



## Economic and Capital Market Review

Third Quarter 2018

In our last quarterly review, we questioned why the markets were so gloomy when the view of the U.S. economy was so encouraging. We focused our answer to three issues weighing on investors' minds: a confrontational U.S. trade policy, a strong U.S. dollar and a fear the Fed will overshoot its transition to higher policy rates.

Thankfully, the third quarter saw the U.S. reach bi-lateral trade agreements with Mexico and Canada, the trade-weighted U.S. dollar remain unchanged and the Fed maintained its transparent rate policy. As a result, investors set aside their concerns and focused instead on the strength of the domestic economy and robust corporate profit growth. Equity markets soared and bond yields rose. The hallmark signs of a healthy economy.

As the fourth quarter begins, we find ourselves asking whether the pessimism of 2Q or the optimism of 3Q is going to prevail. Unfortunately, our answer is yes.

The optimists will be touting solid fundamentals in the domestic markets, continued global economic expansion, strong GDP, strong growth in corporate revenue and profits, high levels of consumer and business confidence, strong consumer spending, low unemployment and low inflation.

The pessimists will be touting the challenges facing the global economy caused by our confrontational trade policy with China and the risk our Fed will overshoot in its transition to higher policy rates.

It is the interplay among these important variables that will subject the economy and markets to a wider range of outcomes than normal. This interplay will be compounded by the fact the increased uncertainty and risk to the global economic picture is coming at a time when most financial assets are priced at or above their long-term averages.

Unless/until the pessimists concerns can be resolved favorably, market volatility will be prevalent.

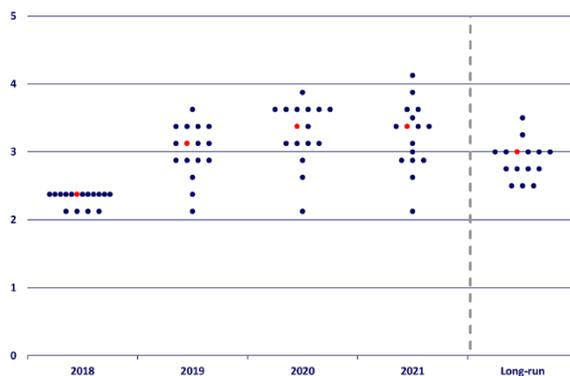
### Federal Open Market Committee (FOMC)

At the FOMC meeting in September, the committee voted to increase short-term rates by 25 basis points. The Fed Funds rate now stands at 2.00% to 2.25%

In its most recent statement following the rate increase, the Fed removed the word "accommodative" to describe the rate environment, in a departure from previous statements. This semantic adjustment appears to be a nod to the idea that short-term borrowing costs, while still accommodative, are closing in on the neutral rate.

In our view, the Federal Reserve will remain on their path of increasing short term interest rates into 2019. The chart at the right depicts the FOMC's projection for the federal funds rate at the end of 2018, 2019 and 2020. Their current projection indicates a rate of 2.375% at the end of 2018 which implies one more rate hike this year.

Target Federal Funds Rate at Year-End (percent)



## Real Gross Domestic Product (GDP)

Real GDP measures the value of all goods and services produced by the nation's economy.

The U.S. economy grew at a faster-than-expected pace in the third quarter as consumers boosted spending and businesses accumulated inventory. Based on the advance estimate, GDP grew at a 3.5% annual rate following 2Q18 growth of 4.2% and 1Q17 growth of a 2.2%. This is the strongest back-to-back reading since 2014.

Consumer spending, which accounts for more than two thirds of U.S. economic activity, grew by 4.0% percent in the third quarter, the strongest since the fourth quarter of 2014. The strong rise in consumer spending helped offset declines in business spending and residential investment. As we discussed last quarter, farmers rushed shipments of soybeans to China during the second quarter to before retaliatory trade tariffs took effect. This boost to exports reversed in the third quarter as net exports reduced GDP by 1.8%.

For a better sense of underlying domestic demand, economists look at final sales to domestic purchasers, which strips out inventories and trade, the two most volatile components of GDP. Domestic final sales grew a healthy +3.1% percent this quarter.

## Inflation

The Consumer Price Index (CPI) measures price changes in consumer goods and services from the perspective of the purchaser.

The Personal Consumption Expenditures Index (PCE) includes a broader range of expenditures than CPI and uses a formula that adjusts for changes in consumer behavior. PCE measures price changes from the perspective of the purchaser.

The Producer Price Index (PPI) measures the change in selling prices of goods and service by domestic producers from the perspective of the seller. PPI inflation generally appears before CPI and PCE.

When making decisions on monetary policy, the Fed is most interested in the less volatile Core PCE, which excludes food and energy. Core PCE inflation increased +2.0% on a year-over-year basis and continues to trend at Fed's target of +2.0%.

## Business

The Conference Board's Leading Economic Index (LEI) increased +1.6% during the quarter to 111.8, its highest ever reading. For the twelve-month period ending September, the leading economic index has increased by +7.0% which suggests the U.S. business cycle remains on a strong growth trajectory heading into 2019. However, the LEI's growth has slowed somewhat in recent months, suggesting the economy may be facing capacity constraints due to the increasingly tight labor market.

According to the latest Manufacturing ISM Report on Business, the overall economy grew for the 113th consecutive month. The past relationship between the ISM PMI and the overall economy indicates that the September reading of 59.8% corresponds to a 5.1% increase in real gross domestic product on an annualized basis. (A reading above 50% indicates that the manufacturing economy is generally expanding and a reading below 50% indicates that it is generally contracting.)

Economic Growth	3Q18	2Q18	1Q18
<b>Real GDP <sup>(1)</sup></b>	<b>3.5%</b>	<b>4.2%</b>	<b>2.2%</b>
Personal Consumption <sup>(2)</sup>	2.7%	2.6%	0.4%
Private Investment <sup>(2)</sup>	2.0%	0.0%	1.6%
Government <sup>(2)</sup>	0.6%	0.4%	0.3%
Net Exports <sup>(2)</sup>	-1.8%	1.2%	-0.1%
<b>Real GDP Components</b>			
Domestic Final Sales <sup>(1)</sup>	3.1%	4.2%	1.9%
Foreign Trade Effect <sup>(1)</sup>	-1.8%	1.2%	0.0%
Final Sales <sup>(1)</sup>	1.4%	5.4%	1.9%
Inventory Effect <sup>(1)</sup>	2.1%	-1.2%	0.3%
Real GDP <sup>(1)</sup>	3.5%	4.2%	2.2%
<b>Demand Components</b>			
Personal Consumption <sup>(1)</sup>	4.0%	3.8%	0.5%
Business Fixed Investment <sup>(1)</sup>	0.8%	8.7%	11.5%
Residential Investment <sup>(1)</sup>	-4.0%	-1.4%	-3.4%
Government Spending <sup>(1)</sup>	3.3%	2.5%	1.5%

<sup>(1)</sup> Annualized Q/Q % Change, <sup>(2)</sup> Contribution to GDP Growth

Inflation	9/18	5 Year High	5 Year Low
<b>Headline (All Items)</b>			
CPI <sup>(3)</sup>	2.3%	2.9%	-0.2%
PCE <sup>(3)</sup>	2.0%	2.3%	0.1%
PPI <sup>(3)</sup>	2.7%	3.3%	-1.5%
<b>Core (Less Food and Energy)</b>			
CPI <sup>(3)</sup>	2.2%	2.4%	1.6%
PCE <sup>(3)</sup>	2.0%	2.0%	1.2%
PPI <sup>(3)</sup>	2.5%	2.8%	0.2%
<b>Inflation Expectations</b>			
5Yr Breakeven Inflation	2.0%	2.1%	1.1%
10Yr Breakeven Inflation	2.1%	2.3%	1.3%
30Yr Breakeven Inflation	2.2%	2.4%	1.5%

<sup>(3)</sup> Y/Y % Change

Business	9/18	5 Year High	5 Year Low
Leading Economic Index	111.8	111.8	90.8
Leading Economic Index <sup>(3)</sup>	7.0%	7.0%	0.5%
Small Business Optimism	107.9	108.8	91.5
ISM PMI	59.8	61.3	47.8
ISM NMI	61.6	61.6	51.6

<sup>(3)</sup> Y/Y % Change

The latest Non-Manufacturing ISM Report on Business indicates economic activity in the non-manufacturing sector grew for the 104<sup>th</sup> consecutive month. The past relationship between the ISM NIM and the overall economy indicates that the September reading of 61.6% corresponds to a 4.6% increase in real gross domestic product on an annualized basis. (A reading above 50% indicates that the non-manufacturing economy is generally expanding and a reading below 50% indicates that it is generally contracting.)

### Employment

The labor market has now posted 96 consecutive months of employment growth, extending the longest streak on record. Employers have added an average of just over 200,000 jobs per month so far in 2018, a pace that has held relatively steady for the past two years.

The unemployment rate dipped to 3.7% in September as people come off the sidelines to re-enter the labor force. A more encompassing measure of unemployment that includes discouraged workers and those at part-time jobs for economic reasons dipped to 7.5%. As we mentioned last quarter, the labor force participation rate and the employment to population ratio remain low, suggesting higher wages might draw workers off the sidelines and into the labor market adding fuel for continued growth.

Labor	9/18	5 Year High	5 Year Low
Wage Growth <sup>(3)</sup>	3.0%	3.0%	1.7%
Unemployment Claims <sup>(5)</sup>	208	346	208
Nonfarm Payrolls <sup>(6)</sup>	190	290	134
Unemployment Rate	3.7%	7.2%	3.7%
Under-employment Rate	7.5%	13.6%	7.4%
Labor Force Participation	62.7%	63.1%	62.3%

<sup>(3)</sup>Y/Y % Change, <sup>(5)</sup>Four Week Moving Average in Thousands,

<sup>(6)</sup>Three Month Moving Average in Thousands

U.S. wage growth rose by more than forecast in the third quarter as increases in private wages and salaries accelerated, indicating workers are gaining leverage in a tightening labor market. The employment-cost index, a broad measure of wages and salaries in the private industry, increased 3.0% year over year through September 2018.

### Consumer

Historically, strength in consumer confidence surveys bodes well for increased economic activity in the following months. The most recent survey indicates consumers remain optimistic on the prospects for the economy as reflected by the September reading of 138.4, an 18-year high.

Consumers' assessment of current conditions remains extremely favorable, bolstered by a strong economy and robust job growth, suggesting solid economic growth exceeding 3.0 percent for the remainder of the year. These historically high confidence levels should continue to support healthy consumer spending, and should be welcome news for retailers as they begin gearing up for the holiday season.

Consumer	9/18	5 Year High	5 Year Low
Consumer Confidence	138.4	138.4	72.0
Consumer Sentiment	100.1	101.4	73.2
Auto Sales <sup>(3)</sup>	-4.0%	8.9%	-5.5%
Retail Sales <sup>(3)</sup>	4.7%	6.6%	1.6%

<sup>(3)</sup>Y/Y % Change

### Housing

Housing remains in a soft patch, with sales, new home construction and home prices all moderating. The loss of momentum since spring is notable because it comes at a time when overall economic growth strengthened. After six years of declining home affordability, first-time shoppers are getting priced out of the market. This makes it harder for move-up buyers to sell. And the slowdown gradually ripples up the real estate food chain.

No to mention, the new tax law, which has limited the amount of mortgage interest that can be deducted and put limits on deductions for state and local taxes, also appears to be hurting demand in higher-end markets. In addition, a stronger dollar and slower growth abroad have reduced foreign demand for U.S. homes. At this point in the business cycle, housing is unlikely to make a major breakout to the upside.

Housing	9/18	5 Year High	5 Year Low
Housing Affordability	141	184	136
Housing Starts <sup>(4)</sup>	1,201	1,334	888
Building Permits <sup>(4)</sup>	1,270	1,377	985
New Home Sales <sup>(4)</sup>	553	712	400
Existing Home Sales <sup>(4)</sup>	5,150	5,720	4,720

<sup>(4)</sup> Monthly Seasonally Adjusted Annual Rate in Thousands

### Looking forward

***Overall, domestic economic indicators maintained their strength during the second quarter of 2018. We believe the prospects for 2018 appear favorable based on positive trends in consumer spending, job gains and inflation. We expect the U.S. economy to grow at annualized rate of +3.0% in 2018 due in large part to tax law changes and low unemployment, a combination that produces stronger consumer purchasing power. We expect inflation to remain within the Fed's 2.0%-2.5% threshold until a tighter labor market delivers meaningful wage gains.***

## Equity Market Summary

As measured by the S&P 500, domestic equities gained 7.7% during the quarter, marking its eleventh gain in the last twelve quarters.

The third quarter saw a continuation in the contrast between strong domestic equity markets and weak international equities, particularly in emerging markets. The performance gap between domestic and international stocks this year has U.S. stocks trading at their highest premiums to international shares in several years, creating an opportunity for patient investors to capitalize when the valuation gap narrows, as we believe it will.

In a reversal from last quarter, large-cap companies significantly outperformed small-cap companies as the S&P 500 Index outperformed the Russell 2000 Index by more than 4.0%. As discussed in our previous commentary, it was last quarter when trade disputes roiled large-cap company valuations (large-cap companies tend to have higher exposure to revenue outside the U.S.), as investors tried to determine what the ultimate impact of the tariffs would be. Compounding the tariff woes of multinational companies was the rise in the dollar, which can create demand and/or cost headwinds. While large caps didn't get any relief from trade tariff and dollar headwinds this quarter, investors seemed to gain some comfort with the situation as the Healthcare and Industrial sectors led the charge.

The quarter was also marked by significant outperformance of growth companies versus value companies as the Russell 3000 Growth Index outperformed the Russell 3000 Value Index by almost 4.0%. The Growth index is dominated by Technology, Consumer Discretionary, Health Care and Industrials. These sectors combined represent 70% of the index. Value on the other hand is more broadly diversified by sector with much more Financials, Utilities and Energy. It is also worth noting that while it appears both have a good Consumer Discretionary weighting, this masks over some very different holdings. The growth consumer discretionary holdings include companies like Amazon and Netflix while the value index has Ford and Macy's.

From a fundamental perspective, domestic market fundamentals remain sound, with blended earnings growth projected to exceed 20% for 2018 on revenue growth of 8%. Expectations for 2019 are less exciting, though still robust, with earnings and sales expected to grow 10% and 5%, respectively.

International equities increased with developed markets up 1.1% and emerging markets down -1.3%. Trade concerns are weighing heavily on the international equity markets. Fears of a trade war, the strengthening dollar, and rising U.S. interest rates continue to hit international equity markets hard.

The lackluster performance of emerging markets equities over the past year has been driven by fundamental factors and exacerbated by a number of idiosyncratic issues and fears that should ease as the cycle continues. As we read the research being generated by investors specializing in emerging markets, the overall tone is positive. The emerging markets "bucket" includes a wide range of regions and countries but the largest and most important emerging economies are enjoying economic growth in the 4-5% range. The outlook for continued growth is good. The demographics of the emerging world are favorable with generally younger populations and expanding consumer bases. Emerging market specialists see competitive, growing companies with good long-term prospects and the ability to withstand economic cyclical comparability to that of companies in the United States.

### Looking forward

*In the current environment, we are neutral on equities and will maintain a base allocation exposure as long as earnings continue to support current P/E multiples.*

Equity Total Returns			
	3Q 18	YTD	12 MO
DJIA	9.6%	8.8%	20.8%
S&P 500	7.7%	10.6%	17.9%
Nasdaq	7.4%	17.5%	25.2%
International <sup>(1)</sup>	1.1%	-1.1%	3.4%
Emerging Markets <sup>(2)</sup>	-1.3%	-7.9%	-0.8%
<b>Domestic Market Cap</b>			
Mega <sup>(3)</sup>	9.3%	11.7%	19.9%
Large <sup>(4)</sup>	8.4%	11.7%	19.3%
Mid <sup>(5)</sup>	5.0%	7.5%	14.0%
Small <sup>(6)</sup>	3.6%	11.5%	15.2%
<b>Domestic Style</b>			
Growth <sup>(7)</sup>	8.9%	17.0%	25.9%
Core <sup>(7)</sup>	7.1%	10.6%	17.6%
Value <sup>(7)</sup>	5.4%	4.2%	9.5%

<sup>(1)</sup> MSCI EAFE IMI, <sup>(2)</sup> MSCI Emerging Markets IMI, <sup>(3)</sup> Russell Top 50, <sup>(4)</sup> Russell Top 200, <sup>(5)</sup> Russell Midcap, <sup>(6)</sup> Russell 2000, <sup>(7)</sup> Russell 3000



## Taxable Bond Market Summary

The fixed income markets remained under pressure in the third quarter as investors focused on the Fed (yield curve) and inflation. The Bloomberg Barclays U.S. Aggregate Bond Index generated no return in the quarter and is down 1.6% year-to-date.

Bond bears awoke from their hibernation in the third quarter as investors observed the momentum of the U.S. economy and began to prepare for more aggressive Fed tightening. With three rate hikes already implemented in 2018 and a fourth expected in December, the central bank is becoming increasingly hawkish. Economic data on GDP growth, employment, and wages were surprisingly strong at each reading in the quarter, and the widely held assumption that the Fed would pause in 2019 is giving way to a belief that the rate increases will continue into next year.

As a result, treasury yields increased sharply with the two year up 29 basis points (bps) and the thirty year up 21 bps. The yield curve also extended its year-to-date flattening, as the premium investors require to hold longer debt fell to its lowest level in more than a decade at 24 bps (10-year yield minus 2-year yield).

Given the rosy economic backdrop, investors piled into the “risk-on” trade which drove a significant rally in investment grade and high yield (<Baa) corporate bonds. In particular, high yield corporate bonds were the best performing segment of the taxable bond market, with spreads narrowing to their tightest levels in more than a decade. High yield credit continues to appear expensive on an absolute basis as well as versus investment grade.

However, the recent decline in volatility belies an underlying sense of uncertainty across the economic landscape. Trade policy, despite recent successes in North America, has the potential to flare up given ongoing friction with China. The Fed’s balancing act of maintaining price stability while supporting a strong labor market will become increasingly difficult as this rate hike cycle approaches its end. And tail risks, such as emerging market contagion, a spike in crude prices, or an unexpected turn in domestic politics could also cause bond market dislocations.

But at the top of the list is the ongoing flattening of the yield curve. The short maturity segment of the bond market is driven primarily by the rates set by the Fed while longer-term yields are driven by expectations about growth and inflation. The narrow gap between short and long yields reflects not only the ongoing strong demand for income-producing assets but also skepticism on the part of bond investors about the long-term outlook for growth and inflation. If the market believed that economic growth would remain strong and that inflation would rise it would demand higher yields on longer-term bonds. With the Fed apparently intent on pushing the Fed funds rate to 3% or higher from its current target range of 2% to 2.25% the market is facing two possible scenarios: either the yield curve will invert or long-term rates will rise. As the fourth quarter gets underway and the strong economic data continue to flow, the second scenario seems most likely.

### Looking forward

*We continue to underweight Treasury and Agency bonds in favor of high rated Corporate and Securitized bonds. As market conditions allow, and as appropriate for each client, we will keep duration slightly shorter than respective benchmarks, improve credit quality and increase coupons in anticipation of gradually rising interest rates.*

U.S. Treasury Yield Curve				
	Sep 18	QTR Δ	YTD Δ	12 MO Δ
2 Year	2.81%	29 bps	92 bps	134 bps
5 Year	2.94%	21	74	102
10 Year	3.05%	20	65	72
30 Year	3.19%	21	45	33
Credit Spreads				
	Sep 18	QTR Δ	YTD Δ	12 MO Δ
Aaa	13 bps	0	0	1
Aa	53 bps	-9	3	-4
A	86 bps	-16	13	6
Baa	136 bps	-21	12	5
< Baa	316 bps	-47	-27	-31
Taxable Bond Total Returns				
	3Q 18	YTD	12 MO	
Aggregate Bond Index	0.0%	-1.6%	-1.2%	
International	-1.7%	-3.0%	-1.5%	
Emerging Markets	1.6%	-2.3%	-1.7%	
Domestic Sector				
Treasury	-0.6%	-1.7%	-1.6%	
Agency	0.3%	-0.6%	-0.5%	
Corporate	1.0%	-2.3%	-1.2%	
Securitized	-0.1%	-1.0%	-0.9%	
Domestic Quality				
Aaa	-0.3%	-1.4%	-1.3%	
Aa	0.3%	-1.2%	-0.6%	
A	0.7%	-2.7%	-1.6%	
Baa	1.4%	-2.0%	-0.8%	
< Baa	2.4%	2.6%	3.0%	
Domestic Maturity				
Short <sup>(1)</sup>	0.3%	0.4%	0.2%	
Intermediate <sup>(2)</sup>	0.1%	-1.1%	-1.2%	
Long <sup>(3)</sup>	-0.5%	-5.4%	-2.7%	

<sup>(1)</sup> Short 1-3 Years, <sup>(2)</sup> Intermediate 5-7 Years, <sup>(3)</sup> Long 10+ Years

## Municipal Bond Market Summary

Against the backdrop of rising interest rates and increasing market volatility during the quarter, municipal bonds performed relatively well compared to other fixed income sectors, as supply and demand patterns remained favorable overall. The Bloomberg Barclays Municipal Bond Index generated a slight negative return in the quarter and is now down 0.4% year-to-date.

The technical tailwinds that historically create positive momentum in the summer months were muted this year. Normally, there is a drop in new issue supply coupled with a rise in reinvestment demand, two seasonal forces that typically combine to produce strong returns. This year, issuance was down and flows into mutual funds slowed as rates drifted higher. Banks and insurance companies, which had been significant buyers of tax-exempt paper in recent years, continued to shed exposure due to the changes from last year's corporate tax reform.

Municipal bond credit fundamentals remain benign. Credit conditions have been supported by strong tax receipts, low unemployment and rising home prices. Add to this an economy hitting on all cylinders and it should come as no surprise that credit spreads have reached post-financial crisis lows. The question then becomes whether all this good news is reflected in current levels. It would certainly appear so.

However, structural risks still pose a challenge to many issuers, including a weaker federal government partner, growing pension and retiree healthcare costs. As happened with pension accounting a few years ago, new government regulations are about to shine a light on how states record healthcare liabilities, which the vast majority address on a pay-as-you-go basis. When the economy is humming along, these issues are often ignored. But the good times won't last forever. At this stage in the cycle, a more cautious outlook on credit is warranted.

Going forward, we believe price performance will be driven largely by technical factors as well as interest rates, which are likely to rise to higher levels with an additional rate hike expected in December. However, from a credit perspective there has been little change in underlying market fundamentals, in our view, as general creditworthiness and low default rates remained stable over the quarter.

High-grade issues (Aaa, Aa, A) have produced slightly negative year-to-date returns as interest rates have drifted higher. BBB rated municipal bonds outperformed high-grade municipal bonds over the second quarter, boosted by a strong performance from Illinois. High-yield municipal bonds (<Baa) were the strongest performers for the quarter.

### Looking forward

*We believe that municipals are fairly valued when compared to other asset classes on a tax-equivalent basis. We favor A-rated bonds in the intermediate part of the curve. As market conditions allow, and as appropriate for each client, we will keep duration slightly shorter than respective benchmarks, improve credit quality and increase coupons in anticipation of gradually rising interest rates.*

AAA Municipal Yield Curve (%)				
	Sep 18	QTR Δ	YTD Δ	12 MO Δ
2 Year	1.98%	33 bps	42 bps	96 bps
5 Year	2.23%	23	53	86
10 Year	2.62%	15	61	62
30 Year	3.26%	26	64	36
Municipal AAA Yield to Treasury Yield Ratio (%)				
	Sep 18	QTR Δ	YTD Δ	12 MO Δ
2 Year	70%	5%	-12%	1%
5 Year	76%	2%	-2%	4%
10 Year	86%	-1%	2%	0%
30 Year	102%	1%	7%	1%
Municipal Credit Spreads				
	Sep 18	QTR Δ	YTD Δ	12 MO Δ
Aa	9 bps	-4	-1	-1
A	43 bps	-6	-6	-13
Baa	99 bps	-12	-16	-25
<Baa	227 bps	-16	-77	-114
Municipal Bond Total Returns				
	3Q 18	YTD	12 MO	
Municipal Bond Index	-0.2%	-0.4%	0.3%	
Type				
General Obligation	-0.1%	-0.5%	0.1%	
Revenue	-0.2%	-0.5%	0.5%	
Quality				
Aaa	-0.3%	-0.8%	-0.3%	
Aa	-0.2%	-0.5%	0.1%	
A	-0.1%	-0.3%	0.6%	
Baa	0.2%	0.6%	2.0%	
<Baa	0.7%	4.4%	6.3%	
Maturity				
Short <sup>(1)</sup>	-0.1%	0.6%	-0.1%	
Intermediate <sup>(2)</sup>	-0.1%	-0.4%	-0.6%	
Long <sup>(3)</sup>	0.1%	-0.7%	-0.1%	

<sup>(1)</sup> Short 3 Years, <sup>(2)</sup> Intermediate 6-8 Years, <sup>(3)</sup> Long 8-12 Years

## Economic Index Descriptions

**Real Gross Domestic Product (GDP):** Real GDP is a basic measure of U.S. economic output adjusted for inflation. Alternatively, it can be thought of as the final value of all goods and services produced within the U.S. Positive Real GDP growth signals an expanding economy.

**Consumer Price Index (CPI):** Measuring the change in the CPI provides an estimate for inflation. The CPI tracks the price of a basket of consumer goods and services. High inflation or deflation (negative inflation) can be signs of economic worry. CPI is typically reported in two ways: headline and core CPI. Headline CPI includes all categories that comprise the CPI basket of goods and services. Core CPI, which is closely monitored by the Fed, strips out the more volatile Food and Energy categories.

**Personal Consumption Expenditure Chain-type Price Index (PCE):** Measuring the change in the PCE provides an estimate for inflation. In comparison to CPI, which uses one set of expenditure weights for several years, this index uses expenditure data from the current period and the preceding period. This price index method assumes that the consumer has substituted from goods whose prices are rising to goods whose prices are stable or falling. Core PCEPI, which is closely monitored by the Fed, strips out the more volatile Food and Energy categories.

**Producer Price Index (PPI):** Measuring the change in the PPI provides an estimate for inflation. The PPI is a weighted index of prices measured at the wholesale, or producer level. A monthly release from the Bureau of Labor Statistics (BLS), the PPI shows trends within the wholesale markets (the PPI was once called the Wholesale Price Index), manufacturing industries and commodities markets. All of the physical goods-producing industries that make up the U.S. economy are included, but imports are not. The PPI measures the average changes over time in the selling prices received by domestic producers.

**Conference Board Index of Leading Economic Indicators (LEI):** The LEI is designed to signal peaks and troughs in the business cycle. The ten components of for the U.S. include: average weekly manufacturing hours; average weekly initial claims for unemployment insurance; manufacturers' new orders for consumer goods and materials; ISM® Index of New Orders; manufacturers' new orders for nondefense capital goods excluding aircraft orders; building permits for new private housing units; stock prices of 500 common stocks; Leading Credit Index™; interest rate spread on 10-year Treasury bonds less federal funds and average consumer expectations for business conditions.

**NFIB Small Business Optimism Index:** The small business optimism index is compiled from a survey that is conducted each month by the National Federation of Independent Business (NFIB) of its members. The index is a composite of 10 seasonally adjusted components based on the following questions: plans to increase employment, plans to make capital outlays, plans to increase inventories, expect economy to improve, expect real sales higher, current inventory, current job openings, expected credit conditions, now a good time to expand, and earnings trend.

**The Institute for Supply Management (ISM) PMI Index:** The PMI is a composite index of five "sub-indicators", which are extracted through surveys to purchasing managers from around the country, chosen for their geographic and industry diversification benefits. The five sub-indices are: Production, New orders, Supplier deliveries, Inventories and Employment level. An Index value over 50 indicates expansion; below 50 indicates contraction.

**The Institute for Supply Management (ISM) Non-manufacturing Index (NMI):** The NMI is a composite index of four "sub-indicators", which are extracted through surveys to purchasing managers from around the country, chosen for their geographic and industry diversification benefits. The four sub-indices: Business activity, New orders, Employment, Supplier deliveries. An Index value over 50 indicates expansion; below 50 indicates contraction.

**Consumer Confidence Index (CCI):** The Consumer Confidence Index is a well-known proxy for the attitudes of U.S. consumer towards topics such as the business climate, personal finances and spending. In essence, this index attempts to measure the confidence that consumers have in the overall economy. This is important because consumer spending accounts for a large portion of U.S. GDP.

**Unemployment Rate:** Calculated monthly by the Bureau of Labor Statistics, the unemployment rate is a gauge of the health of the U.S. labor market. High unemployment can stifle the growth of the economy.

## Domestic Equity Benchmark Descriptions

**Investment Style:** Performance of different types of stocks will vary over time. A common way to characterize a stock is by market capitalization (e.g., large cap or small cap) or style (e.g., value or growth).

**Large Cap vs. Small Cap:** Large companies tend to be more established companies and therefore exhibit lower volatility. Over an extended period of time, expected returns of small cap companies are often higher due to the risks associated with smaller, less established companies.

**Mega Cap:** The Russell Top 50 Index measures the performance of the 50 largest companies in the Russell 1000 Index, which represents approximately 40% of the total market capitalization of the of the Russell 1000 Index.

**Large Cap:** The Russell Top 200 Index measures the performance of the 200 largest companies in the Russell 1000 Index, which represents approximately 68% of the total market capitalization of the of the Russell 1000 Index.

**Mid Cap:** The Russell Midcap Index measures the performance of the 800 smallest companies in the Russell 1000 Index, which represent approximately 36% of the total market capitalization of the Russell 1000 Index.

**Small Cap:** The Russell 2000 Index measures the performance of the 2,000 smallest companies in the Russell 3000 Index, which represents approximately 10% of the total market capitalization of the Russell 3000 Index.

**Value vs. Growth:** Value companies typically trade at discount valuations and may pay a dividend. Growth companies are those that are experiencing greater earnings growth prospects.

**Growth:** The Russell 3000 Growth Index measures the performance of those Russell 3000 index companies with higher price-to-book ratios and higher forecasted growth values.

**Value:** The Russell 3000 Value Index measures the performance of those Russell 3000 companies with lower price-to-book ratios and lower forecasted growth values.

#### **Domestic Fixed Income Benchmark Descriptions**

**U.S. Aggregate Bond:** The Barclays U.S. Aggregate Bond Index measures the performance of USD-denominated, SEC-registered, investment-grade, fixed-rate or step up, taxable bonds. The index includes bonds from the Treasury, Government-Related, Corporate and MBS (agency fixed-rate and hybrid ARM pass-through), ABS, and CMBS sectors. Securities included in the index must have at least 1 year until final maturity.

**U.S. Treasury:** The Barclays Capital U.S. Treasury Index measures the performance of public obligations of the U.S. Treasury with a remaining maturity of one year or more.

**U.S. Agency:** The Barclays Capital U.S. Agency Bond Index measures the performance of the agency sector of the U.S. government bond market and is comprised of investment-grade U.S. dollar-denominated debentures issued by government and government-related agencies, including FNMA. The index includes both callable and non-callable securities that are publicly issued by U.S. government agencies, quasi-federal corporations, and corporate and foreign debt guaranteed by the U.S. government.

**U.S. Corporate:** The Barclays Capital U.S. Corporate Bond Index measures the performance of publicly issued USD-denominated corporate and Yankee debentures and secured notes that meet specified maturity, liquidity, and quality requirements.

**U.S. MBS:** The Barclays Capital U.S. Mortgage Backed Securities Index measures the performance of mortgage-backed pass-through securities of Ginnie Mae (GNMA), Fannie Mae (FNMA), and Freddie Mac (FHLMC).

**U.S. Municipal Bond:** The Barclays Capital Municipal Bond Index measures the performance of the USD-denominated, investment grade, fixed-rate tax exempt bond market. The index has four main sectors: state and local general obligation bonds, revenue bonds, insured bonds and pre-refunded bonds. Securities included in the index must have at least 1 year until final maturity.

**General Obligation Bond Index:** The Barclays General Obligation Bond Index measures the average market-weighted performance of general obligations securities that have been issued in the last five years with maturities greater than one year.

**Revenue Bond Index:** The Barclays Revenue Bond Index measures the average market-weighted performance of revenue backed securities that have been issued in the last five years with maturities greater than one year.