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RPg FWA Q3 2017 Global Investment Committee Market Commentary

Investment Outlook

We entered 2017 with U.S. stock markets at record highs and historically low volatility. We approach year-end with markets at new record highs, continued low volatility, and valuations stretched across most areas of the investment markets. Meanwhile, challenges remain both geopolitically as well as with respect to the domestic legislative agenda. Hopes for tax reform (read "cuts") remain high, but President Trump's framework is only a first step in what is likely to be a long and contentious process. Finally, inflows from overseas buyers have contributed to the appreciation in markets, but it is impossible to predict what will cause these flows to reverse course. As always, prudent asset allocation with appropriate levels of diversification and a long-term perspective remain RPg FWA's recommended course. RPg FWA cautions investors to temper return expectations and, as always, we encourage investors to maintain a long-term perspective and prudent asset allocation with appropriate levels of diversification. At RPg FWA, we look to include a healthy allocation of non-correlated investments to complement a balanced use of equities and fixed income.

Commentary

The third quarter saw the continuation of the Goldilocks environment ("not too hot, not too cold, but just right") and investor complacency keeping volatility at multi-decade lows propelling stock markets to new highs. Despite the escalation of tensions with North Korea, several severe natural disasters, uncertainty around the prospects for tax reform, other domestic agenda items and questionable valuations, the S&P 500, Russell 2000 and Nasdaq all hit record highs on the final trading day of the quarter. It was the Nasdaq's 50th record close this year. Non-U.S. stocks also posted solid single-digit returns, bolstered by improving economies as well as a weakening U.S. dollar. The risk-on environment continued, and emerging markets equity and debt posted the strongest returns within their respective asset classes. Commodity indices also rose as crude oil prices surged nearly 20% after falling during the first half of the year. All major asset classes delivered positive results in the third quarter, and even cash is up from its dismal 0% days and posted a 0.3% quarterly result.

In the U.S., second quarter real GDP growth was revised up to 3.1% (annualized), the fastest pace since the first quarter of 2015. While hurricanes Harvey and Irma may provide a temporary setback to U.S. growth, rebuilding efforts are likely to provide a boost to GDP in the fourth quarter and into 2018. And in a relatively new development, the Institute for Supply Management (ISM) manufacturing index is showing signs of strength. In August, the Index hit 58.8 (anything above 50 signals expansion). The September reading, released in early October, rose to 60.8 with both its employment and new orders components signaling broad-based strength. This marked the highest level in thirteen years. Unemployment ticked up slightly in August to 4.4%, but labor conditions remain tight. Inflation continues to fall short of the Fed's 2% target, puzzling many. Headline CPI was 1.9% as of August (year-over-year) while Core was 1.7%. Both were unchanged from levels three months ago. The Fed's favored measure, the PCE price deflator, gained 1.4% year-over-year (also unchanged). The Fed left rates unchanged at its September meeting, but 12 of the 16 FOMC members expect one more hike this year and

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markets put that probability at about 70%. The Fed also announced that its previously communicated plan to reduce the size of its balance sheet would begin in October of this year. It will reduce reinvestment of its holdings by $10 billion per month, increasing this amount gradually each quarter to $50 billion per month at the end of 2018. In other Fed news, Vice Chairman Stanley Fischer resigned for "personal reasons," leaving a fourth vacancy on the Fed's governing board. Further, Janet Yellin's term as chair expires in February, 2018 with no clear replacement as of yet.

Non-U.S. developed economies continued to gain traction. Second quarter GDP growth in the euro zone was 2.3% (year-over-year) with consumer confidence and demand both showing strength. The European Central Bank's Governing Council left monetary policy unchanged, but Bank President Mario Draghi indicated that decisions around the timing of a tapering program would be made in October. The euro gained ground versus the U.S. dollar and the pound continued to strengthen on hawkish comments from the Bank of England. German Chancellor Angela Merkel's party won an impressive fourth term but her victory was tarnished by the showing of the right-wing nationalist party. The "AfD" attracted 13% of voters, marking the first entry of a far-right party into Parliament in more than 60 years. Also noteworthy was Catalonia's overwhelming vote for independence from Spain as the quarter ended. The outcome remains uncertain but is a reminder that the cohesion of the European Union continues to face challenges. Outside of Europe, Japan's economy continued to slowly recover; second quarter GDP growth was 2.5% (annualized). While this was lower than expected, the economy has now expanded for six consecutive quarters. In China, economic news has generally been positive but the country was downgraded to A+ by S&P, which cited growing concerns over credit growth.

When reviewing 3Q 2017, here is what we saw:

Global Equities

The S&P 500 Index gained 4.5% in the third quarter and is up 14.2% for the year. Several U.S. stock market indices hit record highs going into quarter-end as investors shrugged off bad news and pinned their hopes on meaningful tax reform. Small caps outperformed large caps across styles for the quarter, but trail on a year-to-date basis. Growth outperformed value for the quarter, and year-to-date, growth has outperformed value by more than 10 percentage points across the cap spectrum. Technology, namely a handful of stocks, continued to fuel the growth indices' returns, especially in the large cap space (see below).

The "FAAMG" stocks have an average return of 31% year-to-date and have contributed 7.3% of the 20.7% year-to-date return for the Russell 1000 Growth Index. Technology stocks now comprise 23% of the S&P 500 Index and 38% of the Russell Growth Index. Along with Technology (+8.6%), Energy (+6.8%) and Telecommunications (+6.8%) were strong sectors. Consumer Staples (-1.3%) was the sole sector to deliver a negative result for the third quarter.

	3Q	Y-T-D
Facebook	13.2%	48.5%
Apple	7.4%	34.7%
Amazon	-0.7%	28.2%
Microsoft	8.6%	21.9%
Google (Alphabet A & C shs)	5.1%	23.6%
R1000G	5.9%	20.7%
S&P 500	4.5%	14.2%

Source: Bloomberg Finance L.P.

Overseas, the MSCI EAFE Index (+5.4%) outperformed U.S. market in the third quarter and its year-to-date return is a lofty 20.0%. Gains were broad-based with several countries (Austria, Portugal, Italy, and Norway) posting double-digit returns. The U.S. dollar continued to weaken, down 3-4% versus the euro, Canadian dollar, and the U.K. pound. Within the MSCI EAFE, Europe ex-U.K. was up 6.9%, the U.K gained 5.2%, and Japan returned +4.0%. From a sector perspective, Energy and Materials posted double-digit gains while Health Care and Consumer Staples were laggards with results of less than 1%. Emerging markets modestly outperformed developed (MSCI EM USD: +7.9%) and the Index is up an impressive 28% year-to-date. Emerging Asia continued to be the key driver (as was the case in the first and second quarters) with China (+14.7%) taking the lead. The only emerging markets country to deliver a negative return was Greece (-12.1%). Elsewhere, Russia and Brazil (+17.6% and +22.9%) both posted sharp gains as their economies improved, reversing second quarter declines. India, where second quarter growth did not meet expectations, posted a more muted return at +3.0%.

Global Fixed Income

Interest rates were range-bound during the third quarter. The yield on the 10-year U.S. Treasury closed the quarter at 2.33%, only two basis points higher than at the end of the second quarter. The yield curve continued its flattening trend and the 2-year Treasury yield ended the quarter at 1.47%, its highest level since August 2008. The Bloomberg Barclays Aggregate U.S. Bond Index posted a +0.8% result with corporate bonds outperforming other investment grade sectors. The Bloomberg Barclays U.S. Corporate Index was up 1.3% for the quarter. High yield corporates fared even better, with the Bloomberg Barclays U.S. Corporate High Yield Index up 2.0%. TIPS regained some of their underperformance from the previous quarter. The Bloomberg Barclays U.S. TIPS Index rose 0.9% and the 10-year breakeven spread (the difference between nominal and real yields) rose to 1.84% as of quarter-end from 1.73% at the end of the second quarter.

Rates were also steady overseas, though dollar weakness boosted returns. The U.S. dollar lost nearly 3% versus a broad basket of developed markets currencies. The Bloomberg Barclays Global Aggregate Index returned +1.8% (unhedged) versus +0.8% for the hedged version. Emerging markets debt posted solid returns. The JPM EMBI Global Diversified Index ($ denominated) was up 2.6%. Gains were broad-based with only beleaguered Venezuela (-11%) posting a negative return. The local currency JPM GBI-EM

Global Diversified Index returned +3.6%. Returns were mixed for this Index with Brazil (+11%) being the best performer on improving economic and political news and Argentina's first-ever local bonds (-4%) being the worst on worries over the success of reforms. Year-to-date, the two emerging markets debt indices are up 9.0% and 14.3%, respectively.

The municipal bond market also performed well, benefiting from favorable supply/demand dynamics and steady rates. New issue supply was down 17% from 2016 (through the first three quarters of 2017). The Bloomberg Barclays Municipal Bond Index returned 1.1% for the quarter and the shorter duration 1-10 Year Blend Index was up 0.7%. Puerto Rico remained in the headlines in the aftermath of the devastating hurricane with its bonds trading at less than 50 cents on the dollar.

Commodities/Real Assets/Inflation Protection

Brent crude oil prices rose nearly 20% for the quarter on relatively strong demand and signs that OPEC's production cuts may be easing the supply glut. The energy-heavy S&P GSCI Commodity Index gained 7.2% while the more diversified Bloomberg Commodity Index was up 2.5%. The Alerian MLP Index (-3%) was hurt by one of its larger constituents cutting its dividend, and its performance illustrates that MLP prices do not always move in tandem with oil prices. Gold gained 3.4% and REITs were up modestly (S&P Global REIT: +1.4%; MSCI US REIT: +0.9%). U.S. TIPS outperformed nominal Treasuries; the Bloomberg Barclays U.S. TIPS Index returned +0.9%. The DJB Global Infrastructure Index gained 3.3% and is up 15.2% year-to-date.

RPg FWA Advisor Research Models Performance Summary

RPg FWA's model portfolios are all positive through September, up between 8.17% - 17.57%, depending on the risk profile. The ARMs are a combination of ETFs and Mutual Funds.

- The **ARM Conservative Model** is up 8.17% YTD. Emerging Markets have had a strong 2017, as has developed international. Both the EM and EAFE are outperforming the US equity market, helped in part by a weakening dollar.
- The **ARM Moderate Model** is up 9.30% YTD. With a little more exposure to global equity markets, the moderate model has appropriately more return than our conservative model YTD.
- The **ARM Moderate-Aggressive Model** is up 10.11% YTD as the global allocation has helped drive performance. While in some years diversification can be a headwind, it has proven to be a tailwind in 2017.
- The **ARM Aggressive Model** is up 10.31% YTD. We retain a healthy allocation to alternative investments which has contributed positively to performance, just not as much as some of the risk assets we have allocated to.
- The **ARM All Equity Model** is up 17.57%. The All Equity Model has benefitted from our international exposure and lack of liquid alternatives, or real assets. Global exposure has benefitted this model.

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Satellite Recommendations

RPg FWA Global Investment Committee 2016 Satellite Recommendations (As of 9/30/2017)

Investment Theme	Position Utilized	Period Performance 12/31/2016 – 09/30/2017
Life Settlements	Vida Longevity Fund	8.26%*
Direct Lending	LENDX – StoneRidge Alternative Lending Fund	4.69%*
Reinsurance	SRRIX – StoneRidge Reinsurance Fund	-11.05%*
Emerging Markets	EMQQ – EM Internet and Ecommerce ETF	59.15%*
Senior Loans	SRLN – Blackstone/GSO Senior Loan ETF	2.52%*

Source: Bloomberg Finance L.P.
*Net Returns which include reinvested dividends

Within the Satellite recommendations, the RPg FWA Investment Committee is seeking to be opportunistic, and to provide diversity from our model portfolios. To accomplish the diversity we are seeking, we try to focus on asset classes that minimize their reliance on earnings, interest rates and inflation to generate returns. Within the opportunistic recommendations, we are seeking value, and or market disruptors. Below is a summary of the satellite recommendations of 2017:

Life Settlements – RPg FWA utilizes the Vida Longevity Fund (VLF) to specifically invest in senior life settlements and other longevity-contingent assets. The fund seeks to earn a reasonable return uncorrelated to other asset classes and macroeconomic factors. Through 3Q 2017, VLF may be on pace to return between 9 and 10% for the year. 2Q 2017 was a slower quarter due to a slowdown in mortality, but 3Q was back to underwriting expectations.

Direct Lending – Within the Direct Lending allocations we make on behalf of our clients, we are seeking high single digit returns investing in short-term loans, lines of credit, receivables, real estate loans, and other debt obligations. Because of the low duration of the vehicles we utilize, the RPg FWA Direct Lending investors are exposed mainly to the ability of consumers and small business borrowers to repay their loans. The funds are not as sensitive to interest rate movements as traditional bond proxies which was quite helpful in the latter stages of 3Q 2017.

Reinsurance – Insurance-linked securities (ILS) are financials instruments whose performance depends upon insurance risk rather than traditional financial risk. The most widely accepted forms of insurance-linked securities are those related to catastrophe risk, or the risk of primarily natural disasters (perils). The major types of perils covered in the catastrophe risk market include: US Hurricanes, US Earthquakes, European Windstorms, Japanese Earthquakes and Japanese Typhoons. None of these are correlated to earnings, interest rates, or inflation which is why the asset class is part of our diversification recommendation. After this very active hurricane season, the asset class is entering what we feel is the growth phase of the cycle as premiums are about to rise, which equates to greater cash-flow to the bond holders.

Emerging Markets – Within our recommendation to EM, the RPG FWA investment committee felt it was important to seek growth companies/growth trends, and minimize reliance from State Owned Entities (SOEs). Our research uncovered an exposure that tracks an index of leading internet and Ecommerce companies serving Emerging Markets. This position offers investors exposure to the growth of online consumption in the developing world. To be included in this index, the companies must derive their profits from Ecommerce or internet activities and include search engines, online retail, social networking,

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online video, e-payments, online gaming and online travel. This falls into our opportunistic research recommendation.

Senior Loans – Our goal within the senior loan category was to provide a higher yielding set of constituents, higher up in the capital structure. We also wanted low-duration so we can limit interest rate sensitivity of the position, and have a cash-flow that is senior to most other debt or equity obligations within the capital structure. This satellite recommendation is an opportunistic position meant to provide more stability than longer dated, more traditional fixed income when paired with direct lending, life settlements and reinsurance.

Warm regards,

RPg FWA Investment Committee
RPg Family Wealth Advisory

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Sources: Bloomberg. JP Morgan.