



## Economic and Capital Market Review

Fourth Quarter 2017

The synchronized expansion of the global economy accelerated in the fourth quarter and estimates for 2018 global growth are rising as the details of the U.S. tax bill are factored into economists' models. Corporate earnings rose ~20% in 2017, and between lower corporate tax rates and the opportunities presented by the one-time exemption on repatriated cash, companies should enjoy another strong year of profit performance in 2018.

Economic fundamentals are healthier than at any point in the current cycle. Domestic demand in the U.S. is rising, global trade is robust, new technologies are driving efficiency, unemployment remains low, and the housing, investment and manufacturing sectors are all participating. For the first time in a decade, nearly all major developed and emerging economies are in a sweet spot within their growth cycles, and this strength should continue into 2018.

As we discussed last quarter, the lynchpin for determining asset prices is the long-term bond yield. The data makes it hard to argue against the fact that global central bank policies have distorted bond markets and, by extension, the prices of financial assets. Outside of an unforeseen geo-political event, the most direct threat to the current economic climate is a significant rise in interest rates. Thus, we are keeping our eyes open for any upward pressure on long-term rates.

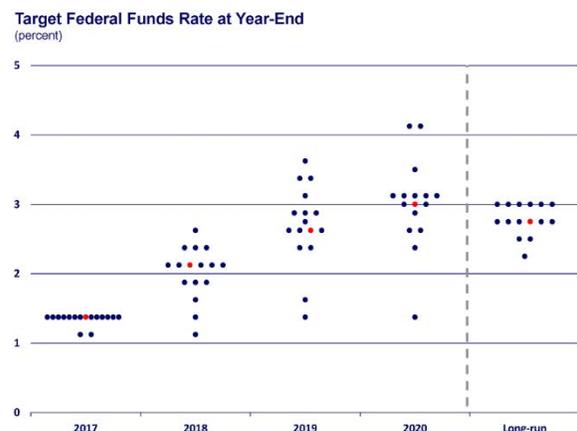
In the political arena, the administration finally gained some traction on two of its three primary legislative agenda items - tax reform and regulatory relief. In light of this, markets have responded positively to the administration's pro-growth agenda.

### Federal Open Market Committee (FOMC)

Strong financial markets and moderate inflation allowed the Fed to increase short-term interest rates by 25 basis points at their December meeting. The Fed Funds rate now stands at 1.25% to 1.50%.

It remains to be seen when, or if, the tightening labor market will translate into higher inflation via faster wage growth.

It also remains to be seen how the new FOMC makeup will operate. January 2018 will mark the final meeting of the Fed's Janet Yellen era as Jerome Powell will be assuming the Fed chairmanship in February 2018. It is widely expected that Powell will follow in Yellen's cautious monetary footsteps. It is also expected that Powell will be slightly more hawkish than Yellen and more open to relaxing financial regulations. Time will tell.



The new year also ushers in an increase in the pace of balance-sheet normalization as the Fed doubles the reinvestment caps to \$12 billion for U.S. Treasury's and \$8 billion for Agency MBS. These amounts are still small relative to the size of these markets and should be readily absorbed without impacting interest rates.

In our view, the Federal Reserve will remain on their path of gradually increasing short term interest rates in 2018. 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 2.125% at the end of 2018 which implies three rate hikes.

## Real Gross Domestic Product (GDP)

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

Fourth quarter GDP rose at a +2.6% annualized rate after +3.2% rate in the prior period. The increase was slower than projected as a drag from net exports (-1.1%) and inventories (-0.7%) offset the strength in consumer spending (+2.6%) and private investment (+0.6%).

Consumer spending, which accounts for more than two-thirds of U.S. economic activity, increased at a +3.8% rate in the fourth quarter. That was the quickest pace since the fourth quarter of 2014 and followed a +2.2% percent rate in the third quarter.

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. Final sales to domestic purchasers grew +4.3% percent last quarter, the most since 2014.

We anticipate continued +3.0% GDP growth in 2018 as the overall economic environment supports consumer spending through low interest rates, modest inflation, low energy prices and lower taxes.

## 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 slightly to +1.5% on a year-over-year basis and continues to trend below the Fed's target of +2.0%. The primary contributors to this latest inflation reading were from the housing and transportation subcomponents.

## Business

The Conference Board's Leading Economic Index (LEI) increased +2.4% during the quarter to 107.0, its highest ever reading. For the six-month period ending December, the leading economic index has increased by +2.6% which suggests solid economic growth well into 2018.

According to the latest Manufacturing ISM Report on Business, the overall economy grew for the 103<sup>rd</sup> consecutive month. The Purchasing Manager's Index (ISM PMI) ended December at 59.7%. The past relationship between PMI and the overall economy indicates that the average PMI of 57.6% in 2017 corresponds to a +4.5% 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	4Q17	3Q17	2Q17
<b>Real GDP <sup>(1)</sup></b>	<b>2.6%</b>	<b>3.2%</b>	<b>3.1%</b>
Personal Consumption <sup>(2)</sup>	2.6%	1.5%	2.2%
Private Investment <sup>(2)</sup>	0.6%	1.2%	0.6%
Government <sup>(2)</sup>	0.5%	0.1%	0.0%
Net Exports <sup>(2)</sup>	-1.1%	0.4%	0.2%
<b>Real GDP Components</b>			
Domestic Final Sales <sup>(1)</sup>	4.3%	1.9%	2.7%
Foreign Trade Effect <sup>(1)</sup>	-1.1%	0.5%	0.2%
Final Sales <sup>(1)</sup>	3.2%	2.4%	2.9%
Inventory Effect <sup>(1)</sup>	-0.6%	0.8%	0.2%
Real GDP <sup>(1)</sup>	2.6%	3.2%	3.1%
<b>Demand Components</b>			
Personal Consumption <sup>(1)</sup>	3.8%	2.2%	3.3%
Business Fixed Investment <sup>(1)</sup>	6.8%	4.7%	6.7%
Residential Investment <sup>(1)</sup>	11.7%	-4.7%	-7.3%
Government Spending <sup>(1)</sup>	2.9%	0.7%	-0.2%

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

Inflation	12/17	5 Year High	5 Year Low
<b>Headline (All Items)</b>			
CPI <sup>(3)</sup>	2.1%	2.7%	-0.2%
PCE <sup>(3)</sup>	1.7%	2.2%	0.2%
PPI <sup>(3)</sup>	2.7%	3.0%	-1.5%
<b>Core (Less Food and Energy)</b>			
CPI <sup>(3)</sup>	1.8%	2.3%	1.6%
PCE <sup>(3)</sup>	1.5%	1.9%	1.3%
PPI <sup>(3)</sup>	2.3%	2.4%	0.2%
<b>Inflation Expectations</b>			
5Yr Breakeven Inflation	1.8%	2.3%	1.1%
10Yr Breakeven Inflation	1.9%	2.6%	1.3%
30Yr Breakeven Inflation	2.0%	2.6%	1.5%

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

Business	12/17	5 Year High	5 Year Low
Leading Economic Index	107.0	107.0	88.2
Leading Economic Index <sup>(3)</sup>	5.7%	6.5%	0.5%
Small Business Optimism	104.9	107.5	88.8
ISM PMI	59.7	60.8	48.0
ISM NMI	55.9	60.1	51.7

<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 96<sup>th</sup> consecutive month. The Non-Manufacturing Index (ISM NMI) ended December at 55.9%, well into expansionary territory. The past relationship between NMI and the overall economy indicates that the latest reading corresponds to a +2.7% 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 87 consecutive months of employment growth. Employment grew by 2 million positions in 2017. While down from a peak of 3 million in 2014 it does not appear as though the pool of available workers has run dry. 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.

Despite the relatively strong employment situation, meaningful wage gains remain elusive. The employment-cost index, a broad measure of wages and salaries in the private industry, increased 2.8% year over year through December 2017. The current slow wage growth, low labor force participation and elevated unemployment duration measures seem to indicate the unemployment rate could drift below 4.0% before the labor market reaches full capacity.

Labor	12/17	5 Year High	5 Year Low
Wage Growth <sup>(3)</sup>	2.8%	2.8%	1.7%
Unemployment Claims <sup>(5)</sup>	238	357	238
Nonfarm Payrolls <sup>(6)</sup>	204	293	128
Unemployment Rate	4.1%	8.0%	4.1%
Under-employment Rate	8.1%	14.6%	8.0%
Labor Force Participation	62.7%	63.7%	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

### 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 December reading of 122.1.

According to the survey, consumers remain quite confident that the solid pace of economic growth seen in late 2017 will continue well into 2018.

Consumer	12/17	5 Year High	5 Year Low
Consumer Confidence	122.1	128.6	58.4
Consumer Sentiment	95.9	100.7	73.2
Auto Sales <sup>(3)</sup>	-1.6%	11.5%	-6.5%
Retail Sales <sup>(3)</sup>	5.4%	6.0%	1.6%

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

### Housing

The nation's housing market is sailing into headwinds. The housing market is already facing a supply crisis, with demand substantially higher than the supply of homes for sale. Higher mortgage rates will exacerbate that problem because most current homeowners have likely refinanced to rates in the 3 percent range over the past few years and will be reluctant to give those rates up, either to downsize or upsize to a new home. Hence, fewer new listings.

New home sales prices have consistently risen this year as a result of lean inventories and robust demand. Existing home sales remain a competitive market with limited supply and steady to increasing prices. As a result, the affordability index has been declining as home prices have been increasing faster than incomes. An increase in mortgage rates will reduce affordability further in coming months. The combined effect of rising demand and limited supply helped increase the national median sales price for new homes to \$335,000 and for existing homes to \$247,000.

Housing	12/17	5 Year High	5 Year Low
Housing Affordability	160	215	148
Housing Starts <sup>(4)</sup>	1,192	1,328	826
Building Permits <sup>(4)</sup>	1,302	1,363	928
New Home Sales <sup>(4)</sup>	625	689	376
Existing Home Sales <sup>(4)</sup>	5,570	5,780	4,720

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

### The view forward

***Overall, domestic economic indicators gathered strength at the end of 2017. We believe the prospects for 2018 appear favorable based on positive trends in consumer spending, job gains, wage growth, housing and inflation. We expect the U.S. economy to grow at annualized rate of +3.0% in 2018 due in large part to low energy prices 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

For the first time in history, the S&P 500 delivered positive returns in each month of the year. Several factors provided support to the stock market rise: promotion of a pro-growth regulatory environment, strong corporate earnings and the passage of tax reform legislation.

Among international equities, emerging market stocks outperformed developed market stocks. International investors continue to benefit from broad based global growth accompanied by low market volatility.

Returns have been driven by both earnings growth and valuation expansion. Current valuations appear elevated, but not overextended, as they are supported by improving corporate earnings and modest inflation. We continue to have a favorable view on international equity markets, due to attractive valuations, accommodative monetary policy and solid growth prospects.

Overall, 2017 was a year of surprises in the equity markets. An unforeseen global economic recovery unfolded, investor confidence soared and volatility was nonexistent. The lack of volatility is the most surprising event given the high expectations for legislative and regulatory reform a year ago were met by gridlock in Washington until late in the year.

### Domestic Market Cap and Style

Large-cap stocks continued to outperform small companies and growth continued to beat value as big, growth-oriented companies leveraged the improving economy to drive earnings growth.

### Domestic Sectors

Consumer Discretionary was the best-performing sector during the quarter, followed by Information Technology, and Financials. Consumer Discretionary companies were boosted by strong retail and auto sales, while Information Technology was led by the FAANG stocks—Facebook, Amazon, Apple, Netflix, and Google. Financial stocks, particularly banks, increased during the quarter, due to positive sentiment related to tax-reform plans and the implications of lighter regulations. Utilities were the bottom-performing sector, followed by Health Care and Real Estate.

### Corporate revenue and earnings

Corporate earnings maintained their momentum in 3Q 2017 with a year-over-year increase of +17.0%. Projections for 4Q 2017 corporate earnings call for a year-over-year gain of +17.4%. The consensus forecast for full year 2017 corporate earnings growth currently stands at ~18.0%. (Earnings data is according to S&P Dow Jones.) Earnings growth drives sustainable gains in stocks, so the recent improvement provides hope for forward-looking valuations and the sustainability of the bull market. Continued robust earnings growth of ~21.0% is expected through 2018.

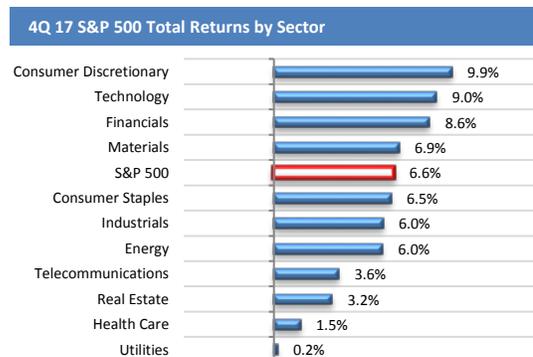
Corporate revenue also maintained momentum in 3Q 2017 with a year-over-year increase of +5.7%. Projections for 4Q 2017 corporate revenue call for a year-over-year increase of +6.6%. The consensus forecast for full year 2017 corporate revenue currently stands at ~6.5%. (Revenue data is according to S&P Dow Jones.)

### The view forward

*In the current environment, we are neutral on equities and will maintain a base allocation exposure as long as earnings continue to justify the current P/E multiples. We will increase exposure if/when equity indices move back into the range of their average P/E multiple over the past 5 to 10 years.*

Equity Total Returns			
	4Q 17	YTD	12 MO
DJIA	11.0%	28.1%	28.1%
S&P 500	6.6%	21.8%	21.8%
Nasdaq	6.6%	29.7%	29.7%
International <sup>(1)</sup>	4.5%	26.7%	26.7%
Emerging Markets <sup>(2)</sup>	7.7%	37.3%	37.3%
<b>Domestic Market Cap</b>			
Mega <sup>(3)</sup>	7.3%	22.8%	22.8%
Large <sup>(4)</sup>	6.8%	23.0%	23.0%
Mid <sup>(5)</sup>	6.1%	18.5%	18.5%
Small <sup>(6)</sup>	3.3%	14.7%	14.7%
<b>Domestic Style</b>			
Growth <sup>(7)</sup>	7.6%	29.6%	29.6%
Core <sup>(7)</sup>	6.3%	21.1%	21.1%
Value <sup>(7)</sup>	5.1%	13.2%	13.2%

<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

During the quarter, as well as throughout much of the year, fixed income markets were primarily focused on the Fed, inflation, and tax legislation. Improving economic fundamentals, stable financial conditions, and strong investor demand for fixed income assets helped all domestic fixed income sectors achieve positive returns during the fourth quarter and 2017.

On the international front, global fixed income investors benefited from continued demand due to quantitative easing, a supportive economic backdrop and a weaker U.S. dollar.

### Yield Curve

The Treasury yield curve continued to flatten, as short-term rates increased more than long-term rates. Short-term rate increases were driven by Fed rate hikes and expectations of tighter monetary policy, while long-term rates remain relatively steady, due to benign inflation expectations. However, late in the year, the bond market began to sell-off, as the investors factored in increased inflation risk associated with the passage of tax reform.

The yield spread between 2-year and 10-year maturities narrowed by 37 basis points (bps) to end the period at 51 bps.

### Domestic Sector, Quality, Maturity

The Barclays Aggregate Bond Index increased +0.4%, bringing its year-to-date return up to +3.5%.

Within the Barclays Aggregate Index, investment-grade corporate bonds were up +1.2%. Within the investment-grade corporate bond category, the financial, industrial and utilities sectors were up +0.8%, +1.3% and +1.9%, respectively. Lower-quality and longer-duration portions of the investment-grade credit market outperformed.

High yield generated a return of +0.5% during the quarter. While high yield bond valuations are slightly less attractive now than in months past, we believe that spreads are poised to continue to tighten based on stable energy prices, healthy credit metrics and stable economic conditions. This outlook is tempered somewhat by the tax reform's limit on the deductibility of interest expense which may negatively impact a subset of high-yield companies.

During the quarter, credit spreads narrowed across virtually every sector, quality and maturity category. Within fixed income sectors, spreads narrowed by 8 basis points on corporate bonds and widened by 1 basis points on securitized bonds.

### New issue activity

Both investment grade and high yield bond issuance remained robust during the quarter. In all, issuers brought \$250 billion in new investment grade issues, \$69 billion in new high yield issues and \$483 billion in new mortgage-backed issues. Comparing the fourth quarter of 2017 to the fourth quarter of 2016, investment grade new issuance decreased -1%, high yield new issuance increased +21% and mortgage-backed new issuance decreased -18% over 2016 levels.

### The view forward

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

U.S. Treasury Yield Curve				
	Dec 17	QTR Δ	YTD Δ	12 MO Δ
2 Year	1.89%	42 bps	69 bps	69 bps
5 Year	2.20%	28	27	27
10 Year	2.40%	7	-5	-5
30 Year	2.74%	-12	-32	-32
Credit Spreads				
	Dec 17	QTR Δ	YTD Δ	12 MO Δ
Aaa	13 bps	1	3	3
Aa	50 bps	-7	-21	-21
A	73 bps	-7	-28	-28
Baa	124 bps	-7	-37	-37
< Baa	343 bps	-4	-66	-66
Taxable Bond Total Returns				
	4Q 17	YTD	12 MO	
Aggregate Bond Index	0.4%	3.5%	3.5%	
International	1.6%	10.5%	10.5%	
Emerging Markets	0.6%	8.2%	8.2%	
Domestic Sector				
Treasury	0.0%	2.3%	2.3%	
Agency	0.1%	3.0%	3.0%	
Corporate	1.2%	6.4%	6.4%	
Securitized	0.2%	2.5%	2.5%	
Domestic Quality				
Aaa	0.1%	2.4%	2.4%	
Aa	0.6%	4.3%	4.3%	
A	1.1%	6.0%	6.0%	
Baa	1.2%	7.4%	7.4%	
< Baa	0.5%	7.5%	7.5%	
Domestic Maturity				
Short <sup>(1)</sup>	-0.2%	0.9%	0.9%	
Intermediate <sup>(2)</sup>	-0.1%	2.6%	2.6%	
Long <sup>(3)</sup>	2.8%	10.5%	10.5%	

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

## Municipal Bond Market Summary

Municipal bond investors are breathing easier after Congress passed sweeping changes to the tax code in December. As we pointed out in our last commentary, the original House proposal would have eliminated approximately 25% of the tax-exempt bond market by taxing interest earned on all private activity bonds. Fortunately, the final bill removed this provision.

However, the tax bill could still profoundly affect the municipal bond market with the elimination of tax-exempt advance refunding's of governmental and 501(c)(3) debt after December 31, 2017. As a result, borrowers with advance refunding's rushed their issues to market in December. December new issue supply exceeded \$64 billion, compared to \$21 billion in 2016.

### Yield Curve

U.S. AAA Municipal rates swung dramatically in the final quarter of 2017 and the municipal yield curve flattened sharply. For the fourth quarter, the 2-year rate increased by 54 basis points (bps), while the 30-year rate declined by 28 bps. The full year saw similar results, as the 2-year rate increased by 33 bps, while the 30-year rate declined by 47 bps. As a result, total returns favored longer duration portfolios.

Relative to Treasuries, short-term municipal bonds got less expensive as 2-year municipal to treasury ratio increased from 69% to 82% while long-term municipal bonds got slightly more expensive as the 30-year municipal to treasury ratio decreased from 101% to 96%.

### Municipal bonds

The Barclays Municipal Bond Index increased +0.7% for the quarter, bringing its year-to-date return up to +5.4%. Within the Municipal Bond Index, both general obligation and revenue bonds performed in line with the Municipal Bond Index. Lower-quality and longer-duration portions of the municipal market outperformed.

The market signaled continued acceptance of credit risk as spreads reached new lows for the year. For A-rated bonds, credit spreads tightened 7 bps and for Baa-rated spreads tightened 9 basis points.

### Municipal credit concerns

Washington's failure to address critical issues in the Affordable Care Act could leave not-for-profit hospitals and state budgets exposed to lower federal funding for Medicaid. This could place added pressure on State budgets.

As mentioned, municipal investors were fearful tax policy changes would reduce the value of the tax exemption. However, the new law protects the exemption while eliminating advanced refunding issues. This will likely result in a significant reduction in 2018 supply — a good thing for muni valuations, but potentially problematic for some issuers seeking to reduce financing costs.

### The view forward

*We believe that municipals are fairly valued when compared to other asset classes on a taxable 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 short to respective benchmarks, improve credit quality and increase coupons in anticipation of gradually rising interest rates.*

AAA Municipal Yield Curve (%)				
	Dec 17	QTR Δ	YTD Δ	12 MO Δ
2 Year	1.56%	54 bps	33 bps	33 bps
5 Year	1.70%	33	-10	-10
10 Year	2.01%	1	-34	-34
30 Year	2.62%	-28	-47	-47
Municipal AAA Yield to Treasury Yield Ratio (%)				
	Dec 17	QTR Δ	YTD Δ	12 MO Δ
2 Year	82%	13%	-20%	-20%
5 Year	77%	6%	-16%	-16%
10 Year	84%	-2%	-12%	-12%
30 Year	96%	-6%	-5%	-5%
Municipal Credit Spreads				
	Dec 17	QTR Δ	YTD Δ	12 MO Δ
Aa	10 bps	-1	-7	-7
A	49 bps	-7	-31	-31
Baa	115 bps	-9	-44	-44
<Baa	304 bps	-37	-112	-112
Municipal Bond Total Returns				
	4Q 17	YTD	12 MO	
Municipal Bond Index	0.7%	5.4%	5.4%	
Type				
General Obligation	0.6%	5.3%	5.3%	
Revenue	1.0%	6.0%	6.0%	
Quality				
Aaa	0.5%	4.5%	4.5%	
Aa	0.7%	5.0%	5.0%	
A	0.9%	6.2%	6.2%	
Baa	1.4%	8.7%	8.7%	
<Baa	1.8%	9.7%	9.7%	
Maturity				
Short <sup>(1)</sup>	-0.8%	1.6%	1.6%	
Intermediate <sup>(2)</sup>	-0.2%	4.5%	4.5%	
Long <sup>(3)</sup>	0.5%	5.8%	5.8%	

<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.