PMA™
PRUDENT MAN ADVISORS

MARKET OUTLOOK

PRUDENT MAN ADVISORS INC. | WINTER 2019

Integrity. Commitment. Performance.™

PMA™
PRUDENT MAN ADVISORS

PRUDENT MAN ADVISORS
MARKET OUTLOOK

WINTER 2019

Highlights

Market returns have disappointed thus far in 2018 as a combination of fundamental and technical factors have negatively impacted asset values. While U.S. equities marginally outperformed global stocks and bonds through November, absolute returns in asset classes are well below recent and historical levels. Though we expected volatility to pick up this fall, the speed and strength of the correction reflects the depth of market angst related to these factors including: tighter monetary policy, credit cycle concerns, slower economic growth and political uncertainty. We believe the recent downturn has resulted in excessively pessimistic valuations as we project modest, albeit positive, returns for most sectors in 2019 as market volatility continues. A lack of progress in removing the uncertainty related to Trump's trade policies will make it difficult for the markets to generate significantly higher returns than our central estimates. At the same time, stable economic growth, positive earnings growth and already more attractive bond and equity valuations support our return expectations.

2019 Expected Returns	Base	Upside	Downside
Cash Returns	2.50%	3.00%	2.25%
U.S. Treasury Returns	2.00%	6.00%	-1.00%
Agency MBS	2.50%	4.50%	-0.50%
IG Corporate Returns	2.00%	4.50%	-3.00%
U.S. Equity Returns[1]	7.00%	15.00%	-10.00%

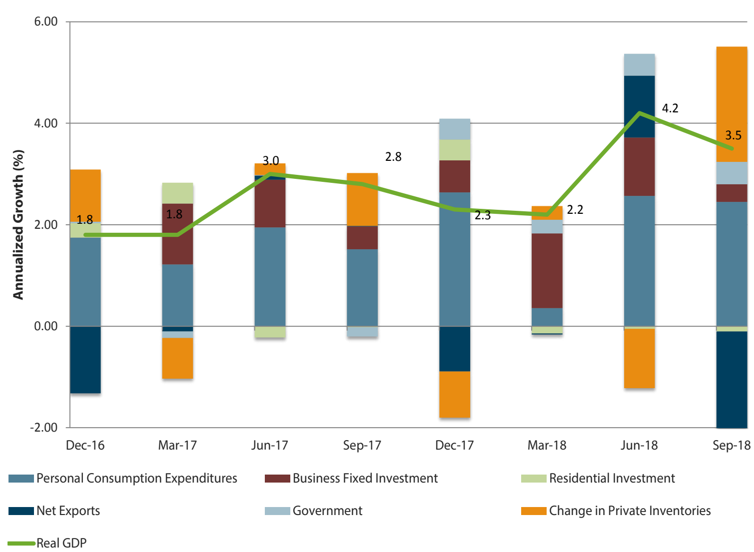
Table 1. [1]Based on S&P 500 closing price of 2760 as of 11/30/18.

Importantly, the future path of monetary policy presents a significant wildcard to these estimates. With U.S. economic growth picking up in 2018, we believe sufficient progress has been made toward achieving the Fed's dual mandate of full employment and price stability to allow the Fed to moderate the pace of policy tightening into next year. Given slower intermediate term economic expectations, as well as the Fed's historically poor track record of engineering economic soft landings, a pause in tighter policy during 2019 make sense in the current market context. As the credit cycle matures, we remain vigilant to the fact that the market unfolds in a consistently surprising manner. Managing risk is critical at this point in the cycle as relative value opportunities emerge. As prudent investors, a consistent investment process can insulate returns today, enhance return opportunities in the future and preserve principal in a dynamic market environment.

Economic Outlook

Positive U.S. economic growth is expected to continue into 2019, and while the pace of growth is expected to decelerate, we think the prospects of a recession next year remain low. In what will ultimately prove to be the longest economic expansion in modern history, it is the length of the expansion that has been particularly impressive given the complexity and depth of the challenges overcome since the credit crisis. The current expansion is unique in that we are just now experiencing the strongest growth levels evidenced during the 10 year recovery. While the cycle is mature, positive economic growth should continue given the strength of the consumer. Economic growth has certainly picked up the pace over the past several quarters as positive impacts from tax reform have spurred higher consumption levels. During the first three quarters of 2018, real GDP has averaged 3.3% on an annual basis. (Graph1) The consumer has remained the economic bright spot and primary contributor to U.S. growth during the third quarter. We would expect an already strong labor market, supported by continued low unemployment rates, improving wage levels and strong consumer balance sheets, will continue to drive consumption as the primary driver of economic growth again in 2019. However, we anticipate that several economic and market challenges will make it difficult for the U.S. to maintain its current >3% growth rate into 2019. First,

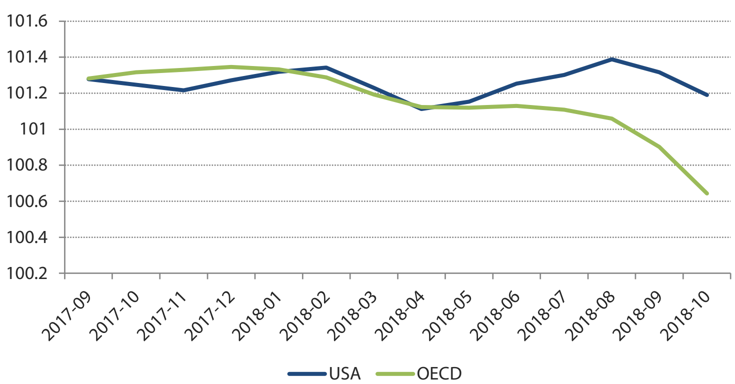
CONTRIBUTIONS TO % CHANGE IN REAL GDP



Graph 1. Source: Bloomberg, Prudent Man Advisors, Inc.

the impact of U.S. tax cuts on business fixed investment has thus far been underwhelming as evidenced by successive quarterly declines in that measure (Graph 2). Equipment and software investment have moderated from the rapid pace recorded in the first half of the year despite the cut in the corporate tax rate from 35% to 21%. The cut was intended to boost business investment, which would raise productivity and wages over time. Policy uncertainty could be playing some part in the lack of progress on this front. Even Federal Reserve Chair Jerome Powell this summer stated that some companies are holding off on hiring and investment because of President Trump's trade policies. An improvement in business investment is critical for sustained economic growth. We expect policy-related technical risks to remain an overhang for decent economic fundamentals in the year ahead.

BUSINESS CONFIDENCE WANING



Graph 2. Source: OECD.org

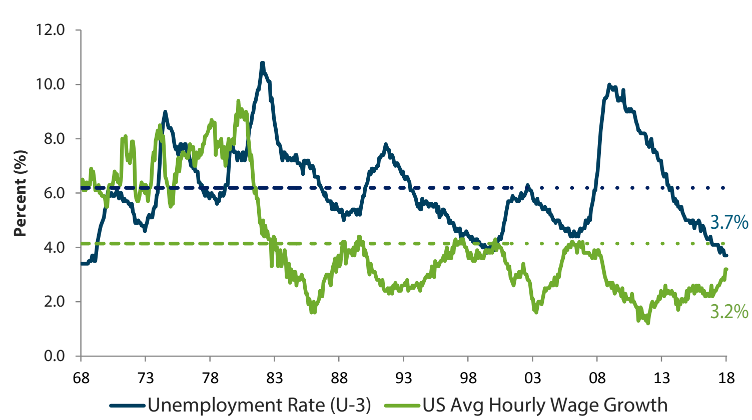
Second, tighter monetary policy is already having a moderating effect on fundamental economic growth. Interest rates have moved materially higher over the past several years and we are seeing the effects in economic activity. In addition, the Federal Reserve has been taking liquidity out of the market and shrinking the money supply with the end of quantitative easing. As a result the housing market has cooled substantially over the past twelve months as mortgage rates have moved above 5%. Similarly, U.S. automobile sales are expected to fall for a second year as the impact of higher interest rates and tariffs raise prices on new cars while used car supply has increased. Consumer credit delinquency levels have moved off of cyclical lows. Tighter policy will ultimately impact profit margins and potentially delay further capital investment. While market expectations for potential future rate increases have come in recently with higher market volatility, we forecast tighter Fed policy to continue into 2019, moderating future economic growth.

Finally, fiscal challenges will increase over the next several years as increasing amounts of government debt crowd out private investment. Over the next decade, the Congressional Budget Office (CBO) estimates that interest costs will become the third largest program in the federal budget. If current policy remains in place, interest costs will become the single largest program by 2048. Interest costs benefit current versus future economic growth. The more dollars spent on interest payments the less available for the government to invest in areas that could drive future economic growth. Similar fiscal challenges face the credit markets, which we address later in this outlook.

Overall, we forecast GDP growth of 2.5 percent in the year ahead, slightly below CBO and market consensus estimates, a clear deceleration from 2018 growth levels. Global growth is also concerning to our outlook as the global economy is forecast to decline toward 3.5% in 2019. Most major economies are likely to see decelerating growth with consensus GDP growth estimates below 2% in Europe and slower 4.5% aggregate growth rates in emerging markets. That said, it is still too early to call for a recession in the U.S. for 2019. By some measures, the market is pricing in close to a 40% probability of a recession in the upcoming year. Overall, while caution is warranted at this point in the cycle, we think the market expectation is excessively pessimistic as fundamentals support our low growth forecast.

A material increase in inflation remains the biggest risk to our economic and market outlook. That said, offsetting economic forces make it difficult to forecast inflation materially changing from current levels. Ongoing wage pressure and the lack of slack in the labor market remains our research team's primary concern (Graph 3). In addition, the potentially negative impact from higher tariffs due to an escalating trade war could increase inflation in 2019. By their very nature, tariffs impact consumers by raising the price of goods. Tariffs impact final goods sold in markets such as cars and televisions as well as parts essential to building such products.

U.S. UNEMPLOYMENT AND WAGE GROWTH



Graph 3. Source: Bloomberg, Prudent Man Advisors, Inc.

The positive news is that trade represents a relatively small overall proportion of the U.S. economy and only a portion of imports are currently impacted by tariffs. Offsetting these risks is the fact that tighter monetary policy should strengthen the dollar versus other currencies as other central banks remain largely accommodative. Further, lower oil and commodity prices as well as a weakening housing sector should keep inflation contained. Implied market estimates in breakeven rates (as measured as the yield difference between U.S. Treasuries and similar maturity Treasury Inflation Protected securities) have declined materially over the past several months along with equity and commodity prices (Table 2).

Term	Spot Dec 18	June 18	FYE 17	FYE 16
3YR Breakeven	1.40	1.94	1.71	1.71
5YR Breakeven	1.62	2.08	1.88	1.76
10YR Breakeven	1.83	2.12	1.98	1.97
30YR Breakeven	1.92	2.12	2.02	2.10
5 Year Forward Breakeven	2.00	2.15	1.97	1.95
Core PCE Index	1.80	2.30	1.52	1.87
Core CPI Index	2.10	2.20	1.80	2.20

Table 2. Source: Bloomberg, Prudent Man Advisors, Inc.

While we expect inflation to remain contained in the 2-2.25% percent range in the year ahead, any significant changes to inflation expectations will likely be accompanied by significantly higher volatility in the equity and debt markets in 2019.

Market Outlook

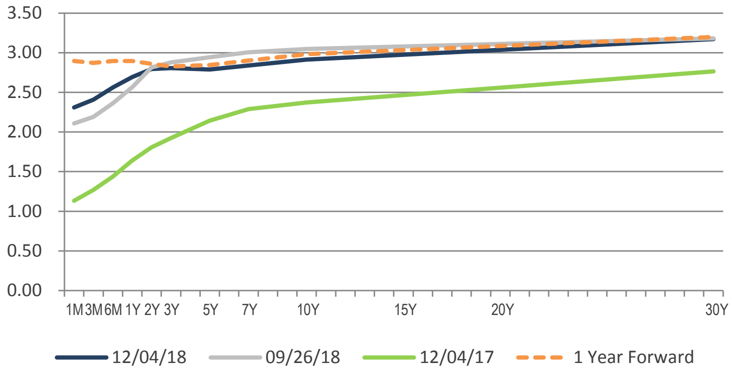
Market returns have disappointed thus far in 2018 as a combination of tighter monetary conditions and late credit cycle concerns have negatively impacted performance (Table 3). The fourth quarter has been a particularly volatile period for the markets as benchmark stock indexes have given back just about all of the gains accumulated during the year and short – intermediate Treasury rates have recently inverted. Somewhat unique to the recent market environment is that nearly all asset classes have been losing value. Bonds, stocks and many commodities have all been under pressure this year despite relatively strong U.S. economic performance. We anticipate volatility to continue for the next several quarters as we get a clearer direction for Fed monetary policy, trade policy, economic fundamentals and corporate earnings.

While interest rates have moved higher the past several years, most of the impact has been felt on the short end of the yield curve, leaving longer maturities relatively untouched (Graph 4). That started to change this year as a firmer tone to Fed Policy and inflation fears pushed intermediate and long term rates to their cyclical highs. While we may have reached the peak in long term interest rates, we believe that the fixed income market has become relatively attractive. We specifically like the combination of carry and quality of cash and short fixed income on a risk adjusted basis versus other sectors.

2010	2011	2012	2013	2014	2015	2016	2017	2018*
S&P 500 Stocks 15.06%	Taxable Municipal Bonds 20.91%	International Stocks 17.60%	S&P 500 Stocks 32.39%	Taxable Municipal Bonds 16.29%	S&P 500 Stocks 1.38%	High Yield Bonds BB 13.22%	International Stocks 27.41%	S&P 500 Stocks 5.11%
High Yield Bonds BB 14.93%	US Treasury Bonds 9.79%	S&P 500 Stocks 16.00%	International Stocks 15.59%	S&P 500 Stocks 13.69%	Taxable Municipal Bonds 0.93%	S&P 500 Stocks 11.96%	S&P 500 Stocks 21.83%	Portfolio Mix (0.30%)
International Stocks 12.98%	Inv Grade Corp Bonds 7.51%	High Yield Bonds BB 14.36%	Portfolio Mix 13.53%	Portfolio Mix 9.51%	US Treasury Bonds 0.83%	Portfolio Mix 8.02%	Portfolio Mix 14.53%	High Yield Bonds BB (1.09%)
Portfolio Mix 11.77%	High Yield Bonds BB 6.12%	Portfolio Mix 12.80%	High Yield Bonds BB 5.19%	Inv Grade Corp Bonds 7.51%	Portfolio Mix 0.09%	Inv Grade Corp Bonds 5.96%	Taxable Municipal Bonds 8.37%	US Treasury Bonds (1.39%)
Inv Grade Corp Bonds 9.52%	Portfolio Mix 4.67%	Taxable Municipal Bonds 11.08%	Inv Grade Corp Bonds (1.46%)	US Treasury Bonds 6.02%	Inv Grade Corp Bonds (0.63%)	Taxable Municipal Bonds 4.97%	High Yield Bonds BB 7.16%	Taxable Municipal Bonds (1.78%)
Taxable Municipal Bonds 7.31%	S&P 500 Stocks 2.11%	Inv Grade Corp Bonds 10.37%	US Treasury Bonds (3.35%)	High Yield Bonds BB 5.34%	High Yield Bonds BB (1.04%)	International Stocks 4.72%	Inv Grade Corp Bonds 6.48%	Inv Grade Corp Bonds (3.70%)
US Treasury Bonds 5.88%	International Stocks (14.25%)	US Treasury Bonds 2.16%	Taxable Municipal Bonds (5.42%)	International Stocks (3.39%)	International Stocks (4.29%)	US Treasury Bonds 1.14%	US Treasury Bonds 2.43%	International Stocks (10.49%)

Table 3. *Through 11/30/18. Portfolio Mix; 40% S&P 500 Index, 25% ICE BofAML US Corporate Index, 10% FTSE Global ex US All Cap Index, 10% ICE BofAML US Treasuries Index, 10% ICE BofAML Broad US Taxable Municipal Securities Index, 5% ICE BofAML BB US High Yield Index.

TREASURY CURVE



Graph 4. Source: Bloomberg, Prudent Man Advisors, Inc.

Real yields have turned positive this year and expected returns available on shorter duration assets are more predictable in the year ahead. PMA's LTD and VNAV ultra short pool offerings are particularly attractive right now as yields represent nearly 90% percent of longer Treasury yields with a fraction of the interest rate risk. That said, we do expect rate volatility to continue into 2019. The last few months have been a particularly wild period for longer Treasuries as divergent inflation and business cycle indicators have whipsawed the long end of the curve. Following a massive 50bps sell-off beginning earlier this fall, long bond yields largely retraced that correction with yields rapidly moving lower as investors recently flocked to the safety of U.S. Treasuries. The rally has been particularly interesting in its impact on the intermediate part of the curve and the inversion seen in the 3's / 5's curve (Graph 4). This experience is different from typical inversion scenarios as financing rates (e.g. Fed Funds / LIBOR etc.) generally move higher than short (e.g. 2yr) rates due to tighter monetary conditions. While there is no doubt that multiple factors are impacting the curve, including large Treasury supply and massive hedging flows, inversions persistently indicate a higher probability of recession. As recessions are an integral part of the business cycle, the curve indicates the timing for a potential recession two to five years from now, in line with our forecast.

It is important to remember that short term rates are based on Fed policy and adjoining economic activity. Long rates are generally impacted by changes in inflation expectations and required real rates of return. As discussed in our economic outlook, continued wage pressures should keep inflation around 2.25%, limiting long rates from materially rallying below current levels unless economic growth decelerates faster than the already modest economic expectations for 2019. Conversely, long term rates remain relatively capped from moving higher as U.S. rates are attractive versus other large developed economies. Despite the economic challenges ahead, as we have evidenced over the past several months, the United States remains the safe haven for global investors in need of principal preservation and liquidity when risk markets sell off. The US Treasury market is the largest bond market in the world and it boasts the highest overall yields versus alternatives. If volatility continues in the year ahead as predicted, risk off investment behavior will benefit U.S. Treasuries versus other sovereign debt or asset classes. It is important to remember that U.S. Treasuries increase in value when nothing else can.

We would not be surprised to see the front end of the yield curve further invert, especially if the Fed follows through with their policy estimates and the probability of a recession increases. 10-year Treasury yields were range bound during the last Fed tightening cycle from 2004-2006. Flatter curves have been the norm when the Fed increases policy rates. The 1-year forward curve is virtually flat as all rates meet at terminal Fed Funds expectations of around 3%. However, interest rate risk on the longer end of the yield curve presents a bigger challenge to our market forecast of expected returns. Assuming the long term U.S. real growth estimates of 1.75% with inflation maintained around 2 percent, a reasonable upper boundary for long bond yields of 3.75% seems appropriate. Therefore, while longer maturity Treasuries are not attractive on a risk adjusted basis versus shorter paper, we would be very surprised to see long bond yields move above this upper boundary without signs of significantly higher inflation. Our base case estimate calls for modestly higher rates and positive returns across most maturities (Table 4). As fiduciaries, we believe effective asset liability management is critical to long term financial health. If you have long-term liabilities, rest assured they will be valued lower along with your long-term assets should long rates move materially higher. Conversely, if rates move materially lower due to weaker economic growth or periodic flights to quality, you will be happy you locked in higher interest rates. Stay invested and stick to your plan.

U.S. Treasury Rates	Spot %	PMA Projected %
Fed Funds	2.20	2.90
3 Month LIBOR	2.77	3.20
1 Year	2.68	3.00
2 Year	2.74	3.00
5 Year	2.73	3.10
10 Year	2.86	3.20
30 Year	3.11	3.30

Table 4. Source: Bloomberg, Prudent Man Advisors, Inc.

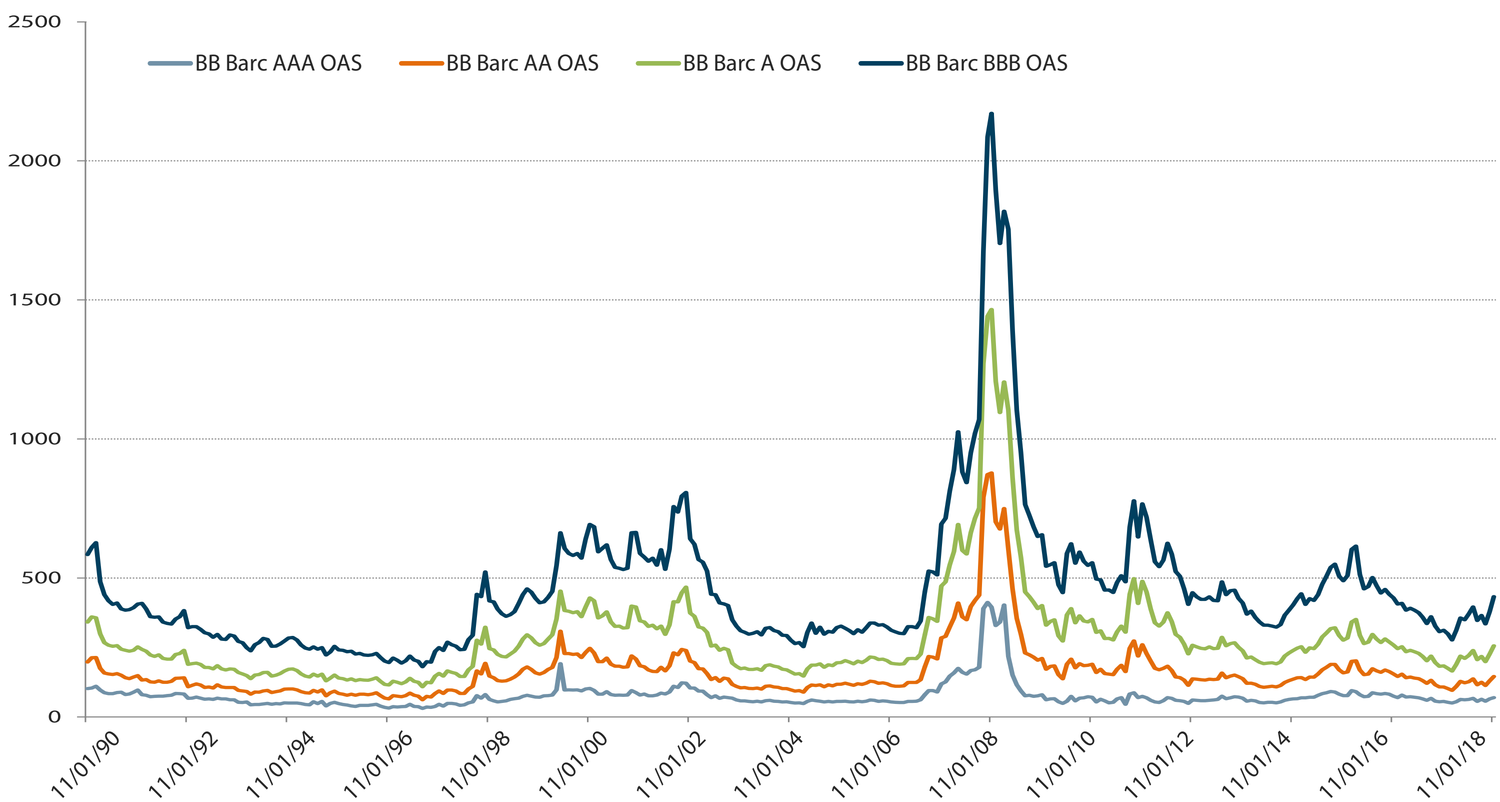
One area of the market that has been particularly hard hit recently has been the credit markets. This is important to our outlook as the credit markets have persistently been the lifeblood of the economy. Higher credit costs impact the real economy as consumers use credit extensively when they go shopping, buy cars or purchase a home. Higher credit costs impact the real economy as businesses use credit extensively when they purchase supplies, inventory and capital equipment. Businesses often extend credit to their customers so that they return to buy additional goods and services.

Higher credit costs also negatively impact consumer and business confidence, delaying consumption and investment, resulting in slower economic growth. Unfortunately, credit costs have soared over the past year due to a combination of higher interest rates and higher corporate spreads. Overall, corporate spreads are wider by 34bps year-to-date with lower rated credits and cyclical sectors under considerable pressure. Even short term (<= 3yrs) high quality credits are under significant pressure with the recent market volatility as spreads have widened nearly 20bps over the past month. Another concern for our research team has been the overall decline in supply of high quality investment grade paper, as the new issue market has been dominated by lower quality issuers comfortable with a more aggressive credit profile.

OPTION ADJUSTED SPREAD			
SECTOR	12/3/18	12/29/17	Change
Communication	159	136	23
Consumer Discretionary	134	90	44
Consumer Staples	113	81	32
Energy	160	119	40
Financial Sr	109	70	39
Financial Sub	182	131	51
Healthcare	114	87	27
Industrials	116	77	38
Materials	158	114	44
Technology	100	76	24
Utilities	128	95	33
All Sectors	126	92	34

Table 5. Source: Bloomberg, Prudent Man Advisors, Inc. 12/3/18.

While the wider spread environment makes credit more attractive for potential investment, mature credit cycle concerns could continue to pressure spreads wider into 2019. Higher debt levels are one cause for investor concern given the current relatively strong economic and earnings backdrop. Total debt has been increasing for consumers, corporations and the federal government over the past several years. As credit costs move materially higher, the negative feedback loop into the real economy could prove significant as earnings growth slows and economic growth decelerates. Higher leverage lowers borrower's financial flexibility and increases reliance on stable funding. This includes the U.S. and other sovereign borrowers whose debt levels are increasing. Should the credit cycle turn more bearish, certain issuers could experience greater liquidity stress and default levels could increase if access to the debt market becomes constrained. Leverage in U.S. nonfinancial corporate borrowers is at historically high levels, specifically in non-investment grade credits. In addition, investment grade nonfinancial corporates exhibit declining credit quality as corporate management has become more comfortable with higher leverage targets through ongoing M&A and share buyback priorities. The supposed benefits of cash repatriation have generally been spent on shareholder enhancement activity versus an opportunity to deleverage. As prudent investors and risk managers, we have seen this play out before, so caution continues to be warranted at this point in the credit cycle despite the fact that spreads have already widened close to historical averages (Graph 5). Ultimately, higher volatility in the credit markets will bring greater discipline to corporate board rooms, improving fundamentals and opportunity to the prudent investor in the years ahead.



Graph 5. Source: Bloomberg, Prudent Man Advisors, Inc.

In terms of relative value elsewhere in the bond markets, we prefer certain sectors of the agency mortgage and asset backed market. Better liquidity, lower supply and high credit quality are certainly an advantage at this point in the credit cycle, but we also like their relative spreads versus credit. Agency pass-through mortgages have come under pressure as the unwinding of quantitative easing and risk off sentiment has expanded across markets, pushing mortgage option-adjusted spreads wider along with spreads on other securitized product (Table 6). Agency guaranteed commercial mortgage-backed securities have also widened materially over the past few months. While we would expect this trend to continue until the future path of interest rates becomes clearer, we do like expected returns in short and intermediate agency securities where you are being compensated for the risk of wider swap and credit spreads. Certain areas of the asset backed sector are also attractive given strong asset protection, credit transparency and strong short term economic fundamentals.

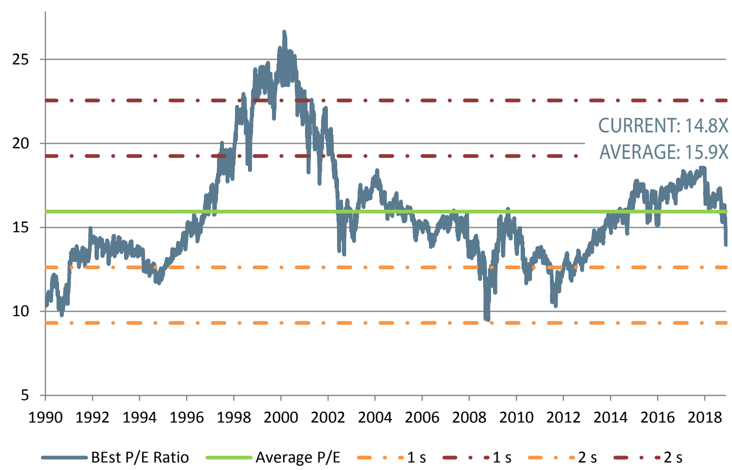
	BB Barc AAA OAS	BB Barc AA OAS	BB Barc A OAS	BB Barc BBB OAS
CURRENT	70	76	110	177
AVG	75	87	120	177
STD DEV	48	62	77	91
WIDE	412	483	588	705
LOW	31	31	47	72

Table 6. Source: JPM , Prudent Man Advisors, Inc.

The taxable municipal market remains relatively overvalued and new issue and secondary spreads have not widened in sympathy with other fixed income sectors. New issues are priced at extremely tight levels and are oftentimes structured with unattractive dollar prices and call features. Bid side markets are materially wider should an investor need to sell securities if a bid exists at all. While credit quality has improved over the past several years, credit concerns will likely re-emerge should the economy decelerate as we expect in the next several years. The risk return trade-off does not fairly compensate investors currently so we emphasize highest quality and short-term maturities when we selectively participate in that sector.

Improving corporate earnings have provided a stabilizing force for the economic expansion thus far. Corporate profits have increased significantly over the past year although earnings are expected to decelerate in the year ahead. As concerns about the global economy have recently pushed stock prices materially lower, valuations have become much more attractive (Graph 6). Forward equity multiples are below historical averages and sales and earnings growth are expected to remain positive across most sectors in 2019 (Table 7). U.S. and global stocks are 12% and 22% below their respective annual peaks. While volatility could continue to negatively impact the equity markets, the risk/return tradeoff is decidedly more balanced than it has been the past year. PMA's base case expectation for domestic equity returns in the next year is 7.0%, albeit with a wide range of potential returns.

FORWARD S&P PRICE TO EARNINGS RATIO



Graph 6. Source: Bloomberg, Prudent Man Advisors, Inc.

NAME	EPS-A	EPS CHG	SALES CHG
S&P 500	164	9%	5%
S&P 500 TECH INDEX	70	9%	5%
S&P 500 HEALTH CARE IDX	63	7%	6%
S&P 500 CONS DISCRET IDX	41	10%	5%
S&P 500 INDUSTRIALS IDX	36	12%	5%
S&P 500 FINANCIALS IDX	35	10%	3%
S&P 500 ENERGY INDEX	29	21%	8%
S&P 500 CONS STAPLES IDX	30	6%	3%
S&P 500 MATERIALS INDEX	22	5%	3%
S&P 500 UTILITIES INDEX	16	5%	3%
S&P 500 COMM SVC	9	5%	8%
S&P 500 REAL ESTATE IDX	6	-11%	4%

Table 7. Source: Bloomberg, Prudent Man Advisors, Inc.

PMA
PRUDENT MAN ADVISORS

Integrity. Commitment. Performance.™

JOHN H. HUBER, CFA

Senior Vice President, Chief Investment Officer
Prudent Man Advisors, Inc.

Tel: 630.657.6510
Email: jhuber@pmanetwork.com