"RE-BUILDING THE CITY'S WATER SYSTEMS FOR THE 21ST CENTURY"

EMPLOYEES' RETIREMENT SYSTEM OF THE
Sewerage & Water Board OF NEW ORLEANS

LaToya Cantrell, President

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August 8, 2018

The Pension Committee met on Wednesday, August 8, 2018 in the Board Room, 625 St. Joseph Street, New Orleans, LA. The meeting convened at 9:00 A.M.

Present:

Mr. Christopher Bergeron
Mr. Joseph Peychaud
Ms. Chante Powell
Mr. Marvin Russell
Mr. Lynes Sloss
Mr. Lewis Sterling III
Mr. John Wilson

Also in attendance: Ms. Jade Brown-Russell, Acting Executive Director and Ms. Yolanda Grinstead, Acting Special Counsel, both of the Employees' Retirement System (ERS) and Sewerage and Water Board (S&WB). The following S&WB staff were in attendance: Ms. Yvette Downs, Chief Financial Officer, Mr. James Thompson, Office of Special Counsel; Dr. Tim Viezer, Chief Investment Officer; and Ms. Candice Newell, Board Relations Manager. Mr. Octave Francis III and Mr. Stephen Daste both of FFC Investment Advisors of Raymond James also attended the meeting.

ACTION ITEMS:

1. Approval of July 11, 2018 Pension Committee minutes.
2. Resolution R-121-2018 Selection of an Asset Allocation Mix.

EXECUTIVE SESSION:

3. None.

PRESENTATION ITEMS:

4. Chief Investment Officer's Presentation
5. Presentation by Theodore C. Sanders III, Louisiana Asset Management Pool

Chairman Joseph Peychaud asked for a motion to approve the July 11, 2018 minutes. Mr. Lynes Sloss moved and Mr. Marvin Russell seconded a motion for approval. The motion carried. Chairman Peychaud called upon Dr. Tim Viezer to provide contextual comments to precede the Committee's deliberation of the asset allocation.

Dr. Viezer stated that Callan LLC had presented their asset-liability study results to the Board of Trustees in July and provided five asset allocations labeled Mix 1 through Mix 5. The five mixes had various levels of increased expected return and risk and increased allocations to international equity and to real estate while decreasing the allocation to fixed income. While the objective is to achieve full funding and not merely mimic peers, Callan showed that these mixes move ERS more in line with peers.

Dr. Viezer stated that Callan had demonstrated in the workforce scenarios and stochastic simulations that most of the volatility experienced by ERS was in their assets rather than liabilities. The volatility in assets affected the funded status and thus the employer contribution rate. He stated that Callan believed that the feasible asset allocations could not achieve the actuarial required return of 7.00%. However, Dr. Viezer also said that the actuarial gains experienced by ERS could conceivably lower the effective required return to 6.50%. Still, none of the mixes were expected to achieve that rate given that their expected returns ranged from 5.6% to 6.26%. Active management could increase the expected returns but was not part of the asset-liability study. The Pension Committee would consider that decision later in the fall.

Dr. Viezer noted that Callan had devised a comprehensive measure called the "ultimate net cost" and considered the risk and reward of that measure for each mix. Based upon that analysis, Callan had suggested either Mix 2 or Mix 3; the latter was Callan's preferred asset allocation. Dr. Viezer added that Callan suggested Mix 2 if the Board of Trustees were concerned about the impact on the employer contribution. In that context, Dr. Viezer read the CFA Institute's Code of Conduct for Members of a Pension Scheme Governing Board: "Pension Trustees…act in good faith and in the best interest of the scheme participants and beneficiaries." That meant that pension trustees "place the benefit of the scheme participants above that of the sponsor of the pension scheme even if the trustee is employed by or appointed to the board of the pension scheme by the scheme's sponsor." Dr. Viezer added a caveat provided in the Code guidance: "However, trustees who exclusively seek to enhance the position of the participants and beneficiaries cannot discount additional considerations, such as the effect of the trustees' decisions on the financial health and viability of the scheme sponsor…."

Mr. Sloss clarified that Callan calculated the ultimate net cost in dollars and that there were tradeoffs among the choices. Mr. Sloss asked if Callan was the expert, why the Board should deviate from Callan's recommendation. Dr. Viezer responded that the choice depended upon the Board of Trustee's risk tolerance. Mr. Russell noted that there was a risk in setting the expected return too low. Mr. Ralph Johnson noted that the recommended choices were Mix 2 and Mix 3 and focused the level of international equity.

Mr. Octave Francis III reminded the Committee of a report they received from Horizon Actuarial Services documenting the range of investment consultants' forecasts of expected asset class returns. Ms. Yvette Downs (Chief Financial Officer) later noted that on any particular day movements in the market could produce returns different from the forecast and actual allocations that did not match the approved policy. Mr. Francis agreed with Callan's increased allocations to international equity and real estate. However, Mr. Francis reminded the Pension Committee that there was a legal cap of 65% in equities. Mr. Francis was concerned that if the private real estate allocation were temporarily funded with REITs this could place ERS uncomfortably close to the legal limit. Therefore, he recommended Mix 2, which avoid that issue and had a higher Sharpe Ratio.

Mr. Lewis Sterling III noted he was "not a fan of hedge funds" and asked what the relative contributions brought to the portfolio. Dr. Viezer and Mr. Francis provided estimated contributions and noted that the Board of Trustees could potentially implement the allocation with liquid multi-asset class strategies that were included in the appendix of Callan's presentation materials. Mr. Sloss noted that hedge funds brought unique tools such as shorting but wanted to know if Mix 3 would exceed the statutory limit for equities. Mr. Francis and Dr. Viezer noted that REITs were considered both equity and real estate and therefore somewhat ambiguous. Ms. Chante Powell inquired about the funding policy.

Mr. Peychaud suggested that the Committee consider Mix 2. Mr. Sterling then suggested amending Mix 2 by increasing the allocation to real estate by 1% to 9% and decreasing the allocation to hedge funds by 1% to 8%. Mr. Marvin Russell seconded the motion and the motion carried. Mr. Russell noted that the motion would be forwarded to the Board of Trustees. Dr. Viezer said he would ask Callan to re-run some of their analysis with the modified Mix 2.

Dr. Viezer quickly summarized his presentation to state that in light of the financial challenges faced by the plan sponsor S&WB, he was revising his recommended funding policy from a 15-year closed amortization to a 20-year closed amortization, which GFOA still considered a best practice. He also reminded the Committee members that the upcoming LAPERS conference could satisfy their suggested trustee training.

Mr. Theodore Sanders III, Chief Executive Officer of the Louisiana Asset Management Pool (LAMP) gave an overview of his organization that oversees the day-to-day cash of nonprofits. LAMP has three objectives: preservation of principle, daily liquidity, and a competitive rate of return. ERS DROP is one of 705 participants, and represents 372 of LAMP's 4,000 accounts and $12 million of the $1.9 billion assets under management. LAMP currently has a 2.02% average monthly yield. Mr. Sanders introduced Mr. Hal Tabb of UBS Financial Services, who described the co-fiduciary oversight his firm provides in over American Beacon (which actually manages the cash). Mr. Sloss asked if these funds were insured and was told they were not insured. Mr. Sloss also asked if LAMP was insured against fraud and was told that LAMP carried such insurance. Mr. Russell asked what the fees on LAMP were. Mr. Sanders answered that they charged 19.5 bps but since 2006 had rebated fees so the average was 9.5 bps.

The Pension Committee received a question from the public. Mr. David Lockett, an S&WB employee asked if there were any contingency plans to ensure the safety of the pension fund in light of the task force created by the State House resolution 193. Ms. Jade Brown-Russell stated that the task force had met only recently. Mr. Lockett asked that the employees be kept informed on the impact to the pension. Mr. Marvin Russell noted that the Board of Trustees had hired outside counsel to advise them in the past when the privatization of S&WB was considered years ago. Dr. Viezer thanked Mr. Lockett and agreed with Ms. Brown-Russell that the implications of the task force were not know but assured Mr. Lockett that Dr. Viezer Mr. James Thompson were working to protect the assets and considering contingencies.

INFORMATION ITEMS:

Information items 6 through 8 were received.

ANY OTHER MATTERS:

The following questions and requests were raised for follow-up:

1. Dr. Viezer would ask Callan to re-run portions of their analysis with the modified Mix 2. Dr. Viezer forward both that new analysis and the Pension Committee resolution to the Board of Trustees.
2. Dr. Viezer would send a reminder to all Trustees about the LAPERS conference. Trustees were to send their registration forms to Dr. Viezer.
3. Mr. Peychaud asked management keep the employees informed of any impact to the pension by the House resolution 193 task force.

ADJOURNMENT:

There being no further business to come before the Pension Committee, Chairman Peychaud called for and received a motion to adjourn, which was second. The motion carried. The meeting adjourned at approximately 10:00 A.M.

Respectfully submitted,

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Joseph Peychaud, Pension Committee Chair

R-152-2018

RESOLUTION OF THANKS TO MR. JOHN WILSON

WHEREAS, John Wilson has served the City of New Orleans from January 18, 1971 to October 30, 1992 and from June 21, 1993 through July 5,1994; and

WHEREAS, John Wilson has been employed with the Sewerage and Water Board of New Orleans from July 6, 1994 through September 1, 2016 before entering DROP; and

WHEREAS, John Wilson was elected to a partial term on the Pension Committee left vacant by an employee member who retired that started September 1 , 2007 through August 31, 2010; and

WHEREAS, John Wilson was re-elected to the Pension Committee for a first full term from September 1, 2010 through August 31, 2014 and re-elected for a final term from September 1, 2014 through August 31, 2018;

NOW, THEREFORE, BE IT RESOLVED by Board of Trustees of the Employees' Retirement System of the Sewerage and Water Board of New Orleans that they wish to thank and commend John Wilson for almost 23 years of service to the City of New Orleans and over 22 years of service to the Sewerage and Water Board of New Orleans, as well as over 11 years of service as a Trustee on the Pension Committee.

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I, Ghassan Korban, Executive Director,
of the Employees' Retirement System of the
Sewerage and Water Board of New Orleans,
do hereby
certify that the above and foregoing is a true and
correct copy of a Resolution adopted at the Meeting of the
Board of Trustees of the Employees' Retirement System
of Sewerage and Water Board of New Orleans, duly called and held,
according to law, on **October 17, 2018**.

______________________________, **Executive Director**
OF THE EMPLOYEES' RETIREMENT SYSTEM OF THE
SEWERAGE AND WATER BOARD OF NEW ORLEANS

R-153-2018

RANGES FOR NEW ASSET ALLOCATION

WHEREAS, Board of Trustees of the Employees' Retirement System of the Sewerage and Water Board of New Orleans hired Callan LLC to conduct an asset-liability study; and

WHEREAS, Callan provided an introduction to the study at the Pension Committee on April 11, 2018, and presented the study results at the Board of Trustees meeting on July 11, 2018; and

WHEREAS, the Pension Committee, considering Callan's recommendations, selected on August 8, 2018 Alternative Mix 2 with the following asset class allocations: Broad US Equity 27%, Global Ex US Equity 20%, Real Estate 9%, Hedge Funds 8%, Domestic Fixed Income 35%, and Cash Equivalents 1%.

WHEREAS, Callan provided minimum and maximum allocations for each asset class in Alternative Mix 2, specifically: Broad US Equity from 22% to 32%; Global Ex US Equity from 16% to 24%; Real Estate from 7% to 11%; Hedge Funds from 6% to 10%; Domestic Fixed Income from 30% to 40%; and Cash Equivalents from 0% to 2%.

NOW, THEREFORE, BE IT RESOLVED by Board of Trustees of the Employees' Retirement System of the Sewerage and Water Board of New Orleans that the Chief Investment Officer be authorized to amend the Investment Policy Statement to reflect the chosen asset allocation ranges.

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I, Ghassan Korban, Executive Director, of the Employees' Retirement System of the Sewerage and Water Board of New Orleans, do hereby certify that the above and foregoing is a true and correct copy of a Resolution adopted at the Meeting of the Board of Trustees of the Employees' Retirement System of Sewerage and Water Board of New Orleans, duly called and held, according to law, on **October 17, 2018**.

__ ______________________________, **Executive Director**

OF THE EMPLOYEES' RETIREMENT SYSTEM OF THE SEWERAGE AND WATER BOARD OF NEW ORLEANS

Comparative Performance Analysis Report

June 30, 2018

Sewerage and Water Board of New Orleans ERS
Employees' Retirement System
Pension Committee

Presented by:

Octave J. Francis III, CIMA®
Managing Director

RAYMOND JAMES

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GLOBAL MARKET OBSERVATIONS

Quarterly Economic & Market Commentary
Q2 2018

IN THIS ISSUE:

RAYMOND JAMES

SECOND QUARTER HIGHLIGHTS

Beset by escalating trade tensions and beleaguered by tariff threats, the rise of the U.S. equity market has been bridled by protectionist policy. This increased uncertainty has been evinced by the sideways slide of stocks in recent months. Tariff announcements have corresponded closely to sharp selloffs.

Sideways Slide
Page 4

In May, all eyes once again turned to Rome. Following elections in March, political turmoil has gripped the Italian state, causing a spike in Italian government bond yields and a selloff in Italian equities. The proposed policies of Italy's new government continue to give investors cause for concern.

Improbable Partners
Page 5

Following its finish as one of the best performers in 2017, the emerging markets engine has fallen out of the fast lane. A host of obstacles have caused emerging markets to lose their former luster. However, the greatest threat to emerging markets has been the appreciation of the U.S. dollar.

Credit Crunch
Page 6

Having met both its inflation and employment targets, the U.S. Federal Reserve (Fed) has been keen to raise interest rates. However, hawkish Fed policy begets both higher government bond yields and, generally, a strengthening U.S. dollar, spelling trouble for debtors and central banks around the world.

Dominion of the Dollar
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A barrage of political upheaval has bedeviled developed democracies in recent years. Widespread frustration amongst populaces around the globe has fueled the rapid rise of newfangled political movements, particularly in Europe. An enfeebled establishment has been stunned by the bombardment.

Populism and Protectionism
Page 8

ASSET CLASS RETURNS OVER Q2 2018 (%)

Returns for Key Indices – Trailing 12 Months and the Second Quarter of 2018 – Ranked in Order of Performance (Best to Worst)

Broad Asset Class Total Returns

T12	Q2
U.S. Equity 14.78	U.S. Equity 3.89
Commodities 7.35	Global Real Estate 3.15
Non-U.S. Equity 7.28	Blended Portfolio 1.08
Blended Portfolio 6.73	Cash & Cash Alternatives 0.44
Global Real Estate 6.26	Commodities 0.40
Cash & Cash Alternatives 1.33	U.S. Fixed Income -0.16
U.S. Fixed Income -0.40	Non-U.S. Equity -2.61

Domestic Equity Total Returns

T12	Q2
Large Growth 22.51	Small Value 8.30
Small Growth 21.86	Small Blend 7.75
Mid Growth 18.52	Small Growth 7.23
Small Blend 17.57	Large Growth 5.76
Large Blend 14.54	Large Blend 3.57
Small Value 13.10	Mid Growth 3.16
Mid Blend 12.33	Mid Blend 2.82
Mid Value 7.60	Mid Value 2.41
Large Value 6.77	Large Value 1.18

S&P 500 Equity Sector Total Returns

T12	Q2
Info Tech 31.30	Energy 13.48
Cons Disc 23.55	Cons Disc 8.17
Energy 20.99	Info Tech 7.09
S&P 500 14.37	Real Estate 6.13
Materials 9.90	Utilities 3.74
Financials 9.65	S&P 500 3.43
Health Care 7.11	Health Care 3.09
Industrials 5.34	Materials 2.58
Real Estate 5.02	Telecom -0.94
Utilities 3.41	Cons Staples -1.54
Telecom 1.39	Financials -3.16
Cons Staples -3.93	Industrials -3.18

International Equity Total Returns

T12	Q2
EM Eastern Europe 15.44	U.S. Large Cap 3.43
U.S. Large Cap 14.37	United Kingdom 2.95
Japan 10.51	Pacific ex-Japan 1.77
EM Asia 10.09	Developed Markets -1.24
United Kingdom 10.02	Japan -2.84
Pacific ex-Japan 8.68	Europe ex-UK -2.86
Emerging Markets 8.20	EM Asia -5.85
Developed Markets 6.84	EM Eastern Europe -7.79
Europe ex-UK 3.51	Emerging Markets -7.96
EM Latin America -0.16	EM Latin America -17.75

Fixed Income Total Returns

T12	Q2
Global Bond ex-U.S. 2.78	High Yield 1.03
High Yield 2.62	Municipal 0.87
U.S. Tips 2.11	U.S. Tips 0.77
Municipal 1.56	T-Bill 0.44
T-Bill 1.33	Short-Term Bond 0.28
Short-Term Bond 0.21	MBS 0.24
MBS 0.15	Treasury 0.10
Agency -0.14	Agency 0.00
Aggregate Bond -0.40	Aggregate Bond -0.16
Credit -0.65	Credit -0.88
Treasury -0.65	Long-Term Bond -1.45
Long-Term Bond -0.78	Emerging Mkt Bond -4.14
Emerging Mkt Bond -4.31	Global Bond ex-U.S. -4.76

BEST

WORST

Assume all asset classes are U.S. unless otherwise noted | Data as of 06/30/2018 | Ranked in order of performances (best to worst)

SIDEWAYS SLIDE

Beset by escalating trade tensions and beleaguered by tariff threats, the rise of the U.S. equity market has been bridled by protectionist policy. The present state of the American market stands in stark contrast to its state at the beginning of the year. With Congress having passed broad tax reform in late December 2017, many, including the International Monetary Fund, spoke of a renewed period of "synchronized global growth." The ink of his signature had barely dried on the tax law before the strokes of President Trump's pen had a new target: trade.

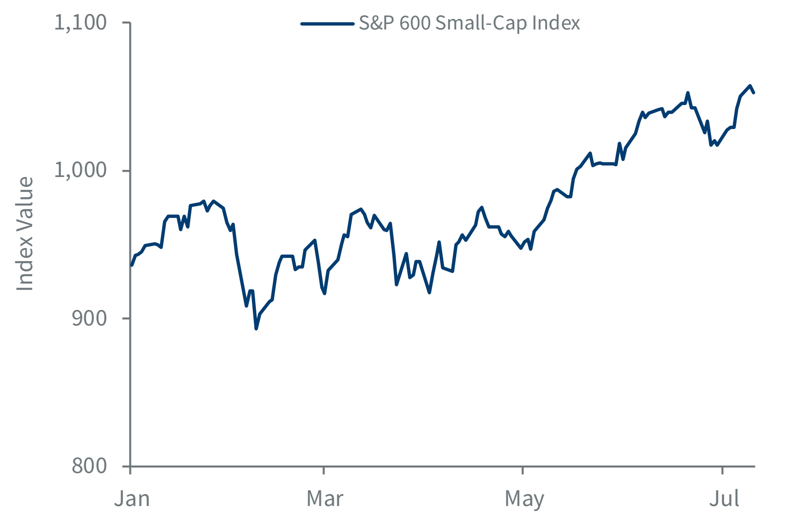
A variety of foreign imports ranging from washing machines and automobiles to steel and aluminum have since fallen within the crosshairs of U.S. tariffs. America's closest trading partners, including Canada, Mexico, and the European Union, have all been impacted. However, the greatest pressure has been applied to China, which has been subjected to substantial tariff measures. Following months of threats (see *Trading Tariffs: A Dangerous Duel,* Q1 2018 Global Market Observations), tariffs were formally applied to a host of Chinese imports on July 6. Given the fact that tariffs cause costs to rise and disrupt global supply chains (see *Populism and Protectionism,* p. 8), uncertainty in the market has increased markedly.

This increased uncertainty has been evinced by the sideways slide of stocks in recent months. As measured by the S&P 500 Index, the broad U.S. equity market has yet to regain the heights it reached in late January of this year (see chart). The sharp selloffs have corresponded closely to tariff announcements. The fact that markets appear bridled by protectionist trade policy is further substantiated by the outperformance of small-capitalization stocks, which are relatively more insulated from tariffs (see chart). This is largely due to the fact that their revenues are generally derived from domestic rather than international sources. Separately, the U.S. Federal Reserve voiced concerns in its June meeting that plans for capital spending had been "scaled back or postponed as a result of uncertainty over trade policy." So long as protectionist policy and trade tensions continue to roil markets, uncertainty surrounding the size and scope of the fallout will remain and the future ascent of stocks will likely remain fraught with obstacles.

TREADING WATER

Source: Standard & Poor's, Bloomberg LP, FactSet as of 07/01/2018

TRADING PLACES



Source: Standard & Poor's, Bloomberg LP, FactSet as of 07/01/2018

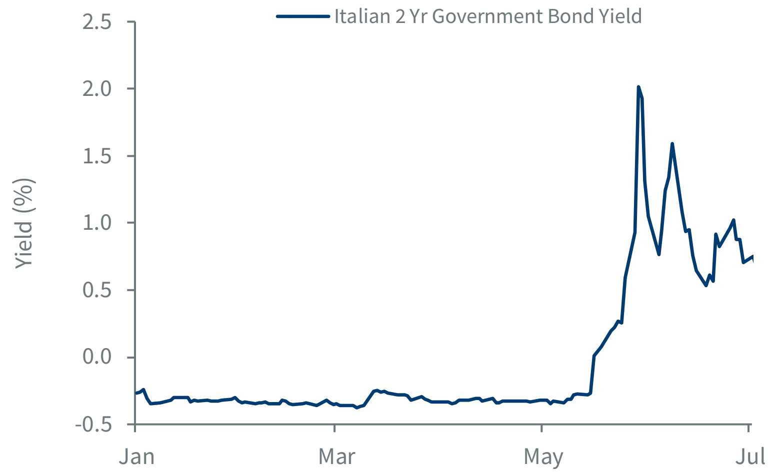
IMPROBABLE PARTNERS

In May, all eyes once again turned to Rome. Following elections in March, the insurgent populist *Movimento Cinque Stelle* (M5S) and *Lega Nord* (LN) parties wrested control of Italy's parliament from the incumbent *Partito Democratico* (see *Inertia, Ire, and Populist Pandemonium,* Q1 2018 Global Market Observations). However, neither party secured an outright majority, causing Italy to be without a workable government due to the deadlock. That is, until an improbable partnership between M5S and LN emerged at the end of May.

In an unexpected turn of events, both parties coalesced and put forward Giuseppe Conte as their pick for prime minister. Yet, it was not the choice of prime minister that caused the most contention. Rather, it was the nominee to head the Ministry of Economy and Finances, Paolo Savona. Savona, an economist openly opposed to the euro and previously supportive of Italy's exit from the single currency, was ultimately unpalatable to the president, who vetoed his nomination. This in turn sparked calls to impeach the president and to hold new elections, which ultimately fueled fears that Italy was indeed slipping further into political crisis.

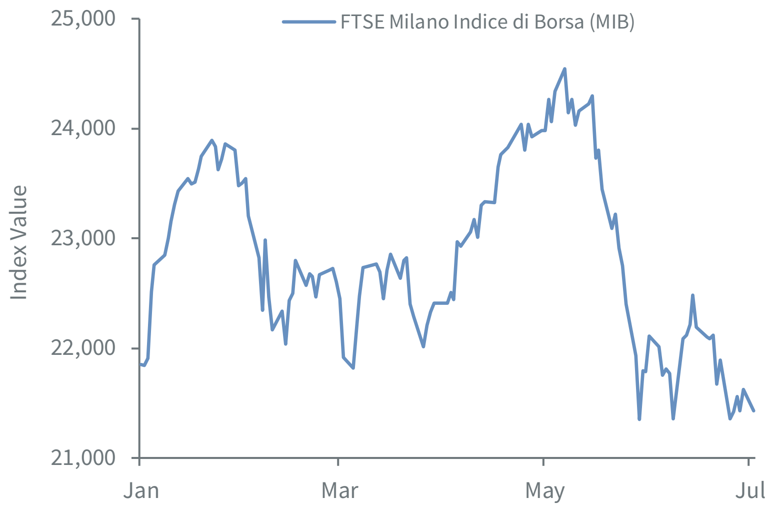
The turmoil spilled over to Italian bond and equity markets. The political upheaval was the proximate cause of the subsequent spike in Italian government bond yields and the selloff in Italian equities (see charts), which rippled through capital markets around the globe. Responding in part to the market panic, Mr. Savona was installed in a different ministry altogether and Mr. Conte officially assumed power as prime minister on June 1, which ultimately tempered the immediate political tensions. However, the political platforms and proposed policies of both M5S and LN continue to give investors cause for concern. A combination of tax cuts and increased spending (including plans for providing a universal basic income) threaten to further swell Italy's burgeoning government debt, which currently stands at €2.3 trillion. In nominal terms, it is the highest amongst all European Union countries. Relative to its GDP, Italy's debt is second only to Greece. Reconciling such fiscal largesse within the constraints of its debt will prove a significant challenge for the new Italian government. Whether such policies will succeed in spurring growth has yet to be seen. If one thing remains certain, it is that the Italian government has its work cut out for it.

ITALIAN ICONOCLASM



Source: Bloomberg LP, FactSet as of 07/01/2018

VENI, VIDI, VOCIFERARI



Source: FTSE, Bloomberg LP, FactSet as of 07/01/2018

Past performance is no guarantee of future results. Indices and peer groups are not available for direct investment. Any investor who attempts to mimic the performance of an index would incur fees and expenses which would reduce returns. Index definitions are available upon request.

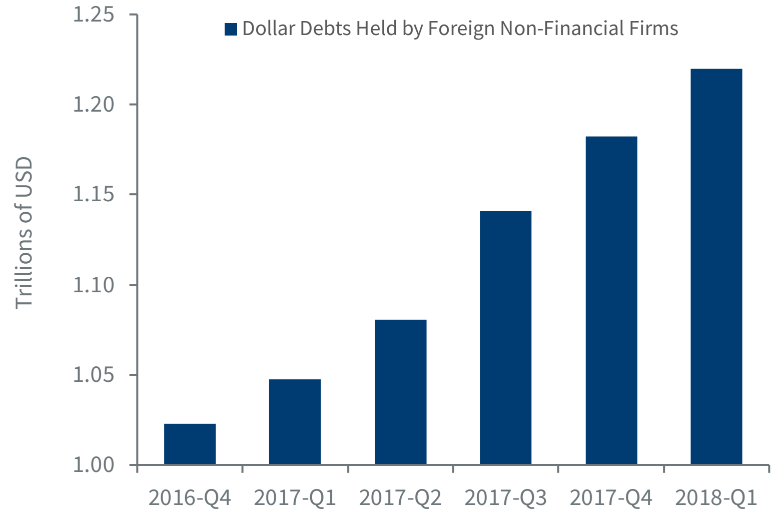
CREDIT CRUNCH

Following its finish as one of the best performers in 2017, the emerging markets engine has fallen out of the fast lane. A host of obstacles have caused emerging markets to lose their former luster. From steep tariffs impacting Chinese exports (see *Trading Tariffs: A Dangerous Duel,* Q1 2018 Global Market Observations) to runaway inflation in Argentina, the list is long. However, the obstacle which poses the greatest threat to emerging markets has been the appreciation of the U.S. dollar and its pernicious impact on foreign debts denominated in dollars.

Encouraged by promising growth prospects and incentivized by low borrowing costs, foreign companies developed an increased appetite for loans. Dollar denominated debt held by non-financial corporations in emerging markets has grown steadily over the past year to the tune of $200 billion, bringing the total to just over $1.2 trillion (see chart). When debts are denominated in foreign currencies, the debtor assumes currency risk. In this case, as the dollar rises in value relative to a company's local currency, the debt becomes more expensive to service, causing a credit crunch.

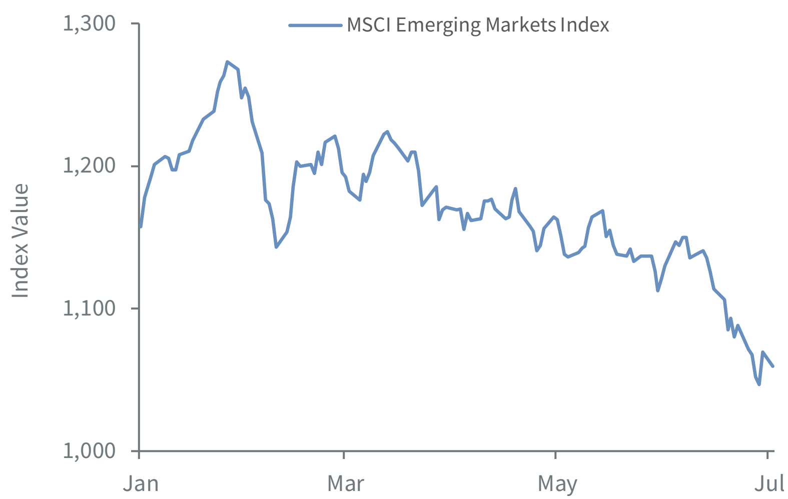
The effects of a strengthening dollar have been evinced by the decline in emerging market equities. As measured by the MSCI Emerging Markets Index, stocks in developing economies are well below the heights reached in late January of this year (see chart). Their decline highlights a paradoxical relationship: so long as solid fundamentals in the U.S. cause the dollar to strengthen, emerging economies will remain under pressure due to the divergence in exchange rates. Argentina was recently forced to secure a $50 billion loan from the International Monetary Fund to staunch the cratering of the peso after conventional methods failed, and Turkey's central bank has raised interest rates significantly to stem a similar fall in the lira (see *Dominion of the Dollar*, p. 7). Additional pressures include higher oil prices and the impact of various political elections, including those most recently held in Turkey and Mexico (Brazilians will head to the polls in October). Still, these current currency pressures are a far cry from those which pushed emerging economies into crisis in the 1990s. While emerging markets are not yet out for the count, how they will regain their lost momentum remains unclear.

DAUNTED DOLLAR DEBT



Source: Bank for International Settlements as of 07/01/2018

THE EMERGING EBB



Source: MSCI, Bloomberg LP, FactSet as of 07/01/2018

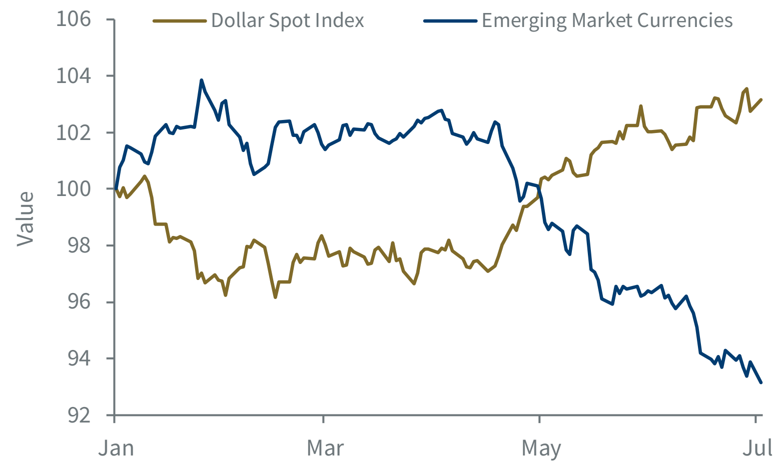
DOMINION OF THE DOLLAR

Having met both its inflation and employment targets, the U.S. Federal Reserve (Fed) has been keen to raise interest rates. With the Federal Government driving fiscal stimulus in the form of tax cuts and planned spending on infrastructure, the Fed is tasked with buoying the presently strong state of the U.S. economy and staving off runaway inflation, which would overheat it. The Fed also has an interest in raising rates so that it has room to lower them in the future, should a recession occur. It therefore follows that hawkish Fed policy begets both rising government bond yields and, generally, a strengthening U.S. dollar. While higher yields and a stronger dollar bode well for U.S. savers and consumers, both effects spell trouble for debtors and central banks around the world. This peripheral and rather paradoxical dynamic is due to the dominance of the dollar as the most widely circulated currency in the world.

The dominion of the dollar is vast indeed. Due to the fact that the overwhelming majority of currency exchanges utilize the dollar as their base currency (i.e., the dollar is the universal medium of exchange), a rise in the dollar inevitably precipitates a fall in the value of foreign currencies. This inverse relationship has manifested itself over the past few months as the dollar has strengthened (see chart). This presents a problem for debtors whose loans are denominated in dollars (see *Credit Crunch*, p. 6) as well as central banks.

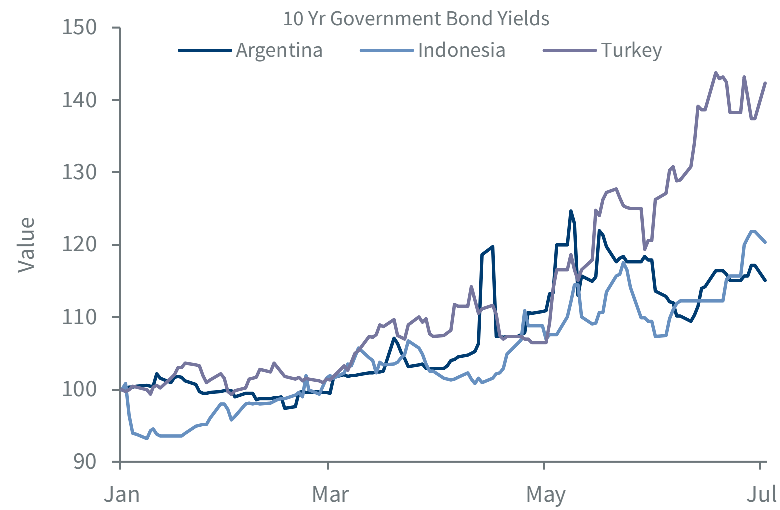
Despite the fact that their domestic economies may not warrant an increase, central banks are faced with a difficult decision: raise interest rates to stabilize their exchange rate with the dollar or risk the consequences of a devalued currency. While a devalued currency makes exports more competitive abroad, it also engenders inflation and causes current account deficits to become more costly to maintain. Many central banks have therefore opted to raise rates. Most notably, the central banks of Argentina, Indonesia, and Turkey have all raised rates substantially as the dollar has strengthened, prompting a rise in their government bond yields (see chart). While a variety of other factors inform and influence such increases, Fed policy and a strengthening dollar exert considerable clout over the world's currency and credit markets.

CURRENCY CONUNDRUM



Source: Barclays, Bloomberg LP, FactSet as of 07/01/2018 (100 = 1 January 2018 Value)

RISING RATES



Source: Bloomberg LP, FactSet as of 07/01/2018 (100 = 1 January 2018 Value)

POPULISM AND PROTECTIONISM

A barrage of political upheaval has bedeviled developed democracies in recent years. Widespread frustration amongst populaces around the globe has fueled the rapid rise of newfangled political movements, particularly in Europe. Britain made the dramatic decision to exit the European Union and political parties across continental Europe have staged strikingly successful campaigns against incumbents (as in the case of France and Germany), or, in some cases, completely overthrew them (as in the case of Italy and Austria). An enfeebled establishment has been stunned by the bombardment.

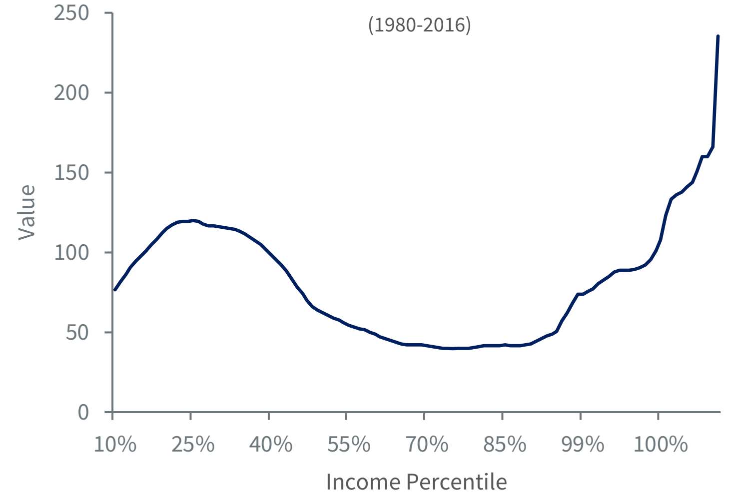
Pundits have dubbed many of these movements ‘populist’ in nature. This begs the question as to what constitutes ‘populism.’ As ubiquitous as the term has become, it is surprisingly difficult to define. While many ‘populist’ movements often exhibit comparable characteristics or are inspired by similar ideologies, they are rarely the same. On the contrary, populist movements often march to different drums, each tune unique to the grievances of a given populace. Many are nationalistic and nativist in nature. Others rail against elitism and the lack of economic opportunity. However, nearly all are fueled either by frustration at the status quo.

While the causes of such sentiment are myriad, a few notable developments merit consideration. Chief amongst them is the recent stagnation of wages over the past few decades amongst the 70th-90th percentiles of global incomes, which comprise most individuals in the developed world (see chart). Dubbed the ‘elephant chart’ due to its distinctive shape, it illustrates how much of the world has prospered across the board, with the notable exception of individuals within this specific interval (the middle of the ‘trunk’). Based on this measure, many are no wealthier than they were 30 years ago. This has doubtless kindled frustrations against the current status quo, which has left governments vulnerable to populist platforms around the world.

One could contend that populism can therefore be viewed as a revolt against ‘globalization’, the movement which has sought to stitch nations together around the world through free trade and open borders over the past half century.

GROWTH OF GLOBAL INCOMES

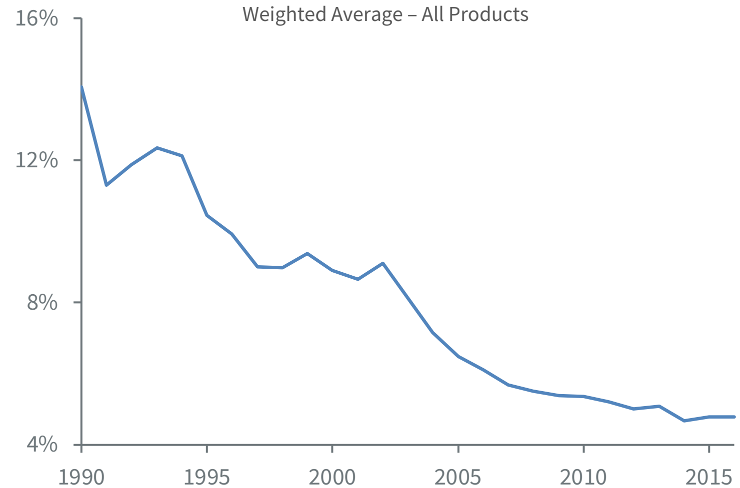
(1980-2016)



Source: World Income Inequality Report as of 07/01/2018 (100 = 1980 Value)

GLOBAL EFFECTIVE TARIFF RATE

Weighted Average – All Products



Source: IMF, Balance of Payments and Statistics, World Bank Group as of 07/01/2018

GLOBAL INSIGHTS (CONT.)

In general, populists have maintained that globalization, to a greater or lesser degree, has been responsible for engendering the systemic issues which have endangered the livelihood of their respective constituents.

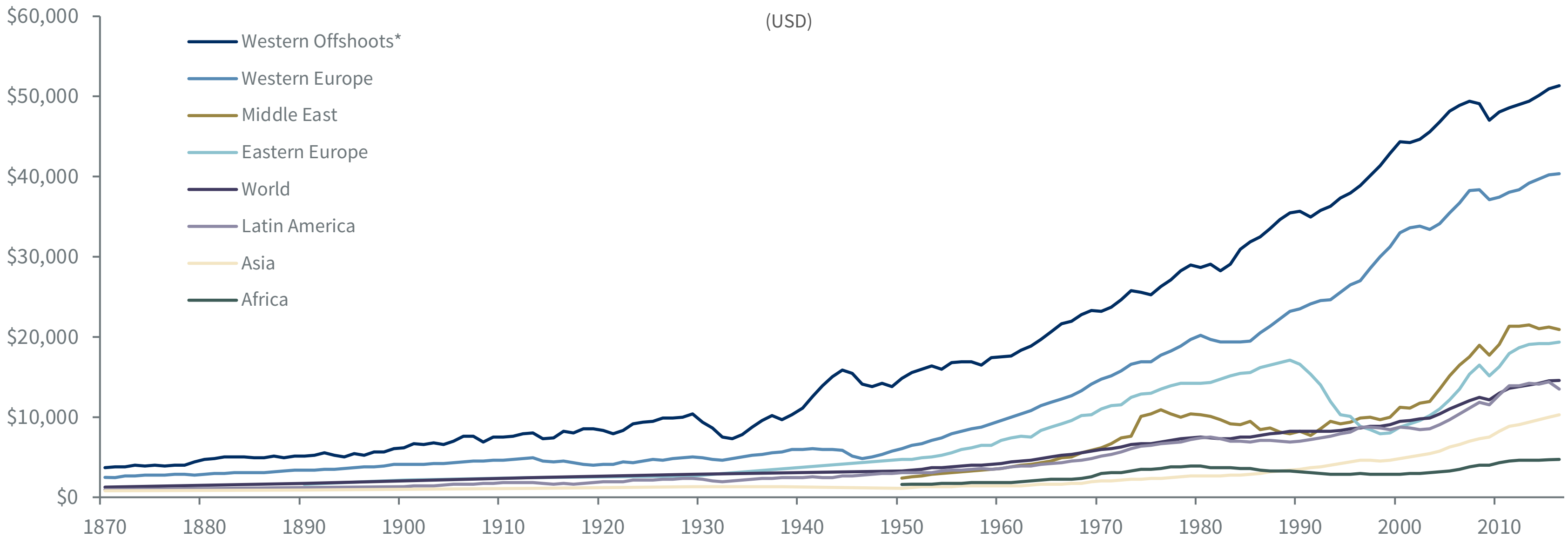
However, protectionist policies often have economic drawbacks in the long run. Tariffs are one such example. When tariffs are enacted, costs rise. Goods become more expensive to consumers and inputs become more expensive to companies, reducing both income and profitability, respectively. That is to say that the aggregate impact to the entire economy at large is negative. In the event that nations engage in a 'trade war' wherein each nation retaliates with higher and more extensive tariffs, the negative economic effects would be amplified drastically. In short, the inefficiencies induced by tariffs are tantamount to 'deadweight loss' and the effects upon the global economy, on average and in aggregate, are negative.

In general, markets and economies thrive when they operate at optimal efficiency, minimizing costs and maximizing value. The benefits of this fundamental maxim are manifest in the growth of the global economy over the past half century. Both the volume and value of global trade have grown exponentially as tariffs and barriers to trade have fallen (see chart, preceding page). This has coincided with the growth of the global economy over the same time period, which is, on average and in aggregate, more prosperous than at any time in human history (see chart).

Generally speaking, all nations stand to benefit by trading freely with one another. On the other hand, tariffs and protectionist measures cause disruptions to global supply chains, increasing costs and reducing profitability. In other words, nations stand to be harmed by abandoning free trade and engaging in trade wars.

AVERAGE GDP PER CAPITA

(USD)



Source: University of Groningen, Maddison Project Database, as of 07/01/2018 *US, Canada, Australia, New Zealand, et. al

ECONOMIC SNAPSHOT

Economic data reports have been consistent with a pickup in the pace of growth in 2Q18 (the advance GDP estimate is due, along with annual benchmark revisions, on July 27). Job growth has remained relatively strong, and labor market conditions have tightened further. The Federal Reserve (Fed) has continued to raise short-term interest rates, and further rate increases are expected (at a gradual pace) as the Fed tries for a soft landing. Trade policy conflicts have intensified, adding risk and uncertainty to the outlook.

DR.SCOTT BROWN
Chief Economist, Equity Research

	ECONOMIC INDICATOR	COMMENTARY
FAVORABLE	GROWTH	GDP growth is expected to have picked up in 2Q18, but that partly reflects a rebound from a “soft” 1Q18. The pace of growth is likely to moderate in the second half of the year, partly reflecting labor market constraints.
FAVORABLE	EMPLOYMENT	Nonfarm payrolls have continued to rise at a moderately strong pace. The unemployment rate has fallen further. Shortages of skilled labor have been noted in a number of industries.
FAVORABLE	BUSINESS INVESTMENT	Sentiment remains strong, but business fixed investment is expected to be somewhat slower this year (despite corporate tax cuts).
FAVORABLE	HOUSING AND CONSTRUCTION	Builders continue to note supply constraints (lack of skilled labor, higher costs). Demand remains strong. Home prices have continued to rise, making affordability an important issue.
FAVORABLE	THE DOLLAR	Trade policy conflicts and concerns about global economic risks have led to a flight to safety.
NEUTRAL	CONSUMER SPENDING	Job gains, wage growth, and tax cuts have been supportive. Spending momentum picked up into early 2Q18. However, higher gasoline prices have reduced purchasing power relative to a year ago.
NEUTRAL	MANUFACTURING	New orders and production have been mixed, but the pace has been generally lackluster-to-moderate. Trade tariffs are a concern.
NEUTRAL	INFLATION	Increased tariffs will add to commodity price pressures. Wage gains are moderate. Consumer price inflation is closer to the Fed’s goal.
NEUTRAL	MONETARY POLICY	Fed policy “remains accommodative” (according to the June 13 FOMC statement), but is close to neutral. The Fed is expected to raise rates further, partly in an attempt to move the unemployment rate higher.
NEUTRAL	LONG-TERM INTEREST RATES	A strengthening economy and increased government borrowing would normally send bond yields higher. However, trade policy concerns and geopolitical risks have led to a flight to safety.
NEUTRAL	FISCAL POLICY	Tax cuts and added spending are expected to provide support for the economy in the near term, but budget deficits are projected to be a lot higher and there’s limited scope to counter a recession if needed.
NEUTRAL	REST OF THE WORLD	The global economic outlook was strong at the start of the year. However, supply chain disruptions and Fed rate increases have negative impacts on emerging economies. Italy and Brexit are concerns in Europe.

SECTOR SNAPSHOT

This report is intended to highlight the dynamics underlying the 11 S&P 500 sectors, with a goal of providing a timely assessment to be used in developing your personal portfolio strategy. Our time horizon for the sector weightings is not meant to be short-term oriented. Our goal is to look for trends that can be sustainable for several quarters; yet, given the dynamic nature of financial markets, our opinion could change as market conditions dictate. Most investors should seek diversity to balance risk versus reward. For this reason, even the least-favored sectors may be appropriate for portfolios seeking a more balanced equity allocation. Those investors seeking a more aggressive investment style may choose to overweight the preferred sectors and entirely avoid the least favored sectors.

J. MICHAEL GIBBS
Managing Director of Equity Portfolio & Technical Strategy

	SECTOR	S&P WEIGHT	TACTICAL COMMENTS
OVERWEIGHT	INFORMATION TECHNOLOGY	26.4%	Healthy fundamentals are expected to continue. Technical momentum for the intermediate term remains strong. Valuations are a challenge, but, as long as fundamentals hold up, valuations should be sustainable. The biggest risk appears to be the U.S. trade battle with China..
OVERWEIGHT	FINANCIALS	14.0%	Price return for the sector is negative year to date vs. gains for the S&P 500. Despite the negative return, fundamental expectations are healthy and valuation attractive. The flattening yield curve is likely the overhang on the sector. We stay Overweight on the back of good fundamentals, attractive valuation, and solid U.S. economic growth.
OVERWEIGHT	HEALTH CARE	14.1%	We cautiously remain Overweight. Fundamental trends are reasonable, but decent projected earnings growth for 2018 and 2019 falls behind the rapid growth expected for the S&P 500. Valuation is attractive based on numerous measures, but, relative to expected growth, it is less so. Technical trends relative to the S&P 500 remain negative. Despite the negatives, there is enough opportunity at the subsector level to justify investment.
OVERWEIGHT	INDUSTRIALS	9.6%	Trade wars and fear of margin pressure (rising freight, labor, and commodity costs) are weighing on the sector. We are guarded with earnings season due to kick-off in a few weeks, but, after the extreme relative strength giveback and with valuation somewhat attractive, we feel a bounce in relative performance is likely.
OVERWEIGHT	ENERGY	6.1%	Crude prices rallied on the news of OPEC settling on production increases below levels feared by the market. We would be buyers as it is likely to post relative strength gains versus the overall market for the intermediate term. Fundamentals remain healthy, while valuation allows for upside.
EQUAL WEIGHT	CONSUMER DISCRETIONARY	13.0%	Technical and fundamental trends support a more positive opinion, but, after the recent run, prices are extended.
UNDERWEIGHT	CONSUMER STAPLES	6.8%	Earnings growth is expected to be well below the S&P 500 growth in 2018 and 2019. Recent revisions have been lower as well. Fundamental trends throughout many subsectors remain a challenge as the lack of pricing power leaves margins vulnerable to rising freight and wage costs.
UNDERWEIGHT	UTILITIES	2.8%	Overall earnings growth relative to the S&P 500 is expected to be unimpressive in 2018. Valuation is compelling. Yet, the inverse correlation to rising interest rates keeps us on the sidelines.
UNDERWEIGHT	REAL ESTATE	2.7%	Fundamental growth is less than appealing relative to growth expected for the S&P 500. Valuation is attractive, but weighing all three (fundamental, valuation, and technical) trends reaffirms of our Underweight.
UNDERWEIGHT	MATERIALS	2.6%	With expectations for the trade battle between the U.S. and China to carry on for months, we chose to lighten exposure to those sectors that appear to be most impacted in terms of stock price action.
UNDERWEIGHT	TELECOM	1.9%	The current stocks within the sector are inexpensive based on historical valuation measures, but fundamental growth is anemic and stock prices are sensitive to interest rate movements.

Past performance is no guarantee of future results. Indices and peer groups are not available for direct investment. Any investor who attempts to mimic the performance of an index would incur fees and expenses which would reduce returns. Index definitions are available upon request.

DISCLOSURES

All content written and assembled by Taylor Krystkowiak, Investment Strategy Analyst.

ADDITIONAL DISCLOSURES

Any charts and tables presented herein are for illustrative purposes only and should not be considered as the sole basis for an investment decision. There can be no assurance that the future performance of any specific investment or investment strategy made reference to be profitable or equal any corresponding indicated historical performance level(s). This information should not be construed as a recommendation.

The foregoing content is subject to change at any time without notice. Content provided herein is for informational purposes only. There is no guarantee that these statements, opinions or forecasts provided herein will prove to be correct.

Past performance is not a guarantee of future results. Indices and peer groups are not available for direct investment. Any investor who attempts to mimic the performance of an index or peer group would incur fees and expenses that would reduce returns. All investing involves risk. Asset allocation and diversification does not ensure a profit or protect against a loss. Dividends are not guaranteed and a company's future ability to pay them may be limited.

International investing involves additional risks such as currency fluctuations, differing financial accounting standards, and possible political and economic instability. These risks are greater in emerging markets.

High-yield bonds are not suitable for all investors. The risk of default may increase due to changes in the issuer's credit quality. Price changes may occur due to changes in interest rates and the liquidity of the bond. When appropriate, these bonds should only comprise a modest portion of your portfolio.

Investing in small- and mid-cap stocks are riskier investments which include price volatility, less liquidity and the threat of competition.

Not FDIC or NCUA Insured • No Bank Guarantee • May Lose Value

INDEX DECRIPTIONS

BROAD ASSET CLASS RETURNS

U.S. EQUITY | Russell 3000 Total Return Index: This index represents 3000 large U.S. companies, ranked by market capitalization. It represents approximately 98% of the U.S. equity market. This index includes the effects of reinvested dividends.

NON-U.S. EQUITY | MSCI ACWI Ex USA Net Return Index: The index is a market-capitalization-weighted index maintained by Morgan Stanley Capital International (MSCI) and designed to provide a broad measure of stock performance throughout the world, with the exception of U.S.-based companies. The index includes both developed and emerging markets.

GLOBAL REAL ESTATE | FTSE EPRA/NAREIT Global Net Return Index: This index is designed to track the performance of listed real estate companies and REITs in both developed and emerging markets. By making the index constituents free-float adjusted, liquidity, size and revenue screened, the series is suitable for use as the basis for investment products. Prior to 2009, this asset class was represented by the NASDAQ Global Real Estate Index.

CASH & CASH ALTERNATIVES | Citigroup 3 Month U.S. Treasury-Bill Total Return Index: This index is a measurement of the movement of 3-month T-Bills. The income used to calculate the monthly return is derived by subtracting the original amount invested from the maturity value.

FIXED INCOME | Bloomberg Barclays Capital Aggregate Bond Total Return Index: This 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.

COMMODITIES | Bloomberg Commodity Total Return Index: The index tracks prices of futures contracts on physical commodities on the commodity markets. The index is designed to minimize concentration in any one commodity or sector. It currently has 22 commodity futures in seven sectors. No one commodity can compose less than 2% or more than 15% of the index, and no sector can represent more than 33% of the index (as of the annual weightings of the components). The weightings for each commodity included in the Bloomberg Commodity Index are calculated in accordance with rules that ensure that the relative proportion of each of the underlying individual commodities reflects its global economic significance and market liquidity. Annual rebalancing and reweighting ensure that diversity is maintained over time.

DOMESTIC EQUITY RETURNS

LARGE GROWTH | Russell 1000 Growth Total Return Index: This index represents a segment of the Russell 1000 Index with a greater-than-average growth orientation. Companies in this index have higher price-to-book and price-earnings ratios, lower dividend yields and higher forecasted growth values. This index includes the effects of reinvested dividends.

MID GROWTH | Russell Mid Cap Growth Total Return Index: This index contains stocks from the Russell Midcap Index with a greater-than-average growth orientation. The stocks are also members of the Russell 1000 Growth Index. This index includes the effects of reinvested dividends.

SMALL GROWTH | Russell 2000 Growth Total Return Index: This index represents a segment of the Russell 2000 Index with a greater-than-average growth orientation. The combined market capitalization of the Russell 2000 Growth and Value Indices will add up to the total market cap of the Russell 2000. This index includes the effects of reinvested dividends.

LARGE BLEND | Russell 1000 Total Return Index: This index represents the 1000 largest companies in the Russell 3000 Index. This index is highly correlated with the S&P 500 Index. This index includes the effects of reinvested dividends.

MID BLEND | Russell Mid Cap Total Return Index: This index consists of the bottom 800 securities in the Russell 1000 Index as ranked by total market capitalization. This index includes the effects of reinvested dividends.

SMALL BLEND | Russell 2000 Total Return Index: This index covers 2000 of the smallest companies in the Russell 3000 Index, which ranks the 3000 largest U.S. companies by market capitalization. The Russell 2000 represents approximately 10% of the Russell 3000 total market capitalization. This index includes the effects of reinvested dividends.

LARGE VALUE | Russell 1000 Value Total Return Index: This index represents a segment of the Russell 1000 Index with a less-than-average growth orientation. Companies in this index have low price-to-book and price-earnings ratios, higher dividend yields and lower forecasted growth values. This index includes the effects of reinvested dividends.

INDEX DECRIPTIONS

DOMESTIC EQUITY RETURNS (CONT.)

MID VALUE | Russell Mid Cap Value Total Return Index: This index contains stocks from the Russell Midcap Index with a less-than-average growth orientation. The stocks are also members of the Russell 1000 Value Index. This index includes the effects of reinvested dividends.

SMALL VALUE | Russell 2000 Value Total Return Index: This index represents a segment of the Russell 2000 Index with a less-than-average growth orientation. The combined market capitalization of the Russell 2000 Growth and Value Indices will add up to the total market cap of the Russell 2000. This index includes the effects of reinvested dividends.

FIXED INCOME RETURNS

AGGREGATE BOND | Bloomberg Barclays US Agg Bond Total Return Index: The index is a measure of the investment grade, fixed-rate, taxable bond market of roughly 6,000 SEC-registered securities with intermediate maturities averaging approximately 10 years. The index includes bonds from the Treasury, Government-Related, Corporate, MBS, ABS, and CMBS sectors.

HIGH YIELD | Bloomberg Barclays US Corporate High Yield Total Return Index: The index measures the USD-denominated, high yield, fixed-rate corporate bond market. Securities are classified as high yield if the middle rating of Moody's, Fitch and S&P is Ba1/BB+/BB+ or below.

CREDIT | Bloomberg Barclays U.S. Credit Total Return Index: The index measures the investment grade, US dollar-denominated, fixed-rate, taxable corporate and government related bond markets. It is composed of the US Corporate Index and a non-corporate component that includes foreign agencies, sovereigns, supranationals and local authorities.

SHORT-TERM BOND | Bloomberg Barclays US Govt/Credit 1-3 Yr Total Return Index: The index is the 1-3 year component of the Bloomberg Barclays U.S. Government/Credit Index. The Bloomberg Barclays U.S. Government/Credit Index covers treasuries, agencies, publicly issued U.S. corporate and foreign debentures and secured notes that meet specified maturity, liquidity, and quality requirements.

LONG-TERM BOND | Bloomberg Barclays US Govt/Credit Long Total Return Index: The index is a measure of domestic fixed income securities, including Treasury issues and corporate debt issues, that are rated investment grade (Baa by Moody's Investors Service and BBB by Standard and Poor's) and with maturities of ten years or greater.

MBS | Bloomberg Barclays US MBS Total Return Index: The index tracks agency mortgage backed pass-through securities (both fixed-rate and hybrid ARM) guaranteed by Ginnie Mae (GNMA), Fannie Mae (FNMA), and Freddie Mac (FHLMC). The index is constructed by grouping individual TBA-deliverable MBS pools into aggregates or generics based on program, coupon and vintage.

TREASURY | Bloomberg Barclays US Treasury Total Return Index: The index measures US dollar-denominated, fixed-rate, nominal debt issued by the US Treasury. Treasury bills are excluded by the maturity constraint, but are part of a separate Short Treasury Index.

U.S. TIPS | Bloomberg Barclays US Treasury US TIPS Total Return Index: The index includes all publicly issued, U.S. Treasury inflation-protected securities that have at least one year remaining to maturity, are rated investment grade, and have $250 million or more of outstanding face value.

GLOBAL BOND EX U.S. | Bloomberg Barclays Gbl Agg Ex USD Total Return Index: The index provides a broad-based measure of the global investment grade fixed-rate debt markets, excluding the United States. Currency exposure is hedged to the US dollar.

T-BILLS | Citi Treasury Bill 3 Mon Total Return Index: This index is a measurement of the movement of 3-month T-Bills. The income used to calculate the monthly return is derived by subtracting the original amount invested from the maturity value.

EMERGING MKT BOND | J.P. Morgan EMBI Plus Total Return Index: The index tracks total returns for traded external debt instruments (external meaning foreign currency denominated fixed income) in the emerging markets.

AGENCY | Bloomberg Barclays US Agency Total Return Index: The index includes native currency agency debentures from issuers such as Fannie Mae, Freddie Mac, and Federal Home Loan Bank. It is a subcomponent of the Government-Related Index (which also includes non-native currency agency bonds, sovereigns, supranationals, and local authority debt) and the U.S. Government Index (which also includes U.S. Treasury debt). The index includes callable and non-callable agency securities that are publicly issued by U.S. government agencies, quasi-federal corporations, and corporate or foreign debt guaranteed by the U.S. government (such as USAID securities).

INDEX DECRIPTIONS

FIXED INCOME RETURNS (CONT.)

MUNICIPAL | Bloomberg Barclays Municipal Total Return Index: The index is a measure of the long-term tax-exempt bond market with securities of investment grade (rated at least Baa by Moody's Investors Service and BBB by Standard and Poor's). This index has four main sectors: state and local general obligation bonds, revenue bonds, insured bonds, and prerefunded bonds.

INTERNATIONAL EQUITY RETURNS

EMERGING MARKETS EASTERN EUROPE | MSCI EM Eastern Europe Net Return Index: The index captures large and mid cap representation across 4 Emerging Markets (EM) countries in Eastern Europe. With 50 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

EMERGING MARKETS ASIA | MSCI EM Asia Net Return Index: The index captures large and mid cap representation across 8 Emerging Markets countries. With 554 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

EMERGING MARKETS LATIN AMERICA | MSCI EM Latin America Net Return Index: The index captures large and mid cap representation across 5 Emerging Markets (EM) countries in Latin America. With 116 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

EMERGING MARKETS | MSCI Emerging Markets Net Return Index: This index consists of 23 countries representing 10% of world market capitalization. The index is available for a number of regions, market segments/sizes and covers approximately 85% of the free float-adjusted market capitalization in each of the 23 countries.

PACIFIC EX-JAPAN | MSCI Pacific Ex Japan Net Return Index: The index captures large and mid cap representation across 4 of 5 Developed Markets (DM) countries in the Pacific region (excluding Japan). With 150 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

UNITED KINGDOM | MSCI Pacific Ex Japan Net Return Index: The index captures large and mid cap representation across 4 of 5 Developed Markets (DM) countries in the Pacific region (excluding Japan). With 150 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

U.S. LARGE CAP | S&P 500 Total Return Index: The index is widely regarded as the best single gauge of large-cap U.S. equities. There is over USD 7.8 trillion benchmarked to the index, with index assets comprising approximately USD 2.2 trillion of this total. The index includes 500 leading companies and captures approximately 80% coverage of available market capitalization.

JAPAN | MSCI Japan Net Return Index: The index is designed to measure the performance of the large and mid cap segments of the Japanese market. With 319 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in Japan.

FOREIGN DEVELOPED MARKETS | MSCI EAFE Net Return Index: This index is designed to represent the performance of large and mid-cap securities across 21 developed markets, including countries in Europe, Australasia and the Far East, excluding the U.S. and Canada. The index is available for a number of regions, market segments/sizes and covers approximately 85% of the free float-adjusted market capitalization in each of the 21 countries.

EUROPE EX UK | MSCI Europe Ex UK Net Return Index: The index captures large and mid cap representation across 14 Developed Markets (DM) countries in Europe. With 337 constituents, the index covers approximately 85% of the free float-adjusted market capitalization across European Developed Markets excluding the UK.

EQUITY SECTOR RETURNS

ENERGY | S&P 500 Sec/Energy Total Return Index: The S&P 500® Energy Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Energy sector.

MATERIALS | S&P 500 Sec/Materials Total Return Index: The S&P 500® Materials Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Materials sector.

UTILITIES | S&P 500 Sec/Utilities Total Return Index: The S&P 500® Utilities Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Utilities sector.

INFO TECH | S&P 500 Sec/Information Technology Total Return Index: The S&P 500® Info Tech Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Info Tech sector.

INDEX DECRIPTIONS

EQUITY SECTOR RETURNS (CONT.)

CONS STAPLES | S&P 500 Sec/Cons Staples Total Return Index: The S&P 500® Consumer Staples Index comprises those companies included in the S&P 500 that are classified as members of the GICS® consumer staples sector.

INDUSTRIALS | S&P 500 Sec/Industrials Total Return Index: The S&P 500® Industrials Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Industrials sector.

TELECOM | S&P 500 Sec/Telecom Services Total Return Index: The S&P 500® Telecom Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Telecom sector.

HEALTH CARE | S&P 500 Sec/Health Care Total Return Index: The S&P 500® Health Care Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Health Care sector.

S&P 500 | S&P 500 Total Return Index: The index is widely regarded as the best single gauge of large-cap U.S. equities. There is over USD 7.8 trillion benchmarked to the index, with index assets comprising approximately USD 2.2 trillion of this total. The index includes 500 leading companies and captures approximately 80% coverage of available market capitalization.

CONS DISC | S&P 500 Sec/Cons Disc Total Return Index: The S&P 500® Consumer Discretionary Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Consumer Discretionary sector.

REAL ESTATE | S&P 500 Sec/Real Estate Total Return Index: The S&P 500® Real Estate Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Real Estate sector.

FINANCIALS | S&P 500 Sec/Financials Total Return Index: The S&P 500® Financials Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Financials sector.

MISC.

STOXX 600 | The STOXX Europe 600 Index is derived from the STOXX Europe Total Market Index (TMI) and is a subset of the STOXX Global 1800 Index. With a fixed number of 600 components, the STOXX Europe 600 Index represents large, mid and small capitalization companies across 17 countries of the European region: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

CAC 40 | The CAC 40® is a free float market capitalization weighted index that reflects the performance of the 40 largest and most actively traded shares listed on Euronext Paris, and is the most widely used indicator of the Paris stock market. The index serves as an underlying for structured products, funds, exchange traded funds, options and futures.

DAX | The DAX® index, the best known German stock exchange barometer, measures the performance of the 30 largest and most liquid companies on the German stock market. It represents around 80 percent of the market capitalization of listed stock corporations in Germany.

NIKKEI 225 | Japan's Nikkei 225 is a price-weighted index comprised of Japan's top 225 blue-chip companies traded on the Tokyo Stock Exchange. The Nikkei is equivalent to the Dow Jones Industrial Average Index in the United States.

Sewerage and Water Board of New Orleans ERS Total Composite

	Market Value ($)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	9 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
			Ending June 30, 2018									
Sewerage and Water Board of New Orleans ERS	**218,940,638**	**100.00**	--	--	--	--	--	--	--	--	--	
Sewerage and Water Board of New Orleans ERS Total Composite	**218,940,638**	**100.00**	**1.21**	**0.33**	**6.31**	**4.76**	**6.04**	**6.12**	**7.59**	**4.91**	**5.97**	**Jul-02**
Strategic Asset Allocation			*1.68*	*0.56*	*6.89*	*5.09*	*5.73*	*5.67*	*7.70*	*4.79*	*5.72*	*Jul-02*
Equity Composite	**112,249,718**	**51.27**	**2.05**	**1.83**	--	--	--	--	--	--	**1.83**	**Jan-18**
Chicago Equity Partners	23,037,243	10.52	4.04	3.64	17.05	10.53	13.09	12.74	15.46	10.35	8.91	Jun-06
Russell 1000			*3.57*	*2.85*	*14.54*	*11.64*	*13.37*	*13.12*	*15.31*	*10.20*	*8.87*	*Jun-06*
Barrow Hanley Mewhinney & Strauss	23,005,833	10.51	3.17	0.13	7.09	7.86	10.20	10.56	12.90	8.44	6.80	Sep-06
Russell 1000 Value			*1.18*	*-1.69*	*6.77*	*8.26*	*10.34*	*11.27*	*13.73*	*8.49*	*6.67*	*Sep-06*
NewSouth Capital	29,460,798	13.46	1.91	3.58	11.26	6.57	10.33	--	--	--	13.61	Sep-11
Russell 2500			*5.71*	*5.46*	*16.24*	*10.30*	*12.29*	--	--	--	*16.36*	*Sep-11*
Earnest Partners	19,429,869	8.87	-3.73	-4.75	6.86	5.70	6.51	--	--	--	8.19	Oct-11
MSCI ACWI ex USA			*-2.61*	*-3.77*	*7.28*	*5.07*	*5.99*	--	--	--	*7.41*	*Oct-11*
iShares S&P 500 Growth ETF	17,315,974	7.91	5.19	7.09	20.08	--	--	--	--	--	16.54	Mar-16
S&P 500 Growth			*5.25*	*7.28*	*20.63*	--	--	--	--	--	*20.70*	*Mar-16*
Fixed Income Composite	**79,007,688**	**36.09**	**-0.06**	**-1.35**	--	--	--	--	--	--	**-1.35**	**Jan-18**
Pyramis Global Advisors	78,979,048	36.07	-0.07	-1.36	0.39	2.71	3.28	3.67	5.40	5.08	4.78	May-07
BBgBarc US Universal TR			*-0.27*	*-1.67*	*-0.27*	*2.12*	*2.63*	*2.94*	*3.97*	*4.07*	*4.10*	*May-07*
Zazove Associates, LLC (Residual Asset)	28,641	0.01	7.91	--	--	--	--	--	--	--	11.90	Feb-18
ICE BofAML Convertibles Securities TR			*3.93*	--	--	--	--	--	--	--	*3.71*	*Feb-18*
Alternatives Composite	**20,632,627**	**9.42**	**-0.16**	**-0.25**	--	--	--	--	--	--	**-0.25**	**Jan-18**
Prisma Capital Partners	20,610,136	9.41	-0.16	-0.29	4.02	0.71	2.73	2.97	4.39	2.56	3.09	May-07
HFRI Fund of Funds Composite Index			*0.41*	*0.68*	*5.13*	*1.93*	*3.45*	*2.81*	*3.44*	*1.40*	*1.48*	*May-07*
Equitas Capital Advisors (Residual Asset)	22,491	0.01	-0.46	-0.86	--	--	--	--	--	--	-0.86	Jan-18
HFRI Fund of Funds Composite Index			*0.41*	*0.68*	--	--	--	--	--	--	*0.68*	*Jan-18*
Real Estate Composite	**7,043,155**	**3.22**	**8.95**	**0.06**	--	--	--	--	--	--	**0.06**	**Jan-18**
Vanguard Real Estate ETF	7,043,155	3.22	8.95	0.06	2.17	7.86	8.13	8.76	--	--	9.92	May-10
MSCI US REIT			*9.74*	*0.54*	*2.22*	*6.65*	*6.90*	*7.73*	--	--	*8.85*	*May-10*
Cash & Equivalents	**7,451**	**0.00**	**0.13**	**0.13**	--	--	--	--	--	--	**0.13**	**Jan-18**
Cash Account	7,451	0.00	0.13	0.13	0.34	0.12	0.09	0.07	0.07	--	0.07	Dec-08
Citi 3mth Treasury Bill			*0.44*	*0.79*	*1.33*	*0.64*	*0.39*	*0.30*	*0.26*	--	*0.26*	*Dec-08*

- Strategic Asset Allocation = 10% Russell 1000 / 7.25% Russell 1000 Growth / 10% Russell 1000 Value / 13% Russell 2500 / 9% MSCI ACWI ex USA / 37% BBgBarc US Aggregate TR / 8.75% HFRI Fund of Funds Composite Index / 3.25% MSCI US REIT / 1.75% Citi 3mth Treasury Bill

Sewerage and Water Board of New Orleans ERS

As of June 30, 2018

Strategic Asset Allocation Policy

12/31/1989 - 08/31/1994
75% CG Broad Bond
25% S&P 500

09/01/1994 - 08/31/1997
55% CG Broad Bond
25% Russell 1000 Value
11% Russell 1000 Growth
9% Russell 2000 Growth

09/01/1997 - 02/28/1999
45% CG Broad Bond
30% Russell 1000 Value
14% Russell 1000 Growth
11% Russell 2000 Growth

03/01/1999 - 08/31/2000
45% CG Broad Bond
30% Russell 1000 Value
14% S&P 500
11% Russell 2000 Growth

09/01/2000 - 08/31/2001
45% CG Broad Bond
30% Russell 1000 Value
14% Russell 1000 Growth
11% Russell 2000 Growth

09/01/2001 - 01/31/2002
45% CG Broad Bond
30% Russell 1000 Value
14% Russell 1000 Growth
11% Russell 2000

02/01/2002 - 02/28/2005
35% CG Broad Bond
30% Russell 1000 Value
14% Russell 1000 Growth
11% Russell 2000
10% ML IG Conv. Bonds

03/01/2005 - 06/30/2007
40% Russell 3000
7.75% MSCI ACWI xUS
25% CG Broad Bond
10% CG World Gvt Bond
7.25% CSFB Tremont/Hdge
10% 90-Day US T-Bill

07/01/2007 - 08/31/2008
40% Russell 3000
7.75% MSCI ACWI xUS
25% CG Broad Bond
10% CG World Gvt Bond
7.25% CSFB Tremont/Hdge
10% DJ Global Index

09/01/2008 - 11/30/2008
40% Russell 3000
7.75% MSCI ACWI xUS
25% CG Broad Bond
10% CG World Gvt Bond
7.25% CSFB Tremont/Hdge
5% DJ Wilshire xUS RESI

12/01/2008 - 04/30/2009
40% Russell 3000
7.75% MSCI ACWI xUS
25% CG Broad Bond
10% CG World Gvt Bond
7.25% CSFB Tremont/Hdge
5% DJ Wilshire REIT
5% 90 Day US T-Billl

05/01/2009 - 09/30/2009
30% Russell 3000
7.75% MSCI ACWI xUS
25% Barclays Agg Bond
10% Barclays Global TIPS
7.25% CSFB Tremont/Hdge
20% 90 Day US T-Bill

10/01/2009 - 03/31/2010
33.5% Russell 3000
8.5% MSCI ACWI xUS
28% Barclays Agg Bond
9% Barclays Global TIPS
8.75% CSFB Tremont/Hdge
7.25% S&P GSCI
1.75% DJ Wil ex US RESI
3.25% MSCI REIT

04/01/2010 - 04/30/2014
33.5% Russell 3000
8.5% MSCI ACWI xUS
28% Barclays Agg Bond
9% Barclays Global TIPS
8.75% CSFB Tremont/Hdge
7.25% S&P GSCI
3.25% MSCI REIT
1.75% FTSE EPRA/NAREIT xUS

05/01/2014 - 11/30/2015
33% Russell 3000
9% MSCI ACWI xUS
28% Barclays Agg Bond
9% Barclays Global TIPS
8.75% HFRI Fund of Funds
7.25% S&P GSCI
3.25% MSCI REIT
1.75% FTSE EPRA/NAREIT xUS

12/01/2015 - 02/28/2016
33% Russell 3000
9% MSCI ACWI xUS
37% Barclays Agg Bond
8.75% HFRI Fund of Funds
7.25% S&P GSCI
3.25% MSCI REIT
1.75% FTSE EPRA/NAREIT xUS

03/01/2016 - 04/30/2016
33% Russell 3
9% MSCI ACWI x
37% Barclays Agg Bond
8.75% HFRI Fund of Funds
3.25% MSCI REIT
9% 30 Day US T-Bill

05/01/2016 - 12/31/2017
40.25% Russell 3000
9% MSCI ACWI xUS
37% Barclays Agg Bond
8.75% HFRI Fund of Funds
3.25% MSCI REIT
1.75% 30 Day US T-Bill

01/01/2018 - Present
10% Russell 1000
7.25% Russell 1000 Growth
10% Russell 1000 Value
13% Russell 2500
9% MSCI ACWI ex USA
37% Barclays Agg Bond
8.75% HFRI Fund of Funds
3.25% MSCI US REIT
1.75% CITI 3MTH Treasury Bill

Sewerage and Water Board of New Orleans ERS Total Composite

	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)	2008 (%)	2007 (%)
Sewerage and Water Board of New Orleans ERS	--	--	--	--	--	--	--	--	--	--	--
Sewerage and Water Board of New Orleans ERS Total Composite	11.64	6.44	-1.66	5.59	11.02	11.65	3.50	9.37	17.13	-25.77	3.33
Strategic Asset Allocation	*12.76*	*6.45*	*-2.78*	*4.23*	*11.50*	*10.50*	*2.19*	*12.45*	*15.93*	*-24.83*	*8.14*
Equity Composite	--	--	--	--	--	--	--	--	--	--	--
Chicago Equity Partners	22.00	8.12	2.48	13.07	32.26	15.62	5.35	16.20	28.25	-35.65	1.23
Russell 1000	*21.69*	*12.05*	*0.92*	*13.24*	*33.11*	*16.42*	*1.50*	*16.10*	*28.43*	*-37.60*	*5.77*
Barrow Hanley Mewhinney & Strauss	14.09	13.53	-1.85	12.09	30.54	14.67	1.96	11.01	23.02	-36.94	3.97
Russell 1000 Value	*13.66*	*17.34*	*-3.83*	*13.45*	*32.53*	*17.51*	*0.39*	*15.51*	*19.69*	*-36.85*	*-0.17*
NewSouth Capital	11.94	9.82	-0.78	11.96	26.05	16.71	--	--	--	--	--
Russell 2500	*16.81*	*17.59*	*-2.90*	*7.07*	*36.80*	*17.88*	--	--	--	--	--
Earnest Partners	30.66	4.59	-6.33	-2.48	12.44	18.50	--	--	--	--	--
MSCI ACWI ex USA	*27.19*	*4.50*	*-5.66*	*-3.87*	*15.29*	*16.83*	--	--	--	--	--
iShares S&P 500 Growth ETF	26.95	--	--	--	--	--	--	--	--	--	--
S&P 500 Growth	*27.44*	--	--	--	--	--	--	--	--	--	--
Fixed Income Composite	--	--	--	--	--	--	--	--	--	--	--
Pyramis Global Advisors	4.65	5.48	0.14	6.19	-0.67	7.67	7.80	9.92	19.73	-6.75	--
BBgBarc US Universal TR	*4.09*	*3.91*	*0.43*	*5.56*	*-1.35*	*5.53*	*7.40*	*7.16*	*8.60*	*2.38*	--
Zazove Associates, LLC (Residual Asset)	--	--	--	--	--	--	--	--	--	--	--
ICE BofAML Convertibles Securities TR	--	--	--	--	--	--	--	--	--	--	--
Alternatives Composite	--	--	--	--	--	--	--	--	--	--	--
Prisma Capital Partners	7.05	-1.24	0.15	2.27	11.13	7.32	-3.21	8.01	17.00	-16.55	--
HFRI Fund of Funds Composite Index	*7.77*	*0.51*	*-0.27*	*3.36*	*8.96*	*4.79*	*-5.72*	*5.70*	*11.47*	*-21.37*	--
Equitas Capital Advisors (Residual Asset)	--	--	--	--	--	--	--	--	--	--	--
HFRI Fund of Funds Composite Index	--	--	--	--	--	--	--	--	--	--	--
Real Estate Composite	--	--	--	--	--	--	--	--	--	--	--
Vanguard Real Estate ETF	4.73	8.42	2.62	30.54	2.38	17.67	8.25	--	--	--	--
MSCI US REIT	*3.74*	*7.14*	*1.28*	*28.82*	*1.26*	*16.47*	*7.48*	--	--	--	--
Cash & Equivalents	--	--	--	--	--	--	--	--	--	--	--
Cash Account	0.21	0.03	0.00	0.02	0.04	0.01	0.04	0.05	0.10	--	--
Citi 3mth Treasury Bill	*0.84*	*0.27*	*0.03*	*0.03*	*0.05*	*0.07*	*0.08*	*0.13*	*0.17*	--	--

Sewerage and Water Board of New Orleans ERS Total Composite

As of June 30, 2018

Asset Allocation by Manager

As Of June 30, 2018

	Total Market Value	% of Portfolio	Large Cap Core	Large Cap Growth	Large Cap Value	SMID Cap Equity	International Equity	Fixed Income	Real Estate	Alternatives	Cash
Sewerage and Water Board of New Orleans ERS Total Composite											
Equity Composite											
Chicago Equity Partners	$23,037,243	10.5%	$23,037,243								
Barrow Hanley Mewhinney & Strauss	$23,005,833	10.5%			$23,005,833						
NewSouth Capital	$29,460,798	13.5%				$29,460,798					
Earnest Partners	$19,429,869	8.9%					$19,429,869				
iShares S&P 500 Growth ETF	$17,315,974	7.9%		$17,315,974							
Fixed Income Composite											
Pyramis Global Advisors	$78,979,048	36.1%						$78,979,048			
Zazove Associates, LLC (Residual Asset)	$28,641	0.0%						$28,641			
Alternatives Composite											
Prisma Capital Partners	$20,610,136	9.4%								$20,610,136	
Equitas Capital Advisors (Residual Asset)	$22,491	0.0%								$22,491	
Real Estate Composite											
Vanguard Real Estate ETF	$7,043,155	3.2%							$7,043,155		
Cash & Equivalents											
Cash Account	$7,451	0.0%									$7,451
Total	**$218,940,638**	**100.0%**	**$23,037,243**	**$17,315,974**	**$23,005,833**	**$29,460,798**	**$19,429,869**	**$79,007,688**	**$7,043,155**	**$20,632,627**	**$7,451**
Difference from Target (%)			0.5%	0.7%	0.5%	0.5%	-0.1%	-0.9%	0.0%	0.7%	-1.7%
Difference from Target ($)			$1,143,179	$1,442,778	$1,111,769	$998,515	-$274,788	-$2,000,348	-$72,415	$1,475,321	-$3,824,011

Sewerage and Water Board of New Orleans ERS Total Composite

As of June 30, 2018

Asset Allocation

	6/30/2018 Market Value	6/30/2018 Allocation	3/31/2018 Market Value	3/31/2018 Allocation
Chicago Equity Partners	$23,037,243	10.5%	$22,493,037	10.3%
Barrow Hanley Mewhinney & Strauss	$23,005,833	10.5%	$22,298,848	10.2%
NewSouth Capital	$29,460,798	13.5%	$30,157,568	13.8%
Earnest Partners	$19,429,869	8.9%	$20,183,227	9.2%
iShares S&P 500 Growth ETF	$17,315,974	7.9%	$16,512,410	7.5%
Pyramis Global Advisors	$78,979,048	36.1%	$79,533,722	36.4%
Zazove Associates, LLC (Residual Asset)	$28,641	0.0%	$26,541	0.0%
Prisma Capital Partners	$20,610,136	9.4%	$20,643,762	9.4%
Equitas Capital Advisors (Residual Asset)	$22,491	0.0%	$22,595	0.0%
Vanguard Real Estate ETF	$7,043,155	3.2%	$6,527,310	3.0%
Cash Account	$7,451	0.0%	$327,331	0.1%
Total	**$218,940,638**	**100.0%**	**$218,726,350**	**100.0%**

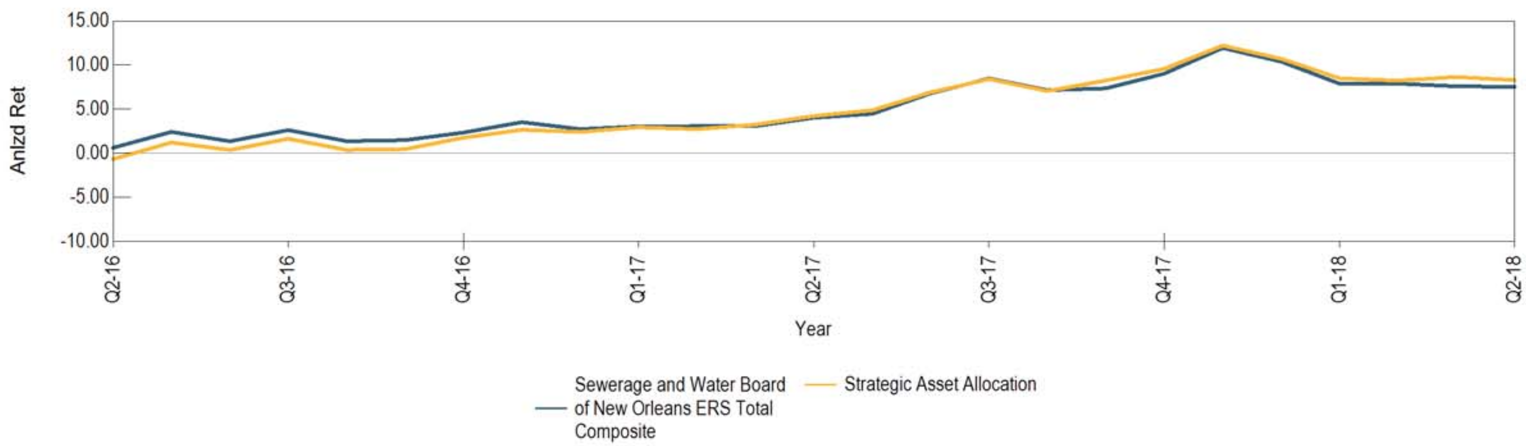
Allocation vs. Targets and Policy

	Current Balance	Current Allocation	Target	Difference	Target Range	Within IPS Range?
Large Cap Core	$23,037,243	10.5%	10.0%	$1,143,179	0.0% - 12.5%	Yes
Large Cap Growth	$17,315,974	7.9%	7.3%	$1,442,778	0.0% - 9.0%	Yes
Large Cap Value	$23,005,833	10.5%	10.0%	$1,111,769	0.0% - 12.5%	Yes
SMID Cap Equity	$29,460,798	13.5%	13.0%	$998,515	9.8% - 16.3%	Yes
International Equity	$19,429,869	8.9%	9.0%	-$274,788	6.8% - 11.3%	Yes
Fixed Income	$79,007,688	36.1%	37.0%	-$2,000,348	27.8% - 40.0%	Yes
Real Estate	$7,043,155	3.2%	3.3%	-$72,415	0.0% - 5.0%	Yes
Alternatives	$20,632,627	9.4%	8.8%	$1,475,321	0.0% - 9.6%	Yes
Cash	$7,451	0.0%	1.8%	-$3,824,011	0.0% - 2.0%	Yes
Total	**$218,940,638**	**100.0%**	**100.0%**			

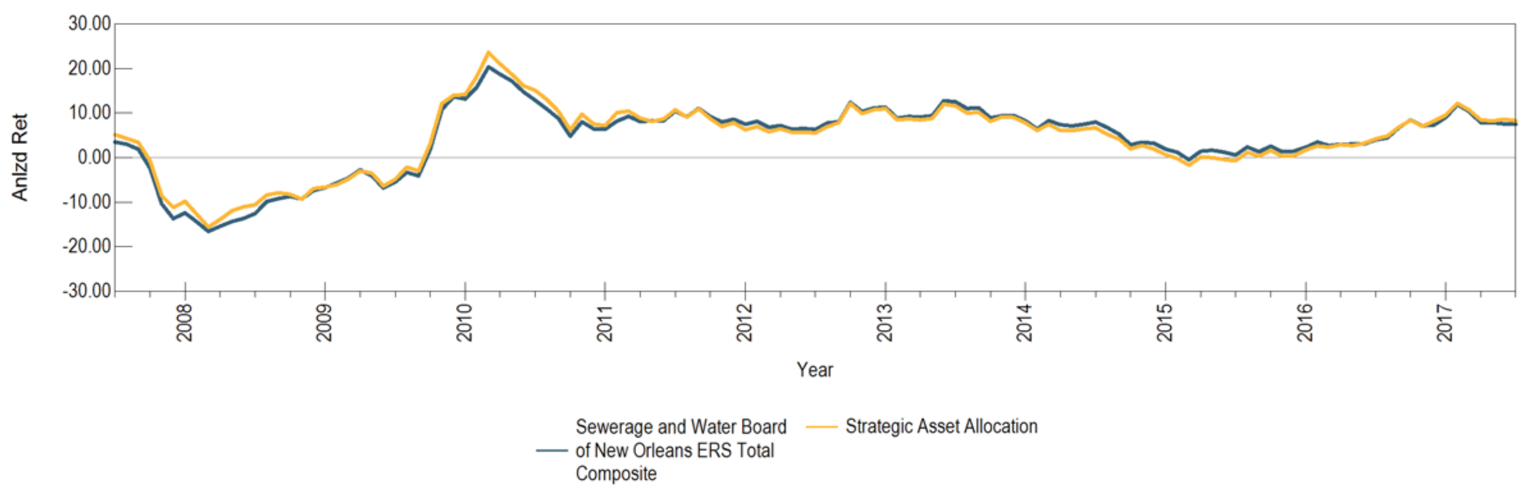
Sewerage and Water Board of New Orleans ERS Total Composite

As of June 30, 2018

Rolling 2 Year Annualized Return (%)



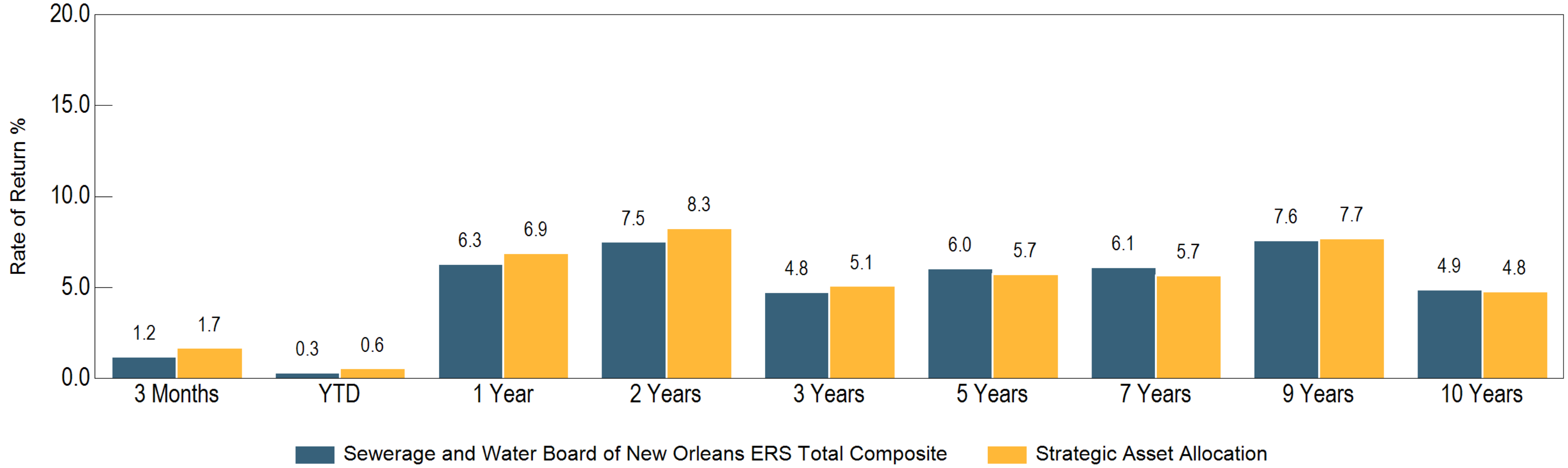
Sewerage and Water Board of New Orleans ERS Total Composite vs. Strategic Asset Allocation



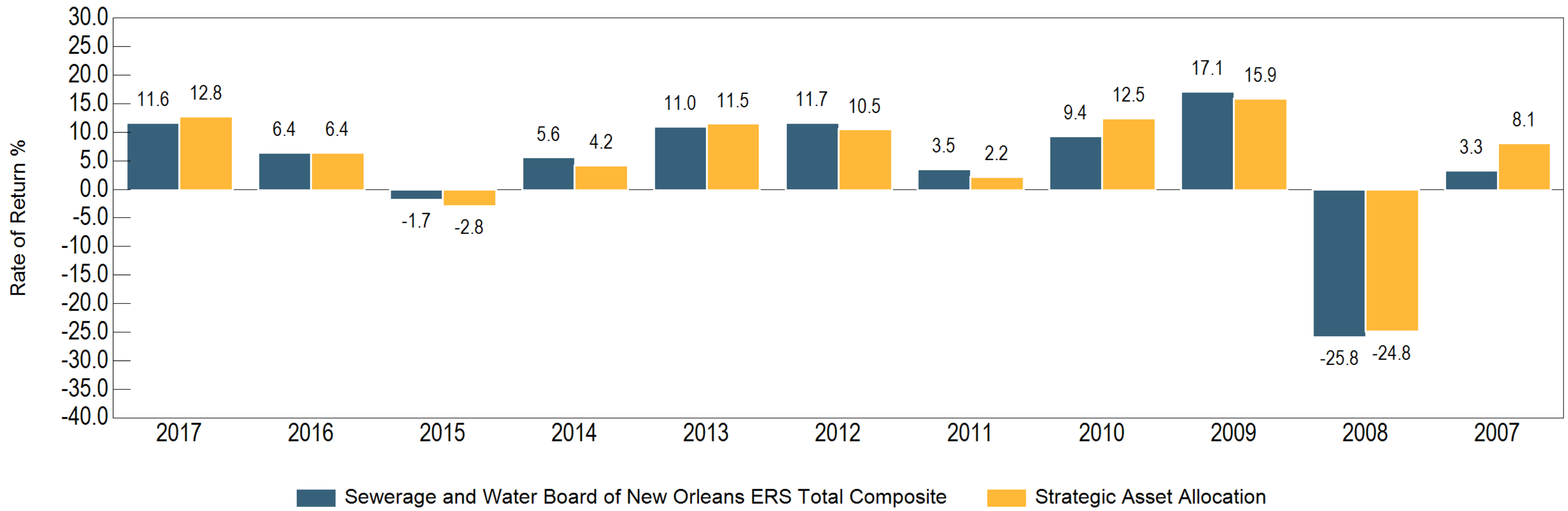
Sewerage and Water Board of New Orleans ERS Total Composite

As of June 30, 2018

Return Summary



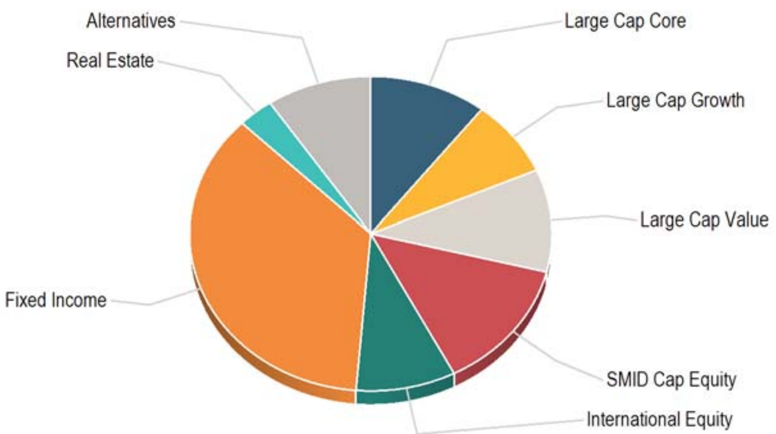
Return Summary Calendar Year



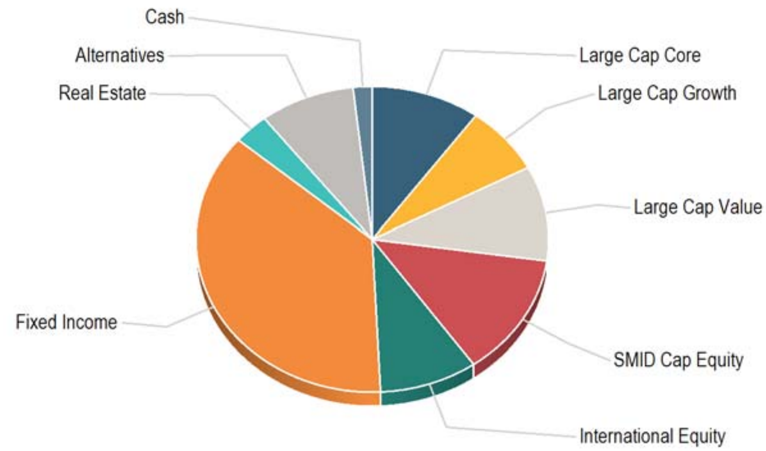
Sewerage and Water Board of New Orleans ERS Total Composite

As of June 30, 2018

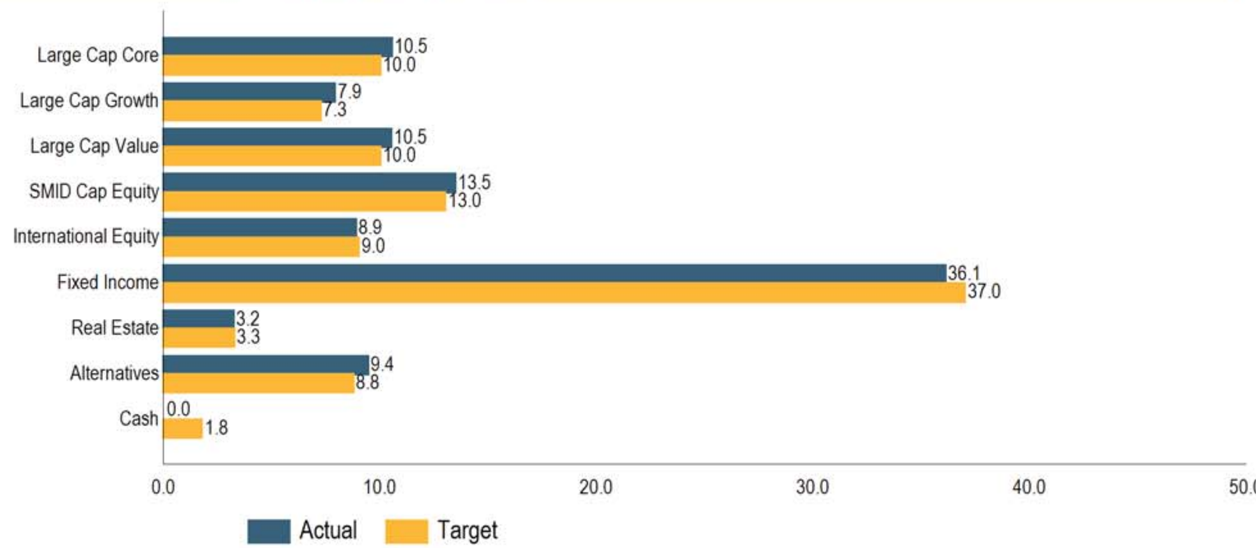
Current Allocation



Target Allocation



Actual vs Target Allocation (%)



IMPORTANT DISCLOSURES

This information is provided for your convenience, but should not be used as a substitute for your account's monthly statements and trade confirmations. Material is provided for informational purposes only and does not constitute a recommendation. It has been gathered in a manner which we believe to be reliable, but accuracy is not guaranteed. It is not intended as tax advice. Past performance does not guarantee future results.

Diversification and strategic asset allocation does not ensure a profit or protect against a loss. No investment strategy can guarantee success. Investments are subject to market risk, including possible loss of principal.

Investing in small and mid-cap stocks are riskier investments which include price volatility, less liquidity and the threat of competition. International investing involves additional risks such as currency fluctuations, differing financial accounting standards and possible political and economic instability. These risks are greater in emerging markets. Alternative investment strategies involve greater risks and are only appropriate for the most sophisticated, knowledgeable and wealthiest of investors. Managed futures involve specific risks that maybe greater than those associated with traditional investments and may be offered only to clients who meet specific suitability requirements, including minimum net worth tests. You should consider the special risks with alternative investments including limited liquidity, tax considerations, incentive fee structures, potentially speculative investment strategies, and different regulatory and reporting requirements. Commodities are generally considered speculative because of the significant potential for investment loss. REITs are financial vehicles that pool investors' capital to purchase or finance real estate. REITs involve risks such as refinancing, economic conditions in the real estate industry, changes in property values and dependency on real estate management.

Beta compares volatility of a security with an index, such as the S&P 500. A beta of one means the security has volatility equal to that of an index. Alpha compares a fund's actual returns with those that would be expected by its beta. A positive alpha means that for the given amount of volatility, the fund returned more than expected when compared to the benchmark index. Alpha and beta measures are historical.

Index Descriptions:

It is not possible to invest directly in an index.

Barclays Municipal Bond: 1-10 Year Blend - A component of the Barclays Capital Municipal Bond Index with municipal bonds in the 1-10 year blend (1-12) maturity range.
Barclays 1-5 Government/Credit - Barclays 1-5 Year Government/Credit Index: Includes all medium and larger issues of U.S. government, investment-grade corporate, and investment-grade international dollar-denominated bonds that have maturities of between 1 and 5 years and are publicly issued.
Barclays 1-5 Year Government - An inclusion of securities within the Barclays Government Index that have a maturity range from 1 up to (but not including) 5 years.
Barclays 1-5 yr Treasury - The 1-5 year component of the Barclays Capital U.S. Treasury Index with securities in the maturity range from 1 year (but not including) 5 years.
Barclays Credit 1-3 Year - Barclays 1-5 Year Credit Index: Includes all medium and larger issues of U.S. government, investment-grade corporate, and investment-grade international dollar-denominated bonds that have maturities of between 1 and 3 years and are publicly issued.
Barclays U.S. Government/Credit (BCGC) - The Government/Credit component of the U.S. Aggregate. The government portion includes treasuries (public obligations of the U.S. Treasury that have remaining maturities of more than one year) and agencies (publicly issued debt of the U.S. Government agencies, quasi-federal corporations, and corporate or foreign debt guaranteed by the U.S. Government). The credit portion includes publicly issued U.S. corporate and foreign debentures and secured notes that meet specified maturity, liquidity, and quality requirements. Must be a publicly issued, dollar-denominated and non-convertible, U.S. Government or Investment Grade Credit security. Must be rated investment-grade (Baa3/BBB- or higher) by at least two of the following rating agencies: Moody's, S&P, Fitch; regardless of call features, have at least one year to final maturity, and have an outstanding par value amount of at least $250 million.
Barclays Intermediate U.S. Government/Credit (BCIGC) - The intermediate component of the Barclays Capital Government/Credit Index with securities in the maturity range from 1 up to (but not including) 10 years.
Barclays Global Aggregate - The index is designed to be a broad based measure of the global investment-grade, fixed rate, fixed income corporate markets. The major components of this index are the US Aggregate, Pan-European Aggregate, and the Asian-Pacific Aggregate Indices. The index also includes Eurodollar and Euro-Yen corporate bonds, Canadian government, agency and corporate securities.
Barclays Global Aggregate Intermediate - The intermediate component of the Barclays Global Aggregate index with securities in the maturity range from 1 up to (but not including) 10 years.
Barclays U.S. Government: Intermediate - The intermediate component of the Barclays Capital U.S. Government Index with securities in the maturity range from 1 up to (but not including) 10 years.
Barclays U.S. Government: Long - The long component of the Barclays Capital U.S. Government Index with securities in the maturity range from 10 years or more.
Barclays LT Muni - A component of the Barclays Capital Municipal Bond Index with municipal bonds with a maturity range greater than 20 years.
Barclays Municipal Bond Index - A rules-based, market-value weighted index that is engineered for the long-term tax-exempt bond market. Bonds must be rated investment-grade (Baaa3/BBB- or higher) by at least two of the following rating agencies: Moody's, S&P, Fitch. The bonds must be fixed rate, have a dated-date after December 31, 1990, have an outstanding par value of at least $7

million, and be issued as part of a transaction of at least $75 million. The four main sectors of the index are: general obligation bonds, revenue bonds, insured bonds (including all insured bonds with a Aaa/AAA rating), and prefunded bonds. Remarketed issues, taxable municipal bonds, floating rate bonds, and derivatives, are excluded from the benchmark.

Barclays U.S. Treasury - A component of the U.S. Government Index. Must be publicly issued, dollar-denominated and non-convertible, fixed rate (although it may carry a coupon that steps up or changes according to a predetermined schedule) U.S. Treasury security. Must be rated investment-grade (Baa3/BBB- or higher) by at least two of the following rating agencies: Moody's, S&P, Fitch; regardless of call features, have at least one year to final maturity, and have an outstanding par value amount of at least $250 million.

Barclays U.S. Treasury: Intermediate (BCIT) - The intermediate component of the Barclays Capital U.S. Treasury Index with securities in the maturity range from 1 year (but not including) 10 years.

Barclays U.S. Treasury: Long - The long component of the Barclays Capital U.S. Treasury Index with securities in the maturity range from 10 years or more.

Barclays U.S. Treasury: U.S. TIPS - Comprised of Inflation-Protection securities issued by the U.S. Treasury. Must be a fixed rate, publicly issued U.S. Treasury Inflation Note that is dollar-denominated and non-convertible. Must be rated investment-grade (Baa3/BBB- or higher) by at least two of the following rating agencies: Moody's, S&P, Fitch; have at least one year to final maturity, and have an outstanding par value amount of at least $250 million.

Barclays High Yield Composite BB - A component of the Barclays U.S. Corporate High Yield Bond Index with bonds in the BB or better.

Citigroup 1-3 Year U.S. Treasury - Component of the Citigroup U.S. Treasury that measures total returns for U.S. Treasuries with a maturity between 1-3 years.

Citigroup 3 Month U.S. Treasury Bill - This index measures monthly return equivalents of yield averages that are not marked to market. The Three-Month Treasury Bill Indices consist of the last three three-month Treasury bill issues.

Citigroup World Government Bond - Citi World Gov't Bond (CWGB) – Citigroup World Government Bond Index, includes the most significant and liquid government bond markets globally that carry at least an investment grade rating.

Consumer Price Index - All Urban Consumers (CPI-U) - As an economic indicator, and as the most widely used measure of inflation, the Consumer Price Index (CPI) is an indicator of the effectiveness of government policy, and as a guide in making economic decisions for business executives, labor leaders, and other private citizens. Published on a monthly basis by the U.S. Bureau of Labor Statistics (BLS), the CPI is a measure of the average change in prices over time of goods and services purchased by households. CPI for All Urban Consumers (CPI-U) encompasses approximately 87 percent of the total U.S. population which includes, in addition to wage earner and clerical worker households, groups such as professional, managerial, and technical workers, the self-employed, short-term workers, the unemployed, and retires and others not in the labor force.

Dow Jones UBS Commodity - Provides a diversified representation of commodity markets as an asset class. The index is comprised of exchange-traded futures on physical commodities; representing 19 commodities which are weighted for economic significance and market liquidity. To promote diversification, weighting restrictions are placed on individual commodities and commodity groups.

FTSE NAREIT U.S. Real Estate - All REITs - The index is designed to represent a comprehensive performance of publicly traded REITs which covers the commercial real estate space across the US economy, offering exposure to all investment and property sectors. It is not free float adjusted, and constituents are not required to meet minimum size and liquidity criteria.

HFRI Equity Hedge Fund Index - The index is designed to represent strategies which maintain positions both long and short in primarily equity and equity derivative securities. A wide variety of investment processes can be employed to arrive at an investment decision, including both quantitative and fundamental techniques; strategies can be broadly diversified or narrowly focused on specific sectors and can range broadly in terms of levels of net exposure, leverage employed, holding period, concentrations of market capitalizations and valuation ranges of typical portfolios. Equity Hedge managers would typically maintain at least 50% exposure to, and may in some cases be entirely invested in, equities - both long and short.

HFRI (Hedge Fund Research, Inc.) Fund of Funds Composite Index (1) - The index only contains fund of funds, which invest with multiple managers through funds or managed accounts. It is an equal-weighted index, which includes over 650 domestic and offshore funds that have at least $50 Million under management or have been actively trading for at least 12 months. All funds report assets in US Dollar, and Net of All Fees returns which are on a monthly basis.

MSCI EAFE - A free float-adjusted market capitalization index that is designed to measure the equity market performance of developed markets, excluding the U.S. and Canada. As of December 31, 2010 the MSCI EAFE Index consists of 22 developed market country indices: Australia, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Israel, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, and the United Kingdom.

MSCI EAFE Value -Net Dividend - A free float-adjusted market capitalization index that is designed to measure the equity market performance of developed markets, excluding the U.S. and Canada. Value attribute for index construction is defined using: book value to price ratio, 12-months forward earnings to price ratio, and dividend yield. Net total return indices reinvest dividends after the deduction of withholding taxes, using (for international indices) a tax rate applicable to non-resident institutional investors who do not benefit from double taxation treaties.

MSCI EAFE Growth -Net Dividend - A free float-adjusted market capitalization index that is designed to measure the equity market performance of developed markets, excluding the U.S. and Canada. Growth attribute for index construction is defined using: long-term forward earnings per share (EPS) growth rate, short-term forward EPS growth rate, current internal growth rate, long-term historical EPS growth trend, long-term historical sales per share growth trend. Net total return indices reinvest dividends after the deduction of withholding taxes, using (for international indices) a tax rate applicable to non-resident institutional investors who do not benefit from double taxation treaties.

MSCI Emerging Markets - A free float-adjusted market capitalization index that is designed to measure equity market performance of emerging markets. As of December 31, 2010, the MSCI Emerging Markets Index consists of the following 21 emerging market country indices: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Morocco, Peru, Philippines, Poland, Russia, South Africa, Taiwan, Thailand, and Turkey.

MSCI World - A free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed markets. As of December 31, 2010, the MSCI World Index consists of the following 24 developed market country indices: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom, and the United States.

NCREIF - The index is a quarterly time series composite total rate of return measure of investment performance of a very large pool of individual commercial real estate properties acquired in the private market for investment purposes only. Information on this index is availableat ncreif.com.
Russell 1000 - Based on a combination of their market cap and current index membership, this index is comprised of approximately 1,000 of the largest securities from the Russell 3000. Representing approximately 92% of the Russell 3000, the index is created to provide a full and unbiased indicator of the large cap segment.
Russell 1000 Growth - Measures the performance of those Russell 1000 companies with higher price-to-book ratios and higher forecasted growth values.
Russell 1000 Value - Measures the performance of those Russell 1000 companies with lower price-to-book ratios and lower expected growth values.
Russell 2000 - Based on a combination of their market cap and current index membership, this index is comprised of approximately 2,000 of the smaller securities from the Russell 3000. Representing approximately 8% of the Russell 3000, the index is created to provide a full and unbiased indicator of the small cap segment.
Russell 2000 Growth - Measures the performance of those Russell 2000 companies with higher price-to-book ratios and higher forecasted growth values.
Russell 2000 Value - Measures the performance of those Russell 2000 companies with lower price-to-book ratios and lower expected growth values.
Russell 2500 - Based on a combination of their market cap and current index membership, this index is comprised of approximately 2,500 of the smallest securities from the Russell 3000. Measures the performance of the small to mid-cap (smid) segment of the U.S. equity universe.
Russell 2500 Growth - Measures the performance of those Russell 2500 companies with higher price-to-book ratios and higher forecasted growth values.
Russell 2500 Value - Measures the performance of those Russell 2500 companies with lower price-to-book ratios and lower expected growth values.
Russell 3000 - Representing approximately 98% of the investable U.S. equity market, the Russell 3000 index measures the performance of the largest 3,000 U.S. companies.
Russell 3000 Growth - Measures the performance of the broad growth segment of the U.S. equity universe which includes Russell 3000 companies with higher price-to-book ratios and higher forecasted growth values.
Russell 3000 Value - Measures the performance of the broad growth segment of the U.S. equity universe which includes Russell 3000 companies with lower price-to-book ratios and lower forecasted growth values.
Russell Midcap - A subset of the Russell 1000 index, the Russell Midcap index measures the performance of the mid-cap segment of the U.S. equity universe. Based on a combination of their market cap and current index membership, includes approximately 800 of the smallest securities which represents approximately 27% of the total market capitalization of the Russell 1000 companies. The index is created to provide a full and unbiased indicator of the mid-cap segment.
Russell Midcap Growth - Measures the performance of those Russell Mid-cap companies with higher price-to-book ratios and higher forecasted growth values.
Russell Midcap Value - Measures the performance of those Russell Mid-cap companies with lower price-to-book ratios and lower expected growth values.
Standard & Poor's 400 MidCap - Comprised of 400 domestic stocks that are chosen based upon market capitalization, liquidity and industry representation. The medium size US firms range with a market capitalization between $2 billion to $10 billion, and are between the S&P 500 Index and the S&P Smallcap 600 Index. It is a market-weighted index, which represents approximately 7% of the aggregate market value of US companies.
Standard & Poor's 500 - Representing approximately 75% of the investable US equity market, the S&P 500 measures changes in stock market conditions based on the average performance of 500 widely held common stocks. It is a market-weighted index calculated on a total return basis with dividend reinvested.
Stark 300 Trader - The Stark 300 index tracks the performance of the top-300 futures and forex traders. The index is calculated monthly using an equity-weighted formula to determine performance.

FFC INVESTMENT ADVISORS

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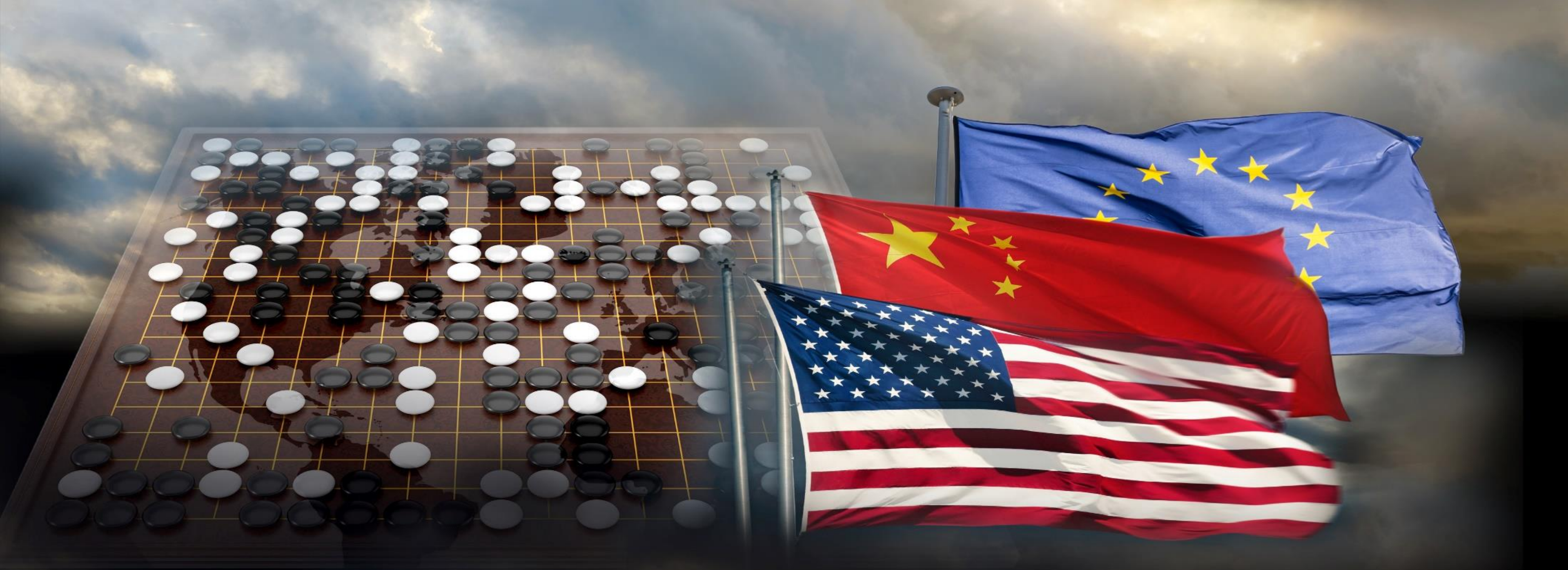


CAPITAL MARKETS REVIEW

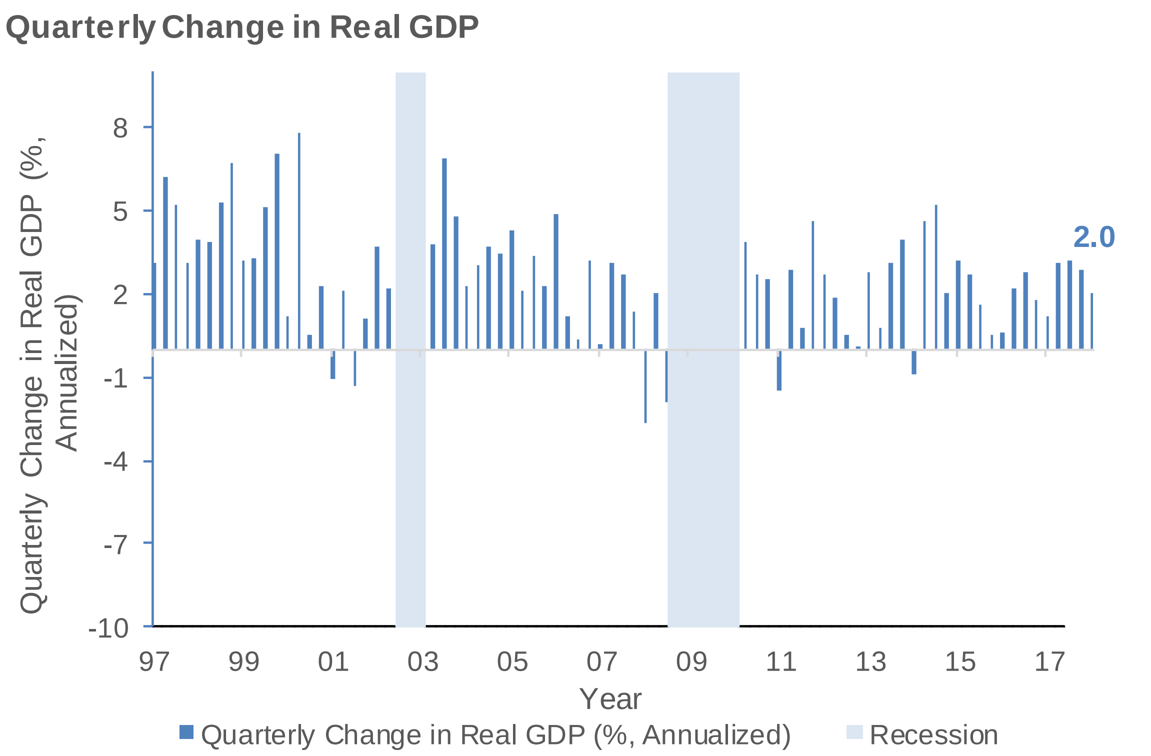
REVIEWING THE QUARTER ENDED JUNE 30, 2018

RAYMOND JAMES®

GROSS DOMESTIC PRODUCT

Real gross domestic product (GDP) increased at an annual rate of 2.0% in the first quarter of 2018, according to the "third" estimate released by the Bureau of Economic Analysis. In the fourth quarter, real GDP increased 2.9%.

With this third estimate for the first quarter, the general picture of economic growth remains the same; private inventory investment and personal consumption expenditures (PCE) were revised down.

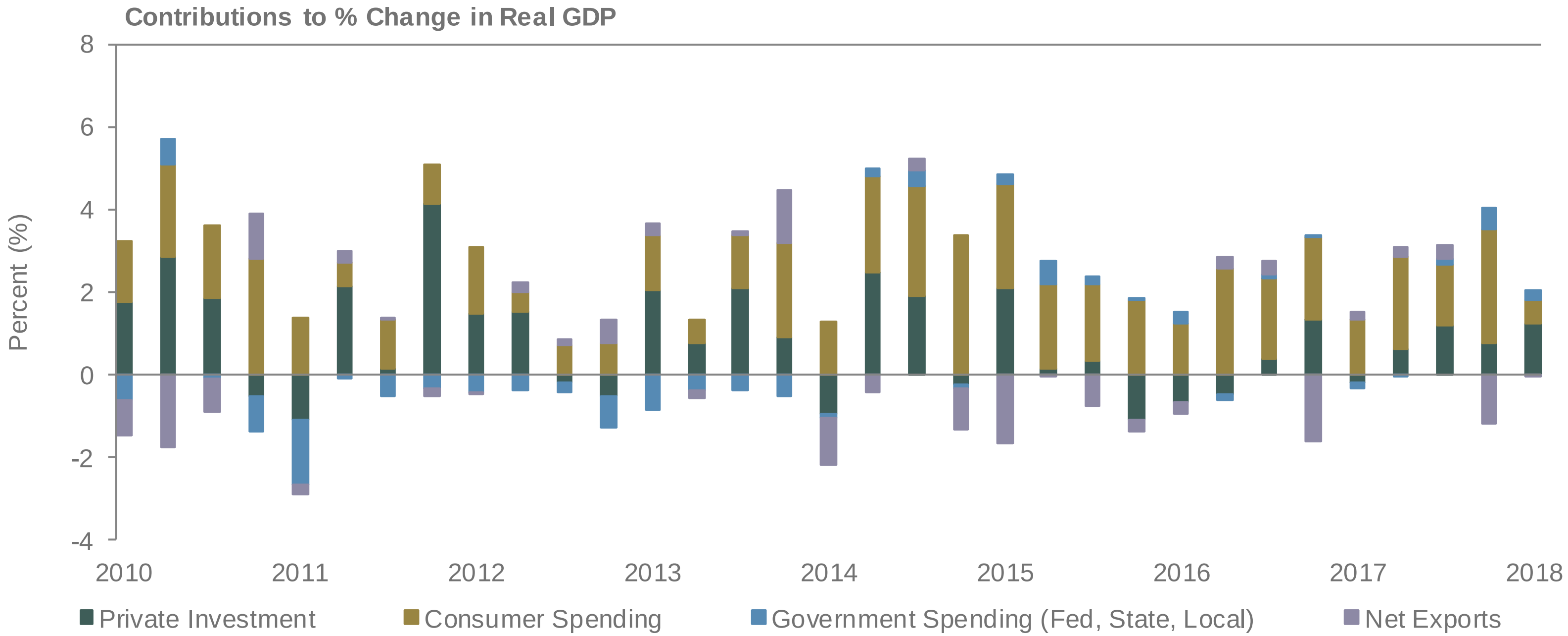


Source: Bloomberg, as of 6/30/2018

CONTRIBUTIONS TO % CHANGE IN REAL GDP

The increase in real GDP in the first quarter reflected positive contributions from nonresidential fixed investment, PCE, exports, federal government spending, and state and local government spending that were partly offset by negative contributions from residential fixed investment and private inventory investment. Imports, which are a subtraction in the calculation of GDP, increased.

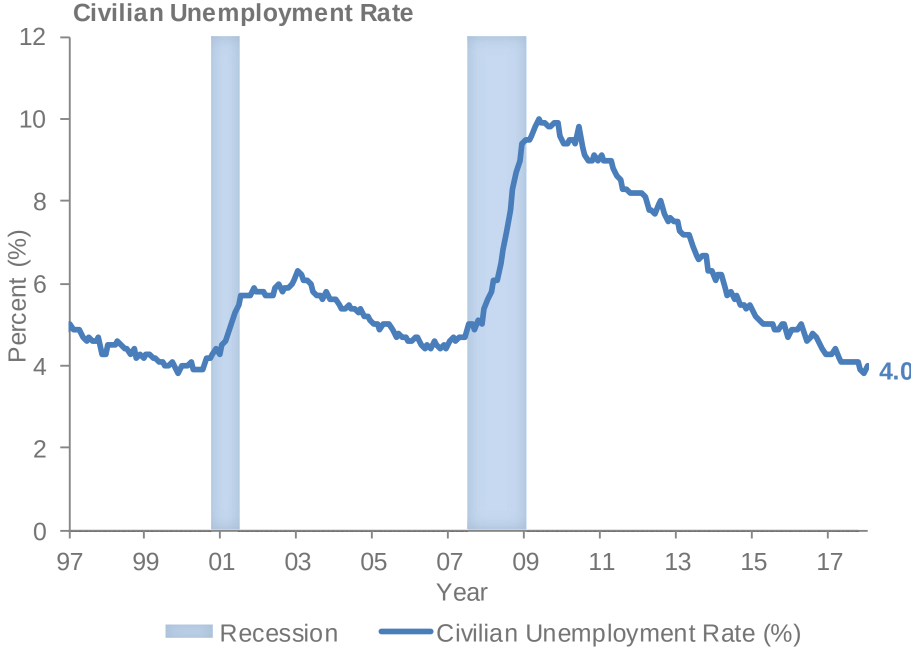
The deceleration in real GDP growth in the first quarter reflected decelerations in PCE, exports, state and local government spending, and federal government spending and a downturn in residential fixed investment.



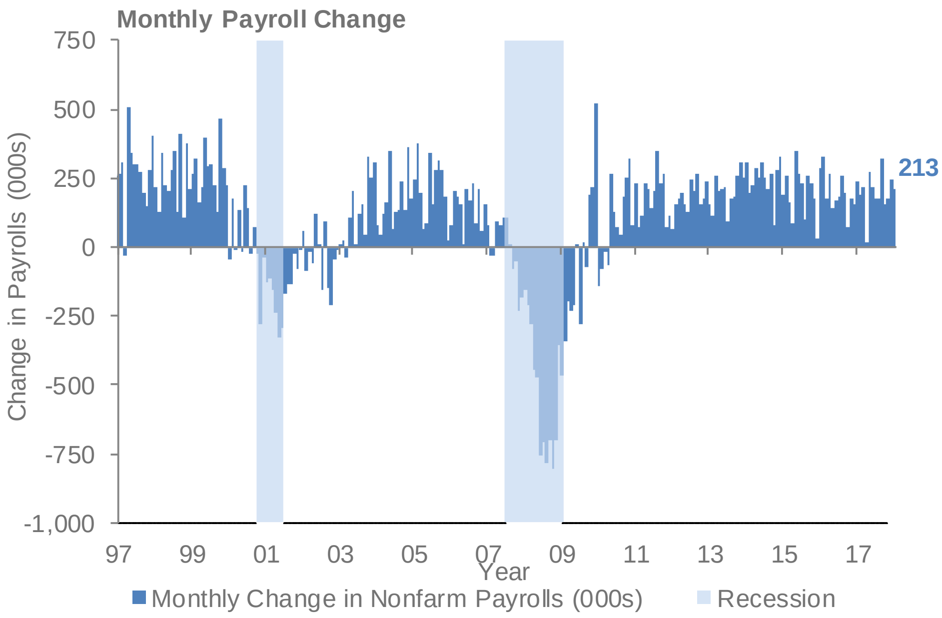
Source: Bloomberg, as of 6/30/2018

EMPLOYMENT

Total nonfarm payroll employment increased by 213,000 in June, and the unemployment rate rose to 4.0%. Job growth occurred in professional and business services, manufacturing, and health care, while retail trade lost jobs.



Source: Bloomberg, as of 6/30/2018

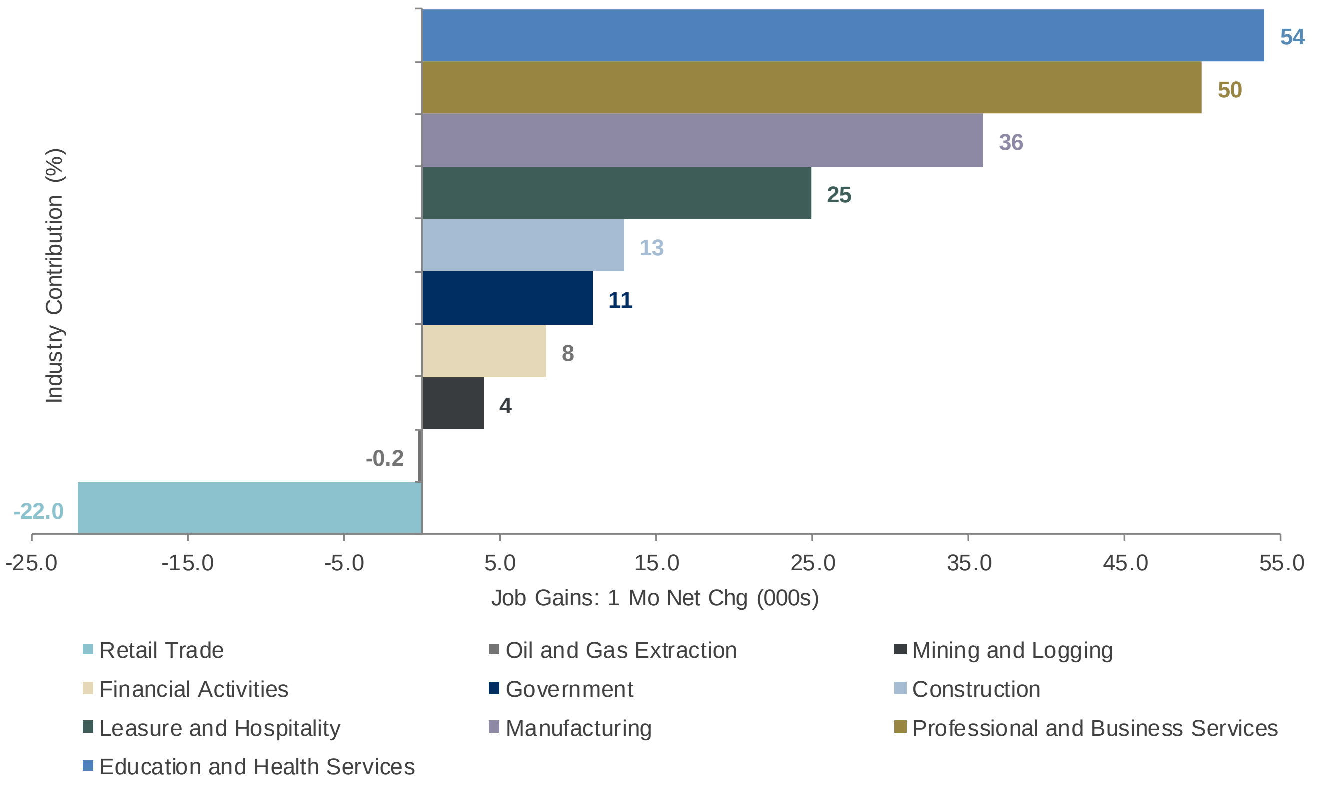


Source: Bloomberg, as of 6/30/2018

MAJOR INDUSTRY CONTRIBUTIONS TO JOB GROWTH

Health care employment increased by 25,000 over the month and is up by 309,000 over the year. Hospitals added 11,000 jobs in June, and employment in ambulatory care services continued to trend up (+14,000).

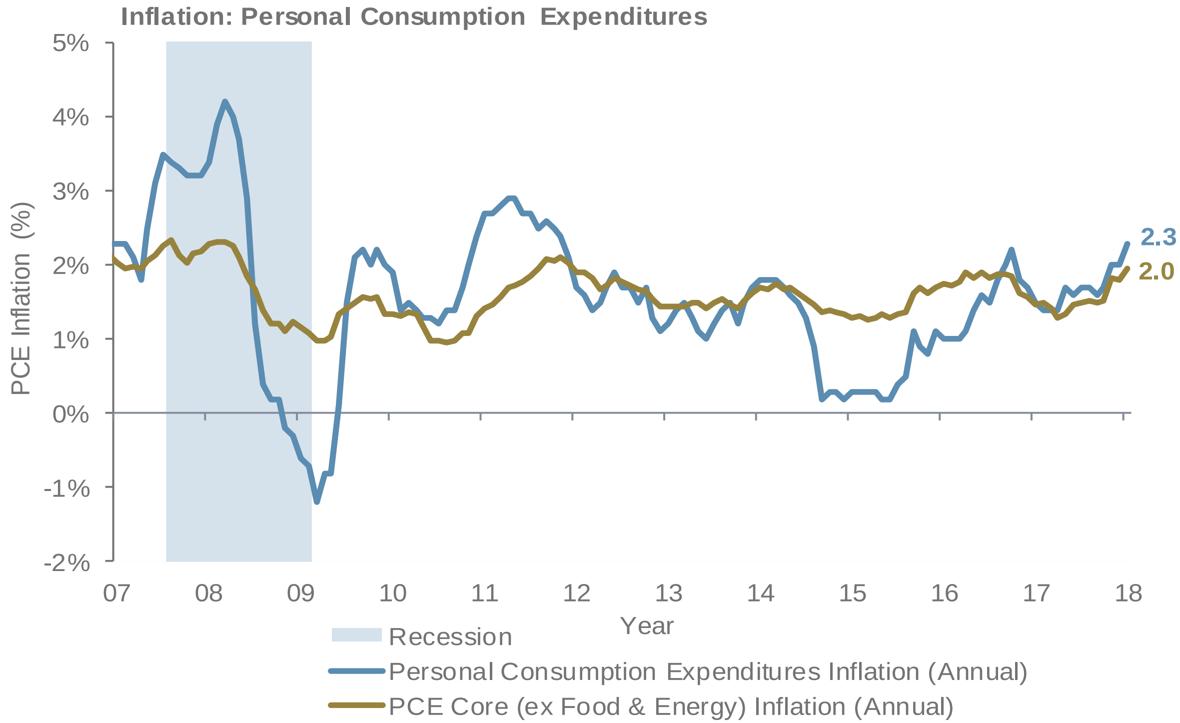
Retail trade employment declined by 22,000 in June, mostly offsetting a gain (+25,000) in the prior month. Employment in the industry has been about unchanged since February.



Source: Bureau of Labor Statistics, as of 6/30/2018, a preliminary estimate of the net number of jobs in the various industries in the latest month.

INFLATION

The percent changes from one year ago for personal consumption expenditure index (PCE) and the PCE Core (ex food & energy) Indices are 2.0% and 1.8% respectively.



Source: Bloomberg, as of 5/31/2018

"Increased tariffs will add to commodity price pressures. Wage gains are moderate. Inflation is closer to the Fed's goal."

- Dr. Scott Brown, Chief Economist

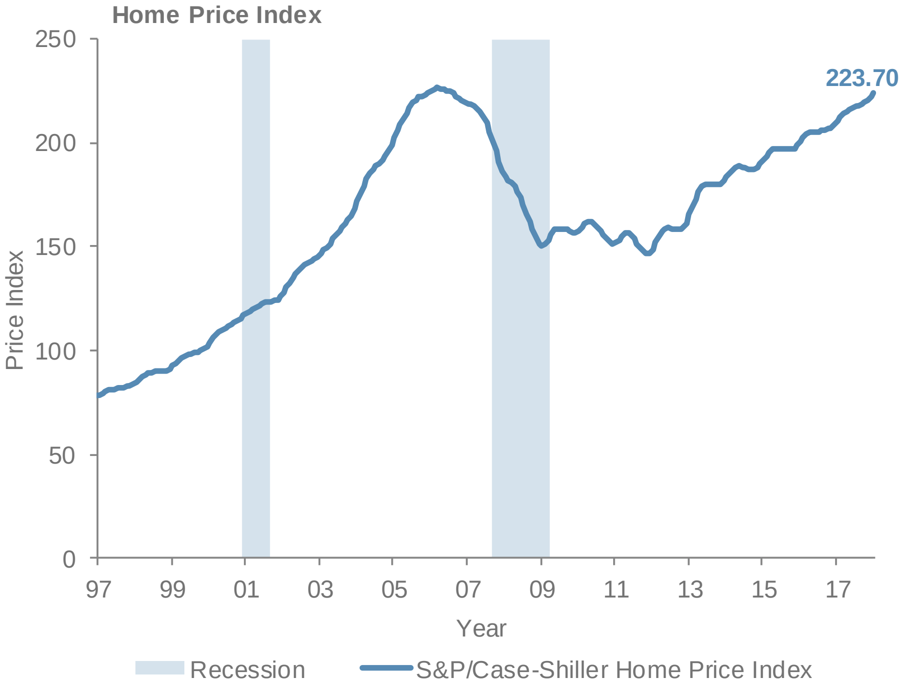
"We are aware that raising rates too slowly might raise the risk that monetary policy would need to tighten abruptly down the road in response to an unexpectedly sharp increase in inflation or financial excesses, jeopardizing the economic expansion. Conversely, if we raise interest rates too rapidly, the economy could weaken, and inflation could continue to run persistently below our objective."

– Fed Chairman Jerome Powell Press Conference (June 13)

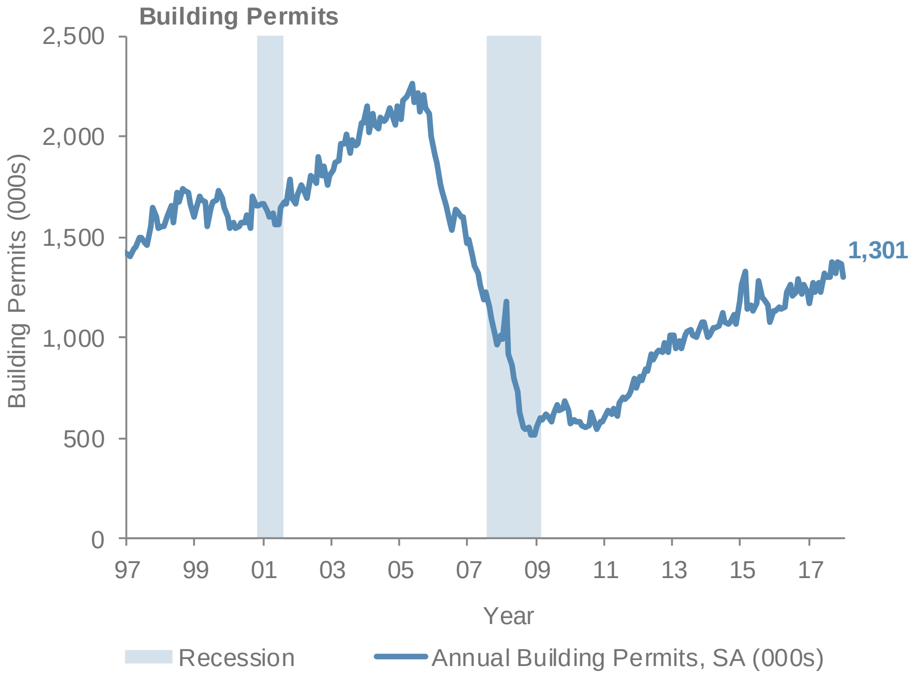
 Personal Consumption Expenditure (PCE) is the preferred measure of inflation by the Bureau of Economic Analysis.

HOUSING MARKET

"Builders continue to note supply constraints (lack of skilled labor, higher costs). Demand remains strong. Home prices have continued to rise, making affordability an important issue."
- Dr. Scott Brown, Chief Economist



Source: Bloomberg, as of 4/30/2018

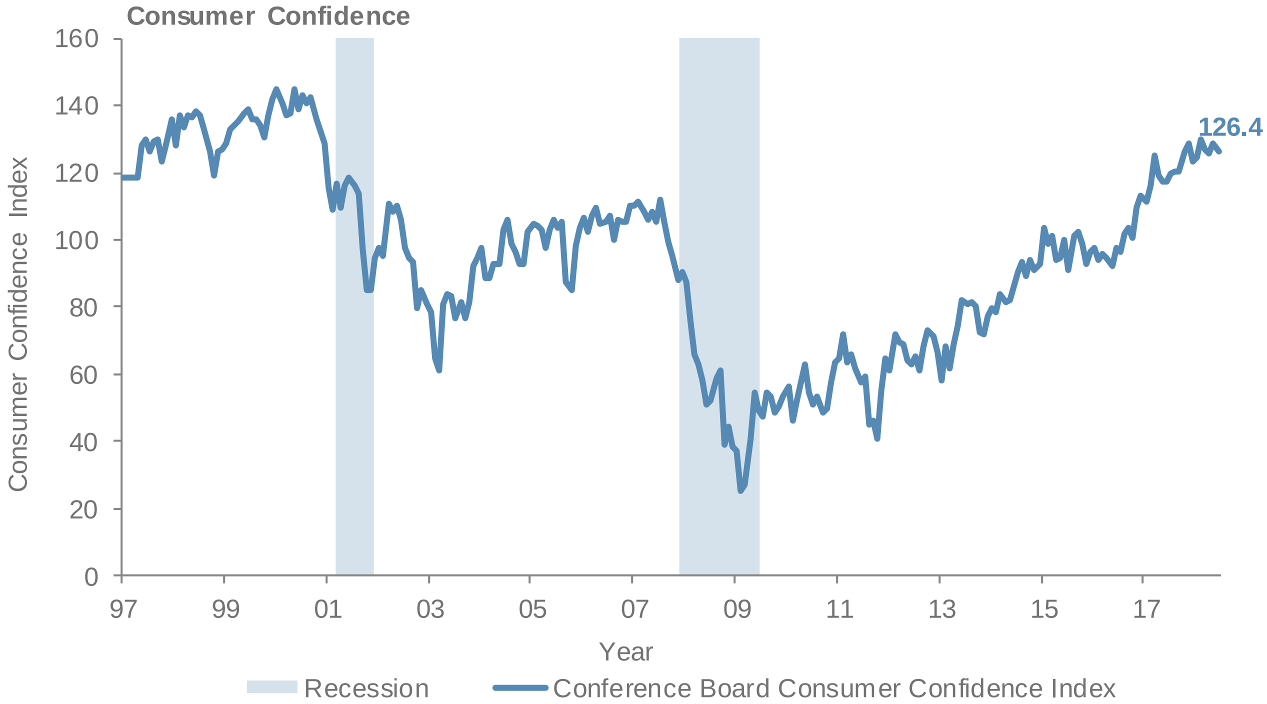


Source: U.S. Census Bureau, as of 5/31/2018

CONSUMER CONFIDENCE

"Consumer confidence declined in June after improving in May. Consumers' assessment of present-day conditions was relatively unchanged, suggesting that the level of economic growth remains strong. While expectations remain high by historical standards, the modest curtailment in optimism suggests that consumers do not foresee the economy gaining much momentum in the months ahead."

- Lynn Franco, Director of Economic Indicators at The Conference Board



Source: Bloomberg, as of 6/30/2018

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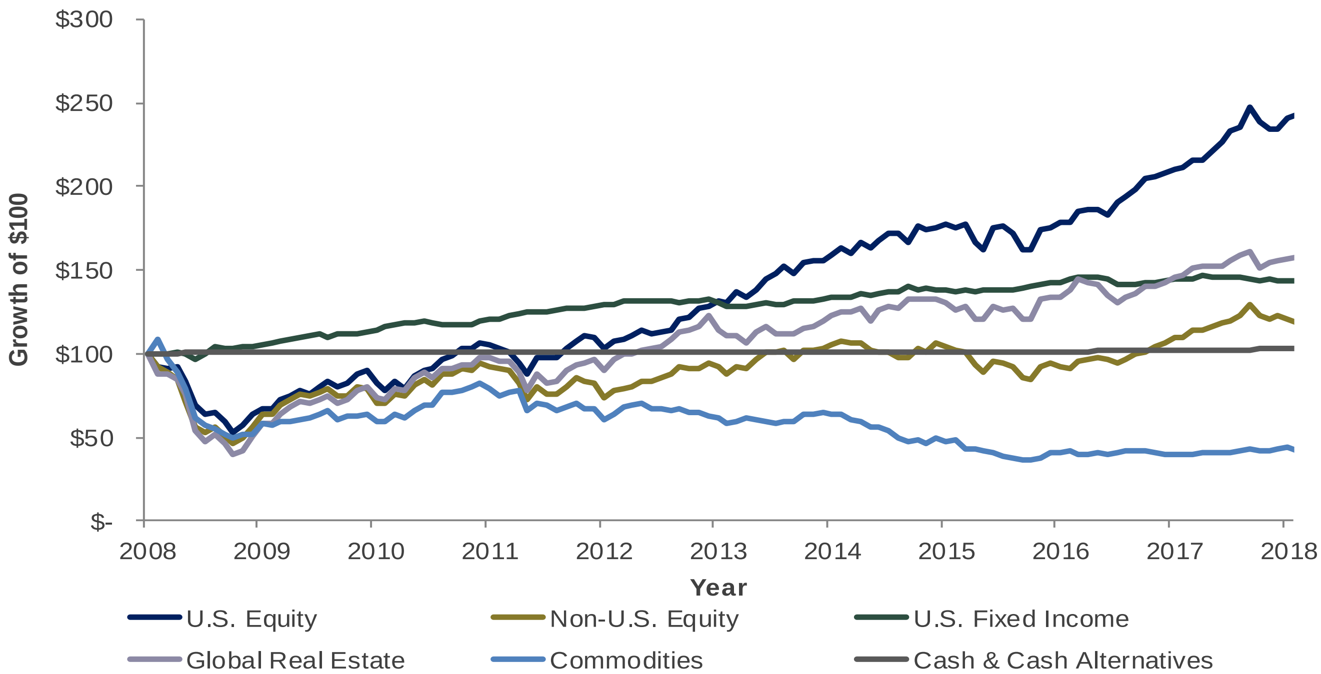
ASSET CLASS RETURNS: GROWTH OF A DOLLAR



Source: Morningstar Direct, as of 6/30/2018

Source: Morningstar Direct, as of 6/30/2018	QTD	YTD	1-Year	3-Year	5-Year	10-Year
U.S. Equity	3.89%	3.22%	14.78%	11.58%	13.29%	10.23%
Non-U.S. Equity	-2.61%	-3.77%	7.28%	5.07%	5.99%	2.54%
U.S. Fixed Income	-0.16%	-1.62%	-0.40%	1.72%	2.27%	3.72%
Global Real Estate (REITs)	3.15%	-0.52%	6.26%	5.97%	5.92%	6.09%
Commodities	0.40%	0.00%	7.35%	-4.54%	-6.40%	-9.04%
Cash & Cash Alternatives	0.44%	0.79%	1.33%	0.64%	0.39%	0.31%

 Past performance is not indicative of future results. Please see slides 26-28 for asset class and index definitions.

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ANNUAL ASSET CLASS TOTAL RETURNS

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	YTD 2018
Non-U.S. Equity 16.7%	Fixed Income 5.2%	Non-U.S. Equity 41.5%	Real Estate 19.3%	Fixed Income 7.8%	Real Estate 29.0%	U.S. Equity 33.6%	Real Estate 13.9%	Fixed Income 0.6%	U.S Equity 12.7%	Non-U.S. Equity 27.2%	U.S Equity 3.2%
Commodities 16.2%	Cash & Cash Alternatives 1.8%	Real Estate 40.2%	U.S. Equity 16.9%	Blended Portfolio 2.1%	Non-U.S. Equity 16.8%	Non-U.S. Equity 15.3%	U.S. Equity 12.6%	U.S. Equity 0.5%	Commodities 11.8%	U.S Equity 21.1%	Cash & Cash Alternatives 0.8%
Blended Portfolio 7.8%	Blended Portfolio -21.7%	U.S. Equity 28.3%	Commodities 16.8%	U.S. Equity 1.0%	U.S. Equity 16.4%	Blended Portfolio 13.9%	Blended Portfolio 7.1%	Cash & Cash Alternatives 0.0%	Blended Portfolio 7.1%	Real Estate 14.0%	Blended Portfolio 0.1%
Fixed Income 7.0%	Commodities -35.7%	Blended Portfolio 20.2%	Blended Portfolio 11.9%	Cash & Cash Alternatives 0.1%	Blended Portfolio 11.0%	Real Estate 1.6%	Fixed Income 6.0%	Blended Portfolio -0.2%	Non-U.S. Equity 4.5%	Blended Portfolio 13.8%	Commodities 0.0%
U.S. Equity 5.1%	U.S. Equity -37.3%	Commodities 18.9%	Non-U.S. Equity 11.2%	Real Estate -8.7%	Fixed Income 4.2%	Cash & Cash Alternatives 0.1%	Cash & Cash Alternatives 0.0%	Real Estate -1.2%	Real Estate 3.8%	Fixed Income 3.5%	Real Estate -0.5%
Cash & Cash Alternatives 4.7%	Non-U.S. Equity -45.5%	Fixed Income 5.9%	Fixed Income 6.5%	Commodities -13.3%	Cash & Cash Alternatives 0.1%	Fixed Income -2.0%	Non-U.S. Equity -3.9%	Non-U.S. Equity -5.7%	Fixed Income 2.7%	Commodities 1.7%	Fixed Income -1.6%
Real Estate -5.0%	Real Estate -50.2%	Cash & Cash Alternatives 0.2%	Cash & Cash Alternatives 0.1%	Non-U.S. Equity -13.7%	Commodities -1.1%	Commodities -9.5%	Commodities -17.0%	Commodities -24.7%	Cash & Cash Alternatives 0.3%	Cash & Cash Alternatives 0.8%	Non-U.S. Equity -3.8%

Blended Portfolio Allocation: 45% U.S. Equity / 15% Non-U.S. Equity / 40% Fixed Income

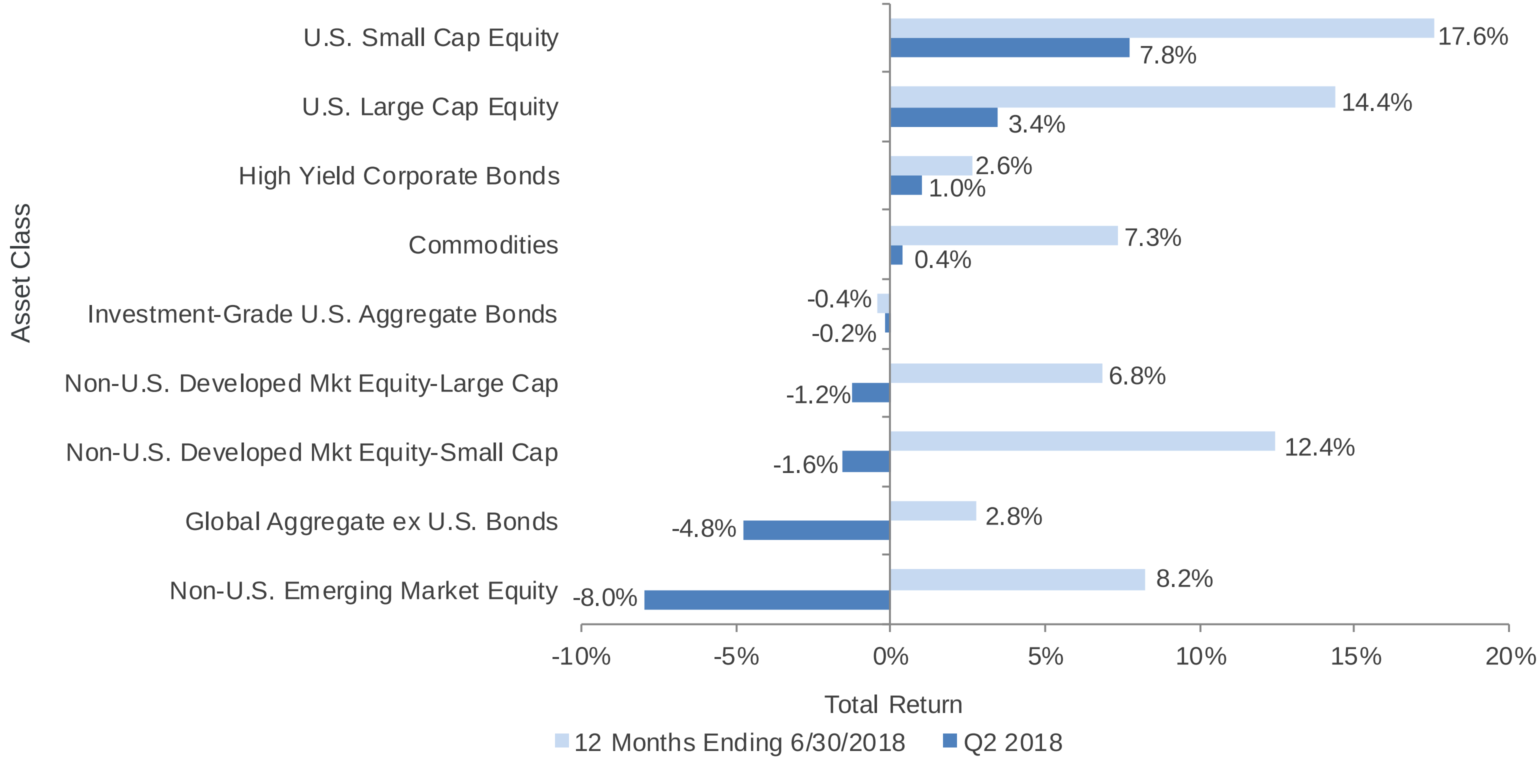
Source: Morningstar Direct, as of 6/30/2018

Past performance is not indicative of future results. Please see slides 26-28 for asset class and index definitions.

ASSET CLASS RETURNS

Small caps continue to produce excess returns relative to the broad market, supported by a strong U.S. dollar and tax reform. Sentiment is strong as investors look for opportunity down the market-cap spectrum.

Emerging market equities faced several major headwinds in the second quarter including rising oil prices, a strong U.S. dollar, negative investor sentiment, and rising rates in some peripheral countries.



Source: Morningstar Direct, as of 6/30/2018

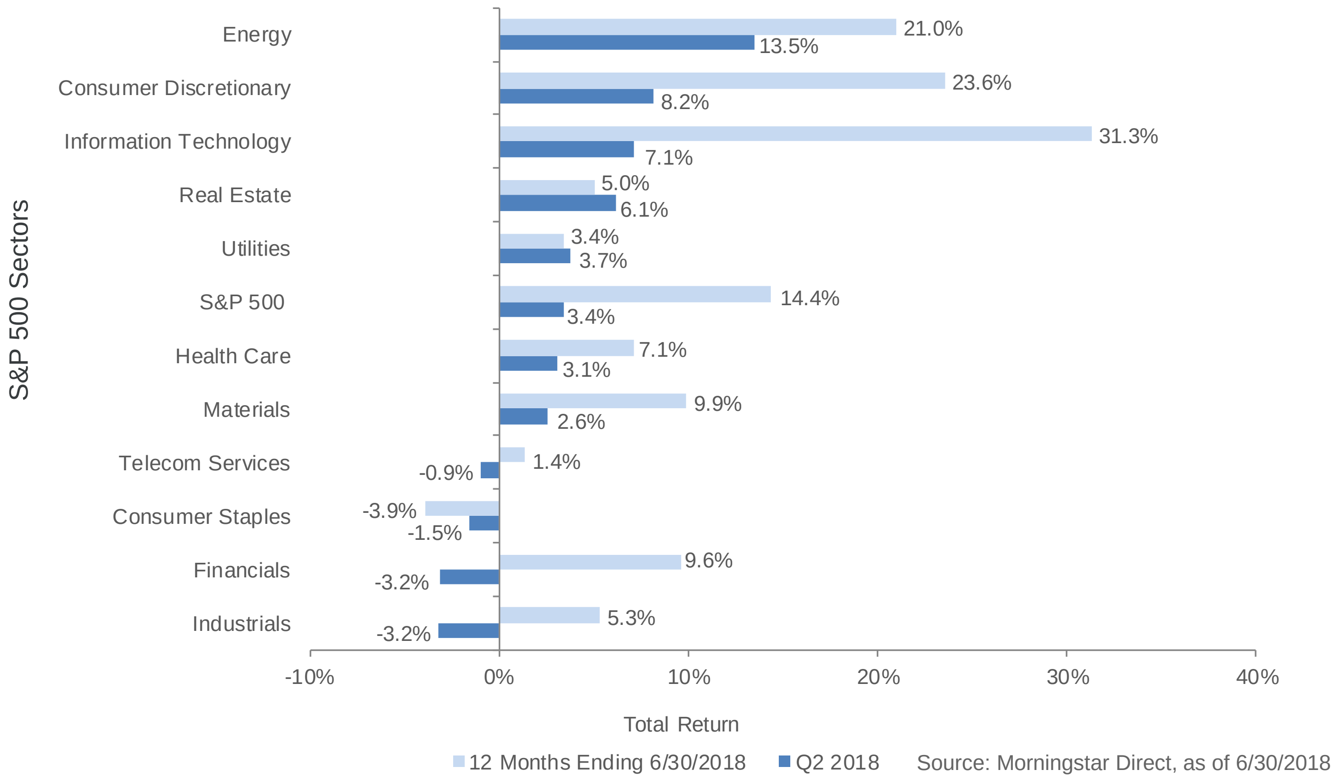
 Past performance is not indicative of future results. Please see slides 26-28 for asset class and index definitions.

S&P 500 SECTOR RETURNS

"Crude prices rallied on the news of OPEC settling on production increases below levels feared by the market. Fundamentals remain healthy, while valuation allows for upside."

"Information technology was the top performing sector for both the second quarter and over the last 12 months. Healthy fundamentals are expected to continue."

- Joey Madere, Senior Portfolio Strategist, Equity Portfolio & Technical Strategy



Past performance is not indicative of future results. Please see slides 29 for equity sector definitions.

Returns are based on the GICS Classification model. Returns are cumulative total return for stated period, including reinvestment of dividends.

EQUITY STYLES

Growth stocks continue to outperform value based in most spaces on near-term and longer-term momentum. We are inching closer to a value trade in the mid- and small-cap space, yet growth companies should further benefit from higher earnings estimates in the short run. Rising interest rates remain a headwind for value stocks.

Q2 2018 Total Return

	Value	Blend	Growth
Large	1.2%	3.6%	5.8%
Mid	2.4%	2.8%	3.2%
Small	8.3%	7.8%	7.2%

Source: Morningstar Direct, as of 6/30/2018

12-Month Total Return

	Value	Blend	Growth
Large	6.8%	14.5%	22.5%
Mid	7.6%	12.3%	18.5%
Small	13.1%	17.6%	21.9%

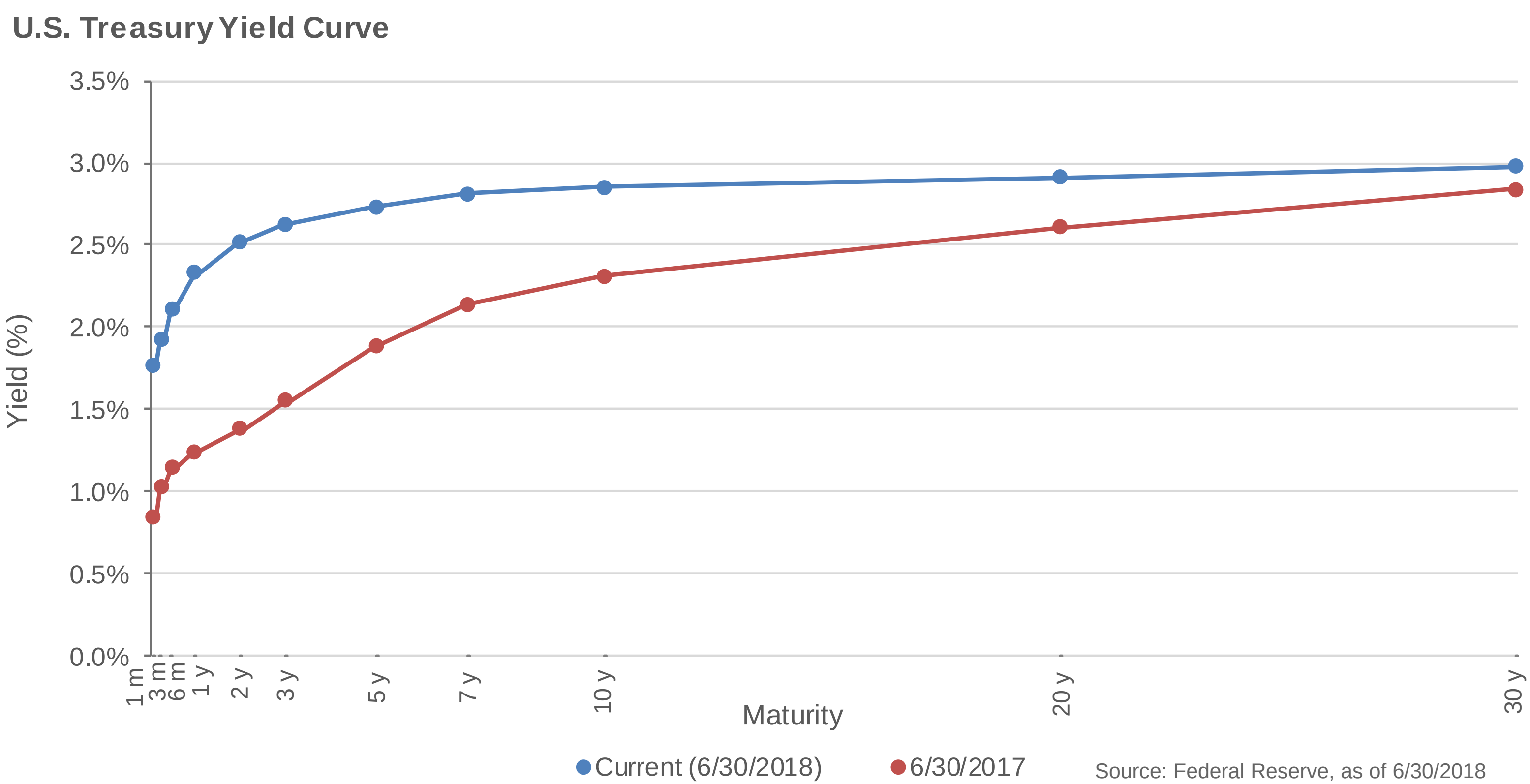
Source: Morningstar Direct, as of 6/30/2018

Style box returns based on the GICS Classification model. All values are cumulative total return for stated period including reinvestment of dividends. The indices used from left to right, top to bottom are: Russell 1000 Value Index, Russell 1000 Index, Russell 1000 Growth Index, Russell Mid-Cap Value Index, Russell Mid-Cap Blend Index, Russell Mid-Cap Growth Index, Russell 2000 Value Index, Russell 2000 Index and Russell 2000 Growth Index.

 Past performance is not indicative of future results. Please see slides 26-28 for asset class and index definitions.

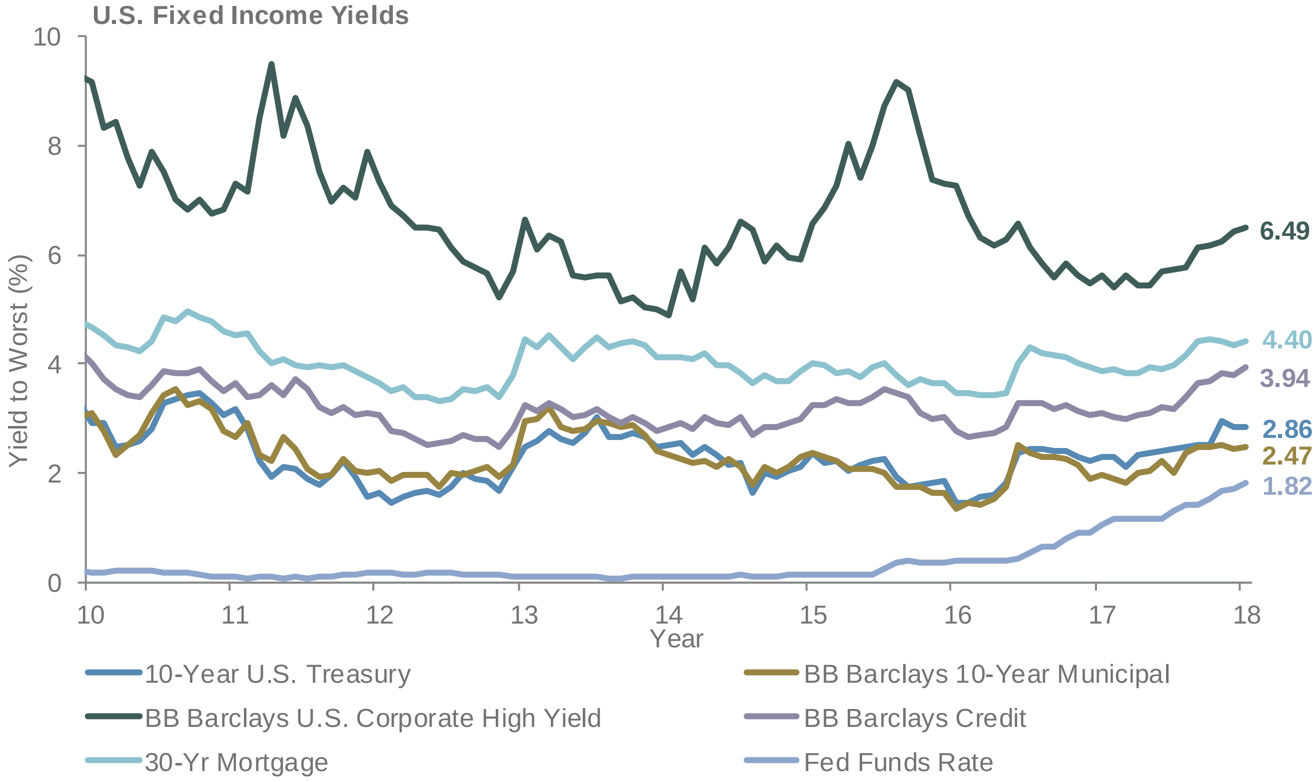
THE U.S. TREASURY YIELD CURVE

"We still have this interesting phenomenon where the Fed is moving in the opposite direction of most central banks around the world. It's also moving in the opposite direction of the administration, which is doing everything it can to promote growth, while you have the Fed calming growth with steady rate hikes."
– Doug Drabik, Senior Strategist, Fixed Income



Source: Federal Reserve, as of 6/30/2018

FIXED INCOME YIELDS

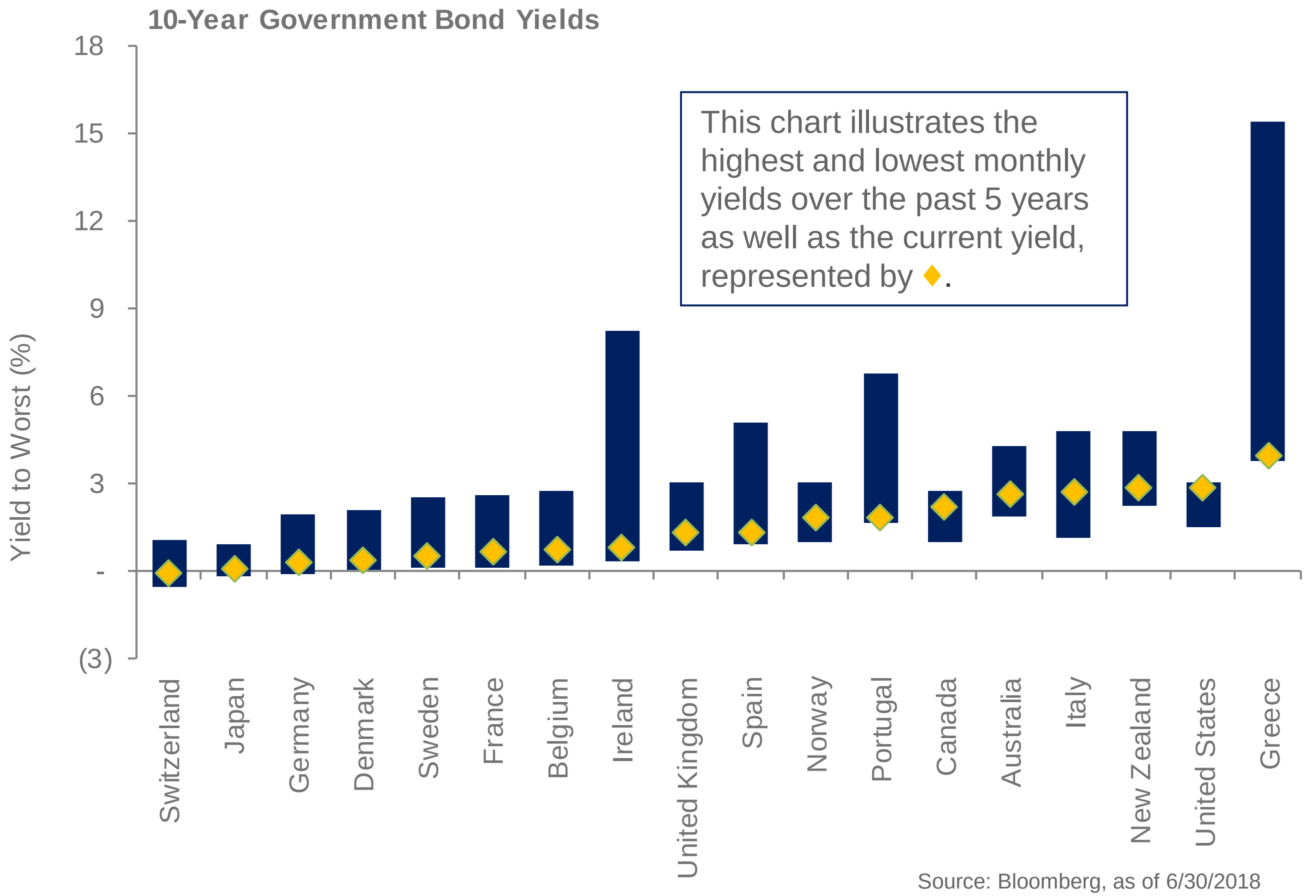


Source: Bloomberg, as of 6/30/2018

 Past performance is not indicative of future results. Please see slides 26-28 for asset class and index definitions.

GLOBAL SOVEREIGN DEBT YIELDS

“As long as we have strong demand for our Treasury bonds and global rate disparity continues, we expect long-term rates to stay range bound - maybe creep up - but at a very slow pace.”
- Nick Goetze, Managing Director, Fixed Income



Source: Bloomberg, as of 6/30/2018

S&P 500 YIELD VS. TREASURY YIELD

"Short to intermediate bonds, including Treasuries, now yield more than the broad equity market. These are the best options in pure fixed income investment."
*– James Camp, CFA, Managing Director of Fixed Income, Eagle Asset Management**

Source: Bloomberg, as of 6/30/2018

Past performance is not indicative of future results. Please see slides 26-28 for asset class and index definitions.

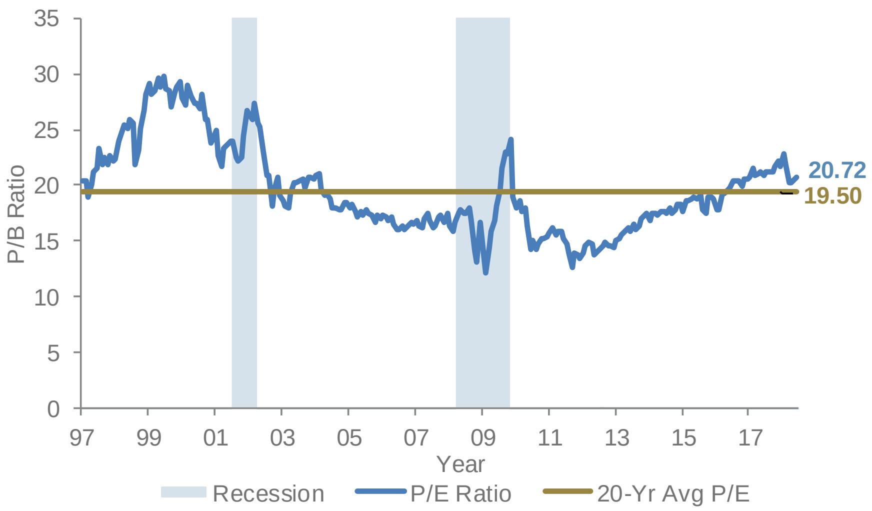
**An affiliate of Raymond James & Associates and Raymond James Financial Services.*

PRICE-TO-EARNINGS AND PRICE-TO-BOOK RATIOS

"Earnings growth this quarter was stellar by all accounts: 9.5% sales growth and 25% earnings growth. Late cycle, it is highly unlikely we will get stronger earnings growth than this, but 'peak earnings growth' should not be confused with 'peak earnings.' Fundamental momentum is attractive, and earnings growth next year is expected to be ~10% (which would be better than the 2012-2016 period)."

- Joey Madere, Senior Portfolio Strategist, Equity Portfolio & Technical Strategy

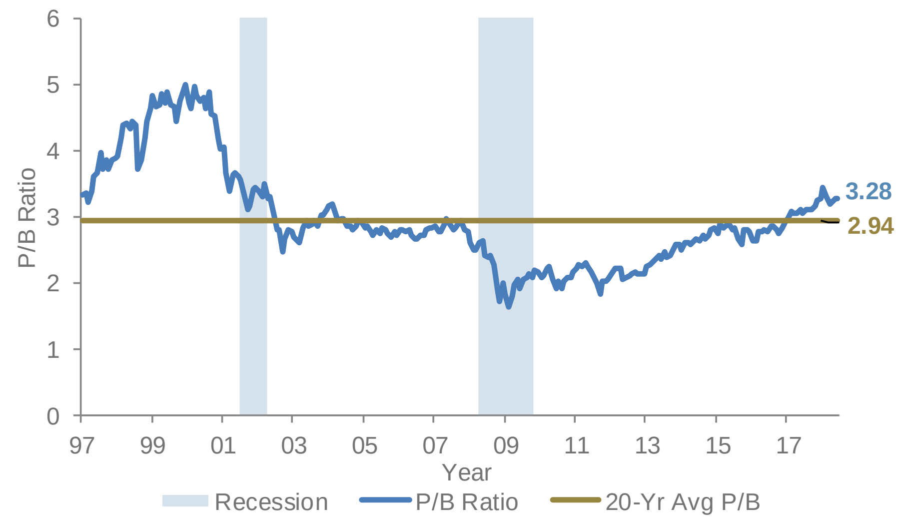
S&P 500 Price-to-Earnings



Source: Bloomberg, as of 6/30/2018

The price-to-earnings ratio, or P/E, is a common measure of the value of stocks. It shows the relationship between a stock's price and the underlying company's earnings (or profits) per share of stock. In essence, it calculates how many dollars you pay for each dollar of a company's earnings. In very general terms, the higher the P/E ratio, the more likely the stock is to be overpriced.

S&P 500 Price-to-Book



Source: Bloomberg, as of 6/30/2018

The price-to-book ratio, or P/B, is a relative measure based on most recent price/accounting (book) value (quarterly, semiannual or annual data). Both price-to-earnings and price-to-book are accounting-based relative value measures.

 Past performance is not indicative of future results. Please see slides 26-28 for asset class and index definitions.

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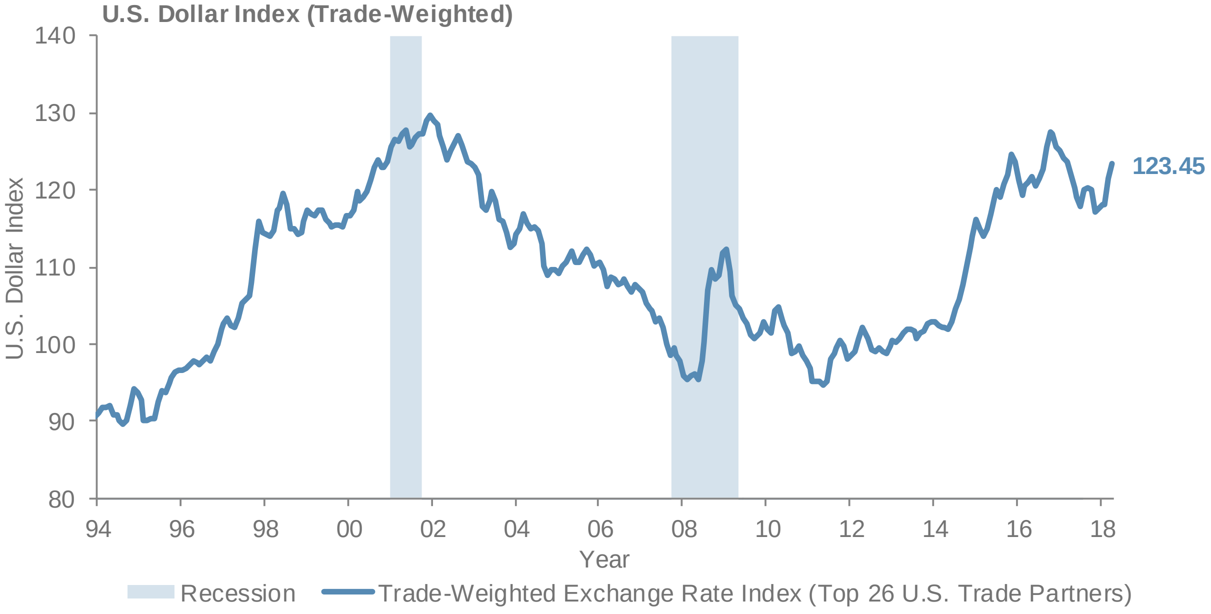
FOREIGN EXCHANGE RATES

"With the dollar expected to continue on an upward trend, (despite the possibility of a near-term pullback) international returns would be eroded by the subsequent depreciation of foreign currencies against the dollar. Exchange rates can be extremely difficult to predict, so the path of the dollar remains a wild card for international investments going forward."
_- Nicholas Lacy, CFA, Chief Portfolio Strategist, Asset Management Services



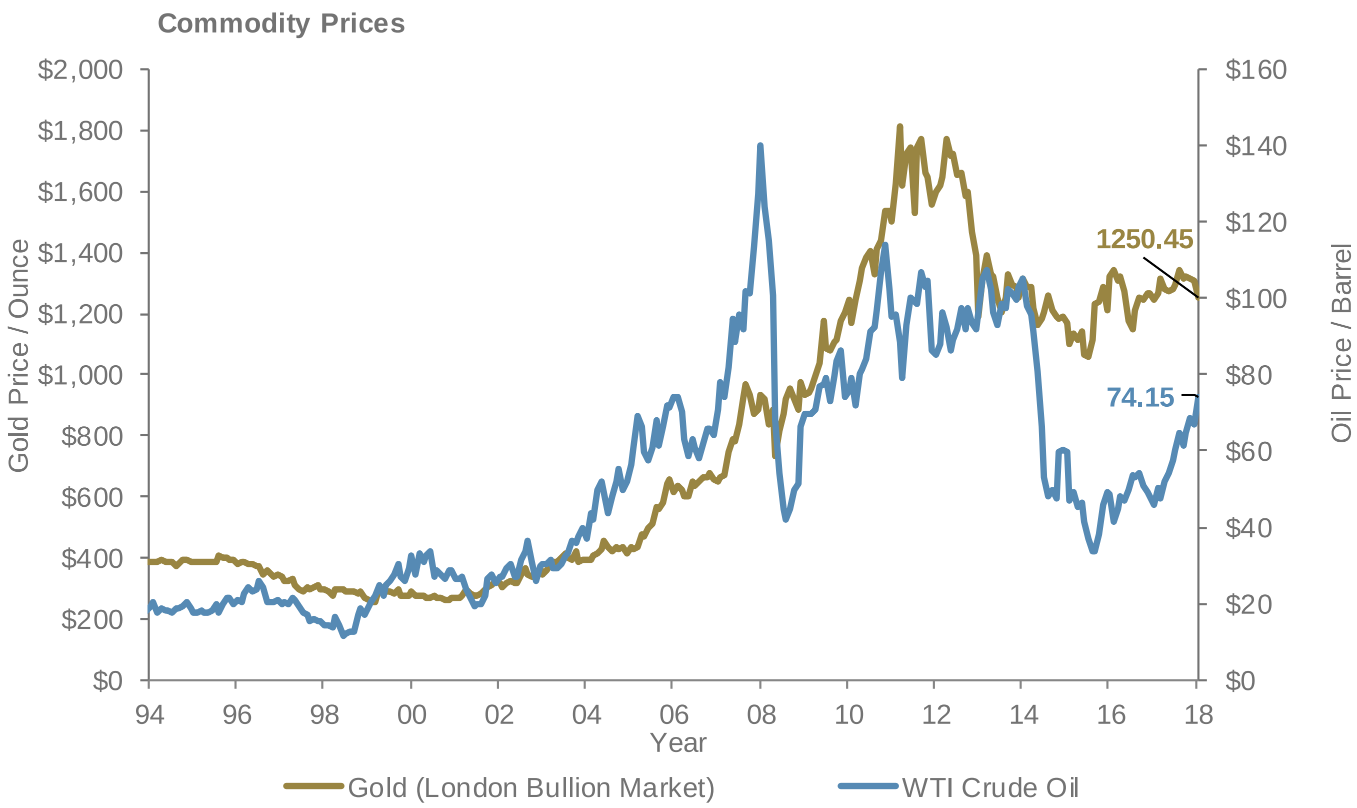
Source: Bloomberg, as of 6/30/2018

	6/30/2018	6/30/2017
Source: Bloomberg, as of 6/30/2018		
U.S. Dollar ($) / Japanese Yen (¥)	110.76	112.39
Euro (€) / U.S. Dollar ($)	1.1684	1.1426
British Pound (£) / U.S. Dollar ($)	1.3207	1.3025

 Past performance is not indicative of future results. Please see slides 26-28 for asset class and index definitions.

COMMODITY PRICES

"It is worth underscoring that the oil futures curve is suggesting that the commodity market is signaling a sharp drop in oil prices from current levels over the next three years. To the contrary, our view is that prices still have room to move higher over the next several years."
- Pavel Molchanov, Energy Analyst, Equity Research



Source: Bloomberg, as of 6/30/2018

 Past performance is not indicative of future results. Please see slides 26-28 for asset class and index definitions.

SQUARING OFF: A HIGH-STAKES GLOBAL GAME

"As nations vie for supremacy around the world, the U.S. continues to lead with China close behind in lockstep."
*- Chris Bailey, European Strategist, Raymond James Euro Equities**

KEY TAKEAWAYS:

• China's singular focus on economic development over the past generation has achieved huge success. In more recent years, the Chinese have made efforts to broaden their global influence as well as their diplomatic and political roles.

• America has to finance its fiscal deficit in order to keep the economic show on the road, and China needs relative global economic stability in order to continue its fairly seamless rapid development.

• In Europe, planning for a lengthy Brexit transition period and measures to make the entire European economy more dynamic should continue to be top priorities. Despite all the negative headlines, this is still within the grasp of Europe's policymakers.

• It is far better to keep full interaction with the world's number one economy today whilst pushing domestic change and reform initiatives.

For full theme articles, ask for a copy of the July 2018 Investment Strategy Quarterly.
**An affiliate of Raymond James & Associates, Inc. and Raymond James Financial Services, Inc.*

CORPORATE EARNINGS: THE FUEL THAT POWERS THE STOCK MARKET

"Since the end of the financial crisis, economic growth in the U.S. has largely been attributed to additions in the labor market, as the unemployment rate has steadily decreased since 2008."

Andrew Adams, CFA, CMT, Senior Research Associate, Equity Research

KEY TAKEAWAYS:

- The pace of earnings growth should slow down in future quarters, but we believe the market understands this and does not expect 20% earnings growth to continue indefinitely.

- It is unlikely that the U.S. will continue to add workers at the same pace of the past few years, which means companies will have to focus instead on productivity growth to keep the wheels turning.

- Investors are still gathering evidence of what companies are doing with their excess cash, but preliminary signs show some pickup in both business investment and wages.

- Investing in the future and improving productivity will increase the chances of continued economic expansion while helping the stock market combat rising input costs and higher expectations of today's investors.

MID-YEAR ECONOMIC OUTLOOK: THE FED'S BALANCING ACT

"The U.S. economy continued to expand at a moderate rate in the first half of 2018, although growth was a bit uneven across sectors. The underlying fundamentals of the economy remain sound."

Scott Brown, Ph.D., Chief Economist, Equity Research

KEY TAKEAWAYS:

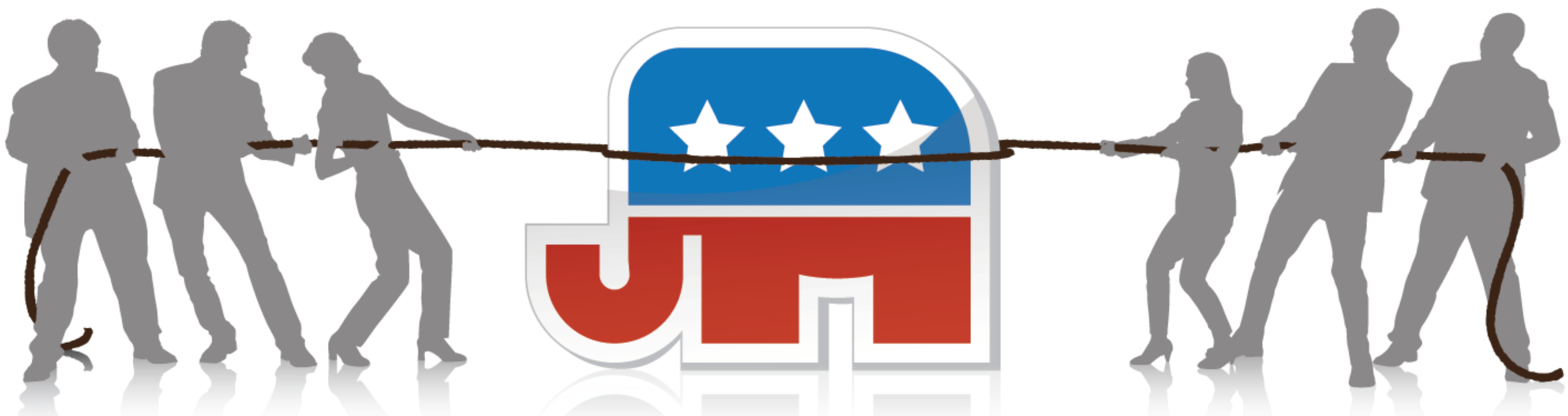
- The key to our outlook is the Fed's balancing act, as it attempts 'a soft landing,' where growth slows to a long-term sustainable pace.

- The expansion is now the second longest on record and there are no signs of a recession on the immediate horizon. However, there are some challenges for the second half of the year.

- There is little risk of the U.S. economy entering a recession this year, but the odds are higher as we look to next year, reflecting the possibility of a monetary policy error.

- Weighing all these uncertainties will make the Fed's task of achieving a soft landing even more difficult, and the risks of a policy error are rising. However, the near-term economic outlook remains optimistic.

PROTECTIONISM: A POLITICAL PREDICAMENT



Q&A: OIL PRICES AT FOUR-YEAR HIGHS: WHAT IT MEANS FOR ENERGY INVESTORS

Pavel Molchanov, Energy Analyst, Equity Research

KEY TAKEAWAYS:

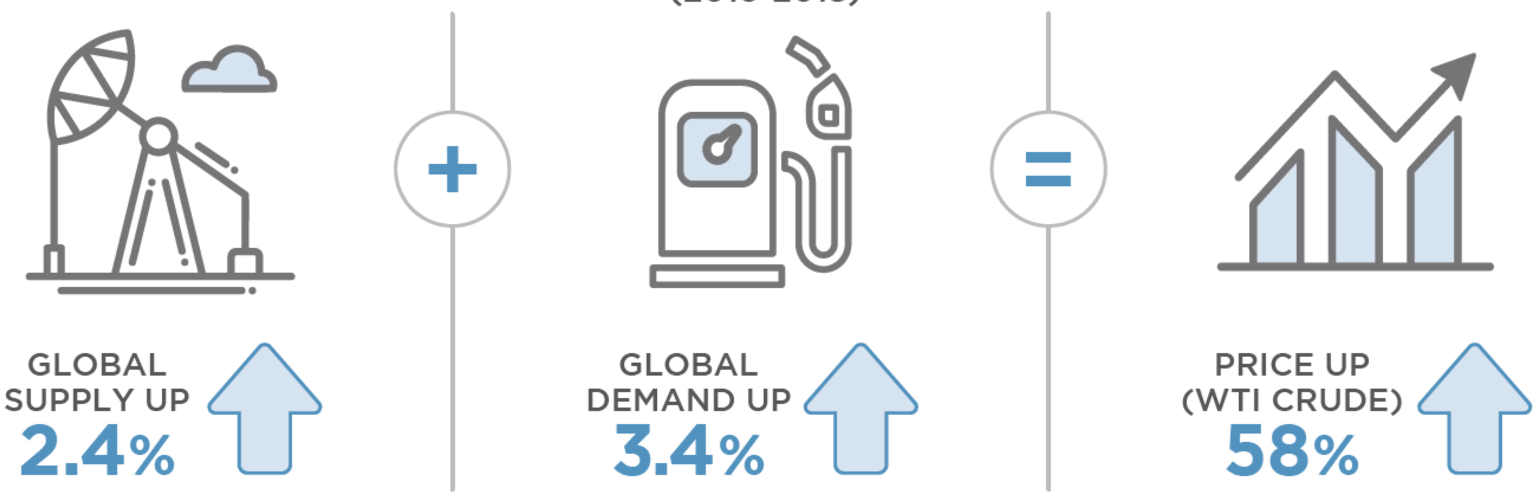
• For the fourth consecutive year, global demand is set to grow faster than its long-term average of 1.4% per year, with emerging markets continuing to drive the bulk of the increase. Supply is also up, but is limited by several factors.

• It is worth underscoring that the oil futures curve is suggesting that the commodity market is signaling a sharp drop in oil prices from current levels over the next three years. To the contrary, our view is that prices still have room to move higher over the next several years.

• Higher oil prices are not ideal for the world's major economies since most of them are net oil importers (especially Japan, India, and most of Europe). The U.S. and China present more of a mixed picture, since they produce a sizable portion of their oil consumption.

SUPPLY AND DEMAND PUSHING PRICES UP

(2016-2018)



Source: International Energy Agency and Raymond James research as of 06/18/2018

DISCLOSURE

Data provided by Morningstar Direct, Bloomberg.

This material is for informational purposes only and should not be used or construed as a recommendation regarding any security outside of a managed account.

There is no assurance that any investment strategy will be successful or that any securities transaction, holdings, sectors or allocations discussed will be profitable. It should not be assumed that any investment recommendation or decisions made in the future will be profitable or will equal any investment performance discussed herein.

Please note that all indices are unmanaged and investors cannot invest directly in an index. An investor who purchases an investment product that attempts to mimic the performance of an index will incur expenses that would reduce returns. Past performance is not indicative of future results. The performance noted in this presentation does not include fees and costs, which would reduce an investor's returns.

- **Fixed Income**: subject to credit risk and interest rate risk. An issuer’s ability to pay the promised income and return of principal upon maturity may impact the issuer’s credit rating. Generally, when interest rates rise, bond prices fall, and vice versa. Specific-sector investing can be subject to different and greater risks than more diversified investments.
- **Personal Consumption Expenditure Index (PCE):** a measure of inflation, this index measures the price changes in consumer goods and services. Personal consumption expenditures consist of the actual and imputed expenditures of households; the measure includes data pertaining to durables, non-durables and services.
- **Gross Domestic Product (GDP**): a broad measurement of a nation’s overall economic activity. It is the monetary value of all the finished goods and services produced within a country's borders in a specific time period, including all private and public consumption, government outlays, investments and net exports that occur within a defined territory.
- **Price-to-Earnings Ratio (P/E)**: a ratio for valuing a company that measures its current share price relative to its per-share earnings.
- **Price-to-Book Ratio (P/B):** A ratio used to compare a stock's market value to its book value. It is calculated by dividing the current closing price of the stock by the latest quarter's book value per share.
- **Small-cap and Mid-Cap Equity:** generally involve greater risks, and may not be appropriate for every investor. International investing also involves special risks, including currency fluctuations, different financial accounting standards, and possible political and economic volatility.
- **High-Yield Fixed Income:** not suitable for all investors. Risk of default may increase due to changes in the issuer’s credit quality. Price changes may occur due to changes in interest rates and the liquidity of the bond. When appropriate, these bonds should only comprise a modest portion of your portfolio.
- **Commodities**: trading is generally considered speculative because of the significant potential for investment loss.
- **U.S. Government Fixed Income**: guaranteed timely payment of principal and interest by the federal government. **U.S. Treasury Bills**: A short-term debt obligation backed by the U.S. government with a maturity of less than one year.
- **Fixed Income Sectors:** Returns based on the four sectors of Barclays Global Sector Classification Scheme: Securitized (consisting of U.S. MBS Index, the ERISA-Eligible CMBS Index and the fixed-rate ABS Index), Government Related (consisting of U.S. Agencies and non-corporate debts with four sub sectors: Agencies, Local Authorities, Sovereign and Supranational), Corporate (dollar-denominated debt from U.S. and non-U.S. industrial, utility, and financial institutions issuers), and Treasuries (includes public obligations of the U.S. Treasury that have remaining maturities of one year or more).

Asset allocation and diversification does not guarantee a profit nor protect against loss. Dividends are not guaranteed and will fluctuate.

Past performance is not indicative of future results. Investing in international securities involves additional risks such as currency fluctuations, differing financial accounting standards, and possible political and economic instability. These risks are greater in emerging markets.

The values of real estate investments may be adversely affected by several factors, including supply and demand, rising interest rates, property taxes, and changes in the national, state and local economic climate. Companies engaged in business related to a specific sector are subject to fierce competition and their products and services may be subject to rapid obsolescence. There are additional risks associated with investing in an individual sector including limited diversification.

INDEX DESCRIPTIONS

Asset class and reference benchmarks:

ASSET CLASS	BENCHMARK
U.S. Equity	Russell 3000 TR
Non-U.S. Equity	MSCI ACWI ex US NR
U.S. Fixed Income	Barclays U.S. Aggregate Bond TR
Global Real Estate (prior to 2008)	NASDAQ Global Real Estate NR
Global Real Estate (2008-present)	FTSE EPRA/NAREIT Global Real Estate NR
Commodities	Bloomberg Commodity TR USD
Cash & Cash Alternatives	Citi Treasury Bill 3 Mon USD

Bloomberg Commodity Total Return Index: Formerly the Dow Jones-UBS Commodity Index TR (DJUBSTR),is composed of futures contracts and reflects the returns on a fully collateralized investment in the BCOM. This combines the returns of the BCOM with the returns on cash collateral invested in 3 Month U.S. Treasury Bills.

Barclays 10-Year Municipal Bond Index: A rules-based, market-value weighted index engineered for the long-term tax-exempt bond market. This index is the 10 year (8-12) component of the Municipal Bond Index.

Barclays 10-Year U.S. Treasury Index: Measures the performance of U.S. Treasury securities that have a remaining maturity of 10 years.

Barclays U.S. Aggregate Bond 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.

Barclays Global Aggregate ex-U.S. Bond Index: Tracks an international basket of bonds that currently contains 65% government, 14% corporate, 13% agency and 8% mortgage-related bonds.

Barclays High Yield Bond Index: Covers the universe of fixed-rate, non-investment grade debt. Pay-in-kind (PIK) bonds, 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 and 144-As are also included.

Barclays U.S. Credit Index: an index composed of corporate and non-corporate debt issues that are investment grade (rated Baa3/BBB- or higher).

Citi 3-Month Treasury-Bill Index: This is an unmanaged index of three-month Treasury bills.

INDEX DESCRIPTIONS (continued)

FTSE EPRA/NAREIT Global Real Estate Index : designed to represent general trends in eligible listed real estate stocks worldwide. Relevant real estate activities are defined as the ownership, trading and development of income producing real estate.

MSCI All Country World Index Ex-U.S Index (ACWI ex U.S.): a market-capitalization-weighted index maintained by Morgan Stanley Capital International (MSCI) and designed to provide a broad measure of stock performance throughout the world, with the exception of U.S.-based companies. It includes both developed and emerging markets.

MSCI EAFE Index (Europe, Australasia, Far East): a free-float adjusted market capitalization index that is designed to measure developed market equity performance, excluding the United States and Canada. The EAFE consists of the country indices of 21 developed nations.

MSCI EAFE Growth Index: represents approximately 50% of the free-float adjusted market capitalization of the MSCI EAFE index, and consists of those securities classified by MSCI as most representing the growth style.

MSCI EAFE Small-Cap Index: an unmanaged, market-weighted index of small companies in developed markets, excluding the U.S. and Canada.

MSCI EAFE Value: represents approximately 50% of the free-float adjusted market capitalization of the MSCI EAFE index, and consists of those securities classified by MSCI as most representing the value style.

MSCI Emerging Markets Index: designed to measure equity market performance in 25 emerging market indexes. The three largest industries are materials, energy and banks.

MSCI Local Currency Index: a special currency perspective that approximates the return of an index as if there were no currency valuation changes from one day to the next.

NASDAQ Global Real Estate Index: the index measures the performance of real estate stocks which listed on an Index Eligible Global Stock Exchange. The index is market-capitalization weighted.

Russell 1000 Index: measures the performance of the 1,000 largest companies in the Russell 3000 Index, which represents approximately 90% of the investible U.S. equity market.

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

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

Russell Mid-Cap Index: measures the performance of the 800 smallest companies of the Russell 1000 Index, which represent approximately 30% of the total market capitalization of the Russell 1000 Index.

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

Russell Mid-Cap Growth Index: measures the performance of those Russell Mid-cap companies with higher price-to-book ratios and higher forecasted growth values.

Russell 2000 Index: measures the performance of the 2,000 smallest companies in the Russell 3000 Index, which represent approximately 8% of the total market capitalization of the Russell 3000 Index.

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

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

Russell 3000 Index: measures the performance of the 3,000 largest U.S. companies based on total market capitalization, which represents approximately 98% of the investable U.S. equity market.

INDEX DESCRIPTIONS (continued)

Standard & Poor's 500 (S&P 500): measures changes in stock market conditions based on the average performance of 500 widely held common stocks. Represents approximately 68% of the investable U.S. equity market.

S&P 500 Consumer Discretionary: comprises those companies included in the S&P 500 that are classified as members of the GICS® consumer discretionary sector.

S&P 500 Consumer Staples: comprises those companies included in the S&P 500 that are classified as members of the GICS® consumer staples sector.

S&P 500 Energy: comprises those companies included in the S&P 500 that are classified as members of the GICS® energy sector.

S&P 500 Financials: comprises those companies included in the S&P 500 that are classified as members of the GICS® financials sector

S&P 500 Health Care: comprises those companies included in the S&P 500 that are classified as members of the GICS® health care sector.

S&P 500 Industrials: comprises those companies included in the S&P 500 that are classified as members of the GICS® industrials sector.

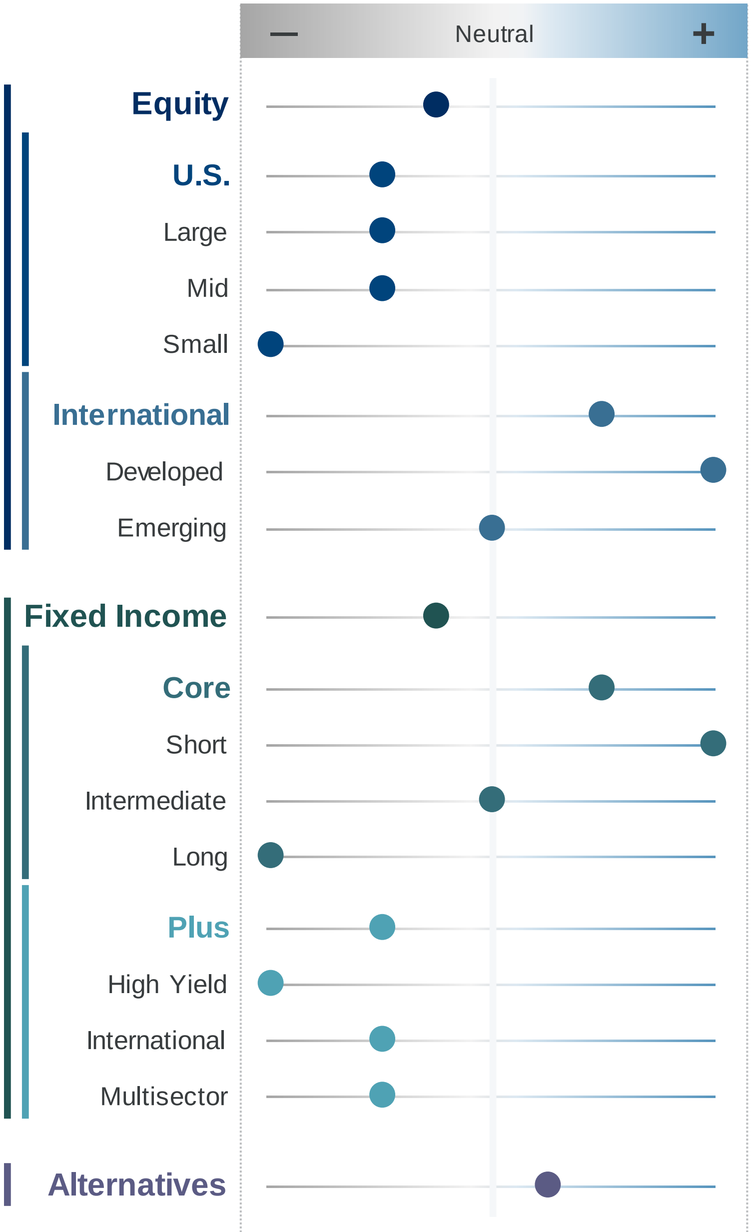
S&P 500 Information Technology: comprises those companies included in the S&P 500 that are classified as members of the GICS® information technology sector.

S&P 500 Materials: comprises those companies included in the S&P 500 that are classified as members of the GICS® materials sector.

S&P 500 Telecom Services: comprises those companies included in the S&P 500 that are classified as members of the GICS® telecommunication services sector.

S&P 500 Utilities: comprises those companies included in the S&P 500 that are classified as members of the GICS® utilities sector.

RAYMOND JAMES GLOBAL ASSET ALLOCATION VIEWS



Commentary

- We remain slightly underweight on overall equity as valuations in the U.S. remain elevated, increasing downside risk.
- U.S. equites are a bit of a conundrum. Despite elevated valuations, increased earnings growth estimates - due to recent tax cuts – are bolstering near-term fundamentals.
- We maintain an overweight to international equities, particularly in developed markets, due to attractive valuations relative to the U.S. and accommodative central bank policy in Europe and Japan.
- Emerging markets experienced a large selloff in the second quarter, primarily attributable to a strong U.S. dollar and fears of a trade war. We remain constructive longer term and recommend a neutral weighting.

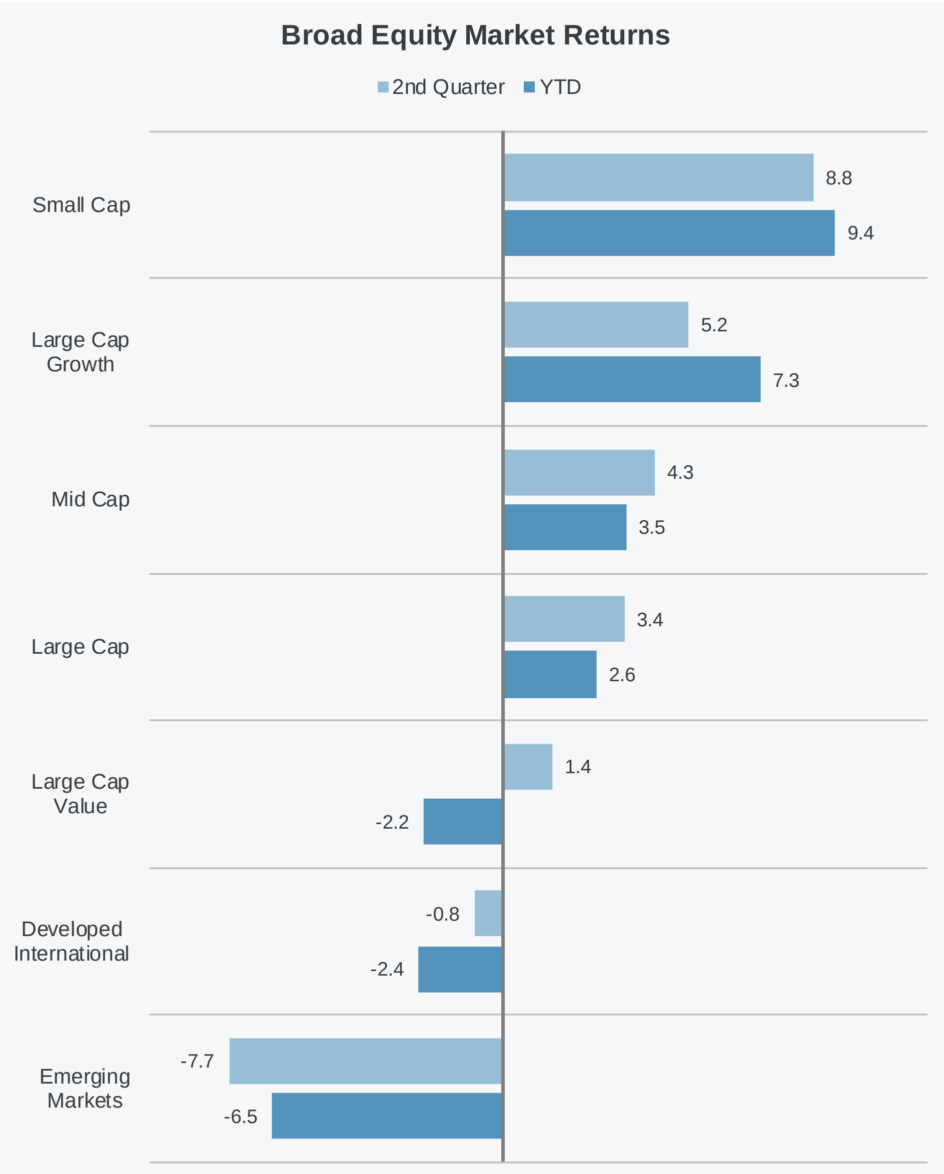
- We recommend a slight underweight to overall fixed income due to the rising interest-rate environment in the U.S.
- Despite the interest-rate sensitivity of core fixed income, the benefits of equity risk protection warrant allocations to this space as part of a diversified portfolio. While short–term rates are expected to continue their ascent, overall return expectations at the longer end of the yield curve remain low.
- We recommend a full overweight to short duration as the slope of the yield curve has flattened, providing nearly as much return with less rate risk.
- Spreads between high yield bonds and Treasuries are at historical lows, justifying a full underweight as investors are not being appropriately compensated for risk.
- Non-U.S. fixed income is sensitive to exchange rates and the U.S. dollar is likely to move higher as the Federal Reserve continues to raise short-term rates.

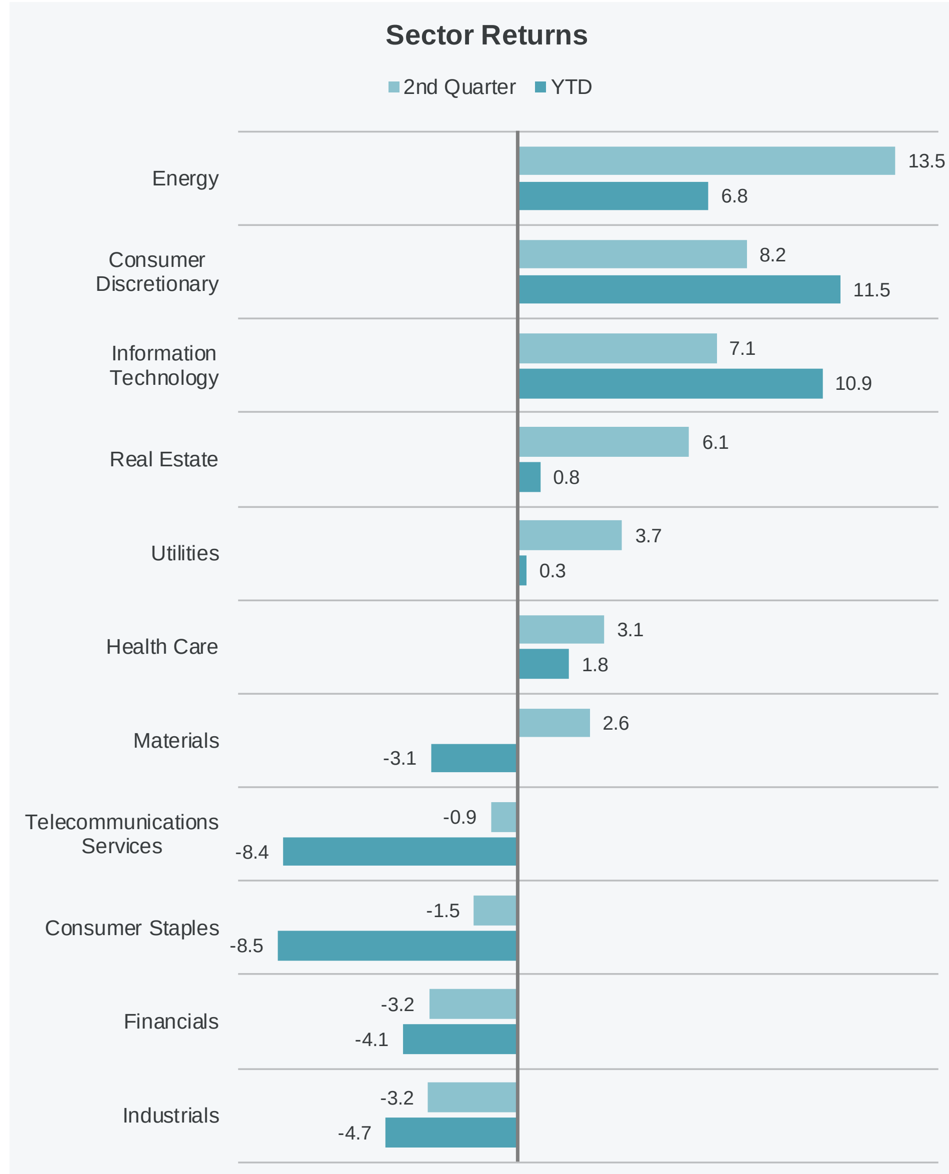
- Alternatives can be best utilized by providing downside protection from rising interest rates.

EQUITY MARKET RETURNS

U.S. Small Cap equities lead all major markets while emerging markets suffered from U.S. Dollar strength and trade tensions. Growth continues to outperform value in the U.S. and abroad.

Growth Sectors - Energy, Discretionary, and Tech posted healthy gains while defensive sectors finished down for the quarter and YTD.

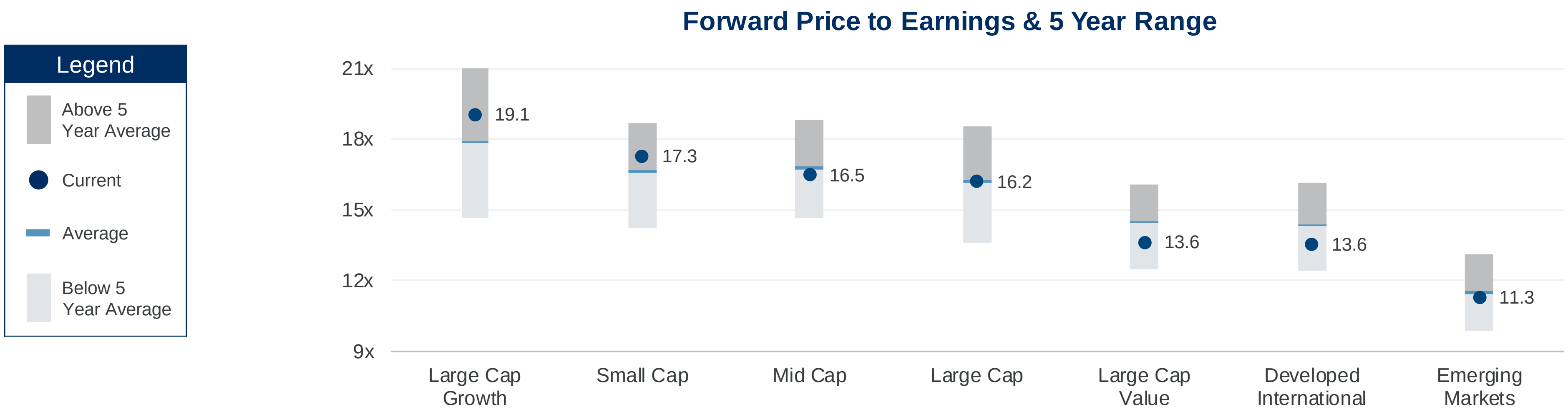




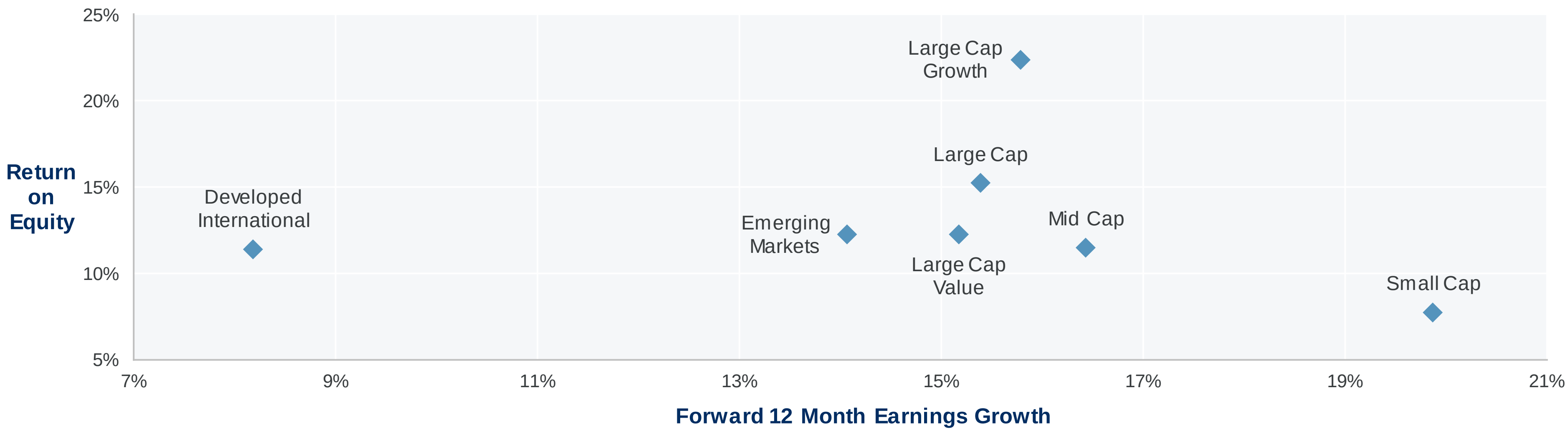
Source: Factset as of 6/29/2018

EQUITY MARKET FUNDAMENTALS

U.S. growth and small caps are presently trading at the highest valuations among major equity markets. U.S. value and international equities are the most attractive based on next twelve months earnings projections. While valuations in the U.S. are higher than average, acceleration in earnings helped drive multiples lower.



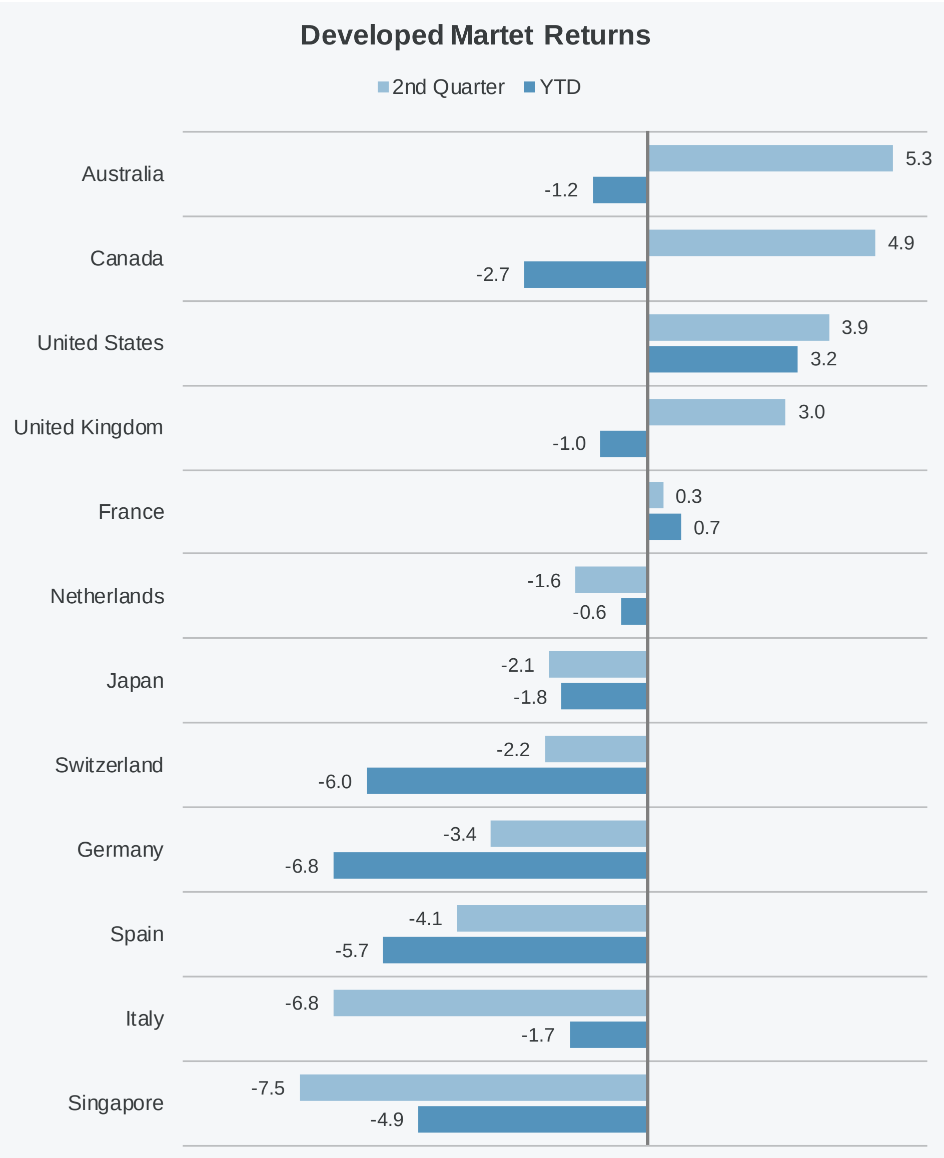
While unattractive from a valuation perspective, U.S. growth continues to offer desirable profitability and earnings growth. Growth expectations are low for developed International as Europe faces central bank uncertainty. Small caps are showing the lowest profitability but higher earnings growth projections over the next 12 months. Higher ROE and earnings growth have supported elevated valuation multiples in the best performing markets.



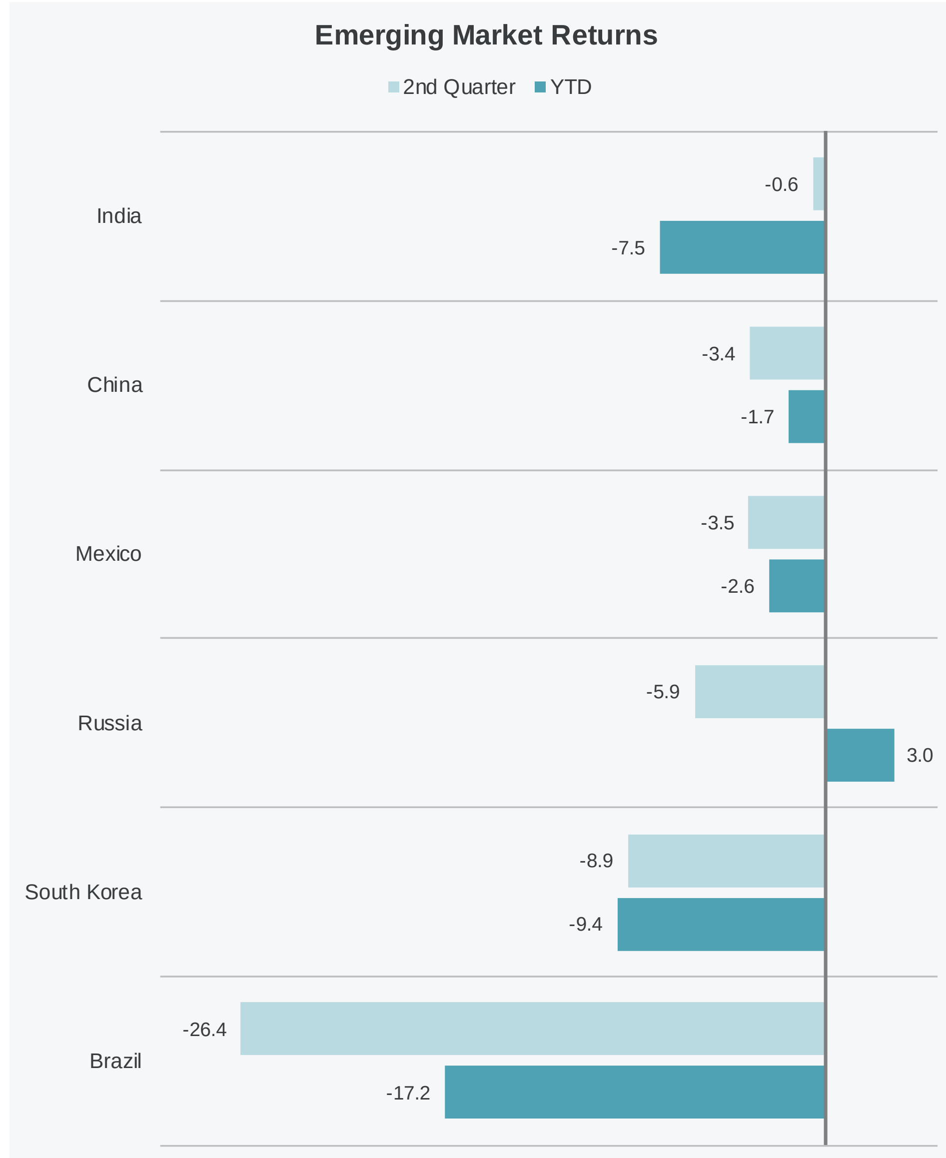
Source: Factset data as of 6/29/2018. Forward earnings are consensus next twelve month (NTM) projections.

GLOBAL EQUITY RETURNS

U.S. equites continue to perform well relative to other equity markets. Most global equity markets are negative for 2018 on a U.S. Dollar basis.



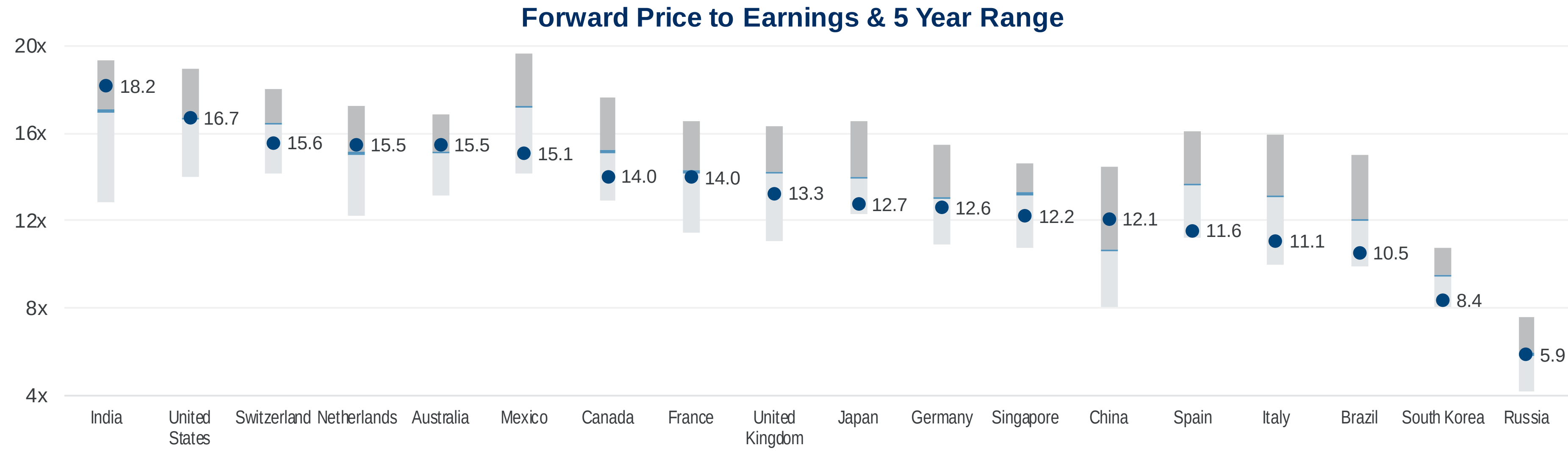
Increased volatility, outflows, and currency weakness have led to negative returns across all major EM countries.



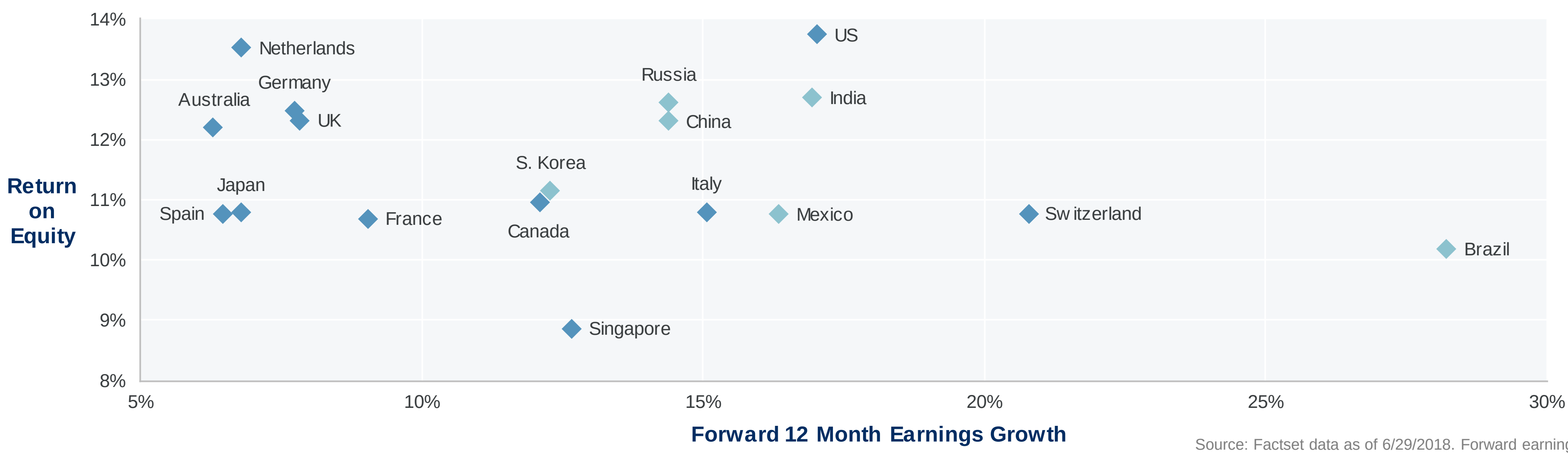
Source: Factset as of 6/29/2018

GLOBAL EQUITY FUNDAMENTALS

The combination of lackluster 2Q returns and healthy earnings growth has kept global valuations reasonable. Most countries are trading at average valuations aside from India and China. Attractive valuations can be found in both developed and emerging markets yet the latter tends to be more risky.



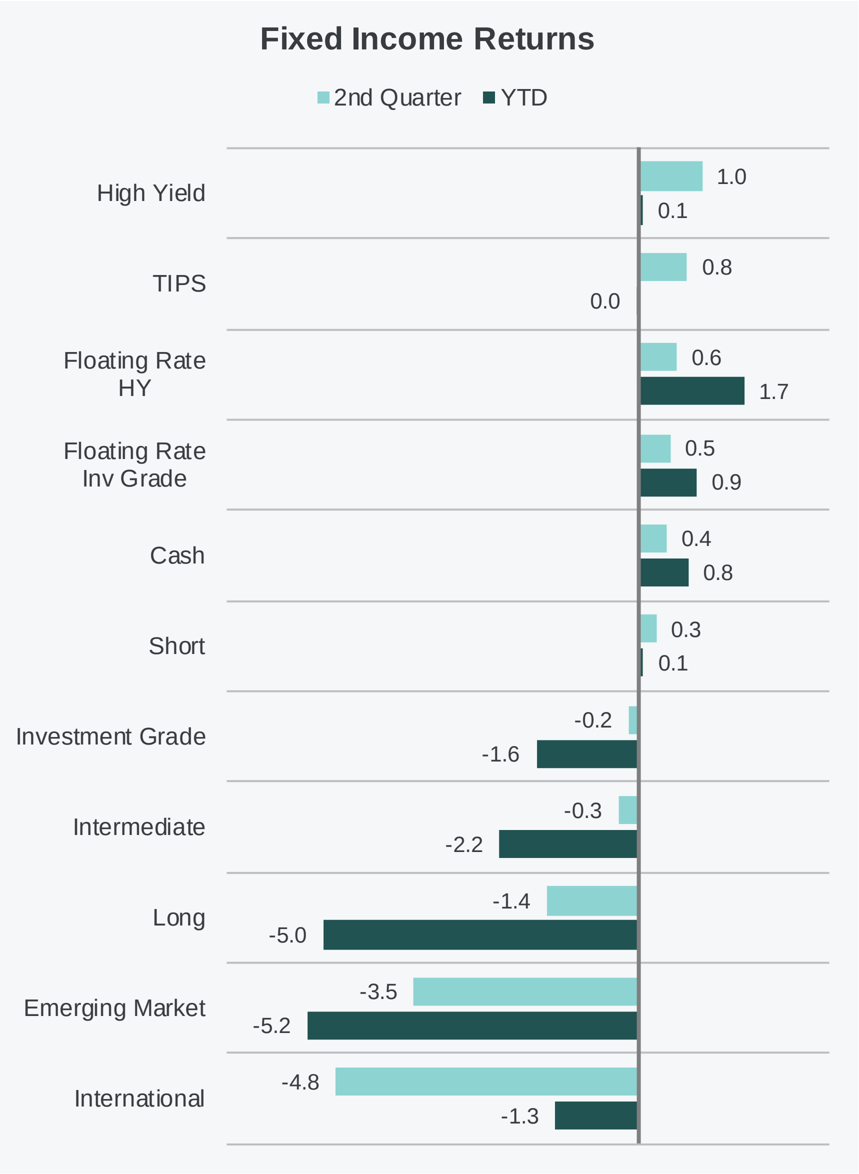
US Equities have offered a solid balance of profitability & earnings growth, but maintaining current levels may not be sustainable for longer periods. Growth expectations for Emerging Markets remain high while sentiment for Eurozone equities is underwhelming.



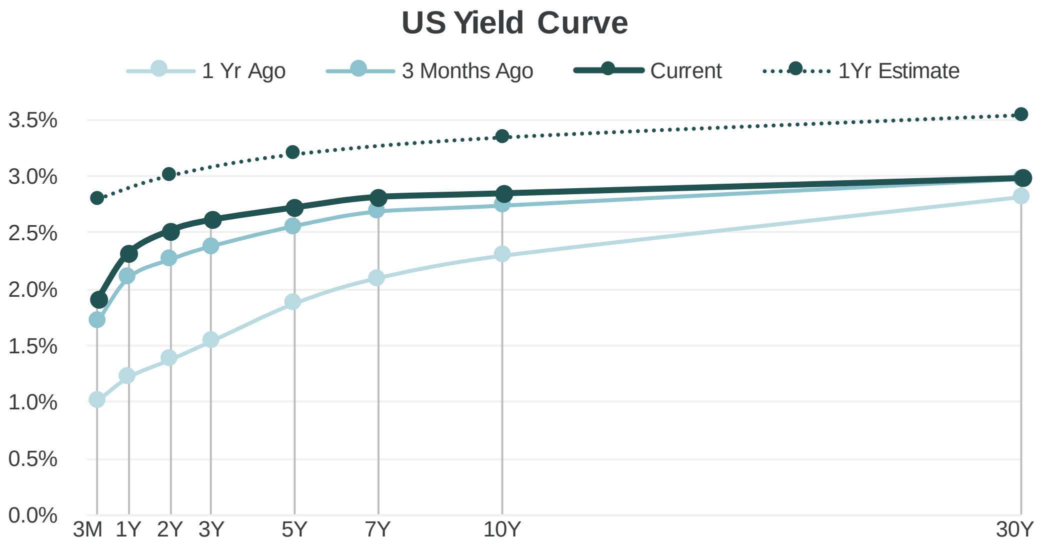
Source: Factset data as of 6/29/2018. Forward earnings are consensus next twelve month (NTM) projections.

FIXED INCOME

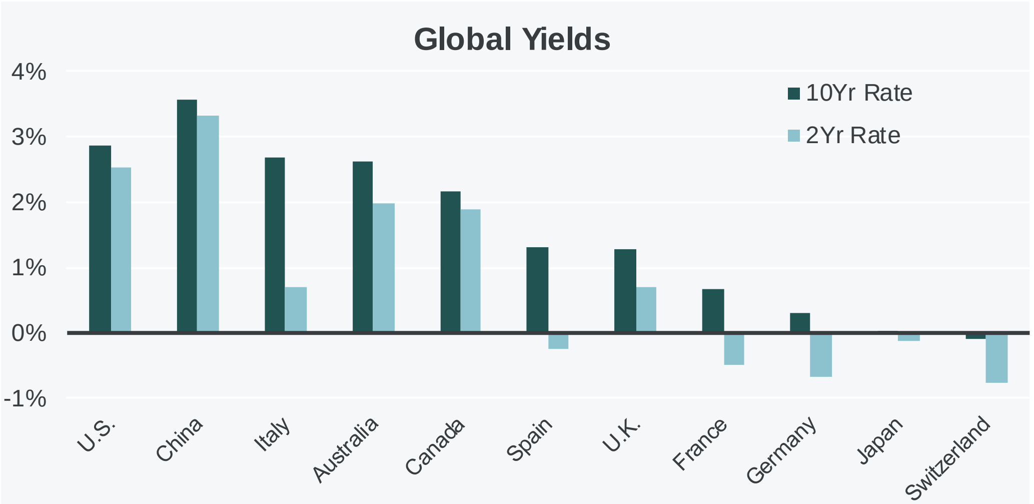
Rising rates and tight credit spreads contributed to a challenging fixed income environment as core fixed income struggled. A stronger U.S. dollar was a major headwind for non-U.S. debt in the second quarter.



Rising short-term rates has left the yield curve much flatter than a year ago and fears of inversion has been a trending topic. Forward projections expect the yield curve to flatten further over next year.



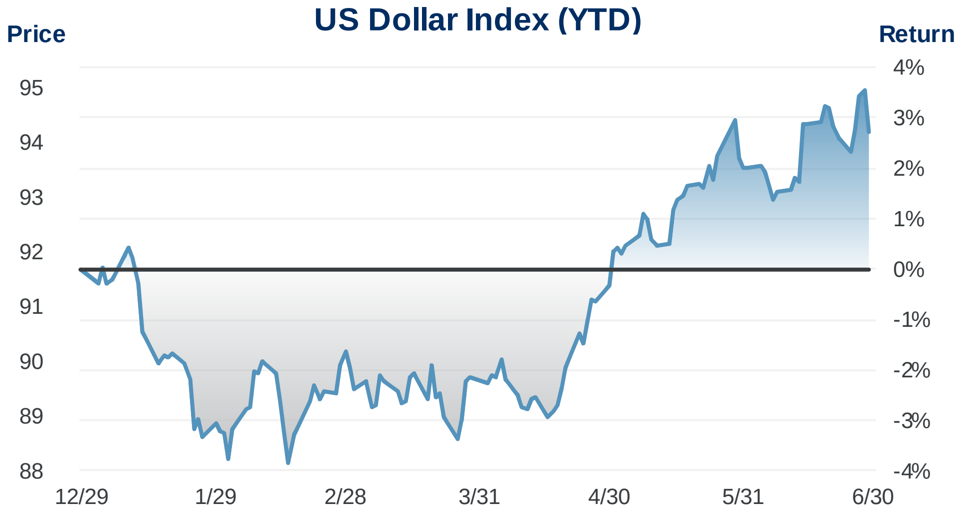
Global sovereign yields remain low across most of developed Europe and term premiums are historically tight.



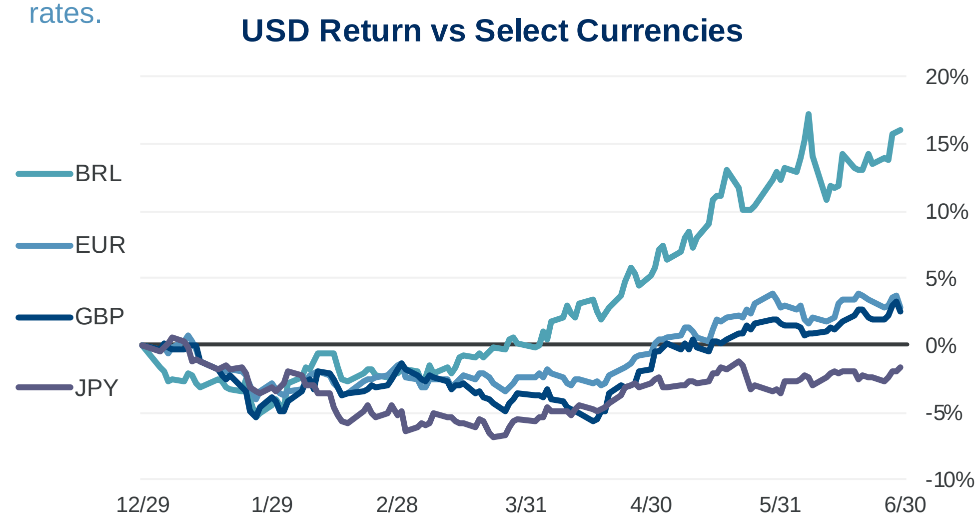
Source: Factset as of 6/29/2018. Yield curve estimates are consensus mean projections.

CURRENCY & COMMODITIES

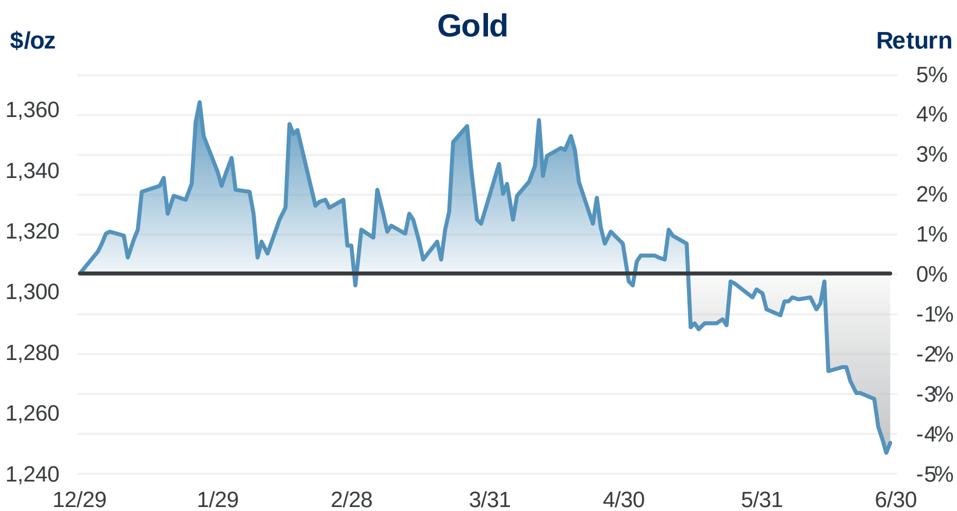
After weakening against major global currencies in 2017 and Q1 2018, the U.S. dollar rallied throughout the second quarter as the Fed raised rates and fears escalated over trade wars.



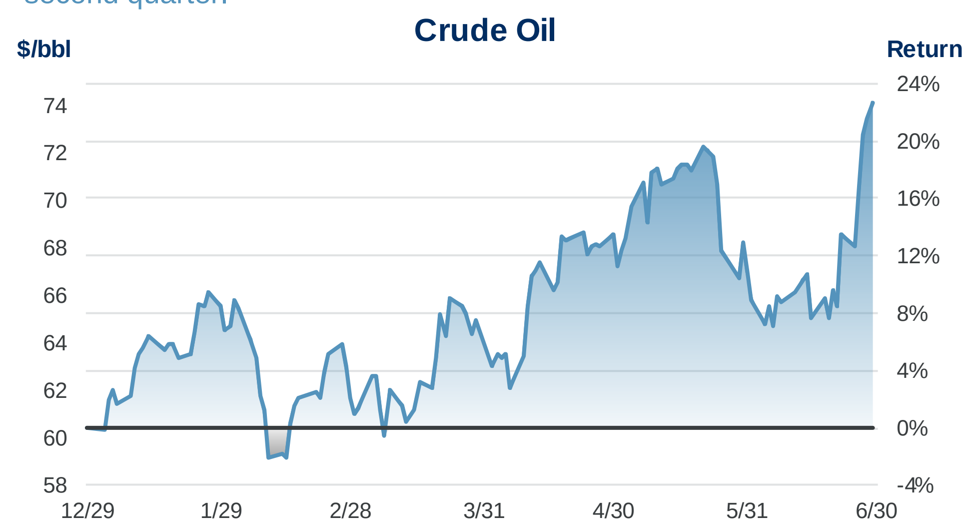
The Brazilian Real weakened significantly vs. the U.S. dollar in Q2. This negatively impacted emerging market equity returns, forcing many emerging market central banks defend their currencies by raising rates.



A stronger U.S. dollar and rising U.S. interest rates contributed to price declines in gold throughout 2Q.



Oil prices reached four-year highs as global demand outweighed supply levels, ranking the energy sector as the top performer in the second quarter.

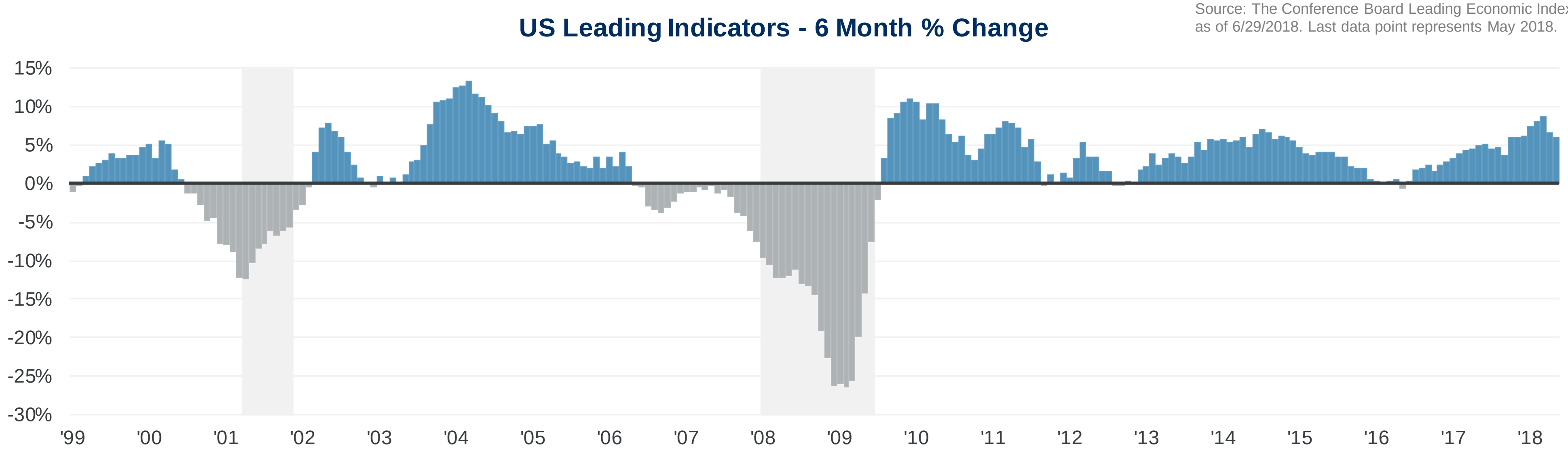


Source: Factset as of 6/29/2018

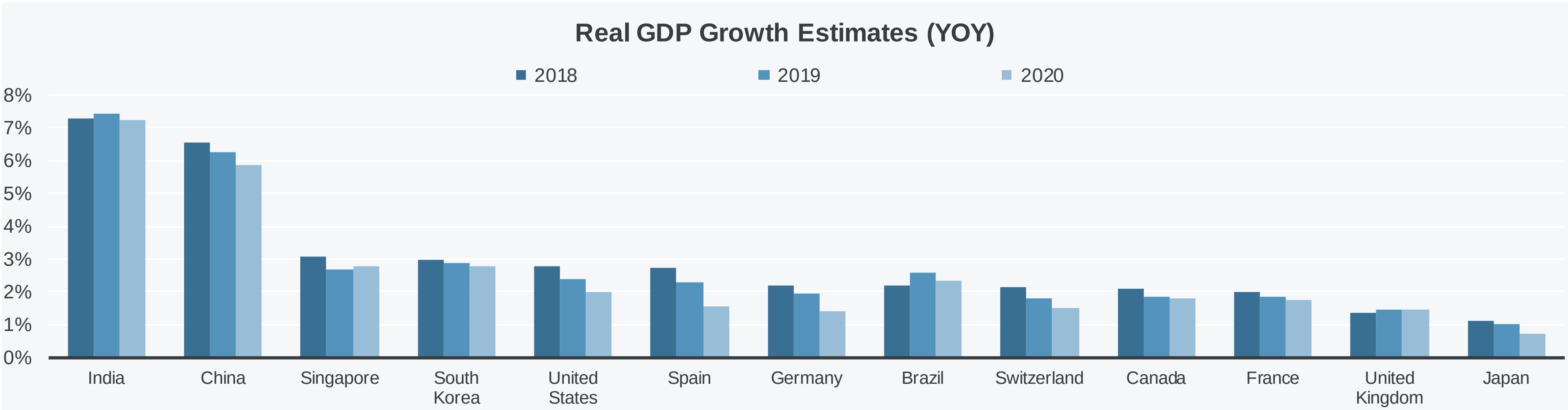
ECONOMIC

Late cycle talks continue to permeate, but leading indicators still show signs of positive change which suggests that a recession is not imminent. However, deceleration of growth is expected as current levels appear unsustainable. The U.S. could experience decelerating growth yet not technically enter into a recession over the next 18 months.

Source: The Conference Board Leading Economic Index® as of 6/29/2018. Last data point represents May 2018.



India & China are poised to dominate global GDP growth while expectations are quite modest for the UK and Japan. The U.S. is poised for superior economic growth relative to most developed markets as it is being boosted by tax cuts from 2017.



Source: Factset as of 6/29/2018. GDP estimates are consensus mean projections.

DISCLOSURES

GLOBAL EQUITY RETURNS

UNITED STATES |Russell 3000 Total Return Index: This index represents 3000 large U.S. companies, ranked by market capitalization. It represents approximately 98% of the U.S. equity market. This index includes the effects of reinvested dividends.

CANADA |MSCI Canada Index: A market-cap-weighted index of Canadian stocks. It captures 85% of the publicly available market, excluding all small-caps.

JAPAN |MSCI Japan Index: A market-cap-weighted index of Japanese stocks. The fund covers roughly 85% of the investable universe of securities traded in Japan.

FRANCE |MSCI France Index: A market-cap-weighted index of French companies. It covers the top 85% of French companies by market cap.

UNITED KINGDOM |MSCI United Kingdom Index: A market-cap-weighted index of British companies. It covers the top 85% of British companies by market cap.

AUSTRALIA |MSCI Australia Index: A market-cap-weighted index of Australian stocks. It captures 85% of the publicly available market, excluding most small-caps.

ITALY |MSCI Italy Index: A market-cap-weighted index of Italian companies. It covers the top 85% of Italian companies by market cap.

GERMANY |MSCI Germany Index: A market-cap-weighted index of German companies. It covers the top 85% of German companies by market cap.

SWITZERLAND |MSCI Switzerland Index: A market-cap-weighted index of Swiss stocks. It captures 85% of the publicly available market, excluding small-caps.

SPAIN |MSCI Spain Index: A market-cap-weighted index of Spanish companies. It covers the top 85% of Spanish companies by market cap.

CHINA |MSCI China Index: A market-cap-weighted index of investable Chinese shares, ex-US-listed. The fund stretches across all market-cap sizes.

SINGAPORE |MSCI Singapore Index: A market-cap weighted index of Singaporean firms, covering top 85% of the market subjected to diversification requirements.

RUSSIA |MSCI Russia Index: A market-cap-weighted index of securities listed on Russian stock exchanges.

SOUTH KOREA |MSCI South Korea Index: A market-cap-weighted index of large- and mid-cap Korean firms.

INDIA |MSCI India Index: A market-cap-weighted index of the top 85% of firms in the Indian securities market.

MEXICO |MSCI Mexico Index: A market-cap-weighted index of Mexican firms.

BRAZIL |MSCI Brazil Index: A market-cap-weighted index of Brazilian firms covering the entire market-cap spectrum.

EQUITY MARKET RETURNS

LARGE CAP | S&P 500 Total Return Index: The index is widely regarded as the best single gauge of large-cap U.S. equities. There is over USD 7.8 trillion benchmarked to the index, with index assets comprising approximately USD 2.2 trillion of this total. The index includes 500 leading companies and captures approximately 80% coverage of available market capitalization.

LARGE CAP GROWTH | S&P 500 Growth Index: The index includes large-cap U.S. stocks from the S&P 500 Index with growth characteristics.

LARGE CAP VALUE | S&P 500 Value Index: The index includes large-cap US stocks. The index uses three fundamental factors to select value stocks from the S&P 500 Index.

MID CAP | S&P Mid Cap 400 Index: The index includes mid-sized companies. It covers approximately 7% of the U.S. equities market.

SMALL CAP | S&P 500 Total Return Index: The index measures the small-cap segment of the U.S. equity market. The index is designed to track companies that meet specific inclusion criteria to ensure that they are liquid and financially viable..

DEVELOPED INTERNATIONAL | MSCI EAFE Net Return Index: This index is designed to represent the performance of large and mid-cap securities across 21 developed markets, including countries in Europe, Australasia and the Far East, excluding the U.S. and Canada. The index is available for a number of regions, market segments/sizes and covers approximately 85% of the free float-adjusted market capitalization in each of the 21 countries.

EMERGING MARKETS | MSCI Emerging Markets Net Return Index: This index consists of 23 countries representing 10% of world market capitalization. The index is available for a number of regions, market segments/sizes and covers approximately 85% of the free float-adjusted market capitalization in each of the 23 countries.

DISCLOSURES

EQUITY SECTOR RETURNS

ENERGY | S&P 500 Sec/Energy Total Return Index: The S&P 500® Energy Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Energy sector.

MATERIALS | S&P 500 Sec/Materials Total Return Index: The S&P 500® Materials Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Materials sector.

UTILITIES | S&P 500 Sec/Utilities Total Return Index: The S&P 500® Utilities Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Utilities sector.

INFO TECH | S&P 500 Sec/Information Technology Total Return Index: The S&P 500® Info Tech Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Info Tech sector.

CONS STAPLES | S&P 500 Sec/Cons Staples Total Return Index: The S&P 500® Consumer Staples Index comprises those companies included in the S&P 500 that are classified as members of the GICS® consumer staples sector.

INDUSTRIALS | S&P 500 Sec/Industrials Total Return Index: The S&P 500® Industrials Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Industrials sector.

TELECOM | S&P 500 Sec/Telecom Services Total Return Index: The S&P 500® Telecom Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Telecom sector.

HEALTH CARE | S&P 500 Sec/Health Care Total Return Index: The S&P 500® Health Care Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Health Care sector.

S&P 500 | S&P 500 Total Return Index: The index is widely regarded as the best single gauge of large-cap U.S. equities. There is over USD 7.8 trillion benchmarked to the index, with index assets comprising approximately USD 2.2 trillion of this total. The index includes 500 leading companies and captures approximately 80% coverage of available market capitalization.

CONS DISC | S&P 500 Sec/Cons Disc Total Return Index: The S&P 500® Consumer Discretionary Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Consumer Discretionary sector.

REAL ESTATE | S&P 500 Sec/Real Estate Total Return Index: The S&P 500® Real Estate Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Real Estate sector.

FINANCIALS | S&P 500 Sec/Financials Total Return Index: The S&P 500® Financials Index comprises those companies included in the S&P 500 that are classified as members of the GICS® Financials sector.

FIXED INCOME RETURNS

CASH | Bloomberg Barclays 3 Month U.S. Treasury-Bill Total Return Index: This index is a measurement of the movement of 3-month T-Bills. The income used to calculate the monthly return is derived by subtracting the original amount invested from the maturity value.

INVESTMENT GRADE | Bloomberg Barclays US Agg Bond Total Return Index: The index is a measure of the investment grade, fixed-rate, taxable bond market of roughly 6,000 SEC-registered securities with intermediate maturities averaging approximately 10 years. The index includes bonds from the Treasury, Government-Related, Corporate, MBS, ABS, and CMBS sectors.

SHORT | Bloomberg Barclays US Govt/Credit 1-3 Yr Total Return Index: The index is the 1-3 year component of the Bloomberg Barclays U.S. Government/Credit Index. The Bloomberg Barclays U.S. Government/Credit Index covers treasuries, agencies, publicly issued U.S. corporate and foreign debentures and secured notes that meet specified maturity, liquidity, and quality requirements.

INTERMEDIATE | Bloomberg Barclays US Govt/Credit 5-10 Yr Total Return Index: The index is the 5-10 year component of the Bloomberg Barclays U.S. Government/Credit Index. The Bloomberg Barclays U.S. Government/Credit Index covers treasuries, agencies, publicly issued U.S. corporate and foreign debentures and secured notes that meet specified maturity, liquidity, and quality requirements.

LONG | Bloomberg Barclays US Long Govt/Credit Total Return Index: The Bloomberg Barclays U.S. Government/Credit Index covers treasuries, agencies, publicly issued U.S. corporate and foreign debentures and secured notes that meet specified maturity, liquidity, and quality requirements.

HIGH YIELD | Bloomberg Barclays US Corporate High Yield Total Return Index: The index measures the USD-denominated, high yield, fixed-rate corporate bond market. Securities are classified as high yield if the middle rating of Moody's, Fitch and S&P is Ba1/BB+/BB+ or below.

U.S. TIPS | Bloomberg Barclays US Treasury US TIPS Total Return Index: The index includes all publicly issued, U.S. Treasury inflation-protected securities that have at least one year remaining to maturity, are rated investment grade, and have $250 million or more of outstanding face value.

INTERNATIONAL | Bloomberg Barclays Gbl Agg Ex USD Total Return Index: The index provides a broad-based measure of the global investment grade fixed-rate debt markets, excluding the United States. Currency exposure is hedged to the US dollar.

EMERGING MARKET | J.P. Morgan EMBI Plus Total Return Index: The index tracks total returns for traded external debt instruments (external meaning foreign currency denominated fixed income) in the emerging markets.

FLOATING RATE INVESTMENT GRADE | Bloomberg Barclays US Treasury Floating Rate Bond Index: The index is a rules-based, market-value weighted index engineered to measure the performance and characteristics of floating rate coupon U.S. Treasuries which have a maturity greater than 12 months.

DISCLOSURES

FIXED INCOME RETURNS (CONT.)

FLOATING RATE HIGH YIELD | ICE BofAML US Floating Rate High Yield: The index is a rules-based, market-value weighted index engineered to measure the performance and characteristics of floating rate high yield, fixed-rate corporate bond market. Securities are classified as high yield if the middle rating of Moody's, Fitch and S&P is Ba1/BB+/BB+ or below..

ADDITIONAL DISCLOSURES

U.S. DOLLAR INDEX | The U.S. dollar index (USDX) is an index or measure of the value of the U.S. dollar relative to the value of a basket of currencies of the majority of the U.S.'s most significant trading partners. The index is designed, maintained, and published by the commodity exchange ICE Futures U.S, Inc.

FIXED INCOME | Subject to credit risk and interest rate risk. An issuer's ability to pay the promised income and return of principal upon maturity may impact the issuer's credit rating. Generally, when interest rates rise, bond prices fall, and vice versa. Specific- sector investing can be subject to different and greater risks than more diversified investments.

GROSS DOMESTIC PRODUCT (GDP) | A broad measurement of a nation's overall economic activity. It is the monetary value of all the finished goods and services produced within a country's borders in a specific time period, including all private and public consumption, government outlays, investments and net exports that occur within a defined territory.

PRICE-TO-EARNINGS RATIO (P/E) | a ratio for valuing a company that measures its current share price relative to its per-share earnings.

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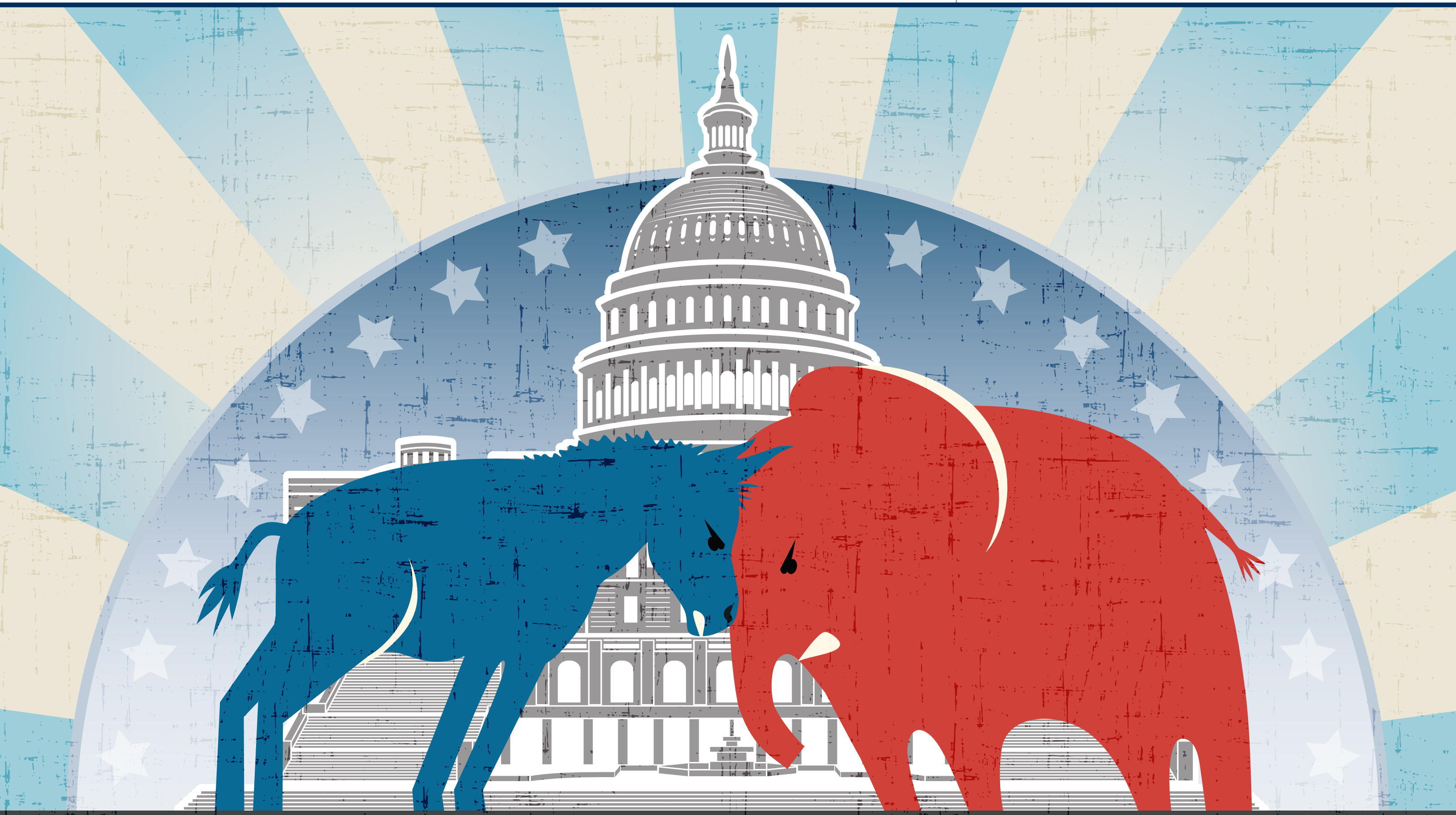
INVESTMENT STRATEGY QUARTERLY



ELEPHANT IN THE ROOM?

page 5

Investment Strategy Committee Meeting Recap – held on September 5, 2018

Major macroeconomic factors that the committee believes will be most influential on investors over the next six to 12 months include trade policy, interest rates, Federal Reserve (Fed) policy, earnings growth, global economic growth, and the U.S. dollar.

U.S. ECONOMY

73% of the committee has a negative outlook on U.S. GDP over the next six to 12 months relative to the "advance" estimate of a 4.1% annualized rate for the second quarter of 2018.

- "Trade policy remains a risk to the economic outlook. To date, the impact has been small, but will worsen as trade conflicts escalate. However, even in the worst case scenario, increased tariffs and retaliatory measures shouldn't be enough, by themselves, to push the economy into a recession."
- "The federal funds futures market is pricing in a 98% chance that the Fed will raise short-term interest rates on September 26*, with about a 76% chance of another quarter-point move on December 19. Fed officials will no longer view policy as 'accommodative' and many see policy as needing to be a bit restrictive in 2019."
- "Fiscal stimulus (tax cuts and government spending) has been larger than expected. The federal budget deficit has deteriorated much more than anticipated in fiscal year 2018 and we're now looking at a deficit of more than $1 trillion in fiscal year 2019. That means support for the economy in the short run, but a bigger problem in the long run."

  – Scott J. Brown, Ph.D., *Chief Economist, Equity Research*

- "Key themes in my world include the upcoming election in November and trade wars. Anything that was in the bullseye of the Obama administration is now the darling of the Trump administration, and vice versa."
- "Will we have impeachment hearings? Absolutely. Does the president get impeached? It's increasingly likely. But does he get removed from office? That's extremely unlikely, unless there's some other shoe to drop."

  – Ed Mills, *Washington Policy Analyst, Equity Research*

> "With the elections, I'm still of the belief that Republicans maintain their majority in the Senate and Democrats have enough seats to win the majority in the House. I don't think that that's a terrible thing from a market perspective."
>
> **– Ed Mills,** *Washington Policy Analyst, Equity Research*

U.S. EQUITY

67% of the committee is bullish to some degree on U.S. equities over the next six to 12 months.

- "With so many U.S. averages breaking out with new all-time highs, that's not typically a sign of an unhealthy market. It's not the same type of breadth we saw last year, but nobody expected it to be when last year was one of the greatest runs in market history."
- "Even investors who are believers in the bull market are still displaying negative sentiment and anticipation that we're going to see volatility on the downside. Major concerns include elections, trade, and the seasonal September/October volatility."

  – Andrew Adams, CFA, CMT, *Senior Research Associate, Equity Research*

- "There are three legs in a secular bull market. The second leg, which we are currently in, is always the longest and the strongest. It's when earnings pick up and the economy starts to improve. Once it peaks, the markets will enter another upside consolidation. Finally, we'll come out of that consolidation and start the third leg, or the speculative leg. That's what bull markets look like."

  – Jeffrey Saut, *Chief Investment Strategist, Equity Research*

- "We've been in the camp that the market is range bound. We've been saying that for months. We've probably been wrong in that position to a degree, and the main reason is because it's been an absolutely perfect environment: very good earnings, and valuations have come down because earnings have outpaced stock prices. So everything checks the box there."
- "If you look at our base case of $168 in earnings in the S&P versus $172 for consensus, and apply our 18x multiple, we still see 5-6% upside for the S&P 500 over the next 12 months, so we still think that's possible. However, we think that getting there could be choppy, especially in the next few months, so I remain a cautious bull."

  – Michael Gibbs, *Managing Director, Equity Portfolio & Technical Strategy*

INTERNATIONAL EQUITY – Chris Bailey, *European Strategist, Raymond James Euro Equities**

53% of the committee is bullish to some degree on non-U.S. developed market equities over the next six to 12 months. Only 33% are bullish on emerging market equities.

 *As predicted, the Federal Reserve raised the federal funds rate by 25 basis points on September 26.

- “The view is that the midterm elections will give an opportunity for a more flexible trade policy for the U.S. administration, and therefore, neither top European nor top Chinese politicians are in any huge rush to strike a deal. Are both sides interested in doing a deal at some point? Absolutely. The Chinese crave stability, and they’ve got enough domestic changes coming that they need a stable environment to be okay. I see Europe taking the same position.”
- “Trends I am seeing are low returns in Europe relative to the U.S. People have become very pessimistic. You can see it in fund manager surveys and fund flow data. Global investment managers have been selling Europe and buying America. People are focused on the influence of the strong dollar and the influence of trade disruptions. Still, there are opportunities in Europe and emerging markets.”
- “In Europe, there’s been a lot of concern about lack of growth, immigration, political angst, etc. The good news about Europe is that France is still changing. Macron continues to do a pretty good job in France.”
- “As for emerging markets, my feeling is that the positives remain in place. Aside from the big structural factors such as rising populations, the big positive remains that China is pursuing domestic reform. It doesn’t want to engage in a trade war and that’s why I think they are up for a deal, and they are up for opening their economy a bit. But they will absolutely wait until after the midterms to see the lay of the land.”

U.S. FIXED INCOME

71% of the committee see the 10-year U.S. Treasury yield being about the same (~2.85%) six months from now.

- “The big issue that I see is the leveraged loan market, which is now bigger than the subprime market. Everyone’s jumping into it. It’s a zero-duration yield, and I’m always skeptical when I hear those two terms in the same phrase, because we’re taking a credit risk, and I think that’s not quite as understood as it should be.”
- “On the pure bond side, you can dial up duration, or dial down credit, neither one of which I care to do right now.”

– **James Camp, CFA,** *Managing Director of Fixed Income, Eagle Asset Management**

- “When we talk about the yield curve and the Fed, the one thing I see that is different is perhaps the motivation of the Fed. We went through seven plus years of zero-interest rate policy. The motivation is to push rates to ‘neutral’ levels to have some room to move in the future.”
- “For the very short-term investor (inside two years), Treasuries have become a competitive alternative, especially for investors with high state income taxes.”
- “As long as portfolios are heavily weighted with growth assets, you still need the diversification benefits of fixed income with some duration as a balance to riskier assets such as equities.”

– **Doug Drabik,** *Senior Strategist, Fixed Income*

ENERGY AND OIL – Pavel Molchanov,

Energy Analyst, Equity Research

The global oil market was undersupplied last year, it is undersupplied this year, and it will yet again be undersupplied in 2019.

- “The steel tariffs out of Washington have increased component costs for pipeline projects and other energy infrastructure investment domestically. However, with oil prices near four-year highs, the increases are manageable for companies.”
- “Oil industry investment in the U.S. is recovering from the commodity down cycle, but lagging behind the strength

Continued on page 20

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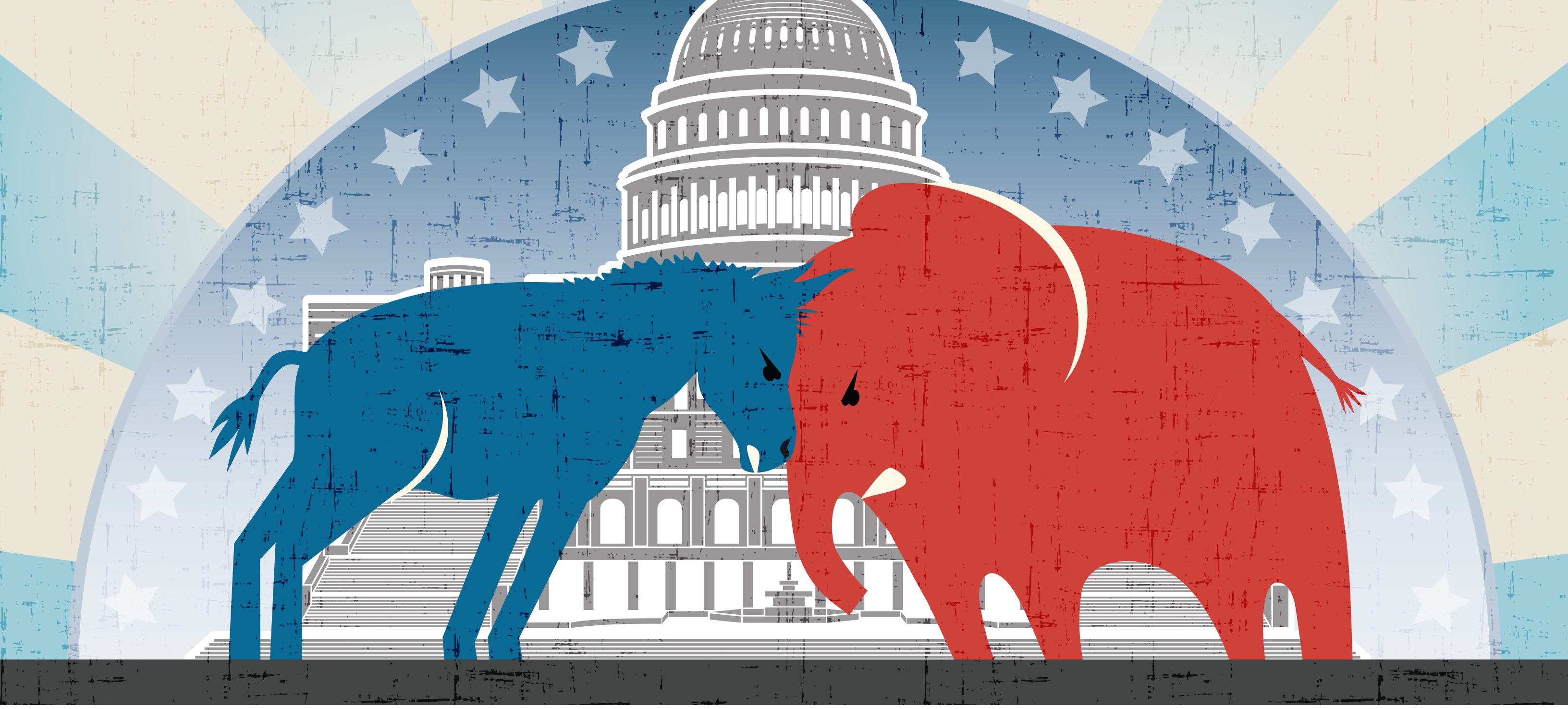
Vice President, Asset Management Services

Economic Snapshot

Recent data suggest that the economic expansion continued at a moderately strong pace in 3Q18, with moderate inflation. Trade tariffs have had a significant impact on some sectors, but only a modest impact on overall economic growth and inflation. However, the risks will increase as trade conflicts escalate. Fiscal stimulus (deficit spending) should continue to provide support into early 2019. Federal Reserve officials believe that policy is close to normal, but many believe that rates may need to become restrictive in 2019 or 2020.

DR. SCOTT BROWN
Chief Economist, Equity Research

	ECONOMIC INDICATOR	COMMENTARY
FAVORABLE	GROWTH	GDP growth is expected to remain moderately strong, although somewhat slower in the second half of 2018, reflecting the tight job market and the fading impact of fiscal stimulus.
FAVORABLE	EMPLOYMENT	Demand for workers should remain strong and there may be some slack remaining in the labor market, but the pace of job growth is likely to slow as constraints become more binding.
FAVORABLE	BUSINESS INVESTMENT	Sentiment remains strong, although there are some concerns about the negative impact of tariffs. Orders and shipments of capital goods have improved into 3Q18.
FAVORABLE	THE DOLLAR	Trade policy conflicts and concerns about global economic risks have led to a flight to safety into U.S. Treasuries and the dollar.
NEUTRAL	CONSUMER SPENDING	Job growth remains supportive, but inflation-adjusted average earnings are trending flat on a year-over-year basis.
NEUTRAL	MANUFACTURING	New orders and production have been mixed, but the pace has been generally moderate. Trade tariffs are a concern, disrupting supply chains and dampening expectations for exports.
NEUTRAL	HOUSING AND CONSTRUCTION	Builders continue to note supply constraints (a lack of skilled labor, higher costs). Demand remains strong. Home prices have continued to rise, making affordability an important issue.
NEUTRAL	INFLATION	Labor cost inflation remains moderate. Core consumer price inflation is at the Fed's target level, but officials have indicated a tolerance for somewhat higher inflation in the near term.
NEUTRAL	MONETARY POLICY	Fed policy is close to neutral, but the neutral federal funds rate can be expected to rise over time. Some Fed officials believe that it may be necessary to raise the federal funds rate above a neutral level in 2019 or 2020 (to align the economy more closely with its potential).
NEUTRAL	LONG-TERM INTEREST RATES	A strengthening economy, somewhat higher inflation, Fed tightening, and increased government borrowing would normally send bond yields higher. However, long-term interest rates remain low outside the U.S. and there is strong global demand for safe assets.
NEUTRAL	FISCAL POLICY	Tax cuts and added spending have provided support for economic growth in the near term (more than expected), but budget deficit projections have risen sharply (a long-term concern given the expected strains on Social Security and Medicare funding).
NEUTRAL	REST OF THE WORLD	Fed rate increases have had a negative impact on emerging market economies and trade policy has disrupted supply chains. Nationalistic tendencies and Brexit are concerns in Europe.



Elephant in the Room?

Ed Mills, *Washington Policy Analyst, Equity Research,* surveys the current political landscape and the upcoming midterm election.

We are in the final stretch of the midterm elections that we view as a proxy in the fight between President Trump's agenda and the electability of Congressional Democrats. Multiple themes will be given considerable attention in the coming months. In terms of the potential electoral outcomes, we will be paying particular attention to the political environment vs. the electoral map. Adding to the uncertainty of the outcome and potential market volatility will be vigorous debates about polling – with questions of its quality (especially in House races), accuracy, and predictability.

CURRENT VIEW

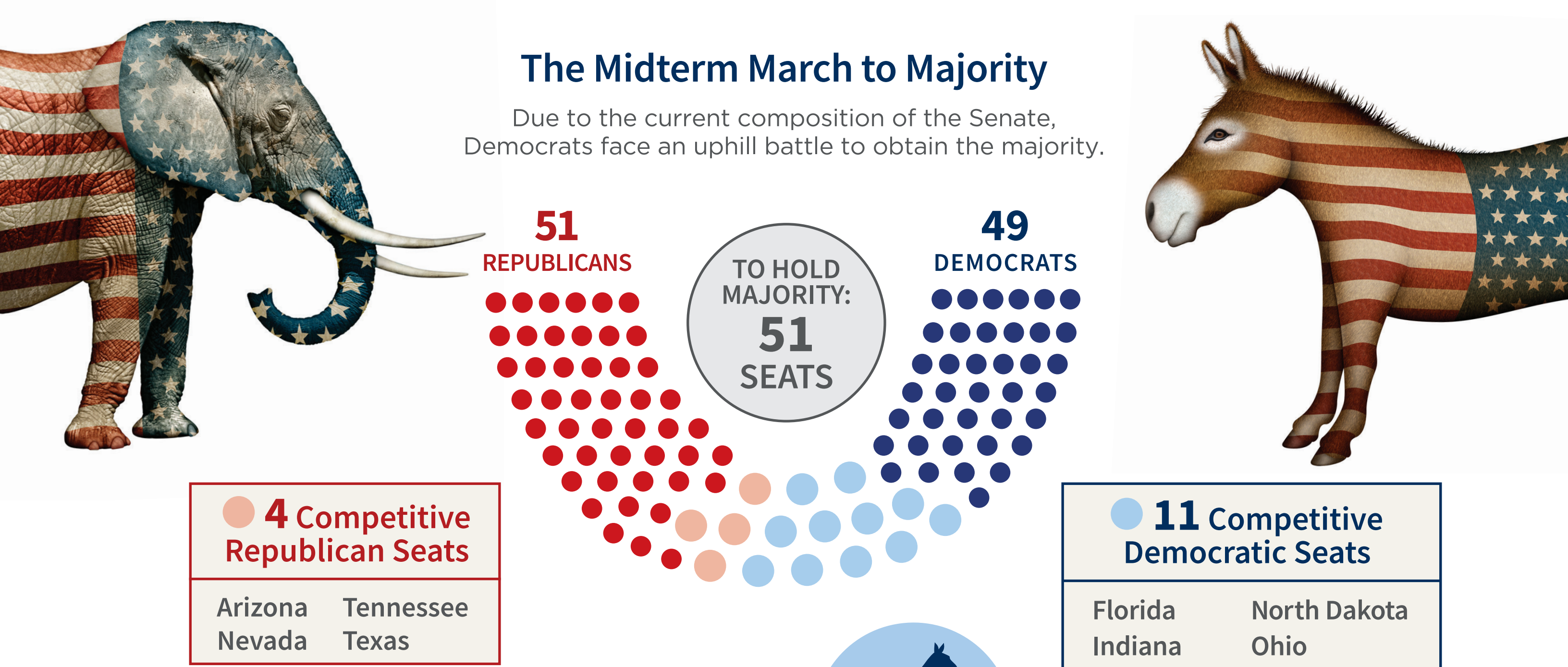
The political winds are at the Democrats' backs, but the distribution of Senate races, the partisan tilt of many House districts, and positive economic indicators could limit Republican losses. That said, we view Democrats as favored to win a majority of seats in the House of Representatives and Republicans favored to maintain control of the Senate. By historical standards an average midterm election would produce a Democratic majority in the House.

> "We view Democrats as favored to win a majority of seats in the House of Representatives and Republicans favored to maintain control of the Senate."

In the House of Representatives, "R" no longer stands for "Republican." It stands for "retirement." House Republicans have more retirements and open seats since at least 1930. Polling is notoriously sparse in House races, but traditional proxies (such as Presidential job approval, generic ballot test and voter enthusiasm) all point to significant gains for Democrats, giving them the edge in the fight for a House majority.

Historical midterm results and an array of surprising Democratic special election victories including Alabama (Doug Jones) and Pennsylvania (Conor Lamb) strengthen the case that Democrats are favored to retake the House.

Democrats need to net two seats for a Senate majority after November's election. In our analysis of these races, we see 11 competitive races in seats currently held by Democrats and only four in seats held by Republicans. Wave elections (an election in which a party makes major gains) can swing these competitive seats in one direction, but Democrats face an uphill battle to retake the Senate.



HOUSE AND SENATE BY THE NUMBERS

Members of the House of Representatives serve a two-year term, and all 435 members are up for re-election in November. Republicans currently enjoy a 44-seat majority with 237 seats compared to 193 seats for Democrats. Five seats are currently vacant. The party with at least 218 seats has a majority in the House.

Senators serve six-year terms and one-third of the Senate is on the ballot every two years. This year that number is elevated to 35 of the 100 senators due to an early retirement and resignation of two senators. Republicans hold 51 Senate seats, while Democrats hold 47 (along with Bernie Sanders and Angus King, two independents who caucus with the Democrats). Given that Vice President Pence serves as a tiebreaking vote, Democrats would need to net two seats for a majority following November's election.

Although gaining two Senate seats appears to be an easily achievable target in the current political environment that suggests a Democratic tailwind, Democrats are defending 26 Senate seats compared to nine for Republicans. Ten Democrats are running in states won by President Trump, including ruby red states like North Dakota, West Virginia, Montana, and Indiana. Republicans are only defending one seat in a state won by Hillary Clinton (Nevada). Structurally, Republicans have the advantage to maintain the majority in the Senate.

The midterm elections are historically challenging for the incumbent party. Since 1938, the party holding the White House has lost seats in Congress in all but two midterm election cycles. The average loss for the incumbent party is 26 House seats.

Generally, the lower the President's job approval numbers, the worse the President's party performs in the election. In 2018, President Trump has consistently polled a net disapproval rating with the latest available data showing a net disapproval rating of 9.3%. Comparatively, President Obama's net disapproval reached a high of 5.3% at the same point in his first term leading up to the 2010 midterm elections, which saw Republicans gaining 63 House seats to claim the majority – the largest swing since 1938.

So far this year, Democrats have consistently led in the generic Congressional ballot, reaching a high of 12.1%. Comparatively, Republicans polled as high as 10% in 2010. The current Democratic advantage is 6.9%. Democrats are also showing an advantage in voter enthusiasm, particularly in toss-up states.

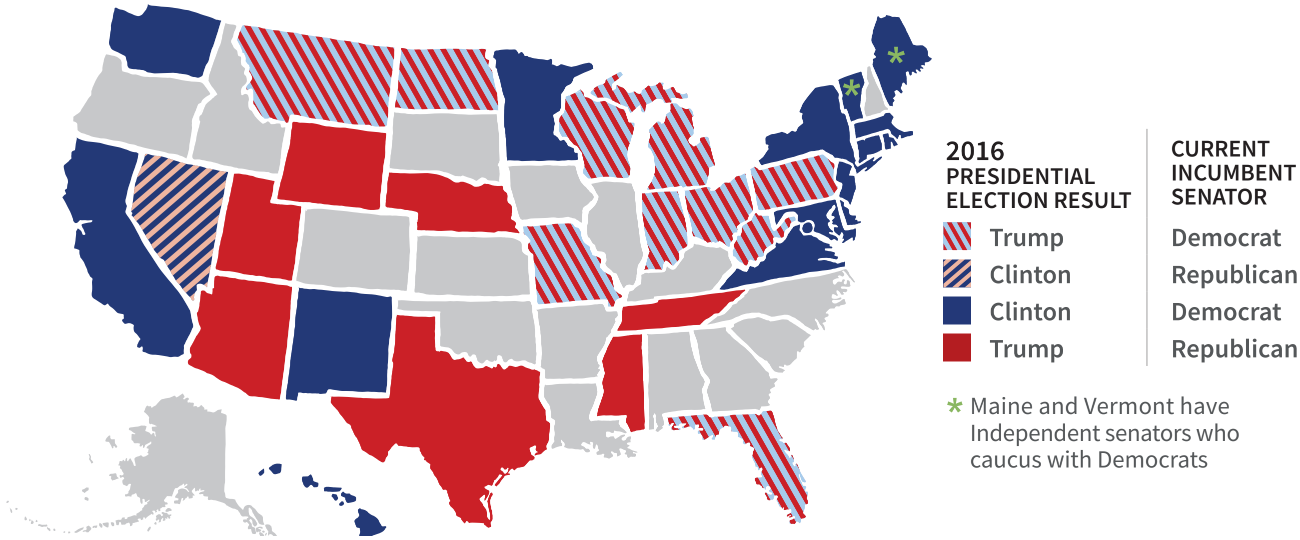
Election watchers typically pay attention to retirements and candidates seeking other offices ahead of the election cycle to gauge the candidates' sentiment. According to Pew Research, the current number of House Republicans voluntarily giving up their seats – including House Speaker Paul Ryan – is at its highest since 1930.

PROJECTION AND OUTLOOK

Based on the current trajectory and historical comparisons, our base case for the 2018 midterms is Republicans retaining a Senate majority with the House switching to Democratic majority control.

Challengers' Trump Card

Many incumbent Democratic senators are running for re-election
in states Trump won in the 2016 presidential election.



"A Republican Senate and a Democratic House could potentially create a Goldilocks scenario for the market: not too hot, not too cold."

A Republican Senate and a Democratic House could potentially create a Goldilocks scenario for the market: not too hot, not too cold. We strongly believe that the strength of the market since President Trump's election has been tied to his deregulatory agenda. The Senate alone confirms Presidential nominees, which require a simple majority vote. A Republican Senate equals a continuation of the Trump deregulatory agenda.

In the House, we would be looking for potential breakthroughs on immigration, infrastructure, and a potential fix to the SALT[1] deductions as possible agenda items. Divided government is likely to produce spending bills that keep domestic and defense spending at or near current levels, continuing a legislative agenda that supports fiscal stimulus. Should the Democrats retake enough seats, a key concern for the market would be increased oversight by the House.

Caveats to consider to the current forecast are candidate recruiting, the strength of individual candidates, new district maps, and the strength of the economy, which could serve to limit potential Republican losses this fall.

KEY TAKEAWAYS:

- We view Democrats as favored to win a majority of seats in the House of Representatives and Republicans favored to maintain control of the Senate.
- We strongly believe that the strength of the market since President Trump's election has been tied to his deregulatory agenda. A Republican Senate equals a continuation of the Trump deregulatory agenda.
- A key concern for the market would be the impact of increased oversight in the House.
- Caveats to consider to the current forecast are candidate recruiting, the strength of individual candidates, new district maps, and the strength of the economy, which could serve to limit potential Republican losses this fall.

[1] SALT: State and Local Tax

Trading Places: Value & Growth

Andrew Adams, CFA, CMT, *Senior Research Associate, Equity Research,* reflects on the rally in growth stocks over the past decade and highlights the tailwinds that are likely to keep them in the lead over value for some time.

One fundamental decision to make when investing in the equity markets is whether to favor growth strategies or value strategies. The two styles represent contrasting approaches to stock selection, and this dichotomy often divides investors who naturally gravitate toward one or the other. However, either strategy can be a better choice in a favorable underlying environment, and having a portfolio tilted toward the right style at any given time can go a long way to boost returns. First, though, it is important to distinguish between growth and value stocks.

GROWTH STOCKS

Growth stocks are companies expected to grow their sales and earnings at a high rate, typically above that of the average stock in the market. Much of the growth stock's worth is tied to its future earnings potential, which is why they tend to trade at higher than average valuation multiples. Growth companies also usually opt to reinvest profits back into their businesses instead of paying out high dividends, and investors are okay with that because they believe they'll be able to sell their shares for much more in the future as long as the company continues to grow.

VALUE STOCKS

Value stocks trade at a discount to some calculated measure of intrinsic value. They tend to have lower valuation multiples, higher dividend yields, and lower expected future growth rates compared to growth stocks. Value investors feel there is a 'margin of safety' in buying a stock that is already trading below what they believe it to be worth, but they have to be careful not to fall into the 'value trap' of buying something that is 'cheap' for a good reason.

Proponents of value stocks are quick to point out that they have outperformed growth stocks over the past several decades, but in recent years that dominance has swung the other way. Since 2006, the Russell 3000 Growth Index (a proxy for all U.S. growth equities) has consistently outperformed its counterpart, the Russell 3000 Value Index, with few notable exceptions. That 12-year advantage for growth has left many value investors wondering just when it will be their turn again. We believe there are a few fundamental reasons why growth has dominated over the past decade, and these tailwinds do not yet show material signs of reversing, which is why we continue to favor growth stocks.

FUNDAMENTALS STILL FAVOR GROWTH

The broad stock market has performed quite well over the past several years, pushing up valuations and offering fewer value

Two Sides of the Coin: Value & Growth

VALUE STOCKS

These companies are often priced based on their current value and distribute a larger portion of current earnings to shareholders.

GROWTH STOCKS

As their name suggests, these companies often reinvest their earnings into future growth opportunities.

opportunities overall. Consequently, investors have piled into stocks with greater earnings growth potential that can better justify the higher valuations. Value tends to lead as recessions near, as investors sell their high-flying growth stocks and move into more stable companies, and when coming out of a market downturn, when beaten-down stocks have more room to rise. As a result, it should not come as a complete surprise that, since 2006, the periods when value has been the better performer have mostly come after meaningful sell-offs in the broad market. We think these sell-offs help create more value opportunities when they occur, and relative performance improves while those beaten-down companies return to fair valuations. Therefore, it may require more of a significant decline in the broad market to put the wind at the backs of value stocks again.

> As interest rates rise, they erode the present value of future earnings, whereas when interest rates fall, they increase the present value of future earnings.

INTEREST RATES AND EARNINGS GROWTH

Interest rates have been near historical lows for the last several years. Lower interest rates translate to a lower discount rate when valuing future earnings, which means future earnings are worth more when discounted back to the present. Relatedly, with interest rates and economic growth as low as they have been over the past few years, many investors have been reaching for returns in equity investments to make up for the lackluster yields in fixed income. A 'barbell-type' strategy has been quite common for investors, as they balance less volatile, low-yielding bonds with stocks that have potential for capital gains. As rates rose over the last couple of years, demand for the lower growth, higher dividend-yielding stocks commonly used as bond proxies appears to have fallen more than demand for the high earnings growers. A stock with a 2-3% dividend that is not expected to grow at a high rate simply becomes less attractive as more competitive yields can be found in fixed income. A stock with the potential to grow earnings at a high rate is not as affected by rising rates while they are still considered to be at low levels overall.

PASSIVE VS. ACTIVE INVESTING

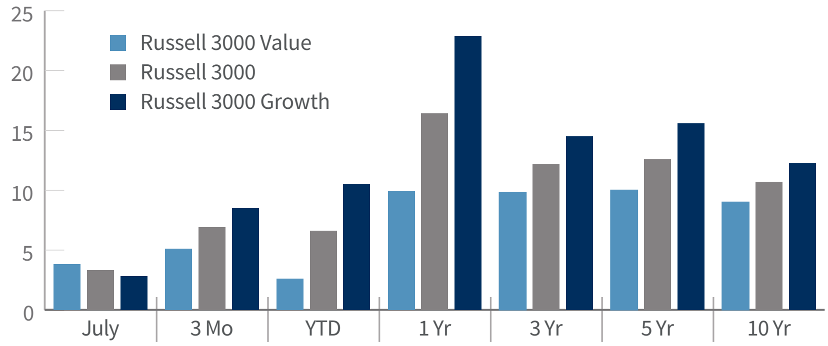
The massive shift to passive investing benefits growth stocks at the expense of value stocks. Historically, active investors and portfolio managers have generally favored value investing strategies. However, as more money flows into products that 'buy the market' or 'buy a sector,' value is largely being thrown out the window. Instead, stocks that are bid up to higher valuations rise in market capitalization and become even larger holdings within these funds, while stocks that fall become smaller holdings. In other words, there's a built-in momentum factor that doesn't exactly help stocks that are 'undervalued.' It's probably not a huge coincidence that the clear outperformance of growth over value going back to 2006 has occurred at the same time passive investing and index funds have proliferated.

TRADING: COST AND EFFICIENCY

On a closely-related note, it used to be more costly and time-consuming to research and trade stocks, and it was near impossible for the average investor to try to duplicate an index or even

Growth Outperforming Value

Over the past decade, growth has outperformed value on a relative basis.



Source: Russell, as of 07/30/2018

to hold a large basket of stocks in a portfolio. As a result, more emphasis was placed on finding the sub-section of stocks that represented exceptional value opportunities, and then holding them until they were no longer a good value (or paying an active manager to find those opportunities).

Now, online brokers offer extremely low-commission stock trades and index funds enable investors to own the majority of the world stock market's capitalization at little cost. The ability to trade so quickly and cheaply has helped to cut down on holding times and has prompted investors to chase quarterly earnings growth and whatever is hot at the moment, further skewing the market toward growth stocks. Moreover, as investing becomes easier and cheaper, more money flows directly into stocks. Since that money is increasingly going toward passive strategies and growth stocks these days, it has almost become a self-perpetuating cycle.

TECHNOLOGY AND DISRUPTION

The increasing importance of technology to our overall economy naturally favors growth strategies over value. Companies that chiefly depend on innovation and continual progress (like those predominantly found in the technology sector) often trade at higher-than-average valuations, but can still be attractive to investors because they are expected to generate higher-than-average earnings growth in the future, even if they're not currently profitable. As technology-oriented companies continue to innovate and disrupt established industries, more and more of the disrupted companies have turned into value traps that underperform for years.

THE BOTTOM LINE

The bottom line is that growth stocks have dominated value stocks for over a decade now, and it might require some sort of a recessionary environment or paradigm shift to really flip that relative strength on a longer-term basis. There will be periods when value does better, and there will always be attractive individual value situations on the company level. However, we believe long-term investors taking a more active approach should still remain focused on the growth-type companies and sectors that have been in favor in recent years until there are clearer signs that the underlying trends have changed.

KEY TAKEAWAYS:

- The broad stock market has performed quite well over the last several years, pushing up valuations and offering fewer value opportunities overall.
- With interest rates and economic growth as low as they have been over the last few years, many investors have been reaching for returns in equity investments to make up for the lackluster yields in fixed income.
- Moreover, as investing becomes easier and cheaper, more money flows directly into stocks. Since that money is increasingly going toward passive strategies and growth stocks these days, it has almost become a self-perpetuating cycle.
- The increasing importance of technology to our overall economy naturally favors growth strategies over value.
- The bottom line is that growth stocks have dominated value stocks for over a decade now, and it might require some sort of a recessionary environment or paradigm shift to really flip that relative strength on a longer-term basis.

U.S. Housing Market Update

Paul Puryear, *Director, Real Estate Research , Equity Research,* analyzes the current state of the U.S. housing market, rising input costs, and changing demographics.

The housing market continues to track our expectation of 1.2-1.3 million starts, although recent reports indicate some softness in new and existing home sales. We are not concerned about the speed or strength of the housing recovery at this juncture and view these data points as a somewhat normal reaction following the 65 basis point spike in mortgage rates from 4.00% to 4.65% at the beginning of the year.

HOUSEHOLD FORMATION

More importantly, U.S. household formation rates have been consistently below the long-term average (1.2 million) this entire housing upcycle following the peak levels reached in 2005. Structurally decelerating rates of population growth in individuals aged 26 to 64, the prime household formation years, portend below-average household formation for years to come and that scenario continues to play out.

Unless influenced by economic recessions, we believe a strong correlation exists between annual new home sales (single-family permits and starts), household formation, and population growth in individuals aged 26 to 64. The period from 1972-2000 represents the strongest workforce population growth in U.S. history. However, after 2017, annual population growth amongst individuals aged 26 to 64 is not projected to reach 0.7% again until 2041. The post-war Baby Boom was an unprecedented historical event shaping U.S. society. We believe 'reversion to the mean' in U.S. household formation, and consequently new home demand, is a flawed assumption validated by the population growth outlook. Further, we don't expect our economy to reap benefits from new housing construction in this upcycle at the levels realized in the past two upcycles.

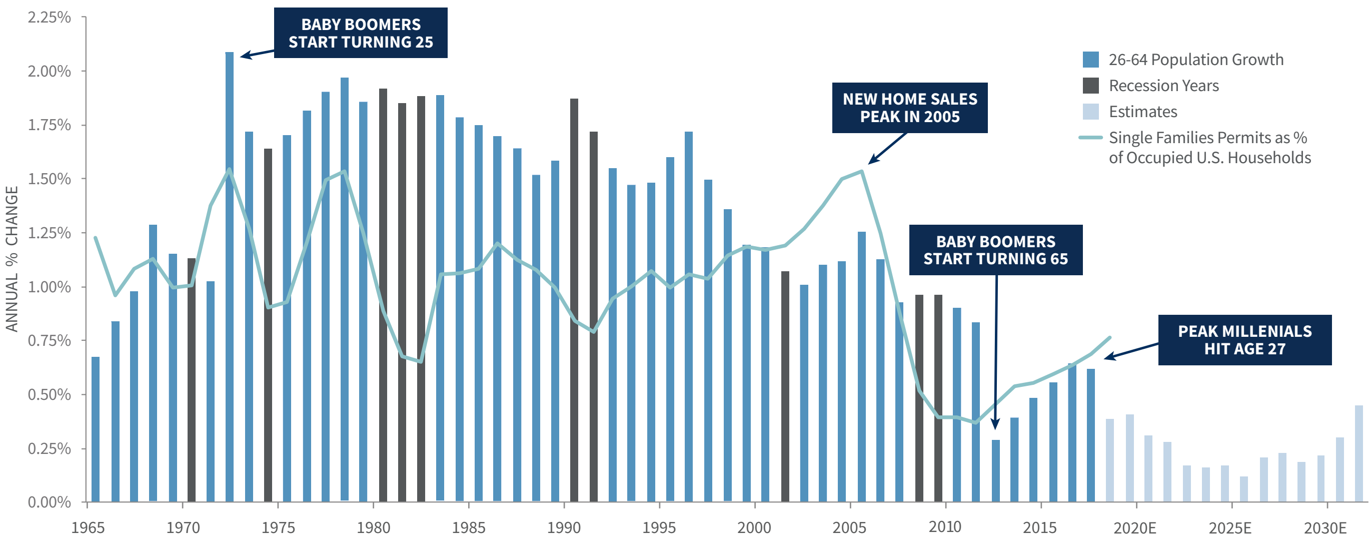
> "Positive shifts in buyer behavior, pent up demand and a strong economy continue to drive our more positive view on the housing recovery."

RISING INPUT COSTS

With regard to the most recent data points in housing sales, we note that listed inventory for sale (new and re-sale) measured as a percentage of total housing stock is tracking its lowest recorded level in over 30 years. Consequently, there is very little for the consumer/buyer to choose from. In addition, due to outsized inflation in the cost to build new housing and the slower growth in household income over the past few years, the affordability index has

Downsizing: The Demographic Debacle

Housing starts have followed declining population growth.



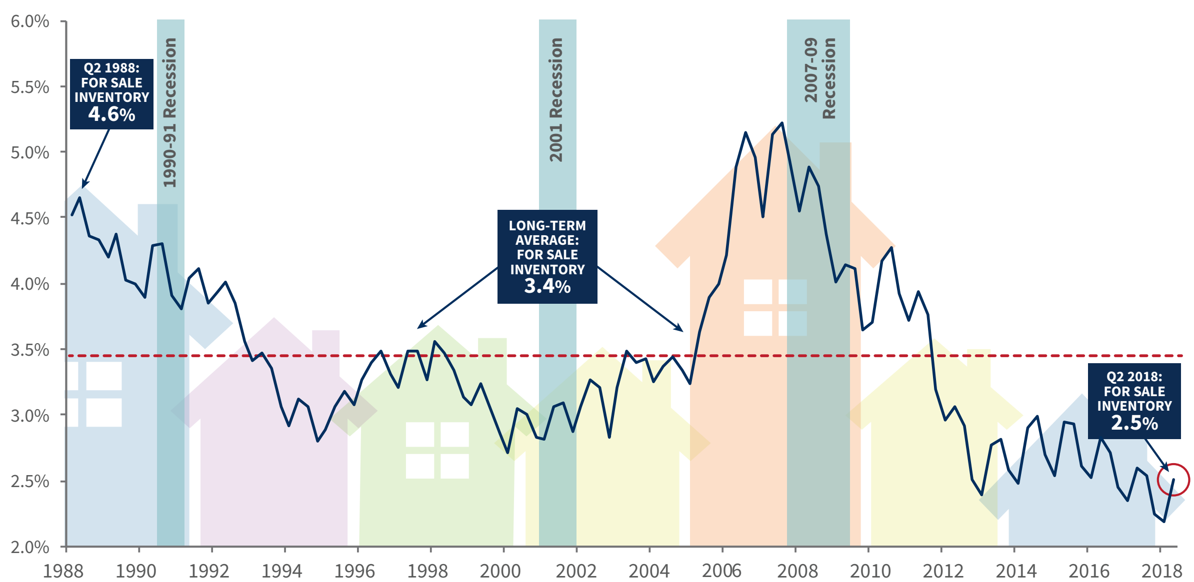
Source: U.S. Census Bureau; Raymond James research, as of 05/01/2018

dropped below the 30-year average, despite the relatively low mortgage rate environment. Labor shortages and escalating costs continue to plague builders and have driven costs to build housing up two to three times higher than the broader CPI inflation rate. The Constant Quality (Laspeyres) Price Index[1] of new single-family houses sold has inflated at a 5.6% compounded annual growth rate since early 2012. Cumulatively, the cost to build a like-kind single family home has increased 31% over the past six years. Trade wars are not helping as materials costs are now spiking. In some cases, they are surpassing the increasing labor and permitting costs that have been rising since the construction recovery began in 2012.

LIFESTYLE PREFERENCES

In addition to the population-driven demographic shift and affordability issues impacting housing demand this upcycle, lifestyle preferences are shifting as millennials are replacing baby boomers as the major home-buying age cohort. Millennials have very different

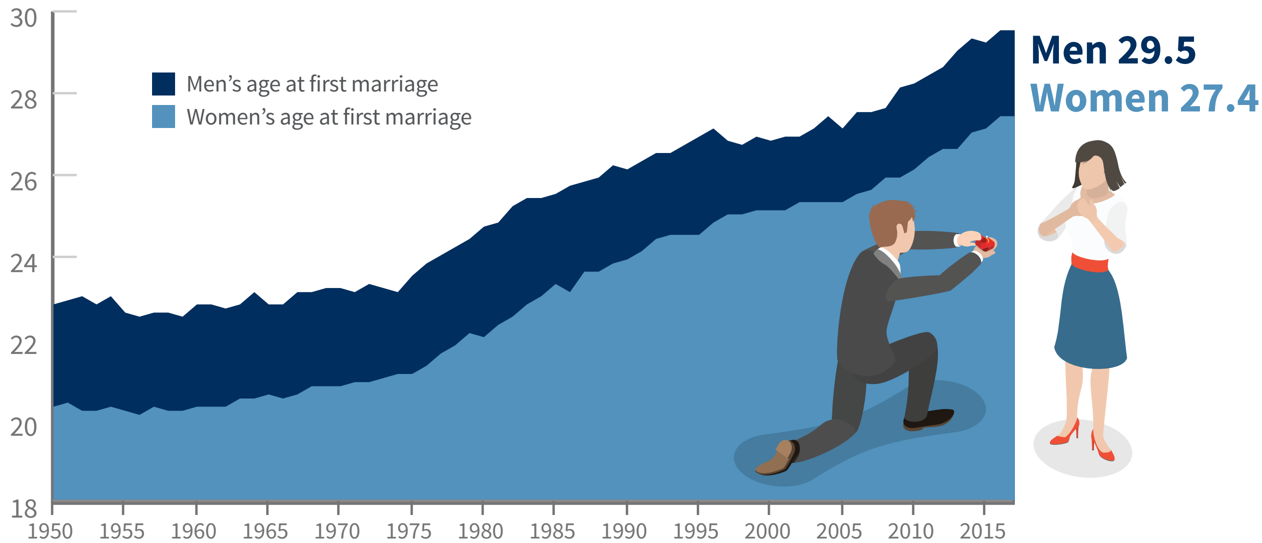
Below Average: Housing Inventory



Source: National Association of Realtors; U.S. Census Bureau; Raymond James research, as of 06/01/2018

[1] The Laspeyres method indexes current prices against those of a base period valued at 100. The value of the index at any given date indicates the value of current prices relative to the base period.

Growing Older: Marriage Ages



Source: U.S. Census Bureau; Raymond James research, as of 09/01/2018

preferences with regard to becoming home owners versus renting, along with lifestyle changes regarding marriage (more single heads of households and delaying marriage), and family formation (birth rates plummeting and fewer families with children). College graduates are entering the workforce at unprecedented levels, but with more student debt and weak credit scores that delay home ownership. For the first time among post-war American generations, living with parents is the most common household arrangement among young adults. As a result, noticeably absent this upcycle is the construction and purchase of entry-level housing, and we don't expect that to change as more and more 'new families' are opting to rent their first home.

PEAK MILLENNIALS

On a more positive note, with the first of the millennials now in their early 30s and 'peak millennials' hitting age 27, there is some renewed demand in single family housing, which will create a shift in demand from apartments to both owned and for-rent single family houses. This shift will continue to drive single family starts higher in the mid-to single-digit range and multifamily starts flat to down, and we have seen an increase in household formations over the past two quarters. Data points like this, which are driven by some positive shifts in buyer behavior, pent up demand, and a strong economy, continue to drive our more positive view on the housing recovery, but we don't see starts spiking up to the historical 1.5 million in the near to intermediate term.

KEY TAKEAWAYS:

- We are not concerned about the speed or strength of the housing recovery at this juncture and view recent data points indicating some softness in new and existing home sales as a somewhat normal reaction to higher mortgage rates this year.
- The cost to build a like-kind single family home has increased 31% over the past six years. Trade wars are not helping as materials costs are now spiking. In some cases, they are surpassing the increasing labor and permitting costs that have been rising since the construction recovery began in 2012.
- For the first time among post-war American generations, living with parents is the most common household arrangement among young adults. As a result, noticeably absent this upcycle is the construction and purchase of entry-level housing, and we don't expect that to change as more and more 'new families' are opting to rent their first home.
- Positive shifts in buyer behavior, pent up demand and a strong economy continue to drive our more positive view on the housing recovery, but we don't see starts spiking up to the historical 1.5 million in the near to intermediate term.

To Invert, or Not to Invert?

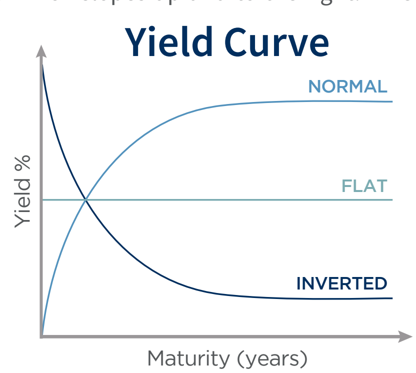
Doug Drabik, *Senior Strategist, Fixed Income,* and **Nick Goetze,** *Managing Director, Fixed Income Services,* assess the current state of the U.S. yield curve and their outlook for interest rates.

As the Federal Reserve (Fed) continues to raise short-term interest rates, the U.S. yield curve has continued to flatten. This, in turn, has prompted investors to question whether the yield curve will become inverted (a scenario in which short-term interest rates become higher than long-term interest rates) and what impact it will have upon the U.S. economy. Historically, inverted curves have often proven to be precursors to recessions. An inverted curve and recession are words that can often elicit intimidation and lead to distorted investment practices. However, maintaining appropriate portfolio balance and perspective may help investors navigate through these markets.

WHERE DID THEY COME FROM?

Record low interest rates can distort perceptions when assessing yields and fixed income in general. On July 8, 2016, the yield on the 10-year Treasury note closed at its three year low of 1.36%. The yield on the 10-year Treasury has since climbed to 3.07% at the time of this writing. On a relative basis, this constitutes a rise of over 126% when compared to its yield in July 2016. While this rise certainly appears large, it is important to keep it in context; on a nominal basis, the yield on the 10-year Treasury has only risen 1.78 percentage points, or 178 basis points (bp). Over the past 50 years, the average yield on the 10-year Treasury has been 6.37%. It is worth noting that yields were skewed substantially higher during the first 25 years of that period as the Fed tried to tame high inflation. On the other hand, yields over the past 15 years have been skewed substantially lower as the Fed tried to spur economic growth following the financial crisis of 2008.

The yield curve is created by plotting the yields of fixed income investments of various maturities. In the case of the U.S. Treasury yield curve, the yields of Treasuries from one month to 30 years in maturity are plotted along an axis. The line connecting these points is known as the 'yield curve' due to its distinctive curved shape. Generally, short-term yields are lower than long-term yields, creating a curve which slopes up and to the right. When short-term and long-term yields are similar, the curve appears 'flat.' When short-term yields are higher than long-term yields, the curve becomes 'inverted,' sloping down and to the right.



It bears mentioning that points along the yield curve have not moved uniformly. On the contrary, short-term yields have risen while long-term rates have remained relatively unchanged. Today's yield curve shape is a product of both the Fed's methodical short-term interest rate hikes and investor sentiment, which has held intermediate and long-term rates in place. In addition, persistently low interest rates around the globe have created steady demand for U.S. Treasuries, which have relatively higher yields than most sovereign debt from around the world. Along with weaker global growth, geopolitical risk, a strengthening dollar, and low inflation, this has proven to be a strong headwind to higher intermediate and long-term interest rates.

THE ECONOMIC CYCLE

Parts of a normal economic cycle include expansions and recessions. An inverted curve signifies that shorter-term rates are higher than longer-term rates. In recent history, inversions have preceded recessions. Historically, equity markets have peaked after the start of an inverted curve. The prospect of a looming recession can incentivize investors to buy bonds with longer maturities as a safe-haven trade in the face of falling equities and/or as a method of preserving capital, potentially causing a fall in long-term yields. Since bond prices rise as yields fall, falling fixed income yields often lead to total return gains. This inverse correlation allows high-quality fixed income to potentially act as a balance to growth assets, such as equities.

It is important to keep in perspective that, on average, periods of economic expansion have been much longer than periods of recession, and positively sloped curves persist much longer than inverted curves. As a result, attempting to 'time the market' based on the shape of the yield curve is an extremely difficult technique for fixed income investors focused on total return. Since long-term planning is typically the norm, it is more of a distraction for fixed income investors seeking income and portfolio preservation strategies. Each of the last three recessions has given way to three of the longest expansionary periods in recent history: March 1991, November 2001

Alternate Sources of Yield

James Camp, CFA, *Managing Director of Fixed Income, Eagle Asset Management*,* discusses the difficulties facing dividends and his outlook on future distributions.

Just as value stocks lagged growth stocks over the last couple of years, a similar trend can be seen between income-producing stocks and the broader equity markets. Non-paying larger cap stocks outpaced dividend payers by over 10% in 2017. Moreover, within the dividend-paying space, higher-paying dividend stocks experienced similar underperformance relative to their lower-paying counterparts.

While non dividend-paying stocks only make up 16% of S&P 500 companies, they have provided an outsized portion of recent returns. Conversely, returns on high-yielding dividend securities have turned negative year-to-date, despite a recovery in July. Dividend-paying stocks are sensitive to rising interest rates, due in part to the higher amount of debt typically carried by these companies. As rates rise, so does the cost of servicing debt, ultimately dampening profits and placing pressure on stock prices.

Despite a challenging rate environment, dividends continue to grow and reacceleration is occurring in many sectors, including financials, where regulatory reform is freeing up capital for increased payouts. Income investors would do well to remember that dividend-based strategies adhere to an 'objective-based' approach, and, in that context, these strategies are meeting that objective by delivering income.

Going forward, headwinds in this space include a potential market correction and rising interest rates, with higher-paying dividend stocks being the most sensitive to these events. More modest paying companies, which yield slightly more than the S&P 500 as a whole, have historically provided the best risk/return characteristics.

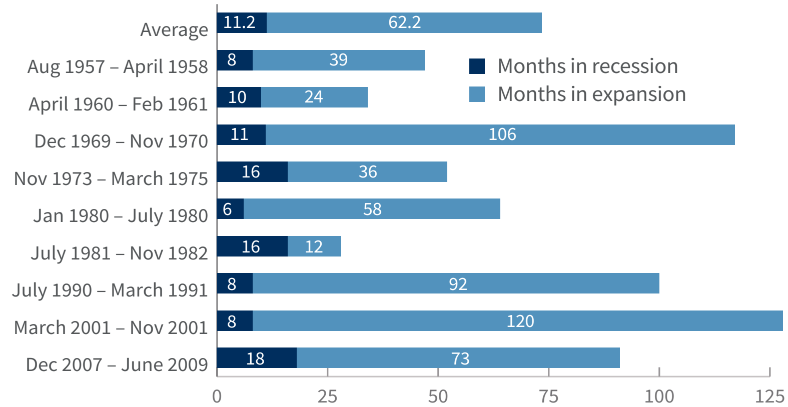
In the past 15 years, there have been nine periods when the 10-year Treasury yield had a significant move (approximately 100 basis points or more). Modest-yielding stocks suffered only two periods of negative returns, while the S&P 500 High Yield Dividend Index fell in three periods. The average returns during these periods for the two groups were 6.88% and 4.38%, respectively.

Source: FactSet

*An affiliate of Raymond James & Associates, Inc., and Raymond James Financial Services, Inc.

The economic business cycle goes through periods of expansion and growth, as well as periods of contraction and recession. A recession can be severe or mild. It does not mean that there is necessarily an economic collapse, but signals that economic activity has declined for several months and/or consecutive quarters.

The Calm Outlasts the Storm: Expansion and Recession Lengths



Source: Federal Reserve Bank of St. Louis; Raymond James, as of 09/15/2018

and June 2009. Over the last 60 years, expansionary periods are, on average, roughly 5.5 times the length of recessionary periods. That margin has widened in recent history. Over the last 30 years, expansionary periods are, on average, more than 8.6 times the length of recessionary periods.

Experts in the fixed income space often monitor spreads between different points on the yield curve in order to forecast economic trends and investor behavior. For example, many prefer to look at the spread between the yield on the 2-year Treasury and the 10-year Treasury. The graph on the following page illustrates the 2-year versus 10-year Treasury spread (light blue line) and the federal funds rate (dark blue line) over the past 30 years. When the light blue line falls below the horizontal '0' axis, the yield curve has become inverted. This 30-year timeline includes four periods of major Fed rate hikes, three periods of major Fed rate cuts, three recessions, and three inverted yield curves.

THE FED'S ROLE

The Fed attempts to keep the markets stable by staving off economic instability caused by inflation or deflation. At the risk of invoking the phrase 'this time is different,' one of the more dangerous mantras of our industry, this time just may be different to a certain degree. Unlike the last three periods of previous rate hikes by the Fed, this time the hikes began after over seven years of interest rates at 0%. As a result, the Fed may be less focused on an overheated market and more focused on reaching 'neutral' interest rates after a period of unusually low rates. A 3.00% federal funds rate is widely viewed to be 'neutral' by policymakers. This would entail another four or five rate hikes of 25 bp each. The Fed raised rates in September and a December hike is looming. These hikes alone could induce the yield curve to invert.

Some Federal Reserve presidents have stated that their greatest concern is inflation, not necessarily the shape of the yield curve. They are more worried about high inflation than low inflation. These statements remind us that the Fed's mandate is to create a stable monetary environment. Given that this mandate will continue to take precedence over the shape of the yield curve, continued rate hikes increase the possibility of an inverted curve and, with it, concerns of a recession. If the Fed pushes short-term rates too high too fast, it could cause the yield curve to invert. Keep in mind that the Fed has relatively less influence upon intermediate and long-term rates. Should short-term rates rise above intermediate and long-term rates, economic models and investor sentiment may very well turn an inverted yield curve into a self-fulfilling prophecy and thereby 'will' the economy into a recession.

WHERE DO THEY GO?

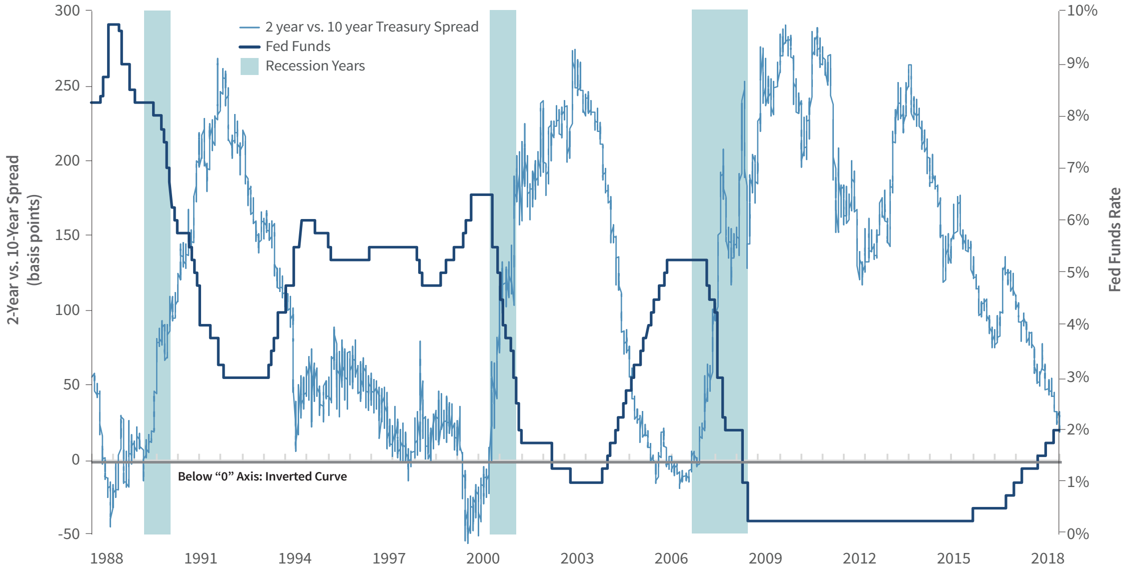
There are currently more headwinds than tailwinds for intermediate to long-term interest rates. As a result, they are likely to be range bound. We anticipate the yield on the 10-year Treasury to remain range bound between 2.80% and 3.40%. Given that the economy continues to show solid growth, there is reason to believe the Fed will continue its gradual pace of hikes and that intermediate and long-term rates will not keep pace, thus causing a yield curve inversion. With U.S. fundamentals still relatively strong, the reaction of the market will dictate where we head from there.

INVESTING AMIDST INVERSIONS

When creating a fixed income strategy/allocation, investors would do well to focus on long-term planning rather than attempting to predict future rates.

A common response to a flatter yield curve is to invest in bonds with shorter maturities. However, an inverted curve does not necessarily mean that short maturity bonds are optimal. For example, on July 3, 2000, the 2-year Treasury yield of 6.29% was higher than the 10-year Treasury yield of 5.99%. However, after maturity on

2-Year vs. 10-Year Treasury Spread vs. Fed Funds



Source: Bloomberg LP; Raymond James as of 09/15/2018

July 3, 2002, the funds from the 2-year Treasury would need to be reinvested. Here, investors faced a much different rate environment. By that time, the yield on the 2-year Treasury had fallen to 2.79% and the yield on the 10-year had fallen to 4.76%.

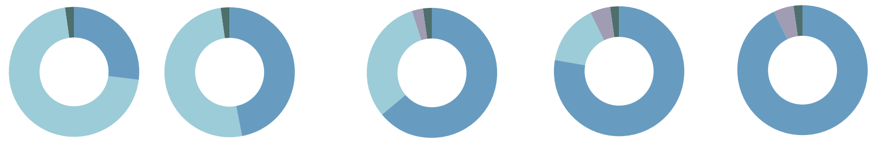
Investing in fixed income requires a different approach than investing in growth assets. Fixed income allocations are typically not designated as total return assets, which should remove the motivation to time the market for most investors. Disciplined, long-term planning can combat unpredictable market forces. Short-term thinking would lead an investor to buy short-term maturities when the yield curve is flat. However, hindsight shows that buying short maturity bonds turned out to be a less attractive investment, as confirmed by our previous example.

Years of general interest rate decline have dropped rates to near historic lows, making it reasonable to presume that interest rates may continue their recent mild upswing. While it is nearly impossible to accurately predict interest rate direction and reliably time the market, promoting a more engineered fixed income strategy (such as laddered maturities/duration) may mitigate interest-rate risk, optimize return, and create structured reinvestment. Fixed income allocations may create a better hedge to heavily weighted growth allocations (such as equities) with modestly higher duration bonds. Regardless of yield curve shape, asset allocation is crucial. Due to the fact that allocations to equities and fixed income depend largely on individual needs and goals, investing in fixed income assets requires disciplined, long-term planning.

KEY TAKEAWAYS:

- An inverted curve and recession are words that can often elicit intimidation and lead to distorted investment practices. However, maintaining appropriate portfolio balance and perspective may help investors navigate through these markets.
- Persistently low interest rates around the globe have created steady demand for U.S. Treasuries, which have relatively higher yields than most sovereign debt from around the world. Along with weaker global growth, geopolitical risk, a strengthening dollar, and low inflation, this has proven to be a strong headwind to higher intermediate and long-term interest rates.
- Promoting a more engineered fixed income strategy (such as laddered maturities/duration) may mitigate interest-rate risk, optimize return, and create structured reinvestment. Fixed income allocations may create a better hedge to heavily weighted growth allocations, such as equities.
- Regardless of yield curve shape, asset allocation is crucial. Due to the fact that allocations to equities and fixed income depend largely on individual needs and goals, investing in fixed income assets requires disciplined, long-term planning.

Strategic Asset Allocation Models



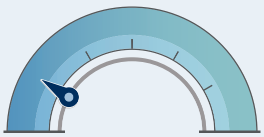
	CONSERVATIVE	MODERATE CONSERVATIVE	MODERATE	MODERATE GROWTH	GROWTH
EQUITY	**27%**	**47%**	**64%**	**78%**	**93%**
U.S. Large Cap Blend	15%	17%	21%	24%	29%
U.S. Large Cap Growth	0%	4%	6%	8%	9%
U.S. Large Cap Value	0%	4%	6%	8%	9%
U.S. Mid Cap Equity	2%	5%	7%	8%	10%
U.S. Small Cap Equity	1%	3%	4%	6%	6%
Non-U.S. Developed Market Equity	9%	14%	16%	20%	25%
Non-U.S. Emerging Market Equity	0%	0%	4%	4%	5%
FIXED INCOME	**71%**	**51%**	**31%**	**15%**	**0%**
Investment Grade Intermediate Maturity Fixed Income	56%	42%	27%	15%	0%
Investment Grade Short Maturity Fixed Income	7%	5%	4%	0%	0%
Non-Investment Grade Fixed Income	3%	2%	0%	0%	0%
Multi-Sector Fixed Income	5%	2%	0%	0%	0%
ALTERNATIVE STRATEGIES	**0%**	**0%**	**3%**	**5%**	**5%**
CASH & CASH ALTERNATIVES	**2%**	**2%**	**2%**	**2%**	**2%**

*Refer to page 22 for multi-sector fixed income asset class definition. Refer to page 23 for model definitions.

Tactical Asset Allocation Outlook

For investors who choose to be more active in their portfolios and make adjustments based on a shorter-term outlook, the tactical asset allocation outlook below reflects the Raymond James Investment Strategy Committee's recommendations for current positioning. Your advisor can help you interpret each recommendation relative to your individual asset allocation policy, risk tolerance, and investment objectives.

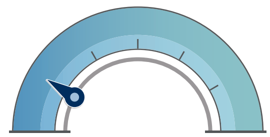
EQUITY



FIXED INCOME

Equities continue to produce positive near-term returns and are supported by strengthening earnings and continued positive global growth. Headwinds for fixed income include a low starting point for yields, rising U.S. interest rates, and high currency volatility in the near term.

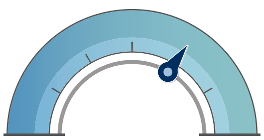
U.S. EQUITY



NON-U.S. EQUITY

U.S. equities have the strongest momentum in the near term relative to non-U.S. equities as domestic companies benefit from the 2017 tax cuts. Additionally, the U.S. is currently leading the rest of the industrialized world in terms of economic growth, however, some caution is warranted as growth may be nearing its peak. Near-term tailwinds outweigh near-term headwinds and strong analysts' outlooks should help overcome negative fund flows for the next couple of quarters.

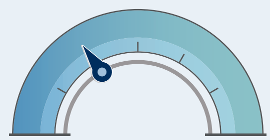
U.S. LARGE-CAP EQUITY



U.S. SMALL-CAP EQUITY

While short-term momentum in U.S. small-cap performance may start to ease at some point, the earnings outlook and analyst estimates should continue to favor small caps in the near term. We are less favorable than the previous quarter on small caps due to elevated valuations and less supportive fundamentals.

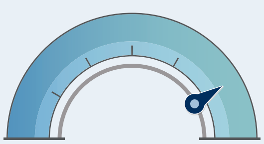
NON-U.S. DEVELOPED MARKET EQUITY



EMERGING MARKET EQUITY

We slightly favor developed markets over emerging markets in the near term. Negative sentiment is present in both areas of non-U.S. equities but is heightened in emerging markets as it approaches counter trend levels. Fund flows continue to support developed markets over emerging, but, at some point, emerging markets will regain favor when long-term trends begin to play out.

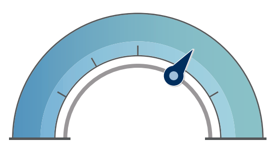
VALUE-ORIENTED EQUITY



GROWTH-ORIENTED EQUITY

We continue to favor growth stocks in the near term as momentum, fund flows, and profitability support their lead over value. Still, we are cautious as growth stock valuations are near 2001-2002 levels and analysts' downgrades are starting to pick up.

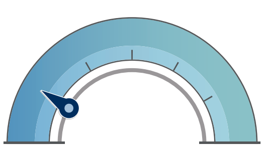
LONG-MATURITY FIXED INCOME



SHORT-MATURITY FIXED INCOME

The U.S. yield curve continues to flatten out and it is unlikely that we will see a spike in longer-term rates in the near future. Global demand continues to suppress yields, and the potential pick up in interest rates is not worth the duration risk. Still, duration is a primary defense against equity market risk, particularly within the 5-7 year range of the curve. Diversified portfolios should maintain fixed income allocations in accordance with each portfolio's investment policy. There is a preference for shorter-maturity, higher-quality bonds at the present.

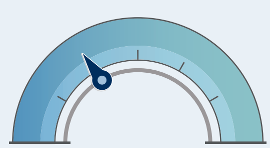
INVESTMENT GRADE FIXED INCOME



NON-INVESTMENT GRADE FIXED INCOME

We continue to favor investment-grade bonds over high yield as investors are not being fully compensated for the credit risk and the equity risk they are taking on. Investment-grade bonds, while not attractive relative to equities, continue to provide ballast to equity market risk and positions should be maintained for this reason. This would also include the senior bank loan market as it tends to act like the high yield market when spreads widen.

U.S. DOLLAR FIXED INCOME



NON-U.S. DOLLAR FIXED INCOME

Local emerging market bond prices are starting to look relatively attractive. However, it may be too soon to call for a tactical recommendation in this space. Continued appreciation of the U.S. dollar would negatively impact dollar-denominated debt held abroad. This, coupled with the additional credit risk associated with non-U.S. debt leaves us slightly favorable to U.S. dollar-denominated fixed income in the near term. This will, at some point, start to turn and favor non-U.S. dollar bonds.

Alternative Investments Snapshot

ALTERNATIVE INVESTMENTS	
EQUITY LONG/SHORT	The opportunity set for long/short equity managers expands in an environment that features a greater degree of dispersion within equities, increasing the potential for managers to generate alpha both long and short. While the strategy has failed to keep pace with broader equity markets thus far in 2018, long/short equity managers would be expected to outperform should volatility spike.
MULTI-MANAGER/ MULTI-STRATEGY	Multi-manager/multi-strategy strategies offer investors diversification across strategy types and asset classes. For clients seeking investments with limited correlation and beta to traditional markets or fixed income alternatives, multi-manager/multi-strategy funds represent a potential solution.
MANAGED FUTURES	Managed futures strive to profit from divergent price movements and trends across asset classes. Managed futures strategies have generally struggled during recent periods of volatility. However, historically the strategy is uncorrelated to equity and bond markets and provides investors with diversification benefits.
EVENT DRIVEN	While the return streams produced by event-driven strategies stand to benefit investors in a late stage market environment, the opportunity set for event-driven managers is mixed. Although merger activity has remained robust, political posturing has resulted in a regulatory environment that is unpredictable. Additionally, the low default environment that has persisted for several years has limited the opportunity in distressed. Companies remain focused on streamlining their asset mix, creating special situation opportunities for managers. Given these dynamics, the current view on the strategy is neutral.
EQUITY MARKET NEUTRAL	Equity market neutral strategies attempt to maintain muted exposure to equity markets by implementing successful stock selection both long and short. The strategy will outperform during periods of volatility within equities while underperforming during periods of strength. Should volatility and dispersion in securities increase going forward, equity market neutral strategies will be poised to outperform. Should markets remain in a low volatility regime that features increased pricing, equity market neutral will underperform broader equity markets.
GLOBAL MACRO	Global macro managers take long and short positions across a variety of asset classes through the lens of current economic and political views of countries and macroeconomics. Variations in returns across asset classes and geographies create opportunities for global macro managers, and, as such, an uptick in volatility would be beneficial to the strategy.

This report is intended to highlight the dynamics underlying major categories of the alternatives market, with the goal of providing a timely assessment based on current economic and capital market environments. Our goal is to look for trends that can be sustainable for several quarters; yet given the dynamic nature of financial markets, our opinion could change as market conditions dictate.

Investors should only invest in hedge funds, managed futures, distressed credit or other similar strategies if they do not require a liquid investment and can bear the risk of substantial losses. There can be no assurance that any investment will meet its performance objectives or that substantial losses will be avoided.

Investment Strategy committee meeting recap

Continued from page 3

in oil prices and cash flows. This reflects the growing trend of capital discipline. Criticism from the investment community regarding their historical outspending has led many domestic oil producers to start returning cash to shareholders through dividends, buybacks, and debt reduction – versus plowing everything into growth."

- "The global oil market was undersupplied last year, it is undersupplied this year, and it will yet again be undersupplied in 2019. Supply increases in the U.S., Saudi Arabia, and Russia are being counteracted by geopolitically driven declines in Venezuela and Iran."

All expressions of opinion reflect the judgment of Raymond James & Associates, Inc., and are subject to change. There is no assurance any of the trends mentioned will continue or that any of the forecasts mentioned will occur. Economic and market conditions are subject to change. Investing involves risk including the possible loss of capital. International investing involves additional risks such as currency fluctuations, differing financial accounting standards, and possible political and economic instability. These risks are greater in emerging markets. Past performance may not be indicative of future results. Asset allocation and diversification do not guarantee a profit nor protect against loss. Companies engaged in business related to a specific sector are subject to fierce competition and their products and services may be subject to rapid obsolescence. Changes in tax laws or regulations may occur at any time and could substantially impact your situation. You should discuss any tax or legal matters with the appropriate professional. The S&P 500 is an unmanaged index of 500 widely held stocks. It is not possible to invest directly in an index. Capital expenditure (CAPEX) are funds are funds used by a company to acquire, upgrade, and maintain physical assets such as property, industrial buildings, or equipment in order to increase capacity or efficiency. Debt securities are subject to credit risk. A downgrade in an issuer's credit rating or other adverse news about an issuer can reduce the market value of that issuer's securities. When interest rates rise, the market value of these bonds will decline, and vice versa. Legislative and regulatory agendas are subject to change at the discretion of leadership or as dictated by events.

New Communication Services Sector

J. MICHAEL GIBBS
Managing Director of Equity Portfolio & Technical Strategy

The Telecommunication Services sector is being broadened to include select companies from the Media industry group (i.e., Comcast Corp.), Internet Retail sub-industry (i.e., Netflix, TripAdvisor), and Technology sector (i.e., Alphabet Inc., Facebook, Inc.) involved in communication services. The new sector will contain two industry groups - Telecommunication Services and Media & Entertainment.

The new sector will have a much different complexion than the previous S&P 500 Telecommunications sector that only included three stocks: AT&T Inc., Verizon, and Centurylink Inc.

Sector weighting (moves to 10% from 2%), growth prospects (among the highest expected growth from among the lowest), valuation (from lowest of all sectors to above S&P 500), dividend yield (goes from highest of all sectors to below the S&P 500), etc. are all significantly affected by the changes.

Moreover, there were significant changes to the Technology sector and Consumer Discretionary sector. As much has been made of the FAANG stocks, it is important to note that the Technology sector only contains one of the FAANG stocks going forward (Apple Inc.). The new Communications Services sector will include three of the FAANG stocks (Alphabet Inc., Facebook, Inc., and Netflix) while the Consumer Discretionary sector will include one name (Amazon).

For information on these sector changes and other sector information, please ask your financial advisor for a copy of *September 2018 Portfolio Strategy: Sector Analysis*.

Overweight: favored areas to look for ideas, as we expect relative outperformance

Equal Weight: expect in-line relative performance

Underweight: unattractive expectations relative to the other sectors; exposure might be needed for diversification

	SECTOR	S&P WEIGHT	TACTICAL COMMENTS
OVERWEIGHT	INFORMATION TECHNOLOGY	20.9%	We think the global macro environment and earnings expectations support a positive stance. However, the risk of heightened trade tensions could hamper many companies in the space. Additionally, a slight softening technical trend should have investors on alert. We expect 3Q earnings results along with management commentary will be important for this market leading sector. A healthy earnings season could suggest recent relative underperformance is likely to reverse. A disappointing quarter could lead to a continuation of declining relative strength trends.
OVERWEIGHT	HEALTH CARE	15.0%	Improving technical trends are supported by decent fundamentals and acceptable valuation. Upside to earnings in 2Q encourages us that more upside may remain in coming quarters. Valuation is mixed, with PEG one standard deviation above the 15-year average while P/E is well below the 15-year average. The continuation of an improving technical trend reinforces our Overweight opinion.
OVERWEIGHT	INDUSTRIALS	9.7%	We think fundamental trends and valuation levels are attractive. Technical trends are attempting to improve. There is a risk of negative fundamentals and sentiment if the U.S. dollar resumes its climb. Additional risk would develop if the U.S. and Canada fail to reach a trade agreement. Despite the highlighted risks, current economic conditions along with attractive fundamentals and valuation justify an Overweight position, in our view.
OVERWEIGHT	ENERGY	6.0%	We remain positive on the energy sector given the Raymond James Energy Team's bullish outlook for global supply and demand of crude. Short term, crude prices rallied due to bullish headlines out of OPEC. The rally has crude and the energy sector near the high of a trading range in place for six months. If price can push to a new high, we expect technical buying to extend the rally.
EQUAL WEIGHT	FINANCIALS	13.5%	We are moving to Equal Weight, influenced by the tight correlation of the yield curve spread and price movement of the sector that has developed this year. With the Fed raising the short end of the curve, lower global yields, and moderate inflation holding longer yields down, the odds seem high for a continuation of a flattening yield curve. Until the correlation of financial stock prices and the 2/10 year spread is broken, we are forced to focus on the yield spread. Sluggish technical trading trends also influence this change of opinion.
EQUAL WEIGHT	CONSUMER DISCRETIONARY	10.3%	The sector lost visible members such as CMCSA, ATVI, DIS, CHTR, and NFLX to the new Communications Service sector. Sector heavy weight AMZN remains. Fundamental trends for this consumer-oriented sector are healthy with the U.S. consumer benefiting from robust job market conditions. Earnings growth expectations in the upper teens (2018) and low double digits (2019) reflect the positive environment. Investors recognize the sector tailwinds with valuations at elevated levels.
EQUAL WEIGHT	COMMUNICATION SERVICES	10.0%	We are Equal Weight on the new Communications Services sector. Projected earnings growth for the new sector is expected to be in line (2018) to slightly better (2019) than the overall market. Nonetheless, weakening technical trends for key members of the index in recent months along with growing attention to the companies' business practices by government authorities keep us equal weight. Although any government action, should it occur, would likely take a long time to transpire, we believe the stocks may experience a short-term overhang with the topic drawing media attention.
UNDERWEIGHT	CONSUMER STAPLES	6.7%	Forward-looking earnings continue to move lower for this fundamentally challenged sector. After a period of price underperformance, valuation is attractive on some measures. However, valuation is less enticing with P/E to Growth (PEG) over one standard deviation above the 15-year relative average (vs. S&P 500). Technical price momentum is building, but relative to the overall market, the improvement is less favorable.
UNDERWEIGHT	UTILITIES	2.8%	The sector's negative sensitivity to rising interest rates influences our Underweight view with the Fed raising rates. Expectations of earnings growth in 2019 (4% and falling) is well below expectations for the S&P 500 (+9%) and solidifies our stance.
UNDERWEIGHT	REAL ESTATE	2.6%	Rising bond yields influenced a sharp pullback in prices over recent days and disrupted what had been an improving trend. With rates likely to trend higher with the Fed raising rates, we are comfortable with our Underweight view of this interest-sensitive sector. Valuation is somewhat attractive, but with modest earnings growth expectations vs. the overall market, valuation becomes less appealing.
UNDERWEIGHT	MATERIALS	2.5%	Moderating earnings expectations for 2019 and weak technical trading trends overrule somewhat attractive valuation measures to influence our Underweight opinion.

ASSET CLASS DEFINITIONS

U.S. Mid Cap Equity: Russell Midcap Index: A subset of the Russell 1000 index, the Russell Midcap index measures the performance of the mid-cap segment of the U.S. equity universe. Based on a combination of their market cap and current index membership, includes approximately 800 of the smallest securities which represents approximately 27% of the total market capitalization of the Russell 1000 companies. The index is created to provide a full and unbiased indicator of the mid-cap segment.

U.S. Small Cap Equity: Russell 2000 Index: The Russell 2000 Index measures the performance of the small-cap segment of the U.S. equity universe. The Russell 2000 is a subset of the Russell 3000 Index representing approximately 10% of the total market capitalization of that index. It includes approximately 2000 of the smallest securities based on a combination of their market cap and current index membership.

The Russell 2000 Index is constructed to provide a comprehensive and unbiased small-cap barometer and is completely reconstituted annually to ensure larger stocks do not distort the performance and characteristics of the true small-cap opportunity set.

U.S. Large Cap Blend: The Russell 1000 Index. An index of approximately 1,000 of the largest companies in the U.S. equity market. The Russell 1000 is a subset of the Russell 3000 Index. It represents the top companies by market capitalization. The Russell 1000 typically comprises approximately 90% of the total market capitalization of all listed U.S. stocks. It is considered a bellwether index for large cap investing.

U.S. Large Cap Growth: The Russell 1000 Growth Index. A composite that includes large and mid-cap companies located in the United States that also exhibit a growth probability. The Russell 1000 Growth is published and maintained by FTSE Russell.

U.S. Large Cap Value: The Russell 1000 Value Index. A composite of large and mid-cap companies located in the United States that also exhibit a value probability. The Russell 1000 Value is published and maintained by FTSE Russell.

Non U.S. Developed Market Equity: MSCI EAFE: This index is a free float-adjusted market capitalization index that measures the performance of developed market equities, excluding the U.S. and Canada. It consists of the following 22 developed market country indices: Australia, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Israel, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland and the United Kingdom.

Non U.S. Emerging Market Equity: MSCI Emerging Markets Index: A free float-adjusted market capitalization index that is designed to measure equity market performance of emerging markets. As of December 31, 2010, the MSCI Emerging Markets Index consists of the following 21 emerging market country indices: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Morocco, Peru, Philippines, Poland, Russia, South Africa, Taiwan, Thailand and Turkey.

Investment Grade Long Maturity Fixed Income: Barclays Long US Government/Credit: The long component of the Barclays Capital Government/Credit Index with securities in the maturity range from 10 years or more.

Investment Grade Intermediate Maturity Fixed Income: Barclays US Aggregate Bond Index: This index is a broad fixed income index that includes all issues in the Government/Credit Index and mortgage-backed debt securities. Maturities range from 1 to 30 years with an average maturity of nearly 5 years.

Investment Grade Short Maturity Fixed Income: Barclays Govt/Credit 1-3 Year: The component of the Barclays Capital Government/Credit Index with securities in the maturity range from 1 up to (but not including) 3 years.

Non-Investment Grade Fixed Income (High Yield): Barclays US Corporate High Yield Index: Covers the universe of fixed rate, non-investment grade debt which includes corporate (Industrial, Utility, and Finance both U.S. and non-U.S. corporations) and non-corporate sectors. The index also includes 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. Original issue zeroes, step-up coupon structures, 144-As and pay-in-kind bonds (PIKs, as of October 1, 2009) are also included. Must publicly issued, dollar-denominated and non-convertible, fixed rate (may carry a coupon that steps up or changes according to a predetermined schedule, and be rated high-yield (Ba1 or BB+ or lower) by at least two of the following: Moody's. S&P, Fitch. Also, must have an outstanding par value of at least $150 million and regardless of call features have at least one year to final maturity.

Multi-Sector Fixed Income: The index for the multi-sector bond asset class is composed of one-third the Barclays Aggregate US Bond Index, a broad fixed income index that includes all issues in the Government/Credit Index and mortgage-backed debt securities; maturities range from 1 to 30 years with an average maturity of nearly 5 years, one-third the Barclays US Corporate High Yield Index which covers the universe of fixed rate, non-investment grade debt and includes corporate (Industrial, Utility, and Finance both U.S. and non-U.S. corporations) and non-corporate sectors and one-third the J.P. Morgan EMBI Global Diversified Index, an unmanaged index of debt instruments of 50 emerging countries.

The Multi-Sector Fixed Income category also includes nontraditional bond funds. Nontraditional bond funds pursue strategies divergent in one or more ways from conventional practice in the broader bond-fund universe. These funds have more flexibility to invest tactically across a wide swath of individual sectors, including high-yield and foreign debt, and typically with very large allocations. These funds typically have broad freedom to manage interest-rate sensitivity, but attempt to tactically manage those exposures in order to minimize volatility. Funds within this category often will use credit default swaps and other fixed income derivatives to a significant level within their portfolios.

Alternatives Investment: HFRI Fund of Funds Index: The index only contains fund of funds, which invest with multiple managers through funds or managed accounts. It is an equal-weighted index, which includes over 650 domestic and offshore funds that have at least $50 million under management or have been actively trading for at least 12 months. All funds report assets in US Dollar, and Net of All Fees returns which are on a monthly basis.

Cash & Cash Alternatives: Citigroup 3 Month US Treasury Bill: A market value-weighted index of public obligations of the U.S. Treasury with maturities of 3 months.

KEY TERMS

Long/Short Equity: Long/short equity managers typically take both long and short positions in equity markets. The ability to vary market exposure may provide a long/short manager with the opportunity to express either a bullish or bearish view, and to potentially mitigate risk during difficult times.

Global Macro: Hedge funds employing a global macro approach take positions in financial derivatives and other securities on the basis of movements in global financial markets. The strategies are typically based on forecasts and analyses of interest rate trends, movements in the general flow of funds, political changes, government policies, inter- government relations, and other broad systemic factors.

Multi-Strategy: Engage in a broad range of investment strategies, including but not limited to long/short equity, global macro, merger arbitrage, statistical arbitrage, structured credit, and event-driven strategies. The funds have the ability to dynamically shift capital among the various sub-strategies, seeking the greatest perceived risk/reward opportunities at any given time.

Event-Driven: Event-driven managers typically focus on company-specific events. Examples of such events include mergers, acquisitions, bankruptcies, reorganizations, spin-offs and other events that could be considered to offer "catalyst driven" investment opportunities. These managers will primarily trade equities and bonds.

Market Neutral: A hedge fund strategy that seeks to exploit differences in stock prices by being long and short in stocks within the same sector, industry, market capitalization, country, etc. This strategy creates a hedge against market factors.

Managed Futures: Managed futures strategies trade in a variety of global markets, attempting to identify and profit from rising or falling trends that develop in these markets. Markets that are traded often include financials (interest rates, stock indices and currencies), as well as commodities (energy, metals and agriculturals).

INDEX DEFINITIONS

Barclays U.S. Aggregate Bond Index: A broad-based benchmark that measures the investment grade, U.S. dollar-denominated, fixed-rate taxable bond market, including Treasuries, government-related and corporate securities, MBS (agency fixed-rate and hybrid ARM passthroughs), ABS, and CMBS. Securities must be rated investment-grade or higher using the middle rating of Moody's, S&P and Fitch. When a rating from only two agencies is available, the lower is used. Information on this index is available at INDEX-US@BARCLAYS.COM.

DISCLOSURE

All expressions of opinion reflect the judgment of Raymond James & Associates, Inc. and are subject to change. Past performance may not be indicative of future results. There is no assurance any of the trends mentioned will continue or forecasts will occur. The performance mentioned does not include fees and charges which would reduce an investor's return. Dividends are not guaranteed and will fluctuate. Investing involves risk including the possible loss of capital. Asset allocation and diversification do not guarantee a profit nor protect against loss. Investing in certain sectors may involve additional risks and may not be appropriate for all investors.

International investing involves special risks, including currency fluctuations, different financial accounting standards, and possible political and economic volatility. Investing in emerging and frontier markets can be riskier than investing in well-established foreign markets.

Investing in small- and mid-cap stocks generally involves greater risks, and therefore, may not be appropriate for every investor.

There is an inverse relationship between interest rate movements and fixed income prices. Generally, when interest rates rise, fixed income prices fall and when interest rates fall, fixed income prices rise.

U.S. government bonds and Treasury bills are guaranteed by the U.S. government and, if held to maturity, offer a fixed rate of return and guaranteed principal value. U.S. government bonds are issued and guaranteed as to the timely payment of principal and interest by the federal government. Treasury bills are certificates reflecting short-term obligations of the U.S. government.

While interest on municipal bonds is generally exempt from federal income tax, they may be subject to the federal alternative minimum tax, or state or local taxes. In addition, certain municipal bonds (such as Build America Bonds) are issued without a federal tax exemption, which subjects the related interest income to federal income tax. Municipal bonds may be subject to capital gains taxes if sold or redeemed at a profit.

If bonds are sold prior to maturity, the proceeds may be more or less than original cost. A credit rating of a security is not a recommendation to buy, sell or hold securities and may be subject to review, revisions, suspension, reduction or withdrawal at any time by the assigning rating agency.

Commodities and currencies are generally considered speculative because of the significant potential for investment loss. They are volatile investments and should only form a small part of a diversified portfolio. Markets for precious metals and other commodities are likely to be volatile and there may be sharp price fluctuations even during periods when prices overall are rising.

Investing in REITs can be subject to declines in the value of real estate. Economic conditions, property taxes, tax laws and interest rates all present potential risks to real estate investments.

High-yield bonds are not suitable for all investors. The risk of default may increase due to changes in the issuer's credit quality. Price changes may occur due to changes in interest rates and the liquidity of the bond. When appropriate, these bonds should only comprise a modest portion of your portfolio.

Beta compares volatility of a security with an index. Alpha is a measure of performance on a risk-adjusted basis.

The process of rebalancing may result in tax consequences.

Alternative investments involve specific risks that may be greater than those associated with traditional investments and may be offered only to clients who meet specific suitability requirements, including minimum net worth tests. Investors should consider the special risks with alternative investments including limited liquidity, tax considerations, incentive fee structures, potentially speculative investment strategies, and different regulatory and reporting requirements. Investors should only invest in hedge funds, managed futures, distressed credit or other similar strategies if they do not require a liquid investment and can bear the risk of substantial losses. There can be no assurance that any investment will meet its performance objectives or that substantial losses will be avoided.

The companies engaged in business related to a specific sector are subject to fierce competition and their products and services may be subject to rapid obsolescence.

The performance mentioned does not include fees and charges which would reduce an investor's returns. The indexes are unmanaged and an investment cannot be made directly into them. The Dow Jones Industrial Average is an unmanaged index of 30 widely held securities. The NASDAQ Composite Index is an unmanaged index of all stocks traded on the NASDAQ over-the-counter market. The S&P 500 is an unmanaged index of 500 widely held securities. The Shanghai Composite Index tracks the daily price performance of all A-shares and B-shares listed on the Shanghai Stock Exchange.

MODEL DEFINITIONS

Conservative Portfolio: may be appropriate for investors with long-term income distribution needs who are sensitive to short-term losses yet want to achieve some capital appreciation. The equity portion of this portfolio generates capital appreciation, which is appropriate for investors who are sensitive to the effects of market fluctuation but need to sustain purchasing power. This portfolio, which has a higher weighting in bonds than in stocks, seeks to keep investors ahead of the effects of inflation with an eye toward maintaining principal stability.

Moderate Conservative Portfolio: may be appropriate for investors with intermediate-term time horizons who are sensitive to short-term losses yet want to participate in the long-term growth of the financial markets. The portfolio, which has an equal weighting in stocks and bonds, seeks to keep investors well ahead of the effects of inflation with an eye toward maintaining principal stability. The portfolio has return and short-term loss characteristics that may deliver returns lower than that of the broader market with lower levels of risk and volatility.

Moderate Portfolio: may be appropriate for investors with intermediate-term time horizons who are sensitive to short-term losses yet want to participate in the long-term growth of the financial markets. This portfolio, which has a higher weighting in stocks, seeks to keep investors well ahead of the effects of inflation with an eye toward maintaining principal stability. The portfolio has return and short-term loss characteristics that may deliver returns lower than that of the broader equity market with lower levels of risk and volatility.

Moderate Growth Portfolio: may be appropriate for investors with long-term time horizons who are not sensitive to short-term losses and want to participate in the long-term growth of the financial markets. This portfolio, which has a higher weighting in stocks seeks to keep investors well ahead of the effects of inflation with principal stability as a secondary consideration. The portfolio has return and short-term loss characteristics that may deliver returns slightly lower than that of the broader equity market with slightly lower levels of risk and volatility.

Growth Portfolio: may be appropriate for investors with long-term time horizons who are not sensitive to short-term losses and want to participate in the long-term growth of the financial markets. This portfolio, which has 100% in stocks, seeks to keep investors well ahead of the effects of inflation with little regard for maintaining principal stability. The portfolio has return and short-term loss characteristics that may deliver returns comparable to those of the broader equity market with similar levels of risk and volatility.

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Tariffs and the Terminology of Trade

An introduction to international trade and its impact on the global economy
by Taylor Krystkowiak

FOREWORD

From its earliest days, trade has been integral to human history and the evolution of society. The fortunes of empires, kingdoms and modern nation states have often revolved around trade and its revenues. In short, trade is a fundamental and crucial cornerstone of economics. As a result, there has been and continues to be a preoccupation with trade and its potential to enrich the economies of nations and the world as a whole. However, the prevailing views toward trade as well as the perception of its advantages and disadvantages have evolved over the centuries.

HISTORY

While its effects were always an object of interest, trade became a focal point of governments in the 16th and 17th centuries with the advent of 'mercantilism.' This doctrine held that the prosperity and efficacy of the state were dependent upon its ability to maximize its exports, limit its imports, and, by doing so, maximize its accumulation of gold and silver. In other words, mercantilism extolled the benefits of a positive 'balance of trade' with other nations. In order to effect a positive balance of trade, the state would place high 'tariffs' on imported goods, provide 'subsidies' on domestic exports, and prohibit trade between its colonial possessions and foreign nations.

KEY TAKEAWAYS

According to the theories penned by Adam Smith and David Ricardo, free trade and specialization enhance the efficiency and aggregate output of the economy.

Tariffs cause costs to rise for consumers and companies, increasing prices and reducing profitability.

Global consensus over the past two centuries has generally favored freer trade and fewer tariffs. Both the volume and value of global trade have grown exponentially as tariffs and barriers to trade have fallen.

If a nation imports more goods than it exports, it will incur a trade deficit. A trade deficit, in and of itself, is not inherently detrimental to the economy.

A substantial reduction in the trade deficit would require either a decrease in consumption, an increase in savings, or a decrease in investment, causing the economy to contract.

If a nation does not save a sufficient portion of its overall income to meet the demand of its economy, foreign capital must make up the deficit.

Mercantilism and its policies remained the prevailing economic theory throughout Europe until the end of the 18th century when it was famously disputed by English economist Adam Smith. In his seminal work *The Wealth of Nations*, Smith challenges the validity of mercantilist theory and contends that it is counterproductive to economic growth, impoverishing rather than enriching the nations which perpetuated such policies. Instead, Smith maintains that nations would benefit from freer, rather than more restrictive trade. By engaging in trade free from the artificial distortions of tariffs and subsidies, the efficiency of the economy would be enhanced and its aggregate output would be increased. This increased output, Smith argues, is the true 'wealth' of a nation, not its stores of gold or silver. Indeed, aggregate output, or 'gross domestic product' (GDP), has become the primary metric of national prosperity rather than stores of metallic wealth.

Building upon the theories Smith established in *The Wealth of Nations*, David Ricardo articulated the notion of 'comparative advantage' in his work *On the Principles of Political Economy and Taxation*. According to Ricardo, all nations stand to benefit by specializing in goods they produce most efficiently and trading with one another, irrespective of whether a nation possesses an 'absolute' advantage in the production of all goods.

To substantiate his claim, Ricardo utilizes an example of wine and cloth production in England and Portugal. While Portugal possesses an absolute advantage in the production of both goods, it stands to benefit by specializing in the production of wine and trading with England, which possesses an advantage in the production of cloth relative to Portugal (see chart). In this way, both nations collectively reap rewards greater than those which would have been possible without trade and specialization.

While there have been many other contributors, the theories of Smith and Ricardo form the foundation of classical economics and the basic framework for modern trade. The international community, by and large, has viewed trade through this lens for the better part of two centuries. The resulting global consensus has been one that generally favors freer trade and fewer tariffs (see chart).

Comparative Advantage

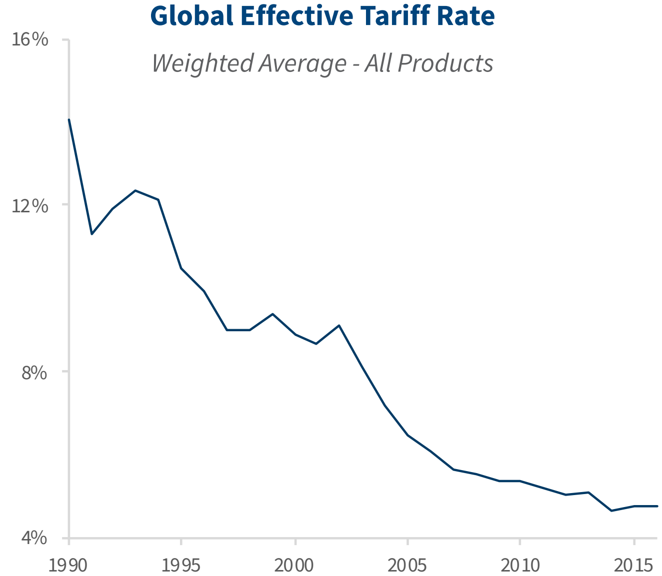
Ricardo's Example

	Cloth	Wine
England	100 hrs	120 hrs
Portugal	90 hrs	80 hrs

In the table above, Portugal possesses an 'absolute' advantage in the production of both cloth and wine relative to English production. Portugal can produce both goods in fewer hours than England can. However, England possesses a 'comparative' advantage in the production of cloth relative to Portugal. In other words, it takes England less time to produce cloth than wine, whereas it takes Portugal more time to produce cloth than wine.

If Portugal specializes in the production of wine and England specializes in the production of cloth, more wine and cloth can be produced in aggregate. Both nations can therefore benefit by specializing and trading with each other.

Global Effective Tariff Rate



Source: World Bank Group, World Integrated Trade Solution, United Nations Conference on Trade and Development as of 06/19/2018

TRADE TERMINOLOGY

A wide array of metrics are used to assess trade and its impact upon the economy. Given the fact that many of these metrics are often misunderstood or misinterpreted, it is helpful to understand how each metric is calculated.

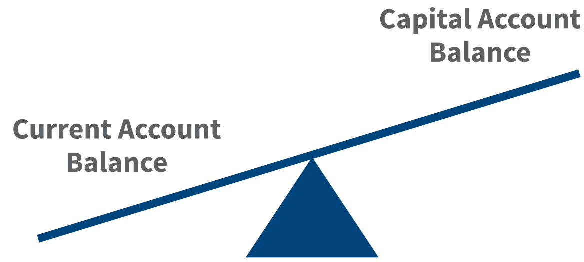
The 'balance of trade' is the net value of a nation's exports less its imports. If a nation exports more goods than it imports, it is said to have a 'trade surplus.' On the other hand, if a nation imports more goods than it exports, it is said to have a 'trade deficit.'

The balance of trade is an outsized component of a nation's 'current account,' which is used in conjunction with a nation's 'capital account' to calculate a nation's overall 'balance of payments.' The current account captures the net value of all national transactions, including trade. The capital account captures the net value of all national investment, including financial assets purchased by foreigners. As with other accounting conventions, the balance of payments equation is structured such that it theoretically 'balances' to zero.

While it may appear complex at first glance, the reasoning behind this relationship is relatively straightforward. If a nation consumes more than it produces, it will require financing from other nations to make up the shortfall. If a nation produces more than it consumes, its surplus capital must be invested abroad. That is to say that a country with a current account deficit will need to incur a capital account surplus in order to finance its demand for capital. On the other hand, a country with a current account surplus will need to incur a capital account deficit in order to invest its surplus capital.

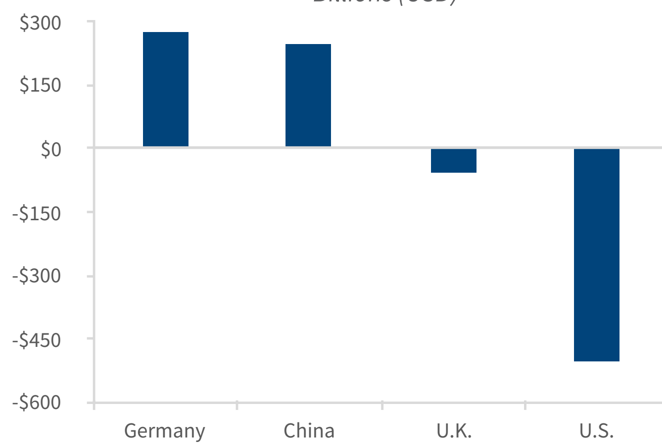
While there are countless inputs that factor into these equations, one of the most crucial and oft overlooked factors is the collective savings rate of a nation. In short, if a nation as a whole does not save a sufficient portion of its overall income to meet the demand of its economy, foreign capital must make up the deficit. On the other hand, if a nation saves more of its overall income than its economy demands, its surplus capital can only be invested abroad. In fact, national savings rates and current account balances are loosely correlated. A high national savings

Balance of Payments

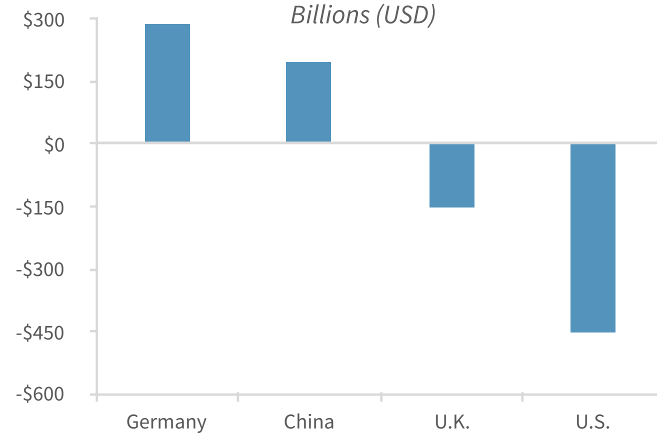


Nations with current account deficits will need to incur a capital account surplus. Conversely, nations with current account surpluses will need to incur a capital account deficit.

Balance of Trade
Billions (USD)



Current Account Balance
Billions (USD)



rate generally corresponds to a current account surplus, while a low national savings rate generally corresponds to a current account deficit (see charts).

U.S. TRADE

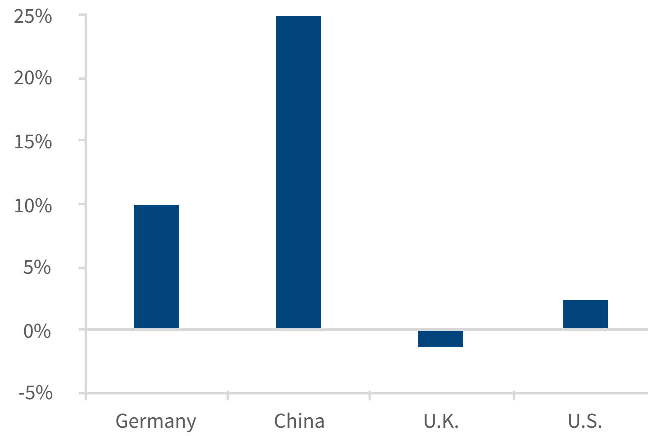
A cognizance of these facts makes it easier to understand the current state of trade in the U.S. While many would point to its burgeoning trade deficit as evidence that the U.S. is at an inherent disadvantage relative to countries with trade surpluses, the reality is more complex.

The fact of the matter is that the U.S. has a propensity to consume more than it produces, a habit which has been facilitated by the dominance of the U.S. dollar as the world's preeminent currency, as well as the sizable and consistent demand for U.S. financial assets. Furthermore, a concurrent decline in national savings has further exacerbated the U.S. trade deficit (see charts). Foreign countries, to a greater or lesser degree, have essentially financed the expansion of U.S. consumption and its decline in savings by purchasing U.S. financial assets and investing in its economy. While the U.S. has had to pay interest and dividends to foreign countries in return for their investments, the arrangement has, on the whole, greatly benefited the U.S. economy. An abundance of foreign capital has enabled the U.S. economy to expand to a greater extent than would have otherwise been possible with domestic capital alone. Therefore, the trade deficit is not necessarily a negative, per se.

It bears mentioning that trade agreements and policies generally have little influence on the overall trade deficit. By virtue of the aforementioned accounting relationships, national consumption, savings, and investment comprise the lion's share

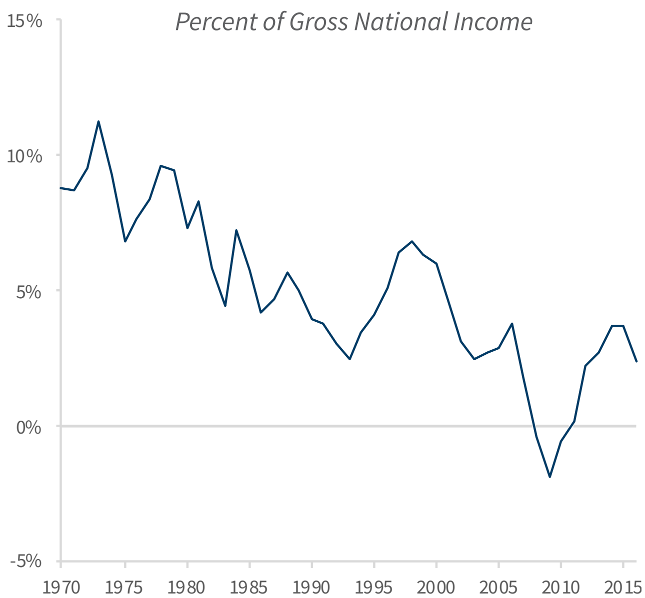
Adjusted Net National Savings

Percent of Gross National Income



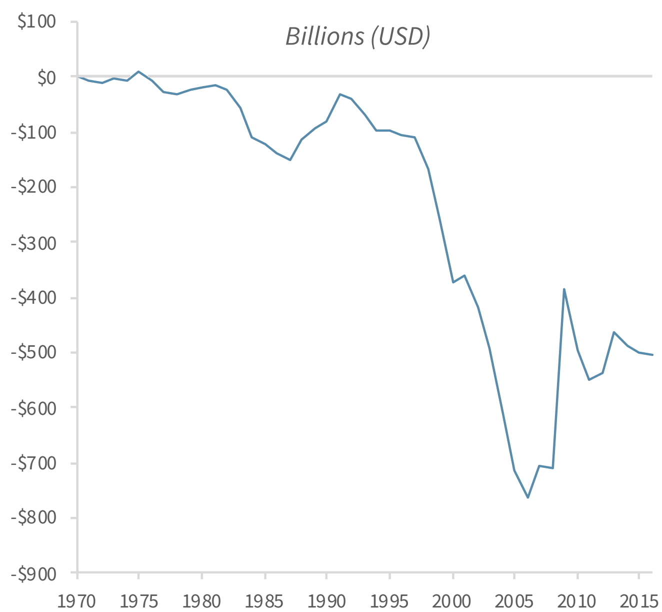
U.S. Adjusted Net National Savings

Percent of Gross National Income



U.S. Balance of Trade

Billions (USD)



Source: International Monetary Fund, Balance of Payments and Statistics, World Bank Group, as of 06/19/2018 of a nation's balance of trade and current account, which are generally impervious to trade policies with foreign countries. A substantial reduction in the trade deficit would necessitate either a decrease in consumption, an increase in savings, or a decrease in investment. Pursuing any of these options would in turn decrease both national output and income. In short, they would cause the economy to contract.

However, in the event that sources of foreign capital were to suddenly dry up, a trade deficit would indeed be unsustainable. In lieu of foreign capital, domestic saving would need to increase to fill the gap or domestic investment would need to decrease. Barring such an occurrence, a trade deficit is not inherently detrimental to the economy in and of itself.

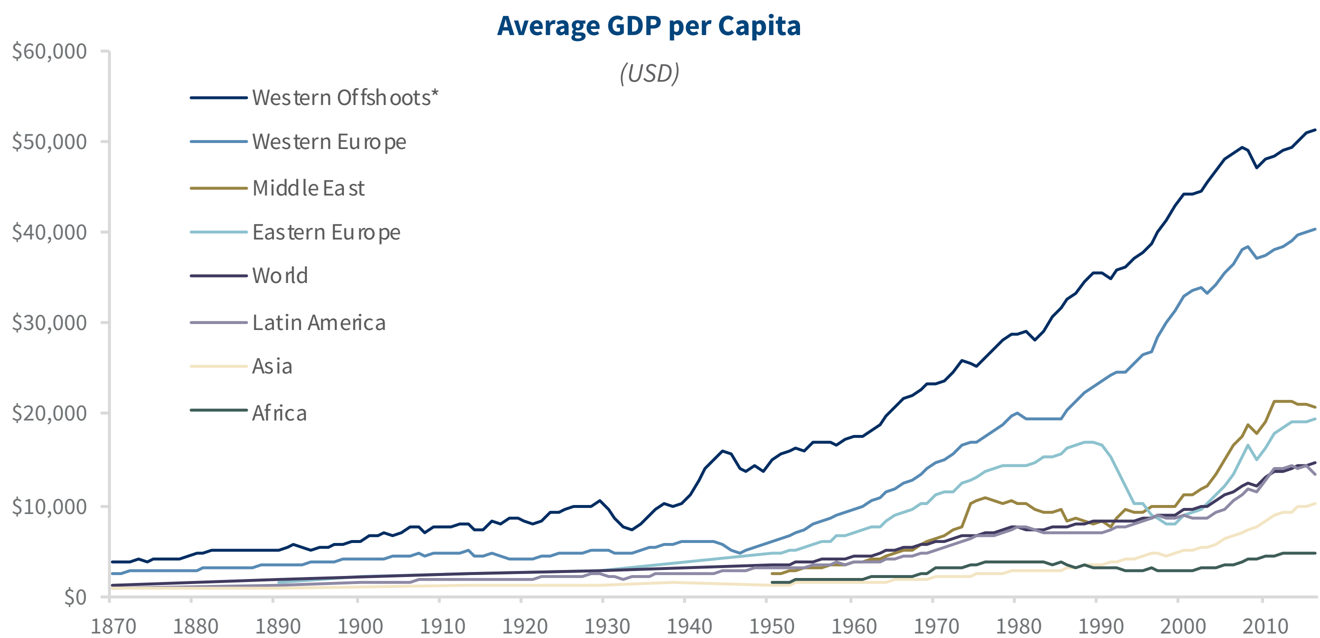
THE EFFECTS OF TARIFFS

A 'tariff' is a tax assessed on foreign imports. Historically, tariffs have been enacted to generate tax revenue or protect domestic producers from competition in the form of cheaper foreign goods. In essence, tariffs artificially make domestically produced goods more competitive by making foreign imports more expensive.

While tariffs have been utilized heavily in the past, both their usage and rates have fallen considerably over the past half century, especially amongst advanced economies. In an apparent validation of Smithian and Ricardian economics, both the volume and value of global trade have grown exponentially as tariffs and barriers to trade have fallen. This has coincided with the growth of the global economy over the same time period, which is, on average and in aggregate, more prosperous than at any time in human history (see charts).

While it is readily apparent that emerging economies have reaped outsized rewards as a result of freer trade, developed economies as a whole have benefited as well. The availability of cheaper goods imported from abroad has enabled consumers in developed economies to retain a larger share of their income for consumption, saving or investment. The same holds true for companies, which benefit from lower input costs and higher profit margins when there are fewer barriers to trade.

On the other hand, when tariffs are raised and other protectionist measures are enacted, costs rise. Goods become more expensive to consumers and inputs become more expensive to companies, reducing both income and profitability, respectively. That is to say that the aggregate impact to the entire economy at large would be negative. In the event that nations engage in a 'trade war' wherein each nation retaliates with higher and more extensive tariffs, the negative economic effects would be amplified drastically. In short, the inefficiencies induced by tariffs are tantamount to 'deadweight loss' and the effects upon the global economy, on average and in aggregate, are negative.



Source: University of Groningen, Maddison Project Database, as of 06/19/2018 *US, Canada, Australia, New Zealand, et. al

However, it bears mentioning that free trade is not without its drawbacks. Though free trade is beneficial on the whole, it can certainly cause dislocations in local industries as uncompetitive producers are undermined and replaced by their more competitive counterparts. As with all creative destruction, there is often a degree of collateral damage. In developed economies, this collateral damage has been directed toward industries which have been rendered uncompetitive by their emerging counterparts. The reintegration of these displaced industries and their workers within the broader economy is often a lengthy process in the short run. Nevertheless, the availability of cheaper goods facilitates income growth over the long run as a smaller share of income is spent on those same goods.

THE EFFECTS OF CURRENCY

The value of a nation's currency has a direct impact upon both the relative value of a nation's imports and exports, as well as its balance of trade. When the value of a nation's currency rises relative to foreign currencies, foreign imports become relatively cheaper while domestic exports become more expensive. On the other hand, when the value of a nation's currency falls relative to foreign currencies, foreign imports become relatively more expensive while domestic exports become relatively cheaper.

The reasoning behind this relationship is fairly straightforward. If the U.S. dollar rises in value relative to the British pound, dollars now purchase more pounds and pounds now purchase fewer dollars. As a result, U.S. consumers can purchase more imports from Britain with the same number of dollars, whereas British consumers can purchase fewer exports from the U.S. with the same number of pounds. The opposite holds true if the U.S. dollar were to fall in value relative to the British pound.

As a result, currency valuation can become a point of contention, especially when a nation's currency is 'pegged.' That is to say its value is based upon the value of another nation's currency, and the rate of exchange between the two currencies is 'fixed.' This is in contrast to currencies which have a free or 'floating' exchange rate. Due to the fact that currency has an outsized influence on trade, the valuation of a pegged currency directly impacts the valuation of a nation's imports and exports.

CONCLUSION

Trade is often viewed as a 'zero-sum game', which is a term used in the economic discipline of game theory. In a zero-sum game, the payoffs for each player sum to zero. That is to say the game is binary, and each player's gain or loss corresponds to the other player's loss or gain, respectively (see chart). A nation's trade deficit or surplus with other nations is often viewed as a proxy for payoffs. By this logic, a nation with a trade deficit must be at an inherent disadvantage to a nation with a surplus.

However, the reality is more complex. As discussed above, trade deficits and surpluses do not necessarily denote whether a nation is at an inherent economic advantage or disadvantage. In this sense, trade is more like a 'non-zero-sum game' with a variety of possible payoffs (see chart). Generally speaking, all nations stand to benefit by 'cooperating' in an environment of free trade. On the other hand, tariffs and protectionist measures cause disruptions to global supply chains, increasing costs and reducing profitability. In other words, nations stand to be harmed by 'defecting' from free trade and engaging in trade wars.

Zero-Sum Game

1	0
0	-1

In a zero-sum game, the payoffs for each player sum to zero. That is to say the game is binary, and each player's gain or loss corresponds to the other player's loss or gain, respectively. If one player completes the game with a positive payoff (1), the other player will have completed the game with a negative payoff (-1).

Non-Zero-Sum Game

Prisoner's Dilemma

C, C	C, D
D, C	D, D

In a non-zero-sum game, payoffs for each player do not sum to zero. In other words, each player can receive positive payoffs or negative payoffs, regardless of whether his opponent has received a positive or negative payoff. The matrix above shows a classic 'prisoner's dilemma' where each player has the opportunity to cooperate (C) or defect (D). If both players cooperate (C,C), they will receive the best possible, or 'Pareto Optimal,' payoff. However, if both players defect (D,D), they will receive the worst possible payoff.

All content written and assembled by Taylor Krystkowiak, Investment Strategy Analyst.

ADDITIONAL DISCLOSURES

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<u>INVESTMENT PHILOSOPHY</u>

The following investment philosophy contains a dynamic set of core <u>beliefs</u>.

1. **The whole of investing is to earn enough to meet your objectives**, not to earn more money than average. You must refuse to judge your financial success against the results of others whose risk tolerance, needs, and unique circumstances you do not know.

2. **There are four dimensions of investing**. The four dimensions, in descending order of your ability to control, are cost, liquidity, risk, and returns. Focus your energy on what you can control.

    a. **You cannot control future returns but you can influence them mightily by the price at which you are able to buy and sell securities.**

3. **We have met the enemy, and he is us.** The human brain has evolved so that it is hardwired to experience emotion before logic, use reasoning short cuts (biases), and socially interact in ways often counter to successful investing.

4. **There are limits to prediction.** The future is unknowable.

    a. **Do not put all your eggs in one basket.** Diversification is a way to prepare for the financial consequences of as many potential future economic conditions as practical.

    b. **Short-term market timing** (e.g., between stocks, bonds, and cash or between major risk factors such as style and size) **is difficult to predict and therefore typically unrewarding.**

    c. **Markets do not merely mean revert, they overshoot.** Although the forces of supply and demand draw markets towards equilibrium, the psychology and sociology of market participants as well as changing economic and political conditions cause markets to overreact and overshoot equilibrium. As a result, history alone is an important but imperfect guide.

5. There is no free lunch. **There are trade-offs in investing:**

    a. **Risk and returns are inversely related.** But unlike returns, risk is multidimensional.

    b. **Excess returns and market efficiency are inversely related and often cyclical**.

6. **Performance cannot be guaranteed, but there are some predictions**:

    a. **Philosophy, processes, and organizational resources drive excess returns. Culture and alignment of interest can enhance or detract.**

    b. **Risk-adjusted excess returns are a function of skills, breadth of independent bets, and freedom** to implement a philosophy or strategy.

Callan

August 2, 2018

Sewerage & Water Board of New Orleans

Asset Allocation and Liability Study: Supplemental Information

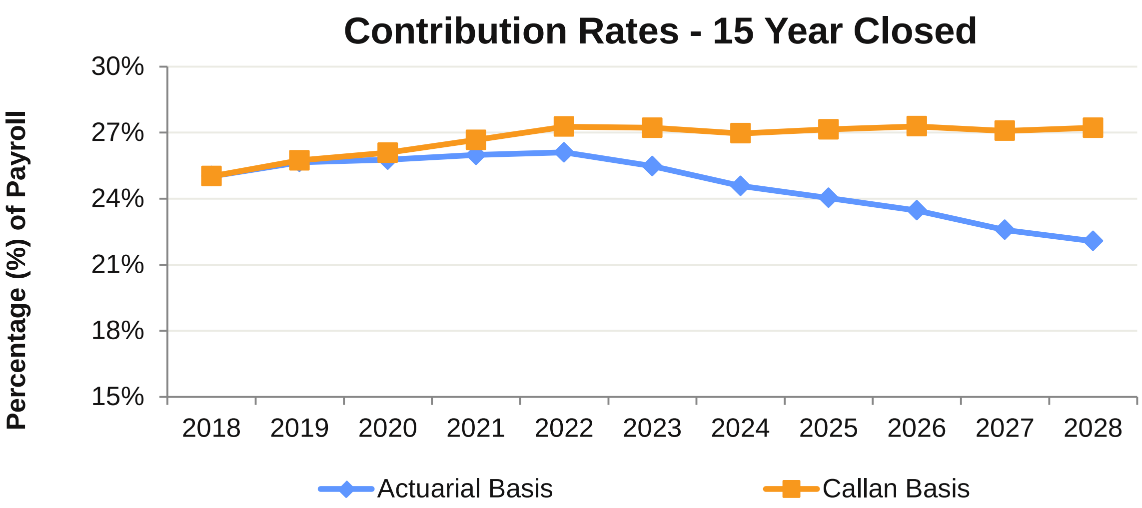
Weston Lewis, CFA, CAIA
Atlanta Plan Sponsor Consulting

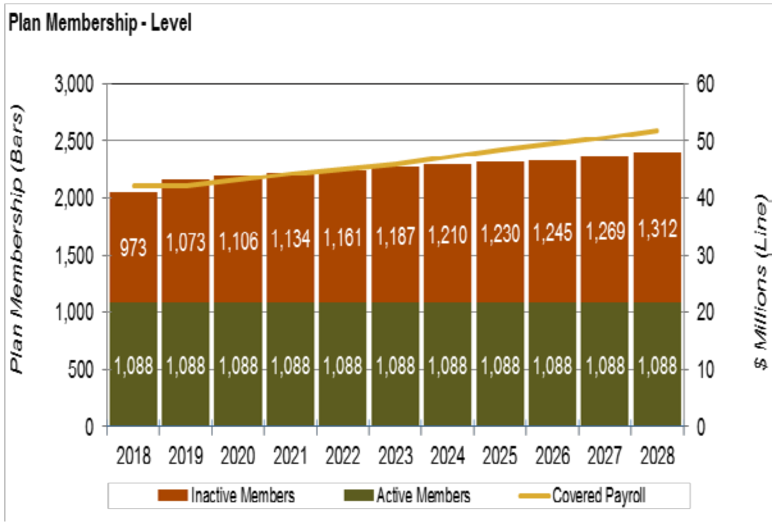
Cody Chapman, CFA, CAIA
Atlanta Plan Sponsor Consulting

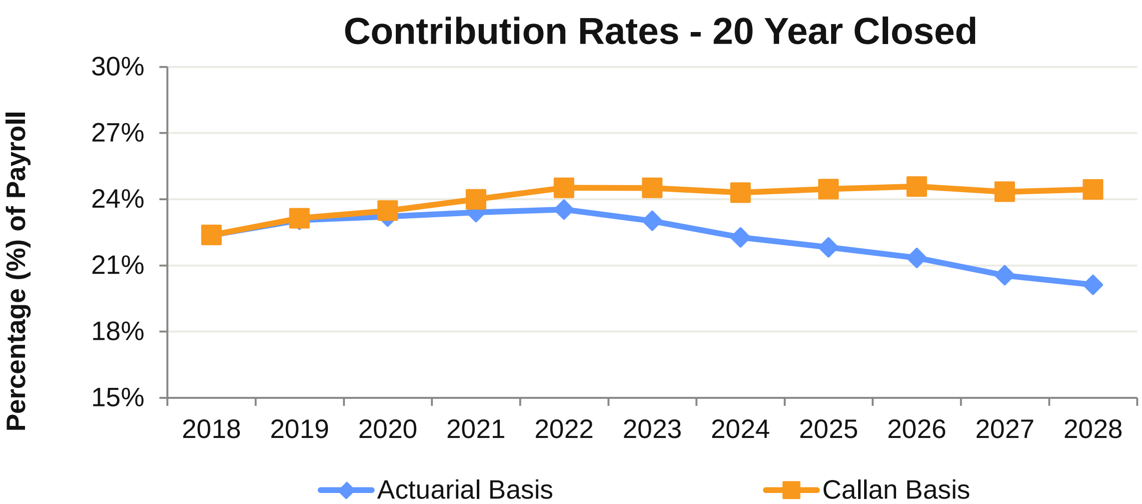
Karen Harris, CFA, ASA
Capital Markets Research Group

Step 1 - Building the Actuarial Valuation Model

1. Level Population – 15 vs 20 Year Closed







- Using the Callan Basis of lower expected returns, the charts compare the impact of 15 versus 20 year closed amortization.
- Extending the amortization period 5 years reduces the contribution rates by ~3% of pay (~$1M per year)

Step 3 – Simulated Ranges of Outcomes for Mix 3

1. Level Population – 15 Year Closed

Results are Undiscounted

Range of Funded Status (AVA) - Mix 3

Percentile	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2.5th	75.5%	78.7%	81.7%	84.9%	89.2%	94.9%	100.1%	105.3%	111.0%	116.9%	122.2%
25th	75.5	77.3	78.7	79.6	80.8	83.2	86.0	88.4	90.9	93.5	95.9
50th	**75.5**	**76.6**	**76.9**	**76.6**	**76.6**	**77.8**	**79.1**	**80.3**	**81.5**	**83.2**	**85.3**
75th	75.5	75.8	75.0	73.5	72.3	72.3	72.7	72.4	73.0	74.3	75.3
97.5th	**75.5**	**74.2**	**71.0**	**67.4**	**64.3**	**62.4**	**61.3**	**59.2**	**58.8**	**59.3**	**60.5**
VAR	**0.0**	**2.5**	**5.9**	**9.2**	**12.3**	**15.4**	**17.7**	**21.1**	**22.7**	**23.9**	**24.8**

Range of Contributions (% Pay)- Mix 3

Percentile	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
97.5th	25.22%	27.88%	30.76%	33.88%	36.98%	39.36%	40.74%	42.86%	44.09%	44.34%	44.87%
75th	25.22	26.55	27.75	29.23	30.80	31.62	32.07	32.85	33.54	33.25	33.51
50th	**25.22**	**25.96**	**26.37**	**26.95**	**27.56**	**27.62**	**27.32**	**27.15**	**27.10**	**26.49**	**26.35**
25th	25.22	25.42	25.01	24.71	24.39	23.39	22.07	21.19	20.24	19.07	18.53
2.5th	**25.22**	**24.49**	**22.80**	**20.82**	**18.29**	**14.99**	**11.87**	**9.02**	**5.87**	**2.89**	**0.17**
VAR	**0.0**	**1.9**	**4.4**	**6.9**	**9.4**	**11.7**	**13.4**	**15.7**	**17.0**	**17.9**	**18.5**

Range of Contribution Dollars - Mix 3

Percentile	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
97.5th	$10.5	$11.7	$13.3	$15.0	$16.5	$17.8	$19.0	$20.6	$21.6	$22.5	$23.3
75th	10.5	11.1	11.9	12.9	13.8	14.4	15.1	15.9	16.4	16.8	17.3
50th	**10.5**	**10.9**	**11.3**	**11.9**	**12.3**	**12.5**	**12.8**	**13.1**	**13.3**	**13.5**	**13.6**
25th	10.5	10.6	10.7	10.9	11.0	10.7	10.4	10.3	10.0	9.7	9.6
2.5th	**10.5**	**10.1**	**9.7**	**9.1**	**8.2**	**6.8**	**5.6**	**4.3**	**2.8**	**1.3**	**0.1**
VAR	**0.0**	**0.8**	**2.0**	**3.1**	**4.2**	**5.3**	**6.2**	**7.5**	**8.3**	**9.0**	**9.7**

Step 3 – Simulated Ranges of Outcomes for Mix 3

1. Level Population – 20 Year Closed

Results are Undiscounted

Range of Funded Status (AVA) - Mix 3

Percentile	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2.5th	75.5%	78.3%	80.9%	83.7%	87.7%	92.9%	97.9%	102.8%	107.7%	113.0%	118.3%
25th	75.5	76.9	77.9	78.4	79.1	81.0	83.4	85.2	87.0	89.0	90.6
50th	**75.5**	**76.2**	**76.1**	**75.3**	**74.9**	**75.5**	**76.2**	**76.8**	**77.3**	**78.3**	**79.5**
75th	75.5	75.4	74.3	72.2	70.5	69.9	69.6	68.6	68.4	68.8	69.2
97.5th	**75.5**	**73.8**	**70.2**	**66.0**	**62.4**	**59.7**	**57.8**	**55.0**	**53.6**	**53.2**	**53.2**
VAR	**0.0**	**2.5**	**5.9**	**9.3**	**12.5**	**15.8**	**18.5**	**21.8**	**23.8**	**25.1**	**26.3**

Range of Contributions (% Pay)- Mix 3

Percentile	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
97.5th	22.56%	24.98%	27.49%	30.17%	32.85%	34.92%	36.05%	37.88%	38.92%	39.04%	39.44%
75th	22.56	23.84	24.91	26.21	27.55	28.28	28.67	29.36	29.88	29.63	29.77
50th	**22.56**	**23.33**	**23.73**	**24.25**	**24.79**	**24.86**	**24.61**	**24.50**	**24.48**	**23.89**	**23.76**
25th	22.56	22.87	22.56	22.33	22.06	21.24	20.15	19.44	18.68	17.64	17.16
2.5th	**22.56**	**22.07**	**20.67**	**18.98**	**16.87**	**14.03**	**11.45**	**9.05**	**6.44**	**3.78**	**1.61**
VAR	**0.0**	**1.6**	**3.8**	**5.9**	**8.1**	**10.1**	**11.4**	**13.4**	**14.4**	**15.2**	**15.7**

Range of Contribution Dollars - Mix 3

Percentile	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
97.5th	$9.4	$10.5	$11.9	$13.3	$14.7	$15.8	$16.9	$18.2	$19.0	$19.8	$20.5
75th	9.4	10.0	10.7	11.6	12.3	12.9	13.5	14.2	14.6	15.0	15.4
50th	**9.4**	**9.8**	**10.2**	**10.7**	**11.1**	**11.3**	**11.5**	**11.8**	**12.0**	**12.1**	**12.3**
25th	9.4	9.5	9.7	9.8	9.9	9.7	9.5	9.4	9.2	8.9	8.9
2.5th	**9.4**	**9.1**	**8.8**	**8.3**	**7.6**	**6.4**	**5.4**	**4.3**	**3.1**	**1.8**	**0.8**
VAR	**0.0**	**0.7**	**1.7**	**2.7**	**3.6**	**4.6**	**5.4**	**6.4**	**7.0**	**7.6**	**8.2**

- Using the median funded status, it appears that 20 year closed amortization maintains the plans funded ratio in 75-80% range.

Step 3 – Simulated Ranges of Outcomes for Mix 2

1. Level Population – 20 Year Closed

Results are Undiscounted

Range of Funded Status (AVA) - Mix 2

Percentile	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2.5th	75.5%	78.1%	80.5%	82.8%	86.2%	90.9%	95.5%	99.6%	103.9%	108.7%	113.0%
25th	75.5	76.9	77.7	78.0	78.5	80.2	82.2	83.8	85.3	87.1	88.6
50th	**75.5**	**76.2**	**76.0**	**75.2**	**74.6**	**75.2**	**75.8**	**76.2**	**76.8**	**77.3**	**78.6**
75th	75.5	75.5	74.3	72.3	70.6	70.1	69.7	68.7	68.5	68.8	69.0
97.5th	**75.5**	**74.0**	**70.6**	**66.8**	**63.2**	**60.8**	**58.7**	**56.0**	**54.7**	**54.3**	**54.2**
VAR	**0.0**	**2.2**	**5.4**	**8.4**	**11.4**	**14.4**	**17.1**	**20.2**	**22.1**	**23.0**	**24.4**

Range of Contributions (% Pay)- Mix 2

Percentile	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
97.5th	22.56%	24.86%	27.19%	29.76%	32.31%	34.18%	35.56%	37.19%	38.22%	38.34%	38.74%
75th	22.56	23.81	24.86	26.14	27.47	28.18	28.61	29.34	29.89	29.68	29.79
50th	**22.56**	**23.35**	**23.77**	**24.34**	**24.95**	**25.05**	**24.86**	**24.86**	**24.91**	**24.40**	**24.40**
25th	22.56	22.92	22.70	22.59	22.44	21.81	20.84	20.26	19.70	18.83	18.33
2.5th	**22.56**	**22.19**	**20.99**	**19.54**	**17.70**	**15.24**	**12.97**	**10.84**	**8.79**	**6.45**	**4.35**
VAR	**0.0**	**1.5**	**3.4**	**5.4**	**7.4**	**9.1**	**10.7**	**12.3**	**13.3**	**13.9**	**14.3**

Range of Contribution Dollars - Mix 2

Percentile	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
97.5th	$9.4	$10.4	$11.8	$13.2	$14.5	$15.6	$16.6	$17.9	$18.7	$19.4	$20.1
75th	9.4	10.0	10.7	11.5	12.3	12.9	13.4	14.1	14.7	15.0	15.4
50th	**9.4**	**9.8**	**10.2**	**10.7**	**11.2**	**11.4**	**11.6**	**12.0**	**12.2**	**12.4**	**12.6**
25th	9.4	9.6	9.7	9.9	10.1	9.9	9.8	9.8	9.6	9.5	9.5
2.5th	**9.4**	**9.2**	**8.9**	**8.6**	**7.9**	**6.9**	**6.0**	**5.2**	**4.2**	**3.1**	**2.2**
VAR	**0.0**	**0.6**	**1.6**	**2.5**	**3.3**	**4.2**	**5.0**	**5.9**	**6.5**	**7.0**	**7.5**

- Using the median funded status, it appears that 20 year closed amortization maintains the plans funded ratio in 75-80% range.

Step 1 - Building the Actuarial Valuation Model

Impact of New Entrants

Study Profile	Date of Birth	Annual Salary	Count		Salary 1	Count 1	Salary 2	Count 2
	01/01/1966	38,200	80		28,019	59	81,044	21
	01/01/1980	39,100	75		28,247	64	89,319	11
	01/01/1991	33,000	115		28,196	108	71,853	7
								14%

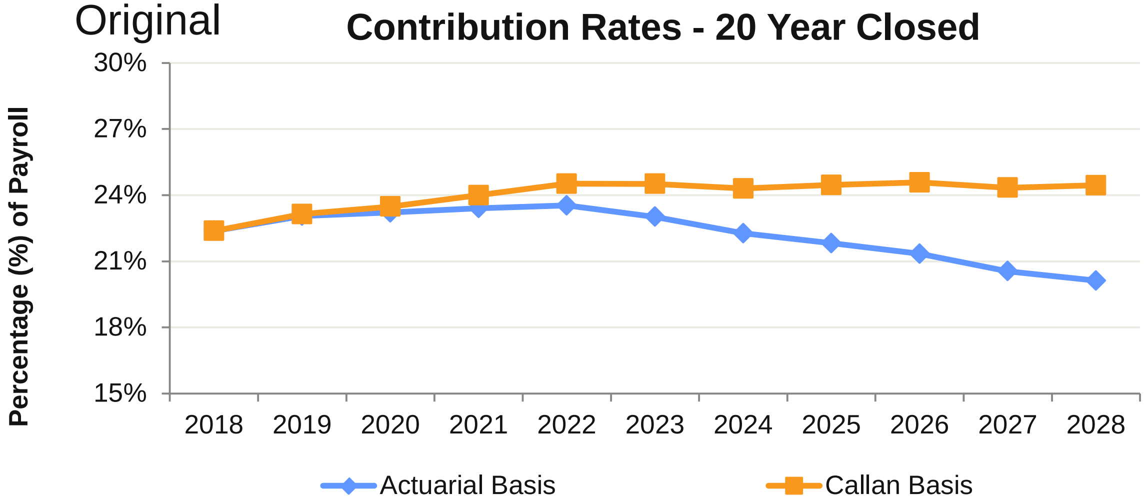
New Profile	Date of Birth	Annual Salary	Count			Date of Birth	Annual Salary	Count
	03/09/1965	28,019	37			01/21/1962	81,044	42
	11/17/1980	28,247	53			11/20/1978	89,319	22
	03/05/1991	28,196	96			12/07/1987	71,853	14
								30%

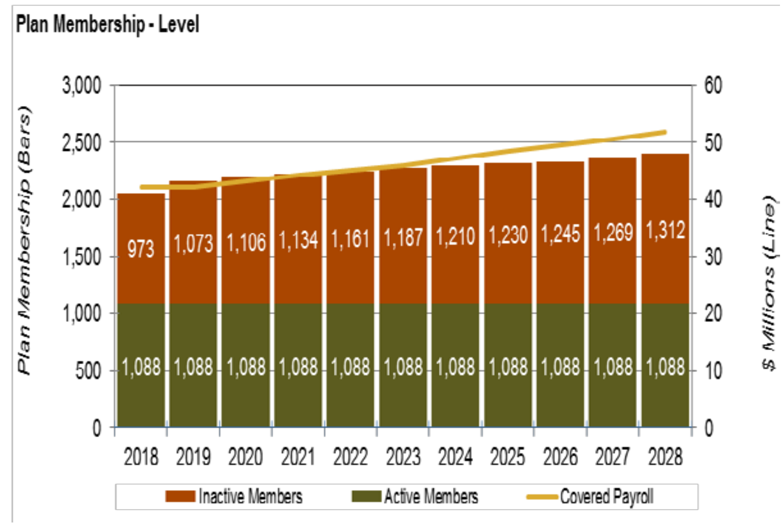
- Original study's new entrant profile is shown in the upper left table (green) based on last year's new hires (264 new actives).
  - The profile consisted of two distinct groups as shown in the columns to the right (Salary 1/Count 1, Salary 2/ Count2)
- In this supplement, we tested the impact of using a new profile as highlighted in the upper red table.
  - New entrants were separated in two groups based on salary, and the % of higher paid employees was increased from 14 to 30%
- The higher pay associated with the new profile will increase total salary

Step 1 - Building the Actuarial Valuation Model

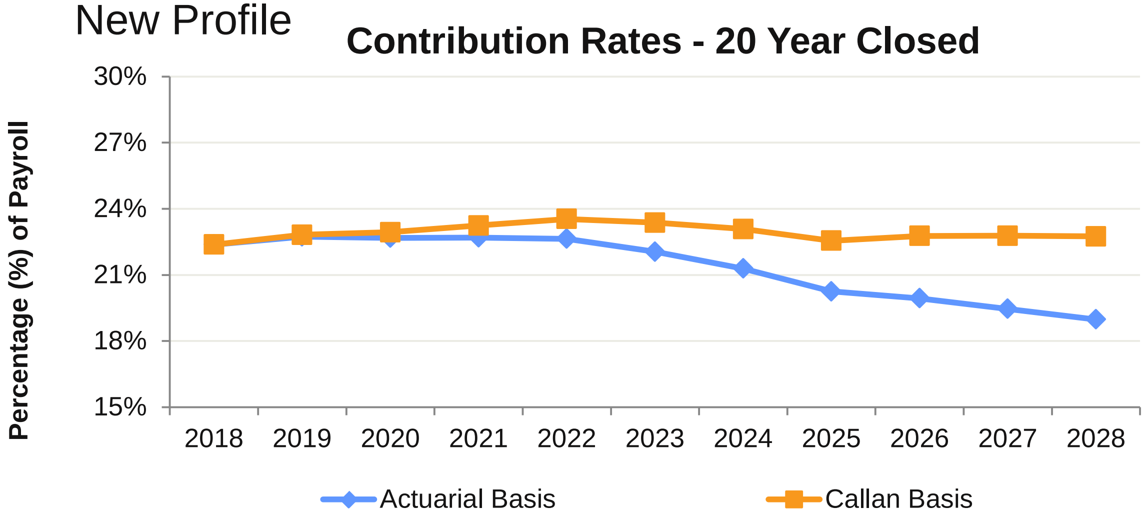
1. Level Population –20 Year Closed

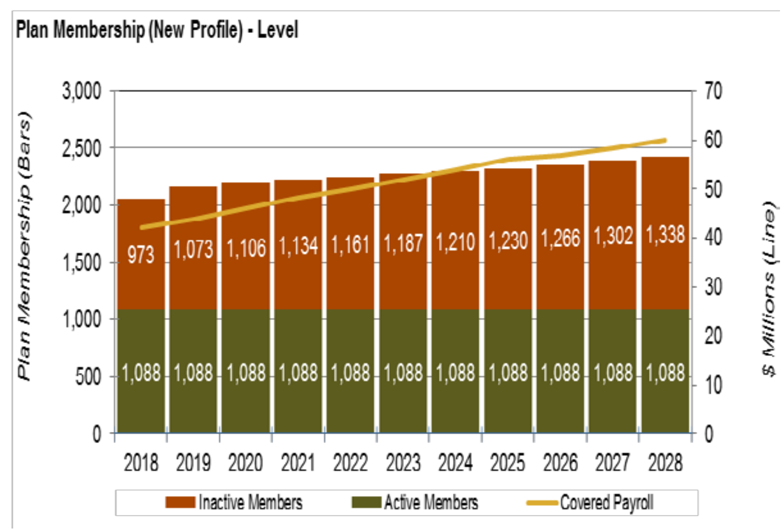
Original





New Profile





- Contribution dollars increase with the new profile but not a material change in the rates.

Step 3 – Simulated Ranges of Outcomes for Mix 3

1. Level Population – 20 Year Closed (Original Study)

Results are Undiscounted

Range of Funded Status (AVA) - Mix 3

Percentile	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2.5th	75.5%	78.3%	80.9%	83.7%	87.7%	92.9%	97.9%	102.8%	107.7%	113.0%	118.3%
25th	75.5	76.9	77.9	78.4	79.1	81.0	83.4	85.2	87.0	89.0	90.6
50th	**75.5**	**76.2**	**76.1**	**75.3**	**74.9**	**75.5**	**76.2**	**76.8**	**77.3**	**78.3**	**79.5**
75th	75.5	75.4	74.3	72.2	70.5	69.9	69.6	68.6	68.4	68.8	69.2
97.5th	**75.5**	**73.8**	**70.2**	**66.0**	**62.4**	**59.7**	**57.8**	**55.0**	**53.6**	**53.2**	**53.2**
VAR	**0.0**	**2.5**	**5.9**	**9.3**	**12.5**	**15.8**	**18.5**	**21.8**	**23.8**	**25.1**	**26.3**

Range of Contributions (% Pay)- Mix 3

Percentile	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
97.5th	22.56%	24.98%	27.49%	30.17%	32.85%	34.92%	36.05%	37.88%	38.92%	39.04%	39.44%
75th	22.56	23.84	24.91	26.21	27.55	28.28	28.67	29.36	29.88	29.63	29.77
50th	**22.56**	**23.33**	**23.73**	**24.25**	**24.79**	**24.86**	**24.61**	**24.50**	**24.48**	**23.89**	**23.76**
25th	22.56	22.87	22.56	22.33	22.06	21.24	20.15	19.44	18.68	17.64	17.16
2.5th	**22.56**	**22.07**	**20.67**	**18.98**	**16.87**	**14.03**	**11.45**	**9.05**	**6.44**	**3.78**	**1.61**
VAR	**0.0**	**1.6**	**3.8**	**5.9**	**8.1**	**10.1**	**11.4**	**13.4**	**14.4**	**15.2**	**15.7**

Range of Contribution Dollars - Mix 3

Percentile	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
97.5th	$9.4	$10.5	$11.9	$13.3	$14.7	$15.8	$16.9	$18.2	$19.0	$19.8	$20.5
75th	9.4	10.0	10.7	11.6	12.3	12.9	13.5	14.2	14.6	15.0	15.4
50th	**9.4**	**9.8**	**10.2**	**10.7**	**11.1**	**11.3**	**11.5**	**11.8**	**12.0**	**12.1**	**12.3**
25th	9.4	9.5	9.7	9.8	9.9	9.7	9.5	9.4	9.2	8.9	8.9
2.5th	**9.4**	**9.1**	**8.8**	**8.3**	**7.6**	**6.4**	**5.4**	**4.3**	**3.1**	**1.8**	**0.8**
VAR	**0.0**	**0.7**	**1.7**	**2.7**	**3.6**	**4.6**	**5.4**	**6.4**	**7.0**	**7.6**	**8.2**

- Using the median funded status, it appears that 20 year closed amortization maintains the plans funded ratio in 75-80% range.

Step 3 – Simulated Ranges of Outcomes for Mix 3

1. Level Population – 20 Year Closed (New Profile of Hires)

Results are Undiscounted

Range of Funded Status (AVA) - Mix 3

Percentile	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2.5th	75.5%	78.3%	80.9%	83.8%	87.7%	93.0%	97.9%	102.9%	107.7%	113.0%	117.9%
25th	75.5	76.9	78.0	78.5	79.2	81.3	83.6	85.5	87.3	89.4	91.0
50th	**75.5**	**76.2**	**76.1**	**75.4**	**75.0**	**75.8**	**76.6**	**77.2**	**77.8**	**78.8**	**80.2**
75th	75.5	75.4	74.3	72.3	70.6	70.2	70.0	69.2	69.1	69.6	70.0
97.5th	**75.5**	**73.8**	**70.2**	**66.1**	**62.6**	**60.1**	**58.3**	**55.7**	**54.5**	**54.4**	**54.4**
VAR	**0.0**	**2.5**	**5.9**	**9.2**	**12.4**	**15.6**	**18.2**	**21.5**	**23.3**	**24.3**	**25.8**

Range of Contributions (% Pay)- Mix 3

Percentile	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
97.5th	22.56%	24.59%	26.71%	28.92%	31.06%	32.61%	33.40%	34.21%	35.30%	35.63%	35.76%
75th	22.56	23.50	24.29	25.28	26.29	26.73	26.92	26.78	27.42	27.39	27.40
50th	**22.56**	**23.01**	**23.18**	**23.48**	**23.79**	**23.70**	**23.36**	**22.58**	**22.69**	**22.39**	**22.16**
25th	22.56	22.56	22.08	21.71	21.33	20.49	19.44	18.18	17.59	16.91	16.44
2.5th	**22.56**	**21.79**	**20.31**	**18.63**	**16.64**	**14.08**	**11.81**	**9.21**	**6.88**	**4.86**	**2.92**
VAR	**0.0**	**1.6**	**3.5**	**5.4**	**7.3**	**8.9**	**10.0**	**11.6**	**12.6**	**13.2**	**13.6**

Range of Contribution Dollars - Mix 3

Percentile	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
97.5th	$9.4	$10.7	$12.3	$13.9	$15.4	$16.7	$17.9	$19.0	$19.8	$20.8	$21.5
75th	9.4	10.2	11.1	12.1	13.0	13.7	14.4	15.0	15.5	15.9	16.4
50th	**9.4**	**10.0**	**10.6**	**11.2**	**11.8**	**12.1**	**12.5**	**12.6**	**12.8**	**13.1**	**13.2**
25th	9.4	9.8	10.1	10.4	10.6	10.5	10.4	10.2	9.9	9.9	9.9
2.5th	**9.4**	**9.4**	**9.2**	**8.9**	**8.2**	**7.2**	**6.3**	**5.0**	**3.8**	**2.6**	**1.8**
VAR	**0.0**	**0.7**	**1.7**	**2.6**	**3.6**	**4.6**	**5.4**	**6.5**	**7.1**	**7.7**	**8.3**

- In the median case, using a different new entrant profile does not materially change the funded status. While contributions rates decline, the dollars of contributions increase ~$.5-1M
- Targeted returns and risk/reward tradeoff analysis did not change.

Step 5 – Rebalancing Ranges

	Growth Assets			Broad U.S. Equity			Global ex - U.S. equity			Real Estate			Hedge Funds			Fixed Income		
	Min	**Target**	**Max**	**Min**	**Target**	**Max**	**Min**	**Target**	**Max**	**Min**	**Target**	**Max**	**Min**	**Target**	**Max**	**Min**	**Target**	**Max**
Mix 2	59%	64%	69%	22%	27%	32%	16%	20%	24%	6%	8%	10%	7%	9%	11%	30%	35%	40%
Mix 3	64%	69%	74%	24%	29%	34%	17%	22%	27%	7%	9%	11%	7%	9%	11%	25%	30%	35%

- Rebalancing ranges first consider growth relative to fixed income.
- Within growth, ranges reflect rebalancing equity, real estate and hedge funds.

Results are Undiscounted

Disclaimers

This report is for informational purposes only and should not be construed as legal or tax advice on any matter. Any decision you make on the basis of this content is your sole responsibility. You should consult with legal and tax advisers before applying any of this information to your particular situation.

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Callan

August 22, 2018

Sewerage & Water Board of New Orleans

Asset Allocation and Liability Study:
Supplemental Information for Alternative Mix 2

Weston Lewis, CFA, CAIA
Atlanta Plan Sponsor Consulting

Cody Chapman, CFA, CAIA
Atlanta Plan Sponsor Consulting

Karen Harris, CFA, ASA
Capital Markets Research Group

Step 2 - Create Alternative Asset Mixes

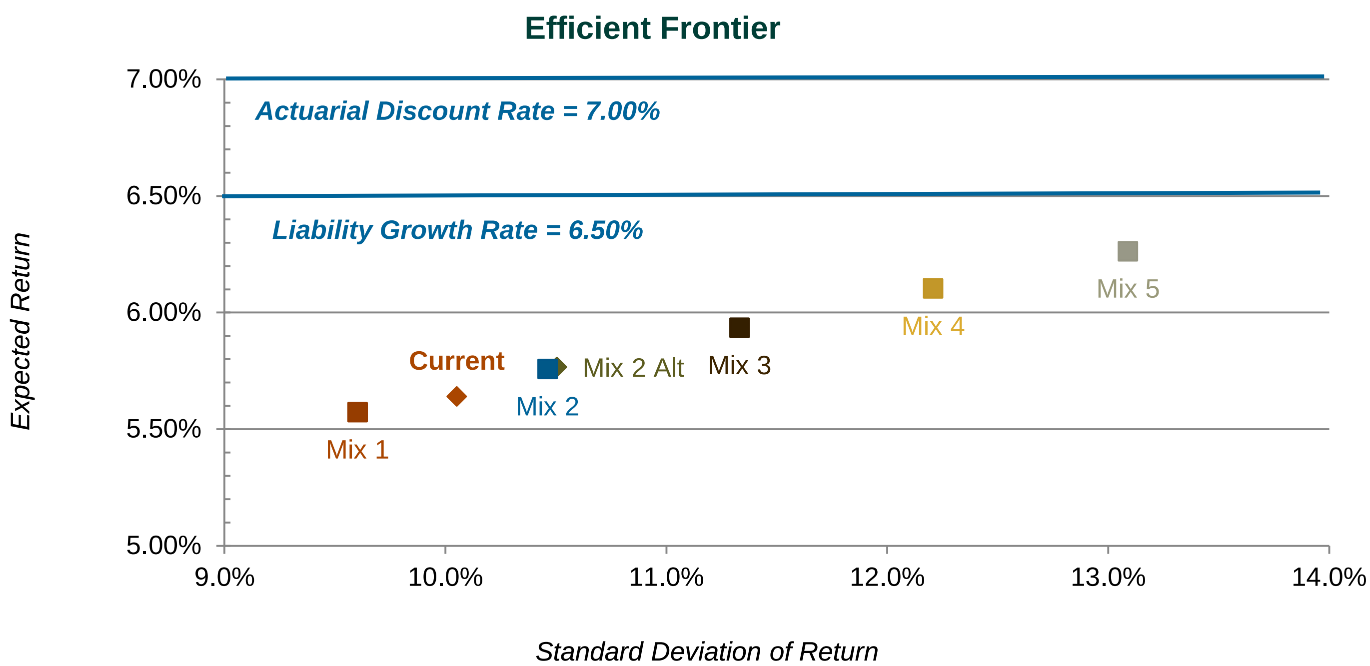
Portfolio Optimization Mixes

Component	Mix 2	Mix 2 Alt
Broad US Equity	27%	27%
Global ex US Equity	20%	20%
Real Estate	8%	9%
Hedge Funds	9%	8%
Domestic Fixed	35%	35%
Cash Equivalents	1%	1%
Total	**100%**	**100%**
Total Fixed Income+Cash	**36%**	**36%**
Asset-Only		
Expected Return	5.76%	5.77%
Standard Deviation	10.46%	10.50%
Sharpe Ratio	0.327	0.326

- Alternative Mix 2 increases real estate and reduces hedge funds by 1% each.
- The expected impact is to increase return and risk at the margin.

Step 2 - Create Alternative Asset Mixes

Efficient Frontier



- Graph plots the return and risk characteristics of asset mixes under consideration.
- Alternative Mix 2 plots very closely to Mix 2 considered in the study.

Step 3 – Simulate Financial Condition

Alternative Mix 2	Downside Scenario (97.5)	Expected Case	Upside Scenario (2.5th)
10 Year Geometric Returns		5.77%	
Risk (SD of Return)		10.50%	
Sharpe Ratio		0.326	
Range of Nominal Returns (5 yr annualized)	-2.0%	5.5%	12.3%
Range of Real Returns (5 yr annualized)	-4.3%	3.1%	10.1%
Net Cash Flow Year 5	-6.1%	-4.9%	-4.1%
Employer Contribution Rate* Year 5	38.7%	27.8%	16.3%
Funded Ratio Year 5	63.5%	77.5%	93.1%
Funded Ratio Year 10	61.3%	84.4%	117.7%
Ultimate Net Cost 10 Years	171.8	108.6	14.8

** Assumes ~~20~~ Year Closed Amortization*

15

- The table above highlights the range of simulated results for the alternative Mix 2.

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Step 3 – Simulate Financial Condition

1. Level Population

Alternative Mix 2	Downside Scenario (97.5)	Expected Case	Upside Scenario (2.5th)
10 Year Geometric Returns		5.77%	
Risk (SD of Return)		10.50%	
Sharpe Ratio		0.326	
Range of Nominal Returns (5 yr annualized)	-2.0%	5.5%	12.3%
Range of Real Returns (5 yr annualized)	-4.3%	3.1%	10.1%
Net Cash Flow Year 5	-7.0%	-5.7%	-4.8%
Employer Contribution Rate* Year 5	32.6%	23.7%	14.1%
Funded Ratio Year 5	60.2%	74.5%	90.1%
Funded Ratio Year 10	52.5%	76.2%	109.9%
Ultimate Net Cost 10 Years	175.3	113.6	22.9

** Assumes 20 Year Closed Amortization*

- The table above highlights the range of simulated results for the alternative Mix 2.

VIEZER, Timothy

From: Mike Conefry <mconefry@juno.com>
Sent: Tuesday, August 7, 2018 4:11 PM
To: VIEZER, Timothy
Cc: BERGERON, Christopher
Subject: Re: FW: S&WB Committee meeting times
Attachments: Message

Thanks, Tim.

I looked into the question posed by Chris Bergeron at the June meeting concerning the large increase in benefit payments from 2016 to 2017 ($20.7 million to $24.2 million,or about $3.5 million). This increase was caused by DROP distributions during 2017 which were about $2.5 million higher than in 2016 and in retiree benefit payments which were about $1 million higher in 2017 than in 2016. These increases are connected in the sense that after departure from the DROP and upon receiving the distribution of the DROP account balance, a member's benefits become retiree benefits and then enter the "external cash flow" as benefit payments. During the DROP period, the benefits remain in the trust (although in segregated accounts) and are not part of external cash flow. Thus a spike in the DROP distributions will also cause a spike in the retiree benefit payments.

I've copied Chris in on this email. I'll leave it to the two of you as to whether to discuss it at the meeting tomorrow.

Regards,
Mike

Michael A. Conefry
504.392.8853 - direct line
504.392.4430 FAX

Please note: message attached

From: "VIEZER, Timothy" <tviezer@swbno.org>
To: Mike Conefry <mconefry@juno.com>
Subject: FW: S&WB Committee meeting times
Date: Tue, 7 Aug 2018 19:14:27 +0000

EMPLOYEES' RETIREMENT SYSTEM

OF THE SEWERAGE AND WATER BOARD OF NEW ORLEANS

SUMMARY

TOTAL CONTRIBUTION FOR PLAN YEAR BEGINNING January 1, 2018

Contribution to Amortize the Unfunded Actuarial Liability over 20 years

The amount of the contribution for a plan year equals the normal cost plus the level dollar amount necessary to amortize the Unfunded Actuarial Liability. The annual amount required to amortize the Unfunded Actuarial Liability of $74,538,805 over 20 years at 7% annual interest (assuming monthly payments) is $6,819,806.

Table 5
Total "20 Year Amortization" Contribution for the
Plan Year Beginning January 1, 2018

(1)	Normal Cost (From Table 3; assumed payable monthly)	$ 4,704,433		
(2)	Net Annual charge Required for Amortization of Unfunded Actuarial Liability Over 20 year period beginning January 1, 2018 (See Above; Assumed payable monthly)	6,819,806		
(3)	Total Plan Contribution as of January 1, 2018: (1) + (2)	$ 11,524,239	(27.555%)	*
(4)	Annual Employee Plan Contributions as of January 1, 2018 (See note below)	$ 2,091,132	(5.000%)	*
(5)	Employer Contribution as of January 1, 2018: (3) - (4) (Assumed payable monthly)	$ 9,433,107	(22.555%)	*

* Expressed as a percentage of annual participant payroll of $41,822,648.

Note: Current actual employee contribution is 6% of payroll effective January 1, 2015. By Board Resolution R-248-2014, as long as the Retirement System is not 100% funded, the Employer Contribution percentage shall be calculated as if the Employee Contribution percentage has remained at 5% of payroll.

<u>Contribution to Amortize the Unfunded Actuarial Liability over 30 years</u>

The amount of the contribution for a plan year equals the normal cost plus the level dollar amount necessary to amortize the Unfunded Actuarial Liability. The annual amount required to amortize the Unfunded Actuarial Liability of $74,538,805 over 30 years at 7% annual interest (assuming monthly payments) is $5,822,297.

<u>Table 6</u>

<u>Total "30 Year Amortization" Contribution for the Plan Year Beginning January 1, 2018</u>

(1)	Normal Cost (From Table 3; assumed payable monthly)	$ 4,704,433	
(2)	Net Annual Charge Required for Amortization of Unfunded Actuarial Liability Over 30 year period beginning January 1, 2018 (see above) (Assumed payable monthly)	5,822,297	
(3)	Total Plan Contribution as of January 1, 2018: (1) + (2)	$ 10,536,730 (25.170%)	*
(4)	Annual Employee Plan Contributions as of January 1, 2018 (See note below)	2,091,132 (5.000%)	*
(5)	Employer Contribution as of January 1, 2018: (3) - (4) (Assumed payable monthly)	$ 8,435,598 (20.170%)	*

* Expressed as a percentage of annual participant payroll of $41,822,648.

Note: Current actual employee contribution is 6% of payroll effective January 1, 2015. By Board Resolution R-248-2014, as long as the Retirement System is not 100% funded, the Employer Contribution percentage shall be calculated as if the Employee Contribution percentage has remained at 5% of payroll.

NET ACTUARIAL EXPERIENCE
for the Plan Year Beginning January 1, 2017

Actuarial experience refers to the comparison of actuarial results of each valuation with those expected from the previous valuation according to the actuarial assumptions. A decrease or increase in the Total Plan Contribution as a percentage of payroll is indicative of favorable (gains) or unfavorable (losses) experience, respectively. If the overall experience follows the general pattern indicated by the assumptions presented in the Appendix, the Total Plan Contribution (on a given amortization basis) as a percentage of payroll will remain relatively stable, except for routine fluctuations.

The total 20 year amortization contribution as a percentage of payroll decreased from 27.679% for the plan year beginning January 1, 2017 to 27.155% for the plan year beginning January 1, 2018. The total 30 year amortization contribution as a percentage of payroll decreased from 25.235% for the plan year beginning January 1, 2017 to 25.170% for the plan year beginning January 1, 2018. These decreases of 0.124% and 0.065% of payroll, respectively, are indicative of an overall actuarial gain for the most recent plan year. This gain represents the net decrease in the total plan contribution as the combined result of actuarial experience and the change in total plan contribution attributable to plan amendments, if any.

EMPLOYEES' RETIREMENT SYSTEM OF THE
SEWERAGE AND WATER BOARD OF NEW ORLEANS

HYPOTHETICAL ACCUMULATION OF "CLOSED" 15 YEAR AMORTIZATION PAYMENTS
AT VALUATION INTEREST OF 7% ANNUALLY

Year	Beginning Value	Total Payments During Year	Investment Earnings	Ending Value
1	0	7,932,566	161,872	7,673,993
2	7,673,993	7,932,566	699,051	15,885,165
3	15,885,165	7,932,566	1,273,833	24,671,119
4	24,671,119	7,932,566	1,888,850	34,072,090
5	34,072,090	7,932,566	2,546,918	44,131,129
6	44,131,129	7,932,566	3,251,051	54,894,301
7	54,894,301	7,932,566	4,004,473	66,410,895
8	66,410,895	7,932,566	4,810,634	78,733,650
9	78,733,650	7,932,566	5,673,227	91,918,998
10	91,918,998	7,932,566	6,596,201	106,027,320
11	106,027,320	7,932,566	7,598,499	121,558,385
12	121,558,385	7,932,566	8,685,674	138,176,625
13	138,176,625	7,932,566	9,848,951	155,958,142
14	155,958,142	7,932,566	11,093,657	174,984,365
15	174,984,365	7,932,566	12,425,493	195,342,424

****

HYPOTHETICAL ACCUMULATION OF "OPEN" 30 YEAR AMORTIZATION PAYMENTS
AT VALUATION INTEREST OF 7% ANNUALLY

Year	Beginning Value	Total Payments During Year	Investment Earnings	Ending Value
1	0	5,822,297	161,872	5,984,169
2	5,984,169	5,822,297	580,763	12,387,229
3	12,387,229	5,822,297	1,028,978	19,238,504
4	19,238,504	5,822,297	1,508,567	26,569,368
5	26,569,368	5,822,297	2,021,727	34,413,392
6	34,413,392	5,822,297	2,570,809	42,806,498
7	42,806,498	5,822,297	3,158,326	51,787,121
8	51,787,121	5,822,297	3,786,970	61,396,388
9	61,396,388	5,822,297	4,459,619	71,678,304
10	71,678,304	5,822,297	5,179,353	82,679,954
11	82,679,954	5,822,297	5,949,468	94,451,719
12	94,451,719	5,822,297	6,773,492	107,047,508
13	107,047,508	5,822,297	7,655,197	120,525,002
14	120,525,002	5,822,297	8,598,622	134,945,921
15	134,945,921	5,822,297	9,608,086	150,376,304

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Notes:

Additional payments for each of 15 years, assumed payable monthly:
$7,732,566 - $5,822,297 = $2,110,269

Accumulated value of additional payments at end of 15 years at 7% valuation interest: $195,342,424 - $150,376,304 = $44,966,120

Unfunded accrued actuarial liability as of 1/1/2018: $74,538,805

Remaining unfunded accrued actuarial liability:

	After 15 years:	After 30 years:
15 Year Closed Amortization:	zero	zero
30 Year Open Amortization:	$63,536,877	$54,167,350

Sewerage and Water Board of New Orleans
December 31, 2017 Actuarial Valuation
Amortization of Unfunded Actuarial Liability
Using Open vs. Closed Amortization Periods

		Percentage Paid Off Under Each Amortization Method			
Elapsed Years	Interest Rate	10 Year Open	30 Year Open	10 Year Closed	30 Year Closed
1	.0700	7.24%	1.06%	7.24%	1.06%
2	.0700	13.95%	2.11%	14.98%	2.19%
3	.0700	20.18%	3.14%	23.27%	3.40%
4	.0700	25.96%	4.17%	32.14%	4.70%
5	.0700	31.32%	5.18%	41.62%	6.09%
6	.0700	36.29%	6.19%	51.77%	7.57%
7	.0700	40.90%	7.18%	62.64%	9.16%
8	.0700	45.18%	8.16%	74.26%	10.86%
9	.0700	49.14%	9.13%	86.69%	12.68%
10	.0700	52.82%	10.10%	100.00%	14.63%
11	.0700	56.24%	11.05%	100.00%	16.71%
12	.0700	59.41%	11.99%	100.00%	18.94%
13	.0700	62.34%	12.92%	100.00%	21.32%
14	.0700	65.07%	13.84%	100.00%	23.87%
15	.0700	67.60%	14.76%	100.00%	26.60%
16	.0700	69.94%	15.66%	100.00%	29.52%
17	.0700	72.12%	16.55%	100.00%	32.65%
18	.0700	74.14%	17.43%	100.00%	35.99%
19	.0700	76.01%	18.31%	100.00%	39.57%
20	.0700	77.75%	19.17%	100.00%	43.40%
21	.0700	79.36%	20.03%	100.00%	47.50%
22	.0700	80.85%	20.88%	100.00%	51.88%
23	.0700	82.24%	21.71%	100.00%	56.57%
24	.0700	83.52%	22.54%	100.00%	61.59%
25	.0700	84.71%	23.36%	100.00%	66.96%
26	.0700	85.82%	24.17%	100.00%	72.70%
27	.0700	86.85%	24.98%	100.00%	78.85%
28	.0700	87.80%	25.77%	100.00%	85.43%
29	.0700	88.68%	26.56%	100.00%	92.47%
30	.0700	89.50%	27.33%	100.00%	100.00%

Summary:

15 Year Closed amortization would entail an additional $2.1 million for 15 years as compared to $5.8 million indefinitely into the future under 30 year open amortization, with gradual reductions in the $5.8 million annually over time. The result would be a an unfunded liability which would decrease *very gradually* from about $74.5 million on 1/1/2018 to about $63.5 million after fifteen years and to about $54 million after 30 years.

EMPLOYEES' RETIREMENT SYSTEM OF THE
SEWERAGE AND WATER BOARD OF NEW ORLEANS

HYPOTHETICAL ACCUMULATION OF "CLOSED" 20 YEAR AMORTIZATION PAYMENTS
AT VALUATION INTEREST OF 7% ANNUALLY

Year	Beginning Value	Total Payments During Year	Investment Earnings	Ending Value
1	0	7,932,566	0	7,932,566
2	7,932,566	7,932,566	818,204	16,262,891
3	16,262,891	7,932,566	1,401,327	25,176,339
4	25,176,339	7,932,566	2,025,268	34,713,728
5	34,713,728	7,932,566	2,692,885	44,918,734
6	44,918,734	7,932,566	3,407,236	55,838,091
7	55,838,091	7,932,566	4,171,591	67,521,803
8	67,521,803	7,932,566	4,989,450	80,023,374
9	80,023,374	7,932,566	5,864,560	93,400,055
10	93,400,055	7,932,566	6,800,928	107,713,104
11	107,713,104	7,932,566	7,817,557	123,463,227
12	123,463,227	7,932,566	8,920,066	140,315,859
13	140,315,859	7,932,566	10,099,750	158,348,175
14	158,348,175	7,932,566	11,362,012	177,642,753
15	177,642,753	7,932,566	12,712,633	198,287,952
16	198,287,952	7,932,566	13,880,157	220,100,675
17	220,100,675	7,932,566	15,407,047	243,440,288
18	243,440,288	7,932,566	17,040,820	268,413,674
19	268,413,674	7,932,566	18,788,957	295,135,197
20	295,135,197	7,932,566	20,659,464	323,727,227

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HYPOTHETICAL ACCUMULATION OF "OPEN" 30 YEAR AMORTIZATION PAYMENTS
AT VALUATION INTEREST OF 7% ANNUALLY

Year	Beginning Value	Total Payments During Year	Investment Earnings	Ending Value
1	0	5,822,297	203,780	6,026,077
2	6,026,077	5,822,297	625,606	12,473,980
3	12,473,980	5,822,297	1,076,959	19,373,236
4	19,373,236	5,822,297	1,559,907	26,755,440
5	26,755,440	5,822,297	2,076,661	34,654,398
6	34,654,398	5,822,297	2,629,588	43,106,283
7	43,106,283	5,822,297	3,221,220	52,149,800
8	52,149,800	5,822,297	3,854,266	61,826,363
9	61,826,363	5,822,297	4,531,626	72,180,286
10	72,180,286	5,822,297	5,256,400	83,258,983
11	83,258,983	5,822,297	6,031,909	95,113,189
12	95,113,189	5,822,297	6,861,704	107,797,190
13	107,797,190	5,822,297	7,749,584	121,369,071
14	121,369,071	5,822,297	8,699,615	135,890,983
15	135,890,983	5,822,297	9,716,149	151,429,429
16	151,429,429	5,822,297	10,600,060	167,851,786
17	167,851,786	5,822,297	11,749,625	185,423,708
18	185,423,708	5,822,297	12,979,660	204,225,665
19	204,225,665	5,822,297	14,295,797	224,343,759
20	224,343,759	5,822,297	15,704,063	245,870,119

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HYPOTHETICAL ACCUMULATION OF "CLOSED" 20 YEAR AMORTIZATION PAYMENTS AT VALUATION INTEREST OF 7% ANNUALLY

Notes:

Additional payments for each of 20 years, assumed payable monthly:
$7,932,566 - $5,822,297 = $2,110,269

Accumulated value of additional payments at end of 15 years at 7% valuation interest: $323,727,227 - $245,870,119 = $77,857,108

Unfunded accrued actuarial liability as of 1/1/2018: $74,538,805

Remaining unfunded accrued actuarial liability:

	After 20 years:	After 30 years:
20 Year Closed Amortization:	zero	zero
30 Year Open Amortization:	$60,249,716	$54,167,350

Sewerage and Water Board of New Orleans
December 31, 2017 Actuarial Valuation
Amortization of Unfunded Actuarial Liability
Using Open vs. Closed Amortization Periods

		Percentage Paid Off Under Each Amortization Method			
Elapsed Years	Interest Rate	20 Year Open	30 Year Open	20 Year Closed	30 Year Closed
1	.0700	2.44%	1.06%	4.88%	1.06%
2	.0700	4.82%	2.11%	10.10%	2.19%
3	.0700	7.14%	3.14%	15.68%	3.40%
4	.0700	9.41%	4.17%	21.66%	4.70%
5	.0700	11.62%	5.18%	28.06%	6.09%
6	.0700	13.77%	6.19%	34.90%	7.57%
7	.0700	15.88%	7.18%	42.22%	9.16%
8	.0700	17.93%	8.16%	50.05%	10.86%
9	.0700	19.93%	9.13%	58.44%	12.68%
10	.0700	21.88%	10.10%	67.40%	14.63%
11	.0700	23.79%	11.05%	77.00%	16.71%
12	.0700	25.65%	11.99%	87.27%	18.94%
13	.0700	27.46%	12.92%	98.26%	21.32%
14	.0700	29.23%	13.84%	100.00%	23.87%
15	.0700	30.96%	14.76%	100.00%	26.60%
16	.0700	32.64%	15.66%	100.00%	29.52%
17	.0700	34.28%	16.55%	100.00%	32.65%
18	.0700	35.89%	17.43%	100.00%	35.99%
19	.0700	37.45%	18.31%	100.00%	39.57%
20	.0700	38.98%	19.17%	100.00%	43.40%
21	.0700	40.46%	20.03%	100.00%	47.50%
22	.0700	41.92%	20.88%	100.00%	51.88%
23	.0700	43.33%	21.71%	100.00%	56.57%
24	.0700	44.72%	22.54%	100.00%	61.59%
25	.0700	46.06%	23.36%	100.00%	66.96%
26	.0700	47.38%	24.17%	100.00%	72.70%
27	.0700	48.66%	24.98%	100.00%	78.85%
28	.0700	49.92%	25.77%	100.00%	85.43%
29	.0700	51.14%	26.56%	100.00%	92.47%
30	.0700	52.33%	27.33%	100.00%	100.00%

Summary:

20 Year Closed amortization would entail an additional $2.1 million for 20 years as compared to $5.8 million indefinitely into the future under 30 year open amortization, with gradual reductions in the $5.8 million annually over time. The result would be a an unfunded liability which would decrease *very gradually* from about $74.5 million on 1/1/2018 to about $6.2 million after twenty years and to about $54 million after 30 years.