Report of the

Maryland Board of Revenue Estimates

on

Estimated Maryland Revenues

Fiscal Years Ending June 30, 2020 and June 30, 2021

Submitted to

Larry Hogan

Governor

December 11, 2019

State of Maryland
Board of Revenue Estimates

Louis L. Goldstein Treasury Building, P.O. Box 466
Annapolis, Maryland 21404-0466
bre@comp.state.md.us

December 11, 2019

Honorable Lawrence Hogan
Governor of Maryland
State House
Annapolis, Maryland 21401

Dear Governor Hogan:

In compliance with Section 6-106(b) of the State Finance and Procurement Article of the Annotated Code of Maryland, the Board of Revenue Estimates has prepared and herewith submits to you new estimates of State revenues for the fiscal years ended June 30, 2020 and June 30, 2021, based upon current laws and administrative practices. As in the past, the estimates represent the collective efforts of each of the Board members and their staffs.

The Board will continue its study of economic and revenue trends and will report to you any significant changes that may affect Maryland's revenues.

Respectfully yours,

Peter Franchot

Peter Franchot, Chairman

Nancy K. Kopp

Nancy K. Kopp

David R. Brinkley

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of MARYLAND
Serving the People

Peter Franchot
Comptroller

Andrew M. Schaufele
Director
Bureau of Revenue Estimates

December 11, 2019

Although the official revenue revisions carry the support of the Board of Revenue Estimates, the report and analysis provided belong to Andrew M. Schaufele, the Director of the Bureau of Revenue Estimates and Executive Secretary of the Board. It is provided solely to aid objective analysis of Maryland's economic and fiscal condition.

I hope you find this report informative. If you should have any questions or concerns regarding this report, please do not hesitate to contact me at 410-260-7450.

Sincerely,

Andrew M. Schaufele

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The Board of Revenue Estimates submits revised general fund revenue estimates of $18.721 billion for fiscal year 2020 and $19.173 billion for fiscal year 2021. The fiscal year 2020 revision represents an increase of $25.8 million from the September 2019 estimate, while the fiscal year 2021 revision represents an increase of $114.6 million. These December estimates mark a very minor adjustment to revenues, just 0.4% across both years.

Economic Fundamentals

Whereas this economic expansion has been lethargic relative to prior post World War II expansions, the rate of growth has been somewhat consistent, in line with constraints imposed by slow growth in the labor force and in productivity. Over the past year or so, economic growth ticked upward but has recently returned to trend. The improvement was largely driven by debt financed fiscal stimulus, the result of increased federal budget expenditures and the major federal tax cuts enacted in the *Tax Cuts and Jobs Act* (TCJA).

Our outlook calls for slowing, but positive, employment growth and steady but subdued wage growth in the next two years. Given that outlook, economic growth is expected to slow relative to recent history. Beyond that time frame we expect more of the same: slowing employment growth and only marginal improvements in wage growth. We forecast the current expansion, the longest in our recorded history, to continue, while calling attention to the fact that slowdowns can unexpectedly turn into recessions.

Capital Gains

Capital gains income continues to grow in our outlook. In fact, much of the income tax estimate increase is due to a more upbeat capital gains outlook for 2019. That increase is entirely attributable to the fact that the stock markets have sustained new highs throughout this calendar year, particularly in the critical fourth quarter. Our outlook for capital gains largely levels off in 2020 and beyond; albeit, at a very high level. If the market can sustain its levels in 2020 and beyond, we will be in safe territory. To put a market correction into perspective, the nadir of gains following the Great Recession was 76% less than the prior peak, which would result in all-else-equal a loss of about 10% of the total income tax, which is 50% of the general fund. While the Great Recession was extraordinary, the early 2000s correction saw a loss of 8% of income tax just from capital gains. The lesson we have learned is that capital gains income contracts far more quickly and unpredictably than other types of income and does so with great consequence. The full application of the revenue volatility cap serves to ameliorate that consequence and we strongly support the maintenance of that cap.

Risks

A list of discrete risks to the economy can be found in the Economic Outlook section of this book. Here, it is prudent to simply discuss the big-picture risk. As noted above, economic growth is slowing to a rate consistent with underlying fundamentals. However, revenues are following a heightened trajectory based not so much on underlying economic conditions, but on a windfall from the TCJA and from a surge in capital gains income. The former will not be an ongoing source of increased rates of growth in revenue, while the latter cannot be counted on to continue.

This economic expansion is the longest on record. Time does not cause recessions, but more time enables more opportunity for policy mistakes and misallocation of capital, which can cause recessions. Of particular note, the federal government's monetary policy and fiscal policies are working at cross purposes. As the fiscal stimulus wears off, the Federal Reserve will have to walk a tightrope to ensure that it neither chokes off this expansion, nor allows an inflationary boom to materialize. It is for these reasons that we view the risk of recession in our forecast horizon as elevated.

State of Maryland
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The Board of Revenue Estimates thanks the following participants of the Revenue Monitoring Committee for their assistance.

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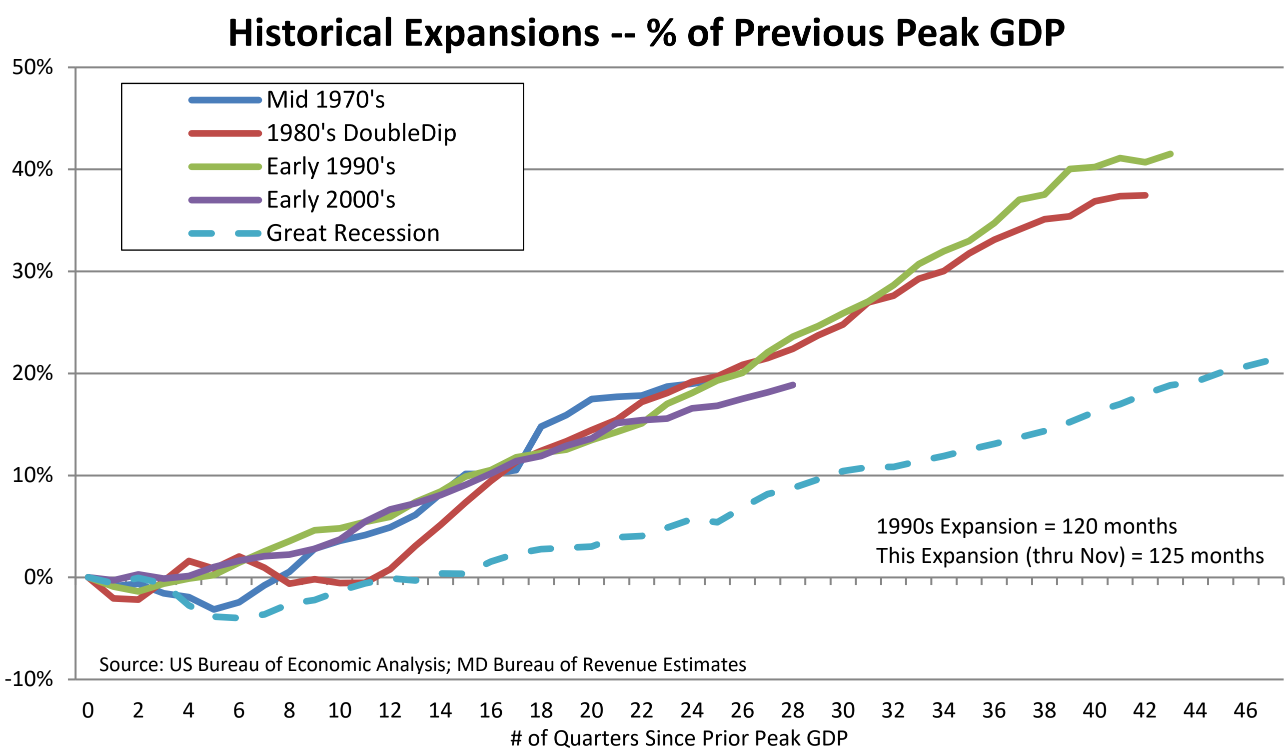
Nationwide, economic growth over this expansion has been consistent but subdued. Following a temporary boost from fiscal stimulus, growth is returning to trend. Our outlook calls for wage growth to continue in line with recent experience and for slowing employment growth. In short, we forecast the current expansion to continue, while recognizing that slowdowns can unexpectedly turn into recessions.

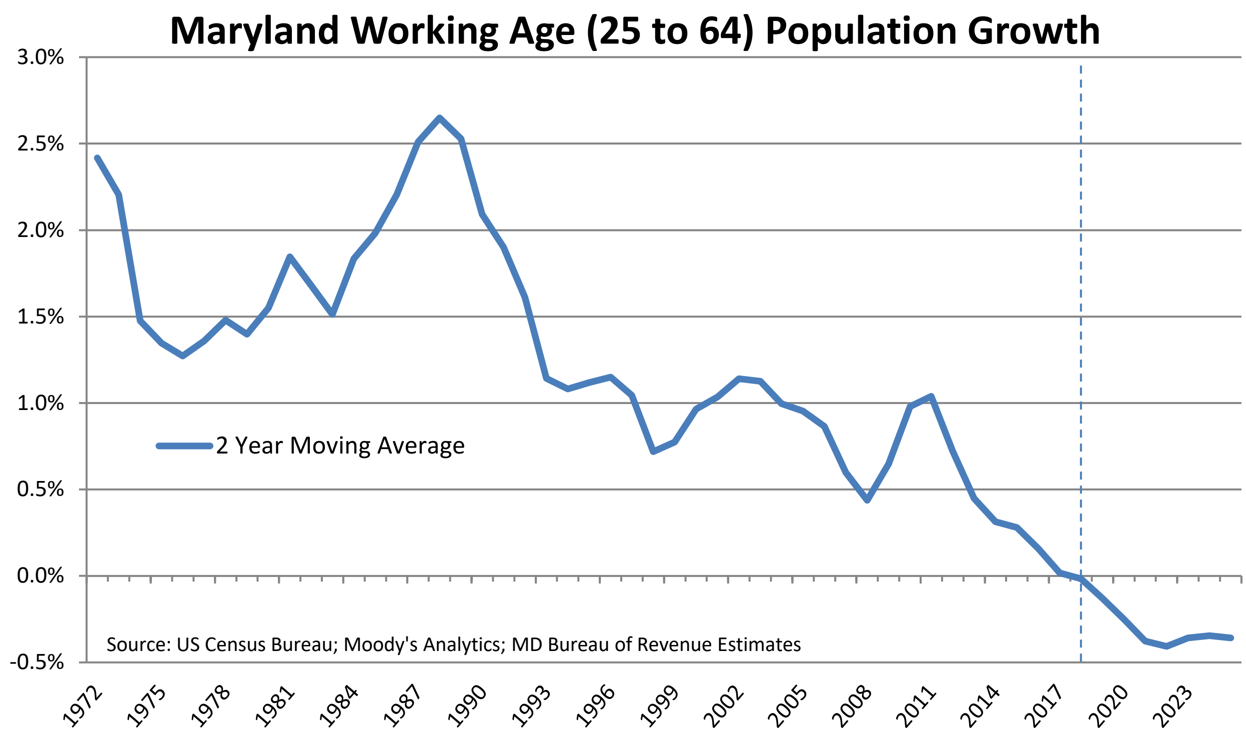
The National Expansion

The growth of real Gross Domestic Product (GDP), displayed in the chart below, has been the slowest relative to any other post-World War II expansion. Where this expansion stands out is its length. Measurements of the length of expansions in the US go back to 1854; at 125 months through November 2019, the current expansion is the longest on record.



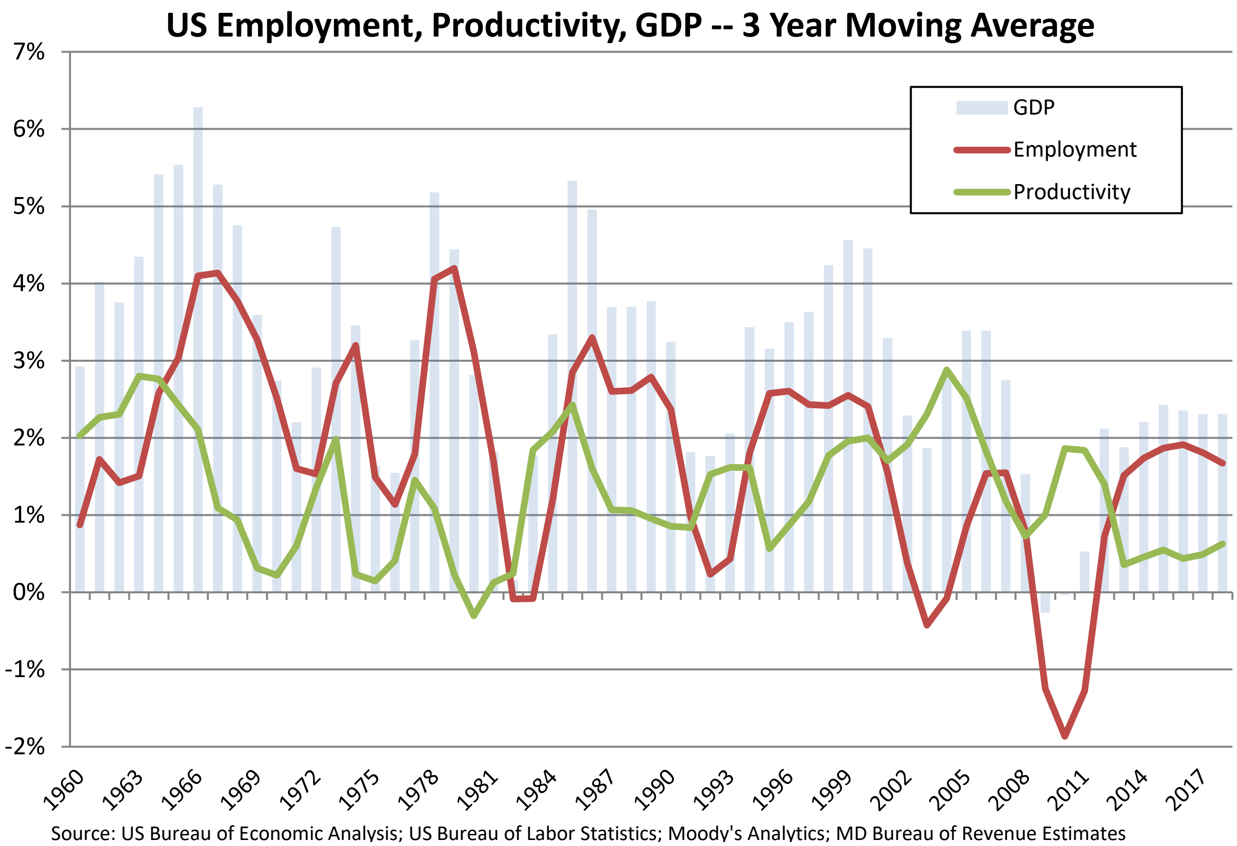
While economic growth has been slower than prior post-WWII expansions, the economy is growing at about its potential. Some simple arithmetic helps illustrate this: the product of the quantity of labor and the productivity of that labor (defined here as output per worker) is the total output of the economy. Framed this way, the decline in economic growth since even before the Great Recession is a function of slowing labor force growth, slower productivity growth, and the resulting impact of those factors on demand. The key question is why labor force and productivity growth are slower than in the past. Demographic trends largely answer this question.

Growth in the traditional working age population (defined here as 25 – 64 years old) has been declining nationwide. In Maryland, the working age population recently began to shrink. Slowing growth in the number of workers, ceteris paribus, translates to proportionally slower growth in output. In reality, this has been partially ameliorated by increased labor participation of those 65 and older.



The cause of slow productivity growth is debated amongst economists. One theory is that we have picked the low hanging fruit of recent significant technological advances, particularly in computing and the internet. Meaning that further marginal improvements in these technologies face diminishing returns, hence slower productivity growth. Another theory relates to decreasing competition that has been observed in most industries. Causes of declining competition include increasing intellectual property protections, industry consolidation, and government support – at all levels – for large incumbent firms. As competition declines, so do output, employment, and the incentive to innovate. A lack of economic dynamism puts newer firms, which tend to be smaller and more productive, at a disadvantage.

However, one of the most significant causes of slow productivity growth again relates to demographics. A large share of the labor force is retiring, while a large generation of younger workers has recently entered. This means there are proportionally fewer middle-aged workers in the labor force, who are the most productive on average. The result is that labor productivity on the whole slows. The chart below shows employment, productivity and GDP growth. These supply side factors form the basis for a general consensus that GDP growth of around 2% a year is the sustainable trend rate of growth over the medium term – ignoring cyclical factors.



Short Term Outlook

In the short run however, economic growth can deviate significantly from what economists expect to be the potential, or sustainable, rate of growth. In 2018, the federal government embarked on a large debt-financed stimulus in the midst of a mature economic expansion. The result was an uptick in both real GDP growth and inflation - which together equal nominal GDP - that is already dissipating. The duration and escalation of trade barriers is also restraining growth.

As nominal GDP growth slows, the Federal Reserve (the Fed) has had to quickly transition from increasing the interest rate it pays on excess reserves - its method of tightening policy - to reducing the rate - its method of loosening policy - in an attempt to maintain its duel mandate of low and stable unemployment and inflation. Presently, the expectation appears to be that the Fed will hold its benchmark interest rate, the Federal Funds Rate, steady for the near term.

In light of these issues, we view the risk of a recession in our forecast horizon as elevated. However, we do not forecast a recession, in part because no one has been able to accurately predict recessions – a result consistent with economic theory. Furthermore, time since the last recession is not a reliable indicator of when the next recession will occur. Australia, for example, last had a recession in 1991. Rather we warn of heightened risk. This expansion is mature, but we cannot reliably answer the important questions of timing or magnitude of the next recession.

If monetary policymakers react perfectly, growth would simply slow rather than contract. Furthermore, the Great Recession was a highly unusual event in our history. Using that history as a guide, we would expect the next recession, whenever it happens, to look much more like the mild recessions of the early 1990s and 2000s than the Great Recession.

Labor Market & Wage Growth

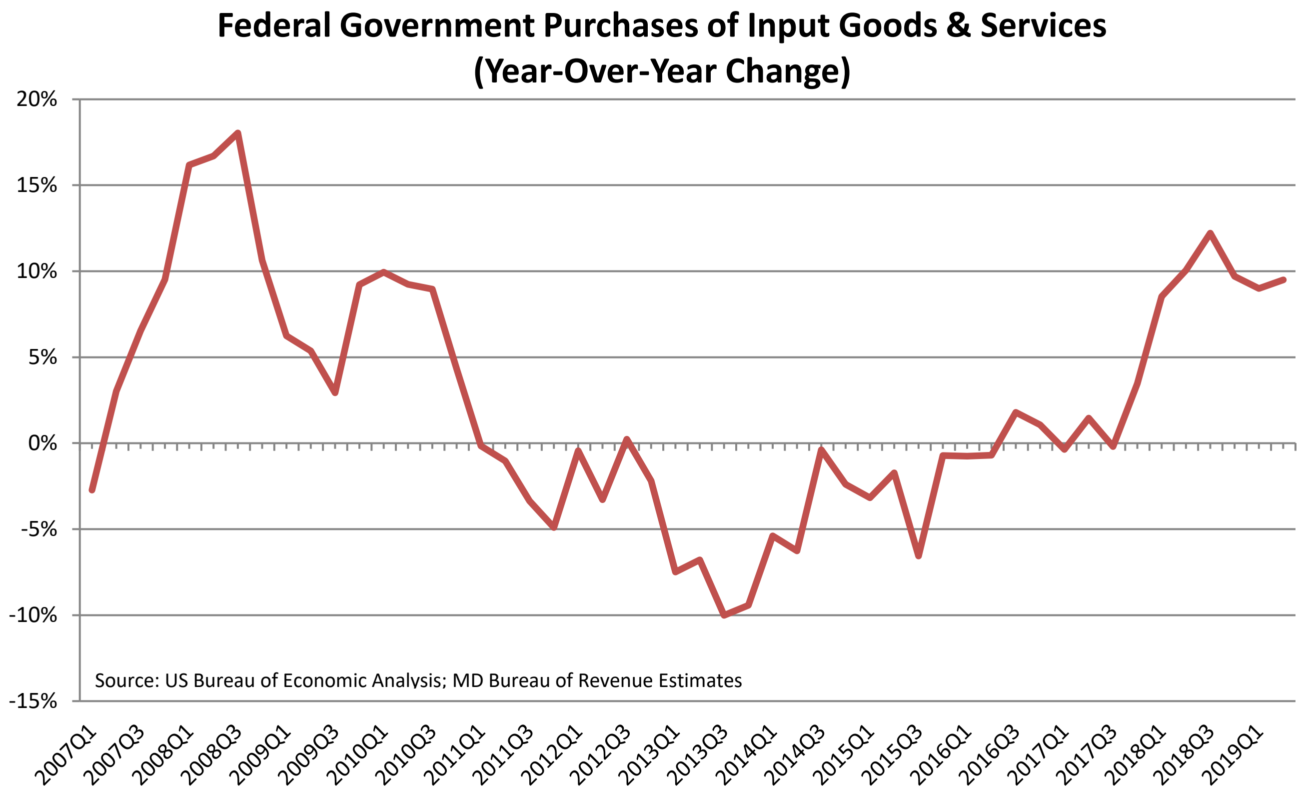
The national labor market continues to perform well in terms of low unemployment and steady job creation, particularly considering slowing growth in the working age population. In both the nation as a whole and Maryland in particular, job growth has outperformed population growth. In October 2019, the unemployment rates for both the nation and Maryland were 3.6%. After growing 1.1% in 2018, the number of non-farm payroll jobs in Maryland has grown 0.6% through October of this year according to the Current Employment Statistics (CES) payroll survey. The less timely but typically more accurate Quarterly Census of Employment and Wages (QCEW) has recorded marginally stronger employment growth for the past two years. Through June of this year, the QCEW reports job growth of 0.8%. Because of this we believe employment will grow 0.8% in 2019.

Growth in the number of jobs in Maryland has been below that of the nation for almost the entire expansion, and this divergence has recently worsened. However, it should be noted that the nation is experiencing higher population growth and would therefore be expected to experience faster job growth all else equal. Despite significant declines in unemployment, wage growth has remained subdued. The average wage, defined as total wages divided by the number of jobs, increased 2.7% in 2018 and is up 3.1% through the first two quarters of 2019.

Demographic trends and the types of jobs created help explain why wage growth has been lower than in previous expansions. Lower productivity growth means lower wage growth. Reflecting productivity differences across the age spectrum, middle age workers earn the most on average and young workers the least. As young workers replace older, higher paid workers, average wage growth is subdued. The job mix, or the types of jobs that are being created, has been concentrated in lower-skilled services, resulting in lower average wage per new job. Adding low inflation to the above factors, it is no mystery that nominal wages have grown so slowly relative to prior expansions. However, the lack of a significant increase in wage growth despite a considerable decline in unemployment was unexpected. Reducing our wage growth forecast in the out-years is the most substantial change in our outlook. In the longer run however, productivity growth should increase as younger workers gain experience, with wage gains to follow.

US Fiscal Policy Impact on Maryland

The Federal government's economic policy during this expansion has been characterized by uncertainty and contradiction. Relatively early in the recovery, the federal government implemented a policy of austerity in the form of tax increases and spending caps that restrained spending growth. Maryland's economy stagnated during this time. More recently, federal spending and deficits have substantially increased. The next chart shows the growth in the value of intermediate inputs purchased by the federal government from the private sector. In other words, it shows the value of the US private sector's sales to the federal government.



As the chart shows, federal purchases from the private sector have grown significantly. Pushing in the other direction is direct federal employment. Although the federal government is buying more from the private sector, direct federal employment in Maryland and D.C. began to decline in mid-2017. More recently, federal employment in Maryland appears to have bottomed out. During this time, income tax withholding from federal contractors, who are private sector employers, grew. The overall impact on federal government related employment is therefore ambiguous.

Federal budget sequestration is set to expire at the end of federal fiscal year 2021 (September 2021). There could be near-term benefits for Maryland if the private sector begins to invest in anticipation of greater federal outlays. Then, once the budget caps are removed, direct federal expenditures would likely increase to the benefit of the State's out-year forecast as well.

The Maryland Outlook

Maryland's economy is expected to continue expanding in line with recent trends. Growth in employment is expected to be 0.8% in 2019, down from 1.1% in 2018. Employment growth in 2020 is expected to decline to 0.6% and 0.5% in the out-years due to slower working age population growth. Growth in the average wage for 2019 is expected to be 2.9%. The rate of wage growth is expected remain low relative to historical norms. Aggregate wage growth and personal income measures increase as employment and the average wage grow.

Outlook For Key Maryland Economic Variables				
Calendar Year	Non-Farm Employment Growth	Personal Income	Aggregate Wage & Salary Income	Average Wage
2017	1.1%	2.9%	3.6%	2.5%
2018	0.9%	5.0%	3.7%	2.7%
2019E	0.8%	3.8%	3.7%	2.9%
2020E	0.6%	3.5%	3.5%	2.9%
2021E	0.5%	3.7%	3.4%	3.0%
2022E	0.5%	3.9%	3.4%	3.0%
2023E	0.5%	3.9%	3.6%	3.1%
Source: Bureau of Revenue Estimates				

Risks

As usual, risks abound. The primary risk factor over the short run is the actions of the Federal Reserve. A slowdown in growth during a mature expansion is a difficult position for a central bank. After moving to tighten policy in reaction to fiscal stimulus, the Fed has been loosening policy as the stimulus wears off. Too little loosening and they could exacerbate the slowdown and tip the economy into a recession, too much and they risk an inflationary boom-bust cycle. At the time of writing the Fed has signaled that it expects to hold the Federal Funds Rate steady, despite the fact that inflation has once again fallen below target. Adding to the complexity of their position is the apparent slowdown in global growth.

Continuing with federal policy, congress faces an appropriations deadline in December to continue funding the government. Failure to reach agreement last December led to the longest government shut down in US history. However, this time it is expected that congress will pass, and the President sign, a continuing resolution to avoid another shut-down. Beyond the short run, the trajectory of federal debt poses a risk to the economy because it reduces the scope for counter-cyclical policy (stimulus during recessions), increases debt service costs, and crowds out private borrowing in times of economic expansion.

Another risk, as ever, is oil prices. An increase in oil prices would be a drag on average consumer spending in Maryland. But while oil price changes still impact the economy, the rise of domestic shale oil producers and their ability to respond quickly means the US economy as a whole is less affected by swings in the international oil market. Increasing fuel and energy efficiency has similarly reduced the impact of oil price swings on the economy. However, whereas falling oil prices were once unambiguously beneficial to the US economy, domestic shale oil production falls when oil prices fall, causing regional declines in industrial production.

The evolution of trade policy is another international risk. There is considerable uncertainty as to the imposition, extent, and duration of tariffs and other barriers. Uncertainty itself can depress economic growth, and tariffs act as a tax on US consumption of such goods. However, the White House now has a track record of starting negotiations from an out-of-reach position only to compromise. The economic gains to all participants from international trade are significant, creating an incentive for all sides to find a mutually acceptable compromise.

Continuing with trade policy, the Port of Baltimore is a significant east coast port. It is among a few that have the berth depths and infrastructure to handle "Post Panamax" ships – those that can pass through the expanded Panama Canal. As such, the port is liable to feel the impacts of increasing trade barriers. However, the port benefits from trade regardless of which direction goods move. While trade barriers will make some goods more expensive to import, the overall trade balance is determined by the savings rates of the trading partners involved. When the US has negative savings, it is by definition importing more than it exports (spending more than it earns), and vice versa. Federal policies to date have resulted in higher federal borrowing. If not canceled out by an increase in private savings, these policies will increase the overall trade deficit through higher imports, regardless of the tariff rates on certain goods. Indeed the trade deficit has grown despite tariffs. The port conceivably benefits from that increased demand for imports. More recently, interested parties in expanding the Howard Street tunnel may have reached agreement over funding, though nothing is final. This would increase the Port of Baltimore's cargo handling capacity and might therefore boost near-term investment in the port, apart from the tunnel expansion.

Table 1

Forecast of the US Economy

Primary Indicators

Calendar Year	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Real Gross Domestic Product ($ in billions)	17,404	17,689	18,108	18,638	19,068	19,462	19,846
	2.9%	*1.6%*	*2.4%*	*2.9%*	*2.3%*	*2.1%*	*2.0%*
Federal Funds Rate	0.1%	0.4%	1.0%	1.8%	2.2%	1.6%	2.0%
10-Year Treasury Bond Yield	2.1%	1.8%	2.3%	2.9%	2.1%	2.1%	2.7%
Consumer Price Index (%D from prior year)	0.4%	1.8%	2.1%	2.2%	2.0%	1.3%	2.3%
Housing Starts (thousands of units)	1,107	1,178	1,209	1,250	1,264	1,289	1,278
	10.7%	*6.4%*	*2.6%*	*3.4%*	*1.2%*	*2.0%*	*-0.8%*
New Light Vehicle Sales (thousands of units)	17,396	17,465	17,136	17,214	16,931	16,678	16,534
	5.7%	*0.4%*	*-1.9%*	*0.5%*	*-1.6%*	*-1.5%*	*-0.9%*
Corporate Profits Before Taxes ($ in billions)	2,062	2,011	2,006	2,075	2,053	2,076	2,177
	-2.8%	*-2.4%*	*-0.3%*	*3.4%*	*-1.0%*	*1.1%*	*4.9%*
Total Non-Agricultural Employment (thousands)	141,826	144,348	146,611	149,064	151,383	153,154	154,303
	2.1%	*1.8%*	*1.6%*	*1.7%*	*1.6%*	*1.2%*	*0.8%*
Unemployment Rate	5.3%	4.9%	4.4%	3.9%	3.7%	3.5%	3.5%
Personal Income ($ in billions)	15,720	16,125	16,831	17,566	18,359	19,220	20,066
	4.9%	*2.6%*	*4.4%*	*4.4%*	*4.5%*	*4.7%*	*4.4%*

Source: IHS Markit (December 2019 Forecast)

Table 2

Forecast of the MD Economy

Primary Indicators

Calendar Year	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Total Non-Agricultural Employment (thousands)	2,664	2,697	2,726	2,750	2,772	2,790	2,803
	1.5%	*1.2%*	*1.1%*	*0.9%*	*0.8%*	*0.6%*	*0.5%*
Existing Median Home Price ($)	270,639	275,335	287,118	297,771	308,602	318,786	328,668
	-0.3%	*1.7%*	*4.3%*	*3.7%*	*3.6%*	*3.3%*	*3.1%*
Existing Single Family Home Sales (thousands)	73,480.2	81,363.1	86,775.2	86,944.8	86,790.3	89,741.2	91,894.9
	8.6%	*10.7%*	*6.7%*	*0.2%*	*-0.2%*	*3.4%*	*2.4%*
Private Housing Starts (thousands)	17.0	17.5	15.9	17.2	18.0	18.3	19.3
	3.2%	*2.9%*	*-9.2%*	*8.2%*	*4.7%*	*1.6%*	*5.4%*
Personal Income ($ in millions)	342,074	354,451	364,576	382,829	397,480	411,386	426,802
	5.0%	*3.6%*	*2.9%*	*5.0%*	*3.8%*	*3.5%*	*3.7%*
Wages and Salaries ($ in millions)	162,485	167,321	173,274	179,617	186,347	192,905	199,550
	4.7%	*3.0%*	*3.6%*	*3.7%*	*3.7%*	*3.5%*	*3.4%*
Dividends, Interest and Rent ($ in millions)	66,575	67,203	70,184	75,320	76,961	78,818	81,613
	5.7%	*0.9%*	*4.4%*	*7.3%*	*2.2%*	*2.4%*	*3.5%*
Capital Gains ($ millions)	9,643	8,556	11,379	13,387	15,127	15,681	15,404
	1.4%	*-11.3%*	*33.0%*	*17.6%*	*13.0%*	*3.7%*	*-1.8%*
Unemployment Rate	5.1%	4.5%	4.2%	3.9%	3.7%	3.4%	3.5%

Source: Board of Revenue Estimates and IHS Markit (December 2019 Forecast)

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General Fund Revenues

In preparing these estimates, all of the State's revenue collecting agencies were consulted. In addition, the Board of Revenue Estimates continued to rely on the Revenue Monitoring Committee, comprised of key State staff with revenue estimating knowledge or collection responsibility. The committee compared and considered alternative economic forecasts from national economic consulting firm Moody's Analytics and Global Insight, and local economists at Sage Policy Group.

Table 3 shows detail on general fund and selected special fund revenue sources for fiscal years 2019 through 2021. Table 4 provides additional detail on general fund revenues. The sections which follow these tables provide more information on each of the state's general fund revenue sources.

Table 3

Selected Revenues

Fiscal Years 2019 - 2021

$ Thousands	GENERAL FUND Fiscal Year 2019 Actual	GENERAL FUND Fiscal Year 2020 Revised Estimate	GENERAL FUND Fiscal Year 2021 Estimate	SPECIAL FUND Fiscal Year 2019 Actual	SPECIAL FUND Fiscal Year 2020 Revised Estimate	SPECIAL FUND Fiscal Year 2021 Estimate	TOTAL Fiscal Year 2019 Actual	TOTAL Fiscal Year 2020 Revised Estimate	TOTAL Fiscal Year 2021 Estimate
INCOME TAXES									
Individual	10,272,352	10,587,327	11,030,082				10,272,352	10,587,327	11,030,082
Corporations	1,033,109	1,011,263	1,101,278	267,941	262,275	285,621	1,301,050	1,273,537	1,386,898
Total	11,305,461	11,598,589	12,131,360	267,941	262,275	285,621	11,573,402	11,860,864	12,416,981
SALES AND USE TAXES	4,812,090	4,951,863	5,040,583	76,602	127,999	146,617	4,888,691	5,079,863	5,187,200
STATE LOTTERY RECEIPTS									
Lottery Games	552,375	530,950	565,446	119,872	126,259	121,226	672,247	657,209	686,672
Casinos[1]	-			726,673	735,699	745,399	726,673	735,699	745,399
Total	552,375	530,950	565,446	846,544	861,958	866,625	1,398,920	1,392,908	1,432,071
TRANSPORTATION REVENUES									
Motor Vehicle Fuel Tax				1,133,132	1,133,132	1,176,611	1,133,132	1,133,132	1,176,611
Motor Vehicle Licenses, Fees				804,062	804,062	804,886	804,062	804,062	804,886
Motor Vehicle Titling Tax				916,536	916,536	935,000	916,536	916,536	935,000
Maryland Transit Fees				140,094	143,899	157,557	140,094	143,899	157,557
Maryland Port Fees				55,283	56,026	57,104	55,283	56,026	57,104
Maryland Aviation Fees				257,929	276,268	288,261	257,929	276,268	288,261
Total	-	-	-	3,307,036	3,329,923	3,419,419	3,307,036	3,329,923	3,419,419
OTHER REVENUES									
Property Transfer Tax	-	-	-	207,648	220,080	220,862	207,648	220,080	220,862
Business Franchises and Filing Fees	245,065	246,174	212,032				245,065	246,174	212,032
State Tobacco Tax	356,697	348,560	341,553				356,697	348,560	341,553
Tax on Insurance Companies	335,168	348,649	356,436				335,168	348,649	356,436
Alcoholic Beverages Excises	32,534	32,878	33,159				32,534	32,878	33,159
Estate & Inheritance Taxes	180,440	196,947	176,511				180,440	196,947	176,511
Clerks of the Court	30,204	31,754	31,392				30,204	31,754	31,392
District Courts	59,859	58,537	57,455				59,859	58,537	57,455
Hospital Patient Recoveries	64,297	48,293	48,934				64,297	48,293	48,934
Interest on Investments	50,240	50,000	52,368					--- See Notes ---	
Miscellaneous Fees, Other Receipts	374,609	320,205	319,317						
Total	1,729,113	1,681,997	1,629,156						
Total Current Revenues	18,399,039	18,763,399	19,366,545						
Excellence in Education Fund [2]	(200,000)	-	-					--- See Notes ---	
Revenue Volatility Cap [3]	-	(42,218)	(193,665)						
GRAND TOTAL	18,199,039	18,721,181	19,172,880		--- See Notes ---				

[1] The 2017 BRFA diverted VLT revenue dedicated to the SMWOB Account to the General Fund for FY 2018. In FY 2019 and 2020, that money will be distributed to the Education Trust Fund

[2] The 2018 BRFA diverted $200M from individual income tax revenues to the Commission on Innovation and Excellence in Education Fund

[3] Established by Chapters 4 & 550 of the 2017 Legislative Session and amended by the 2018 BRFA

Table 4

Maryland General Fund Revenues

Fiscal Years 2019 - 2021

		FY 2020				FY 2021			
$ Thousands	FY 2019 Actual	September Estimate	December Estimate	Difference	Growth	September Estimate	December Estimate	Difference	Growth
INCOME TAXES:									
Individual	10,272,352	10,546,882	10,587,327	40,445	3.1%	10,882,090	11,030,082	147,993	4.2%
Corporation	1,033,109	992,036	1,011,263	19,227	-2.1%	1,093,637	1,101,278	7,641	8.9%
Total	11,305,461	11,538,917	11,598,589	59,672	2.6%	11,975,726	12,131,360	155,634	4.6%
SALES AND USE TAXES	4,812,090	4,956,167	4,951,863	(4,304)	2.9%	5,049,943	5,040,583	(9,360)	1.8%
STATE LOTTERY	552,375	567,145	530,950	(36,195)	-3.9%	579,197	565,446	(13,751)	6.5%
OTHER REVENUES									
Business Franchise Taxes	245,065	248,079	246,174	(1,905)	0.5%	215,818	212,032	(3,786)	-13.9%
Tax on Insurance Companies	335,168	348,649	348,649	-	4.0%	356,436	356,436	-	2.2%
Estate and Inheritance Taxes	180,440	167,312	196,947	29,635	9.1%	169,976	176,511	6,535	-10.4%
Tobacco Tax	356,697	351,058	348,560	(2,498)	-2.3%	344,629	341,553	(3,076)	-2.0%
Alcoholic Beverages Excise Tax	32,534	32,785	32,878	93	1.1%	33,062	33,159	97	0.9%
District Courts	59,859	58,751	58,537	(213)	-2.2%	57,666	57,455	(211)	-1.8%
Clerks of the Court	30,204	31,675	31,754	79	5.1%	30,936	31,392	455	-1.1%
Hospital Patient Recoveries	64,297	61,715	48,293	(13,422)	-24.9%	61,715	48,934	(12,781)	1.3%
Interest on Investments	50,240	50,000	50,000	-	-0.5%	52,368	52,368	-	4.7%
Miscellaneous	374,609	325,334	320,205	(5,129)	-14.5%	323,309	319,317	(3,991)	-0.3%
Total	1,729,113	1,675,358	1,681,997	6,639	-2.7%	1,645,914	1,629,156	(16,758)	-3.1%
Total Current Revenues	18,399,039	18,737,587	18,763,399	25,812	2.0%	19,250,780	19,366,545	115,765	3.2%
Excellence in Education Fund [3]	(200,000)	-	-	-		-	-		
Revenue Volatility Cap [4]	-	(42,160)	(42,218)	(58)		(192,508)	(193,665)	(1,157)	
GRAND TOTAL	18,199,039	18,695,427	18,721,181	25,754	2.9%	19,058,272	19,172,880	114,608	2.4%

[3] The 2018 BRFA diverted $200M from individual income tax revenues to the Commission on Innovation and Excellence in Education Fund

[4] Established by Chapters 4 & 550 of the 2017 Legislative Session and amended by the 2018 BRFA

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Individual Income Tax

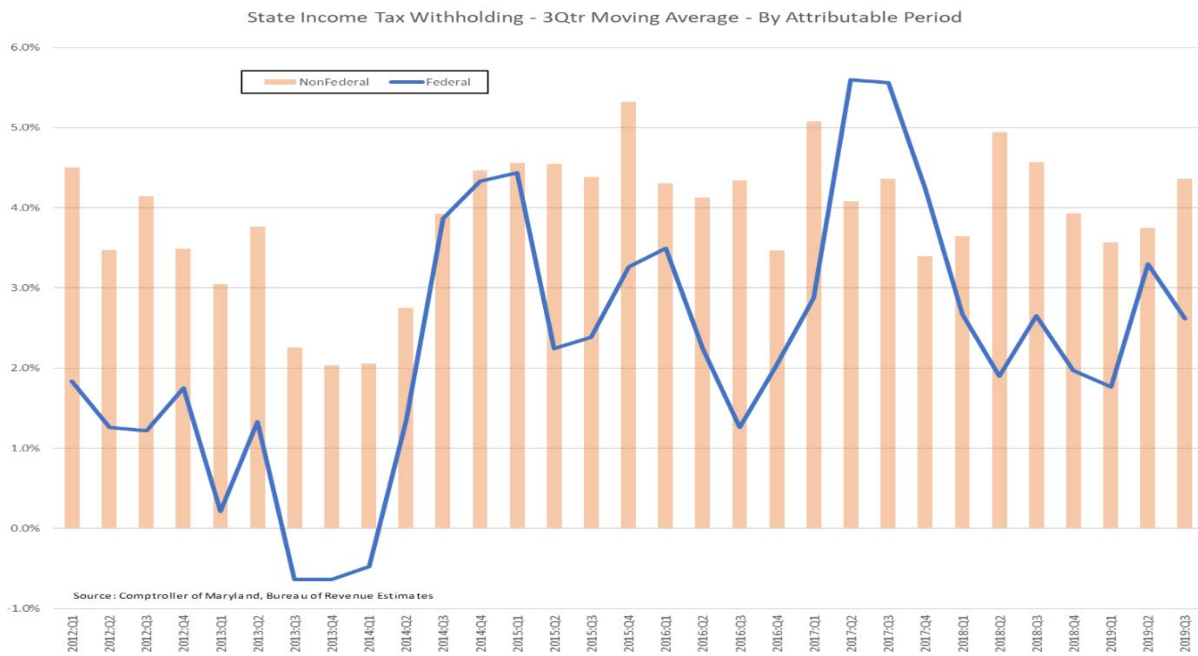
General fund receipts from the personal income tax are estimated to grow 3.1% and 4.2% to $10.587 billion and $11.030 billion for fiscal years 2020 and 2021, respectively. Withholding is anticipated to grow a strong 5.7% for fiscal year 2020, though that is partially attributable to calendar nuances pushing more tax year 2019 withholding into fiscal year 2020 and local income tax rate increases. This estimate does include an increase in overall wage growth and an increase in capital gains relative to the September outlook.

We cannot discuss the outlook without explaining tax year 2018. Our cash figures suggest that tax year 2018 tax receipts increased 9.8%. That rate of growth is driven by several factors: (1) income was likely shifted from 2017 into 2018 to take advantage of lower federal tax rates; (2) the flow through of federal tax changes that increase State and local tax collections; and (3) continued economic expansion. As some of the tax year 2018 was one-time and extraordinary (the shifting of income), the growth expected for tax year 2019 is somewhat diminished. Very little non-wage related income tax was realized prior to filing for tax year 2018, which pushed an abnormal amount of tax to be realized through reduced refunds and payments with filings. We expect that trend to somewhat flip as more will be realized with estimate payments for tax year 2019.

Wage Growth

Wage growth has been muted relative to historic expansions. The reasons for the slow rate of growth, detailed in this book's economic outlook, include: low inflation; strong job growth in lesser paying industries; the stratification of the population's age structure that lowers overall productivity growth; and greater retirement churn, due to the aging of the baby boomer population, that drives less experienced workers into the shoes of retiring boomers.

Throughout this expansion we have also encountered numerous non-structural headwinds (note: very few tailwinds) that restrained wage growth. For the last two years, that has included a slowdown in federal government employment. Some of those losses seem to have been offset by related private sector gains, but to be sure, the loss of federal jobs seems to be a net-loss for employment and wages. More recently it appears that the rate of federal job loss has slowed or perhaps ceased. The following illustrates income tax withholding from the federal government relative to all others; it is evident that the federal government has been a drag on growth. It is also worth noting that the defense related agencies appear to be faring better than the non-defense. While we are highlighting the negative impact on wage growth from the federal government, we should also note that our non-federal employers have maintained a relative strong withholding position, hovering around 4%.

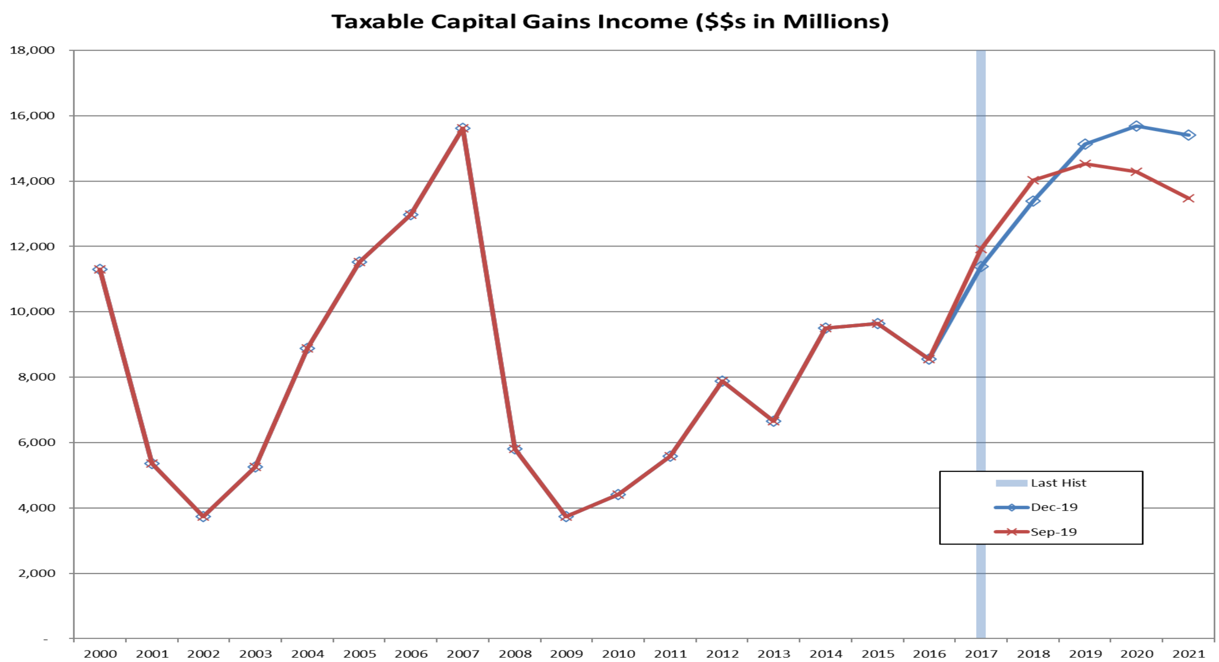


In order to smooth out complexities caused by the timing of pay periods, the prior chart is a three-quarter moving average. That smoothing obscures the fact that withholding for the second and third quarters of 2019, which seem to be free of pay period differences, each increased at year-over-year growth rates of 4.8%. This marks an upswing in the rate of withholding; if sustainable, it might finally signify an increase the rate of average wage growth. We have seen consecutive upswings in growth several times during this expansion, only to see the rate turn below average in succeeding quarters.

While withholding is estimated to increase 5.7% and 4.8% in fiscal year 2020 and 2021, respectively, it is worth noting that growth is strengthened by certain non-economic factors. First, beginning in 2020, seven counties increased their income tax rates. Those increases are estimated to generate close to $200 million annually for those local governments; fiscal years 2020 and 2021 have $91 million and $188 million of extra withholding due to those increases. Second, we expect that a minority of taxpayers that were negatively impacted by the State flow through of the federal Tax Cuts and Jobs Act will amend their withholding to the tune of about just shy of $70 million per year beginning with fiscal year 2020. Excluding these factors, underlying withholding growth for fiscal year 2020 and 2021 is estimated at 4.6% and 4.2%.

Capital Gains

Capital gains income continues to grow in our outlook. In fact, much of the income tax estimate increase is due to a more upbeat capital gains outlook for 2019. That increase is entirely attributable to the fact that the stock markets have sustained new highs throughout this calendar year, particularly in the critical fourth quarter. Our outlook for capital gains largely levels off in 2020 and beyond; albeit, at a very high level. If the market can sustain its levels in 2020 and beyond, we will be in safe territory. To put a market correction into perspective, the nadir of gains following the Great Recession was 76% less than the prior peak, which would result in an all-else-equal a loss of about 10% of the total income tax which is 50% of the general fund. While the Great Recession was extraordinary, the early 2000s correction saw a loss of 8% of income tax just from capital gains. The lesson is that capital gains income contracts far more quickly and unpredictably than other types of income with great consequence. The full application of the revenue volatility cap serves to ameliorate that consequence. The following chart illustrates our outlook for capital gains income now relative to the September estimate.



Tax Cuts and Jobs Act (TCJA)

Our TCJA report, available at the Comptroller's website, provides a detailed analysis of the tax changes and how they flow through to State tax. In short, the TCJA reduced itemized deductions available and incentivized taxpayers to take the federal standard deduction which then requires the taxpayers to take the far less lucrative State standard deduction. Due to the elimination of deductions, we will never know for sure exactly how much State revenue was generated from the TCJA. We can use longitudinal taxpayer level data to make safe estimates.

We estimate that, due to the TCJA, State and local collections increased an additional $468.6 million in tax year 2018. That compares to our initial estimate of $452.5 million, just a

3.6% variance. We might be underestimating the impact of the lost deductions to those that still itemize, as such we have put an upward bound of $532.1 million on our tax year 2018 estimate. We find that between 77% and 87% of the additional revenue was due to taxpayers switching from the itemized to standard deduction. We also find that this incidence fell most heavily on middle income and lower-middle income earners.

The timing for how we realize the TCJA dollars is uncertain. We believe that for tax year 2018 the money was entirely recognized by reduced refunds or increased payments with returns; to which, taxpayers were not impacted until the time of filing. For those that make estimated payments, paying to the safe harbor means that some TCJA will materialize in the estimated payments, but the rest is uncertain. One of the key questions is: will taxpayers amend their withholding, or will they accept a lower level of refund? We have assumed that the vast majority of taxpayers will not amend their withholding.

Table 5

Individual Income Tax Revenues

Fiscal Years 2018 – 2021

($ in thousands)

	2018 Actual	2019 Actual	2020 Estimated	2021 Estimated
Gross Receipts (State & Local)				
Withholding	13,803,174	14,248,409	15,063,830	15,782,023
Estimated Payments	2,257,208	2,119,004	2,483,429	2,568,516
Payments with Final Returns	1,787,832	2,442,064	2,177,361	2,215,519
Fiduciary	131,596	156,487	168,832	177,451
Gross Receipts	17,979,810	18,965,964	19,893,453	20,743,508
Refunds	(2,742,076)	(2,554,160)	(2,808,766)	(2,950,346)
Net Receipts (State & Local)	15,237,734	16,411,804	17,084,687	17,793,162
Local Reserve Account	(5,728,268)	(6,137,714)	(6,495,623)	(6,761,342)
Income Tax Check-offs	(1,690)	(1,738)	(1,738)	(1,738)
Net General Fund	9,507,776	10,272,352	10,587,327	11,030,082

Figures may not sum to totals due to rounding.

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Corporate Income Tax

General Fund Corporate Income Tax (CIT) revenues increased 25.9% to $1.033 billion in fiscal year 2019. Gross receipts increased 24.8%, while refunds increased at a lesser rate of 18.9%. The extraordinary growth in gross receipts is predominately due to income shifting as a result of tax planning incentives from the *Tax Cuts and Jobs Act* (TCJA). Taxpayers, both individual and corporate, were incentivized to shift income out of tax year 2017 and into tax year 2018, and in the opposite direction for expenses. Naturally, corporations are better able to shift income and expenses than individuals.

However, we do expect significant ongoing revenue growth due to the tax changes in the TCJA. Generally, while the federal reforms provided large amounts of tax relief through reduced rates, taxable income was actually increased; that increase in taxable income is what flows through to Maryland. We have estimated increases of $72.4 million and $128.6 million to net receipts for fiscal years 2020 and 2021, respectively, due to the flow through of federal law changes.

Through November, gross receipts are up 1.7% while refunds are down 3.6%, resulting in net receipt growth of 3.9%. We expect to lose ground as the fiscal year goes on because revenue collections were unusually high in the latter half of fiscal year 2019 as corporations made their final payments for tax year 2018. Net receipts are therefore forecast to decline by 2.1% in fiscal year 2020 before growing by 8.9% in fiscal year 2021. The elevated rate of growth in fiscal year 2021 is largely a result of TCJA provisions.

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Table 6

Corrupate Income Tax Revenues

Fiscal Years 2018 – 2021

($ in thousands)

	2018 Actual	2019 Actual	2020 Estimated	2021 Estimated
Gross Receipts	1,228,042	1,532,707	Note 1	Note 1
Refunds	(194,867)	(231,656)	Note 1	Note 1
Net Receipts	1,033,175	1,301,050	1,273,537	1,386,898
Transportation Trust Fund	(150,784)	(189,878)	(185,863)	(202,407)
Higher Education Investment Fund	(61,991)	(78,063)	(76,412)	(83,214)
Net General Fund	820,401	1,033,109	1,011,263	1,101,278

Note 1: Estimates are only for net receipts
Figures may not sum to totals due to rounding.

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Sales and Use Taxes

The second largest component of general fund revenues grew 3.6% in fiscal year 2019 after growing at a 2.3% rate in fiscal year 2018. To date, revenues are up 5.4% for the fiscal year. However, collections from remote sellers began in November of 2018, resulting in a favorable comparison of growth year to date this fiscal year. Excluding revenues from Remote Sellers from both fiscal years, revenue growth year to date would be 3.2%. While growth in SUT revenue was strong in FY 2019 relative to recent trends, we expect growth to slow going forward. Revenue in FY 2020 is forecast to grow 2.9%, and slow to 1.8% in FY 2021.

Near term improvement in the tax was driven primarily by the fiscal stimulus provided by a combination of the federal tax cuts and spending increases. The Supreme Court's decision of *South Dakota v. Wayfair, Inc.,* which essentially allows states to tax those sellers with business in the state regardless of their location, and a new law requiring online marketplace facilitators to collect sales tax on sales through their platforms serves as an ongoing boost for revenues but only a near-term boost for revenue growth. These recent changes will not contribute in an ongoing manner to general fund revenue growth because statute provides that any collections above $100 million go to a special fund rather than the general fund. Without the federal stimulus and revenue from online retailers, baseline growth would have remained sluggish. In fiscal year 2021, we expect a return to this trend as economic growth slows.

High consumer confidence has certainly benefited sales tax. The chart below shows two measures of US consumer confidence levels with respect to the nation's general economic situation. Both the Consumer Confidence Index (CCI) and the Consumer Sentiment Index (CSI) show consumer confidence at near highs for this expansion.

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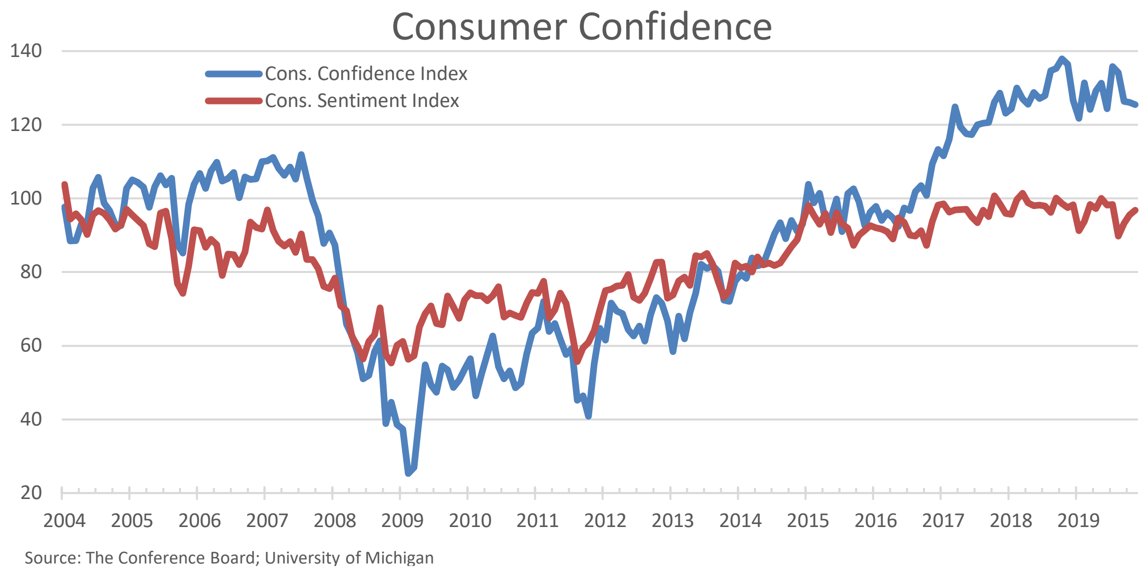
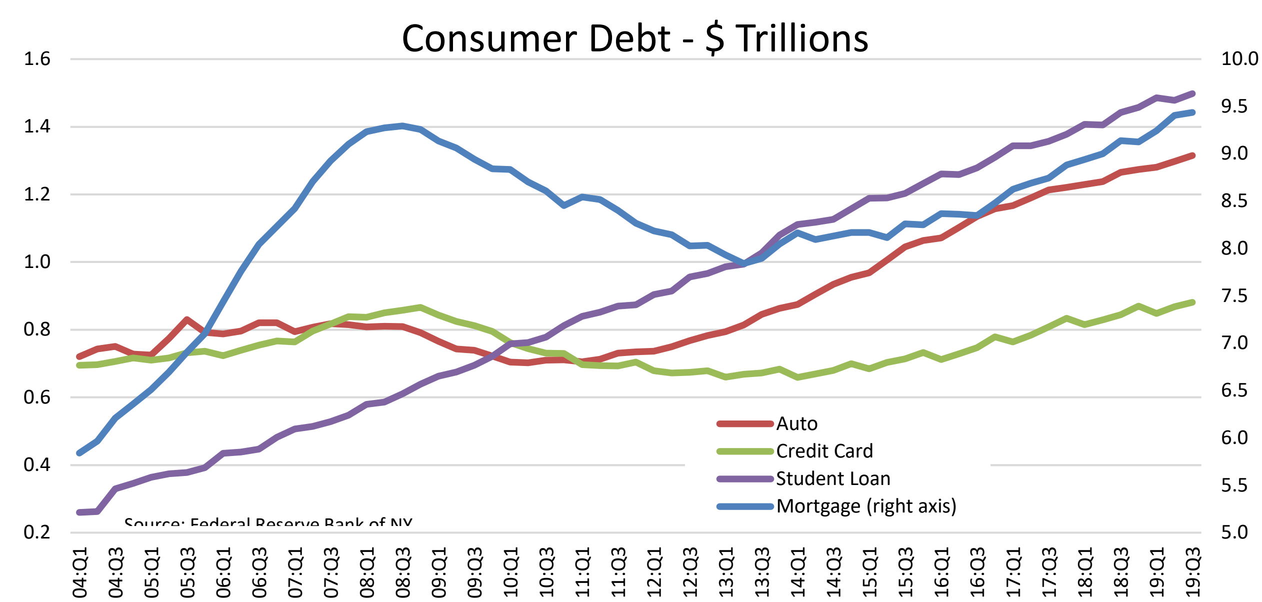


This is likely due to positive conditions in the labor market. Job growth has been strong for the last several years and unemployment is low. In fact, consumption growth has been the key driver, followed by government spending, of continued GDP growth over 2019. According to the most recent data, consumption grew 2.5% year over year in the third quarter of 2019, in line with recent trends. Investment growth slowed to just 0.6%, while net exports continued to decline. That being said, the most recent data is liable to be significantly revised over time, as is typical.

One companion of rising confidence and incomes is a willingness to take on additional debt, as displayed in the chart below (along with a constant rise in student loan debt).



Credit card and mortgage debt are essentially at their pre-Great Recession peaks However, this debt is spread among a greater number of consumers and is growing at a slower pace than in the lead up to the Great Recession. Furthermore, debt is generally growing in line with income growth, which suggests a level of sustainability for current trends. Corporate debt levels are a bit more concerning. That said, increasing debt for the consumer generally benefits the sales tax. Auto and especially student loan debt continue to reach new highs and this spending is not taxed under the SUT. Though to the extent an increase in student loans results in an increase in educational attainment, future spending should increase as a reflection of higher incomes.

Despite the relative strength of consumption and consumer balance sheets (at least relative to recent history), the outlook for the SUT is for a continuation of its sluggish trend. The disconnect between consumption and SUT revenue has several causes that all relate to the same fundamental issue. Namely, that the SUT applies to "tangible goods" and a select few services specifically included in statute.

Household consumption spending has been shifting away from goods towards services, the vast majority of which are not taxable. This shift accelerated in the mid-2000s. In 2004, goods made up 35.2% of Marylanders' total personal consumption expenditures; in 2018 they made up 28.9%. When the SUT was first created, in 1947, goods made up 61% of consumer expenditures nationwide. Furthermore, the proportion of goods that is taxable is itself shrinking due to the rise of digital goods, which are not tangible and therefore not taxable.

The SUT base is therefore becoming a smaller share of overall consumption spending. As a result, the State collects less SUT per dollar of consumption spending than in the past. The shrinking tax base also increases the volatility of SUT revenue to the business cycle. In times of economic stress, consumers are better able to delay or forego consuming taxable goods than services. It is also worth noting that wealthier households typically consume a greater share of services than poorer households because spending on essential goods is a smaller share of income for the wealthy.

Demographic factors elaborated on in our Economic Outlook section compound the erosion of the SUT base. Older consumers shift their spending to untaxed services, such as out-of-pocket healthcare expenses. Additionally, beyond middle age, income tends to decline, with a resulting decline in overall consumption spending. This factor could explain why the shift away from goods consumption accelerated over the past 15 years. Lastly, overall inflation in consumer prices in this expansion has been driven entirely by inflation in the price of services, whereas goods prices have fallen over the past five years. It is great news for consumers that goods prices have been steady to falling even as incomes rise, but it is to the negative for SUT collections. These issues have little impact on SUT growth from one year to the next. But they explain the initially puzzling disconnect experienced between income growth and SUT revenue growth over this expansion.

Table 7

Sales and Use Tax Revenues

Fiscal Years 2018 – 2021

($ in thousands)

	2018 Actual	2019 Actual	2020 Estimated	2021 Estimated
Consumer	3,378,053	3,528,970	3,689,759	3,780,400
Construction	671,152	700,749	732,708	749,644
Capital Goods	298,231	307,214	325,720	331,544
Utilities	372,507	356,501	336,739	331,004
Gross Collections	4,719,943	4,893,433	5,084,926	5,192,592
Assessments	8,100	8,093	8,093	8,093
Refunds	(11,864)	(12,835)	(13,156)	(13,485)
Transportation Trust Fund	(31,691)	(34,471)	(35,160)	(35,863)
Other	(38,733)	(42,131)	(42,973)	(43,833)
Blueprint for MD's Future Fund			(49,866)	(66,921)
Total General Fund	4,645,756	4,812,090	4,951,863	5,040,583

Figures may not sum to totals due to rounding.

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Remaining Supporting Tables

Table 8A

Traditional Lottery - Sales

Fiscal Years 2018 – 2021

($ in thousands)

	2018 Actual	2019 Actual	2020 Estimated	2021 Estimated
Pick 3	235,402	245,627	245,627	245,876
Pick 4	296,207	312,177	316,860	323,379
Multimatch	28,953	29,001	28,334	28,334
Instant/5 Card Cash	756,535	818,645	853,696	883,335
Keno/Racetrax	483,994	498,058	522,046	530,816
Bonus Match 5	19,658	19,573	18,986	18,964
MegaMillions/Powerball	199,751	251,786	160,051	183,077
Instant Ticket Lottery Machines[1]	12,928	13,679	14,227	14,440
Cash4Life/Fast Play	13,174	12,390	22,752	28,752
Gross Sales	2,046,602	2,200,937	2,182,580	2,256,973

Note 1: Sales accounting for Instant Ticket Lottery Machines was changed to “net after payout” basis beginning fiscal year 2016
Figures may not sum to totals due to rounding.

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Table 8B

Traditional Lottery - Revenues

Fiscal Years 2018 – 2021

($ in thousands)

	2018 Actual	2019 Actual	2020 Estimated	2021 Estimated
Pick 3	98,285	87,740	101,540	98,763
Pick 4	128,798	123,862	121,389	132,751
Multimatch	8,839	9,735	9,009	9,907
Instant/5 Card Cash	119,154	131,885	131,217	136,153
Keno/Racetrax	123,267	120,929	127,436	131,124
Bonus Match 5	6,895	5,891	6,526	6,307
MegaMillions/Powerball	84,320	104,912	64,785	74,408
Instant Ticket Lottery Machines[1]	766	780	1,490	1,512
Cash4Life/Fast Play	4,646	4,319	7,706	9,880
Gross Revenue	574,970	590,052	571,099	600,805
Less: Stadium Authority Revenue	(40,000)	(40,000)	(40,000)	(35,208)
Less: Veteran's Trust Fund Revenue	(77)	(78)	(149)	(151)
Misc. Year End Adjustments	705	3,401	-	-
Less: MD Intl Race Fund	(1,000)	(1,000)	-	-
Net General Fund	534,598	552,375	530,950	565,446

Figures may not sum to totals due to rounding.

Table 9

Business Franchise Tax Revenues

Fiscal Years 2018 – 2021

($ in thousands)

	2018 Actual	2019 Actual	2020 Estimated	2021 Estimated
Public Service Company Franchise Tax	145,437	146,303	143,462	145,782
Filing Fees	100,509	98,762	102,712	66,250
Net General Fund	245,946	245,065	246,174	212,032

Table 10

Insurance Premium Tax Revenues

Fiscal Years 2018 – 2021

($ in thousands)

	2018 Actual	2019 Actual	2020 Estimated	2021 Estimated
Insurance Premium Tax	365,459	364,038	382,638	391,436
Less: MD Health Benefit Exchange Distributions	(28,216)	(28,870)	(33,989)	(35,000)
Net General Fund	337,243	335,168	348,649	356,436

Table 11

Estate and Inheritance Tax Revenues

Fiscal Years 2018 – 2021

($ in thousands)

	2018 Actual	2019 Actual	2020 Estimated	2021 Estimated
Collateral Inheritance Tax	58,297	63,732	65,493	67,217
Direct Inheritance Tax	42	106	72	75
Estate Tax	156,044	116,602	131,382	109,218
Net General Fund	214,383	180,440	196,947	176,511

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Table 12

Hospital Patient Recoveries

Fiscal Years 2018 – 2021

($ in thousands)

	2018 Actual	2019 Actual	2020 Estimated	2021 Estimated
Medicaid	17,891	18,385	19,000	19,000
Medicare	7,437	7,577	6,992	7,722
Insurance and Sponsors	3,391	4,029	1,400	1,457
	28,719	29,991	27,392	28,179
Disproportionate Share	34,611	29,045	18,901	18,755
Medicaid Cost Settlements	6,473	5,261	2,000	2,000
Net General Fund	69,803	64,297	48,293	48,934

Figure may not sum to totals due to rounding

Table 13

Excise Tax Revenues

Fiscal Years 2018 – 2021

($ in thousands)

	2018 Actual	2019 Actual	2020 Estimated	2021 Estimated
Cigarette Tax	331,398	315,376	307,239	298,992
Other Tobacco Products Tax	41,337	41,321	41,321	42,560
Net General Fund Tobacco	372,735	356,697	348,560	341,553
Distilled Spirits Tax	17,007	17,437	17,942	18,224
Wine Tax	6,473	6,374	6,342	6,374
Beer Tax	8,201	8,354	8,212	8,170
Miscellaneous Licenses	435	472	484	494
Subtotal Alcoholic Beverages Taxes	32,116	32,638	32,981	33,262
Less: MD Wine and Grape Promotion Fund	(85)	(104)	(103)	(104)
Net General Fund Alcoholic Beverages	32,032	32,534	32,878	33,159

Figures may not sum to totals due to rounding.

Table 14

General Fund Court Revenues

Fiscal Years 2018 – 2021

($ in thousands)

	2018 Actual	2019 Actual	2020 Estimated	2021 Estimated
District Courts	62,990	59,859	58,537	57,455
Clerks of the Court	31,765	30,204	31,754	31,392

Table 15

General Fund Interest Earnings

Fiscal Years 2018 – 2021

($ in thousands)

	2018 Actual	2019 Actual	2020 Estimated	2021 Estimated
Interest Earnings	32,001	50,240	50,000	52,368

Table 16

Miscellaneous Revenues

Fiscal Years 2018 – 2021

($ in thousands)

	2018 Actual	2019 Actual	2020 Estimated	2021 Estimated
Recording Organization & Capitalization Fees	15,968	16,287	16,970	17,309
Excess Fees of Office	(208)	481	490	500
Unclaimed Property	112,999	99,223	99,000	99,000
Local Income Tax Reimbursement	15,428	16,565	19,517	19,517
Uninsured Motorist Penalty Fees	42,971	45,924	45,900	45,900
Federal Retiree Drug Subsidy	10,809	9,462	7,573	8,000
Miscellaneous Revenues and Transfers	3,911	637	2,750	2,750
Net General Fund	201,876	188,579	192,200	192,976

Figures may not sum to totals due to rounding.

Table 17

Miscellaneous Agency Revenues

Fiscal Years 2018 – 2021

($ in thousands)

	2018 Actual	2019 Actual	2020 Estimated	2021 Estimated
PSC Fines, Citations and Filing Fees	85	85	85	87
Legislature	31	25	30	30
Workers' Compensation	52	54	54	54
Public Defender	1,828	606	160	91
Attorney General	30,939	32,862	31,188	31,577
Executive & Administrative Control	7,561	8,383	8,502	8,630
Financial & Revenue Administration	19,248	24,266	18,986	18,312
Budget & Fiscal Administration	3,529	2,791	4,309	4,841
General Services	1,565	389	372	378
Natural Resources	23	113	104	105
Agriculture	97	227	129	131
Health & Mental Hygiene	33,095	85,480	32,655	32,610
Human Resources	1,666	1,342	1,352	1,352
Labor, Licensing & Regulation	8,181	4,474	5,687	5,770
Public Safety & MD State Police	11,034	13,532	12,738	10,534
Public Education	9,175	8,175	8,673	8,809
Housing and Community Development	411	411	422	427
Business & Economic Development	78	710	385	389
Environment	22,477	591	600	610
Juvenile Services	88	1	31	31
Alcoholic Beverage Licenses	1,476	1,512	1,542	1,573
Net General Fund	152,637	186,030	128,005	126,341

Figures may not sum to totals due to rounding.

Table 18

Transportation Revenues

Fiscal Years 2018 – 2021

($ in thousands)

	2018 Actual	2019 Actual	2020 Estimated	2021 Estimated
Department of Transportation				
Registrations	390,056	403,495	401,800	411,000
Licenses	44,623	49,268	60,100	54,300
Med-Evac Surcharge	72,231	73,774	73,201	74,877
Trauma Physician Services Surcharge	12,445	12,708	12,918	13,214
Miscellaneous Motor Vehicle Fees	192,088	197,675	196,361	194,871
Vehicle Emission Inspection Fees	31,964	31,397	31,606	31,763
Security Interest Filing Fees – Special Funds	12,080	12,367	12,600	12,800
Hauling Fees	11,015	11,265	11,100	11,200
Special License Tags – Special Funds	4,673	4,844	5,200	5,300
Titling Tax	869,309	916,536	935,000	952,000
Sales Tax on – Rental Vehicles	31,691	34,471	35,160	35,863
	1,672,175	1,747,800	1,775,046	1,797,188
Motor Fuel Vehicle Tax	738,022	741,851	753,300	759,300
Road Tax	6,393	7,088	-	-
Decals & Permits	177	181	-	-
Sales Tax Equivalent	287,086	321,741	336,725	339,423
Indexing	52,702	69,540	86,586	103,443
	1,084,380	1,140,401	1,176,611	1,202,166
Total	2,756,555	2,888,201	2,951,657	2,999,354

Figures may not sum to totals due to rounding.

Table 19

Casino Revenues

Fiscal Years 2018 – 2021

($ in millions)

Video Lottery Terminals	FY 2018	FY 2019	FY 2020E	FY 2021E
Education Trust Fund	401.8	447.4	458.5	447.3
Casino Operators	491.0	528.8	543.8	550.9
Local Impact Grants	56.8	61.1	62.7	63.5
Small, Minority, and Women – Owned Business	0.0	0.0	0.0	17.2
Purse Dedication	61.2	65.9	67.5	68.4
Race Tracks Facility Renewal Account	10.0	10.8	11.0	11.2
State Lottery Agency	10.5	11.2	11.6	11.7
General Fund	15.3	0.0	0.0	0.0
Total Video Lottery Terminals	1,046.7	1,125.2	1,155.1	1,170.1

Table Games	FY 2018	FY 2019	FY 2020E	FY 2021E
Education Trust fund	94.8	95.3	93.3	94.6
Casino Operators	505.8	508.2	497.5	504.7
Local Impact Grants	31.6	31.8	31.1	31.5
Total Table Games	632.3	635.2	621.9	630.9

Miscellaneous	FY 2018	FY 2019	FY 2020E	FY 2021E
Education Trust Fund	2.8	3.2	0.0	0.0

Total	FY 2018	FY 2019	FY 2020E	FY 2021E
Education Trust Fund	499.4	545.9	551.8	541.9
Casino Operators	996.9	1,037.0	1,041.3	1,055.6
Local Impact Grants	88.4	92.8	93.7	95.0
Small, Minority, and Women – Owned Business	0.0	0.0	0.0	17.2
Purse Dedication	61.2	65.9	67.5	68.4
Race Tracks Facility Renewal Account	10.0	10.8	11.0	11.2
State Lottery Agency	10.5	11.2	11.6	11.7
General Fund	15.3	0.0	0.0	0.0
Total	1,681.7	1,763.6	1,777.0	1,801.0

Figures may not sum to totals due to rounding.

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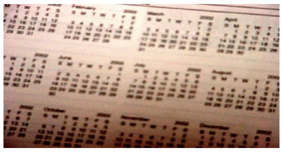

Five Year Forecast

These estimates are based on the current economic outlook for the U.S. and Maryland economies. The broader economic forecast calls for GDP growth to slow in the short run due to waning fiscal stimulus and the protracted trade war. Growth is expected to return to around 2.0% in the out-years, which is around the consensus rate of sustainable growth over the medium term. Beginning in 2020, real GDP growth is expected to slow to around 1.5-2.0% a year, in line with recent trends. The long run forecast is shaped by demographic trends, particularly the aging of the population: a smaller proportion of the population will be working age, defined here as 25 to 64 years old.

Employment has been growing faster than the working age population, meaning a larger portion of the population is in the labor force than a few years ago. However, despite significant improvement in the labor market, wage growth barely budged from its subdued rate. We therefore expect wage growth to rise only gradually, roughly in line with long term trends in demographics and productivity. Therefore, consistent with the broader picture, economic and wage growth are expected to remain lower than in recent past expansions.

Productivity growth is expected to remain low, largely the result of the age distribution of the labor force. In short, the two largest generations in the labor force, boomers and millennials, are at opposite ends of the age distribution when it is middle aged workers who are most productive on average. Productivity should increase as young workers gain experience, but given the forecast of slowing employment growth, the net effect on GDP depends on the magnitude of each factor.

At the time of this forecast, the Federal Reserve is anticipated to hold its benchmark interest rate steady in the short run. Interest rates generally are expected to remain low by historical standards for the foreseeable future. As the economy slows, monetary policymakers will have the challenging task of balancing policy between the extremes of a recession and an inflationary boom.

Recessions cannot be predicted with useful accuracy or consistency – a result consistent with economic theory. Therefore, our outlook does not call for a recession. However, we view the risk of a recession in the next five years as elevated, in large part due to the aforementioned challenges in an environment of low growth. This expansion is the longest on record in US history. Our outlook therefore calls for this expansion to be the longest by five more years at least, an impressive feat. In evaluating this risk, it is important to note that time since the last recession is not a reliable indicator of when the next one will occur. The important take away is that the recovery phase of this expansion is over, a milestone which, in US history, has typically been followed within a few years by a recession.

Table 20

Long Term Economic Forecast

Primary Indicators

Calendar Year	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
US Real GDP (2009 $ in billions)	18,108	18,638	19,068	19,462	19,846	20,177	20,485
	2.4%	*2.9%*	*1.6%*	*2.1%*	*2.0%*	*1.7%*	*1.5%*
US Non-Agricultural Employment (thousands)	146,611	149,064	151,383	153,154	154,303	154,973	155,102
	1.6%	*1.7%*	*1.3%*	*1.2%*	*0.8%*	*0.4%*	*0.1%*
US Personal Income ($ in billions)	16,831	17,566	18,359	19,220	20,066	20,937	21,809
	4.4%	*4.4%*	*4.5%*	*4.7%*	*4.4%*	*4.3%*	*4.2%*
Consumer Price Index (% Δ from prior year)	2.1%	2.2%	2.0%	1.3%	2.3%	2.4%	2.5%
US 10 Year Treasury Bond Yeild	2.3%	2.9%	2.1%	2.1%	2.7%	2.9%	3.0%
MD Total Non-Agricultural Employment (thousands)	2,726	2,750	2,772	2,790	2,803	2,816	2,830
	1.1%	*0.9%*	*0.8%*	*0.6%*	*0.5%*	*0.5%*	*0.5%*
MD Personal Income ($ in millions)	364,576	382,829	397,480	411,386	426,802	443,600	460,760
	2.9%	*5.0%*	*3.8%*	*3.5%*	*3.7%*	*3.9%*	*3.9%*

Source: Board of Revenue Estimates and IHS Markit (December 2019 Forecast)

Table 21

Maryland General Fund Revenues

Fiscal Years 2018- 2024

($ in thousands)

	2019 Actual	2020 Estimate	2021 Estimate	2022 Estimate	2023 Estimate	2024 Estimate	2025 Estimate
Income Taxes							
Individual	10,272,352	10,587,327	11,030,082	11,419,585	11,873,234	12,353,631	12,854,219
Corporation	1,033,109	1,011,263	1,101,278	1,200,089	1,249,776	1,312,801	1,370,168
TOTAL	11,305,461	11,598,589	12,131,360	12,619,674	13,123,009	13,666,432	14,224,387
Sales and Use Taxes	4,812,090	4,951,863	5,040,583	5,150,581	5,255,995	5,374,830	5,496,352
State Lottery	552,375	530,950	565,446	578,915	592,691	606,920	621,676
Franchise, Excise, License, Fee	1,729,113	1,681,997	1,629,156	1,638,945	1,654,799	1,671,118	1,687,998
ONGOING GENERAL FUND REVENUI	18,399,039	18,763,399	19,366,545	19,988,115	20,626,495	21,319,300	22,030,413
Excellence in Education Fund [1]	(200,000)	-	-	-	-	-	-
Revenue Volatility Cap [2]	-	(42,218)	(193,665)	(346,800)	(301,837)	(259,867)	(262,466)
TOTAL GENERAL FUND REVENUES	18,199,039	18,721,181	19,172,880	19,641,315	20,324,658	21,059,433	21,767,947

[1] The 2018 BRFA diverted $200M from individual income tax revenues to the Commission on Innovation and Excellence in Education Fund

[2] Established by Chapters 4 & 550 of the 2017 Legislative Session and amended by the 2018 BRFA

Table 22

Revenues From Maryland's Casinos

Fiscal Years 2019- 2025

($ in thousands)

	2019 Actual	2020 Estimate	2021 Estimate	2022 Estimate	2023 Estimate	2024 Estimate	2025 Estimate
Video Lottery Terminals							
Education Trust Fund	447,422	458,525	447,271	452,425	458,178	464,016	469,938
Licensee	528,811	543,798	550,921	557,341	564,472	568,036	575,344
Local Impact Grants	61,085	62,651	63,464	64,203	65,026	66,780	67,636
Business Development	33	-	17,169	17,369	17,593	18,213	18,446
Purse Dedication	65,856	67,547	68,421	69,220	70,111	72,851	73,785
Racetrack Renewal	10,770	11,048	11,191	11,322	11,469	12,142	12,297
MD Lottery & Gaming Control	11,239	11,551	11,701	11,837	11,988	12,142	12,297
General Fund	-	-	-	-	-	-	
Subtotal	1,125,215	1,155,120	1,170,140	1,183,718	1,198,837	1,214,178	1,229,743
Table Games							
Education Trust Fund	95,279	93,283	94,636	95,829	97,042	98,274	99,523
Licensee	508,155	497,510	504,723	511,089	517,560	524,127	530,792
Local Impact Grants	31,760	31,094	31,545	31,943	32,347	32,758	33,174
Subtotal	635,194	621,888	630,904	638,862	646,950	655,159	663,490
Miscellaneous							
Education Trust Fund	3,230	-	-	-	-	-	-
Subtotal	3,230	-	-	-	-	-	-
Total							
Education Trust Fund	545,931	551,808	541,907	548,254	555,221	562,289	569,461
Licensee	1,036,966	1,041,308	1,055,645	1,068,430	1,082,032	1,092,163	1,106,136
Local Impact Grants	92,844	93,746	95,009	96,146	97,374	99,538	100,810
Business Development	33	-	17,169	17,369	17,593	18,213	18,446
Purse Dedication	65,856	67,547	68,421	69,220	70,111	72,851	73,785
Racetrack Renewal	10,770	11,048	11,191	11,322	11,469	12,142	12,297
MD Lottery & Gaming Control	11,239	11,551	11,701	11,837	11,988	12,142	12,297
General Fund	-	-	-	-	-	-	-
Total	1,763,639	1,777,008	1,801,044	1,822,579	1,845,787	1,869,337	1,893,233