Christian Brothers Investment Services

MARKET PERSPECTIVE 3Q 2018

A Look Back:

The 2008 Financial Crisis and Implications Today

Catholic Responsible Investing

CAPITAL MARKETS REVIEW

In 2008, we witnessed the beginning of the largest financial recession since the Great Depression. To mitigate the crisis, the Fed began unprecedented liquidity programs in the United States to stimulate the economy that far exceeded any long-term expectations at the time. While the Fed is stimulating the U.S. equity market less than it has since the Financial Crisis, those programs remain well intact, which begs the question—what is the end game for stimulus policy, and can we expect a return to higher real growth rates?

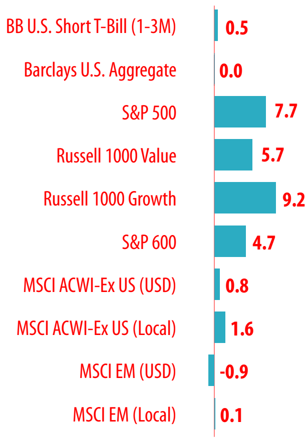
MARKET MUSINGS

2008 saw the start of unprecedented liquidity programs in the United States to stimulate the economy. 10 years later, what is the end game for those unconventional policies?

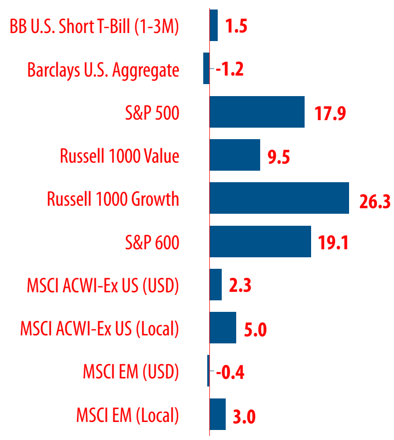
Capital Markets Review

I. GLOBAL OVERVIEW

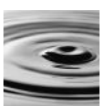
Market Performance: 3 Month



Market Performance: 12 Month

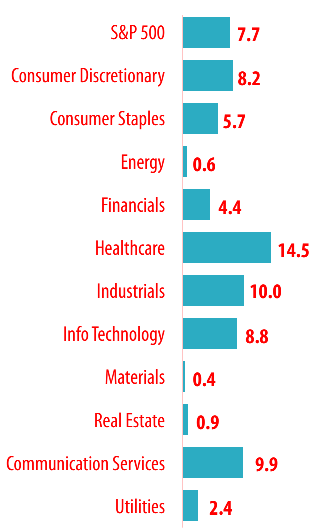


- U.S. equity markets remained resilient over the third quarter despite increased trade tensions and higher interest rates.
- The dichotomy between the stimulative effects of tax cuts on the U.S. economy and the negative consequences of trade policy—particularly on peripheral emerging economies—continues to grow.
- Value stocks continued to underperform during the quarter and year, extending one of the longest periods of such divergence.
- U.S. Fixed Income returns have been dominated by negative price returns given low levels of coupon income and increase in yields.

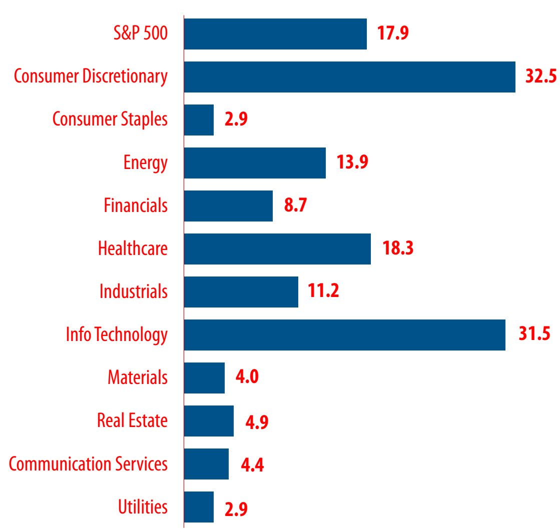


II. U.S. EQUITY MARKETS

Market Performance: 3 Month



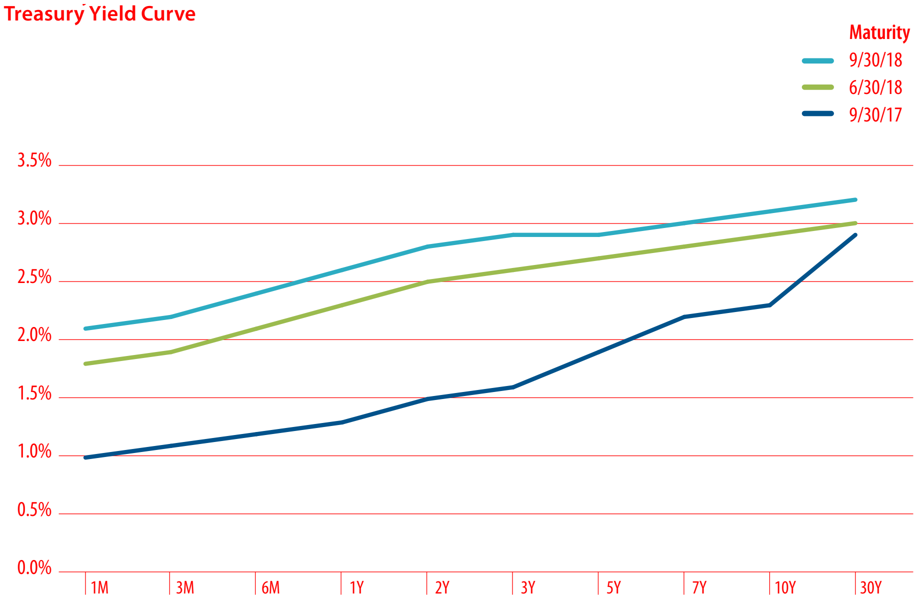
Market Performance: 12 Month



- Healthcare was the strongest sector for the quarter, due to strong quarterly earnings and a rebound from depressed valuations.
- Real estate and utilities lagged as interest rates increased and energy stabilized along with oil prices.
- Information Technology and Consumer Discretionary sectors drove market performance over the last year (FAANG).

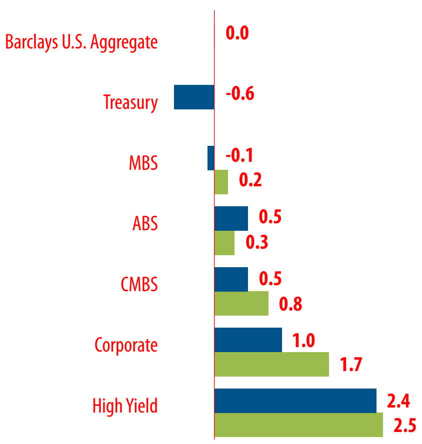
III. FIXED INCOME MARKETS

Treasury Yield Curve

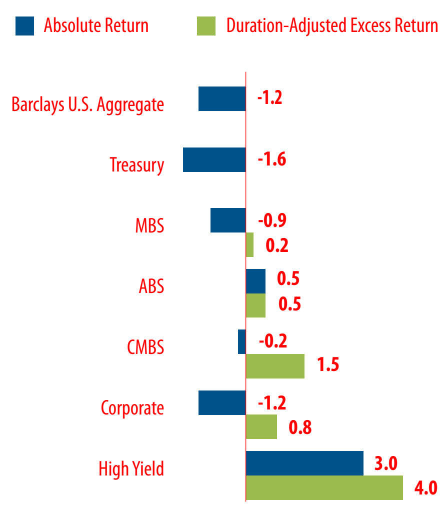


- The Federal Reserve increased the targeted Fed Funds rate by 25 basis points to 2.00%-2.25% at its September meeting. If the Fed follows through with its planned rate increases during 2019, the Fed Funds Rate will end up a full point higher at 3.00%-3.25%.
- The yield curve shifted in parallel during the quarter, but some analysts are concerned about a curve inversion.
- Over the last 12 months, the U.S. Treasury yield curve flattening continued. The short end increased, with 1-3 year maturities having the largest move. There was relatively little change on long end of the curve.

Market Performance: 3 Month



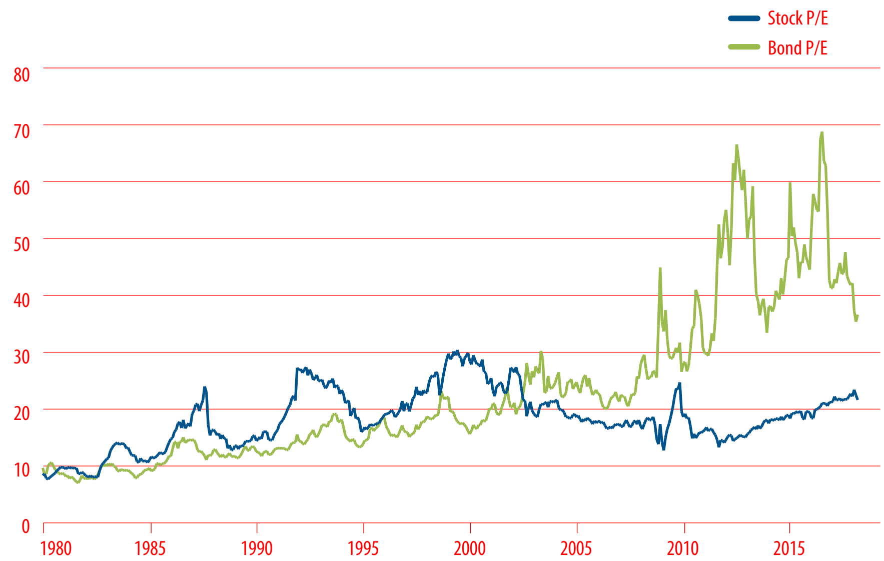
Market Performance: 12 Month



Corporate returns stabilized this quarter after underperforming earlier this year.

- Excess returns for other sectors were modestly positive for the quarter.
- Over the last 12 months, high yield generated significant excess returns due to higher coupon rates, followed by Commercial Mortgage securities.
- Mortgages were breakeven due to higher interest rate volatility.

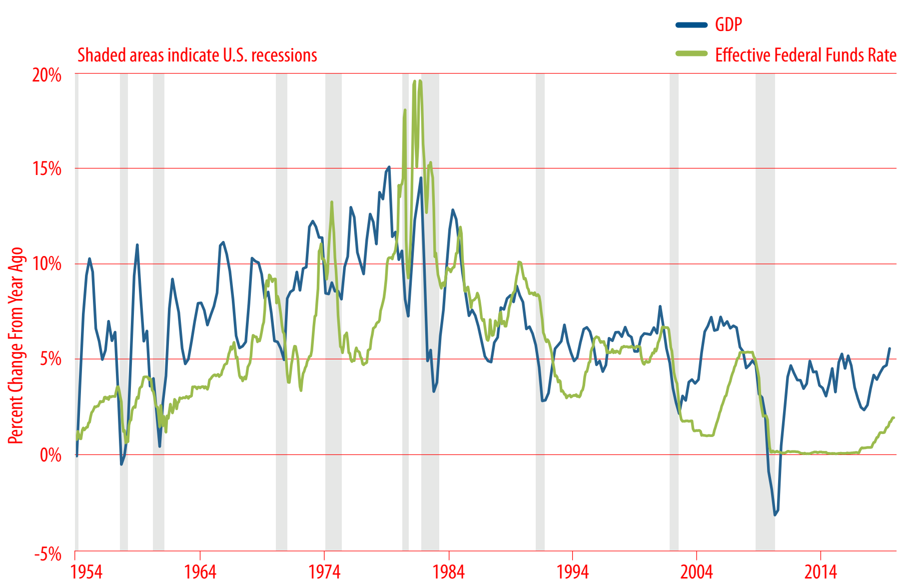
IV. BOND AND EQUITY P/E



Source: Bloomberg, U.S. Department of the Treasury as of 3/31/2018; www.bloomberg.com, www. treasury.gov

- Interest rates have started normalizing, though bond valuations are still high relative to equity valuations.
- What is the end game for the unconventional policies resulting from the Global Financial Crisis of 2008?

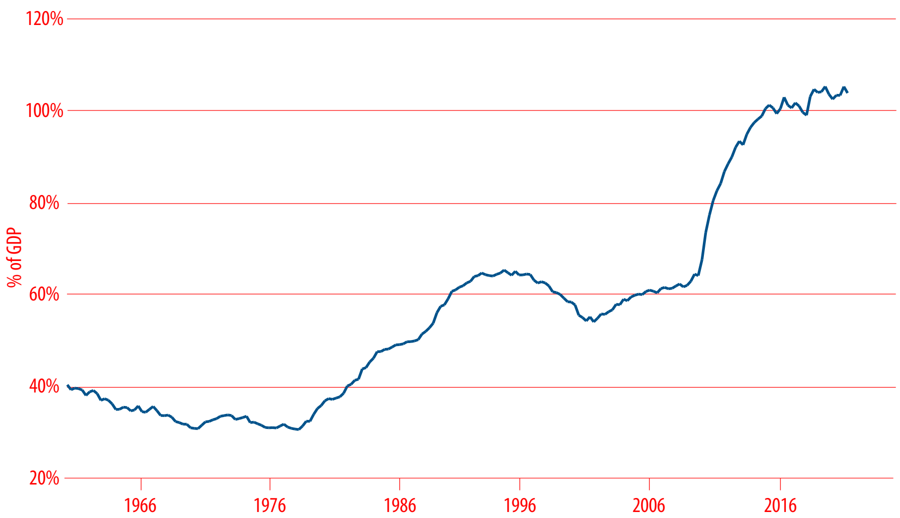
V. EFFECTIVE FEDERAL FUND RATE



Source: Bureau of Economic Analysis and the Board of Governors of the Federal Reserve System via the Federal Reserve Bank of St. Louis as of 9/30/2018; myf.red/g/lms8

- The Federal Funds Rate tends to follow nominal GDP.
- When the Federal Funds Rate is below nominal GDP, the economy tends to improve.
- When the Federal Funds Rate is above nominal GDP, risk of recession increases.
- Currently, the Federal Funds Rate remains stimulative.

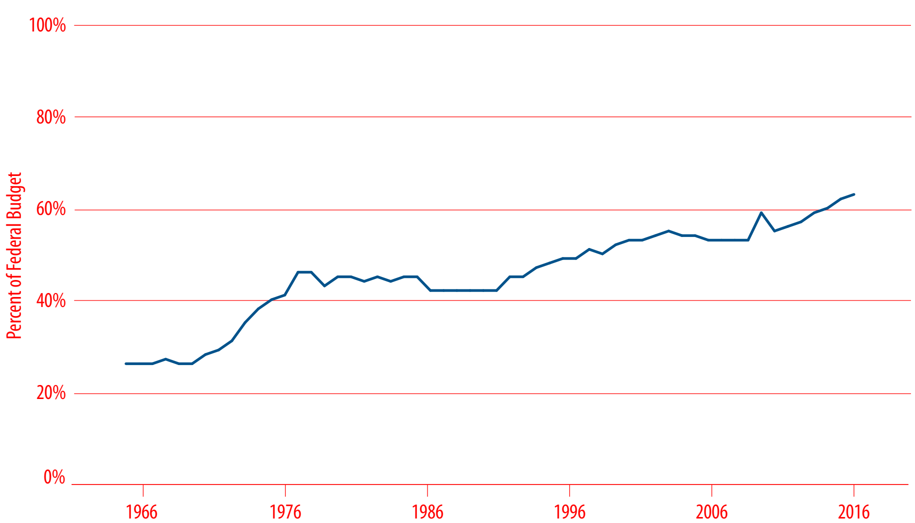
VI. PUBLIC DEBT



Source: Federal Reserve Bank of St. Louis as of 6/30/2018; myf.red/g/lqRD

- During and after the Global Financial Crisis, debt was transferred from private sector to public sector.
- Private debt can be restructured through various legal processes. Public debt, particularly developed national governments, have little option to restructure other than devaluation.

VII. MANDATORY SPENDING IN FEDERAL BUDGET



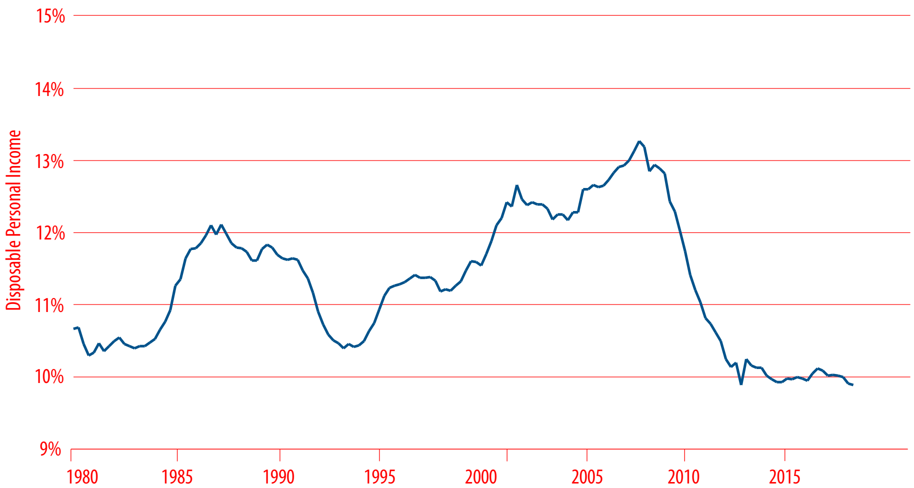
Source: U.S. Office of Management and Budget, Budget of the United States of America Fiscal year 2017; http://www.whitehouse.gov/omb/budget/Historicals/ (accessed October 9, 2018)

- Mandatory spending in the U.S. has continued to consume a growing share of the U.S. budget.

Ability to invest is constrained, dampening the ability to generate significant productivity enhancements in the future.

VIII. CONSUMER FINANCES

Debt payments as % of disposable personal income



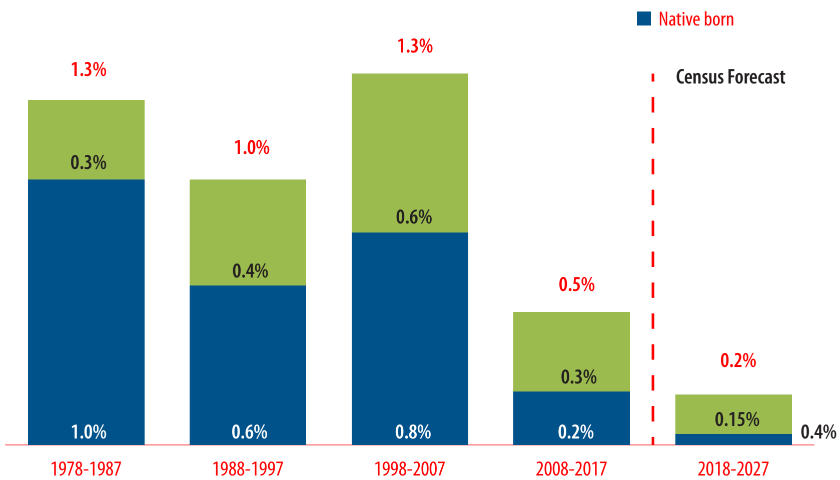
Source: Board of Governors of the Federal Reserve System via Federal Reserve Bank of St. Louis as of 9/30/2018; https://fred.stlouisfed.org/series/TDSP

- Unlike public budgets, the U.S. consumer is in strong financial position.
- This sets the stage for continued economic growth.

IX. LONG-TERM DRIVERS OF ECONOMIC GROWTH

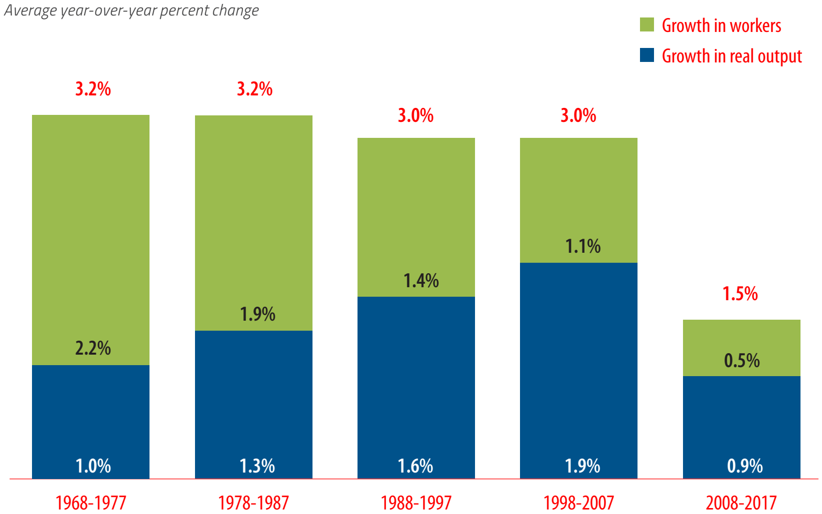
Growth in Working-Age Population

Percent increase in civilian non-institutional population ages 16-64



Drivers of GDP Growth

Average year-over-year percent change



Source: J.P. Morgan Asset Management Guide to the Markets as of 9/30/2018

Growth in workers
+ Growth in real output per worker
Growth in real GDP

- Economic growth is driven by growth in labor force plus increases in labor productivity.

Both of these factors are depressed, limiting future economic growth rates, barring any significant changes.

- Coupled with lack of investment in infrastructure, technology, education, healthcare, etc., the prospect for productivity enhancements is weak.

Market Musings

September 2008. It is hard to believe it was only 10 years ago that we witnessed the beginning of the largest financial recession since the Great Depression. The excesses created within the housing market, driven by accommodative Fed policy, desire for earnings growth at FNMA and FHLMC, and yes, government policies, became too large for the financial system to bear. One typically remembers this period as the month Lehman Brothers filed for bankruptcy, yet this was only one event that transpired to create the Global Financial Crisis.

FNMA and FHLMC, two of the largest publicly traded government sponsored enterprises, with support from Congress and the Federal Reserve, relaxed underwriting standards and became more involved in sub-prime mortgage underwriting to maintain their historical earnings growth rates. Recall, these two entities were involved in over 90% of all mortgage originations in the United States. As housing prices declined—or more to the point, stopped appreciating—these mortgages became impaired, threatening the solvency of these two entities. On September 7, both FNMA and FHLMC were moved into U.S. government conservatorship.

The bedrock of the modern financial system began to crumble. Credit created outside of the regulated banking system evaporated, putting pressure on Lehman's balance sheet—which looked very similar to that of FNMA and FHLMC, as well as other non-regulated mortgage hedge funds. Lehman filed for bankruptcy, the Reserve Primary Money Fund "broke the buck", and fearing larger contagion within the money market sector and the solvency of other larger investment banks, the government took control of AIG. Short-term markets were frozen, prompting the Federal Reserve to provide temporary liquidity support and the Treasury to create various programs to support the viability of the financial system.

I recount these developments on the 10-year anniversary to put into perspective current policy and how it will drive future market performance. I have no doubt economic historians will debate whether the actions of the Treasury and Federal Reserve were excessive, adequate, or lacking. What we do know is that an investor who purchased a global equity portfolio on August 31, 2008, immediately before the beginning of the crisis, has realized a 7.3% annualized return through the end of September 2018. Given the unprecedented liquidity programs in the United States, an investor in U.S. equities realized an annualized return of 10.8% over the same period, far exceeding any long-term expectations at the time.

> While interest rates are far from restrictive in the U.S., the Fed has not yet put its foot on the brakes – it has simply let up on the accelerator.

Despite the recent increases in the Federal Funds rate, the stimulation supporting the economy and markets remains well intact. Chart V shows the relationship between the Fed Funds rate and nominal GDP. One can think of the Fed Funds rate as the cost of capital and nominal GDP as the return on capital for the economy. When the cost of capital is lower than the return on capital, there is an incentive to borrow and invest in the economy—a stimulative force that remains intact today. When the cost of capital exceeds the return on capital the reverse is true, and a recession typically follows. One can see this relationship in the graph: there is a direct correlation between the Fed Funds rate and nominal GDP. Utilizing this metric, the Fed Funds rate today is far from restrictive.

When one compares the valuation of equities versus bonds, one also sees that equities remain attractive relative to bonds despite the rise in yields we have witnessed (chart IV) .

While interest rates are far from restrictive in the U.S., the Fed has not yet put its foot on the brakes—it has simply let up on the accelerator. But at the margin, the Fed is stimulating the U.S. equity market less than it has since the Global Financial Crisis. As a result, when we compare valuations across the world, it appears that the performance differential between U.S. equities and non-U.S. equities has room to narrow.

Despite the stimulative impact of tax reform on the U.S. economy, improving labor market conditions and continuing monetary stimulation, there are structural headwinds in the economy that may distort the interest rate dynamics mentioned above. Interest rates may not reach levels supported by historical relationships due to three economic headwinds:

1. Labor supply and productivity growth;
2. Level of mandatory spending in U.S. budget; and
3. Level of U.S. debt to GDP.

I want to revisit the growth rate of the labor force and productivity in the U.S., because those factors are critical to the long-term growth rate of any country. As seen in charts IX, the growth of the U.S. labor force has declined dramatically, along with a decline in the productivity growth rate. Taken together, the outlook for a return to higher real growth rates is diminished.

The Federal Reserve has borne the burden of stimulus the past ten years, notwithstanding the tax cuts earlier this year. It is no surprise this has been the case, and it will be difficult to see fiscal policy being anything but on the restrictive side of the scale in the years ahead. Discretionary spending has been crowded out due to the level of mandatory spending, reducing investments for future growth.

These two dynamics presage a continuation of "sub-par" growth and lower interest rates. However, we witnessed a transfer of debt from the private sector to the public sector during the Global Financial Crisis. The private sector has the ability to restructure excessive debt. The public sector, particularly in large developed countries, does not have this direct ability. Governments faced with excessive debt must devalue through a combination of currency devaluation and inflation.

I believe investors in the long end of the yield curve are currently betting on the former: the yield curve is flat, not because the market is forecasting a recession, but rather forecasting that interest rates will level at a lower level. Whereas historical norms would suggest short- and long-term interest rates in the 5% range, the structural growth headwinds facing the U.S. (and other developed economies) may just keep interest rates lower (3%-4%) for longer.

Unfortunately, I am not convinced the "bond vigilantes" of the late '80s and early '90s have disappeared. At some point, if the U.S. cannot significantly increase real growth, the increasing level of debt to GDP will result in higher borrowing costs for the U.S. Government.

All of this leaves us with the nagging question: what is the end game for the unconventional policies resulting from the Global Financial Crisis of 2008?

John W. Geissinger, CFA
CIO, CBIS

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