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2018 Outlook, Allocation and Opportunities

US Equities expected to post muted returns as Fed hikes continue

2017 felt like the culmination of the unhappiest bull market we've ever seen. Stock markets then proceeded to hit a number of record highs as the year concluded, the job market continued to improve, unemployment reached a generational low in the U.S., and retail sales rose. A historic revision to the tax code became law at the end of the year, which included a substantial corporate tax cut. After perhaps jumping the gun in the first part of the year, then held back by frustration after not getting expected tax and regulatory changes enacted during the middle quarters, the "animal spirits" of the economy and the capital markets appear to have been unleashed once again. Enthusiasm for growth and risk-taking seem apparent. Is now the time to worry, as phrases like a market "melt-up" enter the popular lexicon?

GDP growth averaged 2.3% for the year, up from 1.5% in 2016. The result for 2017 was impressive given the damage caused by severe hurricanes in the third quarter. Since the Global Financial Crisis (GFC), GDP has increased at a very modest 2.2% annual average, far below the growth typically seen following a recession and below the 3% long-term average since the early 1960s. While gains have been slow and steady, they have gone on now for a sustained period of time, one of the longest expansions on record, and as a result the unemployment rate has been pushed to a generational low of 4.1%. The job market keeps chugging along, creating over 2.1 million new jobs in 2017, or 183,000 per month. The peak years of job creation in the current cycle were 2014 (3 million) and 2015 (2.7 million). While the monthly rate of 183,000 is still robust, and well in excess of the 100,000 needed to keep the market at a steady state, the rate of job creation is tailing off, suggesting we might be reaching the limits of full employment. Despite this tight labor market, wage gains remain remarkably subdued, with annual gains in hourly earnings in the 2%-2.5% range for each of the last four years. The rate of growth in total compensation has begun to rise; the employment cost index has inched up from 2% growth to hit 3% in several quarters during 2017.

Confidence in the sustainability of the current spate of growth rose with the release of the aforementioned animal spirits. The impact of the tax cut is expected to be modest, perhaps adding 0.2 to 0.3 percentage points to GDP growth in 2018, and most if not all of the investment gains are already built into the stock market. How corporations plan to "spend" the tax cut remains the wild card. The optimistic outcome is that the extra money goes into capital expansion and job growth. Other outcomes include returning the capital to owners through dividends and share buybacks to existing workers through wage gains, or to consumers in the form of price cuts. Longer term, the $1.5 trillion increase in the deficit is viewed as a potential drag on growth.

One other potential stimulus still to take shape is the proposed program of substantial infrastructure spending. This spending could spur further growth when the economy is already running hot, and therefore stimulate inflation beyond the current benign levels. The tight labor market suggests we might already be facing limitations on growth from the existing set of labor and capital inputs available in the U.S. economy.

Inflation remains remarkably benign, clipping along at 2.1% in December (year-over-year). Oil prices have recovered from the sharp decline of several years ago, which spurred top-line inflation, but core inflation (net of food and energy) remains below the Fed's target of 2%. The tight labor market, the impact of the corporate tax cut, and the potential for substantial infrastructure spending all suggest that inflation could finally be poised to move. Another potential impetus for inflation is the improving outlook for the global economy, which appears to be moving into synchronized growth across disparate regions.

Overseas, the European Central Bank announced that it would extend its asset purchase program beyond March, 2017 when it was set to expire, but purchases will be lower (€60 billion per month down from €80 billion per month). Italians voted "no" to reforms and a rescue fund was created for troubled banks in response to acute challenges at Monte dei Paschi di Siena. Deutsche Bank settled with the U.S. Department of Justice for its role in selling mortgages during the crisis, agreeing to a $7.2 billion payment (roughly half of what was originally suggested). The unemployment rate in the euro zone declined to 9.8% in October, the lowest since July, 2009; it has been falling since reaching a record high of 12.1% in April, 2013. The range in unemployment rates is highly divergent among euro zone countries, with Spain's at 19% and Germany's at a 35-year low of 4%. Consumer prices in the euro zone increased 0.6% year-over-year in November, the highest since April 2014, but well below the 2% target. GDP is expected to have picked up in the final months of the year from the 0.3% (1.6% year-over-year) pace registered in the third quarter to 0.4% – 0.5%.

In Asia, the Japanese economy advanced 0.3% (1.0% year-over-year) in the third quarter, below the preliminary estimate of 0.5%. The economy continues to struggle in spite of aggressive stimulus measures. The Bank of Japan made no changes to its monetary policy but upgraded the outlook for 2017 given the yen's weakness versus the U.S. dollar, which should provide a boost to exports. The dollar reached a 14-year high versus the yen.

Despite worries at the start of 2017, China ended the year with growth expected to be in line with its target of 6.5%. Its stock market stabilized and is up 19% since its low in late January, 2016. Its currency has depreciated, but in an orderly fashion. However, challenges remain in the form of a high debt load and an overheated property sector.

US Equities

The U.S. equity market continued its upward trajectory in the fourth quarter, closing out a very strong year marked by continued low volatility despite a turbulent U.S. political landscape and a record year in terms of global catastrophes. Investors embraced accelerating global economic growth as well as low interest rates and inflation. Corporate earnings registered double-digit growth for the quarter, receiving a boost from the U.S. tax overhaul bill, which was signed into law in late December.

The S&P 500 Index rose 6.6% in the fourth quarter, and its 21.8% gain for the year was its best since 2013. The Index hit 62 record highs during the year and had only eight days of 1% or more fluctuations, the lowest number since 1964. The S&P 500 Price Index has nearly tripled (+295%) since its low in March 2009. Valuations are stretched by most measures, but estimates for future earnings are also strong. Large cap stocks (Russell 1000: +6.6%) outperformed small cap (Russell 2000: +3.3%) across styles for the quarter.

Riskier assets continued to lead the equity market. Consumer Discretionary (+9.9%) and Technology (+9.0%) were the strongest performers, with Apple, Amazon, and Microsoft posting 10%-20% returns due to ongoing exceptional cash flow generation and growth in global markets. The Tech sector now accounts for 24% of the S&P 500 and 38%

of the Russell 1000 Growth Index; returns for the FAAMG stocks (Facebook, Apple, Amazon, Microsoft, Google) ranged from 36% to 56% for 2017.

Consumer Discretionary benefited from strong year-end retail sales as well as positive tax reform expectations as the retail industry carries the highest industry effective tax rate at 35%. The "Amazon Effect," however, continues to threaten the sector as many large retailers have been forced to close stores or lower prices to unsustainable levels.

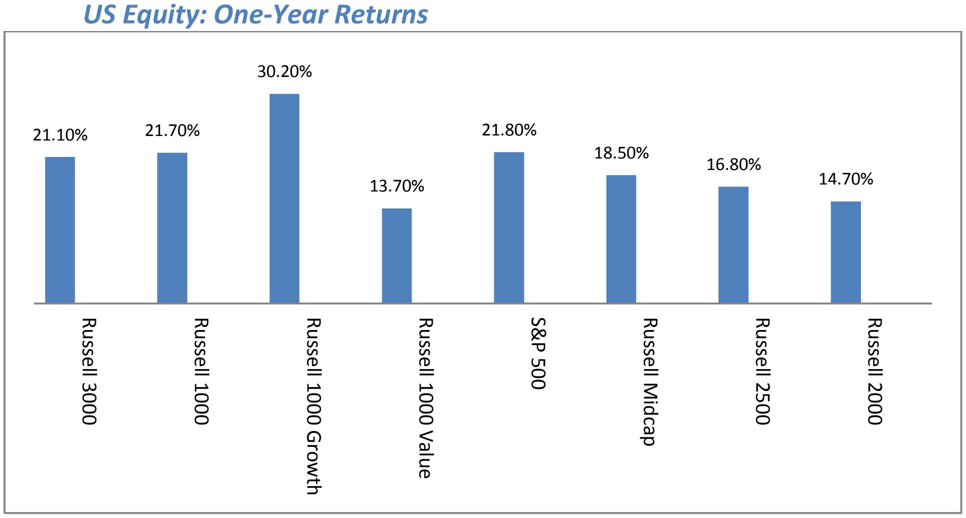
The Energy sector (+6.0%) continued to improve in the fourth quarter although it closed out the year among the worst performers (-1.0%). A combination of optimism and improvements in the global economy has spurred demand in recent months. More near-term volatility is anticipated in the price of oil as U.S. output is expected to surpass production out of Saudi Arabia for the first time since the early 1990s.

Growth outperformed value during the quarter across the market cap range (Russell 1000 Growth: +7.9% vs. Russell 1000 Value: +5.3%; Russell 2000 Growth: +4.6% vs. Russell 2000 Value: +2.0%). The overweight to Tech and Consumer Discretionary in the growth indices drove the outperformance. Investors favored the stronger earnings and top-line growth outlook in the Tech sector, which also benefited from positive investor sentiment following tax reform.

Momentum-oriented stocks (MSCI Momentum Index: +37.8%) posted their biggest annual gain since 1999, leaving valuations stretched; the MSCI Defensive Index rose 12.3% for 2017. Anecdotally, some momentum-oriented managers are finding their bench of ideas shrinking as they take profits on winners while defensively oriented managers continue to sit on cash waiting for more favorable opportunities.

We believe that the U.S. economy is in better shape than commonly appreciated and that the global economic environment remains supportive. While we are less enthusiastic than some about the potential for the new tax cuts to add to positive macroeconomic trends, we do believe tax cuts will lift corporate earnings substantially and add to momentum in markets throughout 2018.

US Equity: One-Year Returns



Sources: Russell Investment Group, Standard & Poor's, Callan

Global Equities

Major non-U.S. markets performed largely in line with each other during the quarter, which saw a bit of an inflection point as investors were more willing to capitalize on synchronized global growth and began to rotate out of momentum winners into more cyclical areas such as Financials, Energy, and Materials. Cyclicals led as tax reform, improving commodity prices, and growth projections overcame Brexit fears and election uncertainty in Germany in a risk-on quarter.

Non-U.S. developed (MSCI EAFE and MSCI World ex USA: +4.2%) trailed U.S. (MSCI USA: +6.4%) after beating it in the previous three quarters. Within MSCI EAFE, the U.K. notched a record high in the fourth quarter and was up 22.3% for the year.

Europe, which led markets in the third quarter on earnings growth and political stability, reverted and trailed other developed regions (MSCI Europe: +2.2%) on Brexit negotiation concerns and political uncertainty following German elections. The European Central Bank also announced plans to curb quantitative easing in January 2018. Japan (MSCI Japan: +8.6%) was the best performer on its election results and improved inflation expectations.

Markets favored economically sensitive sectors: IT (+8.3%), Materials (+7.8%), and Discretionary (+7.6%). Energy was also positive (6.8%) as commodity prices were supported by distribution disruptions and high liquid natural gas usage with winter's arrival. Defensive sectors lagged as markets continued to rise: Utilities (-0.4%), Health Care (+0.9%), and Telecom (+1.7%).

It was another difficult quarter for value; factor performance favored strong growth (forecasted), earnings and price momentum, high quality, and beta (MSCI World Value: +4.6% vs. MSCI World Growth: +6.4%). Valuation factors were mixed with price-to-book ratios and yield detracting from performance, while earnings-based multiples contributed.

Emerging market equities outperformed developed in the quarter and for the year (MSCI Emerging Markets (USD): +7.4%; +37.3%). Latin America was the only weak spot in the quarter (-2.3%) but was up a robust 23.7% for the year. Emerging Asia performed the best for the quarter and the year (+8.4%; +42.8%) driven by strong results from China (+7.6%; +54.1%) and Korea (+11.4%; +47.3%).

Local China A shares did even better (MSCI China A 50 Index: +13.7%). October's 19th National Congress of the Communist Party solidified power around Xi Jinping, reconfirming key policy objectives. Chinese technology continued to perform well but was less of a performance outlier than in previous quarters. China's increasing and less-visible debt is a growing concern, while expectations for stronger growth are buoying the market.

South Africa (MSCI South Africa: +21.4%) was the best performer as commodity prices firmed and investors cheered a leadership change. Mexico (MSCI Mexico: -8.0%) was the worst-performing emerging market country as the peso sold off on NAFTA negotiation concerns.

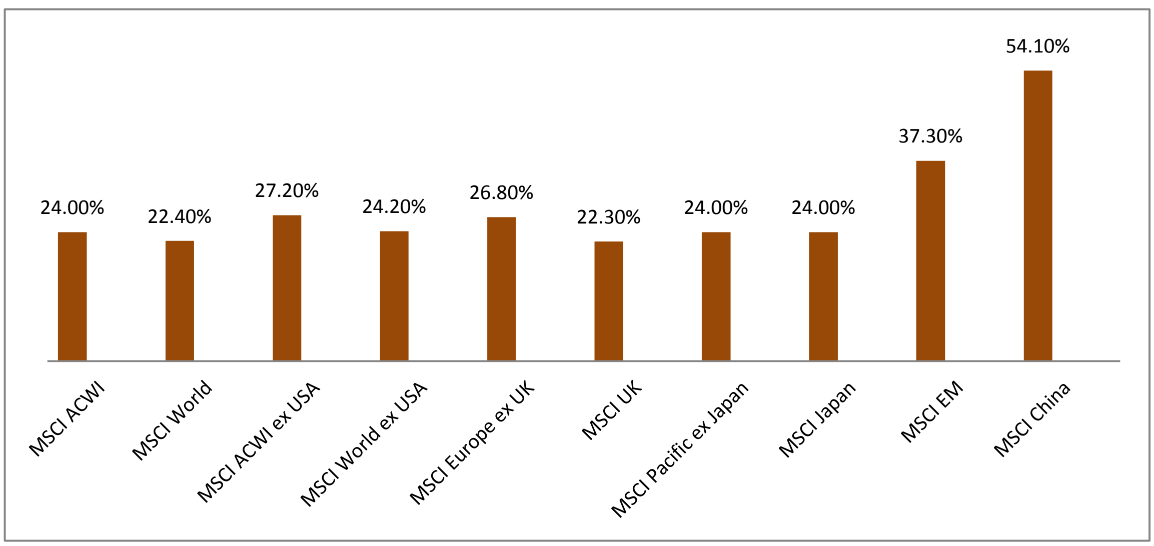
Economically sensitive sectors sold off (Discretionary: -23.6%, Financials: -21.2%). Emerging market Health Care (+16.6%) saw very good performance with outsized contribution from China and South Korea as changing demographics continued to drive demand. Value factors struggled in emerging markets while growth, earnings momentum, price momentum, volatility, and beta were positive.

Developed non-U.S. small cap (MSCI World ex USA Small Cap: +5.8%) outperformed its large/mid counterpart modestly, led by Asia. Australia (+11.6%) and Japan (+8.7%) led the segment.

Emerging market small cap (MSCI Emerging Market Small Cap: +9.2%) was the best-performing segment of the equity markets in the fourth quarter, led by Health Care (+28%); Real Estate (-0.1%) was the laggard.

Entering 2018, we remain optimistic and see significant runway for further growth. Increasing financial security for the US middle class could drive another 3–5 years of economic expansion, and imminent tax cuts will substantially lift corporate earnings. The euro zone recovery has achieved escape velocity and is latently following a similar trajectory to that of the United States. A focus on "higher quality" growth in China has so far resulted in only a mild economic deceleration. In Japan, this positive global backdrop, together with extraordinary monetary stimulus, is lifting nominal GDP.

Non US Equity: One Year Returns



Sources: MSCI, Callan

U.S. Bonds

The U.S. yield curve continued its flattening trend in the fourth quarter. The 2-year U.S. Treasury yield climbed 42 basis points to close at 1.89%, up 69 bps from the end of 2016. At the long end of the yield curve, the 30-year U.S. Treasury yield fell 12 bps during the quarter, ending the year at 2.74%, 32 bps lower than its close in 2016. This trend reflects the Fed's bias to be less accommodative through monetary policy, as well as benign inflation in the face of a strong labor market. As a result, longer-term bonds sharply outperformed short-term and intermediate-maturity bonds for the quarter and the year.

Volatility in fixed income as well as equity markets sits near historical lows. The overall risk appetite remains elevated, driven in part by globally strong growth and loose monetary policy from central banks, as well as business and consumer confidence. The market is pricing in three Fed rate hikes for 2018, not far from the Fed's own expectation of where rates will end up in the longer run. Yields on 10-year Treasuries rose modestly from 2.33% at the end of the third quarter to 2.41%.

The Bloomberg Barclays Long U.S. Treasury Index gained 2.4% in the quarter and 8.5% in 2017 versus a -0.4% quarterly and +1.1% annual return for the Bloomberg Barclays Intermediate Treasury Index. Consistent with the low volatility theme evident in the equity markets, the U.S. Treasury 10-year traded in a narrow 60 bps band for the year, the lowest since 2000.

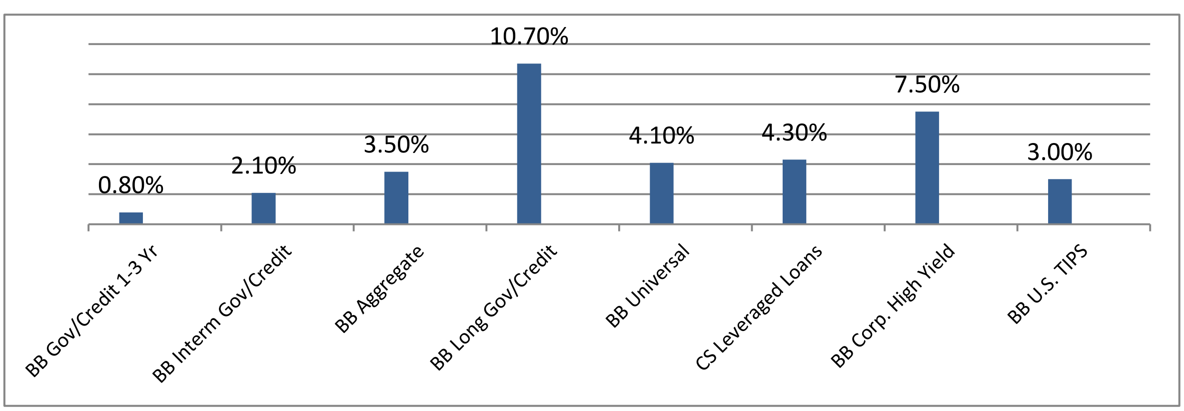
The Bloomberg Barclays U.S. Aggregate Bond Index rose 0.4% during the quarter. Corporate bonds outperformed for the quarter and the year, and yield spreads were the tightest since the Global Financial Crisis, hitting 93 bps over Treasuries. Investment-grade corporate credit was the strongest-performing fixed income sector; tax reform may boost the sector by improving profitability and reducing issuance.

High yield corporates also did well, with the Bloomberg Barclays U.S. Corporate High Yield Index up 0.5% for the quarter and 7.5% for the year. The annual default rate was the lowest since 2013. Issuance was robust in the fourth quarter at $68 billion, but tax reform could negatively impact issuance.

TIPS outperformed nominal U.S. Treasuries as expectations for inflation rose. The Bloomberg Barclays U.S. TIPS Index rose 1.3% for the quarter and 3.0% for the year, and the 10-year breakeven spread (the difference between nominal and real yields) rose to 1.96%.

The municipal bond market performed well in 2017 as rates were steady and demand remained strong. The tax overhaul package is expected to have mixed effects. The change in personal income rates is too small to have a meaningful impact, while the decrease in corporate tax rates is expected to reduce demand for muni's from certain corporations. Limiting state and local tax deductions could increase demand for in-state muni's in high tax states. Issuance spiked in anticipation of changing regulations, setting a record $62.5 billion for December supply, but the market absorbed it well. The Bloomberg Barclays Municipal Bond Index returned 0.7% for the quarter and 5.4% for the year.

U.S. Fixed Income: One-Year Returns



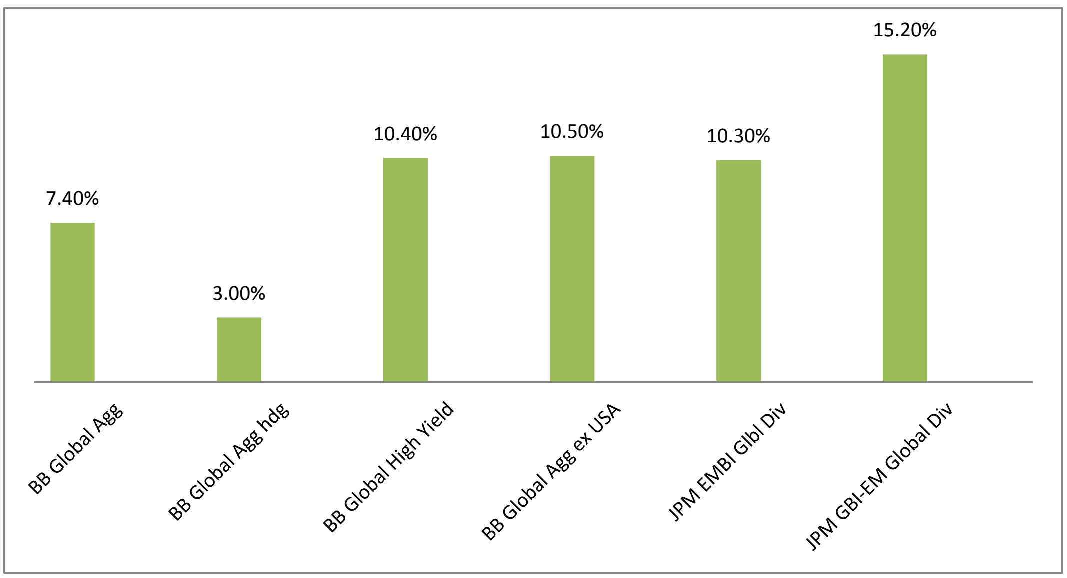
GlobalBonds

Quarterly returns were mostly flat in developed markets. The Bloomberg Barclays Global Aggregate Bond Index rose +1.1% (unhedged) and 0.8% (hedged).

Emerging market debt delivered more muted returns than in earlier quarters. Higher commodity prices and global growth supported the asset class broadly. The JPM EMBI Global Diversified Index ($ denominated) gained 1.2% in the quarter and 10.3% for the year. Returns were mixed, but beleaguered Venezuela was the outlier for the quarter (-29%) and the year (-34%). The local currency JPM GBI-EM Global Diversified Index increased +0.8% in the quarter and +15.2% for the year. In the quarter, Asian countries (+5%) performed best while Latin America sank nearly 5%.

When considering allocating to non-U.S. fixed income, we remain skeptical of allocating to issues with negative absolute and real rates of interest. While investors were rewarded in 2017 for allocating to international fixed income, we view this as a potential time bomb when the global central banks can no longer suppress rates, and in turn, volatility. This is not a risk/reward we believe to be worth taking as we feel that when rates start to rise again, the damage to investors will be severe.

Non-U.S. Fixed Income: One-Year Returns



Sources: Bloomberg Barclays, JP Morgan and Callan

2018 expectations: Rising rates, higher rates, lower corporate taxes, split returns, multiple contraction

With rates rising, and lower corporate taxes, strong balance sheet companies should outperform, PE multiples could come under pressure, and stocks able to boost margins should be rewarded. This dynamic should also reintroduce volatility onto the global risk stage. With higher rates and a stronger US dollar, sectors and companies with higher US sales vs. international sales, and growth vs. value should outperform.

We believe the biggest risk in the year ahead is that central banks in these economies tighten financial conditions too rapidly in response to positive economic momentum. Changes in Federal Reserve Board membership as well as the voting composition of the FOMC make forecasting monetary policy complicated. Moreover, potential changes in the next 18 months at the European Central Bank (ECB), Bank of Japan (BoJ), and the People's Bank of China (PBoC) add to the uncertainty. Beyond monetary policy, we see policy risks related to protectionism driven by populist pressures. Finally, but importantly, we also worry about geopolitical risk in East Asia and the Middle East.

Themes that we expect to dominate the 2018 US Equity Market

We're not big on single year forecasts and don't believe it serves our clients (or anyone) as Wall Street forecasts have shown to be wildly off the mark on an annual basis. That said, as you look out at the horizon and focus on data rather than your gut or a hunch, the reality of the bull market's merits are obvious, and as we assess portfolio allocations, we believe there is a clear need for equity exposure in the years to come. While it is true, the economic cycle is maturing as we continue to plod along, monetary policy is still easy and fiscal policy in the form of corporate tax cuts should be supportive as the economy continues to reinflate? itself from the aftermath of the credit crisis of 2008-09.

Logic and math would suggest the environment as we enter 2018 should be good for cyclicals and small-cap equities, particularly relative to bond proxies. Perhaps one of the most important statements from our investment committee is that we should own innovation and disruption. Sectors such as biotechnology, cloud computing, artificial intelligence and the continued surge of e-commerce are all areas of the economy that may be revenue growth leaders for the next decade-plus.

2018 Themes

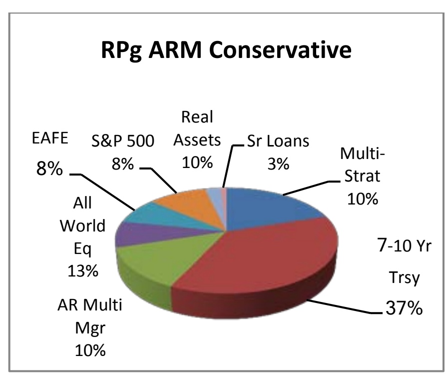
Asset Class	Opportunity	Change	Negative	Neutral	Positive
Main Asset Classes	Equities	↑	○ ○ ○	○	● ○ ○
	Bonds	↓	○ ● ●	○	○ ○ ○
	Credit	↑	○ ○ ○	○	● ● ○
	Commodities	↑	○ ○ ○	○	● ○ ○
	Cash		○ ○ ○	●	○ ○ ○

Asset Class	Opportunity	Change	Negative	Neutral	Positive
Satellite Asset Classes	Longevity Bonds	↑	○ ○ ○	○	● ● ●
	Direct Lending	↑	○ ○ ○	○	● ● ●
	Catastrophe Bonds	↑	○ ○ ○	○	● ● ○
	Senior Loans	↑	○ ○ ○	○	● ○ ○
	Emerging Market Consumer	↑	○ ○ ○	○	● ● ○

RPg FWA Advisor Research Models (ARMs) - 2017

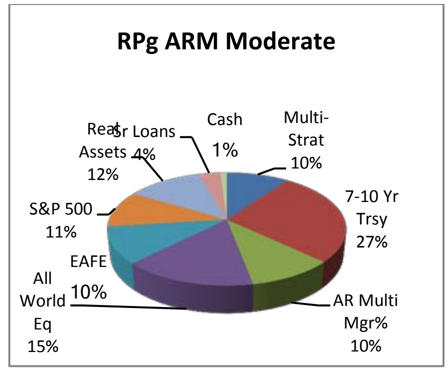
RPg ARM - Conservative

Ticker	Investment Product Name	Product Type	Weight	Expense Ratio
QAI	IQ Hedge Multi-Strat Tracker ETF	ETF	20.00%	0.75%
IEF	iShares 7-10 Year Treasury	ETF	37.10%	0.15%
ACWI	iShares All World ETF	ETF	13.00%	0.33%
IEFA	iShares MSCI EAFE ETF	ETF	8.10%	0.08%
VOO	Vanguard S&P 500 ETF	ETF	8.10%	0.05%
PRDAX	Principal Diversified Real Asset	Mutual Fund	10.00	1.25%
WSMNX	William Blair SMID Gr Fund	Mutual Fund	2.70%	1.35%
Cash	Cash	Cash	1.00	0.18%



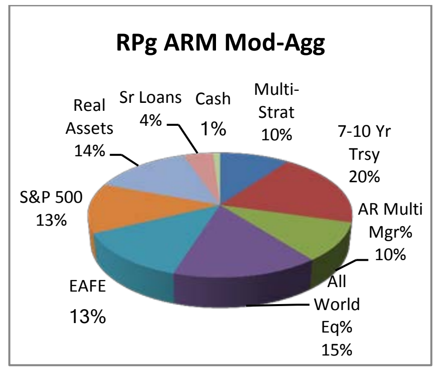
RPg ARM - Moderate

Ticker	Investment Product Name	Product Type	Weight	Expense Ratio
QAI	IQ Hedge Multi-Strat Tracker ETF	ETF	20.00%	0.75%
IEF	iShares 7-10 Year Treasury	ETF	27.00%	0.15%
ACWI	iShares All World ETF	ETF	15.50%	0.33%
IEFA	iShares MSCI EAFE ETF	ETF	10.50%	0.08%
VOO	Vanguard S&P 500 ETF	ETF	10.50%	0.05%
PRDAX	Principal Diversified Real Asset	Mutual Fund	12.00%	1.25%
WSMNX	William Blair SMID Gr Fund	Mutual Fund	3.50%	1.35%
Cash	Cash	Cash	1.00	0.18%



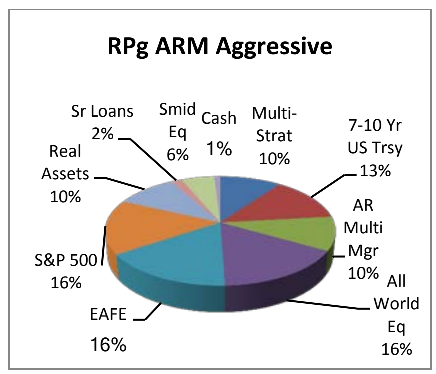
RPg ARM – Moderate Aggressive

Ticker	Investment Product Name	Product Type	Weight	Expense Ratio
QAI	IQ Hedge Multi-Strat Tracker ETF	ETF	20.00%	0.75%
IEF	iShares 7-10 Year Treasury	ETF	19.45%	0.15%
ACWI	iShares All World ETF	ETF	15.45%	0.33%
IEFA	iShares MSCI EAFE ETF	ETF	12.90%	0.08%
VOO	Vanguard S&P 500 ETF	ETF	12.90%	0.05%
PRDAX	Principal Diversified Real Asset	Mutual Fund	14.00%	1.25%
WSMNX	William Blair SMID Gr Fund	Mutual Fund	4.30%	1.35%
Cash	Cash	Cash	1.00	0.18%



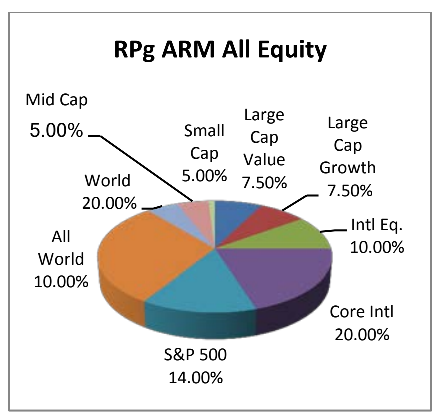
RPg ARM –Aggressive

Ticker	Investment Product Name	Product Type	Weight	Expense Ratio
QAI	IQ Hedge Multi-Strat Tracker ETF	ETF	20.00%	0.75%
IEF	iShares 7-10 Year Treasury	ETF	19.45%	0.15%
ACWI	iShares All World ETF	ETF	15.45%	0.33%
IEFA	iShares MSCI EAFE ETF	ETF	12.90%	0.08%
VOO	Vanguard S&P 500 ETF	ETF	12.90%	0.05%
PRDAX	Principal Diversified Real Asset	Mutual Fund	14.00%	1.25%
WSMNX	William Blair SMID Gr Fund	Mutual Fund	4.30%	1.35%
Cash	Cash	Cash	1.00	0.18%



RPg ARM –All Equity Strategy

Ticker	Investment Product Name	Product Type	Weight	Expense Ratio
IWD	iShares Russell 1000 Value ETF	ETF	7.50%	0.20%
IWF	iShares Russell 1000 Growth ETF	ETF	7.50%	0.20%
HLMNX	Harding Loevner Int Eq Portfolio	ETF	7.50%	1.17%
IEFA	iShares Core MSCI EAFE ETF	ETF	20.00%	0.08%
VOO	Vanguard S&P 500 ETF	ETF	14.00%	0.05%
ACWI	iShares MSCI ACWI ETF	ETF	30.00%	0.33%
IWR	iShares Russell Mid-Cap ETF	ETF	5.00%	0.20%
IJR	iShares Core Small-Cap ETF	ETF	5.00%	0.12%
Cash	Cash	Cash	1.00	0.18%



Closing Thoughts

The fundamentals of the US economy are in better shape than commonly appreciated, and global economic environment remains supportive. We see a long-awaited return to leadership of cyclicals and small-cap equities in the United States as a result of increased GDP growth and fiscal stimulus. The broadening of the US recovery to middle class households may also lead to several more years of growth in the United States, independent of policy change.

We are less enthusiastic than some about the potential for tax cuts to add to these positive macroeconomic trends. The middle class consumer is the critical lynchpin of growth in the years ahead, supported by disruptive technology that increases consumer optimism and confidence. To the extent increased consumer optimism coalesces with business confidence on the back of tax reform, we could see a ramp in business investment that then leads to higher productivity and wage growth and a virtuous cycle. Even if this does not occur, we believe tax cuts will lift corporate earnings substantially and add to momentum in markets in 2018.

Sources: Callan, Goldman Sachs, Federal Reserve, Bloomberg Barclays, MSCI, JP Morgan, Credit Suisse