WILMINGTON TRUST

September | 2019

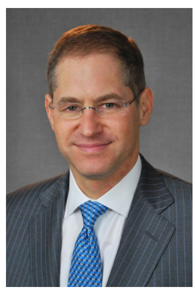
Capital Perspectives

Monthly investment analysis and insights from Wilmington Trust Investment Advisors

ON THE RECORD

As the Economy Ages
Trade, turbulence, and Treasuries

In this issue:



Tony Roth
Chief Investment Officer

When I last wrote in early July, I described our neutral positioning to risk assets as appropriate until some of the risks to the outlook became clearer. Two months on, there has been what feels like a year's worth of events, but no more clarity. To make matters worse, there have been important developments during the heaviest vacation part of the year, when it's hardest to keep track, so a roundup of the most important items is helpful.

On the two major macro drivers, the U.S.–China trade dispute and the Federal Reserve, the former has deteriorated while the latter has moved in the direction of supporting the expansion and markets. Across the pond, Brexit possibilities seem to have increased in likelihood under the new prime minister, Boris Johnson. Another possible monkey wrench for markets, a possible default on U.S. government debt, was thankfully dealt with well ahead of any serious deadlines. While that is encouraging for the short term, there are long-term implications that we discuss in this month's "In Focus" piece. All taken together, we see no compelling reason to deviate from our neutral stance that we established back in May.

What's been going on?

Earnings. With all of the focus on macro events it is possible sometimes to lose sight of how companies are actually performing. Since last I wrote, second quarter earnings season has largely concluded, with the results coming in close to expectations. Roughly 75% of S&P 500 companies were able to beat (admittedly low) expectations for earnings, but earnings declined -0.4%, the first time earnings

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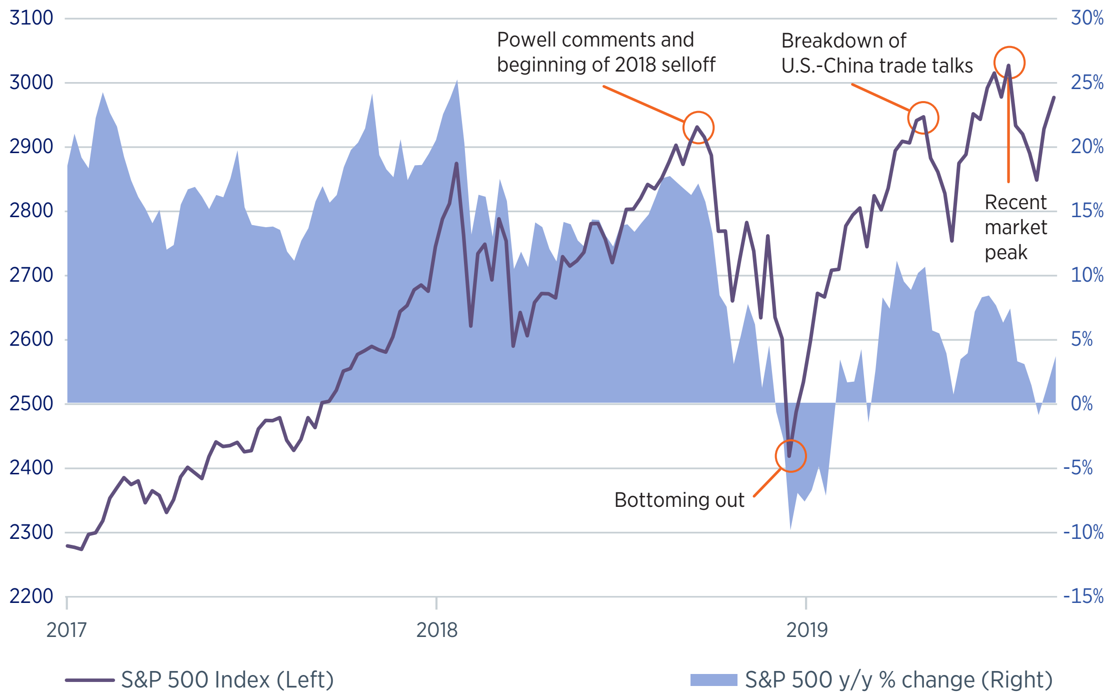
Figure 1

U.S. Large-Cap Equities struggle as U.S. China trade tensions increase

S&P 500 Index



Data as of September 5, 2019.

Source: Macrobond

Indexes are not available for direct investment. Investment in a security or strategy designed to replicate the performance of an index will incur expenses such as management fees and transaction costs which would reduce returns.

We have long argued that the economy is showing signs of being in the "late stage" of the cycle, but also that it can go on for quite some time if allowed to do so.

for the S&P 500 have contracted for two quarters in a row since 2016. Some of the weakness was expected thanks to the very challenging comparison to 2Q 2018, when companies were riding high on a new tax cut. On top of that, the trade war and global slowdown has pulled the manufacturing sector into decline, both domestically and globally. The real concern is whether an intensifying trade war will hurt the U.S. consumer and service providers which so far have held up well and can even be said to have kept recession at bay.

Equities. Large-cap equities have struggled, declining over the past two months as trade tensions escalated and the economic data have been mixed. Nonetheless we believe there is more room for this market to run. After posting year-over-year gains averaging 16% through 2017 and most of 2018, the selloff from last year and more recent struggles have pulled y/y gains into the low-single digits. We have long argued that the economy is showing signs of being in the "late stage" of the cycle, but also that it can go on for quite some time if allowed to do so. Equity performance—shown in Figure 1 over recent years— tends to be quite strong in the late stages and we believe there are still gains to be made so long as the cycle isn't interrupted by trade policy or some other shock, as discussed later on.

Fixed income. Arguably the biggest news in markets came from Treasuries, where the inverted yield curve led to fears of an impending recession. An "inversion" of the yield curve simply means the yield on a long-term interest rate is lower than the yield on a short-term rate, which defies logic to some degree and is widely viewed as signaling a problem. The most watched relationship is the 10–2, or the difference

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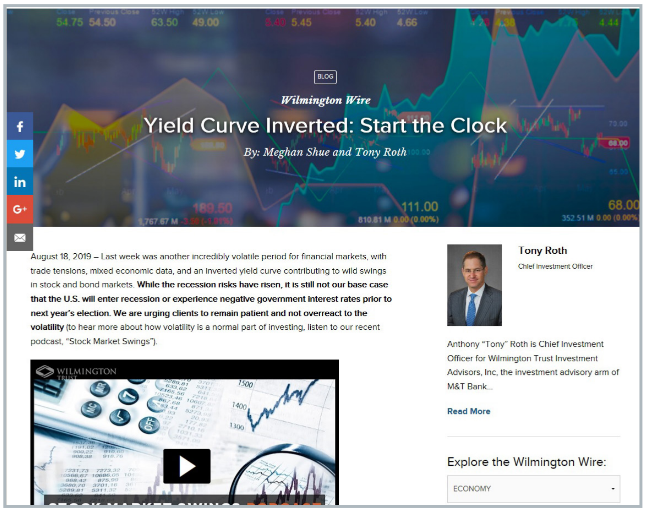

between the 10-year and 2-year Treasury yields, which inverted for the first time in this cycle in mid-August and then again later in the month. This phenomenon causes angst because an inversion of the 10–2 has occurred before each of the last five recessions. This current inversion is chiefly coming from a sharp decline of roughly 50 basis points (0.50%) in the 10-year yield, from hovering above 2% for most of June and July until a sharp collapse at the start of August brought it down to 1.5%. We interpret this as the bond market souring on economic growth and inflation, and expect the Fed to reduce rates further as a result. As we explained in a Wilmington Wire post and on a recent special Conference Call, the inversion definitely increases the risk of a recession, but there are important lags to keep in mind, as well as key differences between this cycle and previous ones. We don't want to fall into the perilous trap of saying "this time is different." It is more accurate to say that "every time is different," and it is not prudent in our view to simply sell because this one indicator is flashing red.

We don't want to fall into the perilous trap of saying "this time is different." It is more accurate to say that "every time is different," and it is not prudent in our view to simply sell because this one indicator is flashing red.

Trade getting worse while the Fed is getting better

Of the two macro drivers and risks, the Fed has clearly moved in the direction of being more supportive of markets over the past two months, while the U.S.–China trade dispute has gotten decidedly worse. After hiking rates nine times (in increments of 0.25% each time) starting in late 2015 and looking like there were several more to come, the Fed tacked more dovish over the first half this year, and has now started moving in the other direction. The Fed cut its target interest rate by 25 basis points to a range of 2.0%–2.25% on July 31, the first time the central bank has lowered rates since the peak of the financial crisis more than 10 years ago.

Chair Powell and other members of the committee indicated at the time that investors should not necessarily expect further rate cuts, but financial market indicators are pushing ever harder in that direction. The domestic economic data have been mixed. On the positive side, job growth has slowed but not collapsed, and consumer spending bounced back encouragingly over the past two months. However, the overall business sector remains weak in terms of capex, with manufacturers continuing to bear the brunt of the slowdown. While the domestic economy is a bit of a toss-up, it is the global economy—Germany appears to be tipping into recession and there are few large economies to crow about right now—and the threat of further tariffs that are likely to have the Fed reducing rates again later this month.

The U.S.–China trade conflict has only intensified in recent weeks. President Trump kicked off the month of August announcing a 10% increased tariff on the roughly $300 billion set of goods that heretofore had not yet been touched. Importantly, these goods fall largely on consumer items compared to the earlier tariffs which fell predominantly on intermediate goods and supplies. We have warned for more than

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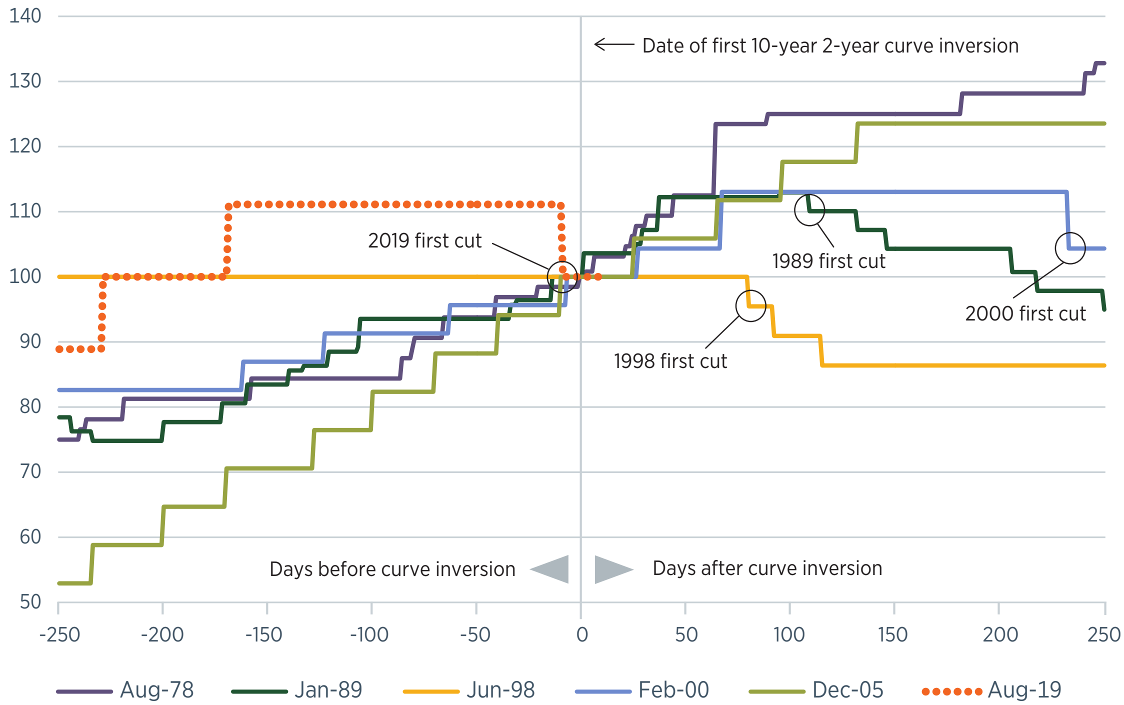
Figure 2

The Fed is ahead of the curve compared to past cycles, cutting rates before the 10-2 inversion

U.S. policy rates indexed to 100 relative to the first yield curve inversion



Data as of August 19, 2019

Sources: Macrobond

While the domestic economy is a bit of a toss-up, it is the global economy—Germany appears to be tipping into recession and there are few large economies to crow about right now—and the threat of further tariffs that are likely to have the Fed reducing rates again soon.

a year about the negative impacts on the U.S. economy should the tit-for-tat brinksmanship get this far, possibly pushing it into recession. Similar analysis seems to have made its way to the Oval Office, as two weeks later the president announced a delay to December 15 "just in case some of the tariffs would have an impact on U.S. customers." This appears to us the first time the president has said publicly that his tariffs could have any negative impact on the U.S. The delay did not stop the Chinese authorities from announcing counter tariffs on $75 billion of U.S. goods, which then elicited a further tariff increase from President Trump (tariffs on $250 billion of imports from China bumped from 25% to 30% and the remaining $300 billion increased from 10% to 15%). The most recent developments came at the G7 meetings in France, where Trump said the Chinese negotiators approached the U.S. to restart talks, but the details are murky.

Stepping back from the details, we think neither the broader movements in markets nor the progression of the Fed or tariffs merits a change to portfolios at this time. In May, we moved to a neutral weight on equities when it became clear that the trade negotiations had gone off the rails and the Fed's path was unclear. Since then the Fed has become more accommodative, but the risks from the trade war have become more fraught, and the market has signaled increased recession risk with the inversion of the 10-2 yields. One positive for markets is the Fed is more ahead of the game than it has been in the past, cutting rates before the inversion of the curve when in the past it's been more reactionary (Figure 2). But we are careful not to get too sanguine as we doubt any amount of Fed rate cuts could outweigh the damage

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that would come from increased rounds of tariff escalation. While that may seem an argument to get defensive, we are keenly aware that the president could change tack at any moment (and with a single tweet). His delay on the new tariffs is the first indication he knows they could hurt the economy, something he is likely to try and avoid entering his reelection bid. Any quick reversal of the tariffs in place, whether from a true trade deal or just a return to the pre-trade war status quo, would in our view send markets higher.

As always, we are diligently watching the economy and markets and stand ready to make adjustments, should circumstances warrant.

Until next month,

Tony

Tony

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Should You Lose Sleep Over Rising U.S. Debt Levels?

Rhea Thomas
Economist

At a glance:

- **High national debt levels are troubling as they may lead to: investor demand for higher interest payments, due to concerns about the government's ability to repay its debts; worries about a debt spiral (in the most extreme cases); and concerns that the government may be left with less "fiscal space" to react to economic downturns**
- **Some argue higher debt levels aren't worrisome for reasons that include: the U.S. dollar's unique reserve currency status; and structural factors, such as demographics and technological advances, suggest longer-term downward pressure on interest rates**
- **We remain vigilant about rising debt levels and remain concerned about the dynamics of high debt levels on longer-term growth**

Though Congress sidestepped another potential market landmine by coming to an agreement to raise the debt ceiling with the Bipartisan Budget Act of 2019 in late July, this does little to help solve the ongoing issue presented by the country's burgeoning federal debt levels, and in fact exacerbates it. The nonpartisan Congressional Budget Office (CBO) estimates that the agreement would raise the cumulative deficit over the next 10 years by an additional $1.7 trillion, though much of this increase is offset by a reduction in projected net interest costs (of $1.4 trillion) driven by lower estimates for the future path of interest rates. Along with other updates to budget projections as a result of other legislative and economic changes, the CBO now projects that the budget deficit will reach $1 trillion by 2020, two years earlier than originally expected, as of its last estimate in May. Federal debt held by the public is now at is highest in history outside of the period just after World War II, at 79% of GDP (Figure 1; also, see page 11, "The ABCs (and Ds) of debt and deficits").

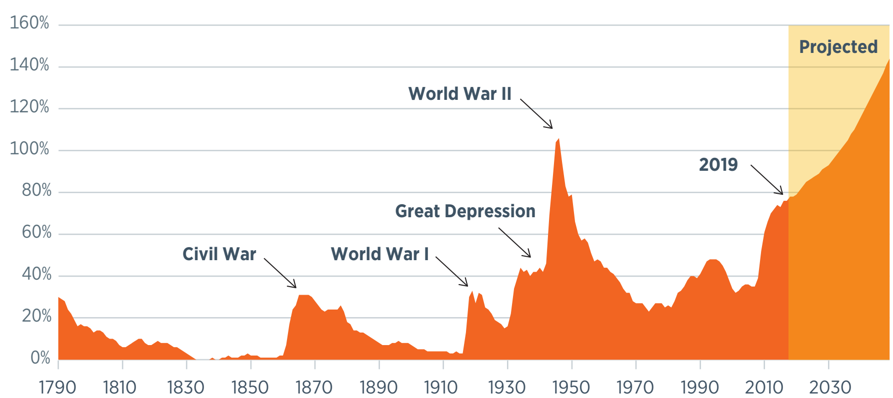
Views vary widely about whether investors should rest easy, or lose sleep worrying about current debt levels. In our view, the U.S. dollar's role as the world's primary reserve currency will likely keep the risk of a near-term fiscal crisis at bay. However, in the longer run, without a change in trajectory, we believe the dynamics of higher debt levels, particularly given demographic factors, bode poorly for long term growth. In other words, sleeping with one eye open may be the best approach.

U.S. government debt levels continue to climb: Reason to worry?

The CBO projects the budget deficit will rise to $960 billion in 2019 (up from $832 billion in 2018) and average $1.2 trillion per year over the next 10 years. The budget deficit in 2019 would be 4.5% of GDP (up from 4.1% of GDP in 2018); this is

Figure 1

Federal debt held by the public is at its highest in history outside of the post-World War II period (% of GDP)



Data as of June 25, 2019. Source: Congressional Budget Office.

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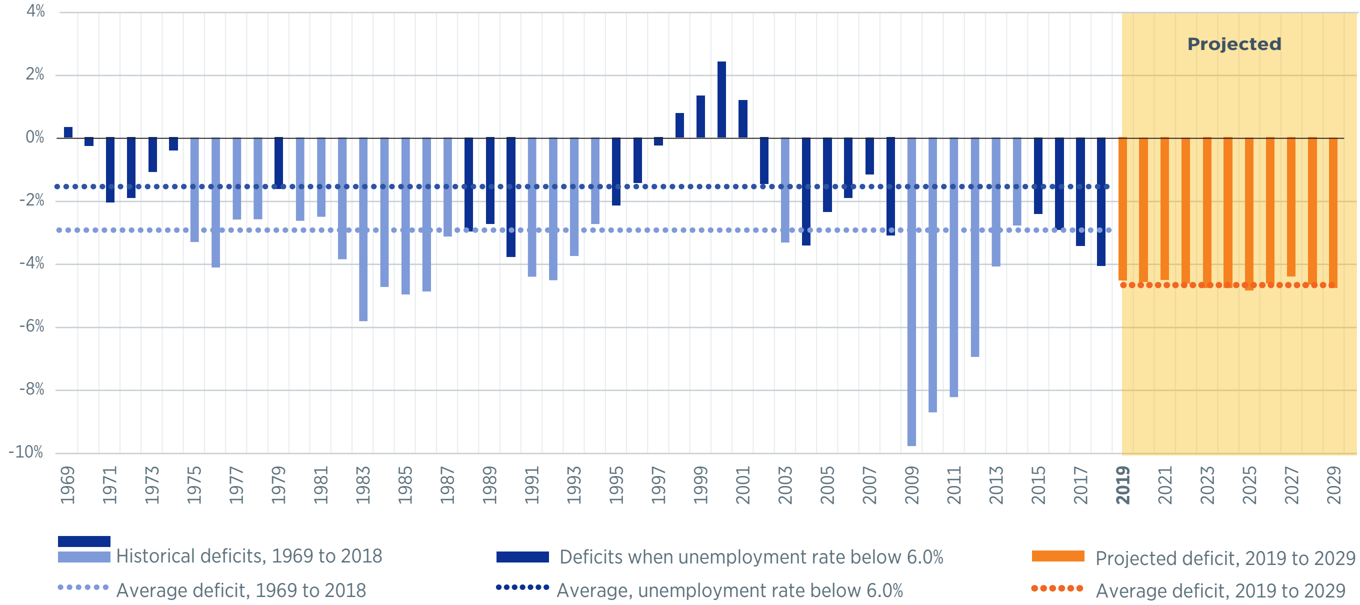
Figure 2

Current budget deficit as percent of GDP is significantly higher than the historical average, particularly for a period of low unemployment (% of GDP)



Data as of August 21, 2019. Source: Congressional Budget Office.

However, in the longer run, without a change in trajectory, we believe the dynamics of higher debt levels, particularly given demographic factors, bode poorly for long term growth. In other words, sleeping with one eye open may be the best approach.

compared to an average of just 2.9% of GDP over the past 50 years. Debt held by the public has grown substantially since the Great Recession, more than tripling in level terms, to $16.7 trillion in 2019 from $4.9 trillion in 2007, and growing by more than double as a percentage of GDP, to 79% in 2019 from 35% in 2007.[1] Looking ahead, the CBO's projections[2] are even bleaker—debt held by the public is forecasted to reach 95% of GDP by 2029, and its longer-term projections show that debt held by the public will reach record levels by 2037. Should these eye popping statistics keep you up at night?

High levels of debt tend to raise concerns about the future health of an economy for a number of reasons:

- **As debt levels grow, investors may demand rising rates of interest due to concerns about the government's ability to repay these heavier debt loads in the future.** These higher interest rates for government-issued debt would draw investment away from (or "crowd out") private investment. A higher proportion of government spending would also be allocated to higher interest payments on debt, and away from more productive uses, such as education, infrastructure, and research. This would dampen productivity and lower long-run growth. Countries with high debt-to-GDP ratios tend to be associated with lower long-term growth. Japan and Italy, with gross debt-to-GDP ratios of roughly 240% and 130% respectively, come to mind.

- **In the most severe cases of debt buildup, rising interest rates could lead to a "debt spiral."** In this scenario, investors demand ever-higher rates of interest to

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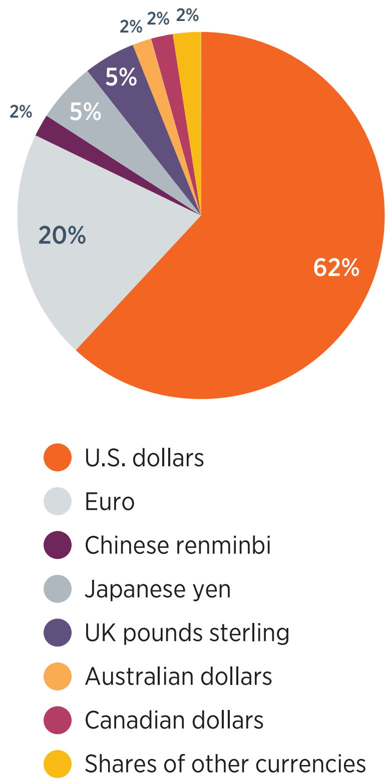
Figure 3

U.S. dollar remains the world's primary reserve currency

Share of official foreign exchange reserves



Data as of March 31, 2019.

Source: Currency Composition of Official Foreign Exchange Reserves, International Financial Statistics.

compensate for the risk of potential default, making debt payments so onerous that governments attempt to calm investors and lower bond yields by cutting spending or raising taxes to ease these concerns. But these measures would then weigh on economic growth, further exacerbating the problem, triggering eventual partial or full default on debt. The current situation in Venezuela and the Greek debt crisis in the years following the Great Recession are examples of the dangers of a debt spiral.

- **Persistently higher levels of debt spur worries that governments will have less "fiscal space" to react to economic downturns or recessions because government finances are already stretched.** The current situation is notable because deficits have deteriorated during a period of economic strength, due in large part to the impacts of 2018 tax reform and the Bipartisan Budget Act of 2019. The budget deficit increased to –4.5% of GDP as of 2019 (from –2.4% of GDP in 2015, where it last stabilized post-recession). The budget deficit is now higher than the average deficit over the past 50 years (–2.9%), and even higher relative to the –1.5% of GDP on average during periods where the unemployment rate was below 6%[3] (Figure 2).

Or is it, as some argue, much ado about little?

In practice, despite growing levels of debt, the U.S. has not yet faced a fiscal crisis, and there are a number of arguments that suggest higher levels of U.S. government debt can be taken in stride:

- **Central banks around the world currently hold 62% of their $10.9 trillion of foreign currency reserves in U.S. dollars as of 1Q 2019, giving the U.S. dollar its unique status as the primary reserve currency of major central banks.** (Figure 3). Foreign currency reserves are typically invested by central banks in liquid, low-risk, investable markets in the currency where the reserves are held. U.S. Treasuries meet all of these criteria, and more broadly play a unique role as an anchor of the global financial system, suggesting that steady underlying demand for U.S. Treasuries from foreign central banks, as well as other investors seeking safe haven assets, will be able help to absorb new debt needed to fund U.S. deficits, and help keep interest rates in check. Though there have been suggestions over the years that the U.S. may be in danger of losing this special status as the world's primary reserve currency (shares of U.S. foreign exchange reserves have declined from nearly 72% in 2001 to 62% in 2019), the U.S. dollar still holds the largest share of reserves by far compared to other major currencies. The next-highest share of reserves is in euros and account for just 20% of total allocated central bank reserves.

- **Some economists have espoused a new approach to thinking about fiscal spending, known as "modern monetary theory."** One of the key ideas behind this theory is that rather than worry about debt levels in and of themselves, governments should only worry about these debt levels to the extent that they trigger higher inflation. Olivier Blanchard, a former IMF chief economist, argued at

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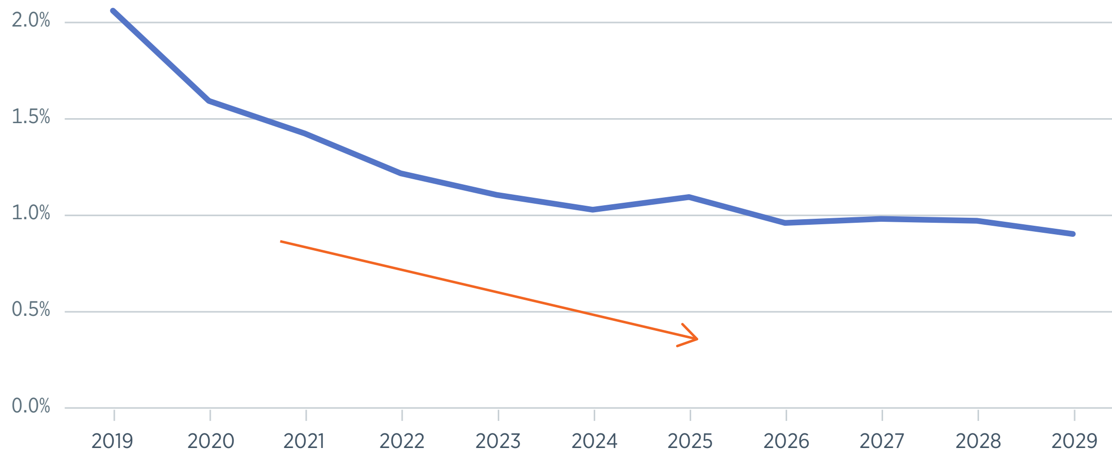
Figure 4

Will nominal growth continue to outpace the rate of interest?

Projected difference between CBO estimates of nominal GDP growth rate and average interest rate on debt held by the public (%)



Data as of August 21, 2019.

Source: Congressional Budget Office.

For more background, see our *Wilmington Wire* blog post, "Pushing the National Debt Limit."

the American Economic Association meeting earlier this year that as long as nominal GDP growth outpaces the rate of interest on government debt, higher debt levels tend to be manageable. Proponents of this theory would be cheered by CBO estimates for 2019, where nominal growth in the U.S. is expected to be 4.6%, clearly exceeding the projected average interest rate on debt of 2.5%.[4]

- **Structural factors, such as demographics and technological advances, suggest longer-term downward pressure on interest rates.** As the Baby Boomer generation in the U.S. ages, the number of people aged 65 or older is expected to rise to 20% of the population in 2029, from 16% in 2018.[5] As a result, we believe rising savings and increased investment in low-risk assets such as government bonds will likely keep interest rates low. Aging populations also tend to spend less, spurring less inflation (and lower interest rates). Investment in technology across all sectors of the economy is likely to grow in coming years, boosting productivity, and helping to keep inflation tame (see our 2019 Capital Markets Forecast for details on our views about technology's dampening effect on interest rates).

Concerns about longer-term growth keep us vigilant about rising debt levels

We are skeptical about the more relaxed approach to rising debt levels suggested by modern monetary theory, as this nonchalance requires taking a view that longer-term growth can continue to outpace interest rates. Current CBO projections suggest this would indeed be the case over the next 10 years, where the difference between the forecasted nominal GDP growth rate and the estimated future rate of interest on debt remains positive (Figure 4). It is notable however, that this differential narrows quite substantially further out in the projections, leaving less cushion for the possibility of lower growth or higher interest rates.

In our view, the same demographic factors mentioned above also pose downward pressures on longer-term growth, as aging populations spend less and save more.

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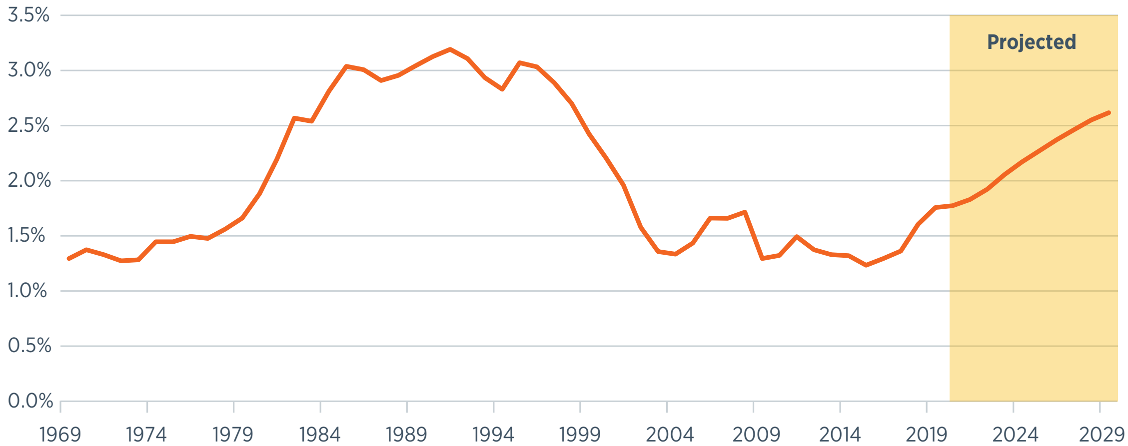
Figure 5

Net interest costs are projected to rise as a percent of GDP



Data as of August 21, 2019.

Source: Congressional Budget Office.

Though there have been suggestions over the years that the U.S. may be in danger of losing its special status as the world's primary reserve currency, the U.S. dollar still holds the largest share of reserves by far compared to other major currencies.

The rising number of retirees relative to new workers entering the workforce will also result in slowing labor force growth, which is a key long-term driver of economic growth. Unless immigration picks up substantially to make up for this loss in the labor force, demographic factors are likely to weigh on long-term growth in the U.S. The aging of the population will at the same time compound the debt burden due to rising government obligations to seniors under current Social Security and Medicare programs, unless these are reformed in some way. The CBO currently projects outlays for people 65 and older as a share of total spending (outside of interest payments) to rise from 41% in 2018 to 50% by 2029.[6]

In addition, though we believe structural factors are likely to keep interest rates modest, we would not dismiss the risks of a sharp rise in interest rates due to unexpected changes in economic circumstances. The "taper tantrum" of 2013 is one such example, when interest rates spiked as markets were surprised by the Fed's announcement that it was considering a reduction in its balance sheet for the first time since the Great Recession. Net interest costs are already projected to double as a percent of GDP to about 2.6% in 2029, from a low of 1.2% in 2015, and this is based on an assumption of a fairly gradual rise in interest rates to 3.0% by 2029 (Figure 5).

Though we remain concerned about the impacts of high debt levels on longer-term growth, we would still put a low probability on a major fiscal crisis in the near term despite current elevated levels of debt. Underlying demand for U.S. Treasuries due to the U.S. dollar's status as a key reserve currency and the U.S. Treasury market's special place in the global financial system should continue to help offset some of the upward pressure on interest rates associated with higher debt levels that other countries have experienced. We would caution however, against taking this status for granted. The United Kingdom's pound sterling was once in a similar position, but it was eventually dethroned by the U.S. dollar over time after War II. Taking all of these factors into consideration, investors should remain vigilant about current debt levels; be prepared for some possibly restless nights in the longer term should growth or interest rate dynamics shift; and be watchful for any change in the dollar's reserve currency status.

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The ABCs (and Ds) of debt and deficits

Before delving into longer term concerns about elevated government debt levels in the U.S., a basic review of terminology related to government finances may be helpful.

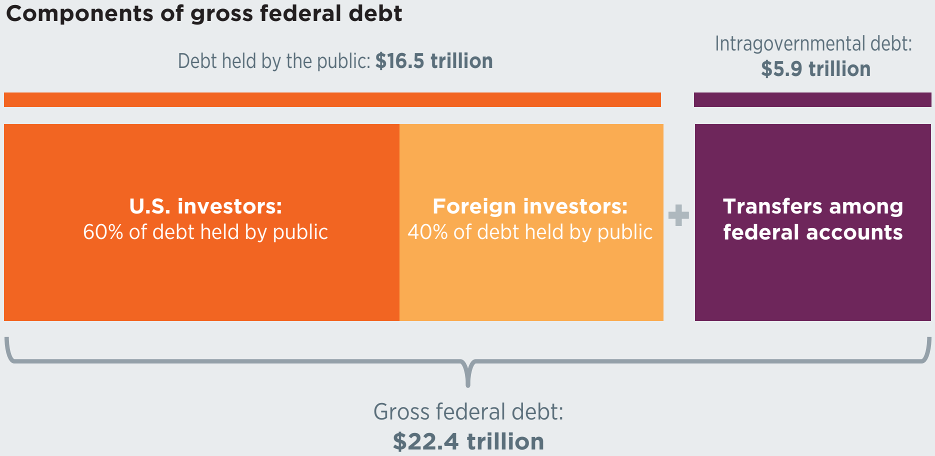
- **Budget deficits and surpluses.** In any given year, if the government spends more money than it receives (government spending exceeds revenues), this results in a budget deficit for the year (and if the government spends less than it receives, this results in a budget surplus). In the case of a budget deficit, the government must then borrow money by issuing debt to pay for that unfunded spending. The accumulation of those deficits (and surpluses) over time is what is referred to as the national debt, or the total net amount of money the government has borrowed over history. There are a number of ways to measure the country's level of debt:
  - **Debt held by the public** is comprised of all the debt the federal government owes to those outside of the federal government. Domestic individuals, businesses, banks, and the U.S. Federal Reserve hold about 60% of debt held by the public (with the Fed accounting for about $2.5trn, or 15% of debt held by the public), while foreign individuals, businesses, and banks hold approximately 40% of this debt.[8] Japan and China are the largest foreign holders of U.S. treasury securities, holding about $1.1trn each of U.S. treasury securities, or roughly 7%, of the total $16.5trn of U.S. debt held by the public as of August 2019.[9]
  - **Intragovernmental debt** is debt that is owed to one part of the government by another part of the government. The vast majority of this form of debt is comprised of debt held by the Social Security Trust fund, but this category of debt also includes federal civilian and military retirement trust funds, along with trust funds for Medicare, disability, and deposit insurance.
  - **Gross federal debt** is a more comprehensive measure of the government's total obligations, as it includes both debt held by the public along with intragovernmental debt.

Typically, markets and economists will refer to debt held by the public in discussions about the impact of debt on the economy, as this refers to publicly traded debt held outside of the federal government, which is helpful in understanding financial market capacity to fund government spending. Gross federal debt however, is still important to monitor in our view, as it gives a fuller sense of the government's total obligations in practice (we do not place a high probability on the government canceling its payments for Social Security, Medicare, etc. without formal legislation). With a few small adjustments, gross federal debt is also roughly equal to the level of debt used to determine whether the government will hit the debt limit.[7]

Both measures of debt are typically scaled relative to GDP, because this allows investors to determine the total amount of governments obligations relative to its ability to repay these obligations (if the economy is performing well, the government is likely to have improved prospects of repaying its debt). In addition, it allows for consistent comparison over time and across countries.

Figure 6

Components of gross federal debt



Data as of August 16, 2019.

Source: U.S. Treasury.gov.

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FOOTNOTES

1 Congressional Budget Office, “An Update to the Budget and Economic Outlook: 2019 to 2029,” August 21, 2019.

2 Congressional Budget Office, “The 2019 Long Term Budget Outlook,” June 25, 2019.

3 Congressional Budget Office, “The Budget and Economic Outlook: 2019 to 2029,” January 28, 2019.

4 Congressional Budget Office, “An Update to the Budget and Economic Outlook: 2019 to 2029,” August 21, 2019.

5 Congressional Budget Office, “The Budget and Economic Outlook: 2019 to 2029,” January 28, 2019.

6 Congressional Budget Office, “The Budget and Economic Outlook: 2019 to 2029,” January 28, 2019.

7 Debt subject to limit differs from gross federal debt mainly in that it excludes most debt issued by agencies other than the Treasury and the Federal Financing Bank and includes certain other adjustments that are excluded from gross debt. Congressional Budget Office: “The Budget and Economic Outlook: 2019 to 2029,” January 28, 2019.

8 US Treasury, Treasury Bulletin, June 2019.

9 US Treasury, Treasury International Capital Data, June 2019.

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ASSET CLASS OVERVIEW

Fixed Income Review

Jason Hannon
Head of Municipal Strategy and Senior Fixed Income Portfolio Manager

AS OF AUGUST 30, 2019	Month	Year to date	Trailing 12-month return
Bloomberg-Barclays U.S. Aggregate Bond Index	2.6%	9.1%	10.2%
Bloomberg-Barclays U.S. Investment Grade Credit Index	3.1%	13.4%	13.0%
Bloomberg-Barclays Ba High Yield Index	1.1%	12.4%	9.4%
Bloomberg-Barclays 60% High Yield Total Return/ 40% Municipal Total Return Index	2.1%	9.0%	9.4%
Bloomberg-Barclays U.S. Mortgage Backed Securities Index	0.9%	5.5%	7.1%
S&P Municipal Bond Index	1.4%	7.3%	8.3%
S&P Municipal Bond New York Index	1.4%	7.2%	8.2%
S&P Municipal Bond California Index	1.5%	7.5%	8.9%

Sources: FactSet, Bloomberg. Investing involves risks and you may incur a profit or a loss. Past performance cannot guarantee future results. Indexes are not available for direct investment.

What we are seeing now

As of August month end, the municipal bond market has delivered a year-to-date return of 7.3% and a 12-month trailing return of 8.3%. Performance has been driven by near record-setting positive fund flows and limited supply. The municipal market has had 34 consecutive weeks of cash inflow and is currently at approximately $62 billion of positive cash flow for the year. While cash inflows have shown a vast increase in demand for bonds, gross supply has been muted (approximately $335 billion for the year) and net supply remains negative (–$75 billion) in the overall market. Net supply factors in reinvestment of maturities, coupon payments, and refundings. This is roughly in line with the five-year average net supply of negative $68 billion but not as supportive for the market as the 2018 net supply of negative $130 billion. These factors, along with the Fed's dovish shift to rate cuts in 2019, has positively contributed to the municipal market's performance. The municipal yield curve has shifted lower and flattened, with long-term yields tightening faster than short-term yields, benefiting longer duration bonds.

What's changing

Uncertainty in the overall economy continues to weigh on risk sentiment and, as a result, how we are positioning portfolios. The market is pricing in a near certain Fed rate cut at the September meeting, and there is still volatility around a trade deal getting done with China. Adding these macroeconomic characteristics to the municipal market drivers mentioned above, we have been positioning our portfolios to find risk-adjusted yield in bonds with defensive structures while keeping a tilt to higher credit quality. We believe the housing sector provides relatively strong risk-adjusted yield in short-term planned amortization class (PAC) bonds with average effective maturities of three to five years. These PAC bonds are often backed by government agencies such as Ginnie Mae, Fannie Mae, and Freddie Mac, so the credit risk is that of the U.S. government, while spreads are attractive compared to other sectors in the marketplace. These bonds usually pay not only coupon interest on a periodic basis but also repay a portion of the principal on a similar periodic basis, reducing duration risk compared to traditional bonds. We believe our strategy of a healthy overweight to the housing sector and neutral duration compared to the benchmark positions our portfolios to achieve above average risk-adjusted yields with less exposure to an unexpected rise in rates.

What we expect

We expect demand for municipal bonds to remain strong going into year end. The supply/demand imbalance that we've seen year to date is expected to continue and keep yields and relative value indicators at attractive levels. Should the Fed continue to cut rates, we expect the municipal yield curve to steepen. We would also expect municipals to outperform Treasuries in the short-term portion of the curve, as we have witnessed during the last two Fed cut cycles in 2001 and 2007–2008. Municipal bonds are expected to continue to offer relative value to the highest tax-bracket investors.

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Investment Positioning

Portfolio targets effective September 1, 2019, for high-net-worth clients with Hedge Funds

	Aggressive			Growth & Income			Conservative		
	Strategic Asset Allocation (long term)	Tactical Asset Allocation (short term)	Change this month	Strategic Asset Allocation (long term)	Tactical Asset Allocation (short term)	Change this month	Strategic Asset Allocation (long term)	Tactical Asset Allocation (short term)	Change this month
Equities									
U.S. Large-Cap	46.0%	46.0%	—	32.6%	32.6%	—	15.2%	15.2%	—
U.S. Small-Cap	13.8%	13.8%	—	8.2%	8.2%	—	1.5%	1.5%	—
International Developed	19.5%	19.5%	—	12.7%	12.7%	—	5.0%	5.0%	—
Emerging Markets	9.7%	9.7%	—	3.6%	3.6%	—	1.0%	1.0%	—
Total Equities	**89.0%**	**89.0%**	**0.0%**	**57.0%**	**57.0%**	—	**22.7%**	**22.7%**	**0.0%**
Fixed Income									
U.S. Investment Grade–Tax-Exempt	0.0%	0.0%	—	30.0%	28.3%	—	64.3%	61.9%	—
High-Yield–Tax-Exempt	0.0%	0.0%	—	2.0%	2.0%	—	2.0%	2.0%	—
Total Fixed Income	**0.0%**	**0.0%**	**0.0%**	**32.0%**	**30.3%**	**0.0%**	**66.3%**	**63.9%**	**0.0%**
Real Assets									
U.S. Inflation-Linked Bonds	0.8%	0.7%	—	0.8%	1.0%	—	0.8%	1.0%	—
U.S. REITs	0.8%	0.5%	—	0.8%	0.8%	—	0.8%	0.8%	—
International REITs	2.5%	1.7%	—	2.5%	2.5%	—	2.5%	2.5%	—
Total Real Assets	**4.0%**	**2.9%**	**0.0%**	**4.0%**	**4.3%**	**0.0%**	**4.0%**	**4.3%**	**0.0%**
Hedge Funds	**5.0%**	**5.0%**	**0.0%**	**5.0%**	**5.5%**	**0.0%**	**5.0%**	**7.0%**	**0.0%**
Cash & Equivalents	**2.0%**	**3.1%**	**0.0%**	**2.0%**	**2.9%**	**0.0%**	**2.0%**	**2.2%**	**0.0%**
Totals	**100.0%**	**100.0%**		**100.0%**	**100.0%**		**100.0%**	**100.0%**	

The Investment Committee made several trades in May due to increased U.S.–China trade tensions. In early May, the committee voted to neutralize equity exposure and funded our cash holdings further overweight versus our long-term, strategic benchmark weight of 2%. In late May, the yield on cash was comparable to bonds without assuming any duration risk, making it an attractive asset for hedging purposes, in our view. However, should the Fed's next move be to cut rates (reducing the yield on cash) or should economic growth deteriorate further (reducing the yield and increasing the price return on longer-duration bonds)—conditions that we saw as increasingly probable in recent weeks—high-quality fixed income would then outshine cash. We therefore felt a modest shift out of cash and into fixed income was warranted.

Note: Totals may differ slightly from the allocation building blocks due to rounding.

TAA, or Tactical Asset Allocation, represents our *current recommendation* for each model strategy.

SAA, or Strategic Asset Allocation, represents our *current benchmark* allocation for each model strategy.

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For an overview of our asset allocation strategies, please see the disclosures.

Source: WTIA.

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Indexes are not available for direct investment. Investment in a security or strategy designed to replicate the performance of an index will incur expenses, such as management fees and transaction costs that would reduce returns.

An overview of our asset allocation strategies:
Wilmington Trust offers seven asset allocation models for taxable (high-net-worth) and tax-exempt (institutional) investors across five strategies reflecting a range of investment objectives and risk tolerances: Aggressive, Growth, Growth & Income, Income & Growth, and Conservative. The seven models are High-Net-Worth (HNW), HNW with Liquid Alternatives, HNW with Private Markets, HNW Tax Advantaged, Institutional, Institutional with Hedge LP, and Institutional with Private Markets. As the names imply, the strategies vary with the type and degree of exposure to hedge strategies and private market exposure, as well as with the focus on taxable or tax-exempt income.

Model Strategies may include exposure to the following asset classes: U.S. large-capitalization stocks, U.S. small-cap stocks, developed international stocks, emerging market stocks, U.S. and international real asset securities (including inflation-linked bonds and commodity-related and real estate-related securities), U.S. and international investment-grade bonds (corporate for Institutional or Tax Advantaged, municipal for other HNW), U.S. and international speculative grade (high-yield) corporate bonds and floating-rate notes, emerging markets debt, and cash equivalents. Model Strategies employing nontraditional hedge and private market investments will, naturally, carry those exposures as well. **Each asset class carries a distinct set of risks, which should be reviewed and understood prior to investing.**

Allocations:

Each strategy is constructed with target weights for each asset class. Wilmington Trust periodically adjusts the target allocations and may shift away from the target allocations within certain ranges. Such tactical adjustments to allocations typically are considered on a monthly basis in response to market conditions. The asset classes and their current proxies are: large–cap U.S. stocks: Russell 1000® Index; small–cap U.S. stocks: Russell 2000® Index; developed international stocks: MSCI EAFE® (Net) Index; emerging market stocks: MSCI Emerging Markets Index; U.S. inflation-linked bonds: Bloomberg/Barclays US Government ILB Index; international inflation-linked bonds: Bloomberg/Barclays World exUS ILB (Hedged) Index; commodity-related securities: Bloomberg Commodity Index; U.S. REITs: S&P US REIT Index; international REITs: Dow Jones Global exUS Select RESI Index; private markets: S&P Listed Private Equity Index; hedge funds: HFRI Fund of Funds Composite Index; U.S. taxable, investment-grade bonds: Bloomberg/Barclays U.S. Aggregate Index; U.S. high-yield corporate bonds: Bloomberg/Barclays U.S. Corporate High Yield Index; U.S. municipal, investment-grade bonds: S&P Municipal Bond Index; U.S. municipal high-yield bonds: Bloomberg/Barclays 60% High Yield Municipal Bond Index / 40% Municipal Bond Index; international taxable, investment-grade bonds: Bloomberg/Barclays Global Aggregate exUS; emerging bond markets: Bloomberg/Barclays EM USD Aggregate; and cash equivalents: 30-day U.S. Treasury bill rate.

Continued

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Disclosures Continued

All investments carry some degree of risk. Return volatility, as measured by standard deviation, of asset classes is often used as a proxy for illustrating risk. Volatility serves as a collective, quantitative estimate of risks present to varying degrees in the respective asset classes (e.g., liquidity, credit, and default risks). Certain types of risk may be underrepresented by this measure. **Investors should develop a thorough understanding of the risks of any investment prior to committing funds.**

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