairman Powell also provided an upbeat outlook for sustained expansion of economic activity, a strong labor market, and inflation near the Fed's symmetric 2 percent objective. Additionally, Chairman Powell indicated it's unlikely the Fed will adjust interest rates again anytime soon, so long as the economy remains on its present path. Market optimism accelerated even further on the announcement that Phase One of a US-China trade agreement had been reached and expected to be signed in January 2020.

The 2010's were the first decade ever without a recession, in spite of also delivering the slowest economic recovery in the post-WWII era. The Fed maintained their zero interest rate policy for 78 months after the 2007-08 Great Recession, while printing $4 trillion. The U.S. government added $12 trillion in new debt, while the corporate bond market doubled in size to $10 trillion, a record high and roughly 50% of GDP. This massive amount of added liquidity fueled the greatest stock market rally in U.S. history, with the S&P 500 appreciating over 470% since the end of 2008 through 2019. The robust recovery explains why consumer spending continues to drive GDP growth, in spite of historically high household savings outpacing recovery spending. Consumer spending represented more than 80% of GDP in the second half of 2019, and the real economy is now tethered to the U.S. stock market. Stock market holdings are now a greater percentage of household wealth than real estate, which has occurred only two times in U.S. history (1968, 1999).

Our cautious economic outlook is underpinned by the massive amount of new U.S. debt that has helped inflate U.S. risk assets, driven by multiple expansion and stock buy-backs in a period of declining corporate profits. The growing debt burdens continue to be fueled by artificially low interest rates caused by a low/flattish yield curve corrupted by the proliferation of global negative interest rates. Of even greater concern is the

Fed denying the existence of any quantitative easing program while they've added $101.5 billion per month to their balance sheet since the end of August. To put that in perspective, the former QE3 program added $80 billion per month to the Fed's balance sheet. Additionally, we continue to doubt the efficacy of a U.S.–China trade resolution, while the global economy faces mounting political, geopolitical, and economic headwinds most notably in China, Iran and the Euro region.

In the fourth quarter, PIA shifted portfolio duration to neutral relative to our respective benchmarks. We utilized the strength in the credit market to further reduce our BBB credit weighting. We currently maintain a modest overweight in corporate credit, with a focus on high quality balance sheets. Our Industrial credits provide incremental risk-adjusted yield and our Financials are senior domestic debt that we believe offer attractive compensation for their sector volatility. After a strong year in credit, we reduced our high yield exposure to a modest overweight in our Core Plus portfolios. The Fixed Rate MBS sector managed to post modest excess returns in 2019, as yields rose and volatility subsided during the 4th quarter. We maintain a modest overweight to Agency Mortgage-backed Securities, as we believe the MBS sector offers value on a risk-adjusted basis.

PIA Investment Strategy Group

KEY **RATES**

	12/31/19	9/30/19	12/31/18
Fed Funds Target Rate	**1.5-1.75%**	**1.75-2.0%**	**2.25-2.5%**
3 Month LIBOR	**1.91**	**2.09**	**2.81**
On-the-run Treasuries:			
3 Months	**1.54**	**1.81**	**2.36**
6 Months	**1.58**	**1.81**	**2.48**
2 Years	**1.57**	**1.62**	**2.49**
5 Years	**1.69**	**1.54**	**2.51**
10 Years	**1.92**	**1.67**	**2.68**
30 Years	**2.39**	**2.11**	**3.02**

Source: Bloomberg

KEY **ECONOMIC INDICATORS**

as of	12/31/19	12/31/18
U.S. $ (DXY)	**96.39**	**96.17**
Oil	**61.06**	**45.41**
Gold	**1,517.27**	**1,282.45**
CRB	**185.79**	**169.80**
GDP	**2.1**	**3.4**
CPI	**2.1**	**2.2**
Core (Ex - Food & Energy)	**1.6**	**1.9**
Unemployment Rate	**3.5**	**3.7**
Consumer Confidence	**126.50**	**128.10**
S&P/Case-Shiller – Comp-20	**2.23**	**5.03**

Source: Bloomberg

INDEX **RETURNS**

	4Q'19	YTD	1-Year
Bloomberg Barclays –			
Universal	**0.45%**	**9.29%**	**9.29%**
Aggregate	**0.18**	**8.72**	**8.72**
Aggregate ex-credit	**-0.19**	**6.66**	**6.66**
Gov-Credit	**-0.01**	**9.71**	**9.71**
Int. Gov-Credit	**0.37**	**6.80**	**6.80**
Corporate	**1.18**	**14.54**	**14.54**
Treasury only	**-0.79**	**6.86**	**6.86**
1-3 year Gov	**0.51**	**3.59**	**3.59**
BofA Merrill – 1-yr T-Note	**0.59**	**2.93**	**2.93**
High Yield	**2.61**	**14.32**	**14.32**
International Debt	**0.67**	**5.09**	**5.09**
Emerging Markets Debt	**2.09**	**13.11**	**13.11**
S&P 500	**9.06**	**31.48**	**31.48**
DJIA	**6.67**	**25.34**	**25.34**
NASDAQ 100	**12.99**	**39.46**	**39.46**
MSCI EAFE	**8.23**	**22.77**	**22.77**

Source: Bloomberg Barclays

SECTOR **RETURNS**

4Q'19	Total Return	Excess Return
U.S. Treasuries	**-0.79%**	**0.00%**
Government-related U.S. Agency	**0.23**	**0.88**
Government-related Credit	**0.32**	**1.09**
Corporate	**1.18**	**2.42**
Corporate Financials	**1.43**	**2.11**
Corporate Industrials	**1.20**	**2.62**
Corporate Utilities	**0.03**	**2.13**
Corporate AAA-rated	**-0.18**	**2.14**
Corporate AA-rated	**0.20**	**1.28**
Corporate A-rated	**0.81**	**2.06**
Corporate BBB-rated	**1.68**	**2.90**
Corporate High-Yield	**2.61**	**2.51**
Securitized	**0.64**	**0.57**
Mortgage-backed Securities-FR	**0.71**	**0.62**
CMBS	**-0.33**	**0.06**
ABS	**0.39**	**-0.03**

Source: Bloomberg Barclays

Pacific Income Advisers, Inc. (PIA) is an autonomous investment management firm registered under the Investment Advisers Act of 1940. PIA manages a variety of fixed income and equity assets for primarily United States clients.

BENCHMARK DESCRIPTION

Bloomberg Barclays U.S. Universal Index represents the union of the U.S. Aggregate Index, U.S. Corporate High-Yield Index, Investment-Grade 144A Index, Eurodollar Index, U.S. Emerging Markets Index, and the non-ERISA eligible portion of the CMBS Index. The index covers USD-denominated, taxable bonds that are rated either investment-grade or below investment-grade. Some U.S. Universal Index constituents may be eligible for one or more of its contributing subcomponents that are not mutually exclusive. These securities are not double-counted in the index. You can not invest directly in an index.

Bloomberg Barclays U.S. Aggregate Bond Index is an unmanaged index that covers the investment grade fixed rate bond market with index components for government and corporate securities, mortgage pass-through securities, and asset-backed securities. The issues must be rated investment grade, be publicly traded, and meet certain maturity and issue size requirements. You can not invest directly in an index.

Bloomberg Barclays U.S. Aggregate Ex-Credit Index (LB Agg (Ex-Credit)) The index covers the U.S. investment grade fixed rate bond market, with index components for government, mortgage pass-through securities, and asset-backed securities. These major sectors are subdivided into more specific indices that are calculated and reported on a regular basis. You can not invest directly in an index.

Bloomberg Barclays U.S. Government/Credit Bond Index includes securities in the Government and Credit Indices. The Government Index includes treasuries (i.e., public obligations of the U.S. Treasury that have remaining maturities of more than one year) and agencies (i.e., publicly issued debt of U.S. Government agencies, quasi-federal corporations, and corporate or foreign debt guaranteed by the U.S. Government). The Credit Index includes publicly issued U.S. corporate and foreign debentures and secured notes that meet specified maturity, liquidity, and quality requirements. You can not invest directly in an index.

Bloomberg Barclays U.S. Intermediate Government/Credit Bond Index is the Intermediate component of the U.S. Government/Credit index. The Government/Credit Index includes securities in the Government and Credit Indices. The Government Index includes treasuries (i.e., public obligations of the U.S. Treasury that have remaining maturities of more than one year) and agencies (i.e., publicly issued debt of U.S. Government agencies, quasi-federal corporations, and corporate or foreign debt guaranteed by the U.S. Government). The Credit Index includes publicly issued U.S. corporate and foreign debentures and secured notes that meet specified maturity, liquidity, and quality requirements. You can not invest directly in an index.

Bloomberg Barclays U.S. 1-3 Year Government Bond Index consist of securities in the U.S. Government Index with a maturity from 1 up to (but not including) 3 years. Securities issued by the U.S. Government (i.e., securities in the Treasury and Agency Indices). Inclusions: Public obligations of the U.S. Treasury with a remaining maturity of one year or more. Publicly issued debt of U.S. Government agencies, quasi-federal corporations, and corporate or foreign debt guaranteed by the U.S. Government. You can not invest directly in an index.

Bloomberg Barclays U.S. Treasury Index includes public obligations of the U.S. Treasury. Treasury bills are excluded by the maturity constraint but are part of a separate Short Treasury Index. In addition, certain special issues, such as state and local government series bonds (SLGs), as well as U.S. Treasury TIPS, are excluded. STRIPS are excluded from the index because their inclusion would result in double-counting. Securities in the Index roll up to the U.S. Aggregate, U.S. Universal, and Global Aggregate Indices. You can not invest directly in an index.

Bloomberg Barclays U.S. Corporate Bond Index covers USD-denominated, investment-grade, fixed-rate, taxable securities sold by industrial, utility, and financial issuers. It includes publicly issued U.S. corporate debentures and secured notes that meet specific maturity, liquidity, and quality requirements. Securities in the index roll up to the U.S. Credit and U.S. Aggregate indices. The U.S. Corporate Index was launched on January 1, 1973. You can not invest directly in an index.

BofA Merrill Lynch 1-Year US Treasury Note Index is comprised of a single issue purchased at the beginning of the month and held for a full month. At the end of the month that issue is sold and rolled into a newly selected issue. The issue selected at each month-end rebalancing is the outstanding Treasury note that matures closest to, but not beyond, one year from the rebalancing date. To qualify for selection, an issue must have settled on or before the month-end rebalancing date. You can not invest directly in an index.

Bloomberg Barclays Corporate U.S. High Yield Index - covers the universe of fixed rate, non-investment grade debt. 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, 144-As and pay-in-kind bonds (PIKs, as of October 1, 2009) are also included. The index includes both corporate and non-corporate sectors. The corporate sectors are Industrial, Utility, and Finance, which include both U.S. and non-U.S. corporations. The Yankee sector has been discontinued as of 7/1/00. The bonds in the former Yankee sector have not been removed from the index, but have been reclassified into other sectors. You cannot invest directly in an index.

Bloomberg Barclays Global Aggregate Index provides a broad-based measure of the global investment-grade fixed-rate debt markets. The Global Aggregate Index contains three major components: the U.S. Aggregate Index (USD 300 million), the Pan-European Aggregate Index (EUR 300 million), and the Asian-Pacific Aggregate Index (JPY 35 billion). In addition to securities from these three benchmarks (94.4% of the overall Global Aggregate market value), the Global Aggregate Index includes Global Treasury, Eurodollar (USD 300 million), Euro-Yen (JPY 35 billion), Canadian (CAD 300 million), and Investment-Grade 144A (USD 300 million) index-eligible securities not already in the three regional aggregate indices. The Global Aggregate Index family includes a wide range of standard and customized subindices by liquidity constraint, sector, quality, and maturity. The Global Aggregate Index is a component of the Multiverse Index. You can not invest directly in an index.

Bloomberg Barclays Global Emerging Markets Index consists of the fixed and floating-rate USD-denominated U.S. Emerging Markets Index and the primarily EUR and GBP-denominated fixed-rate Pan-European Emerging Markets Index and includes emerging markets debt from the following regions: Americas, Europe, Asia, Middle East, and Africa. For the index, an emerging market is defined as any country that has a long term foreign currency debt sovereign rating of Baa1/BBB+/BBB+ or below using the middle rating of Moody's, S&P, and Fitch. The index does not overlap with the U.S. Corporate High-Yield Index or the Pan Euro Corporate High-Yield Index, but may overlap with other investment-grade Aggregate Indices if the securities meet their index eligibility rules. You can not invest directly in an index.

S&P 500 Index – The S&P 500 index includes 500 leading companies in leading industries of the U.S. economy. The S&P 500 is designed to be a leading indicator of U.S. equities and is meant to reflect the risk/return characteristics of the large cap universe. You can not invest directly in an index.

The NASDAQ-100 Index is a modified capitalization-weighted index of the 100 largest and most active non-financial domestic and international issues listed on the NASDAQ. No security can have more than a 24% weighting. The index was developed with a base value of 125 as of February1, 1985. Prior to December 21, 1998 the Nasdaq 100 was a cap-weighted index. You can not invest directly in an index.

The Dow Jones Industrial Average (DJIA) is an index used to measure the performance of the U.S. financial markets. Introduced on May 26, 1896 by Charles H. Dow, it is the oldest stock price measure in continuous use. Over the past century "the Dow" has become the most widely recognized stock market indication in the U.S. and probably in the entire world. Most of the stocks included in the index are listed on the New York Stock Exchange, and are all large blue-chip companies that reflect the health of the U.S. economy. All but a handful of these have major business operations throughout the world, thus providing some insight into the economic well-being of the global economy. You can not invest directly in an index.

MSCI EAFE Index is a capitalization weighted index that monitors the performance of stocks from Europe, Australiasia, and the Far East. You can not invest directly in an index.

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