The Big Picture

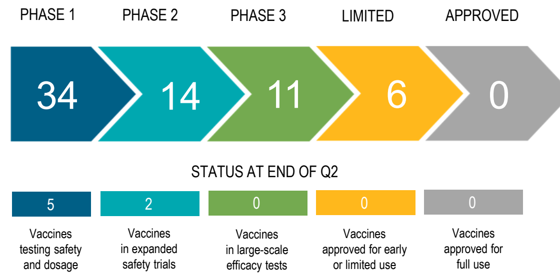
Coronavirus Update
An improving vaccine outlook has bolstered the optimistic case for global economic recovery. The benefits may be particularly large in the US, where the likely timeline for inoculation is faster, the share of activity in high-risk sectors greater, and virus control worse. It is expected that a vaccine will be approved in the US by year-end 2020 and domestically distributed by Q2 2021.

Fiscal & Monetary Stimulus Lead to Economic Strengthening
The global recovery has been sustained by the combination of better virus control and substantial monetary and fiscal policy support. Setbacks on any of these fronts would detract from continued improvement, in which 2021 GDP growth of 5.0 - 6.0% is expected in the U.S. and 7.0% globally.

Employment Numbers Improving
The US has regained nearly half of the 22 million jobs lost since February, though the pace of improvement has slowed. Still, this labor market recovery may prove faster than usual due to: 1) the high share of temporary layoffs (~80% through August), 2) the healthy labor market pre-pandemic, and 3) the potential for large-scale job creation in new industries post- pandemic. We expect the unemployment rate is expected to fall to 7.0% by YE 2020 and 5.6% in 2021 following a vaccine with a more gradual recovery thereafter.

Equity Market Rebound Continues
The injection of significant stimulus and improving economic statistics has fostered optimism among investors, with all primary asset classes posting gains during the 3rd quarter. Large cap stocks led the way among all asset classes while more speculative high yield and international bonds outperformed among fixed income investments.

Coronavirus Vaccine Tracker



STATUS AT END OF Q2

5	2	0	0	0
Vaccines testing safety and dosage	Vaccines in expanded safety trials	Vaccines in large-scale efficacy tests	Vaccines approved for early or limited use	Vaccines approved for full use

Moderna Therapeutics — Phase 3

mRNA-1273 is a synthetic messenger RNA that encodes for a protein found on the surface of the novel coronavirus. By compelling cells to produce that protein, the vaccine would spur an immune response, causing the body to generate antibodies that would protect against infection. The company set a drug industry record with mRNA-1273, identifying a vaccine candidate just 42 days after the novel coronavirus was sequenced.

BioNTech/Pfizer — Phase 3

Working on a multitude of mRNA vaccines for the novel coronavirus, planning to develop them in parallel. Like its competitors, the company uses strands of mRNA to generate protective antibodies. Earlier this month, Shanghai's Fosun Pharma signed a deal to market BioNTech's vaccine in China if it's eventually approved. Pfizer has agreed to co-develop the vaccine in the rest of the world.

Johnson & Johnson — Phase 3

Using its Ebola and Zika technologies to develop a vaccine for the novel coronavirus. J&J's vaccine is made by grafting the coronavirus genes that confer immunity onto a harmless virus, injecting it triggering an immune response without causing infection

Source: Johnson & Johnson, The NY Times, RAPS.org 10/27/20

Coronavirus continued to dominate the headlines both socially and economically. As the chart on the right shows, there has been considerable progress in the development of a vaccine with 5 vaccines approved for limited use and 9 in Phase 3 of clinical trials -the last and broadest. This is significant improvement as there were no vaccines in Phase 3 of clinical trials at the end of Q2. As mentioned last quarter, the U.S. has secured 100 million doses each from Moderna, BioNTech/Pfizer and Johnson & Johnson and all have progressed to Phase 3 of trials. Interestingly, there are recent studies out that suggest that less than 50% of the U.S. population will take a vaccine when it is first available. While this is a bit of a concern, it is comforting to know that herd immunity is generally reached at the 40-60% level.

On the heels of these positive developments, the economy continued its recovery during the 3rd quarter as social distancing rules were relaxed. GDP growth was 35.2% during the quarter following the 31.4% decline in the 2nd quarter.

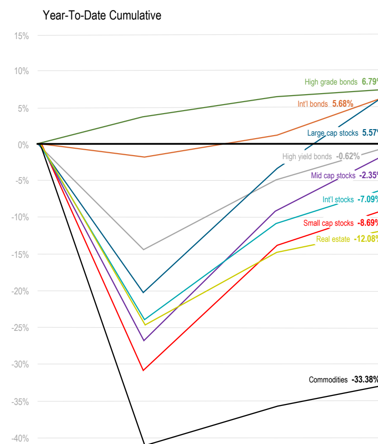
This growth is manifesting itself in the employment numbers as the U.S. unemployment rate declined to 7.9% as of 09/30/20 from 15% as of 06/30/20. This represents approximately 11 million new jobs added during the quarter which has had a positive impact on consumer spending and derivatively, the overall U.S. economy.

The financial markets are reacting to the good news as all primary asset classes showed positive gains during the quarter with large cap stocks leading the way.

Asset Class Returns

Data as of 09/30/2020

	3rd Quarter	Annualized Total Return % 1 Year	3 Year	5 Year	10 Year
Stable Principal					
Cash Equivalents *90-Day U.S. Treasury Bills*	0.03	0.77	1.62	1.17	0.61
Fixed Income					
High Grade Bonds *BBgBarc US Aggregate Bond Index*	0.62	6.98	5.24	4.18	3.64
High Yield Bonds *CSFB High Yield Bond Index*	4.91	1.99	3.60	6.40	6.17
International Bonds *FTSE Citigroup World Gov't Bond Index*	4.59	5.60	3.54	3.89	1.26
Equity					
Large Cap Stocks *S&P 500 Index*	8.93	15.15	12.28	14.15	13.74
Mid Cap Stocks *Russell Mid Cap Index*	7.46	4.55	7.13	10.13	11.76
Small Cap Stocks *Russell 2000 Index*	4.93	0.39	1.77	8.00	9.85
International Stocks *MSCI EAFE Index*	4.80	0.49	0.62	5.26	4.62
Other					
Commodities *S&P GSCI Index*	4.61	-27.84	-9.46	-7.88	-8.84
Real Estate *Dow Jones US Real Estate Index*	2.07	-11.39	3.72	6.62	8.65



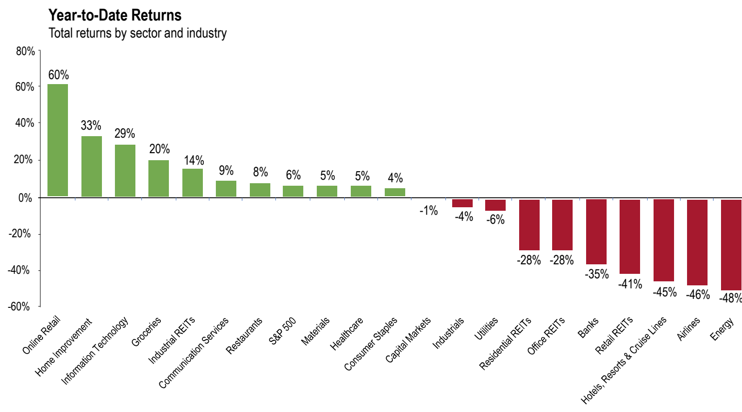
Source: Morningstar. Indices are not actively managed, and investors cannot invest directly in indices. Past performance is no guarantee of future results.

Investors' appetite for risk was on full display during the quarter as all primary asset classes posted gains. Notably, the equity categories produced well above-average returns for the quarter – led by large cap stocks. In perhaps the most telling sign of investors' "risk on" mentality is the sharp gains realized by high yield and international bonds, the two more speculative categories within the fixed income category.

A common discussion during the 2nd quarter was whether we would experience a "V" shaped recovery, "U" shaped recovery, "Nike" shaped recovery, etc. Most often, this conversation centered on economic recovery and not the financial markets. However, as the chart on the right shows, the equity markets have experienced a remarkable "V" shaped rebound since reaching a low in March. In fact, as of the end of the quarter, large cap stocks had gained 5.57% on a year-to-date basis and mid cap stocks were approaching breakeven.

The Haves & Have Nots

The business and social impact of COVID-19 is creating industry winners and losers



Source: FactSet, Standard & Poor's, J.P. Morgan Asset Management.
Guide to the Markets – U.S. Data are as of September 30, 2020.

The pandemic has resulted in winners and losers from a sector and industry standpoint. The winners have been primarily those industries that benefited from social distancing (online retail, home improvement, technology) while the losers seem to be concentrated in the services and economically-sensitive sectors.

Equity Price-to-Fair Value

Current data as of 10/05/2020

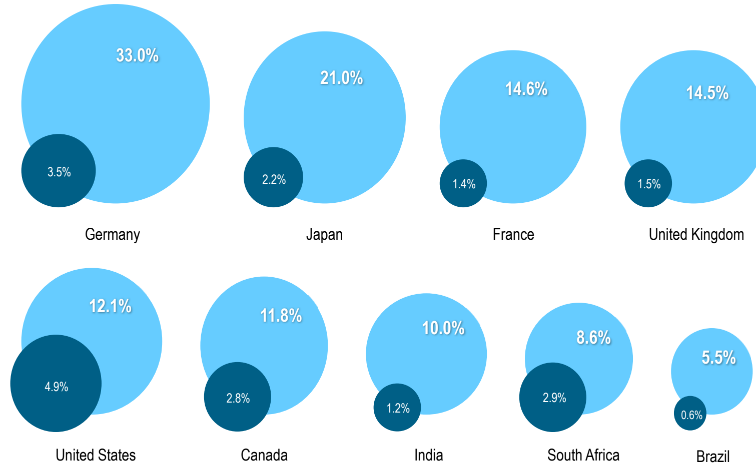
Despite the stock market's 54% gain since reaching its low point on March 23rd, overall valuation appears reasonable at a 2% overvaluation as of 10/09/20. While underlying fundamentals have improved as the year has progressed, much of the resurgence can be attributable to recovery from the extreme 34% undervaluation at the height of the pandemic. In other words, the emotional element of market pricing disappeared and rationality returned.

The Energy & Financial Services sector continue to be the most undervalued in our view. Energy companies have been significantly impacted by the global economic slowdown and resulting pressure on oil prices. Financial Services companies (banks) continue to be hurt by the low interest rate environment and the negative impact on net interest margin – the difference between the yield that they credit savings accounts versus the yield earned on investments.

Not surprisingly, given their strength year-to-date, the Technology sector (primarily mega caps) appears to be the most overvalued with Apple passing the $2 trillion market capitalization threshold.

Unprecedented Economic Stimulus…

Economic stimulus crisis response
% of GDP



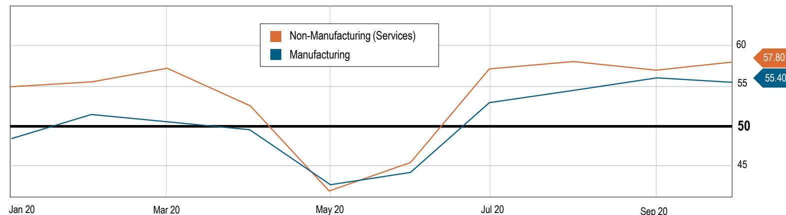
Source: McKinsey & Company

To date, there has been approximately $2.7 trillion of fiscal stimulus introduced into the U.S. economy – with potentially more to come. This is a staggering amount from a historical perspective. When compared to the Great Recession of '08-'09, the amount of stimulus introduced during this pandemic is 3x – 10x higher depending on the country. The sheer level of stimulus is giving investors optimism that we will exit the current recession in an accelerated timeframe and could be part of the reason for the "V" shaped pricing recovery in the financial markets.

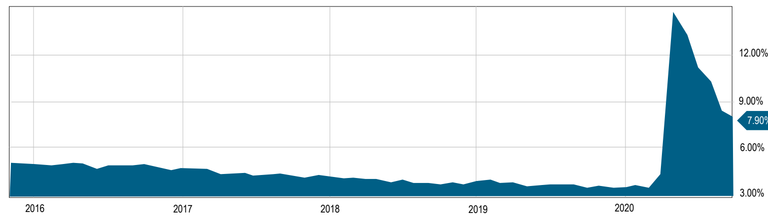
…Is Having an Impact

Economic activity is up, unemployment is down

US Institute for Supply Management (ISM)
US Purchasing Managers Index
09/30/20



US Unemployment Rate
09/30/20



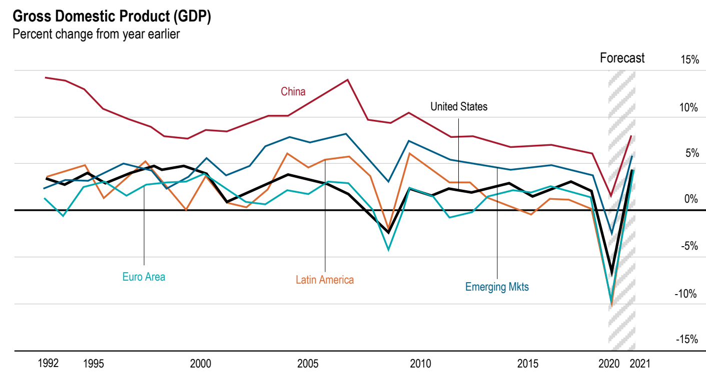
Source: Y Charts

The impact of both fiscal and monetary stimulus is starting to manifest itself in the economic statistics as both the Purchasing Managers Index and unemployment rate have improved dramatically since bottoming out in May.

The Purchasing Managers Index is a key gauge of current and future economic activity that is quite easy to understand. A reading above 50 implies economic expansion while sub-50 suggests contraction. Both the Services and Manufacturing sectors have posted above 50 reading since July with Services strengthening the most. This is significant since the Service sector represents approximately 80% of the overall U.S. economy.

Since reaching 15% in April, the unemployment has declined to 7.9% as of the end of September. This represents approximately 11 million new jobs added over a six month period. The byproduct of job additions is higher consumer income…and higher consumer spending…which represents two-thirds of the U.S. economy.

And the Future is Looking Brighter



Source: IMF

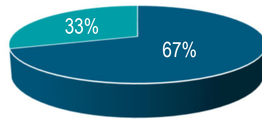
While the financial markets have experienced a "V" shaped recovery, projections from the International Monetary Fund suggest that we may enjoy a similar recovery economically beginning in late-2020/early-2021 with China leading the way. This optimism is premised on the favorable impact of the massive fiscal and monetary stimulus programs in the U.S. and abroad.

The Argument for More Fiscal Stimulus…

Consumer spending is starting to show signs of slowing

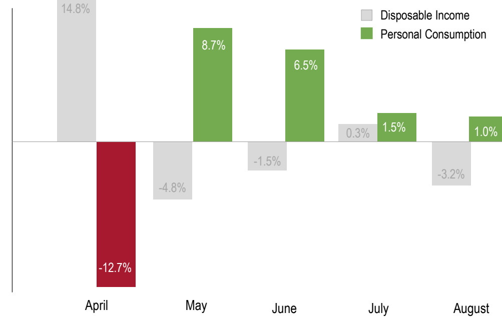
U.S. Economy Breakdown

Consumer spending
Business & Gov't spending



Disposable Income & Personal Consumption Expenditures

Percentage change from prior month



Source: Bureau of Economic Analysis (BEA)

As mentioned last quarter, the stimulus programs appear to be directed primarily at consumers in an effort to sustain cash flows (and spending) during the pandemic shutdown period. This is logical since consumer spending represents two-thirds of the U.S. economy. If you are going to "stimulate", the focus should be on the largest segment of the economy to be the most impactful.

However, while fiscal stimulus has had a positive impact on the U.S. economic resurgence, there are signs that growth may be slowing. The chart to the right compares disposable income to consumption. Typically, there is a lag between the time that income increases or decreases and the effect that it has on consumption. This lag period is typically one month. Notice the material increase in income during April and the corresponding decrease in consumption. The decrease in April consumption is reflective of a decrease in March income. A broad analysis of income from May-August reveals that income has stagnated (and slightly declined). As a result, there has been a systematic decrease in consumption month-over-month. In order to re-accelerate incomes (and consumption), there have been calls for additional fiscal stimulus which is currently under consideration in Washington.

…But It Can Affect Future Growth

Taking from the future to pay for the present

	2020			2021				Annual			
Policy	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2020	2021	2022	2023
Paycheck Protection Program	0.9	1.4	1.0	0.7	0.4	0.2	0.1	0.8	0.3	*	*
Enhanced Unemployment Compensation	1.1	1.8	1.5	0.8	0.5	0.3	0.1	1.1	0.4	*	*
Recovery Rebates for Individuals	1.1	0.8	0.6	0.6	0.3	0.1	0.1	0.6	0.3	*	*
Direct Assistance to Local Governments	0.3	0.9	0.8	0.4	0.2	0.1	*	0.5	0.2	*	0
Other Spending Provisions	1.1	1.9	1.6	1.5	1.3	1.1	0.7	1.1	1.1	0.4	0.1
Other Revenue Provisions	0.5	1.1	0.7	0.6	0.9	0.4	0.2	0.6	0.5	-0.1	-0.2
Federal Reserve Emergency Lending Facilities	*	0.2	0.3	0.4	0.3	0.2	0.2	0.1	0.3	*	-0.1
Total	5.0	8.1	6.4	5.0	4.0	2.4	1.3	4.7	3.1	0.3	-0.1
Real GDP WITHOUT Legislation											
Real GDP ($billions)	4,064	4,103	4,250	4,369	4,466	4,596	4,680	17,161	18,112	19,159	19,652
Growth Since Previous Quarter %	**-14.3**	**1.0**	**3.6**	**2.8**	**2.2**	**2.9**	**1.8**	**-10.0**	**5.5**	**5.8**	**2.6**
Real GDP in CBO's Current Forecast											
Real GDP ($billions)	4,266	4,436	4,522	4,588	4,646	4,706	4,740	17,968	18,679	19,222	19,631
Growth Since Previous Quarter %	**-10.1**	**4.0**	**1.9**	**1.5**	**1.3**	**1.3**	**0.7**	**-5.8**	**4.0**	**2.9**	**2.1**
Net Effect of Legislation on Growth	**+4.2**	**+3.0**	**-1.7**	**-1.3**	**-0.9**	**-1.6**	**-1.1**	**+4.2**	**-1.5**	**-3.1**	**-0.5**

	Effect on the Deficit ($billions)	Cumulative Effect on GDP ($billions)	**Cumulative Effect on GDP Per Dollar Effect on the Deficit**
Paycheck Protection Program	628	226	0.36
Enhanced Unemployment Compensation	442	297	0.67
Recovery Rebates for Individuals	292	175	0.60
Direct Assistance to Local Governments	150	132	0.88
Other Spending Provisions	700	548	0.78
Other Revenue Provisions	425	157	0.37
Total	2,637	1,535	**0.58**

Source: Congressional Budget Office; staff of the Joint Committee on taxation.

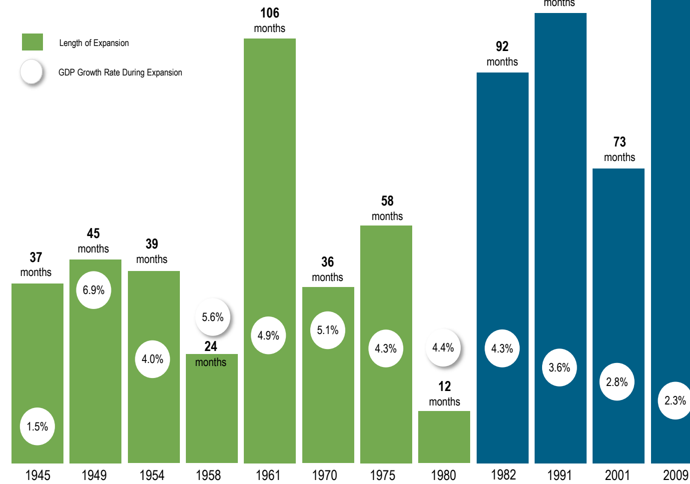
If additional stimulus measures are adopted, there could be a longer-term negative effect on economic growth. Simplistically, stimulus represents the notion of borrowing from the future to pay for the present. At some point, the borrowing needs to be repaid, typically in the form of higher taxation which could be a drag on future growth.

The chart above, compiled by the Congressional Budget Office, compares the forecasted GDP growth rate is stimulus had not been introduced to the expected growth rate with stimulus. Notice the improvement in GDP growth forecasted for Q2 and Q3 versus having no stimulus. However, starting in Q4, while GDP growth is positive under both scenarios, the rate of growth favors an economic environment without stimulus. The interpretation is that stimulus "softened" the economic decline for a brief period but could compromise the long-term economic growth rate.

To further lengthen and potentially the current economic recovery, consideration is being given to another round of stimulus. The CBO has calculated that for every $1.00 of stimulus, GDP is positively impacted by $0.58 – albeit with an corresponding increase in the U.S. budget deficit.

Is Moderate Growth a Bad Thing?

Slower growth may serve to lengthen the expansionary period

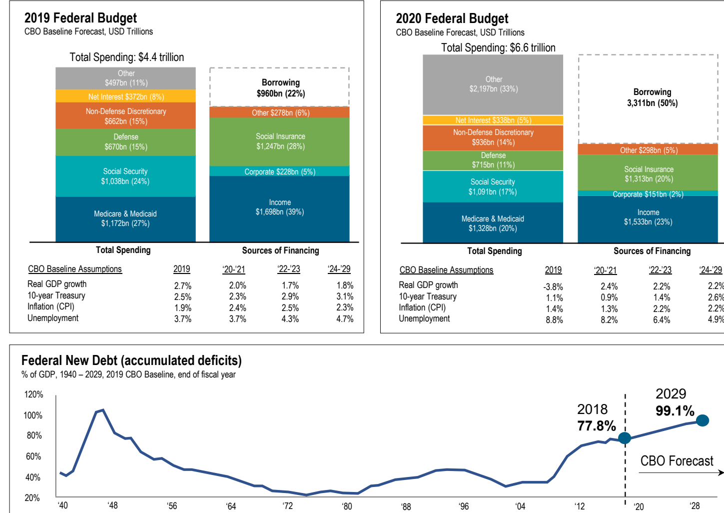


Source: BEA, NBER, J.P. Morgan Asset Management. Data for length of economic expansions and growth rates obtained from the National Bureau of Economic Research (NBER).

With evidence of the beginning stages of a potential economic slowdown, we were curious to know if this was necessarily a bad thing – as long as growth remains positive. The chart above compares the duration of every expansionary period since 1945 and the average growth rate during each period. The results were interesting.

From 1949-1980, the average expansion lasted 45 months with an above average growth rate of 4.6%. From 1982-2009, the average expansion lasted 103 months with an average growth rate of 3.2%. This suggests that accelerated growth can lead to shorter boom and bust cycles while a more moderate growth rate can extend an expansionary cycle considerably. This is logical as recessions are typically preceded by the development of excesses in the economy, primarily driven by over-consumption. The likelihood of excesses developing diminishes with moderate growth.

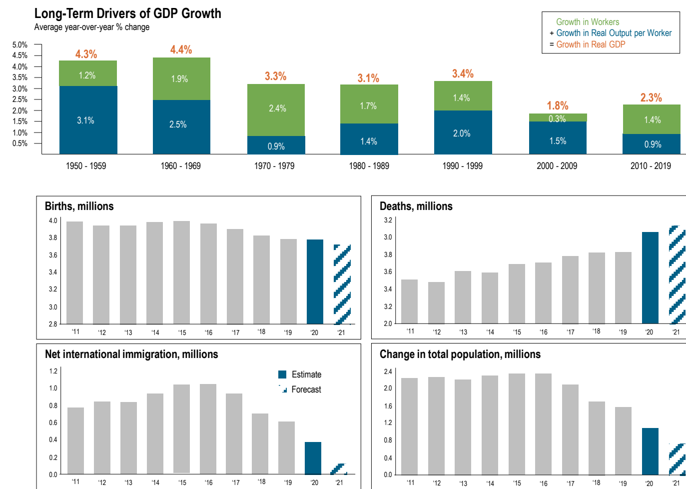
U.S. Federal Budget & Future Deficits



Source: CBO, J.P. Morgan Asset Management; (Top and bottom right) BEA, Treasury Department. 2020 Federal Budget is based on the Congressional Budget Office (CBO) September 2020 Baseline Budget Forecast. CBO Baseline economic assumptions are based on the Congressional Budget Office (CBO) July 2020 Update to Economic Outlook. Other spending includes, but is not limited to, health insurance subsidies, income security and federal civilian and military retirement. Note: Years shown are fiscal years (Oct. 1 through Sep. 30).

A comparison of the 2019 and 2020 budgets reveals an increase of $2.2 trillion in spending primarily attributable to fiscal stimulus programs which has resulted in a significant increase in borrowing. The end result is a projected expansion of net debt for the U.S. from 77.8% of GDP in 2018 to 99.1% by 2029. Debt will likely be funded via higher taxation which could represent a drag on future economic growth.

The US Population Problem



Source: J.P. Morgan Asset Management; Census Bureau, DOD, DOJ, BLS, and BEA.

GDP drivers are calculated as the average annualized growth in the 10 years ending in 4Q19. Future working-age population is calculated as the total estimated number of Americans from the Census Bureau, per the February 2020 report, controlled for military enrollment, growth in institutionalized population and demographic trends. Growth in working-age population does not include illegal immigration; DOD Troop Readiness reports used to estimate percent of population enlisted. Numbers may not sum due to rounding.

An area of economics that is rarely discussed is the long-term drivers of GDP growth. Quite simply, the formula for GDP growth is as follows:

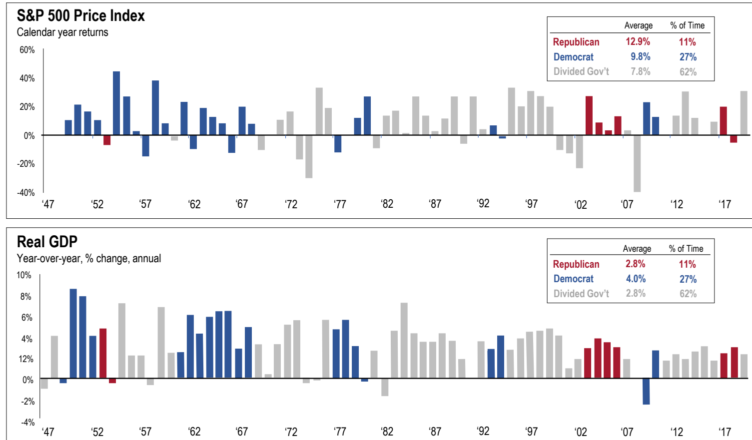
Growth in Workers + Growth in Real Output Per Worker = Growth in Real GDP

Growth in real output per worker can be defined as "productivity". As the upper chart shows, there has been a systematic decline in productivity since 1990. Fortunately, growth in the number of workers has stayed steady which has served as a stabilizing influence on overall real GDP. However, projections by the Census Bureau indicate that this may be coming to an end.

As the lower charts indicate, U.S population growth is expected to decline over the next few years which may have a material impact on GDP growth unless productivity improves.

The forecasted decline in population growth is largely a function of aging baby boomers and social policies.

Elections, Markets & Economic Growth



Source: FactSet, Office of the President, J.P. Morgan Asset Management; (Top) Standard & Poor's; (Bottom) Bureau of Economic Analysis. Top chart shows S&P 500 price returns.

Of note, stock market performance favors Republicans while economic performance favors Democrats. Interestingly, a divided government lags in both measurements.