



FY 2020

Economic and Revenue Outlook

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Receipts Overview

The Economic and Revenue Outlook provides detailed information on the economic and receipt projections underlying the FY 2020 Executive Budget. The economic analysis and forecasts presented in this volume are also used in the development of the expenditure projections where spending trends are impacted by economic conditions.

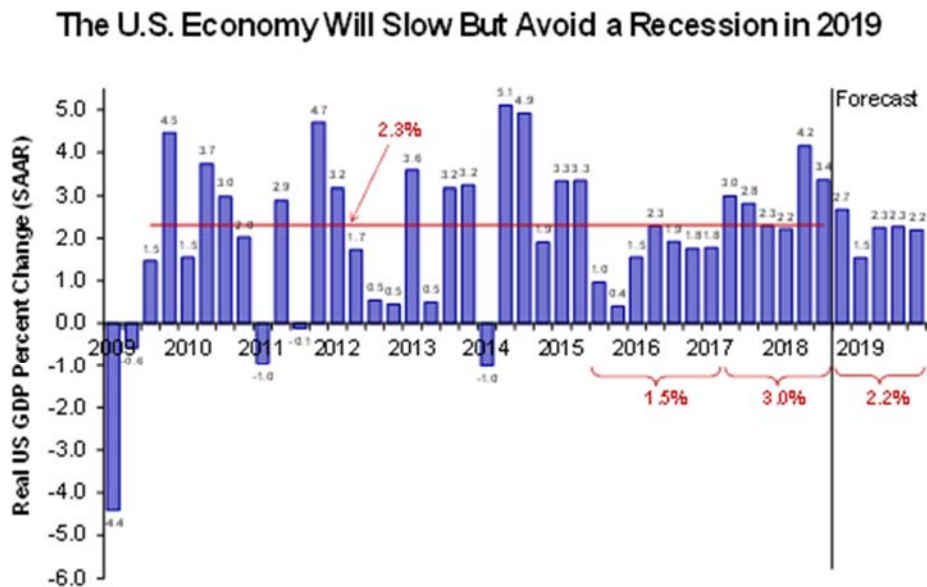
Executive Budget Financial Plan receipts include a variety of taxes, fees and assessments, charges for State-provided services, Federal grants, and other miscellaneous receipts. The Economic and Revenue Outlook includes receipts information required by Article VII of the State Constitution and Section 22 of the State Finance Law and provides information to supplement extensive reporting enhancements undertaken in recent years. This information will aid the Legislature and the public in fully understanding and evaluating the economic assumptions and receipts estimates underlying the FY 2020 Executive Budget. The multi-year tax and miscellaneous receipts estimates are prepared by DOB with the assistance of the Department of Taxation and Finance (DTF) and other agencies that collect State receipts, and are predicated on economic analysis and forecasts. To the extent they are material, sources of receipts not referenced in this volume are discussed in the presentations of the agencies primarily responsible for executing the programs financed by such receipts. The *Economic, Revenue and Spending Methodologies* provide a comprehensive review of the methods used in determining the economic and tax receipt projections and are available at the Division of the Budget's website at www.budget.ny.gov.

The Economic and Revenue Outlook is presented in the following general sections:

- **Financial Plan Receipts and Projections:** Provides a summary of Financial Plan receipts for the current year and FY 2020 by tax category and fund type.
- **Revenue Actions:** Summarizes the revenue actions proposed with the FY 2020 Executive Budget.
- **Economic Backdrop:** Describes DOB's forecast of key economic indicators for the national and New York State economies.
- **Comparison of New York State Tax Structure to Other States:** Compares the New York tax structure and burden relative to that of other states.
- **Tax Receipts Explanation:** Provides a detailed report for each tax and miscellaneous receipts source describing historical receipts and projections for the current and upcoming budget years, the impact of legislation proposed with the FY 2020 Executive Budget, and significant legislation that has been enacted.
- **Dedicated Fund Tax Receipts:** Provides a report on dedicated tax receipts estimates, with an emphasis on transportation-related dedicated taxes.
- **Audit and Compliance Receipts:** Provides data and analysis to better understand receipts collections.

Economic Outlook

Main Street and Wall Street displayed an extraordinary divergence in the fourth quarter of 2018. While U.S. households were enjoying a robust holiday shopping season and the strongest employment and average hourly earnings growth of the year, Wall Street was teetering on the edge of a bear market and displaying a fragility and volatility unseen in almost three years. That volatility stemmed from a wall of worry that included a weakening global economy, declining oil prices, risk of a monetary policy error, a government shutdown, and the vagaries of an administration that appears to have lost its way. Unfortunately, the bricks in that wall only solidified as we entered 2019, with equity markets presaging a very different environment than that of 2017 and 2018. The global economy is weakening, and world trade is contracting, with the weakness emanating from both Europe and China and radiating out from those two economic poles. Financial market conditions are tightening in lockstep with the Federal Reserve’s interest rate normalization policy, while the yield curve, as measured by the difference between the 10-year and the 3-month Treasury yields – seen as an often-reliable indicator of looming recession when inverted – is flatter than it has been in more than a decade. The U.S. dollar remains near its two-year peak.



Source: Moody’s Analytics; DOB staff estimates.

Conditions toward the end of 2018 are reminiscent of those of the first quarter of 2016. In both cases, the turmoil was initiated by anticipation of an imminent Federal Reserve action that was feared could adversely affect the economy and earnings. In early 2016, we were also on the brink of a synchronized global slowdown; oil and equity market prices had plummeted and a global flight to safety sent the 10-year Treasury yield down and the U.S. dollar up. But a recession was avoided in 2016 and, as indicated in the graphic above, is expected to be averted in 2019 as well. The household sector is believed to have carried a substantial degree of momentum into the new year.

Oil prices appear to be stabilizing above the \$50 per barrel mark, and the Federal Reserve is likely to take a pause during the first six months of this year, and longer if need be. Consequently, there is little risk that the current expansion will fail to become the longest since 1850 when it crosses the July 1, 2019, threshold.

However, as the graphic also indicates, the national economy is projected to slow significantly in 2019. As global demand for U.S. exports continues to weaken, business sector spending will follow suit resulting in weaker employment and wage growth. Moreover, the stimulative impact of the Tax Cuts and Jobs Act (TCJA) has already shown signs of petering out. These developments will filter through to both consumer spending and business investment. DOB projects real growth in U.S. GDP of 2.4 percent for 2019, following growth of 2.9 percent for 2018. By 2020, barring any additional adverse developments that increase the risk of recession, economic growth is expected to gradually drift downward toward its long-run potential growth of just below 2 percent. However, whenever the economy is in a state of weakening momentum, the economy's vulnerability to such negative shocks is heightened, as is the risk to the forecast.

The New York State labor market continues to outperform historical averages, with labor shortages emerging in every region and the State unemployment rate posting its lowest level in the history of the monthly series going back to 1976. But with both national and global economic growth stepping down in 2019, the State economy will not be immune. National and global trends tend to be amplified in the financial markets, which creates a disproportionate amount of risk for New York. Given the international flavor of the preponderance of firms in the major stock indexes, it is no surprise that equity markets have been telegraphing the threat to corporate earnings from weakening global growth. Financial firm equity prices are among those that have suffered substantial declines. These developments represent a substantial risk to finance and insurance sector bonuses, despite strong revenue growth during the first three quarters of 2018.

The State's private sector labor market expanded an estimated 1.4 percent in 2018, only one tenth of one percentage point below the 2017 pace, led by the healthcare, management and administrative services, information, education, construction, and transportation and warehousing sectors. Tourism continues to be one of the State's critical industries, but the global slowdown and the strong dollar likely altered the mix between domestic and international visitors, who tend to spend more per visit. Moreover, the State's weakening real estate market has also been exacerbated by off-shore developments, particularly those in China. State private sector job growth of 1.2 percent is projected for 2019, following estimated growth of 1.4 percent in 2018. Growth in government jobs of 0.4 percent is expected to result in slightly lower growth in total State employment of 1.1 percent for 2019.

Given the current degree of volatility, the shape of the yield curve, and the recent hit to finance sector equity prices, there is reason to maintain a cautious outlook for bonus payments for both the season in progress and for FY 2020. Moreover, one-time events that occurred during the FY 2018 bonus season, including both the December 31, 2017 deadline for the repatriation of hedge fund income held off-shore since the 2008-2009 financial crisis and the 2018 federal corporate tax cut, likely resulted in large one-time payouts for both wage and nonwage income that would not be repeated this year. Consequently, DOB projects a decline in finance and insurance sector bonuses of 9.6 percent and a decline in overall bonuses of 4.7 percent for the State fiscal year in

progress. These declines are estimated to result in overall State wage growth of 3.3 percent for FY 2019, down from 4.7 percent from the prior year. Finance and insurance sector bonuses are expected to fall another 1.2 percent in FY 2020, with overall bonuses falling 0.6 percent, contributing to total wage growth of 3.6 percent. Overall personal income growth of 4.1 percent is estimated for both FY 2019 and FY 2020; growth for both years is down from strong FY 2018 growth of 5.7 percent, which is estimated to have been boosted by one-time payments. The projected weakness in bonuses highlights the risk posed by this all-important sector to the State economy and revenues. But with finance and insurance sector employment still well below its pre-recession peak, recent employment and wage trends also highlight the State's success in diversifying away from this volatile sector since the financial crisis.

For further details, please see the *Economic Backdrop* section of this volume.

The Revenue Situation

All Funds estimated tax receipts decline of 2.2 percent in FY 2019 is attributable to:

- A decline in personal income tax receipts of 2.6 percent. This is due almost entirely to the boom in estimated payments in December 2017, which exceeded prior plan estimates by \$2.5 billion, resulting in total tax year (TY) 2017 estimated payments growth of 31.3 percent, and causing a projected timing loss of \$1.9 billion in April 2019 estimated payments. Absent this timing-related shift, personal income tax receipts would have risen 4.3 percent. Unlike a typical tax year, taxpayers were incentivized to accurately reflect, and to the maximum extent possible pay, such liability by December 31, 2017 given the significant loss of federal deductibility of state and local tax payments after TY 2017. The sunset of a federal ten-year window to repatriate foreign hedge fund earnings also helped to create an inflated FY 2018 base;
- Consumption/use tax growth of 4.4 percent, most heavily influenced by robust sales tax growth of 4.9 percent and highway use tax refunds returning to historical averages, offset by a continuing greater-than-trend decline in cigarette consumption;
- An increase in business tax receipts (8.1 percent growth) from a rebound in audit collections, moderate corporate profits growth, lack of the corporate franchise tax rate cut embedded in TY 2016, insurance premiums tax growth associated with a growing economy and reduced insurance tax credit claims related to the bankruptcy of a life insurance carrier in a prior year;
- A decline in other tax receipts of 10.1 percent assuming a return to an historical trend number and average value of super-large (payments over \$25 million) estate tax payments; and
- The shift of MTA payroll tax receipts (about \$1.5 billion) to off-Budget accounting.

All Funds projected tax receipts growth of 5.7 percent in FY 2020 is attributable to:

- Personal income tax receipts growth of 5.7 percent. This reflects typically moderate withholding and current estimated tax growth of 4.6 and 7.5 percent, respectively, but is fueled by an expected growth of 19.5 percent in TY 2018 extension payments, as taxpayers reconcile the uncertainty of prior 2018 payments.
- Consumption and use tax growth of 3.8 percent, boosted by Executive Budget proposals related to vapor products, taxation of Internet-based purchases, and the repeal of an outdated exemption;
- Growth in total business tax receipts of 11.2 percent stemming from increased corporate profits growth, and higher insurance tax payments due mainly to the full implementation of a large nonprofit-to-profit conversion; and
- Growth in other tax receipts of 1.7 percent assuming moderate growth in estate and real estate transfer tax receipts.

Overall base growth (i.e. absent law changes) in tax receipts is dependent on many factors. In general, base tax receipts growth rates are determined by economic changes including, but not limited to, changes in interest rates, prices, wages, employment, non-wage income, capital gains realizations, taxable consumption, corporate profits, household net worth, real estate prices and gasoline prices. Federal law changes influence taxpayer behavior, which often alters base tax receipts. State taxes account for approximately half of total All Funds receipts.

The projections of Federal receipts generally correspond to the anticipated spending levels of a variety of programs including Medicaid, public assistance, mental hygiene, education, public health, and other activities, including extraordinary aid.

Where noted, certain tables in the following section display General Fund tax receipts that exclude amounts transferred to the General Fund in excess of amounts needed for certain debt service obligations (e.g., PIT receipts in excess of the amount transferred for debt service on revenue bonds).

Receipts Overview



The following table displays growth rates for actual and base tax receipts for FY 1996 through FY 2023. The forecast growth rates assume continued economic growth. Should a recession occur prior to FY 2023, one or more of these forecast growth rates could be much lower or negative.

ALL FUNDS ACTUAL AND BASE TAX RECEIPTS GROWTH (percent growth)			
State Fiscal Year	Actual Receipts	Base Receipts	Inflation Adjusted Base Receipts
FY 1996	2.6	3.6	0.7
FY 1997	2.0	2.5	(0.3)
FY 1998	3.7	5.6	3.6
FY 1999	7.2	7.9	6.2
FY 2000	7.5	9.1	6.7
FY 2001	7.9	10.1	6.9
FY 2002	(4.9)	(4.2)	(6.5)
FY 2003	(6.7)	(8.0)	(10.5)
FY 2004	8.5	5.8	3.2
FY 2005	13.6	11.5	8.0
FY 2006	10.3	9.3	5.6
FY 2007	9.7	12.6	9.2
FY 2008	3.7	6.6	3.5
FY 2009	(0.8)	(3.2)	(6.3)
FY 2010	(3.2)	(12.7)	(13.2)
FY 2011	5.6	3.2	1.5
FY 2012	5.6	8.1	4.9
FY 2013	3.1	4.5	2.6
FY 2014	5.1	6.1	4.6
FY 2015	1.9	4.0	2.9
FY 2016	5.1	5.2	4.8
FY 2017	(0.4)	0.2	(1.3)
FY 2018	6.6	6.5	4.6
FY 2019*	(2.2)	(1.2)	(3.3)
FY 2020**	5.7	10.5	8.2
FY 2021**	4.7	3.0	0.7
FY 2022**	4.7	4.9	2.6
FY 2023**	5.2	4.1	1.8
	Actual Change	Base Change	Adjusted Base Change
Historical Average			
FY 1996 to FY 2018	4.1	4.1	1.8
Forecast Averages			
FY 2019 to FY 2023	3.6	4.3	2.0
FY 2020 to FY 2023	5.1	5.6	3.3
Historical Recessions	(3.9)	(7.0)	(9.1)
Historical Expansions	5.8	6.4	4.1
*Estimated Receipts		**Projected Receipts	

All Funds receipts in FY 2019 are projected to total \$170 billion, 2.7 percent above FY 2018 results.

ALL FUNDS RECEIPTS (millions of dollars)											
	FY 2018 Results	FY 2019 Current	Change	FY 2020 Proposed	Change	FY 2021 Projected	Change	FY 2022 Projected	Change	FY 2023 Projected	Change
Personal Income Tax	51,501	50,144	-2.6%	53,014	5.7%	55,754	5.2%	59,025	5.9%	62,560	6.0%
Consumption/Use Taxes	16,711	17,445	4.4%	18,112	3.8%	18,938	4.6%	19,471	2.8%	20,100	3.2%
Business Taxes	7,164	7,744	8.1%	8,611	11.2%	8,784	2.0%	8,929	1.7%	9,292	4.1%
Other Taxes	2,451	2,204	-10.1%	2,242	1.7%	2,344	4.5%	2,456	4.8%	2,567	4.5%
Payroll Mobility Tax ¹	1,439	0	-100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total State Taxes	79,266	77,537	-2.2%	81,979	5.7%	85,820	4.7%	89,881	4.7%	94,519	5.2%
Miscellaneous Receipts	27,262	29,614	8.6%	27,158	-8.3%	24,707	-9.0%	25,104	1.6%	24,907	-0.8%
Federal Receipts	58,942	62,809	6.6%	63,772	1.5%	64,460	1.1%	66,187	2.7%	68,776	3.9%
Total All Funds Receipts	165,470	169,960	2.7%	172,909	1.7%	174,987	1.2%	181,172	3.5%	188,202	3.9%

¹ The FY 2019 amount does not include MTA PMT receipts as the Enacted Budget provided that the PMT be remitted to MTA without an appropriation beginning in FY 2019.

State tax receipts are projected to decrease 2.2 percent in FY 2019, owing to the factors noted above. Refer to the Personal Income Tax section herein for additional explanation of the atypical growth rate pattern for FY 2018 and FY 2019.

Consistent with the projected growth in the State economy over the multi-year Updated Financial Plan period beyond FY 2019, all tax categories are projected to exhibit underlying annual out-year growth.

After controlling for the impact of tax law changes, base tax revenue increased 6.5 percent in FY 2018, is projected to decrease by 1.2 percent in FY 2019 and increase by 10.4 percent in FY 2020.

Proposed Law Changes

The FY 2020 Executive Budget includes changes to tax law that will:

- Provide New Yorkers with protections from Federal reforms;
- Continue to support families and businesses;
- Improve the fairness of the tax system; and
- Simplify the treatment of tax exemptions for taxpayers.

Receipts Overview



The tax, gaming, and fee policy changes proposed with this Budget are reported in the summary table below.

ALL FUNDS LEGISLATION (\$ in millions)*				
	FY 2020	FY 2021	FY 2022	FY 2023
Personal Income Tax	612	3,544	4,813	5,447
Extend Higher Personal Income Tax Rates for Five Years	771	3,560	4,799	5,487
Extend Personal Income Tax Limitation on Charitable Contributions for Five Years	0	86	175	180
Extend Clean Heating Fuel Credit for Three Years	0	0	(6)	(6)
Permanently Extend Tax Shelter Reporting; Extend Preparer Penalties for 5 years; Impose Additional Preparer Penalty	14	18	18	18
Expand the Employee Training Incentive Program (ETIP) Credit	0	0	0	0
Close the Carried Interest Loophole	0	0	0	0
Include Certain New York State Gambling Winnings in Nonresident New York State Income	0	1	1	1
Increase Tax Return Audits	12	120	120	120
Make e-File Mandate Permanent	0	0	0	0
Make Technical Changes to the Farm Workforce Retention Credit	0	0	0	0
Cap Annual Growth in STAR Exemption Benefits at Zero Percent - Credit Portion	(60)	(119)	(175)	(238)
Lower Basic STAR Exemption Income Eligibility Requirement - Credit Portion	(125)	(122)	(119)	(116)
Consumption/Use Taxes	234	502	504	560
Eliminate Internet Tax Advantage	125	250	250	250
Discontinue the Energy Services Sales Tax Exemption	96	128	128	128
Extend Certain Sales Tax Exemption Related to the Dodd-Frank Protection Act	0	0	0	0
Permanently Extend DTF Authorizations to Manage Delinquent Sales Tax Vendors	0	0	0	0
Enact the Cannabis Regulation and Taxation Act	0	83	85	141
Enact a Comprehensive Tobacco Control Policy	2	19	19	19
Impose a Supplemental Auto Rental Tax Surcharge	11	22	22	22
Business Taxes	0	(4)	(7)	(7)
Create the New York State Employer-Provided Child Care Credit	0	0	(1)	(1)
Create the Employer Recovery Hiring Tax Credit	0	0	(2)	(2)
Expand the Current Historic Rehabilitation Credit	0	0	0	0
Expand the Employee Training Incentive Program (ETIP) Credit	0	0	0	0
Extend Workers with Disability Credit for Three Years	0	(4)	(4)	(4)
Decouple the Taxability of State Incentives	0	0	0	0
Decouple from IRC Federal Basis for New York State Manufacturing Test	0	0	0	0

	FY 2020	FY 2021	FY 2022	FY 2023
Other Actions	99	137	153	153
Extend Three-Year Gift Addback Rule & Require Binding New York State QTIP Election	0	0	0	0
Allow Off Track Betting (OTB) Reforms	0	0	0	0
Extend Certain Tax Rates and Certain Simulcast Provisions for Five Years	0	0	0	0
Align New York City Enhanced Circuit Breaker Expiration Dates	0	0	0	0
Allow Residency Verification for Enhanced Beneficiaries	0	0	0	0
Improve Assessor Communications	0	0	0	0
Improve STAR Credit Notifications	0	0	0	0
Extend Good Cause Provisions to First Time Enhanced Applicants	0	0	0	0
Require Mobile Home Park Reporting to DTF	0	0	0	0
Allow Disclosure of Certain Information on Cooperative Housing Corporation Information Returns	0	0	0	0
Simplify Video Lottery Gaming (VLG) Rate and Additional Commission Provisions	5	5	5	5
Impose a Statutory Cap on Casino Free Play	0	6	0	0
Allow Breeding Funds to be Used for Equine Aftercare	0	0	0	0
Authorize Entry into the Mid-Atlantic Drug Compact	0	0	0	0
Extend Equine Drug Testing Advisory Committee and Remove Morrisville Restriction	0	0	0	0
Make Technical Changes to Gaming Provisions	0	0	0	0
Reduce Gaming Commission Employment Restrictions	0	0	0	0
Streamline Occupational Licensing for Casino Employees	0	0	0	0
Expand the New York State Bottle Bill Program	0	18	20	20
Make the Waste Tire Fee Permanent	18	24	24	24
Recognize Value of State Assets	5	10	30	30
Impose Bus Inspection Fee	1	2	2	2
Increase Notice of Violation Fine	3	5	5	5
Increase Indigent Legal Services Fund Support	66	66	66	66
Make the Property Tax Cap Permanent	0	0	0	0
Impose Penalty on the Use of Lead Paint	1	1	1	1
Repeal License Fees on Certain Co-Ops	0	0	0	0
Allow an Exemption From Real Property Taxation For Qualified Energy Systems	0	0	0	0
Improve Equalization Rates	0	0	0	0
Improve Real Property Tax Administration	0	0	0	0
Eliminate Property Tax Freeze Program Language	0	0	0	0
Total All Funds Legislation Change	945	4,178	5,463	6,153

*Rounded to the nearest million, revenue and gaming proposals only.

Personal Income Tax

PERSONAL INCOME TAX (millions of dollars)												
	FY 2018	FY 2019		FY 2020		FY 2021		FY 2022		FY 2023	Annual \$	
	Results	Current	Change	Proposed	Change	Projected	Change	Projected	Change	Projected	Change	Change
STATE/ALL FUNDS	51,501	50,144	-2.6%	53,014	5.7%	55,754	5.2%	59,025	5.9%	62,560	3,535	6.0%
Gross Collections	62,035	61,367	-1.1%	64,638	5.3%	67,261	4.1%	71,321	6.0%	75,464	4,143	5.8%
Refunds (Incl. State/City Offset)	(10,534)	(11,223)	-6.5%	(11,624)	-3.6%	(11,507)	1.0%	(12,296)	-6.9%	(12,904)	(608)	-4.9%
GENERAL FUND¹	36,037	22,648	-37.2%	24,321	7.4%	25,804	6.1%	27,533	6.7%	29,422	1,889	6.9%
Gross Collections	62,035	61,367	-1.1%	64,638	5.3%	67,261	4.1%	71,321	6.0%	75,464	4,143	5.8%
Refunds (Incl. State/City Offset)	(10,534)	(11,223)	-6.5%	(11,624)	-3.6%	(11,507)	1.0%	(12,296)	-6.9%	(12,904)	(608)	-4.9%
STAR	(2,589)	(2,424)	6.4%	(2,186)	9.8%	(2,073)	5.2%	(1,979)	4.5%	(1,858)	121	6.1%
RBTf	(12,875)	(25,072)	-94.7%	(26,507)	-5.7%	(27,877)	-5.2%	(29,513)	-5.9%	(31,280)	(1,767)	-6.0%

¹Excludes Transfers.

All Funds PIT receipts for FY 2019 are estimated to total \$50.1 billion, a decrease of \$1.4 billion (2.6 percent) from FY 2018 results. This decrease is primarily driven by a decline in estimated payments related to the 2018 tax year coupled with an increase in total refunds. This decline is partially offset by growth in withholding and final returns.

The following table summarizes, by component, actual receipts for FY 2018 and forecast amounts through FY 2023.

ALL FUNDS PERSONAL INCOME TAX FISCAL YEAR COLLECTION COMPONENTS (millions of dollars)						
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
	Results	Current	Proposed	Projected	Projected	Projected
Receipts						
Withholding	40,269	40,982	42,854	44,493	46,777	48,843
Estimated Payments	17,781	16,256	17,472	18,199	19,781	21,651
Current Year	14,329	12,729	13,256	13,879	14,733	15,806
Prior Year ¹	3,452	3,527	4,216	4,320	5,048	5,845
Final Returns	2,478	2,629	2,748	2,908	3,032	3,189
Current Year	308	286	301	316	331	346
Prior Year ¹	2,170	2,343	2,447	2,592	2,701	2,843
Delinquent	1,507	1,500	1,564	1,661	1,731	1,781
Gross Receipts	62,035	61,367	64,638	67,261	71,321	75,464
Refunds						
Prior Year ¹	6,292	6,110	6,328	7,230	7,716	8,015
Previous Years	527	623	653	683	714	745
Current Year ¹	2,249	2,250	1,750	1,750	1,750	1,750
Advanced Credit Payment	610	1,067	1,894	720	867	1,020
State/City Offset ¹	856	1,173	999	1,124	1,249	1,374
Total Refunds	10,534	11,223	11,624	11,507	12,296	12,904
Net Receipts	51,501	50,144	53,014	55,754	59,025	62,560

¹These components, collectively, are known as the "settlement" on the prior year's tax liability.

Withholding in FY 2019 is estimated to be \$713 million (1.8 percent) higher than FY 2018 results, driven by the combination of moderate growth in non-bonus wages and weak growth in bonus wages. Extension payments related to TY 2017 are expected to increase by \$75 million (2.2 percent), primarily due to one-time payments related to the expiration of the Federal ten-year window to repatriate foreign hedge fund earnings. These one-time payments have been offset by an acceleration of New York State tax liability payments into December 2017 to take advantage of the uncapped Federal itemized deduction for State and local taxes paid for TY 2017, leaving growth in extension payments nearly flat. Estimated payments for TY 2018 are projected to decrease by \$1.6 billion (11.2 percent), driven by a combination of a decline in nonwage income and an inflated TY 2017 estimated payments base, stemming from the TCJA and repatriation of foreign hedge fund earnings. FY 2019 final return payments are projected to increase by \$151 million (6.1 percent) and delinquencies are projected to decline by \$7 million (0.5 percent).

The projected growth in total refunds of \$689 million (6.5 percent) includes increases of \$457 million (75 percent) in advanced credit payments related to TY 2018, \$96 million (18.3 percent) in previous tax year (2016 and earlier) refunds, and \$317 million (37 percent) in the state-city offset, partially offset by a decline of \$182 million (2.9 percent) in prior tax year (2017) refunds. The administrative January-March refund cap will remain at the higher level in FY 2019, as in FY 2018.

General Fund PIT receipts are net of deposits to the STAR Fund, which provides property tax relief, and the Revenue Bond Tax Fund (RBTF), which supports debt service payments on State PIT revenue bonds. General Fund PIT receipts for FY 2019 of \$22.6 billion are projected to decrease by \$13.4 billion (37.2 percent) from FY 2018 results, reflecting a combination of enacted legislation that doubled RBTF deposits from 25 percent to 50 percent of net PIT receipts, and the decline in All Funds receipts noted above. As a result, RBTF deposits are projected to nearly double to \$25.1 billion. The FY 2019 STAR transfer is projected to be \$2.4 billion.

All Funds PIT receipts for FY 2020 of \$53 billion are projected to increase by \$2.9 billion (5.7 percent) from FY 2019 estimates. Gross PIT receipts are projected to increase 5.3 percent, reflecting increases of \$1.9 billion (4.6 percent) in withholding, \$527 million (4.1 percent) in estimated payments related to TY 2019, \$689 million (19.5 percent) in extension payments related to TY 2018, \$119 million (4.5 percent) in final returns, and \$64 million (4.3 percent) in delinquencies. Total refunds are projected to increase by \$401 million (3.6 percent), due to increases of \$827 million (77.5 percent) in advanced credit payments, \$218 million (3.6 percent) in prior tax year (2018) refunds, and \$30 million (4.8 percent) in previous tax years (2017 and earlier) refunds, partially offset by a \$500 million (22.2 percent) expected decline in the administrative refund cap and a \$174 million (14.8 percent) decline in the state-city offset.

General Fund PIT receipts for FY 2020 of \$24.3 billion are projected to increase by \$1.7 billion (7.4 percent) from current year estimates, mainly reflecting the increase in All Funds receipts noted above. RBTF deposits are projected to be \$26.5 billion and the STAR transfer is projected to be \$2.2 billion.

All Funds PIT receipts for FY 2021 of \$55.8 billion are projected to increase by over \$2.7 billion (5.2 percent) from FY 2020 projections. Gross PIT receipts are projected to increase 4.1 percent, primarily reflecting projected withholding growth of \$1.6 billion (3.8 percent) and total estimated

Receipts Overview



payments growth of \$727 million (4.2 percent). Total refunds are projected to decline by \$117 million (1 percent).

The growth in total estimated payments includes projected increases of \$623 million (4.7 percent) in estimated payments for TY 2020 and \$104 million (2.5 percent) in extensions for TY 2019. Final returns are expected to increase by \$160 million (5.8 percent) and delinquencies are projected to increase by \$97 million (6.2 percent). The decline in total refunds is attributable to the scheduled expiration of the Property Tax Relief Credit.

General Fund PIT receipts for FY 2021 of \$25.8 billion are projected to increase by \$1.5 billion (7 percent). RBTF deposits are projected to be \$27.9 billion, and the STAR transfer is projected to be \$2.1 billion.

All Funds PIT receipts in FY 2022 are projected to increase by \$3.3 billion from FY 2021 projections to reach \$59 billion, while General Fund PIT receipts are projected to total \$27.5 billion in FY 2022.

Consumption/Use Taxes

CONSUMPTION/USE TAXES (millions of dollars)												
	FY 2018	FY 2019		FY 2020		FY 2021		FY 2022		FY 2023	Annual \$	
	Results	Current	Change	Proposed	Change	Projected	Change	Projected	Change	Projected	Change	Change
STATE/ALL FUNDS	16,711	17,445	4.4%	18,112	3.8%	18,938	4.6%	19,471	2.8%	20,100	629	3.2%
Sales Tax	14,495	15,212	4.9%	16,033	5.4%	16,787	4.7%	17,355	3.4%	17,961	606	3.5%
Cigarette and Tobacco Taxes	1,171	1,112	-5.0%	1,048	-5.8%	989	-5.6%	944	-4.6%	904	(40)	-4.2%
Vapor Excise Tax	0	0	0.0%	10	0.0%	39	290.0%	39	0.0%	39	0	0.0%
Motor Fuel Tax	512	531	3.7%	515	-3.0%	515	0.0%	515	0.0%	515	0	0.0%
Highway Use Tax	93	144	54.8%	142	-1.4%	143	0.7%	145	1.4%	146	1	0.7%
Alcoholic Beverage Taxes	259	262	1.2%	265	1.1%	269	1.5%	272	1.1%	275	3	1.1%
Medical Marihuana Excise Tax	2	4	100.0%	4	0.0%	4	0.0%	4	0.0%	4	0	0.0%
Adult Use Cannabis Tax	0	0	0.0%	0	0.0%	83	0.0%	85	2.4%	141	56	65.9%
Taxicab Surcharge	56	50	-10.7%	0	-100.0%	0	0.0%	0	0.0%	0	0	0.0%
Auto Rental Tax	123	130	5.7%	95	-26.9%	109	14.7%	112	2.8%	115	3	2.7%
GENERAL FUND¹	7,377	7,709	4.5%	8,083	4.9%	8,429	4.3%	8,687	3.1%	8,965	278	3.2%
Sales Tax	6,776	7,120	5.1%	7,506	5.4%	7,862	4.7%	8,128	3.4%	8,412	284	3.5%
Cigarette and Tobacco Taxes	342	327	-4.4%	312	-4.6%	298	-4.5%	287	-3.7%	278	(9)	-3.1%
Alcoholic Beverage Taxes	259	262	1.2%	265	1.1%	269	1.5%	272	1.1%	275	3	1.1%

¹Excludes Transfers.

All Funds consumption/use tax receipts for FY 2019 are estimated to total \$17.4 billion, a \$734 million (4.4 percent) increase from FY 2018 results. Sales tax receipts are estimated to increase \$717 million (4.9 percent) from FY 2018 results, reflecting base growth (i.e., absent law changes) of 6.4 percent. Cigarette and tobacco tax collections are projected to decrease by \$59 million (5 percent), reflecting a greater than trend decline in taxable cigarette consumption. Highway use tax (HUT) collections are estimated to increase by \$51 million (54.8 percent) as long-term trend levels resume following litigation-induced refund increases in FY 2018. Motor fuel tax receipts are estimated to increase by \$19 million (3.7 percent) reflecting higher-than-expected gasoline consumption. Taxicab surcharge receipts are estimated to decline by \$6 million (10.7 percent) resulting from consumers choosing alternative transportation services not subject to the surcharge. Auto rental tax receipts are estimated to increase by \$7 million (5.7 percent).

General Fund sales tax receipts are net of deposits to the Local Government Assistance Tax Fund (25 percent), and the Sales Tax Revenue Bond Fund (25 percent), which support debt service payments on bonds issued under LGAC and State Sales Tax Revenue Bond programs. Receipts in excess of the debt service requirements of the funds and the local assistance payments to New York City, or its assignee, are transferred back to the General Fund.

General Fund consumption/use tax receipts for FY 2019 are projected to total \$7.7 billion, a \$332 million (4.5 percent) increase from FY 2018 results. This increase largely reflects the All Funds sales and use tax and cigarette tax trends, noted above.

All Funds consumption/use tax receipts for FY 2020 are projected to total \$18.1 billion, a \$667 million (3.8 percent) increase from FY 2019 estimates. The projected \$821 million (5.4 percent) increase in sales tax receipts reflects a sales tax base growth of 3.2 percent and an additional \$221 million in projected revenue related to FY 2020 Executive Budget legislation. This increase is partially offset by the continued greater-than-trend decline in taxable cigarette consumption, as well as shifting certain MTA receipts directly to the MTA.

General Fund consumption/use tax receipts are projected to be \$8.1 billion in FY 2020, a \$374 million (4.9 percent) increase from FY 2019. The projected increase largely reflects the All Funds sales and use tax and cigarette tax trends, noted above.

All Funds consumption/use tax receipts for FY 2021 are projected to increase to over \$18.9 billion, an \$826 million (4.6 percent) increase from FY 2020. The projected increase in sales tax receipts reflects a sales tax base growth of 4 percent, and an additional \$378 million in projected revenue related to Executive Budget legislation. The vapor excise tax will be fully effective and is projected to generate \$39 million and the excise tax, along with the license fees for adult use cannabis, are projected to generate \$83 million. These increases are partially offset by a continued decline in taxable cigarette consumption, as well as shifting certain MTA receipts directly to the MTA. FY 2021 General Fund consumption/use tax receipts are projected to increase to \$8.5 billion, a \$429 million (5.3 percent) increase from FY 2020 projections.

All Funds consumption/use tax receipts are projected to increase to nearly \$19.5 billion (2.8 percent growth) in FY 2022, largely representing base growth in sales tax receipts, which is slightly offset by a continued decline in taxable cigarette consumption, as well as shifting certain MTA receipts directly to the MTA. General Fund consumption/use tax receipts are projected to increase to nearly \$8.8 billion (3.1 percent growth) in FY 2022, reflecting the All Funds sales and use tax and cigarette tax trends, noted above.

Business Taxes

BUSINESS TAXES (millions of dollars)												
	FY 2018	FY 2019	FY 2020		FY 2021		FY 2022		FY 2023		Annual \$	
	Results	Current	Change	Proposed	Change	Projected	Change	Projected	Change	Projected	Change	
STATE/ALL FUNDS	7,164	7,744	8.1%	8,611	11.2%	8,784	2.0%	8,929	1.7%	9,292	363	4.1%
Corporate Franchise Tax	3,080	3,977	29.1%	4,362	9.7%	4,605	5.6%	4,646	0.9%	4,886	240	5.2%
Corporation and Utilities Tax	748	685	-8.4%	710	3.6%	717	1.0%	727	1.4%	736	9	1.2%
Insurance Tax	1,777	1,816	2.2%	2,307	27.0%	2,354	2.0%	2,467	4.8%	2,595	128	5.2%
Bank Tax	467	123	-73.7%	71	-42.3%	0	-100.0%	0	0.0%	0	0	0.0%
Petroleum Business Tax	1,092	1,143	4.7%	1,161	1.6%	1,108	-4.6%	1,089	-1.7%	1,075	(14)	-1.3%
GENERAL FUND	4,916	5,396	9.8%	6,163	14.2%	6,359	3.2%	6,463	1.6%	6,776	313	4.8%
Corporate Franchise Tax	2,326	3,157	35.7%	3,510	11.2%	3,717	5.9%	3,714	-0.1%	3,908	194	5.2%
Corporation and Utilities Tax	570	515	-9.6%	537	4.3%	541	0.7%	547	1.1%	553	6	1.1%
Insurance Tax	1,610	1,622	0.7%	2,056	26.8%	2,101	2.2%	2,202	4.8%	2,315	113	5.1%
Bank Tax	410	102	-75.1%	60	-41.2%	0	-100.0%	0	0.0%	0	0	0.0%
Petroleum Business Tax	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%

All Funds business tax receipts for FY 2019 are estimated to total \$7.7 billion, an increase of \$580 million (8.1 percent) from FY 2018 results. The estimate reflects increases in corporate franchise tax, insurance tax and petroleum business tax (PBT) receipts. Corporation and utilities tax and bank tax receipts are estimated to decline primarily due to higher receipts in FY 2018 that are not expected to recur in FY 2019.

Corporation franchise tax receipts are estimated to increase \$897 million (29.1 percent) in FY 2019, reflecting higher gross receipts and audits. FY 2018 results were negatively impacted by a shortfall in cash remittances from taxpayers that continue to have overpayment balances from TY 2015 that they can use to satisfy current year liability. It will likely be several years before many larger taxpayers need to remit cash payments for current liability. FY 2019 estimates also include \$60 million resulting from taxable interest associated with the Federal TCJA repatriated earnings provision and \$20 million from other TCJA flow-through impacts.

Corporation and utilities tax receipts are estimated to decrease \$63 million (8.4 percent) from FY 2019. Audits are projected to fall by \$44 million as FY 2018 included payments from telecommunication companies that are not expected to recur. Gross receipts from telecommunications companies are expected to decline due to industry competitiveness and the movement of most communications to internet-based solutions which are not taxable. In 2017, over 90 percent of the population owned a smartphone.

Insurance tax receipts for FY 2019 are estimated to increase \$39 million (2.2 percent) from FY 2018. Projected growth in TY 2018 liability as well as lower expected credit claims for assessments paid to the Life Insurance Company Guaranty Corporation (LICGC) account for the year-over-year increase. The LICGC exists to protect policyholders from the insolvency of their life insurers. This is the third year of claims for the credit for assessments paid earlier.

Receipts from the repealed bank tax (all from prior liability periods) are estimated to decrease by \$344 million (73.7 percent) from FY 2019, stemming from lower audit receipts (\$176 million) and

increased refunds. PBT receipts are estimated to increase \$51 million (4.7 percent) in FY 2019, primarily due to the 5 percent increase in the PBT rate index effective January 1, 2018 and the projected 5 percent increase in the PBT rate index effective January 1, 2019.

General Fund business tax receipts for FY 2019 of \$5.4 billion are projected to increase by \$480 million (9.8 percent) from FY 2018 results, reflecting the All Funds trends discussed above.

All Funds business tax receipts for FY 2020 of \$8.6 billion are projected to increase by \$869 million (11.2 percent) from FY 2019 estimates. The corporation franchise tax receipts increase of \$385 million (9.7 percent) reflects projected growth in corporate profits, increased audit receipts, and a stabilization of liability as taxpayers adjust to all aspects of State corporate tax reform (effective TY 2015). This projection includes \$71 million in TCJA flow-through impacts in the corporation franchise tax. The corporation and utilities tax receipts increase of \$25 million (3.6 percent) is primarily attributable to growth in the utilities section of the tax.

Insurance tax receipts for FY 2020 of \$2.3 billion are projected to increase by \$491 million (27 percent) from current year estimates. This projected increase is primarily due to the conversion of a not-for-profit health insurer to a for-profit health insurer in addition to projected growth in insurance tax premiums combined with lower expected LICGC credit claims. Receipts from the repealed bank tax are projected to decrease by \$52 million (42.3 percent) in FY 2019, due to lower projected audit receipts. PBT receipts are projected to increase by \$18 million (1.6 percent) in FY 2020 due to a projected 5 percent increase in the PBT rate index effective January 1, 2019.

General Fund business tax receipts for FY 2020 of nearly \$6.2 billion are projected to increase by \$767 million (14.2 percent) from current year estimates, reflecting the All Funds trends discussed above.

All Funds business tax receipts for FY 2021 of nearly \$8.8 billion are projected to increase by \$173 million (2 percent), and General Fund business tax receipts are projected to increase to nearly \$6.4 billion (3.2 percent growth) from FY 2020 projections. The increase is primarily reflective of growth in corporation franchise tax receipts driven by higher gross receipts and lower refunds. Increases in projected corporation and utilities tax and insurance tax receipts are partially offset by a decline in projected bank tax and PBT receipts. This projection includes \$52 million in TCJA flow-through impacts in the corporation franchise tax.

All Funds business tax receipts for FY 2022 reflect projected trends in corporate profits, taxable insurance premiums, electric utility consumption and prices, the consumption of taxable telecommunications services, and automobile fuel consumption and fuel prices. In FY 2022, All Funds business tax receipts are projected to increase to \$8.9 billion (1.6 percent growth), and General Fund business tax receipts are projected to increase to nearly \$6.5 billion (1.6 percent growth). This projection includes \$53 million in TCJA flow-through impacts.

Other Taxes

OTHER TAXES (millions of dollars)												
	FY 2018 Results	FY 2019 Current	Change	FY 2020 Proposed	Change	FY 2021 Projected	Change	FY 2022 Projected	Change	FY 2023 Projected	Annual \$ Change	Change
STATE/ALL FUNDS	2,451	2,204	-10.1%	2,242	1.7%	2,344	4.5%	2,456	4.8%	2,567	111	4.5%
Estate Tax	1,308	1,056	-19.3%	1,074	1.7%	1,135	5.7%	1,198	5.6%	1,263	65	5.4%
Real Estate Transfer Tax	1,125	1,130	0.4%	1,148	1.6%	1,183	3.0%	1,219	3.0%	1,263	44	3.6%
Employer Compensation Expense Program	0	0	0.0%	2	0.0%	8	300.0%	21	162.5%	23	2	9.5%
Gift Tax	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%
Real Property Gains Tax	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%
Pari-Mutuel Taxes	15	15	0.0%	15	0.0%	15	0.0%	15	0.0%	15	0	0.0%
All Other Taxes	3	3	0.0%	3	0.0%	3	0.0%	3	0.0%	3	0	0.0%
GENERAL FUND¹	1,326	1,074	-19.0%	1,093	1.8%	1,157	5.9%	1,226	6.0%	1,292	66	5.4%
Estate Tax	1,308	1,056	-19.3%	1,074	1.7%	1,135	5.7%	1,198	5.6%	1,263	65	5.4%
Employer Compensation Expense Program	0	0	0.0%	1	0.0%	4	300.0%	10	150.0%	11	1	10.0%
Gift Tax	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%
Real Property Gains Tax	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%
Pari-Mutuel Taxes	15	15	0.0%	15	0.0%	15	0.0%	15	0.0%	15	0	0.0%
All Other Taxes	3	3	0.0%	3	0.0%	3	0.0%	3	0.0%	3	0	0.0%

¹Excludes Transfers.

All Funds other tax receipts for FY 2019 are estimated to total over \$2.2 billion, a decrease of \$247 million (10.1 percent) from FY 2018 results. This is primarily due to an estimated \$252 million (19.3 percent) decrease in estate tax receipts resulting from a return to an historical average in both the number and payment value of super-large (i.e., over \$25 million) payments. Real estate transfer tax receipts are expected to increase by \$5 million (0.4 percent) due to weak estimated growth in housing starts and housing prices.

General Fund other tax receipts are estimated to be near \$1.1 billion in FY 2019, a decrease of \$252 million (19 percent) from FY 2018 results, reflecting the estate tax receipts decrease noted above.

All Funds other tax receipts for FY 2020 are projected to total over \$2.2 billion, a \$38 million (1.7 percent) increase from FY 2019 estimates. The \$18 million (1.7 percent) projected increase in estate tax receipts reflects projected growth in household net worth, partially offset by a projected decline of one super-large payment compared to the prior year. Real estate transfer tax receipts are projected to increase by \$18 million (1.6 percent), reflecting continued weak projected growth in housing starts and prices.

General Fund other tax receipts for FY 2020 are projected to approach \$1.1 billion, an increase of \$19 million (1.8 percent) from FY 2019 estimates due to the projected increase in estate tax receipts noted above.

All Funds other tax receipts for FY 2021 are projected to be well over \$2.3 billion, a \$102 million (4.5 percent) increase from FY 2020 projections. Estate tax receipts are projected to increase by \$61 million (5.7 percent) in FY 2021, reflecting projected growth in household net worth. The

\$35 million (3 percent) projected increase in real estate transfer tax receipts in FY 2021 reflects projected growth in housing starts and prices.

General Fund other tax receipts for FY 2021 are projected to total below \$1.2 billion, an increase of \$64 million (5.9 percent), resulting from the projected increase in estate tax receipts noted above.

All Funds other tax receipts for FY 2022 reflect projected trend growth in household net worth, housing starts, and housing prices. All Funds other tax receipts are projected to be nearly \$2.5 billion in FY 2022, an increase of \$112 million (4.8 percent).

General Fund other tax receipts are projected to be over \$1.2 billion in FY 2022, an increase of \$69 million (6 percent).

Miscellaneous Receipts

All Funds miscellaneous receipts include moneys received from HCRA financing sources, SUNY tuition and patient income, lottery receipts for education, assessments on regulated industries, Tribal-State compact revenue, Extraordinary Monetary Settlements and a variety of fees. As such, miscellaneous receipts are driven in part by year-to-year variations in health care surcharges and other HCRA resources, bond proceeds, tuition income revenue and other miscellaneous receipts.

MISCELLANEOUS RECEIPTS (millions of dollars)												
	FY 2018	FY 2019		FY 2020		FY 2021		FY 2022		FY 2023	Annual \$	
	Results	Current	Change	Proposed	Change	Projected	Change	Projected	Change	Projected	Change	Change
ALL FUNDS	27,262	29,614	8.6%	27,158	-8.3%	24,707	-9.0%	25,104	1.6%	24,907	24,907	0.0%
General Fund	3,129	3,109	-0.6%	2,071	-33.4%	2,049	-1.1%	1,906	-7.0%	1,896	(10)	-0.5%
Special Revenue Funds	17,933	18,601	3.7%	17,286	-7.1%	15,909	-8.0%	16,242	2.1%	15,782	(460)	-2.8%
Capital Projects Funds	5,729	7,406	29.3%	7,407	0.0%	6,355	-14.2%	6,563	3.3%	6,837	274	4.2%
Debt Service Funds	471	498	5.7%	394	-20.9%	394	0.0%	393	-0.3%	392	(1)	-0.3%

All Funds miscellaneous receipts are projected to total \$29.6 billion in FY 2019, an increase of 8.6 percent from FY 2018 results. This increase is primarily due to higher bond financed capital spending on a year-over-year basis. Bond-financed capital expenses are paid from the General Fund (or STIP) in the first instance and subsequently reimbursed with PIT or Sales Tax Revenue Bond proceeds, at which time they are captured as miscellaneous receipts.

All Funds miscellaneous receipts are projected to decline annually after FY 2019, reflecting the impact of Extraordinary Monetary Settlements received and a decrease in bond proceeds reimbursements in later years, which subsequently corresponds to the spending out of bond-financed capital projects.

Federal Grants

FEDERAL GRANTS (millions of dollars)												
	FY 2018	FY 2019		FY 2020		FY 2021		FY 2022		FY 2023	Annual \$	
	Results	Current	Change	Proposed	Change	Projected	Change	Projected	Change	Projected	Change	Change
ALL FUNDS	58,942	62,809	6.6%	63,772	1.5%	64,460	1.1%	66,187	2.7%	68,776	68,776	0.0%
General Fund	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%
Special Revenue Funds	56,744	60,302	6.3%	61,470	1.9%	62,200	1.2%	63,928	2.8%	66,520	2,592	4.1%
Capital Projects Funds	2,125	2,433	14.5%	2,229	-8.4%	2,187	-1.9%	2,187	0.0%	2,187	0	0.0%
Debt Service Funds	73	74	1.4%	73	-1.4%	73	0.0%	72	-1.4%	69	(3)	-4.2%

Aid from the Federal government helps to pay for a variety of programs including Medicaid, public assistance, mental hygiene, school aid, public health, transportation, and other activities. Annual changes to Federal grants generally correspond to changes in federally-reimbursed spending. Accordingly, DOB typically projects Federal reimbursements will be received in the State fiscal year in which spending occurs, but due to the variable timing of Federal grant receipts, actual results often differ from the projections.

All Funds Federal grants projections primarily reflect the continuation of growth in Federal Medicaid spending related to Federal health care transformation initiatives, partly offset by the projected phase-down of Federal disaster assistance aid. All Federal receipts are subject to Congressional authorization, appropriations and budget action.

Under the current administration and Congress, many of the policies that drive Federal aid may be subject to change. At this time it is not possible to assess the potential fiscal impact of future policies that may be proposed and adopted. If Federal funding to the State were reduced, this could have a materially adverse impact on the Financial Plan. The FY 2018 Enacted Budget included authorization to develop a mitigation plan to offset the impact of significant Federal funding reductions.

The ongoing partial Federal government shutdown, now in its fourth week, has become the longest in history. The shutdown is affecting approximately 800,000 Federal workers who experienced their first missed paycheck on Friday, January 11, 2019. Although these workers live predominantly in the D.C. area, Federal workers across the country, including New York, are being affected. Spending will be curtailed by these workers, which will have secondary and tertiary effects on local economies. In addition, nominally “nonessential” agencies on which many segments of the economy depend, ranging from the Transportation Safety Administration to the IRS, to the Securities and Exchange Commission, have ceased operations. For example, with the SEC unable to perform its regulatory function, initial public offerings have come to a standstill, which could adversely affect securities industry revenues. Federally backed mortgage applications cannot be approved, which could adversely affect the State’s housing market. Parks, monuments, and myriad historic sites operated by the National Park Service, many of which are located in New York, are closed. At this writing, the overall impact on the New York economy and the State Budget remain uncertain.

Revenue Actions

Revenue Actions



The FY 2020 Budget includes a net positive increment of \$945 million in FY 2020 All Funds receipts reflecting the revenue actions contained in this budget. The accompanying table summarizes the revenue proposals by type of action required and provides a short description of the proposal, the proposal effective date, the Fund type where revenue will be deposited, and the incremental revenue gain or loss from the proposed action. This table represents gross revenue adds and reductions without any adjustments for associated spending changes, movements across funds or General Fund spending offsets. For more detailed explanations on these actions, please see The Revenue Actions section of the Executive Budget Briefing Book.

REVENUE ACTIONS (millions of dollars)							
Agency	Description	Effective Date	Fund Type	General Fund		All Funds	
				FY 2020	FY 2021	FY 2020	FY 2021
Responding to Federal Tax Reform							
DTF	Decouple the Taxability of State Incentives	1/1/2018	GFTX	-	-	-	-
DTF	Decouple from IRC Federal Basis for New York State Manufacturing Test	1/1/2018	GFTX	-	-	-	-
Tax Cuts and Credits							
DTF	Make the Property Tax Cap Permanent	4/1/2019	GFTX	-	-	-	-
DTF	Expand the Employee Training Incentive Program (ETIP) Credit	4/1/2019	GFTX	-	-	-	-
DTF	Make Technical Changes to the Farm Workforce Retention Credit	1/1/2019	GFTX	-	-	-	-
DTF	Create the New York State Employer-Provided Child Care Credit	1/1/2020	GFTX	-	-	-	-
DTF	Create the Employer Recovery Hiring Tax Credit	1/1/2020	GFTX	-	-	-	-
DTF	Expand the Current Historic Rehabilitation Credit	1/1/2020	GFTX	-	-	-	-
Tax Reform and Simplification Actions				209	359	221	378
DTF	Close the Carried Interest Loophole	1/1/2019	GFTX	-	-	-	-
DTF	Eliminate Internet Tax Advantage	9/1/2019	GFTX/SFTX	119	239	125	250
DTF	Discontinue the Energy Services Sales Tax Exemption	6/1/2019	GFTX/SFTX	90	120	96	128
DTF	Allow an Exemption From Real Property Taxation For Qualified Energy Systems	4/1/2019	GFTX	-	-	-	-
DTF	Improve Equalization Rates	4/1/2019	GFTX	-	-	-	-
DTF	Improve Real Property Tax Administration	4/1/2019	GFTX	-	-	-	-
DTF	Eliminate Property Tax Freeze Program Language	4/1/2019	GFTX	-	-	-	-
Enforcement Initiatives				12	121	12	121
DTF	Include Certain New York State Gambling Winnings in Nonresident New York State Income	1/1/2019	GFTX	-	1	-	1
DTF	Increase Tax Return Audits	4/1/2019	GFTX	12	120	12	120
DTF	Make e-File Mandate Permanent	1/1/2020	GFTX	-	-	-	-
Tax Law Extenders				785	3,660	785	3,660
DTF	Extend Higher Personal Income Tax Rates for Five Years	1/1/2020	GFTX	771	3,560	771	3,560
DTF	Extend Personal Income Tax Limitation on Charitable Contributions for Five Years	1/1/2020	GFTX	-	86	-	86
DTF	Extend Clean Heating Fuel Credit for Three Years	1/1/2020	GFTX	-	-	-	-
DTF	Permanently Extend Tax Shelter Reporting; Extend Preparer Penalties for 5 years; Impose Additional Preparer Penalty	4/1/2019	GFTX	14	18	14	18
DTF	Extend Certain Sales Tax Exemption Related to the Dodd-Frank Protection Act	4/1/2019	GFTX	-	-	-	-
DTF	Permanently Extend DTF Authorizations to Manage Delinquent Sales Tax Vendors	4/1/2019	GFTX	-	-	-	-
DTF	Extend Workers with Disability Credit for Three Years	1/1/2020	GFTX	-	(4)	-	(4)
DTF	Extend Three-Year Gift Addback Rule & Require Binding New York State QTIP Election	4/1/2019	GFTX	-	-	-	-

Key:
 CF = Capital Projects Fund GF = General Fund SF = Special Revenue Funds
 DF = Debt Service Fund MR = Miscellaneous Receipt TX = Tax

Agency	Description	Effective Date	Fund Type	General Fund		All Funds	
				FY 2020	FY 2021	FY 2020	FY 2021
School Tax Relief (STAR) Program Actions				46	88	(185)	(241)
DTF	Cap Annual Growth in STAR Exemption Benefits at Zero Percent - Credit Portion	4/1/2019	GFTX	(60)	(119)	(60)	(119)
DTF	Cap Annual Growth in STAR Exemption Benefits at Zero Percent - STAR Savings	4/1/2019	SFTX	106	207	-	-
DTF	Lower Basic STAR Exemption Income Eligibility Requirement - Credit Portion	4/1/2019	GFTX	(125)	(122)	(125)	(122)
DTF	Lower Basic STAR Exemption Income Eligibility Requirement - STAR Savings	4/1/2019	SFTX	125	122	-	-
DTF	Align New York City Enhanced Circuit Breaker Expiration Dates	4/1/2019	SFTX	-	-	-	-
DTF	Allow Residency Verification for Enhanced Beneficiaries	4/1/2019	SFTX	-	-	-	-
DTF	Improve Assessor Communications	4/1/2019	SFTX	-	-	-	-
DTF	Improve STAR Credit Notifications	4/1/2019	SFTX	-	-	-	-
DTF	Extend Good Cause Provisions to First Time Enhanced Applicants	4/1/2019	SFTX	-	-	-	-
DTF	Require Mobile Home Park Reporting to DTF	4/1/2019	SFTX	-	-	-	-
DTF	Allow Disclosure of Certain Information on Cooperative Housing Corporation Information Returns	1/1/2020	SFTX	-	-	-	-
Other Revenue Actions				(2)	78	13	124
DTF	Enact the Cannabis Regulation and Taxation Act	4/1/2019	GFTX	-	83	-	83
DTF	Enact a Comprehensive Tobacco Control Policy	10/1/2019	GFTX/SFTX	(2)	(5)	2	19
DTF	Impose a Supplemental Auto Rental Tax Surcharge	10/1/2019	SFTX	-	-	11	22
Gaming Initiatives				-	-	5	11
Gaming	Allow Off Track Betting (OTB) Reforms	4/1/2019	GFTX	-	-	-	-
Gaming	Extend Certain Tax Rates and Certain Simulcast Provisions for Five Years	4/1/2019	GFTX	-	-	-	-
Gaming	Simplify Video Lottery Gaming (VLG) Rate and Additional Commission Provisions	4/1/2019	SFMR	-	-	5	5
Gaming	Impose a Statutory Cap on Casino Free Play	4/1/2019	SFMR	-	-	-	6
Gaming	Allow Breeding Funds to be Used for Equine Aftercare	4/1/2019	SFMR	-	-	-	-
Gaming	Authorize Entry into the Mid-Atlantic Drug Compact	4/1/2019	SFMR	-	-	-	-
Gaming	Extend Equine Drug Testing Advisory Committee and Remove Morrisville Restriction	4/1/2019	SFMR	-	-	-	-
Gaming	Make Technical Changes to Gaming Provisions	4/1/2019	SFMR	-	-	-	-
Gaming	Reduce Gaming Commission Employment Restrictions	4/1/2019	SFMR	-	-	-	-
Gaming	Streamline Occupational Licensing for Casino Employees	4/1/2019	SFMR	-	-	-	-
Fee Actions				5	12	94	126
EPF	Expand the New York State Bottle Bill Program	4/1/2020	GFMR/CFMR	-	4	-	18
EPF	Make the Waste Tire Fee Permanent	4/1/2019	CFMR/SFMR	-	-	18	24
DOT	Recognize Value of State Assets	4/1/2019	SFMR	-	-	5	10
DOT	Impose Bus Inspection Fee	4/1/2019	GFMR	1	2	1	2
DOT	Increase Notice of Violation Fine	4/1/2019	GFMR	3	5	3	5
ILS	Increase Indigent Legal Services Fund Support	4/1/2019	SFMR	-	-	66	66
DTF	Impose Penalty on the Use of Lead Paint	4/1/2019	GFMR	1	1	1	1
DTF	Repeal License Fees on Certain Co-Ops	4/1/2019	GFMR	-	-	-	-
TOTAL REVENUE ACTIONS				1,055	4,318	945	4,178

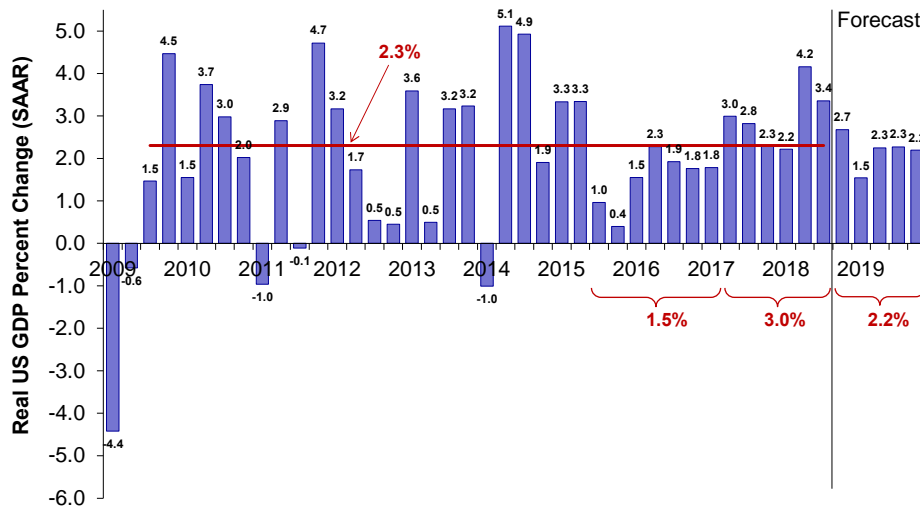
Key:
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Economic Backdrop

Overview

Main Street and Wall Street displayed an extraordinary divergence in the fourth quarter of 2018. While U.S. households were enjoying a robust holiday shopping season and the strongest employment and average hourly earnings growth of the year, Wall Street was teetering on the edge of a bear market and displaying a fragility and volatility unseen in almost three years. That volatility stemmed from a wall of worry that included a weakening global economy, declining oil prices, risk of a monetary policy error, a government shutdown, and the vagaries of an administration that appears to have lost its way. Unfortunately, the bricks in that wall only solidified as we entered 2019, with equity markets presaging a very different environment than that of 2017 and 2018. The global economy is weakening and world trade is contracting, with the weakness emanating from both Europe and China and radiating out from those two economic poles. Financial market conditions are tightening in lockstep with the Federal Reserve’s interest rate normalization policy, while the yield curve, as measured by the difference between the 10-year and the 3-month Treasury yields – seen as an often reliable indicator of looming recession when inverted – is flatter than it has been in more than a decade. The U.S. dollar remains near its two-year peak.

Figure 1
The U.S. Economy Will Slow But Avoid a Recession in 2019



Source: Moody's Analytics; DOB staff estimates.

Conditions toward the end of 2018 are reminiscent of those of the first quarter of 2016. In both cases, the turmoil was initiated by anticipation of an imminent Federal Reserve action that was feared could adversely affect the economy and earnings. In early 2016, we were also on the brink of a synchronized global slowdown; oil and equity market prices had plummeted and a global flight to safety sent the 10-year Treasury yield down and the U.S. dollar up. But a recession was avoided in 2016 and, as indicated Figure 1, is expected to be averted in 2019 as well. The household sector

is believed to have carried a substantial degree of momentum into the new year. Oil prices appear to be stabilizing above the \$50 per barrel mark, and the Federal Reserve is likely to take a pause during the first six months of this year, and longer if need be. Consequently, there is little risk that the current expansion will fail to become the longest since 1850 when it crosses the July 1, 2019, threshold.

However, as Figure 1 also indicates, the national economy is projected to slow significantly in 2019. As global demand for U.S. exports continues to weaken, business sector spending will follow suit resulting in weaker employment and wage growth. Moreover, the stimulative impact of the Tax Cuts and Jobs Act (TCJA) has already shown signs of petering out. These developments will filter through to both consumer spending and business investment. The Budget Division projects real growth in U.S. GDP of 2.4 percent for 2019, following growth of 2.9 percent for 2018. By 2020, barring any additional adverse developments that increase the risk of recession, economic growth is expected to gradually drift downward toward its long-run potential growth of just below 2 percent. However, whenever the economy is in a state of weakening momentum, the economy's vulnerability to such negative shocks is heightened, as is the risk to the forecast.

The New York State labor market continues to outperform historical averages, with labor shortages emerging in every region and the State unemployment rate posting its lowest level in the history of the monthly series going back to 1976. But with both national and global economic growth stepping down in 2019, the State economy will not be immune. National and global trends tend to be amplified in the financial markets, which creates a disproportionate amount of risk for New York. Given the international flavor of the preponderance of firms in the major stock indexes, it is no surprise that equity markets have been telegraphing the threat to corporate earnings from weakening global growth. Financial firm equity prices are among those that have suffered substantial declines. These developments represent a substantial risk to finance and insurance sector bonuses, despite strong revenue growth during the first three quarters of 2018.

The State's private sector labor market expanded an estimated 1.4 percent in 2018, only one tenth of one percentage point below the 2017 pace, led by the healthcare, management and administrative services, information, education, construction, and transportation and warehousing sectors. Tourism continues to be one of the State's critical industries, but the global slowdown and the strong dollar likely altered the mix between domestic and international visitors, who tend to spend more per visit. Moreover, the State's weakening real estate market has also been exacerbated by off-shore developments, particularly those in China. State private sector job growth of 1.2 percent is projected for 2019, following estimated growth of 1.4 percent in 2018. Growth in government jobs of 0.4 percent is expected to result in slightly lower growth in total State employment of 1.1 percent for 2019.

Given the current degree of volatility, the shape of the yield curve, and the recent hit to finance sector equity prices, there is reason to maintain a cautious outlook for bonus payments for both the season in progress and for FY 2020. Moreover, one-time events that occurred during the FY 2018 bonus season, including both the December 31, 2017 deadline for the repatriation of hedge fund income held off-shore since the 2008-09 financial crisis and the 2018 federal corporate tax cut, likely resulted in large one-time payouts for both wage and nonwage income that would not be repeated this year. Consequently, the Budget Division projects a decline in finance and insurance

sector bonuses of 9.6 percent and a decline in overall bonuses of 4.7 percent for the State fiscal year in progress. These declines are estimated to result in overall State wage growth of 3.3 percent for FY 2019, down from 4.7 percent from the prior year. Finance and insurance sector bonuses are expected to fall another 1.2 percent in FY 2020, with overall bonuses falling 0.6 percent, contributing to total wage growth of 3.6 percent. Overall personal income growth of 4.1 percent is estimated for both FY 2019 and FY 2020; growth for both years is down from strong FY 2018 growth of 5.7 percent, which is estimated to have been boosted by one-time payments. The projected weakness in bonuses highlights the risk posed by this all-important sector to the State economy and revenues. But with finance and insurance sector employment still well below its pre-recession peak, recent employment and wage trends also highlight the State's success in diversifying away from this volatile sector since the financial crisis.

The National Economy

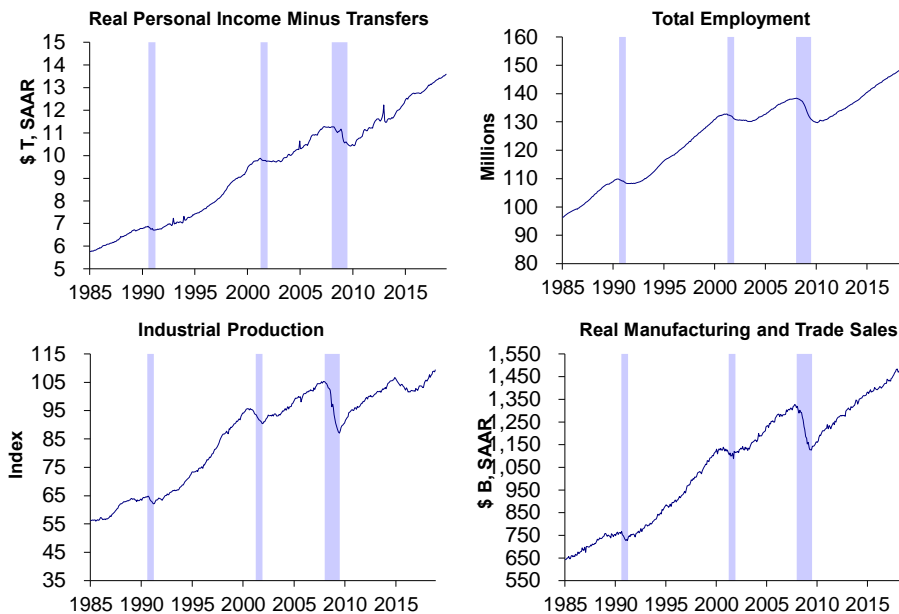
Economic developments witnessed toward the end of 2018 represented a déjà vu moment, reminiscent of those of the first quarter of 2016. In both cases, Federal Reserve policy actions were pivotal, engendering fear that a policy error could adversely affect the economy. Toward the end of 2015, the central bank was poised to raise its short-term interest rate target for the first time in a decade, which it did in December. More recently, on December 19th, that target was raised for the ninth time amid a tide of worry that central bank officials were out of touch with the developments, particularly off-shore, that were expected to buffet economic and earnings growth in 2019. In early 2016, we were also on the brink of a synchronized global slowdown, when oil and equity market prices plummeted engendering a flight to safety, pushing down the 10-year Treasury yield and pushing up the value of the U.S. dollar. A predominant concern is whether a recession can be avoided in 2019 as it was in 2016.

That the national economy will at some point fall into a recession is an inevitability, but the likelihood of that happening at any point in 2019 is still estimated to be small. Although real U.S. GDP growth is projected to have slowed during the fourth quarter, Figure 1 indicates that a substantial degree of momentum was carried into 2019. First quarter growth is expected to step down significantly due to a moderation in household spending growth as the tax cut impact diminishes and an inventory correction. However, history suggests that household spending has to more than simply moderate to signal an imminent recession. Table 1 presents the deceleration in both real household consumption growth and private sector employment growth over the four quarters just prior and two years prior to entering a recession. The data indicate that real consumption growth has on average fallen by half, implying that average quarterly consumption growth would have to have fallen from 2.7 percent in 2017 to 1.4 percent or below in 2018, but in fact average household spending growth accelerated to 2.9 percent in 2018. The Budget Division forecast for average quarterly consumption growth for 2019 is 2.4 percent. Similarly, average quarterly private sector employment is also seen to have fallen by almost half during the four quarters prior to a recession, but it too accelerated in 2018. Consequently, the probability of a recession starting in 2019 is judged to be low.

Table 1

The Evolution of Household Spending and Private Employment Growth Prior to a Recession						
Recession Period	Average Quarterly Real Consumption Percent Growth			Average Quarterly Private Employment Percent Growth		
	2nd Year Prior	1st Year Prior	Recession Period	2nd Year Prior	1st Year Prior	Recession Period
1953Q3:1954Q2	4.0	6.0	0.8	0.8	4.6	(3.5)
1957Q4:1958Q2	2.0	3.1	(0.6)	2.0	0.8	(6.6)
1960Q3:1961Q1	6.6	3.4	(0.4)	5.4	1.6	(3.0)
1970Q1:1970Q4	6.4	3.1	1.7	3.5	3.2	(1.6)
1974Q1:1975Q1	7.3	1.9	(0.5)	4.5	4.1	(1.9)
1980Q2:1980Q3	4.0	1.0	(1.6)	5.5	2.0	(1.3)
1990Q4:1991Q1	3.1	2.0	(2.3)	2.3	1.1	(1.9)
2001Q2:2001Q4	5.7	3.3	2.8	2.5	1.1	(2.3)
2008Q1:2009Q2	3.2	1.6	(1.6)	1.7	0.8	(4.1)
Average	4.8	2.4	(0.3)	3.4	1.8	(2.8)
2019Q1:?	2.7	2.9	?	1.7	2.0	?

Figure 2
Indicators Used by the NBER to Date Recessions

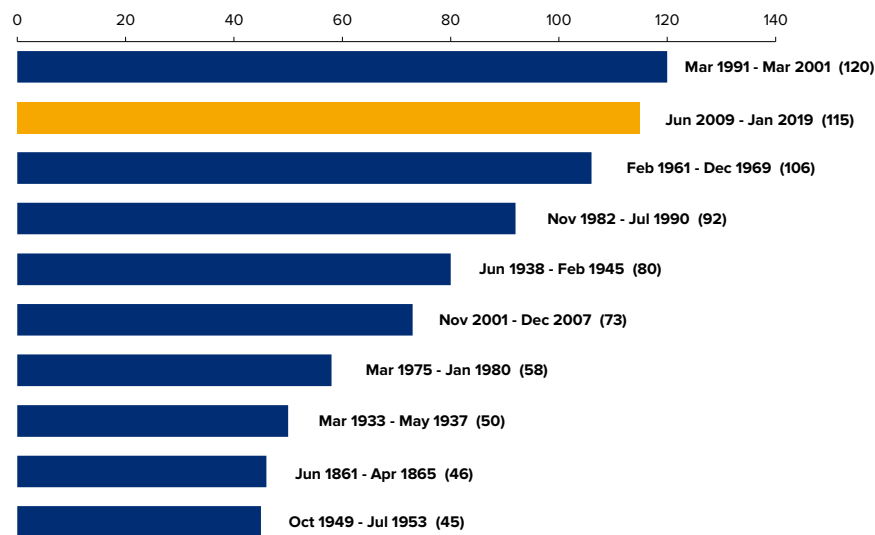


Note: Shaded areas represent U.S. recessions.
Source: Moody's Analytics.

Additional evidence that the U.S. economy is unlikely to enter a recession is presented in Figure 2, which shows the four indicators chiefly used by the National Bureau of Economic Research Business Cycle Dating Committee to date business cycle peaks and troughs, although additional monthly and quarterly indicators are used as well. The data presented should be viewed with the caveat that these data represent the current vintage, incorporating all the revisions to date and will not exactly

match the vintage that was available six to 12 months prior to the start of the recessions shown. That said, there is virtually no evidence of a significant deceleration in any of these indicators. Thus, if the Budget Division outlook is correct, the current expansion should easily clock in as the longest expansion since 1850, when it enters its 11th year on July 1, 2019. But this expansion has also been the weakest of the 10 expansions that in Figure 3, and is expected to weaken further in 2019 consistent with the projected cyclical slowdown for this year and the economy’s longer-term deceleration toward its potential trend growth rate.

Figure 3
The 10 Longest Economic Expansions Since 1850
(Months)



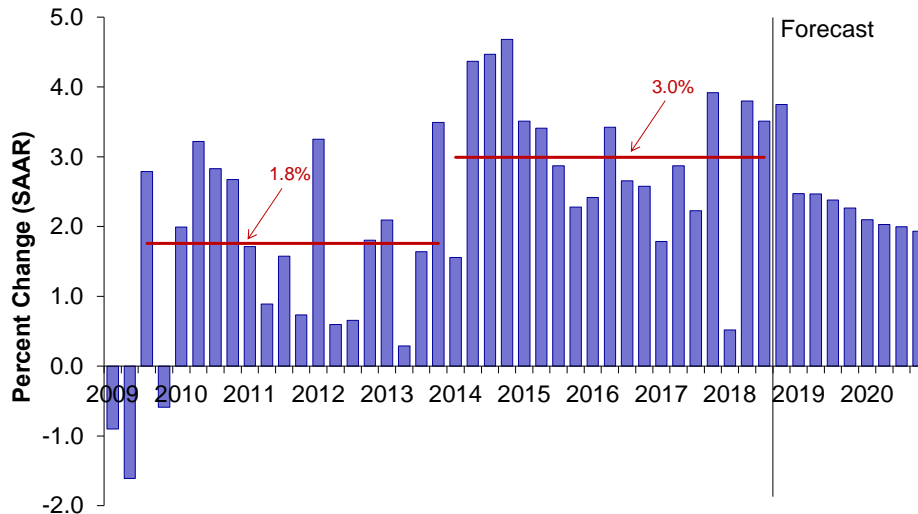
Source: National Bureau of Economic Research; Moody's Analytics.

Household Spending Growth Likely Peaked in 2018

Household spending, which accounts for more than two-thirds of the U.S. economy, has been the engine of U.S. economic growth since 2014 (see Figure 4), supported by robust gains in the labor market, high financial and real estate asset values, and the improved health of the household balance sheet. Household spending is estimated to have been lifted further in 2018 by the personal income tax cuts embodied in the Tax Cuts and Jobs Act (TCJA). Based on the analysis by the Joint Committee on Taxation (JCT), the TCJA is estimated to have boosted real consumer spending by \$40 billion in calendar year 2018, or approximately 0.2 percent.¹ Real growth in consumption spending rose 3.8 percent and 3.5 percent at an annualized rate for the second and third quarters of 2018, respectively, and yet another strong quarter is estimated for the fourth quarter as well, even while other sectors of the economy were facing headwinds.

¹ For a more detailed discussion, see FY2019 Economic and Revenue Outlook, p.25.
<https://www.budget.ny.gov/pubs/archive/fy19/exec/fy19ero/economicRevenueOutlook.pdf>.

Figure 4
Real Household Spending Growth Accelerated in 2014 Along with
Employment and Asset Prices



Source: Moody's Analytics, DOB staff estimates.

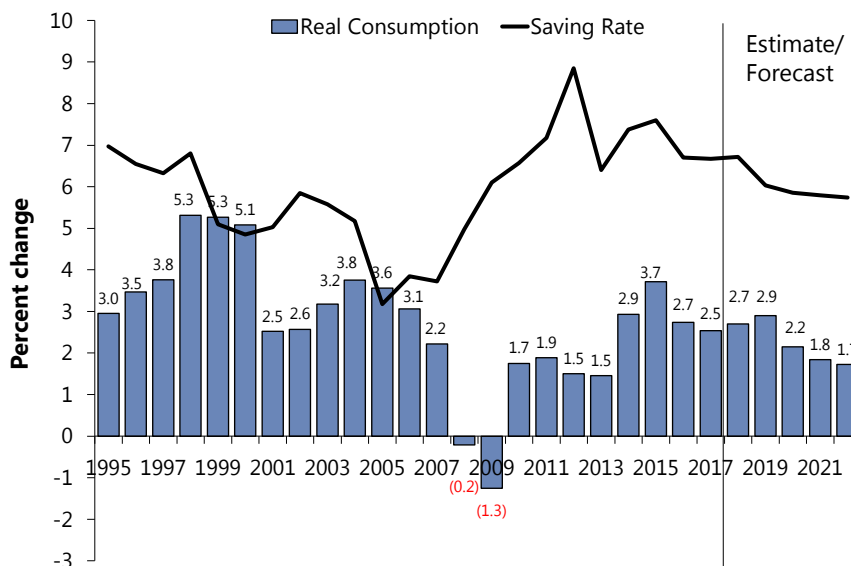
Although recent financial market volatility erased all of the S&P 500's 2018 gains, equity prices are still up over 15 percent since the end of 2016. Thus, the potential negative impact from a reverse wealth effect on consumer spending, particularly luxury goods, may be small. Moreover, that impact is estimated to be more than offset by the recent drop in gasoline prices, which are at levels not seen since July 2017 and undoubtedly helped to support a solid holiday shopping season. The decline in crude oil prices since the beginning of October 2018 has translated into a decline in gasoline prices to-date of over 60 cents per gallon. The Budget Division estimates that plummeting gasoline prices may have saved consumers about \$25 billion in the fourth quarter of 2018, or approximately \$200 per household, although some of that windfall is expected to have been saved. On balance, the Budget Division estimates that real consumption grew at an annualized rate above 3.5 percent in the fourth quarter of 2018, resulting in growth of 2.7 percent for all of 2018 on an annual average basis.

Real growth in consumer spending of 2.9 percent is projected for 2019, which appears to imply an acceleration, but the strength is an artifact of the strong base-year dynamics. On an annualized quarterly basis, household spending growth is estimated to step down from above 3.5 percent exhibited in the last three quarters of 2018 to an average of 2.4 percent in the four quarters of 2019 (see Figure 4). The lift to household spending from the tax cuts is expected to peter out in 2019. The TCJA is estimated to raise real consumer spending by \$55 billion in calendar year 2019, implying an increment to growth of less than 0.1 percent relative to 2018. Moreover, both employment and wages are projected to decelerate in 2019, consistent with slower national and global growth. Long-term interest rates have fallen from their most recent early November 2018 peaks, as global growth fears provoked a flight to safety among investors, but are expected to continue on a modest upward path over the course of this year, which in turn will put downward

pressure on the demand for big-ticket items, such as autos and furniture, as the cost of borrowing rises. Finally, the recent equity market correction and weakening home price growth imply less support from the wealth effect on household spending than there was in 2018. All of these factors point to lower household spending growth on a quarterly basis in 2019 than witnessed last year.

Household spending is expected to further decelerate in the out-years toward its long-term trend growth of about 1.7 percent as employment and labor force growth slow, a segment of households enters or prepares to enter retirement, and the overall economy regresses toward its long-term potential growth rate. The 2018 Comprehensive Revisions to the National Income and Product Accounts (NIPAs) significantly revised up the personal saving rate from a low and downward trending level to a more stable and elevated rate. For example, the value for 2017 was almost doubled, from less than 4 percent to 6.7 percent (see Figure 5). Although this upward revision may appear to provide room for further household spending growth, much of it resulted from a parallel upward revision to proprietors' income, dividends, and interest on pension plans.² As much of these types of income tends to accrue to higher-income households, they typically are characterized by lower marginal propensities to consume (MPC) than overall wages and salaries, and thus their support for future consumption growth may be limited. On balance, the Budget Division expects real consumption growth to fall below 2 percent over the remainder of the forecast horizon as overall economic growth converges to its long-run trend growth rate.

Figure 5
Household Spending and Saving Rate



Note: Displayed values pertain to real consumption growth.
Source: Moody's Analytics; DOB staff estimates.

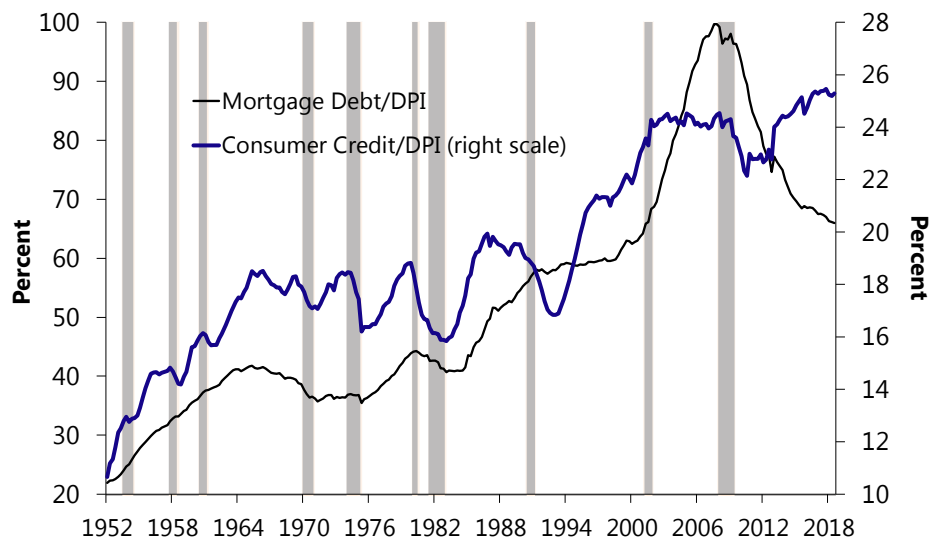
The relative health of household balance sheets is one development that should help the nation avoid a recession over the near-term. Figure 6 shows that mortgage debt as a share of disposable

² Source: Macroeconomic Advisors by IHS Markit Recently Asked Questions (RAQ): "What accounts for the dramatic upward revision to the personal saving rate?", August 28, 2018.

personal income has continued to go down, even with the collapse of the housing bubble well in the rearview mirror. Moreover, the growth in other forms of consumer debt, including auto loans and student loans, as a share of disposable income has also slowed down since 2017. The average level of the consumer-credit-to-disposable-income ratio for the first three quarters of 2018 is below the 2017 average, possibly indicating that households have been using their additional after-tax income to pay down debt. Today’s relatively low debt-to-disposable-income ratio can be viewed as a testament to the ongoing weakness of the nation’s housing market. Indeed, the most recent Federal Reserve Flow of Funds data indicate that real estate wealth had risen only \$2.8 trillion above its prerecession peak as of the third quarter of 2018, compared with a total for financial wealth of \$34.3 trillion, though a portion of the latter has likely since been lost. However, these data also demonstrate the absence of household credit imbalances that often represent the seeds of the next recession.

Figure 6

**Home Mortgage Debt and Consumer Credit
Relative to Disposable Income**



Note: Shaded areas represent U.S. recessions.
Source: Moody's Analytics.

Although the aggregate debt-to-disposable-income ratio remains healthy, the composition of debt held broken down by age group is a cause for concern. The Federal Reserve Bank of New York’s Household Debt and Credit Report disaggregates household debt by type of debt and age of the borrower.³ As of the third quarter of 2018, housing-related debt, including mortgage and home equity lines of credit (HELOC), comprises the vast majority of debt owned by borrowers over age 60, while non-housing-related balances, including student loans, auto loans and credit cards, represent the majority of debt for borrowers under 30 (see Table 2). Furthermore, this report also shows that mortgage delinquencies have significantly declined among all age groups since the Great Recession as tighter mortgage underwriting standards and high home prices have limited mortgage borrowing by less creditworthy borrowers. However, student loan, auto loan, and credit

³ Source: <https://www.newyorkfed.org/microeconomics/hhdc.html>.

card delinquencies have all increased slightly, especially among borrowers under 30, largely as a result of dramatic increases in student loan volume and loosened credit standards for auto loans and credit cards. The elevated delinquency rate among young borrowers potentially represents a restraining force on consumer spending going forward.

Table 2
Household Debt by Product Type and Age Group (2018Q3)

Trillions of Dollars

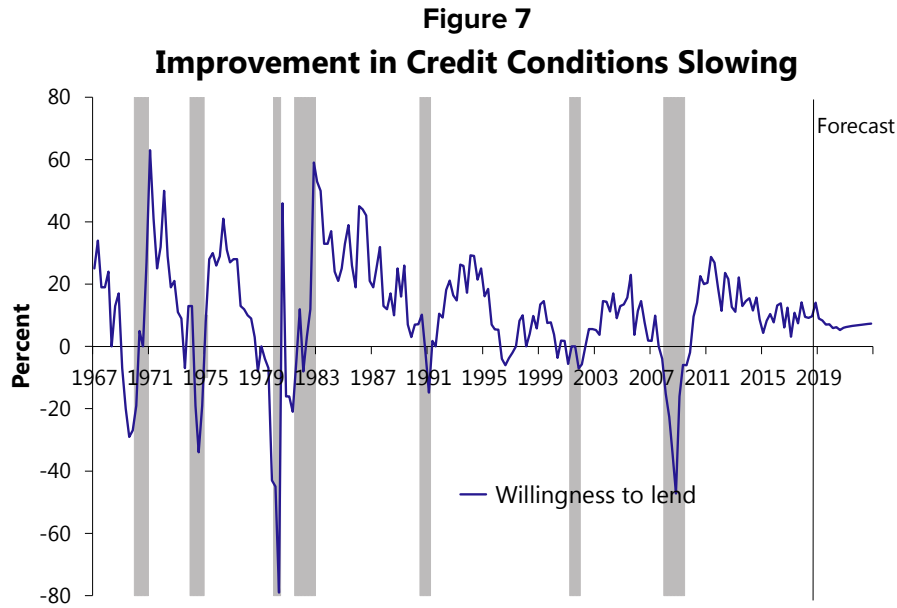
Debt Product	18-29	30-39	40-49	50-59	60-69	70+
Mortgage	0.34	1.82	2.47	2.29	1.49	0.73
HELOC	0.00	0.02	0.07	0.13	0.12	0.08
Auto Loans	0.16	0.28	0.29	0.27	0.17	0.09
Credit Card	0.05	0.14	0.19	0.21	0.15	0.10
Student Loans	0.37	0.48	0.30	0.19	0.08	0.02
Other	0.03	0.07	0.09	0.10	0.07	0.04
Total	0.96	2.81	3.41	3.19	2.08	1.05
Housing Debt Share	36%	66%	74%	76%	77%	77%
Non-Housing Debt Share	61%	32%	23%	21%	19%	19%

Note: Housing debt includes mortgage and home equity lines of credit (HELOC); non-Housing Debt includes auto loans, credit card and student loans. Other debt is excluded when calculating shares.

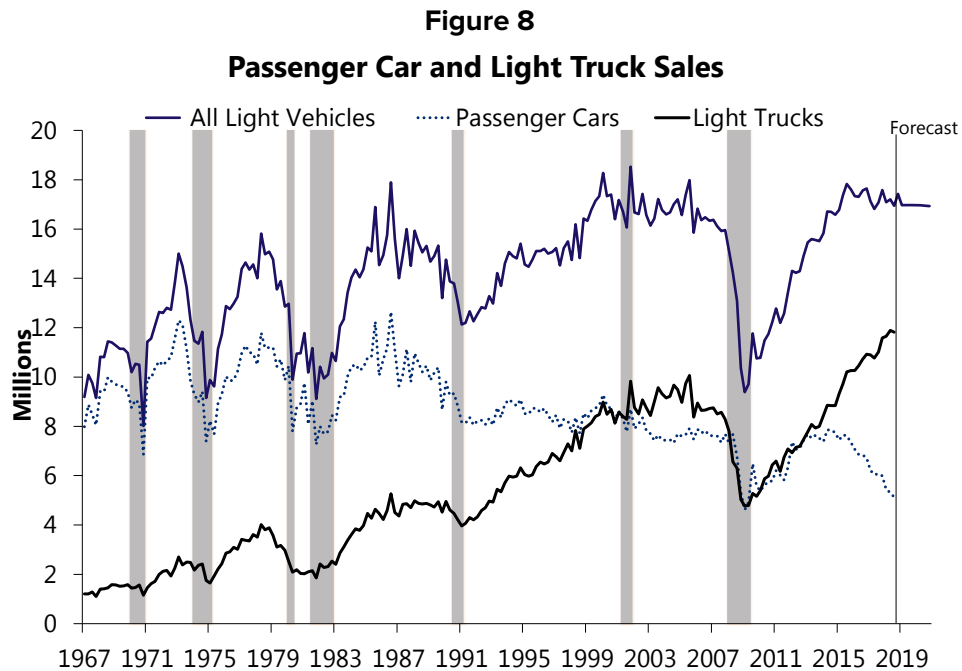
Source: New York Fed Household Debt and Credit Report.

Yet another source of downward pressure on household spending lies in the tightening of lending conditions, which may be related to the recent flattening of the yield curve.

Figure 7 describes bank willingness to lend to consumers, as measured by the Federal Reserve Board’s Senior Loan Officer Opinion Survey (SLOOS). Banks’ desire to lend to households improved over the past seven years, but the pace was not as fast as earlier expansions and it has slowed significantly since 2015. In 2018, overall consumer credit loosened a little bit as the willingness to lend measure averages slightly higher than 2017. However, the two most important determinants of banks’ willingness to extend consumer credit are short-term interbank borrowing costs, which are expected to continue rising as the Federal Reserve continues to normalize the federal funds rate in 2019, and default risk, which is expected to rise as the economy slows. Consequently, both indicators suggest that credit market conditions are expected to tighten for consumers going forward. Indeed, the Federal Reserve Bank of New York’s December 2018 Survey of Consumer Expectations Credit Access Survey shows a year-ago decline in application rates for credit for October 2018 and a substantial year-ago increase in rejection rates driven largely by respondents age 40 and below. Similarly, SLOOS reported from credit providers’ perspective that bank loan officers have seen a weakening particularly in credit card applications during 2018 with successful applicants needing a higher credit score.



Note: Senior Loan Officers Survey data measures net percentage of banks reporting increased willingness to lend to consumers; shaded areas represent US recessions.
Source: Moody's Analytics; DOB staff estimates.



Note: Shaded areas represent U.S. recessions.
Source: Moody's Analytics; DOB staff estimates.

Among all consumption categories, autos represent of the areas that are most sensitive to economic conditions. Figure 8 indicates that the strong upward trend for light vehicle sales, starting shortly after the recovery began, has stabilized since the end of 2015. Since then, light vehicle sales have maintained at a level around 17 million annualized units, with some fluctuation created by summer storms. For example, the replacement demand generated after Hurricanes Harvey and Irma struck Texas in the summer of 2017 lifted the sales of new cars and trucks up 10.0 percent in September 2017, while Hurricane Florence drove the sales up 4.4 percent in September 2018 after striking the Carolinas last year.

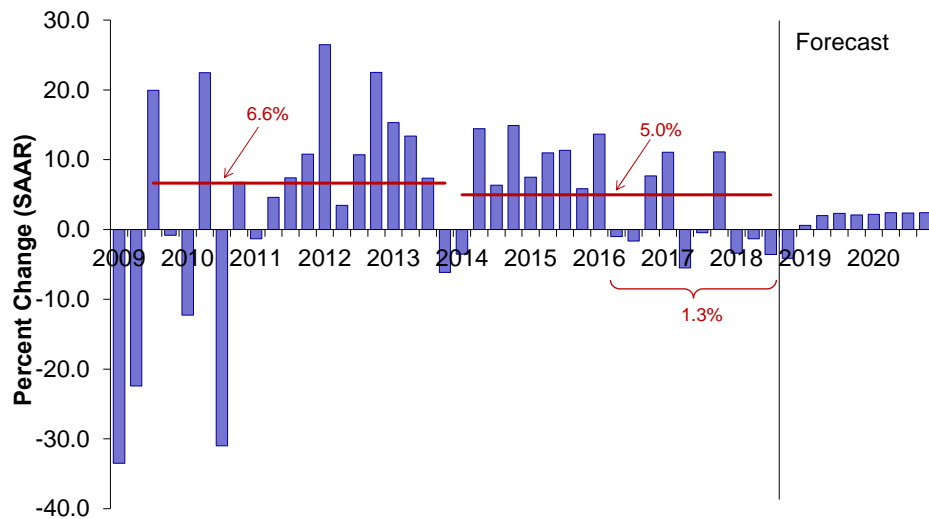
Going forward, there are several headwinds weakening the outlook for auto sales. First, rising interest rates and tighter borrowing constraints are bringing up auto loan costs. Second, existing tariffs on steel and aluminum and the threat of future auto tariffs that could boost the price of imported cars as well as the cost of vehicles built in the U.S. using imported parts. The threat of future tariffs also may have pulled sales forward. Should the U.S. decide to move forward with auto tariffs, the new NAFTA agreement, reached in October 2018, grants exemptions to Mexico and Canada, but the negotiations with the European Union and Japan are still ongoing. If the 25-percent auto tariffs are implemented, auto sales and the entire industry could be negatively affected.

The trend among U.S. households toward holding on to their vehicles longer represents yet a third factor putting downward pressure on auto sales. Results from the 2017 National Household Travel Survey conducted by the Federal Highway Administration and released in 2018 indicate that the average age of vehicles owned by households increased from 9.3 years in 2009 to 10.5 years in 2017, across all light-duty vehicle types and all levels of household income.⁴ Indeed, data indicate that the average age of vehicles used by higher-income households has increased even more than those used by lower-income households. This trend is likely a result of improved vehicle quality with the implication that the replacement of a vehicle has become more of a consideration of preference rather than necessity. Meanwhile, rising new vehicle prices have increased consumer preferences in favor of recent-model used vehicles relative to brand-new vehicles. The Manheim Used Vehicle Value Index spiked in the summer of 2017 during hurricane season and again in 2018 when import tariffs threatened higher future prices. In the absence of a fundamental change in technology that has the potential to trigger an accelerated replacement of vehicles, such as the advance of self-driving vehicle technology, light vehicle sales are expected to maintain their current levels.

For low income households, the home is not only the most important asset, but in many cases the only asset a family may own. Thus, the continued recovery of the housing market is critical to maintaining the momentum of the economic expansion. However, real growth in residential investment has performed dismally for much of the last three years, posting declines in seven of the most recent ten quarters for which data are available (see Figure 9). Real residential investment growth has average only 1.3 percent over the period from 2016Q1 through 2018Q3; growth has fallen every quarter during the first three quarters of 2018, and is estimated to have fallen 4.1 percent in the fourth quarter. Indeed, housing's performance would have been even worse had it not been for the high levels of investment experienced in the last quarter of 2017 due to the rebuilding and repair of homes damaged by Hurricanes Harvey and Irma in the summer of that year.

⁴ Source: <https://www.eia.gov/todayinenergy/detail.php?id=36914> .

Figure 9
Real Residential Investment Growth Remains Hung Over

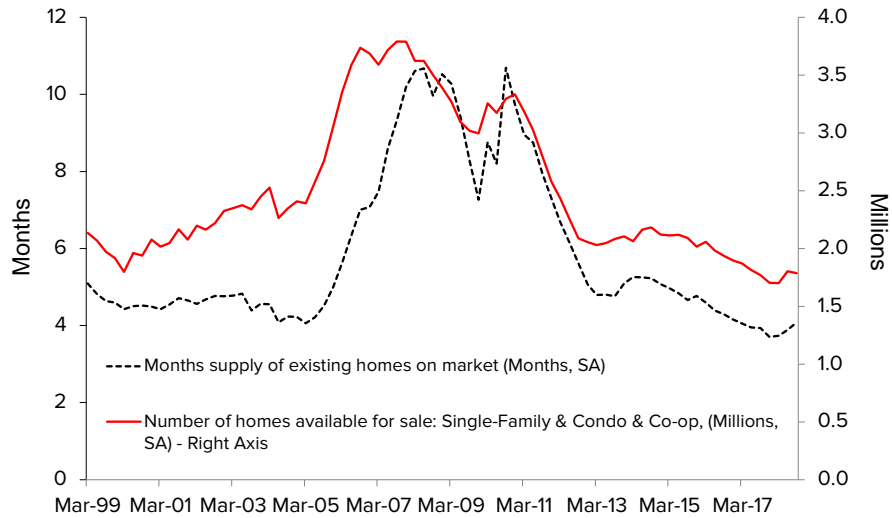


Source: Moody's Analytics, DOB staff estimates.

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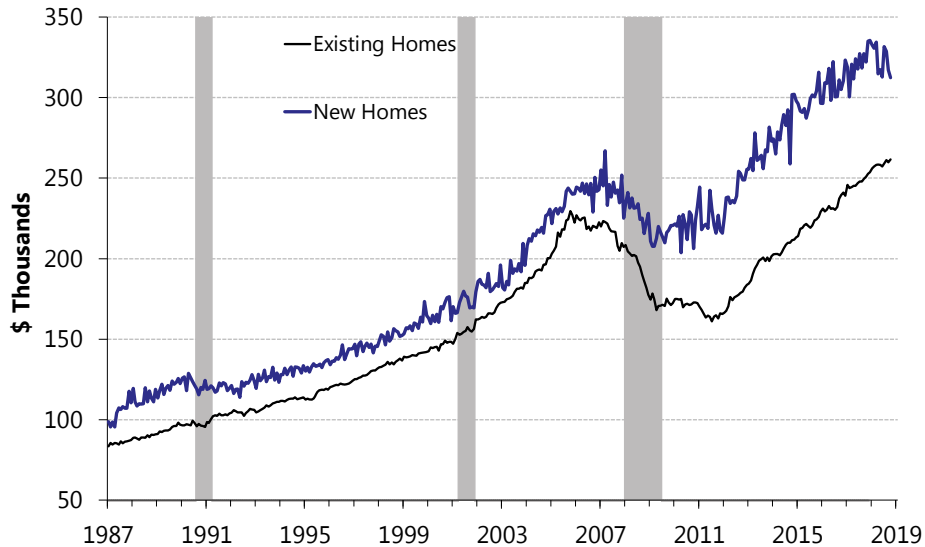
Existing home sales seem to be constrained by a relatively tight supply of both existing and new homes on the market (see Figure 10). The supply of new housing starts has been constrained by a shortage of skilled construction workers and rising materials costs, which in turn have resulted in skyrocketing new home prices (see Figure 11). High prices combined with higher mortgage rates and weak wage growth have limited the affordability of new homes, which in turn has constrained existing-home owners from trading up, limiting the supply of existing homes for sale as well. However, growth in new home prices slowed down over the course of the summer and fall of 2018, and mortgage rates now fall back to where they were in early 2018, both of which in addition to ongoing growth in employment and wages will help the housing market to resume. Therefore, the Budget Division expects the real residential investment growth to turn positive on an average quarterly basis during 2019, though its annual average growth is still expected to be down 0.4 percent in 2019, following a similar decline of 0.3 percent in 2018.

Figure 10
Housing Market Supply Remains Tight



Source: Moody's Analytics.

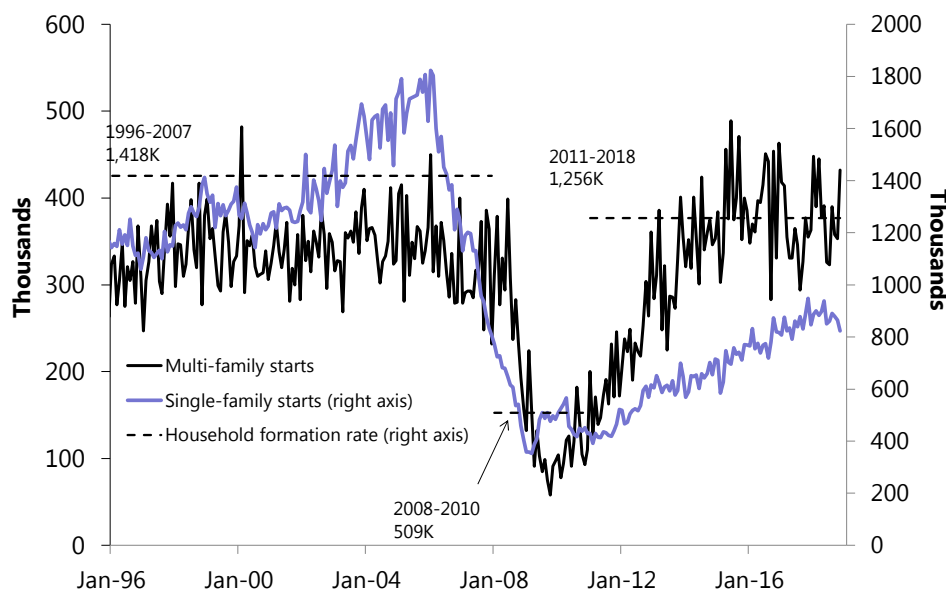
Figure 11
U.S. Median Home Price Growth Reducing Affordability



Note: Shaded areas represent U.S. recessions.
Source: Moody's Analytics.

With the rise in employment and income, household formation rose well above the recession lows, fueling the demand for new home construction, but household formation remains below its prerecession level (see Figure 12). At the height of the housing boom in 2005, real residential fixed investment represented 6.1 percent of total real GDP. This share is only 3.3 percent based on the most recent four quarters of available data through 2018Q3. While much of the housing bubble originated from a building boom in single-family homes, the collapse and the ensuing tight market for mortgage credit resulted in a significant decrease in both single-family and multi-family starts. The recovery, however, has been substantially stronger for multi-family housing which has been stabilized at the pre-recession level. In contrast, single-family starts remain more than 50 percent below their pre-recession peak.

Figure 12
Household Formation Recovering But Multi-families Still Outpacing Single-family Construction



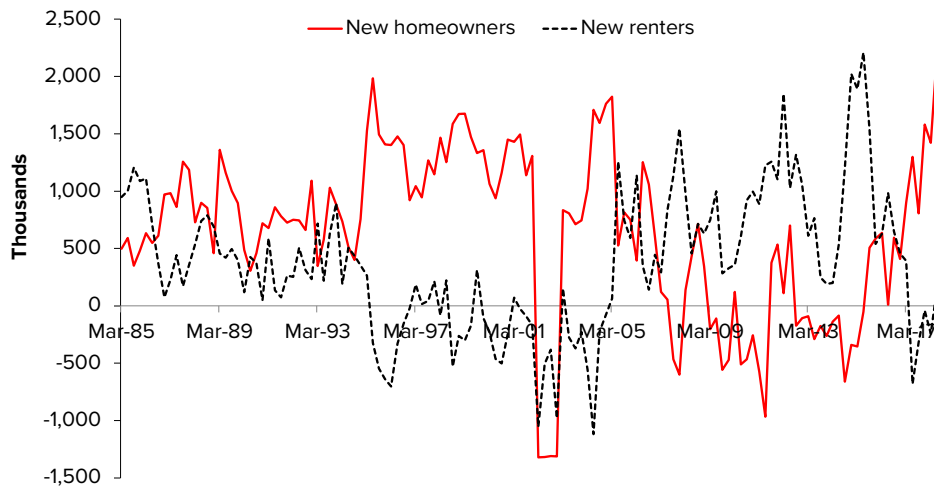
Source: Moody's Analytics.

The weak growth in single-family housing starts relative to multi-family starts is consistent with an average household formation rate that is well below its prerecession level. Survey data suggests that Millennials (who were born between 1981 and 1996) are less likely than previous generations of young adults to be married and to have a child. A 2017 analysis of Current Population Survey (CPS) data finds that only 37 percent of Millennials aged 21- to 36-years old were married, compared to 48 percent of Gen Xer's (who were born between 1965 and 1980) when they were 21- to 36-years old, and 56 percent of Baby Boomers (who were born between 1946 and 1964) when they were 21- to 36-years old.⁵ Moreover, 88 percent of Millennials in the 21- to 36-year old age cohort reported

⁵ <http://www.pewresearch.org/fact-tank/2017/02/13/americans-are-moving-at-historically-low-rates-in-part-because-millennials-are-staying-put/>

living in an urban setting, up slightly from the 84 percent of Gen Xer's at the same age, and up significantly from the 68 percent of Baby Boomers living in an urbanized area at that age. Perhaps consistent with the above trends, Millennials had appeared to have shifted their preferences away from home ownership toward renting. The reason behind these apparent life-style changes is more uncertain, although financial constraints are likely playing a significant part. Compared with the credit conditions faced by Gen X young adults a generation before, lending standards are much tighter, making it more difficult for Millennials to obtain a mortgage. Similarly, student debt may be deterring young adults from home ownership too. However, more recent data indicate that a reversal of these trends may be developing. Figure 13 shows that in virtually every quarter since the fourth quarter of 2006, the height of the housing market collapse, the number of new renters exceeded the number of new homeowners. That trend finally reversed itself in the first quarter of 2017, when the number of new-owner households finally exceeded the number of new-renter households. This trend has continued through 2018Q3, the most recent data available. Moreover, the rate of homeownership, which had finally hit a trough of 62.9 percent in the second quarter of 2016, now stands at 64.4 percent as of 2018Q3, the highest in four years.

Figure 13
Has the Housing Market Crossed a Tipping Point?

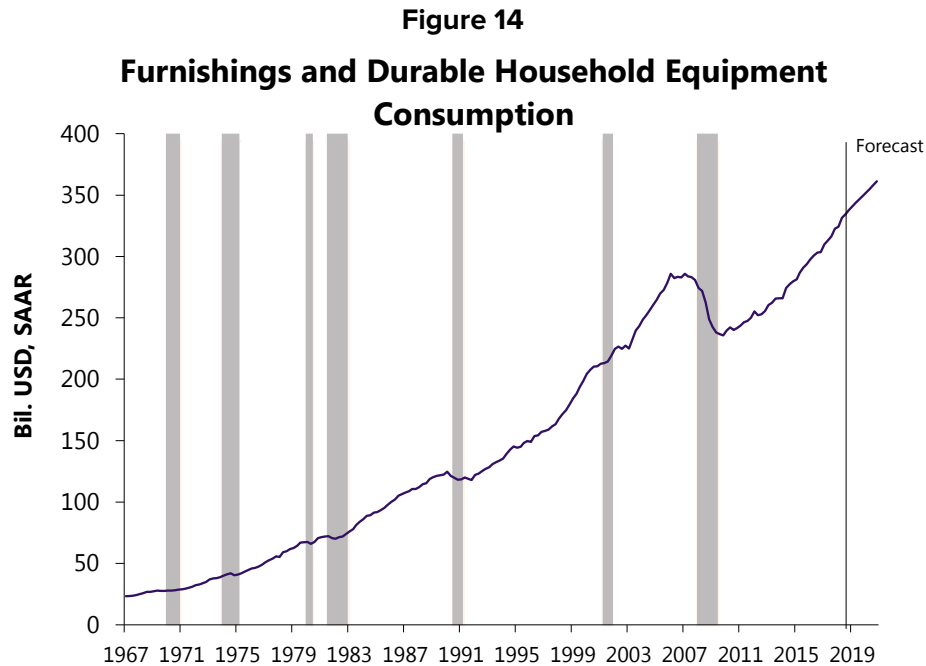


Note: New homeowners are calculated as the year-ago change in the number of owner-occupied homes; new renters are calculated as the year-ago change in the number of renter-occupied homes.

Source: Moody's Analytics.

The choice as to whether to rent or own a home can have macroeconomic consequences. Consumer spending on durable goods is likely to be restrained by a preference toward renting since homeowners tend to spend more on home improvement and other complementary goods, such as furniture, appliances, and autos, than renters do. Figure 14 shows the steep decline in nominal consumption of furnishings and durable household equipment following the housing market crisis. This spending failed to achieve its pre-crisis level until the second quarter of 2014, a testament to the duration of the housing market's long and slow healing process. However, ongoing employment and wage growth is expected to continue to promote homeownership and household

lasting throughout 2019, possibly representing one of the few tailwinds supporting the durability of the current expansion.



Note: Shaded areas represent U.S. recessions.
Source: Moody's Analytics; DOB staff estimates.

The Labor Market to Ease Further

The relatively strong real GDP growth in 2018 translated into continued healthy gains in the labor market. Monthly private sector job gains of 214,000 were somewhat stronger than the pace of the last two years (see Figure 15). As the expansion continues to mature, employment is expected to slow significantly in 2019, with private nonagricultural job growth of 1.6 percent projected for the current year on an annual average basis, following growth of 1.8 percent and 1.9 percent for 2017 and 2018, respectively. Monthly public sector gains were modest at 6,200 in 2018. Public sector job growth of 0.3 percent is projected for the current year, virtually unchanged from last year's performance. On balance, total employment growth is projected to fall to 1.4 percent in 2019, following growth of 1.6 percent in both 2017 and 2018. Slower job growth combined with slower output growth implies no noticeable improvement in productivity growth for this year.

Employment gains continued to be widespread in 2018. Only the utilities and information sectors lost jobs in 2018. For 2019, most sectors are expected to add jobs at a slower pace than in 2018 (see Table 3). The service sector will contribute over one-half of the job gains, led by the health care and social services and the leisure and hospitality sectors. Construction and transportation and warehousing will also post good gains, and manufacturing will have another year of job increases, although the pace of growth will fall as the domestic economy softens and world trade contracts.

Figure 15
Private Job Gains Will Slow as Slack Diminishes

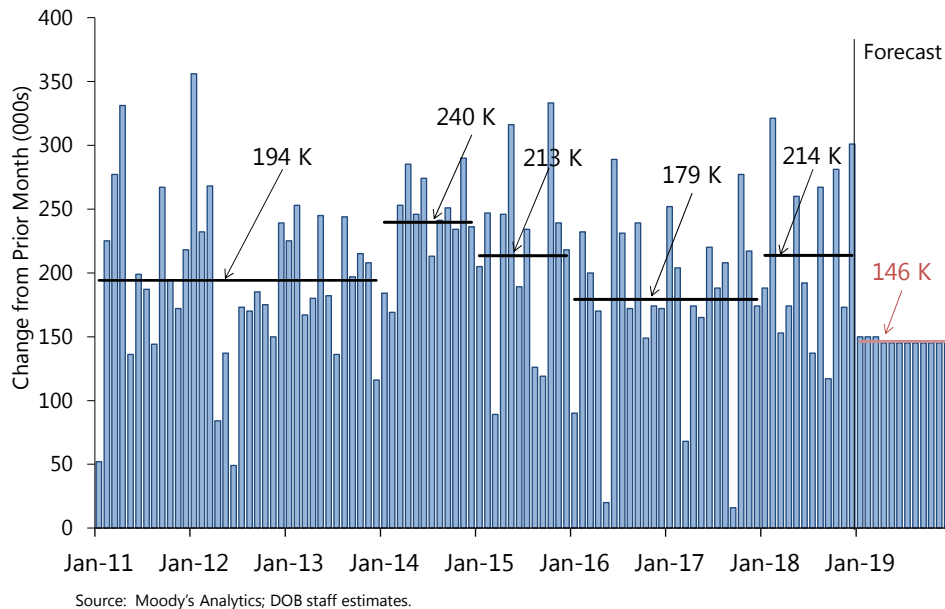


Table 3
JOB GROWTH TO SLOW FURTHER IN 2019

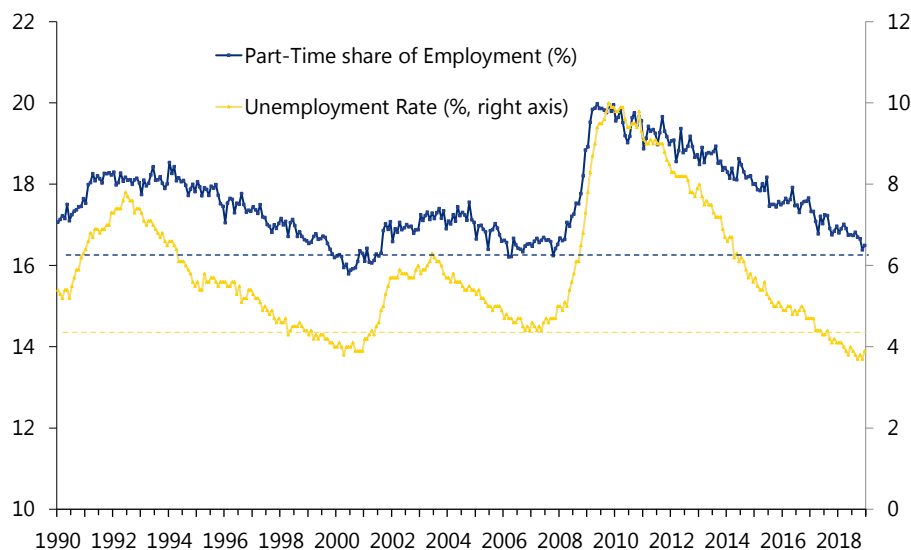
	2017 %Change	2018 %Change	2019 Jobs Added	2019 % Change
Total Private	1.8	1.9	1,998	1.6
Natural Resources and Mining	1.5	8.8	34	4.6
Utilities	(0.3)	(0.3)	4	0.7
Construction	3.4	4.0	190	2.6
Manufacturing	0.7	2.1	146	1.2
Wholesale Trade	0.7	1.4	62	1.0
Retail Trade	0.2	0.4	81	0.5
Transportation and Warehousing	3.1	3.3	136	2.6
Information	(0.0)	(1.0)	1	0.0
Finance and Insurance	1.9	0.9	66	1.0
Real Estate, Rental, and Leasing	2.3	2.9	50	2.2
Professional and Technical Services	1.9	2.6	241	2.6
Management, Admin. Support, and Waste Services	2.2	2.6	179	1.5
Education Services	2.8	1.6	61	1.6
Health Care and Social Assistance Services	2.3	2.1	366	1.8
Leisure, Hospitality, and Other Services	2.3	1.7	376	1.7
Government	0.4	0.2	75	0.3
Total	1.6	1.6	2,072	1.4

Source: Moody's Analytics; DOB staff estimates.

With continued, albeit slower growth in employment, the Budget Division projects the national unemployment rate to drift lower from an average of 3.9 percent for 2018 to 3.6 percent in 2019. The rate of decline in the unemployment rate is markedly diminishing as it falls below the vicinity of the non-accelerating inflation rate of unemployment, or NAIRU, i.e., the unemployment rate below which inflationary pressures begin to build. However, the precise value of the NAIRU remains uncertain as policymakers continue to debate just how much slack remains in the labor market after eight years of substantial job growth. The Budget Division estimate for this year’s annual average unemployment rate is far below the prerecession low of 4.4 percent.

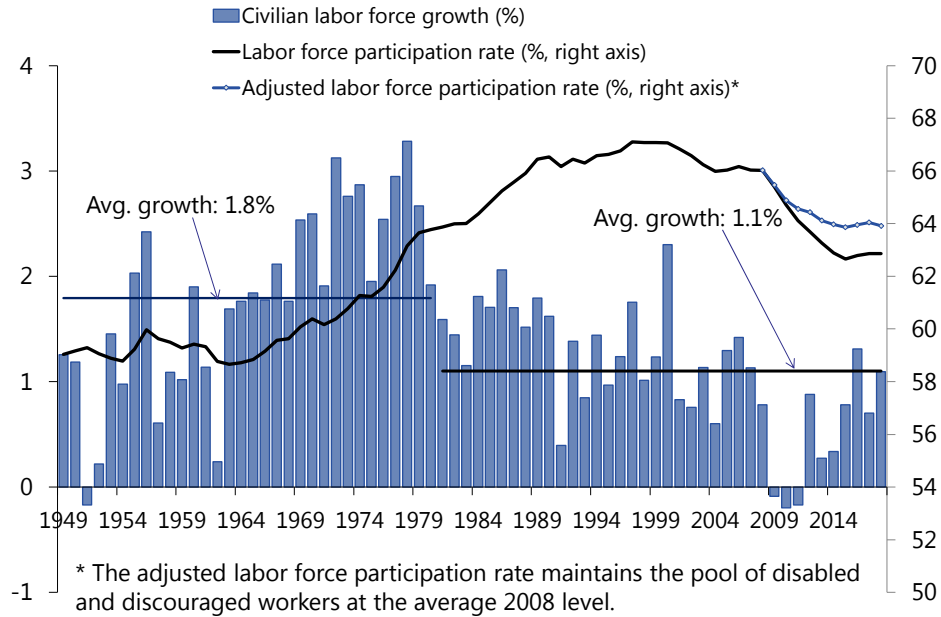
Despite the creation of 20 million jobs since early 2010, the current expansion boasts the second weakest labor market recovery of the postwar era, with only the 2002-07 expansion exhibiting slower growth. While the official unemployment rate recently has been around the 2000 pre-recession low and briefly touched a low level last seen 50 years ago, there are still pockets of slack in the form of both unemployment and underemployment. The long-term unemployed (27 weeks or more) and those who are not in the labor force but would like to have a job are both still above prerecession levels and even rose slightly during 2018. A source of underemployment is part-time work. As a share of employment, this measure is nearing pre-recession lows (see Figure 16). Included in this category may be “gig” workers, who work for themselves on tasks as they can find them. This type of work has blossomed in recent years as the Internet and mobile apps have made it easier for the worker and customer to connect. Based on the household survey data from U.S. Bureau of Labor Statistics, approximately 20 percent of part-time workers want to be working full-time and would choose to change their labor market status from self-employed to payroll employee. That transformation would add to payroll employment but leave the labor force and the unemployment rate unchanged.

Figure 16
The Share of Part-Time Work Declines



Note: Dotted lines denote pre-recession lows.
Source: Moody’s Analytics

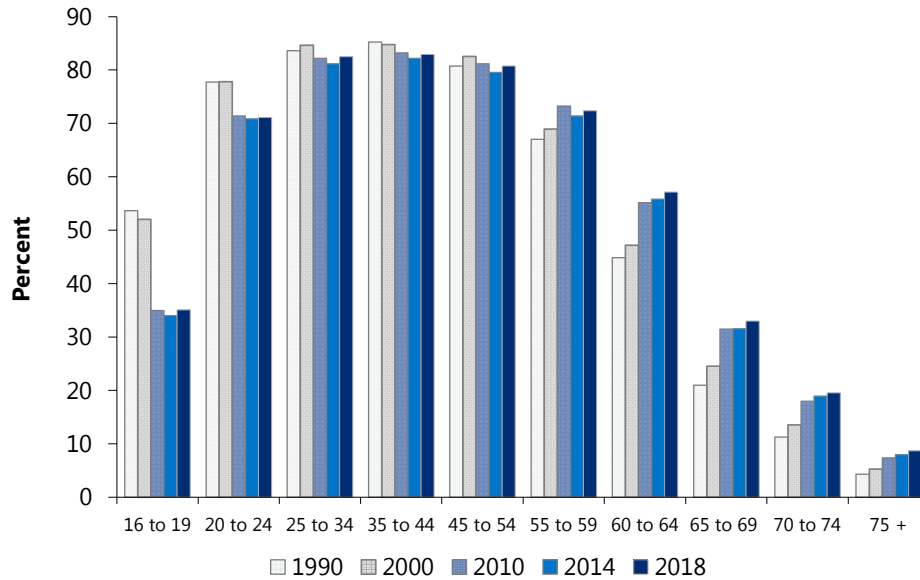
Figure 17
National Labor Force Trends



Source: Moody's Analytics.

The number of individuals who are not in the labor force but want a job now remains well above pre-recession lows. The labor force participation rate (LFPR) is defined as the percentage of the population 16 and older who either are employed or seeking employment. As illustrated in Figure 17, the LFPR fell precipitously between the start of the Great Recession and the end of 2015, falling 3.7 percentage points from its pre-recession peak in 2007, but has remained virtually unchanged since then, ending 2018 at 63.1 percent. This pattern is due to both secular and cyclical factors. Understanding these factors is critical to assessing the degree of slack that exists in the labor market and, in turn, how rapidly payroll employment can increase before the inflation rate can be expected to accelerate.

Figure 18
Labor Force Participation Rates by Age Group



Source: U.S. Bureau of Labor Statistics.

Secular factors, such as the aging of the baby boomer generation, have also contributed to the decline in the LFP, and many of these older workers who left the labor force are unlikely to return no matter how strong the economy. As demonstrated in Figure 18, labor force participation rates tend to fall substantially for older workers. The participation rate for those aged 55 to 59 was above 70 percent in 2018, but only slightly above 19 percent among those 65 and over. Thus, as the very large baby boom generation moves through those age cohorts with declining labor force participation rates, overall labor force participation rates will fall, all else constant. The CBO and the Council of Economic Advisors (CEA) both conclude in their research that about half of the decline in labor force participation after the fourth quarter of 2007 can be attributed to the aging of the population.⁶ Baby boomers will continue to reach retirement age in elevated numbers until 2029; correspondingly, the decline in labor force participation attributable to aging will continue, potentially at a more rapid pace in the coming years.

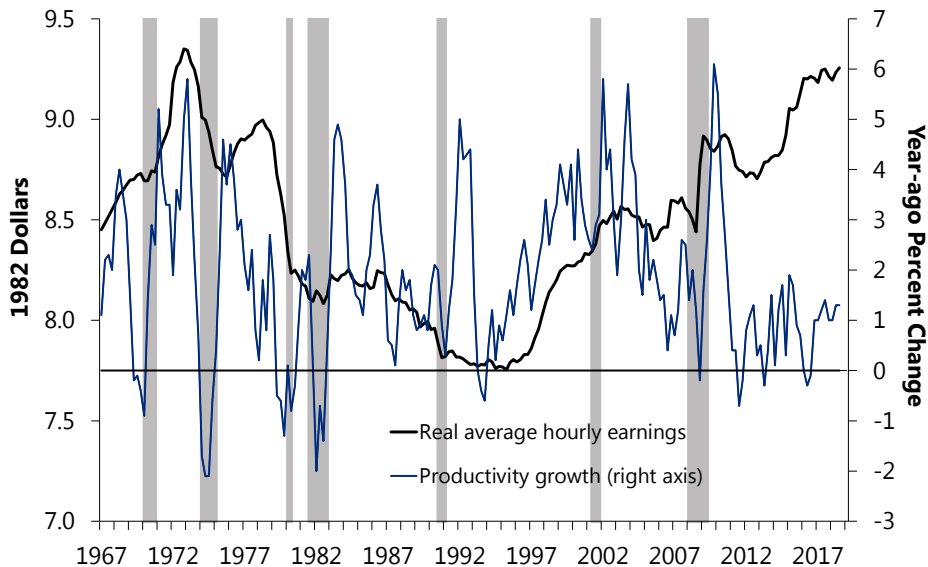
Some additional labor market trends are also illuminated in Figure 18. Over the decades, the participation rates of younger cohorts have declined as more young people attend school, and participation rates among the two oldest cohorts have increased as better health and higher life expectancy increased both the ability and the need for a longer work life. Participation rates among all three prime working age groups (ages 25–54) only recovered to 2010 levels this last year, further evidence of the corrosive impact that weak economic growth has had on the labor market. On a more optimistic note, participation rates between 2014 and 2018 increased for all age cohorts,

⁶ Congressional Budget Office “The Slow Recovery of the Labor Market”, Congress of the United States, February 2014; Council of Economic Advisers, “The Labor Force Participation Rate Since 2007: Causes and Policy Implications.” July 2014.

perhaps signaling that stronger economic growth has indeed drawn more workers into the labor force.

Another development associated with the decline in labor force participation among prime age workers was an increase in the number of working-age people in the U.S. who are not in the labor force for reasons of disability. Since 2010 more than three million working-age people have left the labor force due to disability, representing 2.0 percent of the labor force. BLS data indicate that the combined total of discouraged workers and workers not in the labor force because of disability has grown 14.0 percent since the recession's first year (2008). If that total had remained at its 2008 level, the labor force participation rate would have been an estimated 1.1 percentage points higher in 2018 (see Figure 17).

Figure 19
Productivity Growth and Real Private Average Hourly Earnings



Note: Shaded areas represent U.S. recessions.
Source: Moody's Analytics.

Average hourly earnings in the private sector has risen through much of the expansion, even after adjusting for inflation (see Figure 19). Real earnings growth rate accelerated in 2015, as the labor market continued to strengthen, but by the end of 2016, growth fell below 1 percent where it remained until the final quarter of 2018 when it posted a 1.0 percent gain. The weakness in real earnings growth is consistent with the persistence of slack in the labor market. Historically, real wage growth also aligns with productivity growth. Until very recently, productivity growth has remained very weak throughout the slow but steady expansion, mustering only 0.7 percent growth on average since the first quarter of 2011. This is due in part to the weak rates of output and investment growth that have characterized this expansion. However, there may be some downward pressures on average hourly earnings and average wages that obscure a more robust growth in hourly earnings for many workers. One study posits that real wages grow little or even decline a bit

for white male workers once they reach their mid- to late 40's.⁷ Another study suggests that the growth of the average wage is depressed by the flows in and out of the labor force. As aging baby boomers retire, there is an outflow of high wage earners from the workforce, simultaneous with an inflow of younger workers who, on average, earn less than those retiring. This flow has been larger than average as the expansion draws in a larger than average number of unemployed and new entrants.⁸ Total wage growth is also projected to slow to 4.1 percent, down from 4.4 percent growth in 2018. Total personal income growth of 4.1 percent is projected for 2019, down from 4.4 percent in 2018.

Persistently low productivity growth has presented a puzzle for much of the expansion. Even within the manufacturing sector, where production is highly automated, productivity growth remains unusually flat. Some research points to a secular decline owing to the notion that transformational advances like those of the late 19th and early 20th centuries that spawned decades of high productivity growth are unlikely to be repeated going forward. Productivity growth, defined as output per worker, can be decomposed into its two component parts, output growth and employment growth. If the former exceeds the latter, then productivity growth will rise, if job growth exceeds output growth, then productivity growth will fall as it did early in the current expansion. If productivity tends to be supply-side driven, then employment will rise in advance of a rise in output and productivity will fall, or if workers are replaced with robots or artificial intelligence, employment will fall in advance of (or possibly simultaneously with) output growth and productivity will rise. But if productivity tends to be demand side driven, then output growth will tend to lead employment growth, causing productivity to rise. Statistical test results indicate that output growth does tend to lead job growth, suggesting that it may be the low growth environment itself that is restraining growth in productivity.⁹

Business Fixed Investment Growth to Slow

Nonresidential fixed investment – that is, business spending on equipment, intellectual property products (IPP) and structures that, generally, are used in the production of goods and services – is expected to increase at a slower pace in 2019 after posting what is likely to be its fastest growth in four years in 2018. Total real nonresidential fixed investment is expected to increase 3.9 percent in 2019 after estimated growth of 6.8 percent in 2018, which – if realized – would be the highest rate of growth since 6.9 percent in 2014. But growth is expected to slip to 3.9 percent in 2019 and fade further going forward. Equipment investment growth is expected to slow to 4.5 percent in 2019, after 7.3 percent in 2018, its fastest pace since 2012. Real investment in structures is expected to rise 1.6 percent, down from 5.3 percent growth in 2018, also the best since 2014. The Budget

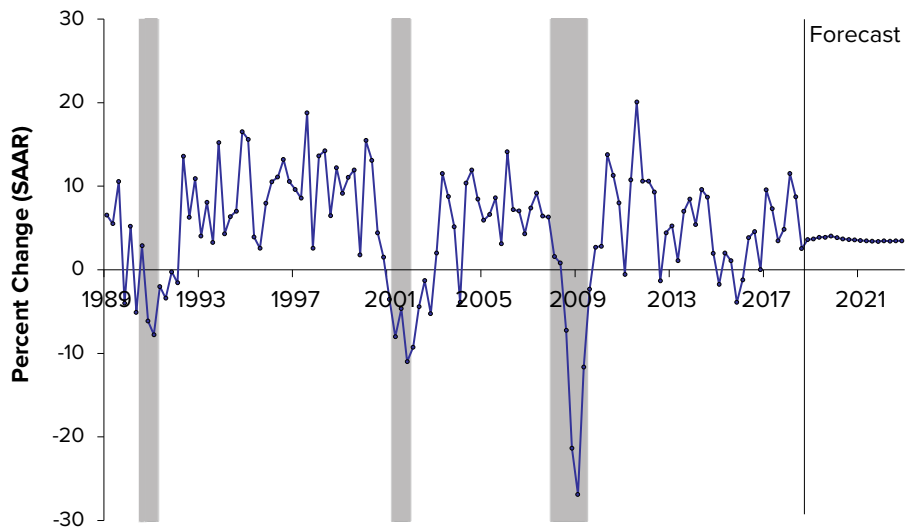
⁷ Robert Rich, Joseph Tracy and Ellen Fu, “U.S. Real Wage Growth: Aging’s Effect on the Average,” Federal Reserve Bank of New York, *Liberty Street Economics* (blog), September 28, 2016, <http://liberystreeteconomics.newyorkfed.org/2016/09/us-real-wage-growth-slowing-down-with-age.html>.

⁸ Mary C. Daly, Bart Hobijn and Joseph Pedtke, “The Good News on Wage Growth”, Federal Reserve Bank of San Francisco (SF Fed Blog), August 14, 2017, <https://www.frbsf.org/our-district/about/sf-fed-blog/wage-growth-good-news>.

⁹ A Granger causality test was performed using real U.S. GDP and private sector employment over the period from 1990Q1 through 2018Q3. The null hypothesis that employment growth does not Granger cause output growth could not be rejected at the 5 percent level; the null hypothesis that output growth does not Granger cause employment growth is rejected at less than the 5 percent level, with an optimal lag length of six quarters.

Division expects real IPP investment growth to decline to 4.8 percent in 2019 following a 7.1 percent gain in 2018.

Figure 20
Real Nonresidential Fixed Investment To Remain Subdued

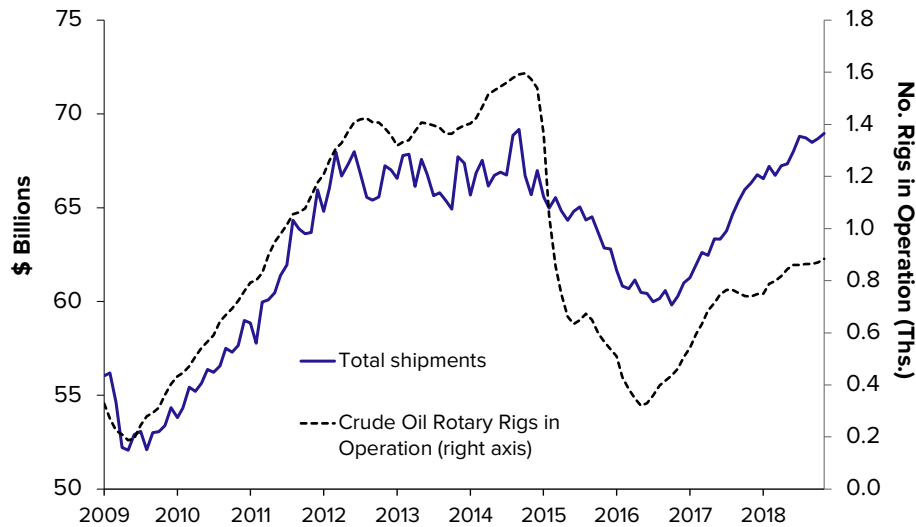


Source: Moody's Analytics; DOB staff estimates.

Real business fixed investment has been extremely volatile during the current expansion (see Figure 20). Although household spending is a key driver, much of the recent volatility can be explained by energy price dynamics and global growth cycles. As indicated in Figure 21, the impact of energy sector developments on investment cannot be overstated. The decline in shipments of nondefense capital goods excluding aircraft, a good proxy for business equipment spending, starting in the middle of 2014, was closely associated with the precipitous drop in oil prices and the removal of oil rigs from service. Both indicators improved with the rise in energy prices from their early 2016 trough. However, the upturn in total shipments has outstripped the improvement in energy-related equipment, pointing to more favorable developments outside the energy sector as well, both domestic and global.

Figure 21

Oil Rigs and Nondefense Capital Goods Shipments Excluding Aircraft



Source: Moody's Analytics.

Real fixed business investment in structures, the smallest of the three major components of nonresidential fixed investment, is the weakest and most volatile. After posting back-to-back declines in 2015 and 2016, structures investment rebounded to 4.6 percent growth in 2017, and the Budget Division expects it strengthened further to 5.3 percent growth in 2018. While real investment in structures reached its highest level since 2008Q4 in the second quarter of 2018 after growing 13.9 percent and 14.5 percent in the first two quarters of the year, a drop of 3.4 percent in Q3 brought the level back down.

The recent behavior of structures investment appears mainly due to two factors: one is a certain amount of overbuilding associated with the real estate boom that preceded the Great Recession and that is slowly being worked off, and the second is swings in the mining exploration, shafts and wells component that are related to oil price fluctuations. Regarding the first factor, a study by the Federal Reserve Bank of Cleveland estimated that overbuilding of nonresidential structures accelerated in the first half of the 2000s and began to decline just before the start of the recession.¹⁰ Indeed, structures investment grew 7.6 percent in 2006, the fastest growth since 2000, before accelerating to a 13.3 percent rate of expansion the next year. Structures investment plunged 18.7 percent in 2009, the largest percentage decline since World War II, and also fell by a double-digit

¹⁰ The authors obtain an estimate of the overhang of structures as the percentage difference between the actual stock of structures and their optimal level. The optimum stock of structures is based on the idea that a firm should construct a new building only if it expects that the cost of doing so will be smaller than the discounted value-added the building will be likely to generate in the future. See Filippo Occhino and Margaret Jacobson, "The Overhang of Structures before and since the Great Recession," *Economic Commentary*, 2014-04, Federal Reserve Bank of Cleveland. Available at <https://www.clevelandfed.org/Newsroom%20and%20Events/Publications/Economic%20Commentary/2014/The%20Overhang%20of%20Structures%20before%20and%20since%20the%20Great%20Recession.aspx>

percentage in the following year. The authors estimate that by 2008 the overhang in retail trade, defined as the stock of buildings in excess of what economic conditions and growth prospects call for, was close to 50 percent and about 25 percent in manufacturing. While they also show that these overhangs tended to fall during and after the Great Recession, it will still take some time to work them off given the relatively long lives of these buildings, which the authors estimate at 24 years on average.

But the other factor behind the fluctuations in structures investment is the shale boom in the U.S. and the effects that changes in global oil prices have on the mining exploration, shafts, and wells component of real structures investment. In 2016, for example, investment in the mining segment fell 43.2 percent, with its share of structures investment falling to 12.2 percent, due to weakness in global oil prices. Overall nonresidential investment in structures shrank 5.0 percent despite a 17.7 percent increase in commercial and health care structures. But as oil prices began to rebound in 2017, investment in mining exploration, shafts and wells jumped 41.8 percent, leading to a rebound of 4.6 percent growth in overall structures investment despite declines in investment in manufacturing plant and in power and communications projects and a rise of just 3.2 percent in commercial and health care projects investment. The share of mining exploration, shafts and wells in overall investment rose to 18.3 percent in 2017 from 13.4 percent in the previous year. With oil prices again retreating in late 2018, and signs of a global slowing of economic growth, which would also put downward pressure on oil prices, the mining segment could again become a drag on real investment in structures. The Budget Division does however expect oil prices to remain fairly stable at just over \$50 per barrel in the near future.

With complete data on 2018 still lacking, it remains difficult to assess the extent to which nonresidential fixed investment has been affected or will be affected in the future by the federal Tax Cuts and Jobs Act (TCJA), only signed into law at the end of December 2017. While real private nonresidential fixed investment expanded 11.5 percent in Q1, it slowed to 8.7 percent in the second quarter before falling to a 2.5 percent growth rate in Q3. Spending on equipment, up 8.5 percent in the first quarter, saw its growth rate nearly halved to 4.6 percent in Q2 with a further slowdown to a 3.4 percent rate of growth in the third quarter. Again, economic forces in the form of oil price fluctuations seem to have had more to do with this than tax policy changes, as spending on mining exploration, shafts and wells was up 31.0 percent in Q1 and jumped 95.7 percent in Q2 with a 10.4 percent decline in Q3. As noted above, oil prices climbed in the first half of the year, then plateaued somewhat before climbing again in late summer and early autumn, prior to a steep decline.

History provides other reasons for skepticism. For example, the Tax Reform Act of 1986 lowered the corporate tax rate from 46 percent to 34 percent, but real business fixed investment increased just 0.9 percent in 1987, following growth of 16.7 percent in 1984, 6.6 percent in 1985, and a 1.7 percent decline in 1986. Investment subsequently grew at the moderate pace of 5.0 percent in 1988 and 5.7 percent in 1989.

The TCJA also contained provisions designed to encourage firms to repatriate profits from overseas. Supporters of the TCJA argued that real fixed business investment would be stimulated as those profits were brought home. While it is very early in the TCJA's existence, early evidence does not appear to support this. A September 2018 article posted on the Federal Reserve's website says that funds repatriated in Q1 2018 "have been associated with a dramatic increase in share

buybacks; evidence of an increase in investment is less clear at this stage” though the authors say it may simply be too early to see effects on investment, given that it takes time to order capital goods and have them produced, not to mention engage in new construction projects.

The authors say that of some \$1 trillion held offshore by U.S. multinational enterprises (MNEs), just over \$300 billion was repatriated in Q1 2018. In contrast, after a repatriation tax holiday was declared for one year in 2004, \$312 billion of an estimated \$750 billion held overseas came back to the U.S. Note that the repatriation is done in an accounting sense: funds previously held by a foreign affiliate are transferred to ownership by the U.S. parent. The authors concentrate on the activities of the top 15 holders of overseas cash, since these MNEs account for 80 percent of all offshore cash and about 80 percent of their total cash (combining domestic and foreign) is held overseas. It turns out that within this small group, the top five cash holders accounted for 66 percent of share buybacks in Q1, with the top holder alone responsible for 41 percent of share buybacks. Money did not go directly back to their shareholders, either: the authors find no change in dividends by these firms. These firms also basically did not use the funds to pay down debt – the authors find that the total debt of these 15 MNEs dipped just two percent with “little change” in their debt-to-assets ratio. Unlike the case of equities buybacks, the authors found no “obvious spike” in investment. They note that even prior to the passage of the TCJA, investment spending was already on an upward trajectory, a trend that is confirmed by the data shown in Figure 21. But they do say that in looking at Q1-over-Q1 changes in investment, “it does appear that investment is higher for the top 15 cash holders though not for other firms” in Q1 2018 as compared with Q1 2017. They conclude this section by saying, “Of course, it is far too early to reach a definitive conclusion or to know whether the effects will persist, as any boost to investment due to the repatriation may take time to fully materialize.”¹¹ But to-date the effect is much smaller than the share-buyback effect.

Research shows that the causal link between real output growth and real investment growth goes in the direction of the former to the latter, and not the other way around. This link was demonstrated empirically in recent research at the Federal Reserve Bank of St. Louis based on use of the Granger causality test.¹² Generally, one variable is said to “Granger cause” another variable if past values of the first variable are useful in predicting the second variable. Wen (2007) used quarterly real U.S. GDP minus inventory investment for output; real business fixed investment as the investment concept; and real consumption of nondurable goods and services for real consumption. Using quarterly data from 1966 to 2015, the Budget Division finds that Wen’s results continue to hold, namely that 1) real consumption growth in the previous period “causes” current output growth in the Granger sense; 2) growth of real output in the previous period “Granger causes” real investment in the current period; 3) therefore, since the relationships are transitive, they imply that past real consumption growth also “Granger causes” contemporaneous real investment growth. Thus, anticipated slowing in consumption bolsters the case for slow growth in real investment.

¹¹ Michael Smolyansky, Gustavo Suarez and Alexandra Tabova, “U.S. Corporations’ Repatriation of Offshore Profits,” *FEDS Notes*, September 4, 2018. Available at <https://www.federalreserve.gov/econres/notes/feds-notes/us-corporations-repatriation-of-offshore-profits-20180904.htm>. Accessed on January 12, 2019.

¹² Li Wen, “Granger Causality and Equilibrium Business Cycle Theory,” *Federal Reserve Bank of St. Louis Review*, volume 89, number 3, 195-205, May/June 2007. Available at <http://research.stlouisfed.org/publications/review/07/05/Wen.pdf>

Additional testing also reaffirmed Wen's assessment that the Granger causation is one-way, i.e., investment does not Granger-cause consumption. Applying Wen's methods to real consumption of durable goods finds that the same relationships hold for that series as well. While the decision to invest in nonresidential structures and equipment is a complex one, involving considerations of tax policy, interest rates, profitability and other factors, these results indicate that the macroeconomic environment plays a key role in real business fixed investment growth. On the other hand, statistical tests also indicate that real interest rates Granger-cause real investment; thus, it can also be expected that as the Federal Reserve continues its monetary policy normalization process, bringing interest rates up to more "usual" levels, a countervailing restraining influence will be in place.

Surveys also provide reasons for being wary of claims of an impact on real investment from the TCJA. The October 2018 *Manufacturing Business Outlook Survey* conducted by the Federal Reserve Bank of Philadelphia asked special questions regarding planned capital expenditures for 2019 and the influence of "tax relief" and trade policy (including tariffs) on those spending plans. The survey covers manufacturing firms in the Philadelphia Fed's geographic district. Nearly 60 percent of firms thought their 2019 capital expenditures would be the same or lower than in 2018, with the majority (45.5 percent) expecting no change from current levels. According to 60.4 percent of respondents "tax relief" had no effect on their plans, but 17.0 did say that it caused a "significant increase" in their capital expenditure plans, with another 22.6 percent indicating it led to a modest increase in planned capital expenditures. Trade policy issues were behind a "significant decrease" in planned capital expenditures according to 3.8 percent of respondents, while another 15.1 percent said trade policy issues led to a moderate decrease in capital spending plans. However, 64.2 percent of respondents said trade policy had no effect on their planned capital expenditures.¹³

Another forward-looking survey is the Institute for Supply Management's (ISM) *Semiannual Economic Forecast*, the latest being released during the first half of December 2018. In its headline summary, the ISM says that manufacturing industries in its survey plan to increase capital expenditure 6 percent in 2019 while nonmanufacturing industries expect to increase capital spending 3.4 percent. Digging a bit more deeply into the survey, 36.4 percent manufacturing industries said that their firms had increased capital spending plans for the coming 12 months during the prior six months, while fully 49.0 percent said they had made no changes in plans for capital spending and 14.6 percent said their firms had cut capital spending plans. When asked the reasons for the changes in their capital spending plans, 73.6 percent of those who planned to increase spending said "general business outlook" while only 7.4 percent selected "recent business tax reform." Among those who were now planning to cut spending, 50.0 percent cited "general business outlook," no one cited tax reform, but 17.6 percent gave trade policy uncertainty as their reason.

Unsurprisingly, the ISM report shows that responses were qualitatively the same as the non-manufacturing industries. Here, 38.5 percent of the service industry supply-management executives reported that capital spending plans had increased over the past six months, while 45.8 percent said there had been no change and 15.6 percent reported plans for diminished capital

¹³ *Manufacturing Business Outlook Survey*, October 2018, p. 3. Federal Reserve Bank of Philadelphia. At <https://www.phil.frb.org/-/media/research-and-data/regional-economy/business-outlook-survey/2018/bos1018.pdf>. Accessed January 12, 2019.

spending. When asked the follow-up question as to why, 55.9 percent cited “general business outlook” as the reason for the increase but 19.1 percent said “recent business tax reform.” For the respondents who said that firms in their industries changed their plans to cut capital expenditures in 2019, 50.0 percent said it was because of the general business outlook but 4.2 percent cited recent business tax reform. Also not a surprise, none of the respondents said that trade policy uncertainty was a factor. The survey also asked respondents what actually happened with capital expenditures during 2018. Manufacturing industries said expenditures were up 13.4 percent on average, the ISM said, compared with a predicted 10.1 percent back in May 2018. Service industries said capital expenditures ended 2.8 percent higher, versus a predicted 7.0 percent increase in May.¹⁴

While not as timely, the Federal Reserve Bank of New York included supplemental questions regarding capital expenditures (among other topics) in both its Empire State Manufacturing Survey and its Business Leaders Survey in June 2018. The Business Leaders Survey covers service industry firms, and, while the Empire State survey covers only New York State manufacturers, the Business Leaders Survey includes the northern half of New Jersey and Fairfield County, Connecticut (or the New York Fed’s complete continental U.S. district). Firms in both surveys indicated that the median change in capital expenditures for the first half of 2018 was not different from a year earlier. But for all of 2018 the median expected change on the manufacturing side was 5.0 percent while nonmanufacturers anticipated a 3.0 percent increase.¹⁵ These are not overwhelming rates of growth.

According to Federal Reserve’s December 2019 Beige Book, which is published eight times a year and contains anecdotal information on current economic condition in each of the Fed’s twelve districts, tariffs were a significant concern across all the districts and in various industries.¹⁶ All sectors reported increases in non-labor input costs which were partly due to tariffs; manufacturers and contractors were especially concerned since they are heavy users of steel, upon which the U.S. has increased tariffs. A number of firms reported that the price increases due to tariffs were passed down the supply chain; while some producers absorbed all or part of the cost increase, others passed the increases to the consumers. The higher cost of production lowers profits, while the higher cost to consumers would lower demand; but both of these forces stemming from higher import tariffs pose a risk to private investment.

Finally, annual business investment growth averaged only 3.4 percent over the five years from 2013 through 2017. This relatively slow increase in investment was not for lack of resources. Strong earnings growth early in the recovery allowed large businesses to accumulate funds that potentially could have been used for capital spending. However, the financial environment is only one component of the complex array of factors that firms consider when contemplating investment in

¹⁴ “Economic Growth Continues in 2019,” Institute for Supply Management, December 10, 2018. Available <https://www.instituteforsupplymanagement.org/about/MediaRoom/newsreleasedetail.cfm?ItemNumber=30638>. Accessed January 12, 2019.

¹⁵ *Supplemental Survey Report*, June 2018. Federal Reserve Bank of New York. Available at https://www.newyorkfed.org/medialibrary/media/survey/business_leaders/2018/2018_06supplemental.pdf?la=en. Accessed January 12, 2019.

¹⁶ Beige Book, December 2018. Federal Reserve Bank. Available at https://www.federalreserve.gov/monetarypolicy/files/BeigeBook_20181205.pdf. Accessed January 13, 2019.

factories, department stores, and other structures, as well as equipment and software. Standard economic theory posits that profit-maximizing firms are assumed to choose a level of investment that achieves an optimal long-run relationship between the expected level of sales and the stock of plant and equipment for a given set of current and expected future input and output prices. In addition, decreases in the cost of acquiring and using capital goods (the “user cost of capital”) also induce firms to increase investment spending. Factors that reduce the user cost of capital include a decline in the prices of new investment goods, falling inflation-adjusted borrowing costs, increasing equity prices, and changes in the tax code, such as the creation of investment tax credits.

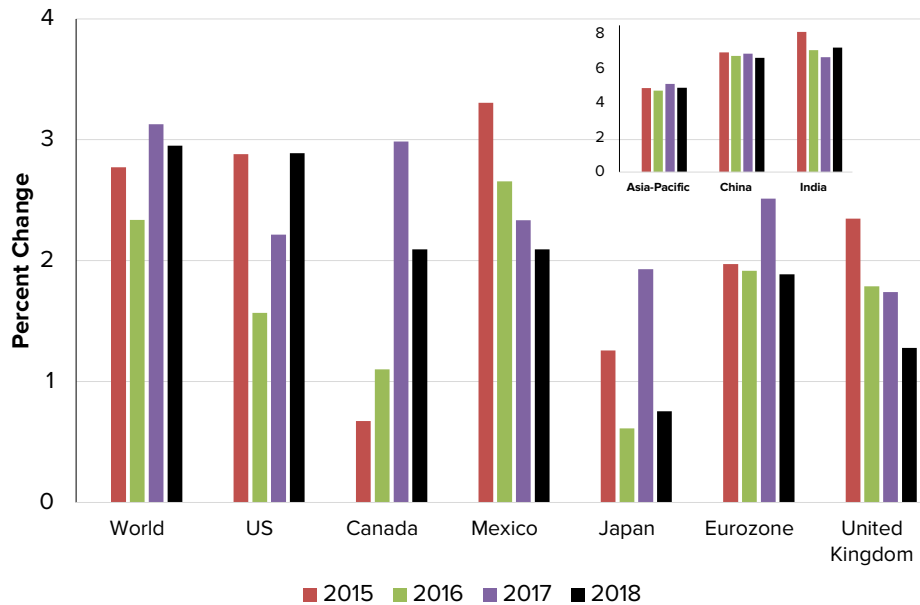
Thus, low interest rates and favorable tax treatment programs support investment growth but have existed in abundance since early in the recovery. Anticipated growth in sales is also necessary to induce investment. This helps to explain the relatively tepid growth of real investment until recently – with weak and uneven growth coming out of the Great Recession, real investment has also generally been sluggish. In the absence of a reliable customer base, no business can be induced to spend, tax incentives notwithstanding.

The International Economy

Although U.S. economic growth was strong during the second and the third quarters of 2018, global economic conditions have shown signs of weakness. Japan’s real output contracted during the third quarter of 2018, while China showed signs of slowing with industrial production growth falling below 6 percent after growing above that mark for almost three years. In the meantime, Eurozone growth also slowed down, with real GDP growth at 1.7 percent during the third quarter of 2018, following growth well above two percent during the first half of last year. The German economy contracted during the third quarter of 2018, while Brexit uncertainty also contributed to Europe’s economic troubles. The ongoing U.S.-China trade war appears to be inflicting damage on the Chinese economy, especially its export industries.¹⁷ As the second largest economy in the world, when China slows down, the rest of the world, especially its neighboring Asian economies, feel the pain.

¹⁷ In fact, Beijing took the unusual step of suspending the release of monthly regional manufacturing activity for Guangdong Province known for being country’s export hub. For more please see < <https://www.wsj.com/articles/trade-tensions-take-a-toll-on-chinas-economy-11546776001>>.

Figure 22
World Economy is Expected to Slow



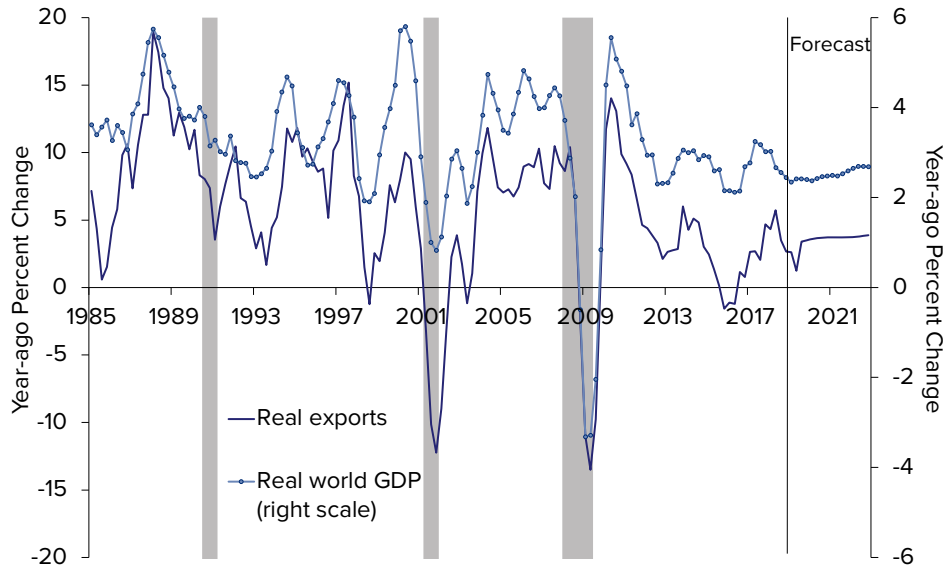
Source: IHS Markit.

Following the slowdown in 2016, world economic growth accelerated in 2017 across all the regions, except for the Middle East. The strong recovery in the rest of the world resulted in a depreciation of the U.S. dollar with positive impact on U.S. exports. However, during 2018, the U.S. economy outperformed, contributing to a stronger dollar. The talk of trade wars and the actual imposition of tariffs pushed the dollar up further, causing U.S. goods to be less competitive in the world market. A rapidly increasing dollar also took a toll on emerging markets, where a significant amount of debt is denominated in U.S. dollars.

Although year-ago growth in real world GDP fell from a local peak of 3.2 percent in the second quarter of 2017 to 2.6 percent by the third quarter of 2018 (see Figure 23), real U.S. export growth remained strong, jumping to 9.3 percent in the second quarter of 2018 at an annualized quarterly rate before falling 4.9 percent in the third quarter. Although fluctuations in the strength of the dollar played a role, tariff avoidance appears to have boosted exports in the second quarter, particularly in the agricultural sector, followed by an unwinding in the third quarter.¹⁸ Under the assumption that the global economy will decelerate further during 2019, the Budget Division expects real U.S. export growth to slow down from 4.0 percent in 2018 to 2.6 percent in 2019.

¹⁸ U.S. first imposed tariffs on solar panels and dishwashers in January of 2018, followed by tariff announcement on steel and aluminum in March. To retaliate, China imposed tariffs on various US goods ranging from aluminum waste and scrap, pork, fruits and nuts, to other US products, valued around the same as its steel and aluminum exports to U.S. For a detailed timeline of tariff increases between U.S. and other countries, please see <<https://piie.com/sites/default/files/documents/trump-trade-war-timeline.pdf>>.

Figure 23
Real Export and World GDP Growth



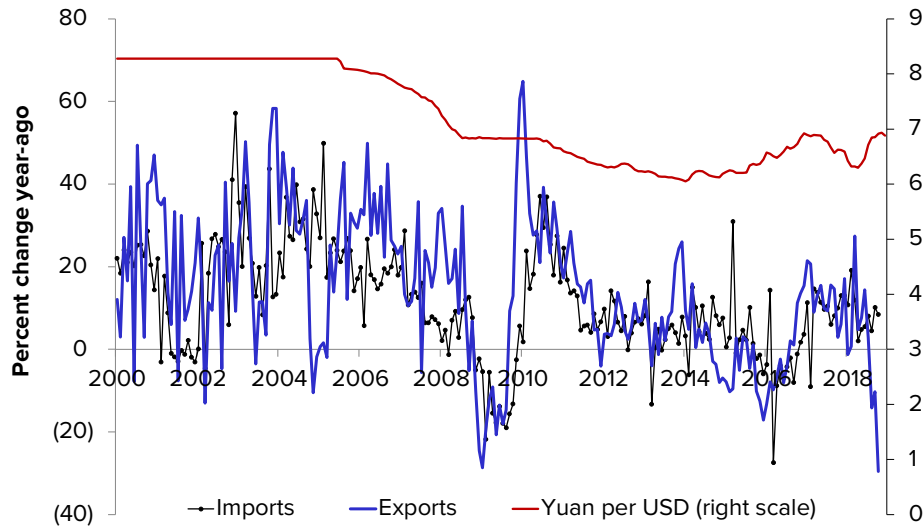
Note: Shaded areas represent U.S. recessions.
Source: Moody's Analytics; IHS Markit; DOB staff estimates.

The U.S. trade balance depends primarily on the domestic economy and the economic conditions of its largest trading partners: Canada, the Eurozone, Mexico, China, and Japan. Among those, the slowdown in China, Japan, and Europe probably poses the largest risk to global growth as well as U.S. exports. Increased tariffs by the U.S. and the retaliation by its trading partners took a toll on world trade in 2018, impacting the stock market. More than 50 percent of the earnings of S&P 500 firms are estimated to derive from their overseas business. Some of 2018's trade tensions were eased by the new NAFTA agreement and the ongoing trade negotiations with China, but the negative impact of the trade wars and the associated uncertainty are expected to linger.

The impact of the trade wars with China on U.S. exports is clearly visible in the current trade statistics. China's retaliation against U.S. tariffs resulted in U.S. exports to China declining almost 30 percent in October 2018, following declines in August and September (see Figure 24). The sharp decline was due to China halting its soybean imports from U.S. to nearly zero during the third quarter from 1.2 billion in January of 2018.¹⁹ The strength of the dollar and a slowing Chinese economy are also contributing to weaker U.S. exports to China.

¹⁹ Please see <<https://www.reuters.com/article/us-china-economy-trade-soybeans/china-imports-zero-us-soybeans-in-november-for-first-time-since-trade-war-started-idUSKCN10N0ER>>.

Figure 24
U.S. Imports from and Exports to China



Source: Moody's Analytics.

In response to the slowing of its economy in the wake of the trade war with the U.S. and other factors, Beijing has taken measures to soften the impact by using fiscal and monetary stimulus, including a change in the reserve requirements and lower income taxes for low- and middle-income taxpayers. China's maturing economy is expected to continue to lose its steam over the next few years.

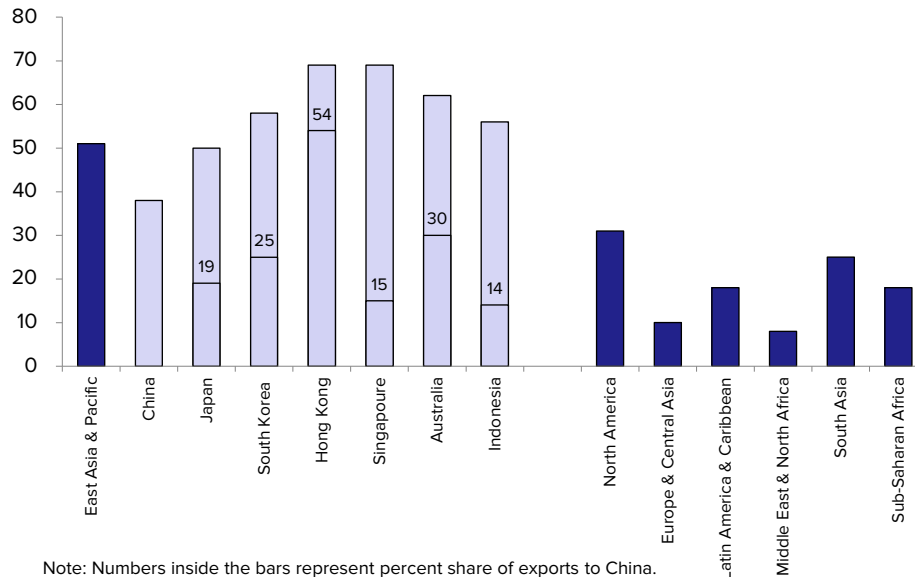
Eurozone economic growth is estimated to slow to 1.9 percent in 2018, following 2.5 percent growth in 2017, which was partly thanks to the European Central Bank's (ECB) accommodative monetary policy. Although the ECB's target interest rate remained at zero percent during 2018, it tapered its bond purchases. That combined with long term interest rates slowly creeping up created a less favorable borrowing environment. Trade tensions, as well as the strengthening of the euro against most other currencies except the dollar, had a negative impact on region's exports.²⁰ According to IHS Markit's December forecast, the Eurozone's real output growth will slow to 1.4 percent in 2019, followed by 1.2 percent in 2020 (see Figure 22). With the March 29th deadline only a few months away, there is still no clear plan for Brexit.²¹ The uncertainty surrounding Brexit, combined with the

²⁰ As retaliation to U.S. tariffs on steel and aluminum, which EU was later exempt but then lost its exempt status, the European Union imposed tariffs on various U.S. goods such as aluminum, food and other products, including bourbon whiskey, motor boats and yachts, motorcycles, blue jeans, corn, and peanut butter.

²¹ March 29th is the Brexit day when U.K. officially exits European Union. British Parliament needs to pass a Brexit deal (submitted by the Prime Minister May by January 21st), and European Parliament needs to approve it before the March 29th deadline, otherwise the result could be a no-deal Brexit which would have great ramifications for the U.K. economy. Alternatively, May could ask for an extension and if European Parliament approves such a request, U.K may be able to extend the March deadline.

global slowdown, is expected to lower real output in the United Kingdom to 1.1 percent in 2019, following estimated growth of 1.3 percent in 2018. However, the forecast would change depending on whether the outcome is a “hard” or “no-deal” Brexit.

Figure 25
Percent of Country Exports Destined to East Asia & Pacific Region in 2017



Note: Numbers inside the bars represent percent share of exports to China.
 Source: World Integrated Trade Solutions (WITS).

Japan’s economic growth has slowed thus far in 2018 following a strong showing in 2017 when real output grew 1.9 percent, its highest growth since 2013. China’s slowing economy, as well as the global trade wars have taken a toll on Japan, which is expected to grow 0.8 percent in 2019. Although the U.S. is the top export destination for Japanese goods and services with a 19.35 percent share, China is a very close second with 19.02 percent. Indeed, half of Japan’s exports goes to the rest of Asia.²² This is the case for the most developed economies in Asia where most of their exports remain within the region, making them especially vulnerable to slowdowns in China and Japan (see Figure 25).

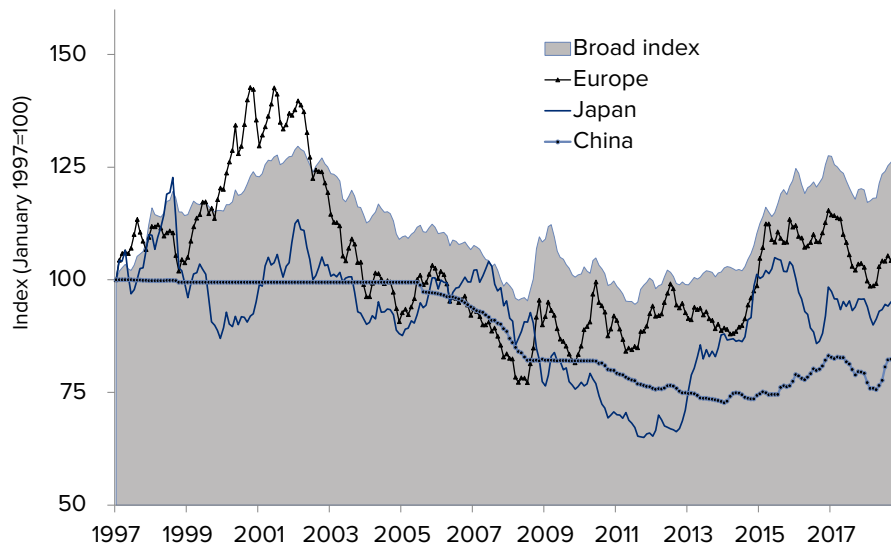
Economic conditions in Canada and Mexico, America’s top export destinations, are somewhat more favorable than our trade partners across the Atlantic. Following 3.0 percent growth in 2017, Canada’s economy slowed in 2018 with estimated growth of 2.1 percent. Real Canadian output growth is expected to remain at about 2 percent in both 2019 and 2020. The Mexican economy is expected to grow 2.0 percent in 2019, following 2.1 percent estimated growth in 2018.

Following the tumultuous NAFTA negotiations and mini tariff wars, US, Canada and Mexico finally signed a new trade deal, “the United States-Mexico-Canada Agreement”, or USMCA, at the end of

²² Detailed statistics can be found at <https://wits.worldbank.org/CountrySnapshot/en/JPN>.

October of 2018. While the new agreement is not much different from the former NAFTA, there are some provisions that might impact some regions and industries more than others.²³

Figure 26
Foreign Exchange Value of U.S. Dollar



Note: The Broad Index is a trade weighted index of major trading partners.

Source: Moody's Analytics.

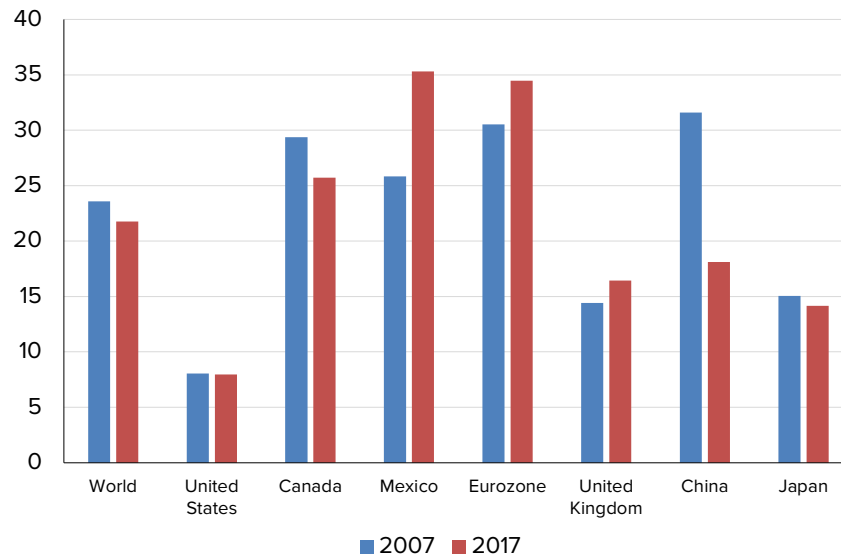
The value of the U.S. dollar declined over the course of 2017, but by early 2018 was on an upward path, appreciating through the end of 2018 against major currencies (see Figure 26). The Broad Index, a trade-weighted index of the nation's major trading partners, shows that the dollar fell 6.0 percent during 2017, followed by an increase of 7.2 percent in 2018, appreciating 9.7 percent since its early 2018 trough. The dollar has appreciated 9.3 percent against the Chinese yuan since its trough in 2018, after depreciating 4.7 percent in 2017. Against the euro, the dollar fell 11.0 percent in 2017, followed by an appreciation of 4.0 percent in 2018. Even with the slowing economy, the dollar is expected to remain strong in 2019, as the rest of the world economy also slows down. The Federal Reserve's interest rate hikes have also contributed to the strengthening of the dollar. Uncertainty surrounding Brexit poses a great risk for both the euro and the British pound, especially if they are not able to reach a deal. On the other hand, a potential political deadlock in Washington poses a downside risk for the dollar. The strong dollar represents a risk to the Budget Division forecast for U.S. exports.

During the last decade, the export destinations for U.S. goods shifted from the developed world toward large emerging economies, especially China with a share of 8 percent of U.S. goods exported in 2017. However, China's share is still small compared to that of Canada, Mexico, and the

²³ For example, US dairy farmers will have greater access to Canadian markets; content requirements on cars and trucks will be raised to 75 percent from 62.5 percent, hurting the non-NAFTA countries like China that were supplying auto parts to production in US, Canada and Mexico.

European Union, with shares between 16 and 18 percent (see Table 4). As a result of globalization, economic risks due to trade cannot be measured by bilateral relationships only, one must consider the indirect trade linkages between countries, as well as supply chain structures (see Figure 25).

Figure 27
Merchandise Exports as Percent of GDP



Source: IHS Markit, NYS Division of the Budget.

The global economic slowdown is expected to impact exports of many nations, however not all nations are equally vulnerable. While the U.S. export sector represents a small share of gross domestic product (GDP), other countries such as China rely heavily on their exports. U.S. merchandise exports accounted for only 8 percent of GDP in 2017, which has not changed much over a decade (see Figure 27). Among the major global economies, Japan’s and United Kingdom’s shares are relatively low at 14 and 16 percent, respectively. In contrast, Mexico’s share was at 35 percent in 2017, increasing significantly over the last decade. The Eurozone also heavily relies on exports with 34 percent. Although China is another export driven country, it managed to reduce its dependence on exports over the last decade with its merchandise exports share declining from 32 percent in 2007 to 18 percent in 2017. Although the U.S. share is relatively low, the export sector is very important to large segments of the U.S. economy, particularly the high-productivity manufacturing sector.²⁴ Moreover, with more than half of the earnings of S&P 500 firms stemming from their overseas operations, improving global demand can have a substantial impact on the financial health of the U.S. household sector both directly through increased employment and wages, and indirectly through the wealth effect.

²⁴ For a more detailed discussion, see FY 2018 Economic and Revenue Outlook, p. 64.
<https://www.budget.ny.gov/pubs/archive/fy18archive/exec/economicRevenueOutlook/economicRevenueOutlook.pdf>.

Table 4

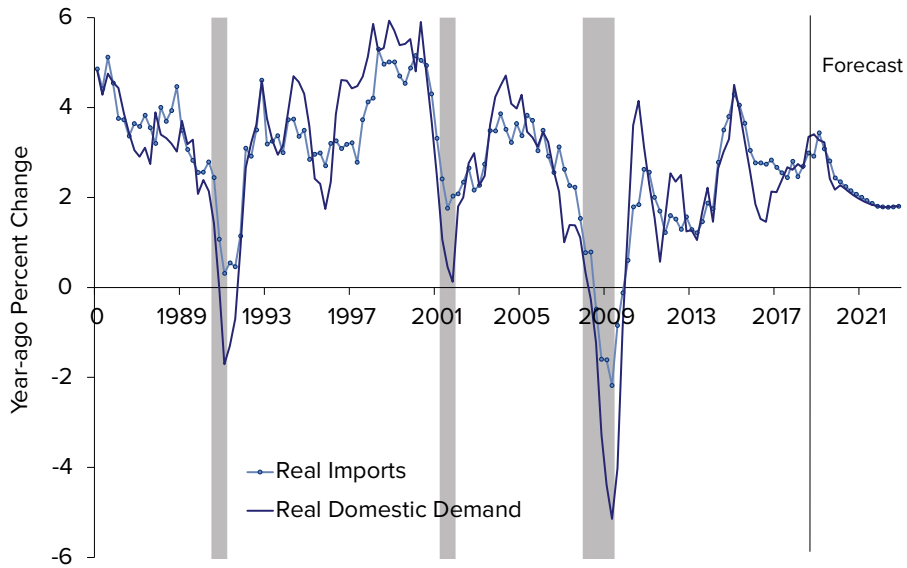
U.S. MERCHANDISE TRADE IN 2017

	Trade in \$ billions		Percent Share	
	Imports	Exports	Imports	Exports
World Total	2,341,963	1,546,273	100	100
South and Central America	115,999	150,194	5	10
North America	613,587	525,580	26	34
Canada	299,319	282,265	13	18
Mexico	314,267	243,314	13	16
Europe	506,298	332,714	22	22
European Union	434,633	283,269	19	18
Rest of Europe	71,666	49,445	3	3
Asia	1,057,921	486,203	45	31
China	505,470	129,894	22	8
Japan	136,481	67,605	6	4
South Korea	71,444	48,326	3	3
India	48,603	25,689	2	2
Taiwan	42,462	25,730	2	2
Rest of Asia	253,462	188,960	11	12
Africa	33,411	22,062	1	1
Australia, Oceania & Greenland	14,746	29,520	1	2

Source: U.S. Census Bureau.

As the U.S. economy slows, domestic demand for imported goods will slow as well. However, a stronger dollar lowers the cost of imported goods, which will tend to increase the demand for imports. On balance, real import growth of 4.9 percent is projected for 2019, virtually unchanged from 2018. However, growth in nominal imports is expected to be weaker in 2019 due to lower import prices, which along with weaker nominal export growth is expected to result in little change in the current account trade deficit. The trade deficit reached a low point of 2.7 percent of nominal GDP in the second quarter of 2018, rising to 3.2 percent in the third quarter.

Figure 28
U.S. Real Imports and Domestic Demand



Note: Shaded areas represent U.S. recessions.
Source: Moody's Analytics; IHS Markit; DOB staff estimates.

Global and domestic economic conditions impact the foreign holdings of U.S. treasuries. Overall foreign holdings were down 0.2 percent in 2018, based on the first 10 months of data, after rising 3.3 percent in 2017 (see Table 5). Although the holdings were at record level in October 2017, they were down 2 percent by October 2018. Top two holders of U.S. Treasuries, namely China and Japan were net sellers in 2018. China, the largest single holder based on data through October, cut its holdings by 3.9 percent during the first ten months of 2018 after increasing them by 12 percent in 2017, while Japan, the second largest holder, saw a drop in its holdings of 4.0 percent by October 2018 following a decrease of 9.1 percent in 2017. Central banks tend to sell foreign currency when their own domestic currency is under pressure. Over the past few years China has experienced massive capital outflows as investors abandon the yuan for U.S. dollars and euros to invest elsewhere. The People's Bank of China has responded by selling foreign currency and buying yuan in order to stabilize its value. The United Kingdom, the fifth largest holder of U.S. Treasury securities based on the most recent data, increased its holdings by 7.8 percent and 15.1 percent in 2016 and 2017, respectively, and by another 5.6 percent by October 2018. Treasury securities holdings by the eight major oil-exporting nations rose 15 percent in 2018 through October.

Table 5

MAJOR FOREIGN HOLDERS OF TREASURY SECURITIES*
(\$ Billions)

	Japan		Mainland China		United Kingdom		Oil Exporters**		Grand Total***	
	Level	Change	Level	Change	Level	Change	Level	Change	Level	Change
Jan-17	1,102.5	11.7	1,051.1	(7.3)	214.1	(3.1)	234.8	10.6	5,949.2	(57.1)
Feb-17	1,115.7	13.2	1,059.7	8.6	217.5	3.4	240.1	5.3	6,012.5	63.3
Mar-17	1,120.7	5.0	1,088.1	28.4	228.3	10.8	252.9	12.8	6,075.3	62.8
Apr-17	1,106.9	(13.8)	1,092.2	4.1	231.5	3.2	251.4	(1.5)	6,060.5	(14.8)
May-17	1,111.5	4.6	1,102.2	10.0	236.4	4.9	259.5	8.0	6,108.4	47.9
Jun-17	1,090.3	(21.2)	1,146.5	44.3	236.0	(0.4)	267.6	8.1	6,151.9	43.5
Jul-17	1,113.3	23.0	1,166.9	20.4	229.6	(6.4)	272.0	4.4	6,230.2	78.3
Aug-17	1,101.7	(11.6)	1,201.7	34.8	225.0	(4.6)	265.4	(6.6)	6,249.4	19.2
Sep-17	1,096.0	(5.7)	1,182.3	(19.4)	237.4	12.4	264.6	(0.8)	6,301.9	52.5
Oct-17	1,094.0	(2.0)	1,189.2	6.9	225.9	(11.5)	278.2	13.5	6,324.1	22.2
Nov-17	1,084.1	(9.9)	1,176.6	(12.6)	237.5	11.6	279.2	1.1	6,306.2	(17.9)
Dec-17	1,061.5	(22.6)	1,184.9	8.3	250.0	12.5	277.7	(1.5)	6,210.4	(95.8)
Jan-18	1,065.8	4.3	1,168.2	(16.7)	243.3	(6.7)	272.7	(5.1)	6,187.2	(23.2)
Feb-18	1,059.5	(6.3)	1,176.7	8.5	250.5	7.2	282.3	9.6	6,217.5	30.3
Mar-18	1,043.5	(16.0)	1,187.7	11.0	263.7	13.2	284.6	2.3	6,217.8	0.3
Apr-18	1,031.2	(12.3)	1,181.9	(5.8)	262.7	(1.0)	301.1	16.5	6,174.8	(43.0)
May-18	1,048.8	17.6	1,183.1	1.2	265.0	2.3	307.0	6.0	6,214.7	39.9
Jun-18	1,032.2	(16.6)	1,179.0	(4.1)	274.4	9.4	309.8	2.7	6,213.7	(1.0)
Jul-18	1,035.5	3.3	1,171.0	(8.0)	271.7	(2.7)	314.1	4.3	6,253.8	40.1
Aug-18	1,029.9	(5.6)	1,165.1	(5.9)	272.6	0.9	317.9	3.8	6,277.9	24.1
Sep-18	1,028.0	(1.9)	1,151.4	(13.7)	276.3	3.7	325.0	7.0	6,225.2	(52.7)
Oct-18	1,018.5	(9.5)	1,138.9	(12.5)	263.9	(12.4)	318.8	(6.1)	6,199.6	(25.6)

* Estimated foreign holdings of U.S. Treasury marketable and nonmarketable bills, bonds and notes are based on Treasury Foreign Portfolio Investment survey benchmarks and on monthly data reported under the Treasury International Capital (TIC) Reporting System.

** Due to data availability, oil exporters include Bahrain, Iraq, Kuwait, Oman, Saudi Arabia, United Arab Emirates, Algeria, and Nigeria.

*** Grand Total is the total of all 27 countries included in the Portfolio Investment Survey.

Source: U.S. Department of the Treasury/Federal Reserve Board.

Although total foreign holdings of U.S. treasuries declined only a small amount by October, it is concerning that the two largest holders, Japan and China, were net sellers. U.S. Treasury bonds are the bedrock of the international financial system due to their backing by the full faith and credit of the U.S. government and the accompanying perception of their safety. Should that status be threatened by brisk growth in the national debt, a selloff by foreign holders could ensue that would raise domestic interest rates, lower U.S. economic growth, or worse, pushing the economy into a recession.

Monetary Policy: Now What?

Having increased the target range for the federal funds rate four times in 2018, the largest number of policy-rate increases since four in 2006, policymakers at the nation's central bank no doubt hope that normalization can be attained in time to give the bank sufficient monetary policy tools to be able to confront the next recession, when it occurs.

The Federal Open Market Committee (FOMC), the part of the Federal Reserve System that deliberates over and directs monetary policy, not only continued raising its target band for the federal funds rate, but it also continued to shrink the reserve bank's asset holdings, a process that began in October 2017. The process of running off the Fed's asset portfolio accelerated during 2018 and by year's end the level of assets was roughly the same as in mid-January 2014, when the FOMC's third quantitative easing (QE) program was still operating, though at that point it was also tapering down (it would cease in October 2014).

The Budget Division expects that with inflation finally reaching the FOMC's goal of 2 percent, the effective federal funds rate will rise from its 1.8 percent annual average in 2018 to 2.6 percent in 2019 and 3.1 percent in 2020. These projections are consistent with Budget Division expectations of two rate hikes by the FOMC in 2019, with the first no sooner than June. Correspondingly, the 10-year Treasury yield is expected to climb from 2.9 percent in 2018 to 3.1 percent in 2019, before reaching 3.5 percent in 2020.

The Budget Division's expectations for the federal funds rate over the next two years are roughly consistent with what the Federal Reserve Board members and Federal Reserve Bank presidents themselves project. According to the "Summary of Economic Projections" (SEP) released at the end of the December monetary policy meeting, participants foresaw a median year-end federal funds rate of 2.9 percent for 2019, with a range from 2.1 percent to 3.6 percent.²⁵ The SEP shows a movement of 50 basis points between the 2018 and 2019 medians but a difference of just 25 basis points between the 2019 and 2020 medians, which is also roughly consistent with the Budget Division forecast for two rate hikes in 2018 and at least one in 2019. However, the December SEP shows 2.8 percent as the "longer run" (i.e., beyond 2020) median level for the federal funds rate, which is considerably lower than the Budget Division's longer-run outlook for a 3.2 percent rate.

The FOMC appears to still be hoping to be able to achieve a "soft landing" under which it can sustain economic growth but at a pace that prevents a run-up in inflation. The December SEP shows that FOMC meeting participants believe that the longer-run unemployment rate is 4.4 percent, while growth in real gross domestic product (GDP) over the longer term is pegged at 1.9 percent. With the unemployment rate having averaged 3.9 percent for 2018, and the median 2019 projection being 3.5 percent for 2019, participants at the December FOMC meeting must see the economy as operating above its potential. Their median projections for real GDP growth in 2018 and 2019 were 3.0 percent and 2.3 percent, respectively, with the 2019 projection down from 2.5 percent growth that was expected at the September meeting. But with the median projection for the core personal consumption expenditure (PCE) price index at 2.0 percent for the 2019-21 period, the FOMC envisions its increases in the federal funds rate target range as slowing real GDP growth to 2.0 percent in 2020 and 1.8 percent in 2021, with the unemployment rate edging up to 3.6 percent and 3.8 percent in those years, respectively. Note that in September the FOMC collectively thought that it would need to raise the federal funds rate target more aggressively, as it projected median federal funds rates of 3.1 percent for 2019 and 3.4 percent for both 2020 and 2021.

²⁵ "Economic projections of Federal Reserve Board members and Federal Reserve Bank presidents under their individual assessments of projected appropriate monetary policy, December 2018," Board of Governors of the Federal Reserve System, Washington, D.C., released December 19, 2018, at <https://www.federalreserve.gov/monetarypolicy/files/fomcprojtabl20181219.pdf>, accessed December 31, 2018.

William C. Dudley, a former president of the Federal Reserve Bank of New York, warned of the potential problems with attempting such a slowing in a January 2016 speech, as he pointed out the difficulty in pushing the unemployment rate up “just a little bit” to contain inflation pressures. “Looking at the post-war period, whenever the unemployment rate has increased by more than 0.3 to 0.4 percentage points, the economy has always ended up in a full-blown recession with the unemployment rate rising by at least 1.9 percentage points.” His concern was that the FOMC might undershoot the unemployment rate that is consistent with price stability.²⁶ Once the inflation genie is out of the bottle, it has historically been very difficult to put it back in without a recession ensuing. As Dudley noted in his speech, “Economic expansions don’t simply die of old age.” They tend to die either because of an adverse economic shock that the FOMC cannot easily offset, or “because monetary policy is kept too loose for too long,” as Dudley says, calling forth a too-abrupt tightening of policy.²⁷

A threat to continuance of the current expansion that drew increased attention at the end of 2018 is a potential inversion of the yield curve. An inversion occurs when yields on short-run securities (often the three-month Treasury bill is used) are higher than the yields on longer-run securities (a typical such security being a 10-year Treasury bond). Because inversions have developed a reputation for being harbingers of recessions (though often with a lag of 12 months or more), the flattening of the yield curve that has been evident for the past couple of years has been a source of concern for some, including members of the FOMC. Research conducted by the Federal Reserve Bank of San Francisco using the spread between the 10-year and two-year Treasury securities shows that since December 1987 all three recessions were preceded by yield-curve flattening and subsequent inversions, though there was a “false positive” in November 1997 when the curve flattened but did not invert (the researcher also eliminated a brief flattening in autumn 1994 because “it was quickly reversed, unlike the other four episodes.” That research article also finds that “over the past three decades” recessions started nine to 18 months after the initial inversion of the yield curve.²⁸

Neel Kashkari, president of the Federal Reserve Bank of Minneapolis and at the time a voting member of the FOMC, cited a yield curve that “has flattened significantly, potentially signaling an increasing risk of a recession,” in dissenting from the December 2017 FOMC decision to hike the federal funds rate target. He favored halting further increases in the target until the FOMC is “much more confident that inflation is returning to our target.”²⁹ Kashkari cited the spread between 2-year and 10-year Treasury yields, noting that it had fallen from around 1.45 percent prior to the start of FOMC normalization toward at the end of 2015 to about 0.51 percent at the time of the FOMC meeting in December 2017. That spread was as low as 0.11 percent in mid-December 2018 before recovering modestly.

²⁶ William C. Dudley, “The U.S. Economic Outlook and Implications for Monetary Policy,” Remarks at the Economic Leadership Forum, Somerset, NJ, January 15, 2016, p. 3. At <https://www.newyorkfed.org/newsevents/speeches/2016/dud160115>, accessed January 2, 2018.

²⁷ Dudley, op. cit., p. 3.

²⁸ Jens H.E. Christensen, “The Slope of the Yield Curve and the Near-Term Outlook,” FRBSF Economic Letter, 2018-23 (October 15, 2018), Federal Reserve Bank of San Francisco, at <https://www.frbsf.org/economic-research/publications/economic-letter/2018/october/slope-of-yield-curve-and-near-term-outlook/>. Accessed January 11, 2019.

²⁹ Neel Kashkari, “Why I Dissented a Third Time,” Statement, December 18, 2017, p 1. At <https://minneapolisfed.org/news-and-events/messages/why-i-dissented-a-third-time>, accessed December 18, 2017.

While this was not an inversion (when short-term rates are higher than long-term rates), Kashkari argued that “the bond market is telling us that the odds of a recession are increasing.” Skeptical that inflation expectations were showing signs that inflation would reach the FOMC’s target, he said that “monetary policy is entering a delicate phase.”³⁰ The Federal Reserve Bank of Cleveland, which maintains a “Yield Curve and Predicted GDP Growth” page, shows that the spread between the three-month Treasury bill yield and the 10-year Treasury bond yield fell from 213 basis points in November 2015 to 47 basis points in December 2018, with the one-year ahead recession probability rising from 3.74 percent back in 2015 to 24.0 percent currently. (The probability was 16.6 percent in October.) Meanwhile the New York Fed’s “The Yield Curve as a Leading Indicator” page has the 12-month ahead recession probability rising from 2.30 percent in November 2015 to a current value of 21.4 percent that the economy will be in recession in December 2019.³¹

Obviously, neither of these current probabilities are very high, but the direction of movement is worrisome. The minutes of the December 2017 FOMC meeting are interesting because they present alternative interpretations of what the flattening of the yield curve could mean and what the sources of the flattening could be. The minutes say that “Some expressed concern” over a “possible future inversion,” citing the relationship between inversions and subsequent recessions; alternatively, “a protracted ... inversion could adversely affect the financial condition of banks ... and pose risks to financial stability.” While there seemed to be general agreement that the “current degree of flatness ... was not unusual by historical standards,” it was also felt by “several participants” that it was important to monitor the slope of the yield curve. Besides the FOMC’s actions in raising the federal funds rate target, other reasons for the increased flattening of the yield curve advanced by meeting participants included reductions in investors’ estimates of the neutral real interest rate; lower longer-term inflation expectations; and lower term premiums. The minutes also note that “A couple of other participants” thought the flattening was “an expected consequence” of the rising federal funds rate and “judged that a yield curve inversion under such circumstances would not necessarily foreshadow or cause an economic downturn.”³² In contrast, a fast forward to the December 2018 FOMC meeting minutes shows no discussion of the yield curve (though there is note of “the recent tightening in financial conditions”) – on the other hand, the context is also different, in that the December increase in the range to 2.25 percent to 2.50 percent would put the federal funds rate “at or close to the lower end of the range of estimates of the longer-run neutral interest rate,” and FOMC meeting participants thought that the economic situation made “the appropriate extent and timing of future policy firming less clear than earlier.”³³

The usual explanation for the strong correlation between yield curve inversions and recessions is that yields on Treasury securities of any maturity can be decomposed into two basic pieces: an expected policy rate path over the maturity, and an adjustment (relative to that path) that reflects

³⁰ Ibid, p. 2.

³¹ See <https://www.clevelandfed.org/en/our-research/indicators-and-data/yield-curve-and-gdp-growth.aspx> and archive. accessed January 10, 2019; also

https://www.newyorkfed.org/medialibrary/media/research/capital_markets/Prob_Rec.pdf, accessed January 10, 2019.

³² “Minutes of the Federal Open Market Committee,” December 12-13, 2017, p. 7. At <https://www.federalreserve.gov/monetarypolicy/files/fomcminutes20171213.pdf>. Accessed January 7, 2018.

³³ “Minutes of the Federal Open Market Committee,” December 18-19, 2018, p. 10. At <https://www.federalreserve.gov/monetarypolicy/files/fomcminutes20181219.pdf>. Accessed January 11, 2019.

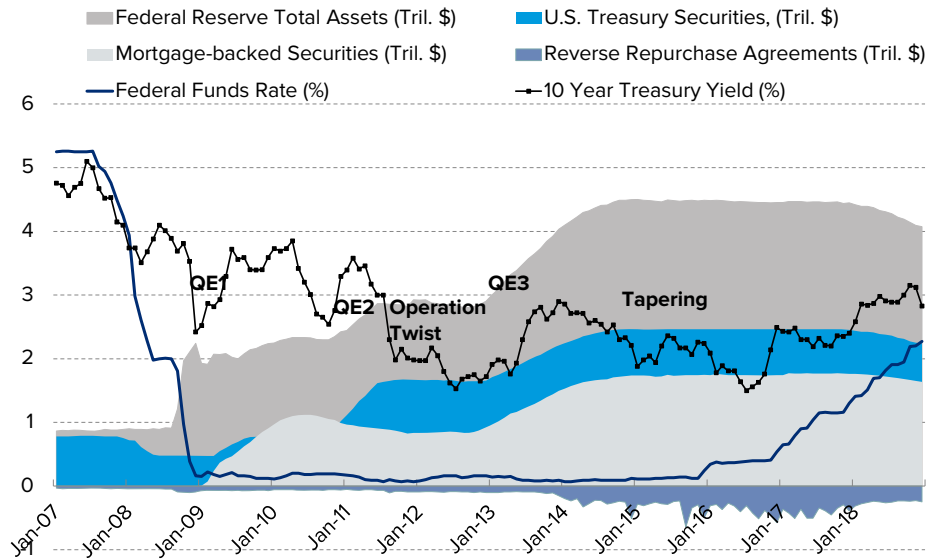
additional compensation investors must receive to bear the risk of holding longer-dated bonds (the term premium). The term premium is believed to be quite low currently, contributing to the flattening. Focusing on the first component leads to the inference that the market is anticipating an economic slowdown that would require the FOMC to begin cutting the federal funds rate in the near future to avert a recession.³⁴

However, recent research from the Federal Reserve Bank of St. Louis articulates a mechanism by which a yield curve inversion can *cause* a recession, rather than merely indicate a likelihood of one. David Wheelock noted that the Federal Reserve asked banks a special question in the October 2018 *Senior Loan Officer Opinion Survey on Bank Lending Practices* on how their lending practices might change due to a hypothetical moderate inversion of the yield curve. According to the article, “many” said that they would tighten either lending standards or price terms “on every major loan category.” Among the reasons given were that loans would be less profitable relative to the cost of funds; their banks would become less tolerant of risk; and they would interpret the inversion as indicating a worsening economic outlook and so pull back. Since research has found that the economy tends to slow after banks tighten their lending standards, an inversion could cause the slowing as banks respond by reducing the supply of loans. As the article concludes, “Thus, an inverted yield curve might do more than *predict* a recession: It might actually *cause* one.” [Italics in the original.]³⁵

³⁴ Raphael Bostic, “What Does the Current Slope of the Yield Curve Tell Us?,” *macroblog*, August 23, 2018, Federal Reserve Bank of Atlanta, at <https://macroblog.typepad.com/macroblog/2018/08/what-does-the-current-slope-of-the-yield-curve-tell-us.html>. Accessed January 11, 2019.

³⁵ David Wheelock, “Can an Inverted Yield Curve Cause a Recession?” On the Economy Blog, December 27, 2018, Federal Reserve Bank of St. Louis. At <https://www.stlouisfed.org/on-the-economy/2018/december/inverted-yield-curve-cause-recession>. Accessed January 11, 2019.

Figure 29
Monetary Policy, Federal Reserve Balance and Interest Rates



Source: Moody's Analytics.

However, raising the level of the federal funds rate target is only one aspect of monetary policy normalization. As Figure 29 indicates, in an effort to provide maximum accommodation given that nominal interest rates can fall no lower than zero, the central bank resorted to multiple applications of less conventional policy tools from November 2008 to September 2012, commonly referred to as quantitative easing, or QE. While the last QE program ended in October 2014, the Federal Reserve was left with a massive balance sheet which it has generally maintained. In October 2017 the Federal Reserve began its balance-sheet normalization program which envisions that the balance sheet will decline gradually and in a manner that is minimally disruptive to financial markets and that is consistent with its intended degree of policy accommodation. The FOMC has publicly set out a schedule under which reinvestment of principal payments from its holdings of certain types of securities is subject to rising caps. The FOMC has not announced how large it expects its balance sheet to be when the normalization ends, nor when the normalization will end. As the Federal Reserve's portfolio of these longer-term financial instruments contracts, this should tend to alleviate the flattening of the yield curve as longer rates should increase in response, other things being equal.

Major risks to the Budget Division's forecast for policy setting by the FOMC are the evolution of the economy, financial markets and inflation. Slower economic growth, a retreat from the FOMC's 2 percent inflation target, continued volatility in financial markets could separately or together lead the FOMC to reduce or halt projected increases in the federal funds target range, particularly since the latest FOMC minutes show a committee already inclined to pause before the next step. Faster economic growth or signs of higher inflation, on the other hand, could lead to more increases, but this is not likely in 2019.

Outlook for Inflation

The outlook for inflation changed over the course of 2018. Fear of higher tariffs, increasing oil prices and the tight labor markets all signaled higher inflation earlier in the year. In fact, higher inflation worries spooked the markets occasionally as it raised the probability of interest rate hikes by the Fed. However, some of the trade tensions eased later in the year, and the dollar appreciated, making imported goods cheaper, easing inflationary pressures. Oil prices stabilized midyear and started declining, with a sharp drop at the end of the year, thanks to abundant supply and slowing world demand. All these factors tamed inflation later in the year; however, the headline CPI growth of 2.4 percent in 2018 surpassed the prior year’s growth of 2.1 percent.

Shelter, which constitutes a large share of the consumers’ basket, continued to grow over three percent in 2018 for the fourth year in a row (see Table 6). Higher oil prices, except for the last few months of the year, contributed to an acceleration in the transportation inflation in 2018, while headline energy inflation was slightly lower than 2017. Medical care inflation continued to slow down, while prices of apparel, recreation, education and communication remained very low. With oil prices remaining low, transportation inflation is expected to be lower in 2019.

Table 6

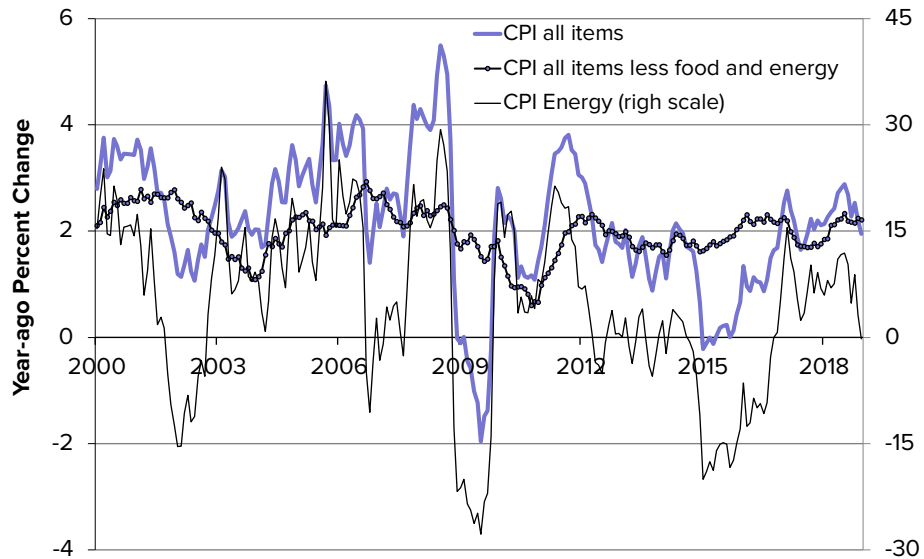
CPI INFLATION

(%)

	Relative Importance	2014	2015	2016	2017	2018
All Items	100.0	1.6	0.1	1.3	2.1	2.4
Food and beverages	14.4	2.3	1.8	0.3	0.9	1.4
Housing	41.8	2.6	2.1	2.5	3.0	2.9
Shelter	32.8	2.8	3.1	3.4	3.3	3.3
Apparel	3.0	0.1	-1.3	0.1	-0.3	0.0
Transportation	16.5	-0.7	-7.8	-2.0	3.5	4.5
Medical care	8.7	2.4	2.6	3.8	2.5	2.0
Commodities	20.2	2.5	3.3	3.4	2.8	1.2
Services	79.8	2.4	2.4	3.9	2.4	2.2
Recreation	5.7	0.2	0.3	0.9	1.3	0.5
Education and communication	6.7	1.2	0.5	0.7	-1.9	0.2
Other goods and services	3.2	1.8	1.7	2.0	2.2	2.2
All Items less food and energy	79.1	1.7	1.8	2.2	1.8	2.1
Food	13.4	2.4	1.9	0.3	0.9	1.4
Energy	7.5	-0.4	-16.7	-6.5	8.0	7.4

Source: Moody’s Analytics; Bureau of Labor Statistics.

Figure 30
General vs. Core Inflation



Source: Moody's Analytics.

While inflation, as measured by the Consumer Price Index (CPI), accelerated in 2018, core inflation, which excludes the volatile food and energy components, followed suit, posting a rate of 2.1 percent for 2018, following a weaker 1.8 percent in 2017 (see Figure 30). Headline inflation is expected to slow modestly to 2.2 percent in 2019, as energy prices and the value of the dollar stabilize. Medical price inflation is expected to advance to 2.4 percent in 2019, following growth of 2.0 percent in 2018 and 2.5 percent in 2017. Price of medical services is expected to lead the inflation advance, while the medical goods inflation, which include prescription and nonprescription drugs as well as medical equipment, is expected increase from 2018, but remain low.

The low inflation rates in 2015 and 2016 were primarily the result of significant declines in energy prices. The West Texas Intermediate (WTI) crude oil spot price reached a record low of \$26 during February of 2016 after a two-year slide that started in the summer of 2014. Since then, the oil price recovered, reaching the recent high of \$77 per barrel at the end of June. After staying around \$70 per barrel, the oil price started to decline late in the year, even with OPEC production cut announcements, eventually reaching \$45 per barrel at the end of December. With U.S. as the top oil producer in the world, OPEC production cuts have less impact on prices than before (see Table 7).

Table 7

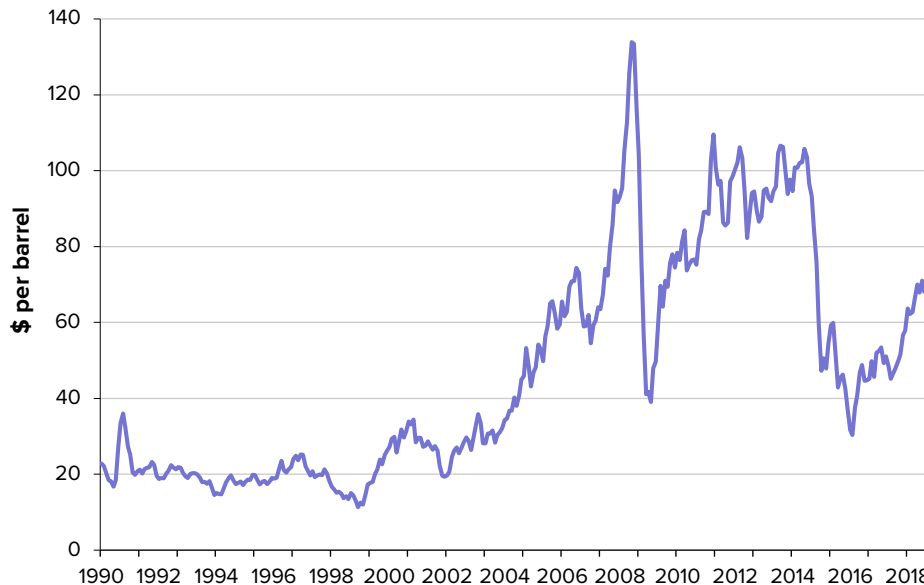
TOP 10 OIL PRODUCERS IN 2017

Country	Million barrels per day	Share of world total
United States	15.65	16%
Saudi Arabia	12.09	12%
Russia	11.21	11%
Canada	4.96	5%
China	4.78	5%
Iran	4.69	5%
Iraq	4.45	5%
United Arab Emirates	3.72	4%
Brazil	3.36	3%
Kuwait	2.82	3%
Total top 10	52.10	53%
World total	98.06	100%

Note: Oil includes crude oil, all other petroleum liquids, and biofuels. Production includes domestic production of crude oil, all other petroleum liquids, biofuels, and refinery processing gain.

Source: U.S. Energy Information Administration.

Figure 31
WTI Spot Price

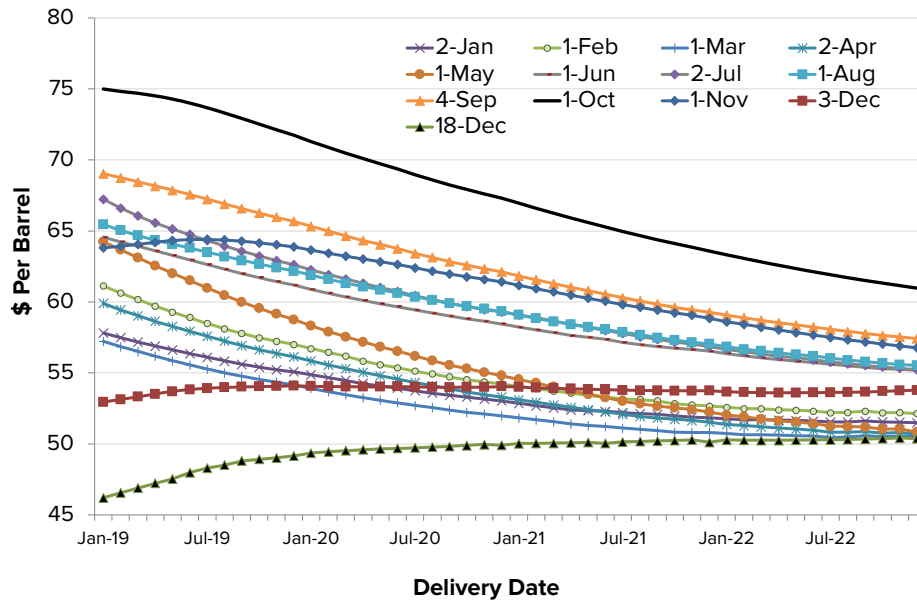


Source: Moody's Analytics.

The Budget Division uses the most recent futures contract curve to guide its oil price forecast, because of the extreme volatility in global energy prices. Figure 32 indicates just how market participants' expectations changed over the course of 2018. Contract prices negotiated on January

2nd, 2018, for delivery one year out settled at \$58 per barrel, while that same contract negotiated in October 1 increased to \$75, by 19 percent. Future prices came back down in December. The Budget Division anticipates that oil prices, as represented by the refiners' acquisition price for a barrel of imported oil, will average \$51.6 in 2019, down from \$61.9 in 2018.

Figure 32
WTI Crude Oil Futures Prices for Selected Contract Delivery Dates in 2018



Source: Bloomberg.

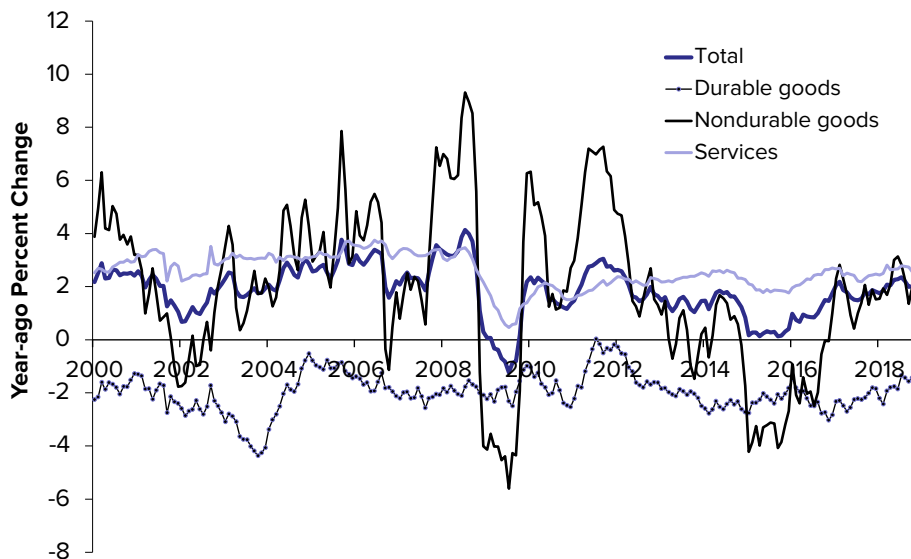
Retail gasoline prices, which the consumers pay, reflect more than just the crude oil prices. The refining costs and profit margins; retail and distribution costs and associated profit margins; and taxes all contribute to the gasoline prices at the pump. As a result, while gasoline prices move with crude oil prices, the effect may be more or less pronounced. The EIA's latest *Short-Term Energy Outlook*, issued in December 2018 has a similar outlook for the crude oil price as the Budget Division and expects an average regular gasoline price of \$2.50 per gallon at the pump nationwide in 2019, down from an average of \$2.73 per gallon in 2018. This 8.4 percent decline is unsurprisingly muted compared to 16.6 percent decline in the refinery acquisition price of imported oil forecasted by the Budget Division.

Although CPI is more commonly used to gauge inflation, an alternative measure of the prices paid by consumers for goods and services is the Personal Consumption Expenditures (PCE) price index, which is closely watched by the Federal Reserve.³⁶ Three major components of PCE, consumer durable goods, consumer nondurable goods and services, can display quite different behavior from

³⁶ Both indices follow a similar pattern, however because they are estimated using different data and methods, they are not always very close. For more detail on how the two measure differs, please see: <https://www.bls.gov/opub/btn/archive/differences-between-the-consumer-price-index-and-the-personal-consumption-expenditures-price-index.pdf>.

the overall index (see Figure 33). For example, in December 2018, while the overall PCE index was 1.8 percent higher than its year-ago level, the index for services grew 2.5 percent, the nondurables index was up 1.0 percent, and the index for durable goods showed a decrease of 1.0 percent. The price index for consumer durable goods has been declining since the mid-1990s. The declining trend is partly due to ongoing declines in prices for consumer electronics. In contrast, nondurable prices have been much more volatile than either durable goods or services prices, since they include highly volatile energy sector goods, such as gasoline and heating oil. The service sector is the least volatile among the three, but has a much higher share of the total, compared with nondurables' share of 25 percent and durables' share of 10 percent. Indeed, housing services costs are among the most stable and represent a large portion of consumer basket (see Table 4). The shelter component of the CPI grew 3.3 percent both in 2017 and 2018.

Figure 33
Price Index for Personal Consumption Expenditures (PCE)

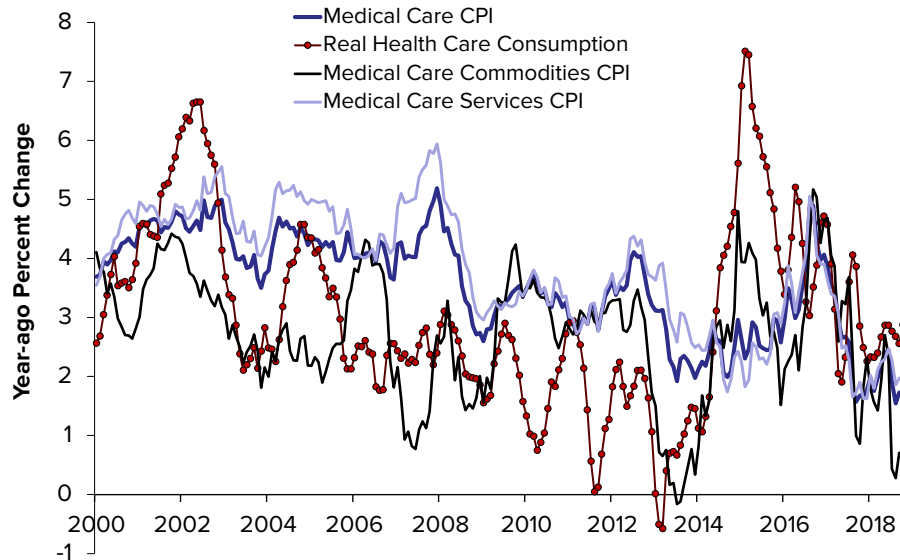


Source: Moody's Analytics.

The medical care component of CPI represents only 8.7 percent of the consumer basket; however, it usually grows faster than the overall index. Prior to the Great Recession, the medical care component of the CPI was growing at an annual average rate over 4 percent, prompting concern and straining the budgets of both consumers and governments. However, the growth was subdued during the recession. Indeed, the average annual growth fell below 3 percent during the 2013-2015 period (see Figure 34). During the same period, utilization rates, measured as real consumption of medical goods and services, also declined. With the passage of the Affordable Care Act (ACA), the utilization rates increased significantly, peaking in 2015, as the number of uninsured dropped. After peaking in 2016 with 3.8 percent, medical care inflation declined to 2.5 percent in 2017, followed by 2.0 percent in 2018.

Figure 34

Medical Care Spending and Prices



Source: Moody's Analytics.

The medical care CPI comprises two major components, commodities and services, and like the headline CPI, the services piece has a higher weight, representing 80 percent of total medical care, and is more stable. Both components saw strong growth in 2016 and both eased in 2017 and 2018. Commodities inflation, which includes the prices of medicinal drugs, medical equipment and supplies, fell to 1.2 percent in 2018. In fact, on a year over year basis, the index itself fell during December 2018 (see Figure 34). The deceleration in 2017 and 2018 was largely due to deceleration in prescription drug prices. This slowdown in drug prices is partly due to FDA's accelerated drug approvals and the increased competition from the generics market.³⁷ However, the structural changes in the prescription drug industry, especially the way the drugs are covered by the insurance companies as well as the flaws in BLS's methodology, caused some in the health care sector as well as in academia to question CPI's ability to measure the true cost of drugs to the consumers.³⁸

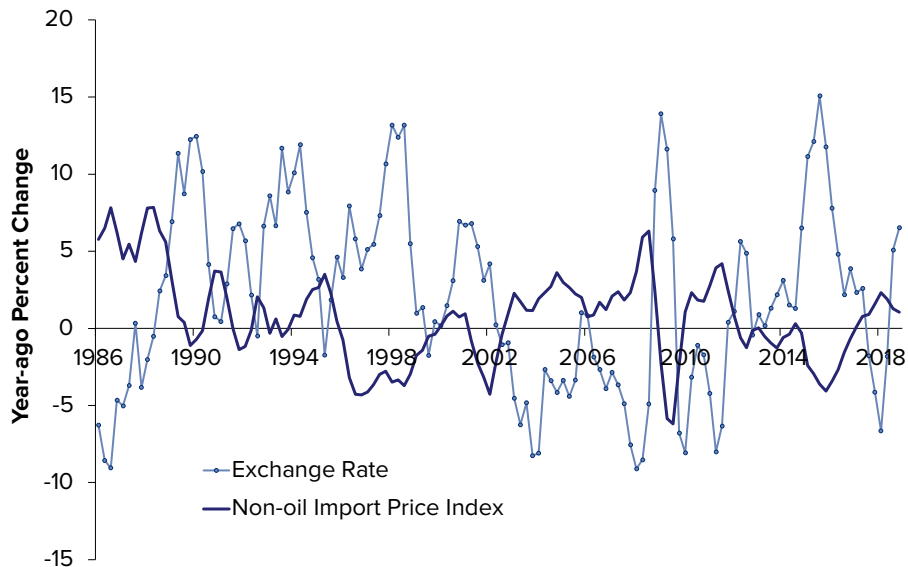
Medical care services inflation also decelerated in 2018 to 2.2 percent, down from 2.4 percent in 2017 and 3.9 percent in 2016. Medical services inflation in 2018 was led by 4.2 percent inflation for hospitals and related services, which was partially offset by inflation of only 0.9 percent in the professional services component, which includes services provided by medical professionals, such

³⁷ According to NBER paper mentioned below, unbranded generics accounted for an estimated 85 percent of all drug prescriptions, compared with 50 percent in 2005.

³⁸ Please see < <https://www.reuters.com/article/us-usa-healthcare-drugpricing/u-s-drug-prices-hit-by-insurer-tactic-against-copay-assistance-analysis-idUSKCN1J2005>> and https://www.brookings.edu/wp-content/uploads/2018/01/es_20180103_bosworthcpiindexes_final.pdf. The latter compares CPI's measure of prescription prices to an alternative index constructed using data from IQVIA Institute for Human Data Science. They find that the alternative index of drug prices shows a higher rate of growth compared with the CPI measure.

as doctors, dentists, eye care professionals etc. The low inflation of professional medical services is partly explained by the Medicare Access and Chip Reauthorization Act of 2015, which locked the growth in Medicare’s rate of payment to physicians at 0.5 percent through 2019. The ongoing impact of these pricing pressures are expected to result in a much more subdued pace of medical care price inflation over the medium term than was observed prior to the Great Recession.

Figure 35
Dollar’s Impact on Import Prices



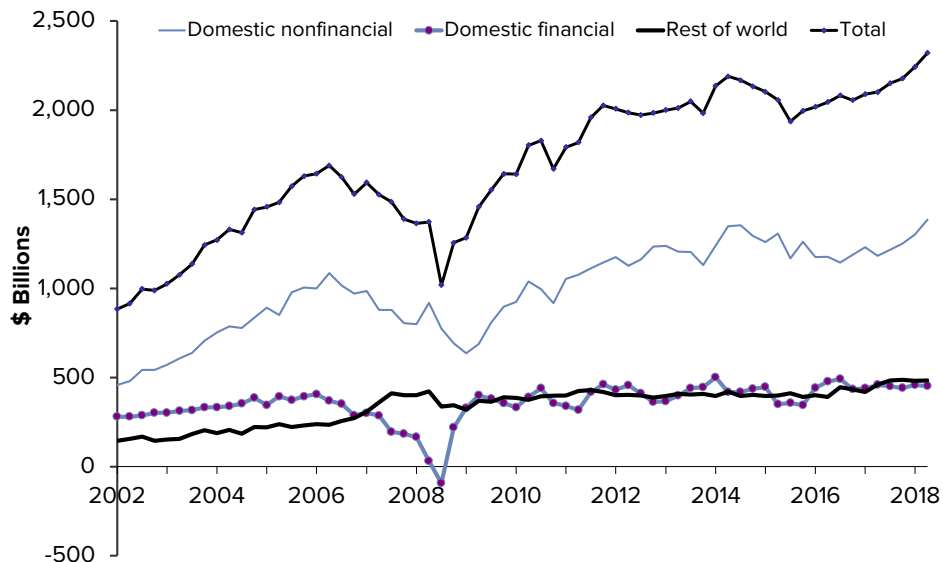
Source: Moody’s Analytics.

Imported deflation has been a concern in the past, as a strong dollar could lower the price of imported goods, impacting the overall level of inflation (see Figure 35). On the other hand, imported inflation can also cause domestic price levels to rise, not only via the prices of finished goods but also via the international supply chains where a lot of inputs to domestic production are imported. Continued slowdown in global growth and a relatively strong U.S. dollar will contribute to keeping inflation in check during 2019. However, continued trade wars and higher tariffs do pose a risk to the Budget Division’s forecast of import prices, as well as to overall inflation. Another source of risk is wage inflation due to the tight labor markets. As discussed earlier, hourly wages have increased throughout the expansion; however, the inflation offset much of that growth, keeping real wage growth low, or sometimes negative, which contradicts economic theory given the low unemployment rate, especially in 2018. However, that trend is changing with real hourly wage growth in private sector reaching 2 percent on a year over year basis during December 2018. Nevertheless, the Budget Division does not expect significant inflationary pressure from wages, as the economy and employment growth slow in 2019, with headline CPI growth expected to slow down to 2.2 percent, following 2.5 percent growth in 2018.

Outlook for U.S. Corporate Profits and the Stock Market

U.S. corporate profits reached their highest level during the third quarter of 2018, growing over 10 percent on a year-over-year basis, which is the highest growth since 2012 (see Figure 36). The increase in profits were a result of a strong economy, low interest rate environment and deregulations. Domestic nonfinancial sector profits (before tax) increased 17.2 percent during the third quarter of 2018 from prior year, meanwhile financial sector profits declined 1.6 percent following growth during the first half of the year. The “rest-of-world” profits growth rate slowed from 13.6 percent during the first half of 2018 to 5.1 percent during the third quarter. The slowdown in the rest of the world profits is consistent with the slowing global growth during the third quarter and pose a risk as the world economy continues to slowdown in 2019. On balance, growth in U.S. corporate profits from current production, which includes the inventory valuation and capital consumption adjustments, is estimated to have risen to 8.3 percent in 2018, after posting an increase of 3.2 percent in 2017. However, as both the global and domestic economies weaken, and financial market conditions tighten as interest rates rise, growth in U.S. corporate profits is expected to slow to 6.4 percent in 2019.

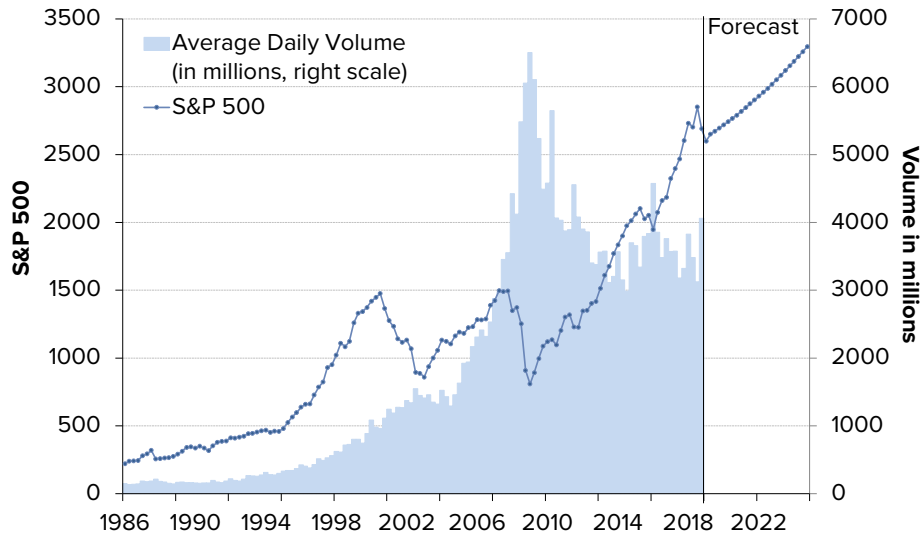
Figure 36
U.S. Corporate Profits



Source: Moody's Analytics.

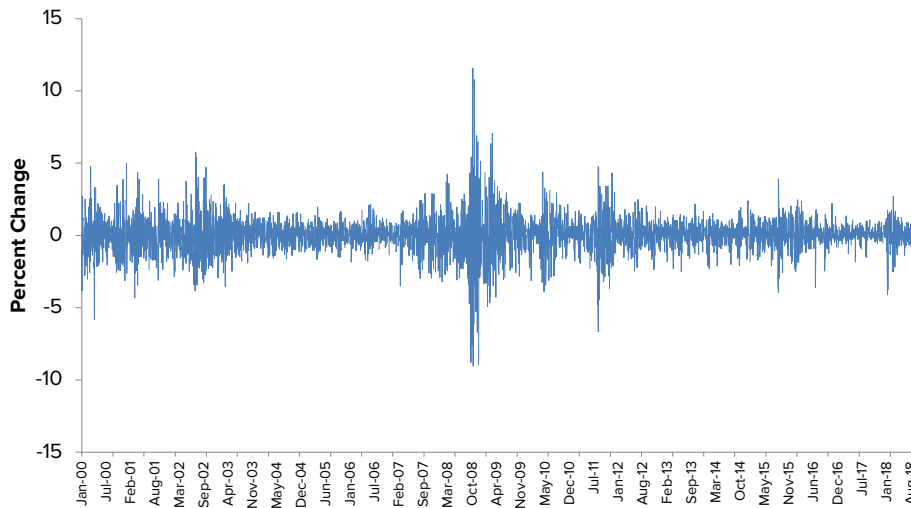
Following 2017's relatively smooth and steady growth, volatility came returned to equity markets in 2018 (see Figure 37). The jitters hit the market early in the year, as the market experienced 10 percent drop in two weeks (from January 26th to February 8th), following a 7.5 percent increase from the last day of 2017. Markets remained volatile but exhibited an upward trend until late September. However, between the September 20th peak and the December 24th trough, the S&P 500 index lost almost 20 percent of its value.

Figure 37
Equity Market Volatility



Source: Moody's Analytics; Yahoo Finance; DOB staff estimates.

Figure 38
Daily Fluctuations in the S&P 500



Source: Moody's Analytics.

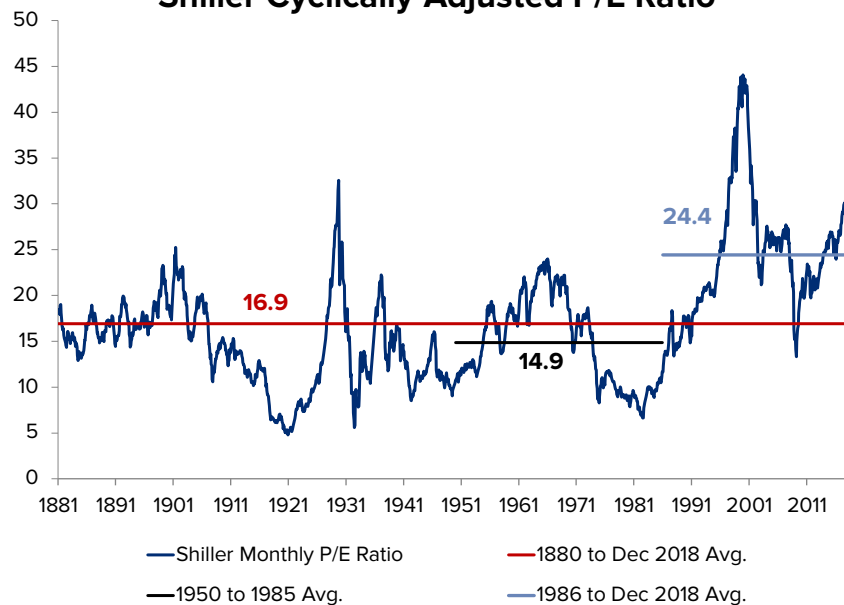
Corporate buybacks from the repatriation of offshore profits after the passage of Tax Cuts and Jobs Act (TCJA) in late 2017 might have contributed to the strong performance of the markets in early

2018.³⁹ With profits at record highs, the fundamentals in the business environment were strong. But trade wars with China, Mexico, and Canada, coupled with rising interest rates and slowing global growth took their toll, sending the S&P 500 index into a tailspin as markets began to contemplate the probability of a fourth short-term rate hike by the central bank. Although markets have since recovered some of their losses, Figure 38 indicates that the market's recent volatility does not particularly stand out from a historical perspective.

Over the long run, equity market price growth is expected to mirror the expected growth in corporate earnings, discounted by the change in interest rates. Figure 39 presents the long-term history of the S&P 500 price-to-earnings ratio adjusted for inflation, where earnings are measured by the trailing 10-year moving average. The December 2018 level was above the 24.4 average from 1986 to that month, a period that contained the high-tech/Internet bubble of the late 1990s. This level compares to an average over the entire history of the series of 16.9, and an average over the early postwar period of 14.9. We note that ratios between equity prices and corporate earnings for the most recent 10 years may be somewhat exaggerated due to a period of extraordinarily low earnings at the depths of the financial crisis in 2008 and 2009, due to write-downs of "toxic assets." Nevertheless, these results suggest caution, particularly in an environment of rising interest rates and lackluster growth. The Budget Division projects a decline in the equity market, measured by S&P 500 index, of 3.3 percent for 2019 on an annual average basis, consistent with the profits forecast, following growth of 12.1 percent in 2017 and 17 percent in 2016 (see Figure 40).

Figure 39

Shiller Cyclically Adjusted P/E Ratio

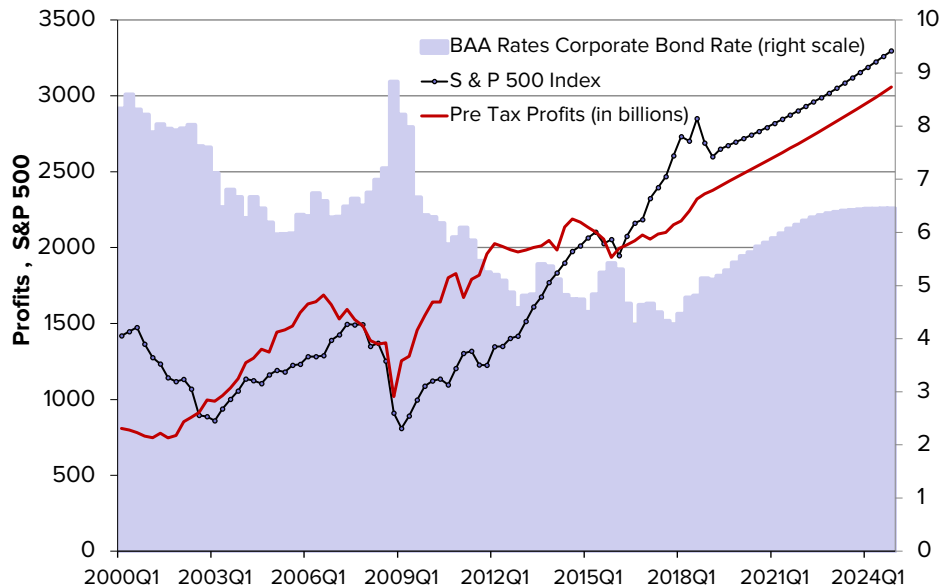


Source: Robert Shiller; DOB staff estimates.

³⁹ For detailed analysis, please see < <https://www.federalreserve.gov/econres/notes/feds-notes/us-corporations-repatriation-of-offshore-profits-20180904.htm>>.

Figure 40

Corporate Profits and Stock Market Performance



Source: Moody's Analytics; DOB staff estimates.

Outlook for Government Spending

On February 9, 2018, President Trump signed into law the Bipartisan Budget Act of 2018 (BBA18). Among other things, this Act raised the caps imposed by the Budget Control Act of 2011 (BCA11) on discretionary budget authority for federal fiscal years 2018 and 2019 by a total of \$296 billion. The defense discretionary funding cap was increased by \$80 billion in FY2018 and \$85 billion in FY2019, while the non-defense domestic discretionary spending cap was increased by \$63 billion in FY2018 and \$68 billion in FY2019. This fiscal stimulus Act suddenly boosted the growth of federal government spending in 2018, which was virtually absent during the current expansion. Real federal government spending is estimated to have ramped up to 2.8 percent at an annual rate in calendar year 2018, while it barely grew in 2016 and 2017 and declined for five consecutive years prior to that due to sequestration.

As a result of the higher spending cap and lower revenue caused by tax cuts, the Federal budget deficit is estimated to quickly build up to \$833 billion in FY2018 from \$665 billion or 3.5 percent of nominal GDP in FY2017, and then increase even further to \$984 billion or 4.7 percent of nominal GDP in federal fiscal year 2019. Assuming the budget authority will be extended beyond fiscal year 2019 to avoid any fiscal cliff, the Budget Division forecast projects that the federal government spending will grow 2.6 percent at an annual rate in 2019 before slowing down to 0.9 percent in 2020. This projection does not account for the impact of federal government shutdown started on December 22nd, 2018. The affected federal departments include Agriculture, Commerce, Justice, Homeland Security, Housing and Urban Development, Interior, State, Transportation, and Treasury.

According to IHS Markit analysis, roughly 380 thousand federal employees have been furloughed, and another 420 thousand, deemed “essential,” have been working without pay.

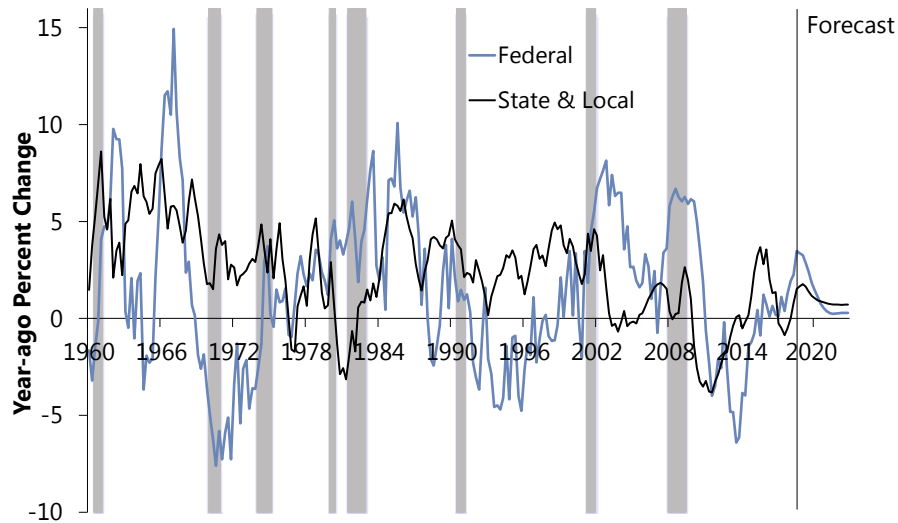
State and local government spending is also expected to benefit from higher federal budget as federal funding would flow to states. In history as shown in Figure 41, state and local government spending experienced a prolonged period of declines on a year-ago basis after the 2008 recession. The declines ended at the end of the second quarter of 2014 but resumed throughout 2017. The strength during 2015-2016 period was largely a result of strong growth in federal funds to states from increased Medicaid enrollment during the first full year of the Affordable Care Act, according to the National Association of State Budget Officers (NASBO).⁴⁰ Therefore, the Budget Division estimates that state and local government spending will improve upon a decline of 0.5 percent in 2017 and grow 1.0 percent in 2018. Going forward, state and local government spending is project to grow 1.5 percent at an annual rate in 2019 before slowing down to 0.9 percent in 2020.

At this writing, it is uncertain how the economy will be affected by the ongoing partial federal government shutdown, now in its fourth week and the longest in history. The shutdown is affecting approximately 800,000 federal workers who experienced their first missed paycheck on Friday, January 11, 2019. Although these workers live predominantly in the D.C. area, federal workers across the country are being affected. Spending will be curtailed by these workers, which will have secondary and tertiary effects on local economies. In addition, nominally “nonessential” agencies on which many segments of the economy depend, ranging from the Transportation Safety Administration to the IRS, to the Securities and Exchange Commission, have ceased operations. For example, with the SEC unable to perform its regulatory function, initial public offerings have come to a standstill. Federally backed mortgage applications cannot be approved. Parks, monuments, and myriad historic sites operated by the National Park Service are closed. The shutdown could shave over \$1 billion from real U.S. GDP for each week it drags on, which does not include the impact a prolonged shutdown might have on consumer sentiment and behavior. Finally, in a tight labor market, many unpaid federal workers could find other jobs leaving the long-term impact of the shutdown on federal government operations highly uncertain.

⁴⁰ The National Association of State Budget Officers, *State Expenditure Report*, 2015-17.

Figure 41

Real Government Spending Over the Business Cycle



Note: Shaded areas represent U.S. recessions.
Source: Moody's Analytics; DOB staff forecast.

Comparison with Other Forecasters

Table 8 compares the Budget Division's (DOB) forecast for a selection of U.S. indicators with those of other forecasting groups. The 2019 forecasts for real U.S. GDP growth fall into a tight range from 2.4 percent (DOB) to a high of 2.7 percent (Moody's Analytics). The DOB and Moody's Analytics 2019 inflation forecasts of 2.2 percent are at the top of the range, while the Blue Chip Consensus is at the bottom with 1.9 percent; again the difference is not large. DOB's unemployment rate forecast for 2019 of 3.6 percent is in line with most other forecasters, except for Moody's Analytics. However, the forecasts for 2020 highlight very divergent views toward the economic slowdown and the duration until economic growth converges to its long-term trend; in that, DOB's outlook is relatively optimistic.

Table 8

U.S. ECONOMIC FORECAST COMPARISON

	2018	2019	2020
Real Gross Domestic Product (GDP) (2009 chained percent change)			
DOB	2.9	2.4	2.1
Blue Chip Consensus	N/A	2.6	1.9
Moody's Analytics	2.9	2.7	0.9
MA by IHS Markit	2.9	2.5	2.0
Consumer Price Index (CPI) (percent change)			
DOB	2.5	2.2	2.4
Blue Chip Consensus	N/A	1.9	2.2
Moody's Analytics	2.4	2.2	2.2
MA by IHS Markit	2.4	2.0	2.5
Unemployment Rate (percent)			
DOB	3.9	3.6	3.5
Blue Chip Consensus	N/A	3.6	3.7
Moody's Analytics	3.9	3.4	3.7
MA by IHS Markit	3.9	3.6	3.7

Source: New York State Division of the Budget, January 2019; Blue Chip Economic Indicators, January 2019; Moody's Analytics, January 2019; and Macroeconomic Advisers by IHS Markit, Economic Outlook, January 2019.

For a brief description of the methodology used by the Budget Division to construct its macroeconomic model for the national economy (DOB/US), see Box 2. For a more detailed description, see *New York State Economic, Revenue, and Spending Methodologies*, November 2018.⁴¹

⁴¹ See <<http://www.budget.ny.gov/pubs/supporting/MethodologyBook.pdf>>.

Risks to the U.S. Forecast

The Budget Division Executive Budget outlook calls for national economic growth to decelerate after a strong 2018 performance in tandem with the much of the remainder of the global economy. The momentum carried into the new year from 2018 – particularly from strong fourth quarter employment and hourly earnings growth – is expected to be more than sufficient to keep economic growth above stall speed for 2019, but there are many risks to this forecast. The impact of the Tax Cuts and Jobs Act on household spending growth is expected to diminish right on heels of the loss of all of the equity markets' 2018 gains and could be exacerbated by a prolonged government shutdown. The resulting diminished growth in disposable income could combine with the wealth effect to reduce real consumption growth by more than is reflected in this forecast and could be even further exacerbated by higher long-term interest rates should the recent flight to safety unwind. A more subdued household sector could result in slower growth in sales, corporate earnings, investment, and employment. On the positive side, a steeper yield curve could help to instill confidence that the economy is further from a near-term recession and help to shore up bank profits as well.

One of the greatest risks to the forecast is the extent to which the global economy is slowing. Although talks are ongoing at this writing, the potential for another escalation in the tariff war between China and the U.S. could cause world trade to contract further still. The extent of the damage already done to China's economy is highly uncertain. The economies of Europe are equally fraught with risks that go well beyond what the ECB and the Bank of England can mitigate through monetary policy. If growth in either area is weaker than expected, the implications for emerging markets and the global economy more generally will be negative and will likely result in slower export and corporate profits growth than reflected in this forecast. The impact will reverberate through U.S. labor and financial markets, resulting in slower growth than anticipated. On the other hand, if either area is stronger than expected, the implications for the forecast will be positive.

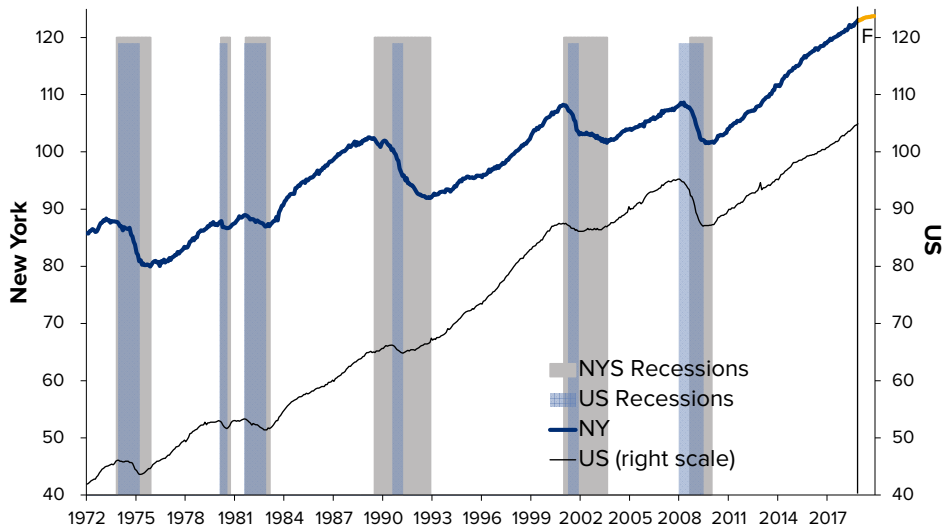
Oil prices are expected to stabilize given Saudi Arabia and Russia's apparent commitment to restrain supply, but such commitments have fallen apart many times in the past. If oil prices should rise much further, gasoline prices will be likely to follow, diminishing the windfall from lower prices that U.S. households are currently enjoying, possibly resulting in lower spending growth than is reflected in this forecast. On the other hand, if prices should fall much lower, U.S. energy producers could pull back on investment spending and hiring, negatively affecting equity markets as well.

Finally, the Federal Reserve's strategy for interest rate normalization and the unwinding of its unconventional policy tools has met some rough spots. The events of the fourth quarter demonstrated the fragility of the financial markets in the face of high levels of uncertainty. Under these conditions, miscommunication between the central bank and market participants can have momentous consequences. The central bank appears to have assuaged market fears for now with the assurance that the FOMC will be flexible and data dependent. But markets are likely to remain jittery and volatile for much of 2019.

The New York State Economy

New York State private sector job growth appears to be stabilizing at a historically healthy pace. The most recent data indicate that the State private sector jobs grew 1.5 percent for 2017 and carried that same pace of growth into the first half of 2018 as well. However, preliminary data for the second half of the year indicates a slight stepdown from the first half, resulting in estimated growth of 1.4 percent for all of 2018. The State’s leading industrial sectors in 2018 were healthcare, management and administrative services, construction, information, and transportation and warehousing. In contrast, the manufacturing, wholesale trade, retail trade, and utilities sectors continue to exhibit losses. At the same time, job growth in the leisure and hospitality sector and in the professional, scientific, and technical services sector is slowing, indicating that the global slowdown, the strong dollar, and rising interest rates may be starting to take their toll. Slower growth of 1.2 percent is projected for 2019 as national and global economic growth tapers off.

Figure 42
New York State Index of Coincident Economic Indicators



Note: NYS recession dates are DOB staff estimates; NYS forecast (in red) is derived from the New York State Leading Index.
Source: Moody's Analytics; DOB staff estimates.

Consistent with years of streamlining in the wake of the financial crisis, public sector job growth lags well behind private growth. Following 0.4 percent growth in 2017, the government sector is estimated to grow 0.5 percent in 2018, followed by growth of 0.4 percent for 2019. As a result, overall State employment growth is estimated to have risen from 1.4 percent in 2017 to 1.3 percent in 2018; weaker growth of 1.1 percent is projected for 2019. In contrast with the small stepdown in job growth, State wage growth is estimated to have slowed significantly from 5.4 percent growth in 2017 to 3.8 percent for 2018. This seeming inconsistency is the result of tax avoidance behavior on the part of taxpayers resulting in a shifting of income into 2017. The impact of this behavior on State wage growth is described in detail below.

With the current national economic expansion on a path toward becoming the longest since 1850, New York is too on track to experience a business cycle of record length. However, due to the more limited availability of state-level data, we cannot document the State's business cycle history going back that far. The Budget Division uses the New York State Index of Coincident Economic Indicators to determine the State's business cycle turning points (see Box 1). The index is plotted in Figure 42 along with a similar index for the U.S., as well as the turning points for both the New York and U.S. business cycles. The New York State Leading Index combines five high frequency data series to signal that either a pickup or a slowdown in economic activity can be expected six to 12 months down the road. The coincident index exhibits average monthly growth of 0.2 percent for the last twelve months through November 2018, the final month for which complete data are available. The leading index implies virtually no growth for the twelve months through November 2019. This is not surprising given the weight that financial sector indicators, such as equity prices and the slope of the yield curve, carry in the Index. The Leading Index is signaling that we can expect slower growth over the near-term.

Box 1
NEW YORK STATE INDICES OF COINCIDENT AND LEADING ECONOMIC INDICATORS

In the absence of an official mechanism for dating business cycles at the sub-national level, DOB staff constructed a New York State Index of Coincident Economic Indicators measuring overall economic conditions for New York.¹ The methodology used to construct the index is based on the Stock and Watson methodology and rests on the notion that co-movements in many macroeconomic time series can be captured by a single unobserved variable representing the overall state of the economy.² Four State data series – private sector employment, hours worked in the manufacturing sector, the unemployment rate, and sales tax receipts (as a proxy for retail sales) – are combined into a single index using the Kalman filter, a common approach to the estimation of unobserved variables. Based on the DOB Coincident Index, six business cycles have been identified for New York since the early 1970s, as reported in the table below. A recession is judged to have begun if the DOB Coincident Index sustains three to five consecutive declines of significant depth. A similar approach is used to date business cycle troughs. The last column of the table below reports the number of private sector jobs lost due to the recession, although labor market cycles do not always coincide precisely with the technical business cycle dates.

NEW YORK STATE BUSINESS CYCLES

Peak Date	Trough Date	Recession Length (in months)	Private Sector Job Losses
October 1973	November 1975	25	384,800
February 1980	September 1980	7	54,800
August 1981	February 1983	18	76,600
June 1989	November 1992	41	551,700
December 2000	August 2003	32	329,300
August 2008	December 2009	16	352,700

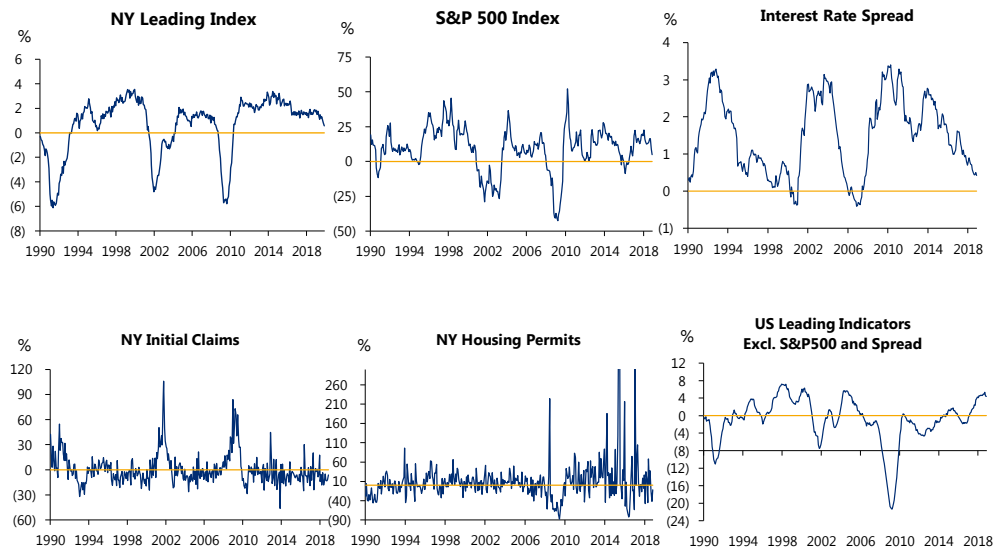
Source: DOB staff estimates.

In order to gauge the future direction of the State economy, the Budget Division produces the New York State Index of Leading Economic Indicators, which yields a forecast for the Coincident Index up to 12 months ahead. The forecasting model includes the following five leading economic variables in a vector autoregressive framework: the U.S. Index of Leading Economic Indicators (excluding stock prices and the interest rate spread), New York housing permits, New York initial unemployment insurance claims, stock prices, and the spread between the 10-year and one-year U.S. Treasury rates.

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Variables Used in New York Index of Leading Indicators



Note: All percent changes are from prior year.
Source: Moody's Analytics; DOB staff estimates.

The long lag with which the New York economy entered the last recession contrasts sharply with the experience of the prior five downturns. As illustrated in Figure 42 on page 81, the State entered three of the five prior recessions earlier than the nation as a whole, and entered the remaining two only one month later. The State's estimated business cycle trough date is December 2009, which implies that New York's recession was two months shorter than that of the nation as a whole.

¹ R. Megna and Q. Xu (2003). "Forecasting the New York State Economy: The Coincident and Leading Indicators Approach," *International Journal of Forecasting*, Vol 19, pages 701-713.
² J.H. Stock and M.W. Watson (1991), "A Probability Model of the Coincident Economic Indicators," in K. Lahiri and G. H. Moore (eds.), *Leading Economic Indicators: New Approaches and Forecasting Records*, New York: Cambridge University Press, pages 63-85.

New York State is home to the world's financial capital, and while that status confers many benefits, historically it has also imparted a high degree of employment and wage volatility. However, since the recent financial crisis, the changing regulatory environment has altered the pattern of risk-taking behavior by Wall Street firms. Although the net impact of these changes on finance sector employment and wages has been negative, a fringe benefit has emerged in the form of lower wage volatility. A standard deviation is a simple statistic that when doubled defines a range of values within which a measure has a 67 percent chance of falling. The wider is the range, the more volatile the series. During the seven bonus seasons that preceded the worst of the financial crisis, finance and insurance sector bonus growth exhibited a standard deviation of 25.7 percentage points; in the seven seasons that followed, the standard deviation dropped to 12.4 percent. Thus, the State economy appears to be undergoing a period of adjustment, during which above-average private sector job growth has coupled with a less volatile and more diversified wage base.

Outlook for Employment

Since the end of the recession, the State’s labor market has enjoyed historically strong private sector job growth. Table 9 presents a current profile of the job market by comparing year-ago growth rates for the first half of 2018, the most recent for which detailed Quarterly Census of Employment and Wages (QCEW) data are available, with those for the U.S. for the same period. Although private employment grew 0.3 percentage points faster for the U.S. than for New York, New York led the nation in four sectors in the first half of last year: information; management, administrative, and support services; healthcare; and government. The differential was the largest (3.9 percentage points) for the information sector, which includes large media companies such as Google and Facebook. Both New York and the nation as a whole have seen a large slowdown in job growth within the leisure and hospitality sector from over 3 percent earlier in the expansion to below 2 percent by the middle of 2018, with rising wages and a much stronger dollar likely playing a role.

Table 9

YEAR-AGO PERCENT CHANGE IN EMPLOYMENT FOR 2018H1: NYS v. US

	<u>NYS</u>	<u>US</u>
Total Private	1.5	1.8
Utilities	(0.2)	(0.3)
Construction	3.0	3.9
Manufacturing and Mining	(0.7)	2.0
Wholesale Trade	(2.3)	1.2
Retail Trade	(0.9)	0.4
Transportation and Warehousing	2.2	3.1
Information	2.5	(1.4)
Finance and Insurance	0.6	1.1
Real Estate and Rental and Leasing	0.6	2.8
Professional, Scientific, and Technical Services	0.3	2.3
Management, Administrative, and Support Services	3.5	2.7
Educational Services	1.8	1.8
Healthcare & Social Assistance Services	3.9	2.0
Leisure, Hospitality and Other Services	1.3	1.8
Government	0.5	0.0
Total	1.4	1.6

Note: Management, and administration and support services includes NAICS sectors 55 and 56; sum of sectors may not match the total due to the exclusion of unclassified.

Source: NYS Department of Labor; Moody’s Analytics; DOB staff estimates.

Going forward the Budget Division projects total State employment growth of 1.1 percent for 2019, following growth of 1.3 percent for 2018. Private sector job growth of 1.2 percent is projected for 2019, following estimated growth of 1.4 percent for 2018. The State’s maturing pace of labor market growth is comparable to, albeit a bit below, overall national job growth for 2019 of 1.4 percent and private growth of 1.6 percent.

Table 10

CHANGE IN NEW YORK STATE EMPLOYMENT FOR 2019

	Percent	Levels
Total Private	1.2	99,135
Utilities	0.3	108
Construction	1.2	4,863
Manufacturing and Mining	(0.1)	(412)
Wholesale Trade	(0.0)	(125)
Retail Trade	0.2	2,053
Transportation and Warehousing	1.3	3,389
Information	0.5	1,335
Finance and Insurance	0.4	1,808
Real Estate and Rental and Leasing	0.8	1,631
Professional, Scientific, and Technical Services	1.0	6,921
Management, Administrative, and Support Services	1.6	10,770
Educational Services	2.0	7,187
Healthcare & Social Assistance Services	2.7	41,841
Leisure, Hospitality and Other Services	1.3	17,765
Government	0.4	5,105
Total	1.1	104,240

Note: Management, and administration and support services includes NAICS sectors 55 and 56; sum of sectors may not match the total due to the exclusion of unclassified.

Source: NYS Department of Labor; DOB staff estimates.

Table 10 shows projected changes in employment for 2019 by sector. The education and health care industries are expected to continue their strong growth during the current year. Tourism will still be a source of strength, with the leisure and hospitality sector continuing to be a leading sector, though growth has come down over the last few years.

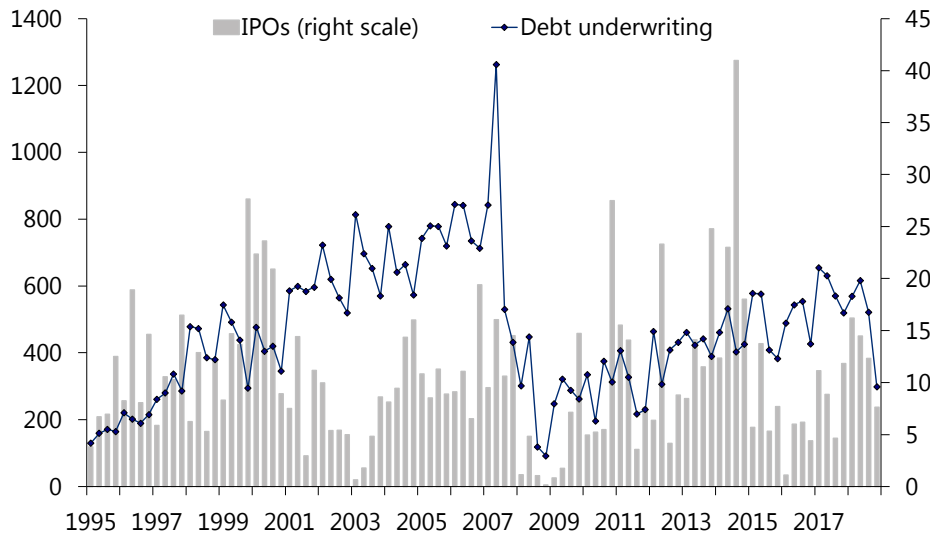
The Continuing Transformation of the Securities Industry

Initial public offerings (IPOs) and corporate debt underwriting are two important drivers of securities industry revenues and profits. While debt underwriting is closely linked to interest rates and the overall level of economic activity, IPOs tend to rise and fall with the secondary equity market. The spikes that appear in Figure 43 correspond to the historically large offerings that gained much attention in recent years, such as the \$15.8 billion General Motors IPO in November 2010, the notorious Facebook offering in May 2012, the public sale of Twitter in November 2013, and the record-setting \$21.8 billion Alibaba IPO in September 2014.

The 2018 IPO market hit a 4-year high despite the weakness in the last quarter of 2018; there were 190 IPOs in 2018, 30 more than 2017. Total IPO proceeds increased 32 percent to \$47 billion due to some big listings, such as Spotify, AXA Equitable, and Tencent Music. Driving activity were biotech companies, technology firms, and the return of Chinese issuers. However, the weakening of the broader stock market caused many planned IPOs to be withdrawn and, as a result, the activity level was significantly subdued. The November 2018 IPO level was the lowest level since April

2016. Given the 3.3 percent decline projected for the S&P 500, 2019 is expected to be a weak year for IPOs. Debt underwriting fell 15.5 percent in 2018 and is not expected to improve substantially in 2019.

Figure 43
Major Drivers of Financial Market Activity
 \$ Billions

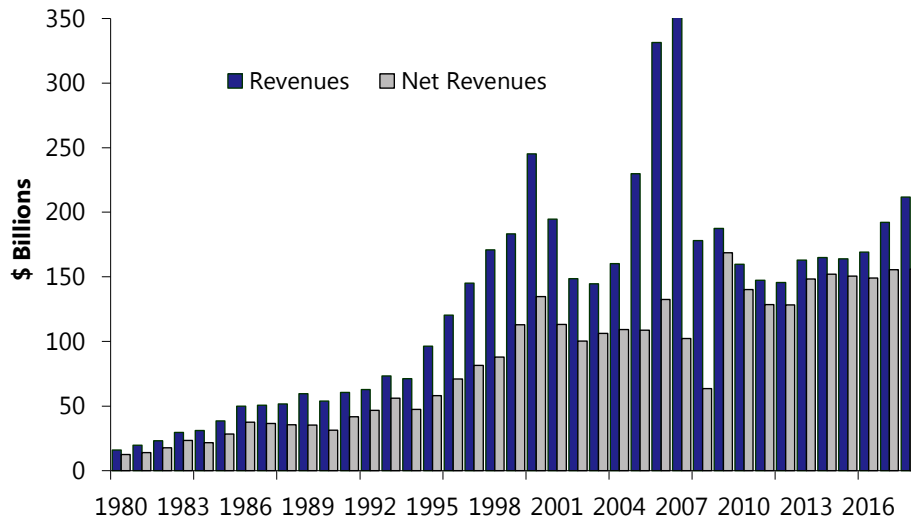


Source: Securities Industry and Financial Markets Association (SIFMA).

Corporate tax reform created a favorable backdrop for deal making in 2018. Repatriated offshore cash and low funding costs made 2018 a robust year for merger and acquisition (M&A) activities. In the first three quarters of the year, global merger and acquisition deals totaled about \$3.3 trillion, the most since record keeping began nearly four decades ago. Deals announced in the first nine months of the year involving American companies alone were worth over \$1.3 trillion, and were mainly in the energy and power, technology, and healthcare industries. However, tightening monetary policy, rising protectionism, and geopolitical worries likely slowed this trend in the fourth quarter of 2018 and are likely to continue to do so in 2019. Companies are likely to be less willing to commit huge volumes of capital to new businesses in a slowing economy.

Strong equity market growth, combined with robust IPO and M&A activity, led to strong overall securities industry revenue and profits growth in the first three quarters of 2018. Figure 44 shows New York Stock Exchange member-firm revenues before and after subtracting interest costs. Total revenues are estimated to have risen 10.1 percent in 2018, following 13.7 percent growth in 2017. Despite the strong growth of the most recent two years, total revenues for 2018 are estimated to remain 39.9 percent below 2007 levels. Figure 44 also shows how the margin between revenue and net revenue has widened as short-term interest rates have risen, raising financial firms' interest costs. With short-term rates rising faster than long-term rates, interest expenses have tended to rise faster than margin interest gains.

Figure 44
NYSE Member Firm Revenues



Note: Estimate for 2018 is based on three quarters of actual data and one quarter estimated; net revenues exclude interest expenses.
Source: SIFMA.

Table 11

NYSE MEMBER FIRM FINANCIAL RESULTS (\$ Billions)												
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018*
Revenues	352.0	178.1	187.5	159.8	147.3	145.7	162.8	165.0	164.0	169.1	192.2	211.7
Commissions	28.8	30.2	26.3	25.0	25.7	19.4	23.1	23.0	22.7	21.3	20.2	18.6
Trading Gain (Loss)	(10.3)	(71.8)	27.4	16.7	1.5	14.0	11.1	11.5	8.4	11.9	12.6	16.7
Underwriting Revenue	23.2	16.5	19.8	20.3	18.3	20.8	24.9	25.5	22.6	19.0	22.2	21.8
Fees, Asset Management	21.6	20.9	17.5	20.6	25.7	24.7	33.2	38.2	40.9	42.8	51.5	52.7
Margin Interest	29.2	16.7	3.6	3.8	4.9	4.8	5.8	6.8	7.1	7.6	10.0	13.3
All Other	259.6	165.6	92.9	73.3	71.2	61.9	64.7	60.0	62.3	66.5	75.7	88.6
Expenses	363.4	220.7	128.1	134.7	139.5	123.6	145.8	148.7	148.8	150.8	167.1	184.7
Total Compensation	69.6	59.8	62.4	66.9	68.0	60.2	70.4	72.7	73.9	72.9	73.8	72.2
Interest Expense	249.8	114.5	18.7	19.6	18.7	17.3	14.4	13.1	13.4	20.1	36.7	55.6
All Other Expenses	44.0	46.3	46.9	48.2	52.8	46.1	61.0	63.0	61.5	57.8	56.5	56.9
Pre Tax Net Income	(11.3)	(42.6)	59.4	25.1	7.7	22.1	17.0	16.3	15.2	18.3	25.2	26.9

* Estimate for 2018 is based on three quarters of actual data and one quarter estimated.

Source: SIFMA.

Table 11 lists the primary sources of revenue and expenses for NYSE member-firms over the last ten years. Clearly, the three greatest areas of improvement in industry balance sheets since 2008 are the decline in interest expenses, due to historically low interest rates; increasing gains from equity underwriting; and the growth in fee and asset management revenues. Although interest expenses are down substantially from their pre-recession high, they are up since 2017 due to the rise of interest rates.

Ten years after the financial crisis, securities industry revenues remain about 40 percent below their most recent 2007 peak. Industry trading gains fell dramatically in both 2010 and 2011, and have remained relatively low for the past seven years for a number of reasons that include volatile equity markets; concerns about the Chinese economy; the strengthening dollar; the price of oil; the Brexit vote; the U.S. presidential election; policy uncertainty under a new presidential administration; and the trade war with China. With long-term interest rates remaining stubbornly low, gains from fixed-income trading and lending have also been weak. Finally, the evolving regulatory environment since Dodd-Frank was signed into law in July 2010 has succeeded in constraining bank risk-taking behavior.

Some of the key goals of the Dodd-Frank reform were strengthening bank capital requirements; limiting counterparty risk; and, ultimately, systemic risk. One of the major provisions of Dodd-Frank required the formulation of regulations to enforce the so-called “Volcker Rule,” which put limits on proprietary trading on the banks’ own account. Finalized regulations were released and adopted by regulatory agencies in December 2013. However, in December 2014 the Federal Reserve decided to give banks until July 21, 2016, to conform investments made prior to December 31, 2013, with the regulations, though banks still had to cease proprietary trading activities by July 2015. They also had to divest themselves of any interest in private equity, venture capital funds, and hedge funds created after December 2013 by that deadline. There has been debate about whether this law is “too much regulation”, and several efforts had been made in 2017 and 2018 to roll back some of the consumer-protection provisions found in the Dodd-Frank Act. The results presented in Table 11 highlight the impact that reform has had on the way Wall Street is conducting business.

In addition to Dodd-Frank, implementation of Basel III, the third incarnation of the Basel Accords establishing global regulatory standards for managing bank risk, was to start in 2013, but the implementation date has since been extended to 2019. Basel III specifically aims at improving the ability of banks to withstand periods of systemic economic and financial stress through more stringent capital and liquidity requirements. But these strengthened requirements will tend to put further pressure on revenue-generating activity and bank profitability by reducing leverage ratios, thus intensifying the pressure that already exists in the current environment of low long-term interest rates.

The new regulatory environment appears to have altered bank business practices in two fundamental ways. First, the composition of executive compensation has evolved away from cash in favor of deferred compensation and stock grants, thus more closely tying pay to the long-term performance of the firm. As a result, the revenue growth estimated for a given year may not translate into an equivalent rise in taxable bonus pay for the ensuing bonus season. The deferral of compensation will tend to smooth out bonus payments, as the cash portion of current-year compensation packages combines with the deferred portions of prior years.

Secondly, in order to reinforce such long-term incentives, compensation packages now include claw-back provisions that allow firms to take back a portion of bonus pay if actions taken by an employee are ultimately judged to have been too risky. Firms therefore are expected to continue to alter their business practices in favor of less risky behavior both by reducing leverage and by engaging in fewer risky trades. The upward trend in revenue generated by less risky fees and asset management, illustrated in Table 11 supports this claim.

Outlook for State Income

The Budget Division projects total personal income growth of 4.0 percent for 2019, slightly weaker than the 4.5 percent growth estimated for 2018. These growth rates are driven mainly by fluctuations in the growth in wages, its largest component. New York State wages are estimated to have risen 3.8 percent in 2018, following 5.4 percent growth in 2017. More moderate growth of 3.6 percent is projected for 2019. Recent fluctuations in wage growth have tended to reflect tax avoidance behavior on the part of employers and employees, either in anticipation of or resulting from changes to federal tax law. The first such shift took place on the heels of the 2016 election, in anticipation of changes to federal personal income tax rates under the new administration. There is evidence that some wages were shifted from the last quarter of 2016 into the first quarter of 2017 so that employees could take advantage of potentially lower federal personal income tax rates should the Congress pass such a law and make it effective for the 2017 tax year. Ultimately, changes to federal tax law were postponed until December 2017 when the Tax Cuts and Jobs Act (TCJA) was passed, effective January 1, 2018. The new tax law lowered the top federal marginal tax rate from 39.6 percent to 37 percent but capped the deductibility of state and local tax (SALT) payments at \$10,000. The limitation placed on the deductibility of SALT payments, often referred to as the SALT cap, was a tectonic shift for many New Yorkers. For high-income wage earners, the SALT cap likely more than offsets the benefit from lower marginal federal tax rates. Consequently, we estimate there was very little shifting of wages between the fourth quarter of 2017 and the first quarter of 2018.

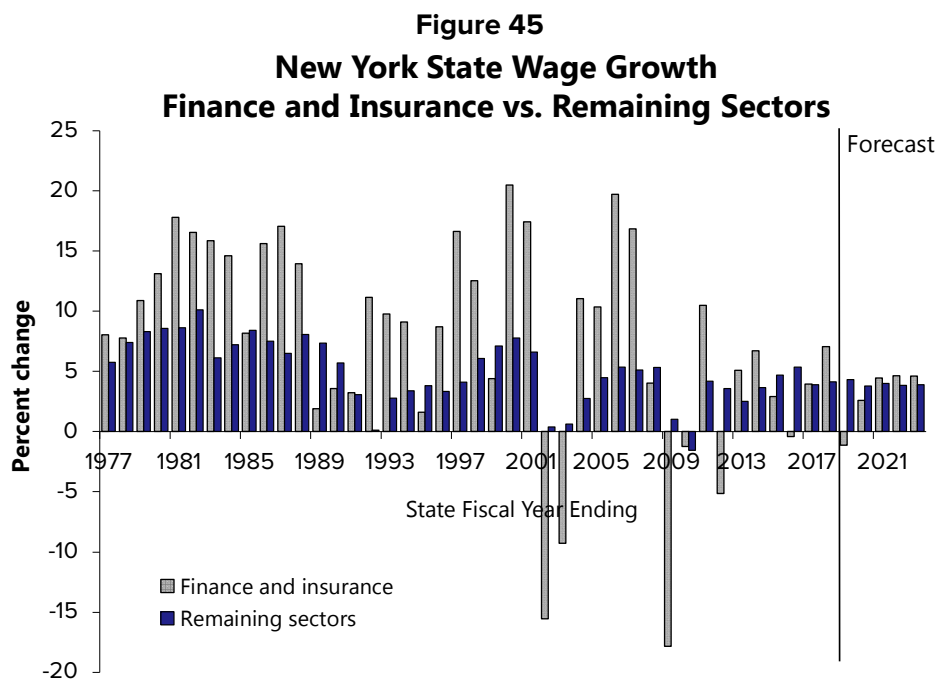
Yet another tax rule appears to have led to some unusually large payments in the fourth quarter of 2017. In 2008, Congress passed a law that required that deferred management and incentive fees retained offshore by hedge fund principals would have to be recognized for tax purposes by the end of December 2017. The repatriation of the taxes owed on those funds appears to have been associated with some unusually large finance and insurance sector wage payouts in the fourth quarter of 2017 worth about \$2.9 billion that are unlikely to recur.⁴² A second source of nonrecurring income is estimated to be associated with the reduction in the corporate tax rate from 35 percent to 21 percent under the TCJA, with many firms sharing some of the financial benefits from the tax cut with their workers. These one-time bonus payouts are estimated to have totaled \$3.0 billion.

⁴² The details are laid out in Internal Revenue Code Section 457A, IRS Notice 2009-8, and Revenue Ruling 2014-18. Strong growth in nonwage payments is also believed to be related to this rule and is discussed in more detail starting on page 127.

The government sector is expected to continue to add jobs. Private sector wages are projected to grow 3.7 percent for 2019, while government sector wage growth is projected at 2.9 percent. Note that government wages are assumed to be unaffected by strategic income shifting.

With 2017 wages estimated to have been elevated by both a strategic shifting of income and one-time payments, estimated wage growth for 2018 is correspondingly depressed. Similarly, the one-time payments estimated for 2018Q1 elevate 2018 wages, thereby masking the true underlying trend for 2019. After smoothing over the fluctuations associated with tax avoidance, and removing the one-time payouts associated with hedge fund tax repatriation and the corporate tax cut, underlying wage growth of 4.0 percent is estimated for CY 2017, followed by growth of 4.4 percent for 2018 and 4.2 percent for 2019.

Because the state-level wage data published by the U.S. Bureau of Economic Analysis have proven unsatisfactory for the purpose of forecasting State tax liability, the Budget Division constructs its own wage and personal income series based on Quarterly Census of Employment and Wage (QCEW) data. Moreover, because of the importance of trends in variable income – composed of stock-related incentive income and other one-time bonus payments – to the understanding of trends in State wages overall, the Budget Division has developed a methodology for decomposing wages into a bonus and a non-bonus series. For a detailed discussion, see Box 2. The Budget Division’s outlook for State income is based on these constructed series.

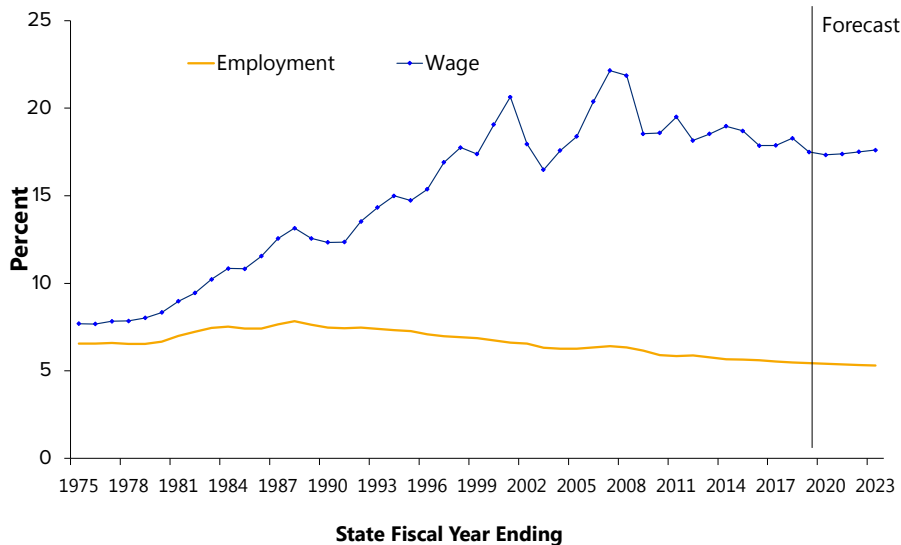


Source: NYS Department of Labor; DOB staff estimates.

New York State employment and income are profoundly affected by the fortunes of the financial markets. As illustrated in Figure 45, finance and insurance sector wages have historically tended to grow much faster than wages outside of that sector. However, not only has this trend become

much more muted since the end of the financial crisis, as the chart makes clear, it actually reversed during FY 2015 and FY 2016 and is expected to do so again in FY 2019 and FY 2020. From FY 1977 through FY 2008, the last complete fiscal year before the fall of Lehman Brothers, average annual growth in finance and insurance sector wages was 4.3 percentage points above that of the remaining industrial sectors. However, over the nine years since the worst of the crisis (excluding FY 2009 when finance and insurance sector wages fell 17.8 percent), finance and insurance sector wage growth was an average of 0.1 percentage points below that of the remaining sectors. With bonuses estimated to fall 9.6 percent for FY 2019 and 1.2 percent for FY2020, finance and insurance wage growth is expected to be below the growth for the remaining sectors for those two years. In the out-years, financial sector wage growth is expected to be a bit above but much more in line with nonfinancial sector wage growth than has historically been the case. Moreover, the finance industry’s share of total wages is not projected to reach its 2006-07 peak at any point over the forecast horizon.

Figure 46
Finance and Insurance Sector Employment and Wages as Share of State Total



Source: NYS Department of Labor; DOB staff estimates.

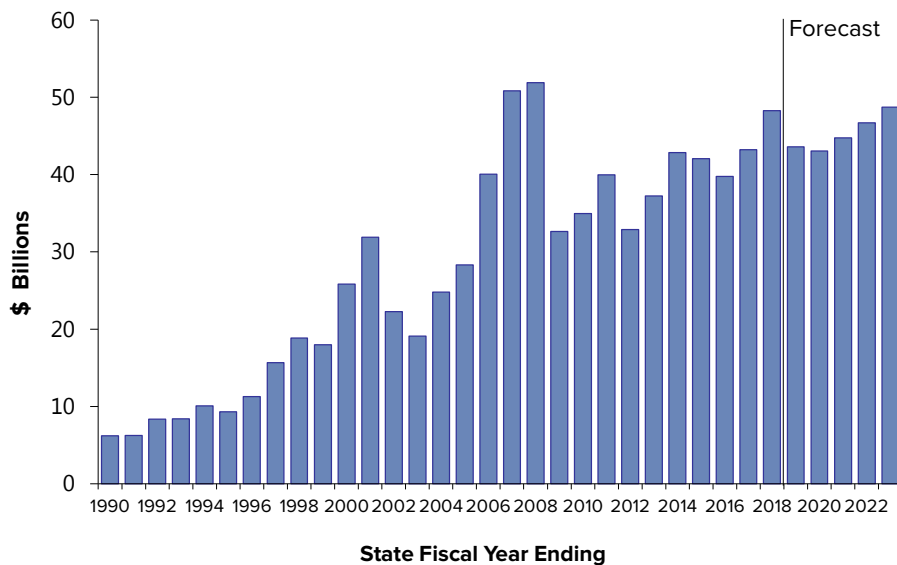
Figure 46 shows how the substantially higher wage growth in the finance and insurance sector caused it to increase its share of total State wages over time on a State fiscal year basis to a peak of 22.1 percent in 2006-07, but the share has since fallen and is unlikely to revisit it prior peak in the near future. The industry’s employment share is substantially lower than its wage share at only 5.5 percent of total State employment in 2017-18 and is expected to continue its downward trend. Nevertheless, finance sector workers continue to be, on average, very highly compensated. Even after falling to \$174,000 in the wake of the financial crisis, FY 2009 finance and insurance sector average wages were still 247 percent higher than the average wage for the rest of the State economy. By FY 2018, the industry’s average wages rose to approximately \$238,000, which were 286 percent above that of the remaining sectors. Financial market wages have an important effect

on employment and income in New York City and its surrounding suburbs, both directly – through compensation paid to finance sector workers and purchases made by finance sector firms, and indirectly – as finance sector workers spend their incomes on housing, entertainment, and other goods and services.

Variable Income Growth

Variable income is defined as that portion of wages derived primarily from bonus payments, stock incentive income, and other one-time payments. Firms tend to grant employee bonus packages during either the fourth quarter of a given year or the first quarter of the following year, as a form of performance incentive for the prior calendar year. Although the cash component of bonus income is unambiguously counted as wages (from which taxes are withheld) in the quarter in which it was granted by the firm, stock incentive income typically is not. Stock grants do not appear in the wage data until they are vested. Nevertheless, variable income payments are sufficiently concentrated in the fourth and first calendar-year quarters to make the State fiscal year a logical period of analysis for discussing the determinants of variable income growth.⁴³

Figure 47
New York State Finance and Insurance Sector Bonuses



Source: NYS Department of Labor; DOB staff estimates.

⁴³ See Box 2 on page 62 for a more detailed discussion of bonus estimation.

Box 2

THE CONSTRUCTION OF NEW YORK STATE WAGES AND THE ESTIMATION OF VARIABLE INCOME

Trends in State wages are critical to an accurate analysis and forecast of personal income tax liability and collections. To improve the link between the economic and tax variables on a quarterly basis, the Division of the Budget (DOB) constructs its own wage series from the available primary data sources. This series differs from the data published by the U.S. Bureau of Economic Analysis (BEA).

DOB uses only New York data to construct its State wage series. The primary source is data collected under the Quarterly Census of Employment and Wages (QCEW) program. In contrast, the BEA uses national information to adjust the quarterly values for seasonal variation, as well as to ensure that state level wages add up to national estimates. The consequence is often a significant difference between the two series in both the quarterly pattern and the annualized growth rates. For example, according to staff estimates based on the QCEW data, wage growth rates for the first and second quarters of 2000, on a year-ago percent-change basis, were 18.3 percent and 8.5 percent, respectively. The comparable growth rates originally published by the BEA were 2.4 percent and 5.4 percent. These estimates have since been revised up to 7.3 percent and 9.2 percent, respectively. However, the lack of timeliness in the revision process limits the usefulness of BEA data for state forecasting purposes.

A comparison with yet another source of wage data also demonstrates the greater accuracy of the QCEW data. Since the amount of wages withheld for personal income tax purposes varies systematically with wages itself, withholding data provide a useful guide for estimating State wage growth. For example, wages withheld during the first quarter of 2000 were 18.6 percent above withholding for the same quarter of the previous year. This estimate is much more consistent with the growth rate derived from the QCEW data than with the BEA's estimate of 2.4 percent.

Once an entire year of QCEW data becomes available, the BEA revises its state level wage data to be more consistent with that data source. For this reason, DOB's method performs well in anticipating the BEA's revised estimates of annual growth in New York wages. To make the actual magnitudes of DOB's wage series more strictly comparable to the BEA wage series, non-covered and unreported legal wages would have to be added to wages taken directly from the QCEW data. But the addition of these components typically changes the annual growth rate for State wages by no more than two tenths of one percentage point.

An increasing portion of New York State wages has been paid on a variable basis, in the form of either bonus payments or proceeds derived from the exercise of stock options. Because no government agency collects data on variable income as distinct from ordinary wages, it must be estimated. DOB derives its bonus estimate from firm level data collected under the QCEW program. This method allows a large degree of flexibility as to when individual firms actually make variable income payments. However, as with any estimation method, some simplifying restrictions are necessary. DOB's method incorporates the assumption that each establishment makes variable income payments during at most two quarters of the year. However, the determination as to which quarters contain these payments is made at the firm level.

Firms report their wages to the QCEW program on a quarterly basis. A firm's average wage per employee is calculated for each quarter. The average over the two quarters with the lowest average wages is assumed to reflect the firm's base pay, that is, wages excluding variable pay. If the average wage for either of the remaining quarters is significantly above the base wage, then that quarter is assumed to contain variable income.¹ The average variable payment is then defined as total average wage minus the base average wage, after allowing for an inflation adjustment to base wages. Total variable pay is then calculated by multiplying the average bonus payment by the total number of firm employees. It is assumed that only private sector employees earn variable pay.

¹ The threshold adopted for this purpose was 25 percent. However, the variable income estimates are fairly robust to even a five-percentage-point swing in this criterion.

The Budget Division projects total State variable income to fall 4.7 percent for FY 2019. Figure 47 portrays how dramatically variable income paid to employees in the finance and insurance industry has grown since 1990. An incentive-based payment structure allows employers to share with employees the risks of doing business and is particularly attractive to the securities industry, given the degree of volatility in industry profits.

The cash portion of finance and insurance sector bonuses is estimated to decline 9.6 percent for the current FY 2019 bonus season, resulting in a payout of \$43.6 billion. This would follow a 11.6 percent growth estimated for FY 2018, which would include the one-time payments associated with both the hedge fund repatriation and the TCJA corporate tax cut. The outlook for FY 2020 bonuses is also unfavorable. Equity market growth is projected to decline 3.3 percent in 2019. Although this continues to be a historically low interest rate environment, bank interest expenses are rising as the Federal Reserve continues to pursue a policy of interest rate normalization. The yield curve is alarmingly flat, putting downward pressure on bank profits. Moreover, slower national and global economic growth reduces the demand for financial services, including corporate equity and debt underwriting. As a result, the Budget Division projects a decline in finance and insurance sector bonuses of 1.2 percent for FY 2020, representing a payout of \$43.1 billion, or \$0.5 billion below FY 2019.

Nonbonus Wages

Unlike the variable component of income, nonbonus wages are driven by changes in employment and nonbonus average wages and are therefore relatively more stable. After adjusting for inflation, the nonbonus average wage for each of the State's industrial sectors is believed to have a stable long-run relationship with real U.S. average wages, which in turn is determined by labor productivity. However, State real average wages can deviate from their long-run trend due to short-term fluctuations related to business cycles, shocks to the regional economy, or shocks to a specific industrial sector that is relatively more important to the State economy, such as finance and insurance. Nonbonus average wages are projected to rise 3.0 percent for the 2019 calendar year, following an estimated 3.5 percent increase in 2018. Note that strategic income shifting and one-time payments are not expected to significantly affect nonbonus wages. Consistent with slightly weaker employment growth, total nonbonus wage growth is projected to fall to 4.2 percent for 2019, following growth of 4.9 percent for 2018.

Average Wages and Inflation

Average wages are estimated to increase 2.5 percent for 2018, following 4.0 percent growth in 2017; growth of 2.4 percent is projected for 2019. This pattern is consistent with the strategic shifting of income and one-time bonus payments described above. The Budget Division projects 2.1 percent growth in the composite CPI for New York in 2019, following the same growth for 2018. Projected 2019 inflation for New York is slightly lower than that for the nation, which is consistent with the trend in recent years.

Nonwage Income

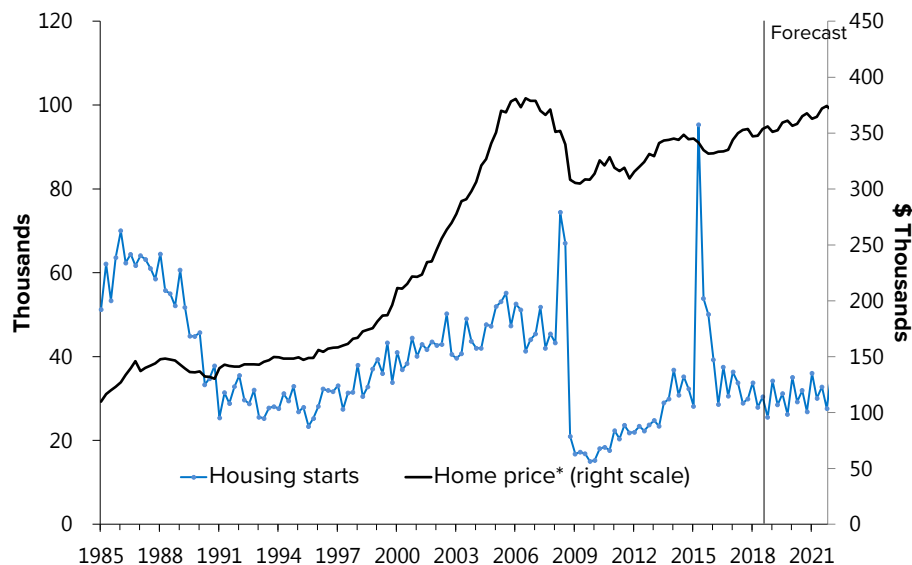
Growth in the nonwage components of State personal income is projected to decelerate from 5.3 percent in 2018 to 4.5 percent in 2019. This decrease is in large part due to a deceleration in property income growth from 5.3 percent in 2018 to 4.0 percent in 2019. Property income, one of the largest components of nonwage income at the State level, comprises interest, dividend, and rental income. Dividend income, the largest subcomponent based on State income tax return data, is expected to decelerate for both the State and the nation, consistent with the projected decline in equity prices and weaker U.S. corporate profits. Interest income, the second largest subcomponent, is also expected to decelerate in 2019 due to interest rates rising at slower pace as the Federal Reserve takes a pause on its path toward interest rate normalization, as well as slower economic growth.

Proprietors' income is expected to accelerate from growth of 4.7 percent in 2018 to 5.2 percent growth this year due to tariff-related subsidies to farmers. The disbursement of subsidies in October 2018 was part of the Trump administration's efforts to assist farmers damaged by the retaliatory tariffs placed by China on U.S. agricultural products. A continuation of these payments is expected to lift farmer's proprietors' income further in the coming months. The employee contribution to Social Security is expected to rise 4.3 percent in 2019, following 5.4 percent growth for 2018. Transfer income is expected to grow 4.9 percent in 2019, following growth of 5.4 percent in 2018.

The Housing Market Outlook

The year-over-year declines in New York State housing starts that persisted through 2017 only intensified in 2018. The uncertainty surrounding the future of the 421-a property tax exemption program for new developments engendered a flurry of activity starting in 2015, resulting in a surge of building permit applications and starts in the spring of that year.⁴⁴ This surge was followed by a “payback” period that encompassed much of 2016. The 421-a program has since evolved into the Affordable New York program, but housing starts have yet to fully rebound. Figure 48 displays these trends, as well as the Budget Division forecast for both housing starts and average existing home prices for New York. Indeed, State housing starts fell in 2017 by 5.2 percent, though much less so than the 40.2 percent decline in 2016. Permits were down 8.7 percent based on data for the first 10 months of 2018, while housing starts fell 13.4 percent. Housing starts are expected to finish the fourth quarter of 2018 with a decrease of 14.7 percent on a year-ago basis, resulting in an annual decline of 8.7 percent. Starts are expected to rise 2.1 percent in 2019, followed by continued growth of 2.5 percent in 2020 as higher employment and wages facilitate modest increases in the demand for new homes.

Figure 48
NYS Housing Market Outlook

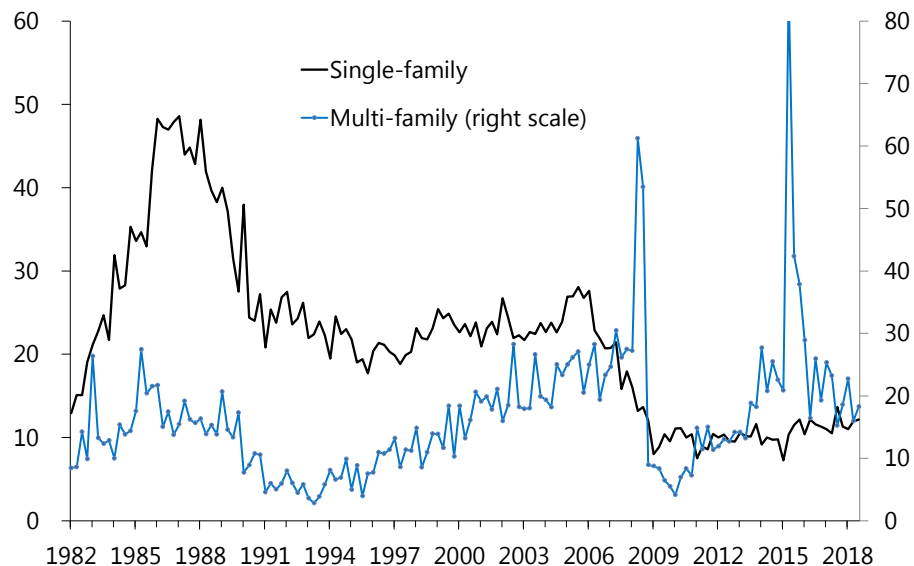


*Average existing single family home price.
Source: Moody's Analytics.

⁴⁴ This is not the first time that a legal or regulatory change has had an outsized effect on construction spending. A change in New York City building codes took effect on July 1, 2008 requiring developers to add features such as sprinklers, smoke detectors, fire-resistant stairways, and on-site safety managers or coordinators for buildings larger than 10 stories. The change produced a rush to obtain building permits and start work in June of that year, and resulted in growth of 11.2 percent multi-family starts in 2008.

The weak performance of housing starts in 2017 came from a steeper decline in multifamily unit starts, which saw a decrease of 9.0 percent, compared to a 2.4 percent increase in single-family starts (see Figure 49). In 2018, multi-family units continued to fall, posting a decline of 19.7 percent on an annual basis based on the first 10 months of data. Single-family homes experienced a 1.9 percent decrease in starts through October 2018, the first time this indicator has posted a decline on an annual basis since 2014.

Figure 49
Recent Trends in NYS Housing Starts
Thousands of units



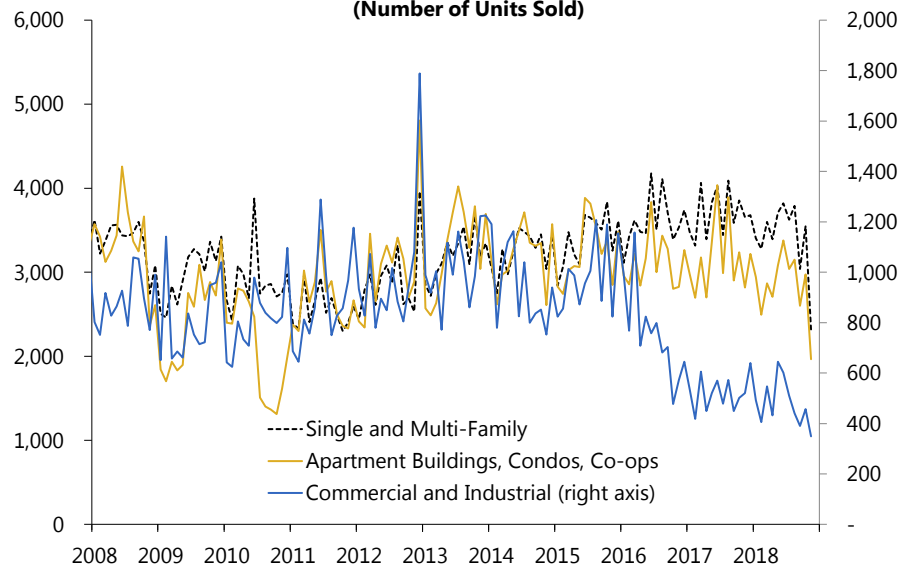
Source: Moody's Analytics.

Prospects for the State's residential housing market also depend on the outlook for prices. Growth in New York State's average single-family home price is expected to increase only 0.3 percent in 2018, following an increase of 4.9 percent in 2017, and a decrease of 1.4 percent in 2016. The TCJA is arguably presenting a significant source of downside risk to the State's housing market, particularly for home prices. Prospective new homebuyers are grappling with the reduced tax benefits of owning a home, including the loss of state and local tax deductibility above the first \$10,000, and a more limited deduction for mortgage interest costs. Consequently, the market could settle at prices that are below what they otherwise would have been in the absence of the new federal tax law. The State's average single-family home price is projected to rise 1.4 percent in 2019.

New York City's housing market plays an outsized role in the State's market as a whole. Figure 50 shows the monthly unit sales since January 2008. Properties in New York City are classified into four tax classes. Class 1 comprises single family homes, multi-family homes with up to three units, and most condominium buildings less than four stories; class 2 is made up of the remaining residential properties, notably apartment buildings, condos, and co-ops; class 3 contains most utility properties, a markedly small segment; and class 4 encompasses all commercial and industrial

properties.⁴⁵ Since the beginning of the most recent economic expansion, residential properties in this sub-market have been relatively cyclically stable. However, there were significant decreases across all sectors in 2018. The number of class 1 closed sales decreased 7.9 percent in 2018, based on the first 11 months of data compared to the same period in 2017. This follows 3.1 percent growth in 2017. Tax class 2 closed sales decreased by 10.3 percent through the first 11 months, following a 1.6 percent increase in 2017. Both sectors saw significant declines in November: 36.8 percent compared to the same month in 2017 for tax class 1, and 30.3 percent for tax class 2. These trends can be distinctly seen in all series in Figure 50. In contrast, average sales prices grew moderately on both an annual and monthly basis for the two tax classes. Median sales prices for tax class 1 also increased by 14.4 percent in the first 11 months of 2018, while tax class 2 saw a 3.9 percent annual decline. Tax class 4 has been on a steady decline since April 2016, with only four months of growth since then.

Figure 50
NYC Real Estate Trends
(Number of Units Sold)



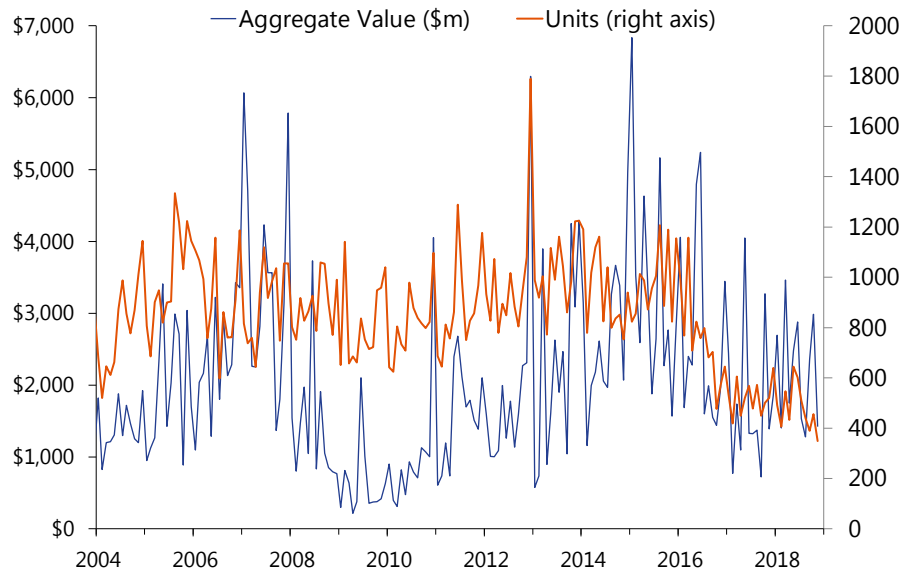
Note: Single and Multi-Family series includes multi-family homes with up to three units and most condos less than four stories.
Source: NYC Department of Finance.

Breaking down the market by borough, Staten Island experienced the biggest decline through the first 11 months of 2018, with a 15.8 percent decline in units sold, followed by Manhattan with an 11.1 percent decline. Queens and Brooklyn experienced declines of 8.0 and 7.3 percent, respectively, while the Bronx experienced the smallest decline of 2.5 percent. Luxury properties have not been exempt from the downturn either. Properties of any class with a sale price above \$10 million experienced a decline of 18.8 percent in 2017 through November, improving to only a 1.8 percent decline in 2018.

⁴⁵ <http://www1.nyc.gov/site/finance/taxes/definitions-of-property-assessment-terms.page>

Focusing on New York City's commercial sector, Figure 51 shows the number of units sold and the aggregate sales volume of conveyances through November 2018. Through November, total units sold declined 20.5 percent in 2016, declined 33.5 percent in 2017, and declined another 6.1 percent in 2018. Three consecutive declines have not been experienced since 2010. In contrast, average sales prices increased in 2018 by 33.5 percent, following a decline of 0.2 percent in 2017 and 3.2 percent in 2016. Decreases in both series indicate a continued softening in the New York City real estate market.

Figure 51
NYC Commercial Sales



Source: NYC Department of Finance data.

Manhattan's condo and co-op market is a unique niche with a global reach. Unfortunately, almost all areas of the market showed declines for the majority of 2018. The fourth quarter represented the fifth consecutive year-ago quarterly sales decline, falling 3.3 percent from 2017Q4 and 18.6 percent from the previous quarter (2018Q3). The first three quarters of 2018 saw year-ago declines of greater magnitudes: 24.6 percent, 16.6 percent, and 11.3 percent respectively.⁴⁶ Higher mortgage rates, challenged affordability, and a sustained uncertainty about the impact of the new federal tax law are likely the most important factors depressing sales. The \$10,000 cap on state and local tax deductions, i.e., the SALT cap, created under the TCJA has appears to be giving pause to potential homebuyers. Sales are taking 15 percent longer to close than a year ago, while the discount rate – the difference between listing prices and sales prices at the date of sale – has also increased, displaying the seller's increased attempt to meet the buyer on home price. The median sales price for the fourth quarter was \$999,000, down 5.8 percent from the previous year's final quarter and the first time the price has dipped below the \$1 million-dollar threshold in three years. The last quarter of 2018 showed a turnaround for average sales prices; a 3.5 percent increase from 2017Q4

⁴⁶ See < https://www.millersamuel.com/files/2019/01/Manhattan-4Q_2018.pdf >, viewed January 3, 2019.

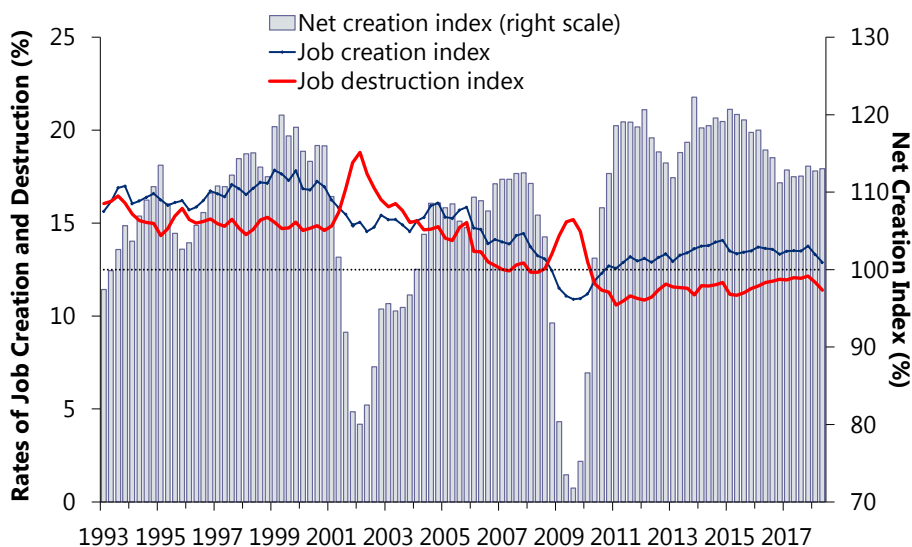
to \$1,963,938 was observed. Unfortunately, this increase could not offset the three consecutive declines prior, causing the year-to-date average sale price to fall 3.4 percent from 2017. The luxury segment, representing the top 10 percent of sales, showed price gains in 2018 mainly due to an increase in the average size of the properties sold. The average square footage of luxury resales was up 3.6 percent from 2017Q4; luxury resales totaled nearly two times the number of luxury new development sales in the final quarter of 2018.

New York State Labor Market Dynamics

Between 1993 and 2018, New York State’s private sector labor market weathered two devastating recessions, the first (2001-03) was amplified by the September 11 terrorist attack, while the second (2008-09) originated in one of the State’s critical leading sector, the financial sector. An analysis of labor market dynamics helps to illuminate the underlying economic conditions that can signal how well the State economy will be able to recover from the next downturn (see Figure 52). However, Figure 52 also indicates that the 2001-03 recession left a lasting impact on the State’s private sector job market, leaving the gross rates of both job creation and job destruction on a downward path, signaling a secular loss of dynamism that characterizes labor dynamics at the national level as well. Although some of New York’s loss has been regained during the current expansion, the State has still not returned to the more robust conditions of the 1990s.

Figure 52

NYS Private Sector Employment Dynamics



Source: NYS Department of Labor; DOB staff estimates.

During the Great Recession, the gross rate of job destruction jumped while the rate of job creation, which had already been on a downward path, began to fall more steeply. The third quarter of 2009 marked the peak in the rate of job destruction and the trough in the rate of job creation, resulting in the lowest values for the net jobs creation index since 1993. Beginning with the second quarter of

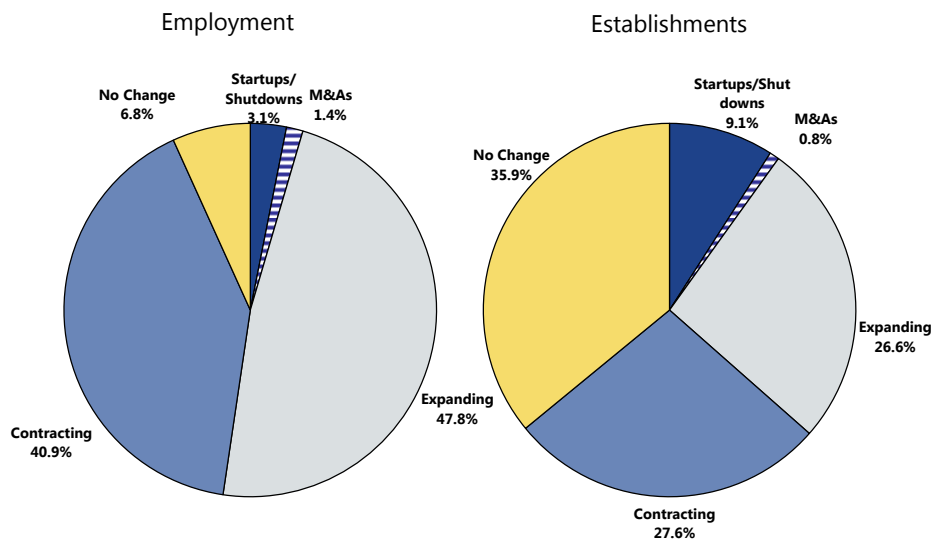
2010, the rate of job creation began to exceed the rate of job destruction, and has done so for 33 consecutive quarters. Nevertheless, the net job creation index appears to have posted a peak in early 2015 and has been slowing down since then. The underlying net job creation rate of 1.5 percent in the second quarter of 2018 is consistent with the Budget Division's 1.4 percent estimate for private sector job growth for all of 2018. As we enter 2019, the Budget Division is projecting a slower growth of 1.2 percent for 2019.

The State's Employment and Establishment Base

Figure 53 shows the composition of the State's employment and establishment base for the second quarter of 2018 by type of establishment. Startups and shutdowns accounted for 9.1 percent of the establishment base in 2018Q2. Because these firms tend to be quite small, averaging only about five employees per firm, they accounted for only 3.1 percent of the State's private sector employment base. Firms that were either acquired or absorbed by other firms accounted for 0.8 percent of the establishment base. The average size of these firms was about 22 employees, and these firms accounted for 1.4 percent of employment.

Existing firms are classified according to whether their employment levels (a) expanded, (b) contracted, or (c) experienced no change relative to the same quarter of the prior year. Existing firms represent an overwhelming share of both establishments and employment: 90.1 percent of the State's establishment base and 95.4 percent of the job base. As indicated in the right-hand panel of Figure 53, the three types of existing firms accounted for somewhat similar shares of establishments: 26.6 percent were expanding, 27.6 percent were contracting and 35.9 percent had no change. The employment shares, however, were quite different with 47.8 percent of employment in expanding firms, 40.9 percent in contracting firms and 6.8 percent in firms with no change. That the job share of expanding firms is significantly higher than that of contracting firms is consistent with the healthy rate of net job creation for the quarter. The average size of existing firms also varies by firm type, with those firms experiencing no change in employment averaging fewer than three employees, expanding firms averaging 23 employees, and contracting firms averaging 19.

Figure 53
Composition of State's Employment and Establishment Base
2018Q2



Source: NYS Department of Labor; DOB staff estimates.

Box 3

ANALYZING PRIVATE SECTOR EMPLOYMENT DYNAMICS AT THE ESTABLISHMENT LEVEL

The expansion or contraction of an industry over time is usually measured by the net change or net growth in jobs. However, a look beneath the net numbers into the mechanics of job creation and destruction at the establishment level facilitates a deeper understanding of the underlying dynamics.¹ During times when State employment is growing slowly, or even falling, an examination of the underlying dynamics reveals an extremely active labor market – even in the worst of times, new firms are created and existing firms add jobs. For example, though private sector employment fell 3.3 percent in 2009, about 23 percent of the State’s business establishments created jobs. The data for this study derives from the Quarterly Census of Employment and Wages (QCEW) program.² These data include all establishments subject to Federal unemployment insurance laws and cover approximately 98 percent of all employment. For the second quarter of 2018, the most recent period for which data are available, the QCEW data covered 626,630 private sector establishments in New York State and 7,995,932 private sector employees.

Establishment-level data facilitate the investigation of questions that cannot be addressed at the aggregate level. Such questions include whether the primary source of job creation is new firm startups or existing firms that have chosen to expand, or whether net employment growth is the result of an increase in the rate of job creation or a decrease in the rate of job destruction. Two industries may exhibit the same net change in employment but one may have a high job turnover rate, resulting from high gross rates of gains and losses, while the other may have a low turnover rate. Previous studies have found that an increase in the turnover rate tends to be associated with an increase in net growth.³ Hence, the underlying dynamics may give clues as to the near-term direction of the business cycle, and an industry that suddenly starts to experience an increase in firm startups or gross job creation may turn out to be a leading industry in the economy’s next growth phase. Moreover, one can also determine whether new jobs are being created in relatively high-wage or low-wage industries.

Because QCEW data are not seasonally adjusted, comparisons over time should be restricted to the same quarter of various years. We therefore analyze job growth relative to the same quarter of the previous year. Comparability across time also requires normalizing by a common base. Because the jobs that were eliminated between the two quarters are no longer in the 2018 job count, we follow BLS and define the base as the average of the two quarters.

The gross number of jobs created between the second quarter of 2017 and the second quarter of 2018 is constructed by adding together the number of jobs created by firm startups (firms which existed during the second quarter of 2018 but did not exist four quarters prior), expanding firms that existed in both quarters, and firms created through mergers and acquisitions. Between the second quarter of 2017 and the second quarter of 2018, a total of 1,025,934 jobs were created from these three sources. Performing this calculation for the second quarter of 2018 produces the following:

$$\text{Gross rate of job gain} = \frac{\text{Startup gain} + \text{Existing firm gain} + \text{M\&A gain}}{\text{Base}} = \frac{1,025,934}{7,963,282} = 12.9\%$$

(continued on next page)

¹ For a similar analysis for the U.S., see U.S. Bureau of Labor Statistics (BLS), “Business Employment Dynamics: First Quarter 2018,” <<http://www.bls.gov/news.release/pdf/cewbd.pdf>>.

² For a detailed description of DOB’s use of QCEW data, see Box 2 on page 93.

³ See R. Jason Faberman, “Job Flows and Labor Dynamics in the U.S. Rust Belt.” *Monthly Labor Review*, September 2002, Vol. 125, No. 9, pages 3-10.

(continued from previous page)

This result indicates that the State’s gross rate of job creation for the second quarter of 2018 is 12.9 percent. An analysis of job creation at the establishment level also confirms the conventional wisdom that small firms are the State economy’s primary growth engine. For example, of the more than one million gross number of jobs created during the second quarter of 2018, 51.3 percent were created by firms with fewer than 50 employees. Another 24.5 percent were created by medium sized firms of between 50 and 250 workers, and the remaining 24.2 percent by large firms with workforces exceeding 250.

We similarly construct a gross rate of job destruction by adding together employment at firms that existed in the second quarter of 2017 but not in the second quarter of 2018, jobs lost from contracting firms that existed in both quarters, and jobs lost due to a merger or acquisition. We then divide by the State’s job base (as defined above), which for the second quarter of 2018 yields:

$$\text{Gross rate of job loss} = \frac{\text{Startup loss} + \text{Existing firm loss} + \text{M\&A loss}}{\text{Base}} = \frac{907,667}{7,963,282} = 11.4\%$$

This result states that the gross rate at which jobs were lost between the two quarters is 11.4 percent. Thus, for the second quarter of 2018, the gross rate of job creation exceeded the gross rate of job destruction. A net index of job creation is constructed by dividing the gross rate of job gains by the gross rate of job losses. For the second quarter of 2018, this calculation yields:

$$\text{Net index of job creation} = \frac{\text{Gross rate of job gain}}{\text{Gross rate of job loss}} = \frac{12.9\%}{11.4\%} = 113.0\%$$

A net index value of exactly 100 percent implies that the gross number of jobs created is entirely offset by the number of jobs destroyed; a value above 100 percent, as we see above, indicates that employment is growing; a value below 100 percent indicates a net job loss, implying the presence of a “job gap.”

As illustrated in the table below, two industries can have similar values for the net index but have very different underlying dynamics. For example, for the second quarter of 2018, the Finance & Insurance sector and the Leisure, Hospitality & Other Services sector had similar net indices of job creation of 105.3 percent and 107.5 percent, respectively. However the Leisure, Hospitality & Other Services sector has a much higher turnover rate than the Finance & Insurance sector. Understanding these differences has implications for fine-tuning the Budget Division employment forecast.

Employment Dynamics Comparison: 2018Q2

Sector (NAICS code)	Gross rate of job creation	Gross rate of job destruction	Net index of job creation
Finance & Insurance (52)	11.2%	10.6%	105.3%
Leisure, Hospitality & Other Services (71,72,81)	15.2%	14.1%	107.5%

Manufacturing

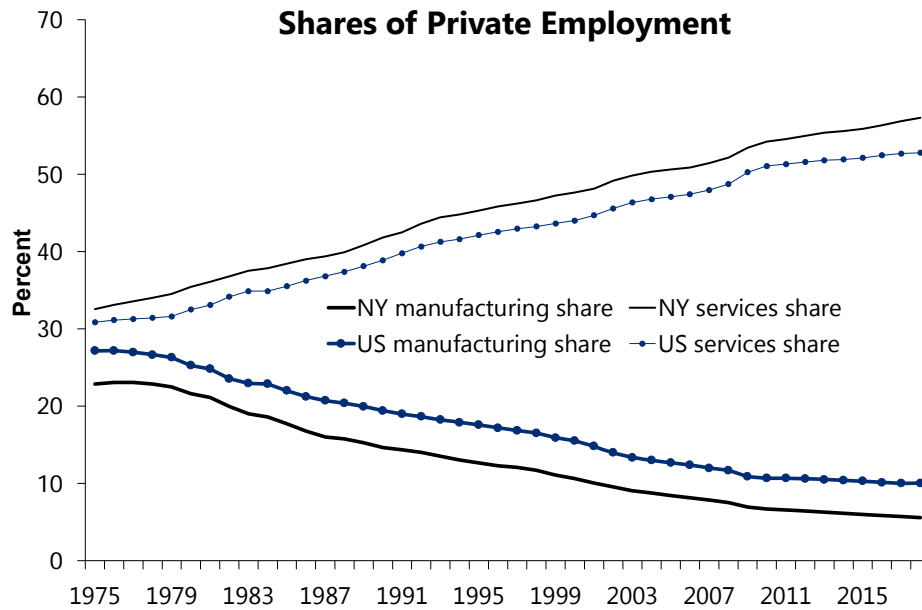
The State has been losing manufacturing jobs for nearly 30 years and now employs fewer workers in manufacturing than in health care and social assistance services; leisure, hospitality and other services; retail trade; professional, scientific, and technical services; management, administrative, and support services; and finance and insurance.⁴⁷ Nevertheless, the manufacturing sector is important in Upstate, where it still accounts for a significant share of private employment.

New York's comparative advantage has shifted away from manufacturing jobs toward jobs in services (see Figure 54). Competitive pressures arising from increased globalization have resulted in the decline of State manufacturing employment since the mid-1970s, with the rate of job loss accelerating during recessions. Although the declines had slowed for a few years and manufacturing actually experienced a small net employment gains during 2015, the declines resumed in 2016 and continued into 2018. The Budget Division's forecast calls for continued small decreases in the manufacturing sector in 2019.

Figure 55 suggests that the decline in demand for the State's exports that resulted from the recent global and national slowdown likely resulted in less demand for New York State manufacturing workers. Figure 56 indicates that the demand for State exports is also sensitive to the value of the U.S. dollar. Despite a recent comeback of the nation's auto industry, the State's manufacturing sector continues to struggle. Trade wars started in 2018 made the global stock markets tumble. As it escalates, a trade war reduces international trade. In the long run, a trade war costs jobs. It depresses economic growth for all countries involved.

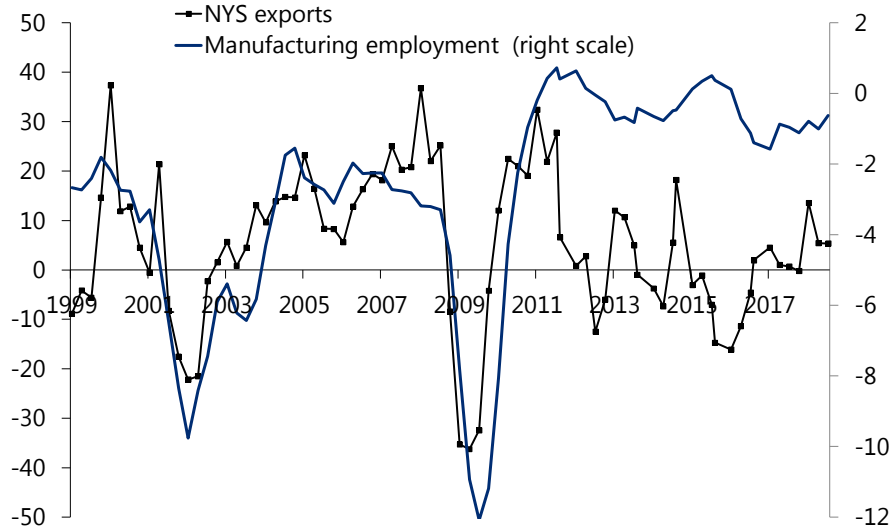
⁴⁷ The Budget Division combines manufacturing and mining for forecasting purposes. As of the second quarter of 2018, mining accounted for less than 1 percent of total employment in this category and will be ignored for the remainder of the discussion.

Figure 54
Manufacturing and Service Sector
Shares of Private Employment



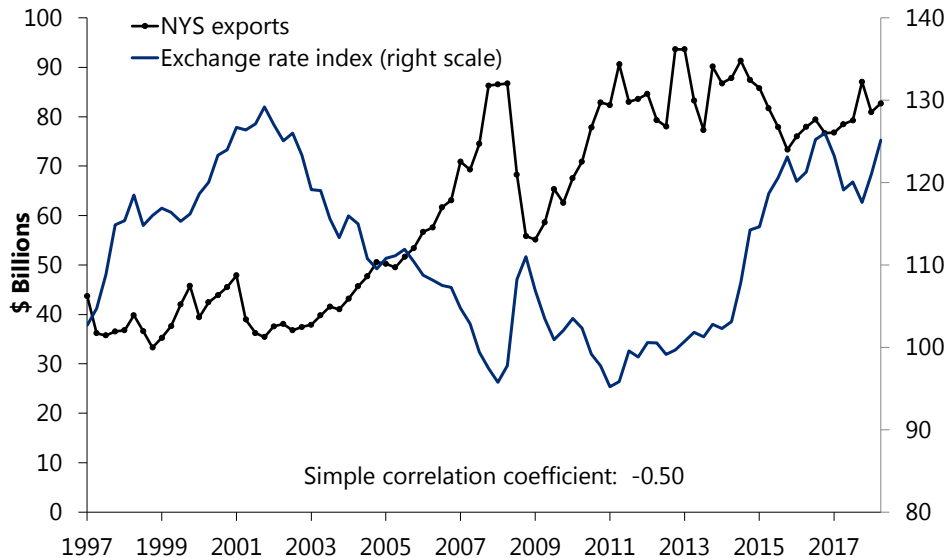
Source: Moody's Analytics; NYS Department of Labor.

Figure 55
NY State Exports and Manufacturing Employment
Year-ago percent change



Note: The two series have a simple correlation coefficient of 0.40.
Source: Moody's Analytics.

Figure 56
U.S. Dollar Exchange Rate and NYS Commodity Exports

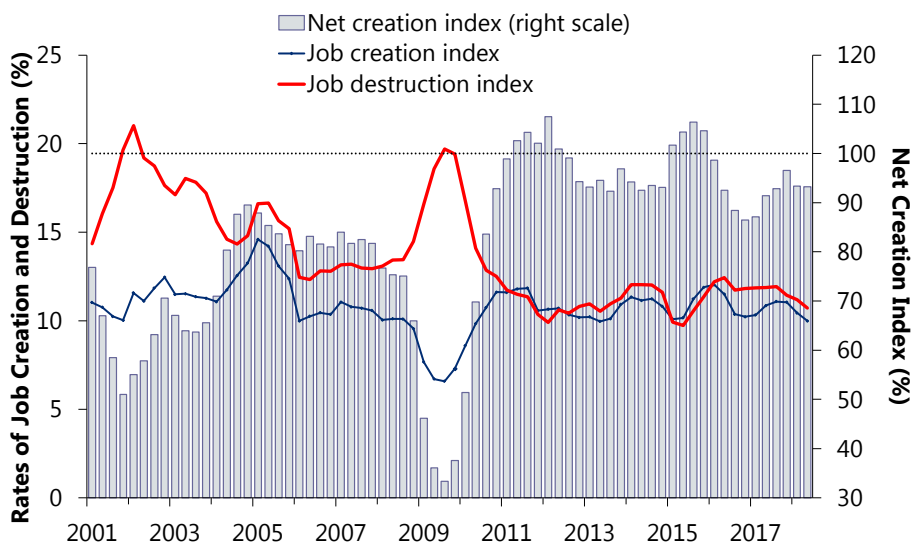


Source: Moody's Analytics

In the wake of the 2001-03 State recession, job creation began to rise and job destruction continued to fall, leading to a net index of job creation of almost 90 percent by the end of 2004 (see Figure

57). The net index dropped back down to about 82 percent by the second quarter of 2007, consistent with the slowdown in manufacturing nationwide, in advance of the “official” start of the national recession in December 2007. Those losses accelerated starting in 2008 due to an increasing rate of job destruction and a falling job creation rate. Losses continued in 2009, as net creation index reached just 33 percent by the third quarter of 2009, resulting in a decline of 10.9 percent for the year, the largest in the history of the series. After a brief rebound, sector employment fell in four of the next five years. A 0.6 percent drop in manufacturing jobs is currently estimated for 2018, a loss of about 2,590 jobs. With the slowdown in global and national economic growth, this sector is projected to continue to lose jobs; a decline of 0.1 percent is projected for 2019, a loss of about 410 jobs. Sector employment remains 60 percent below its 1984 level of about 1.2 million workers.

Figure 57
Manufacturing



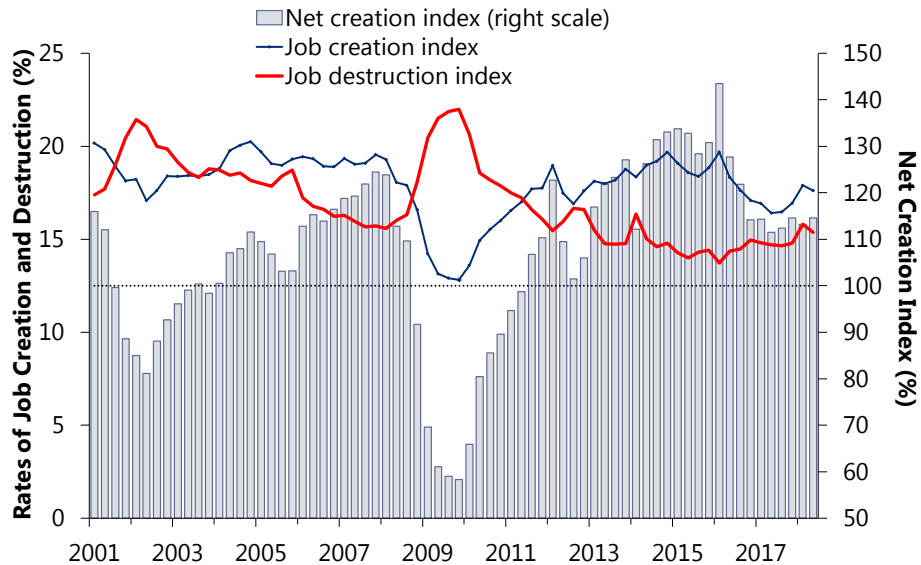
Note: DOB combines manufacturing and mining for forecasting purposes.
Source: NYS Department of Labor; DOB staff estimates.

Construction and Real Estate

Despite the fact that New York’s residential housing market experienced less of a bubble than the rest of the nation, residential housing took a hit during the Great Recession. Commercial real estate also took a beating in the last recession, making the construction sector the second hardest hit during the downturn after manufacturing. Unlike manufacturing, however, construction has staged a solid comeback, with more than 4 percent consecutive annual increases from 2013 to 2016. The growth in the sector has been slowing down since 2017. The Budget Division is expecting an increase of 2.6 percent in 2018 and projects an increase of 1.2 percent in 2019. Meanwhile, employment in the real estate, and rental and leasing sector is projected to increase 0.8 percent in 2019 after an increase of 0.7 percent in 2018.

The underlying labor market dynamics illustrate the sector’s recent slowing down. The net employment creation index moved to its highest level of the past 32 years during the first quarter in 2016 but has started to tail off since then (see Figure 58). In 2018, both the rate of job destruction and the rate of job creation started to fall after the short upward trend in the prior year.

Figure 58
Construction & Real Estate

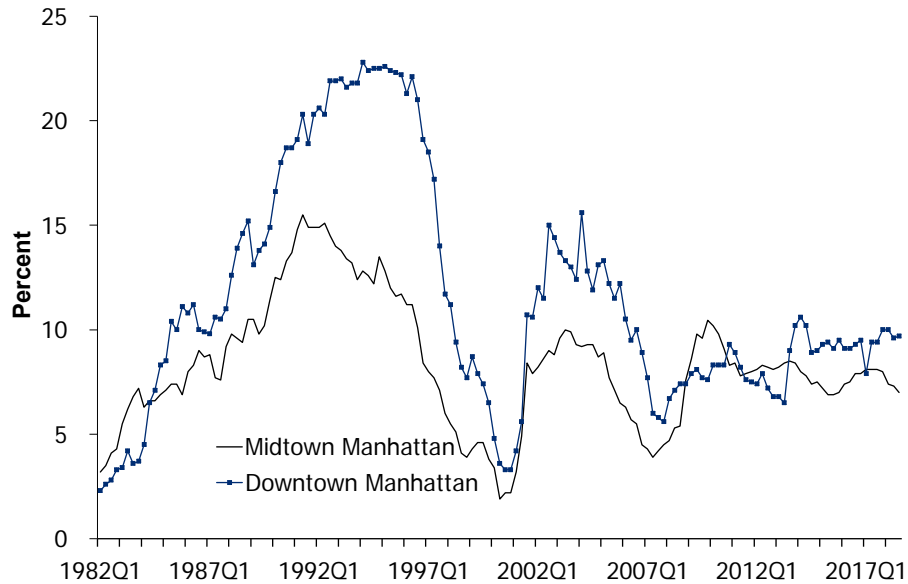


Source: NYS Department of Labor; DOB staff estimates.

The credit crisis started just as new office space was coming online, resulting in increased office vacancy rates. For example, office vacancy rates for both downtown and midtown Manhattan turned upward starting in the first quarter of 2008, though they were still well below national office vacancy rates (see Figure 59). After increasing at the end of 2009 and 2010, Manhattan office vacancy rates started to decrease in 2011. After a short increase in 2013, Manhattan office vacancy rates started to come down again.

The construction employment growth in the past few years has been supported by activities already in the pipeline, such as the ongoing reconstruction of the World Trade Center, a multi-year subway project, and the rebuilding after Superstorm Sandy. Projects financed by the waning American Recovery and Reconstruction Act may have helped reduce net job losses. The slowdown in the construction sector coincided with the completion of some these projects. Figure 59 indicates that office vacancy rates may be leveling off.

Figure 59
Office Vacancy Rates



Source: Moody's Analytics; CBRE.

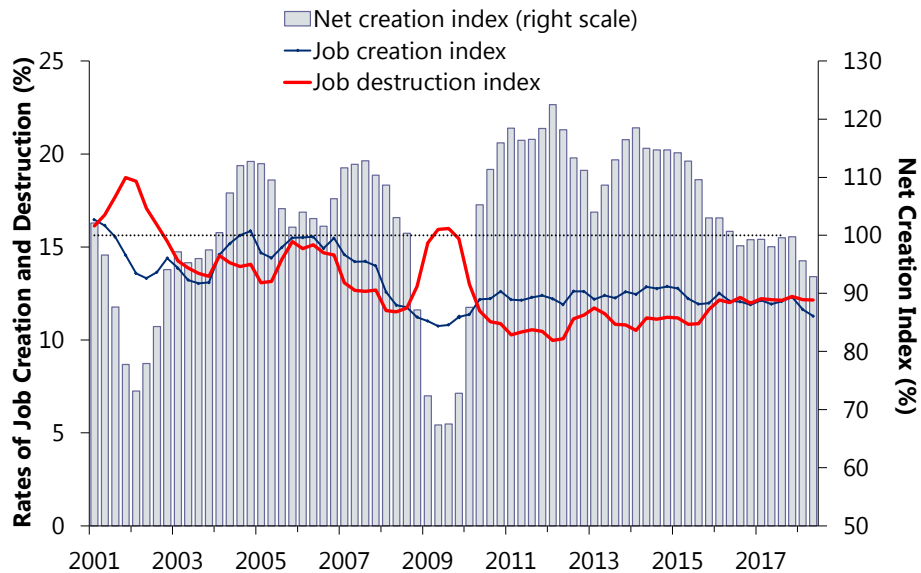
Regional data indicate that housing sector growth has positively impacted construction employment in most of the State's regions, with these regions reporting higher employment in the first half of 2018 compared to the same period in 2017. The greatest construction employment increases occurred in the North Country (9.6 percent), Central New York (4.9 percent), New York City (2.7 percent), and Long Island (2.2 percent).

Job and real estate prospects are soaring with Amazon's plan to establish a new headquarters (the so-called "HQ2") in New York City's Long Island City section. Google is also planning to expand its operations in New York City. The impact of these two tech giants' plans will be unfolding in the coming years.

Trade, Transportation, and Warehousing

The Budget Division projects this sector will gain about 5,320 jobs in 2019, for an increase of 0.4 percent, after a 0.4 percent decrease in 2018. The retail trade, wholesale trade, and transportation and warehousing segments are among the more cyclically sensitive industrial sectors, and were hit hard by recessions. As Figure 60 shows, this sector experienced large “job gaps” in both State recessions of 2001-03 and 2008-09. In the more recent recession, the sector lost jobs for six consecutive quarters, from the fourth quarter of 2008 through the first quarter of 2010. Although the gross job destruction rate took a huge dive during the first quarter of 2010, the net index turned positive in the following quarter. Growth did pick up over the course of 2010, and continued in the following years, with the net creation index reaching a historic high during the first quarter of 2012. Steady growth of more than 1 percent in employment was observed for five consecutive years from 2011 through 2015. Growth in this sector started to decelerate in 2016 and even went into the negative zone starting in 2017. For 2019, however, the Budget Division projects flat growth for wholesale trade, 0.2 percent growth for retail trade, and 1.3 percent growth for transportation and warehousing.

Figure 60
Trade, Transportation, and Warehousing



Source: NYS Department of Labor; DOB staff estimates.

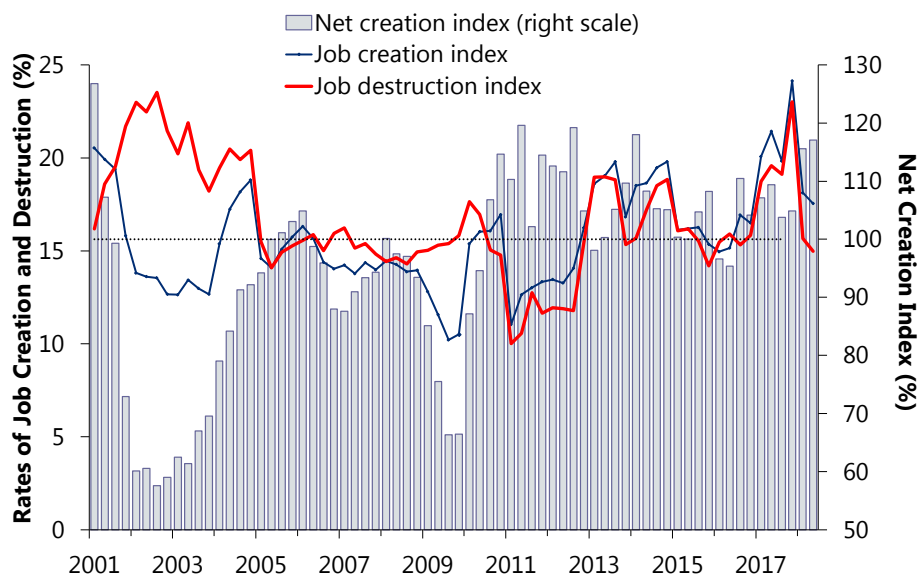
Information (Media and Communications)

The information sector, which includes publishing, motion pictures, broadcasting, and telecommunications, is the most regionally concentrated industrial sector with more than 70 percent of State employment located in New York City. The information sector is estimated to have gained

about 5,800 jobs in 2018, after experiencing an impressive increase in 2017. The gains in employment appear to be related to the penetration of the New York City market by the social media industry and are not expected to be repeated at that scale going forward. Job gains of 1,330, or 0.5 percent, are expected in 2019.

The information sector was among the hardest hit in the State during the 2001-03 recession and was extremely negatively affected by the collapse of the internet/high-tech bubble. Employment in the sector, which reached its most recent peak in 2001, has to-date failed to recover to that level, and had been trending downward even before the 2008-2009 State recession hit. After the recession, the employment in this sector has been growing slowly but steadily. In addition, this sector was once one of the most dynamic sectors in the State, exhibiting gross rates of job creation and destruction generally well above statewide averages (see Figure 61).

Figure 61
Information

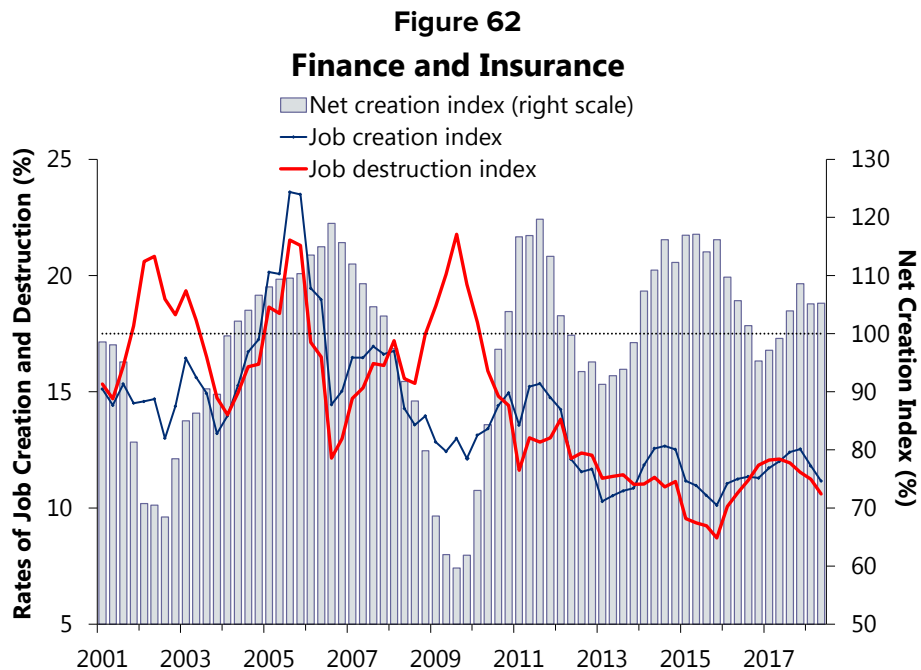


Source: NYS Department of Labor; DOB staff estimates.

Finance and Insurance

The finance and insurance sector, one of the State’s leading sectors, has been showing slow growth in recent years, with occasional slips back to the negative territory. As has been the case in the past, it could take many years before Wall Street fully recovers from one of the most cataclysmic periods in its history. For example, after the stock market crash of 1987 and the national recession of 1990-91, it took ten years for the securities industry to recover its previous employment peak; this time it could take longer. The Budget Division does not project that the finance and insurance sector will reach its pre-recession 2007Q3 peak of 547,000 jobs before the end of the forecast horizon in 2025.

During the middle of the past decade, the finance and insurance sector had been a bright spot for the State’s economy (see Figure 62). The jobs lost during the 2001-03 recession lowered industry compensation costs and helped Wall Street firms to increase profits significantly by 2003. After three years of job losses, strong revenue and profit performances resulted in the sector’s net job creation index rising above 100 in 2004; it remained there through 2007. During these years, employees received record salaries and bonuses, supporting strong growth in State personal income tax revenues. In addition, both job creation and job destruction rates climbed to about 20 percent in 2005, proving this sector to be one of the State’s most dynamic. Between the middle of 2005 and the end of 2007 the rates of job creation and destruction moved in parallel, with the latter remaining above the former, implying net job growth.



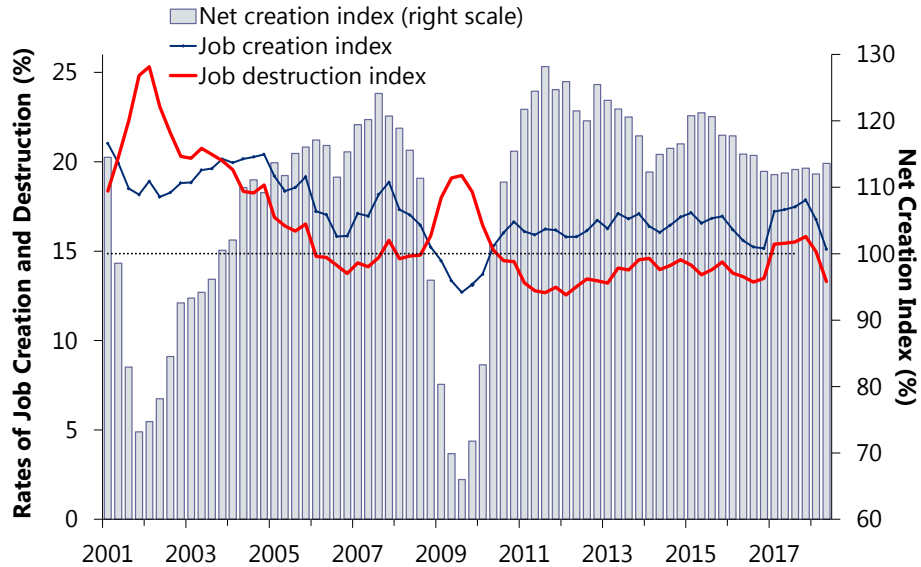
Source: NYS Department of Labor; DOB staff estimates.

With the start of the credit crisis that began during the summer of 2007, the finance and insurance sector's rate of job creation began to fall, with the net creation index falling below 100 by the first quarter of 2008. The sector's rate of job destruction took a sharp upward turn in the fourth quarter of that year, coinciding with the shock to the global financial sector generated by the fall of Lehman Brothers. The sector lost 9,500 jobs in 2008, and a record 38,300 jobs were lost in 2009. During this period, the sector was facing the most severe downturn since the Great Depression. However, the job destruction index started to decline at the end of 2009 and continued to do so until the second quarter of 2011. On the other hand, the job creation index started to increase during 2010, with the net index turning positive at the end of that year. Job losses faded to 9,200 during 2010. While the new recruitment efforts of 2011 kept the net index positive, it turned negative in 2012 and 2013. The net index came back to positive territory in 2014. The momentum continued in 2015, but slowed down in 2016 and 2017. The financial markets experienced a volatile 2018 and tumbled in fear of a trade war between the world's three largest economies. The Budget Division is estimating a job gain of about 2,700, or a 0.5 percent increase for 2018, while job gains of 1,810, or 0.4 percent are projected for 2019. Growth is expected to slow even further in the out-years.

Professional and Business Services

This sector includes two groups of industries: the professional, scientific, and technical services sector (PST), which encompasses legal, accounting, architectural, engineering, advertising, and technical services; and the management, administrative, and other business support services group. After the significant gain of 1.6 percent in 2017, the Budget Division estimates that the PST subsector saw an unusually low growth of 0.5 percent, or 3,410 jobs, in 2018, to be followed by a higher gain of 1.0 percent, or 6,920 jobs, in 2019. The management, administrative, and support services sector is expected to gain 10,770 jobs, or 1.6 percent, after a gain of 18,840 jobs, or 2.9 percent growth in 2018. This sector includes temporary help services, which tends to be a leading indicator.

Figure 63
Professional and Business Services



Source: NYS Department of Labor; DOB staff estimates.

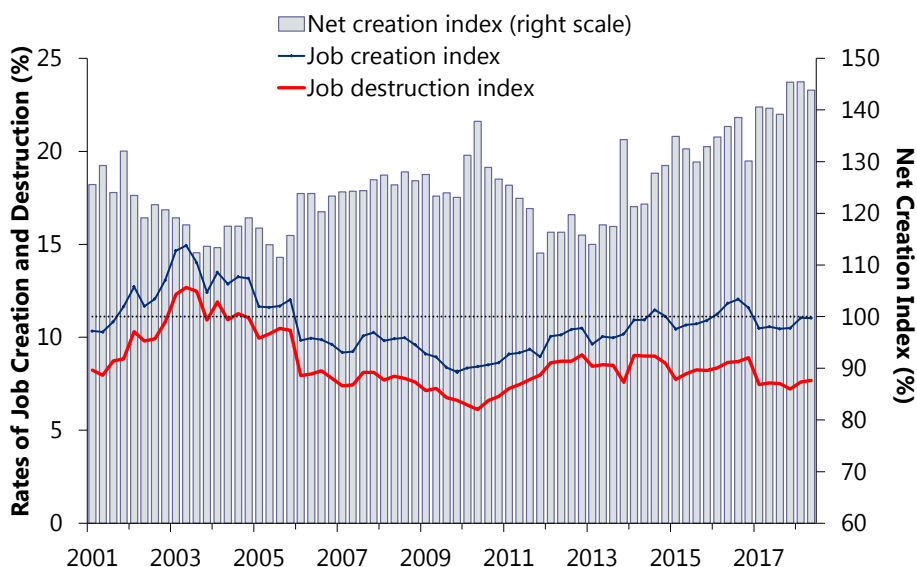
Temporary help services are one of the first employment classes to grow following a downturn, consistent with the substantial improvement in this sector coming out of recessions. Many firms hire temporary workers in the early months following a recession, being uncertain as to whether an increase in the demand for their products will be sustained. This contributes to the high job turnover rate in this sector, as well as to its cyclical sensitivity.

Meanwhile, in the PST subsector, the most recent recession led to a dramatic increase in the job destruction index, and decrease in job creation index, which in turn pushed down the net creation index down to a level even below that engendered by the 2001-03 State recession (see Figure 63). Since the second quarter of 2010, the trends in those two indexes have reversed, leading to the highest rate of net job creation since the 2007 peak by the second quarter of 2011. The State’s PST sector serves both a national and an international customer base and this sector will continue to grow, but at a slower pace.

Education and Health Care

The private education sector and healthcare and social assistance sector have exhibited consistent strength and remain the brightest spots in the employment forecast (see Figure 64). Together, these two sectors are expected to add about 49,030 new jobs in 2019, or growth of 2.6 percent.

Figure 64
Education, Health Care, and Social Assistance



Source: NYS Department of Labor; DOB staff estimates.

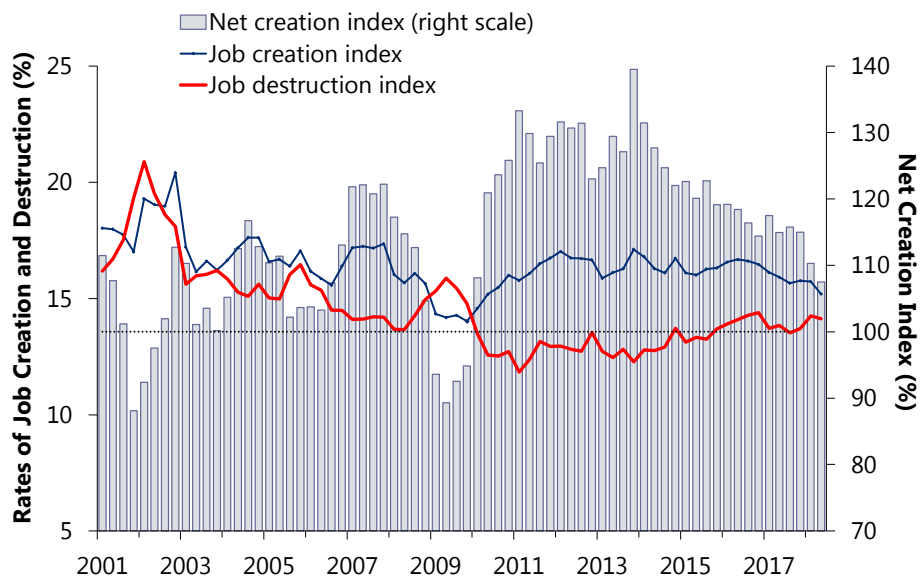
The health care industry is the larger of the two, employing an estimated total of almost 1.6 million workers in 2018. The private education sector is estimated to employ only about 354,300, as it excludes more than 600,000 workers employed at public educational institutions. Typically, neither of these sectors exhibits a significant degree of cyclical sensitivity. The demand for jobs within the health care and social assistance sector is expected to strengthen further with the aging of the State’s population going forward. Private education employment is projected to rise 2.0 percent for 2019, following estimated growth of 1.8 percent for 2018. Healthcare and social assistance employment is also projected to rise 2.7 percent in 2019, following estimated growth of 3.5 percent for 2018.

Leisure, Hospitality, and Other Services

The Budget Division expects leisure, hospitality, and other services employment to stay at the historically low growth of 1.3 percent in 2019, repeating its 2018 performance. The national and global recessions had a severe impact on this sector, particularly in the arts, entertainment, and other tourism-related industries, not unlike the impact of the September 11 attacks (see Figure 65). In that case, the gross rate of job destruction increased considerably during the fourth quarter of 2001 and the first quarter of 2002, although the sector began to bounce back soon thereafter.

During the more recent State recession, the net index started falling in the first quarter of 2008 and was below 100 by the first quarter of 2009. The sector’s rate of job destruction peaked early in the second quarter of 2009, and the sector has been improving since, experiencing net growth by the first quarter of 2010. Since then, this sector has experienced strong growth, mainly due to the improvement of the job destruction index, which led to the highest net creation index in the fourth quarter of 2013 since 2001. The sector had been growing at the pace of 3 percent or above prior to 2016. The growth in this sector started to decelerate starting in 2016. With the slowdown of global economy and rising dollar, this sector slowed even more in the first half of 2018, and the Budget Division does not expect substantial improvement in this sector next year.

Figure 65
Leisure, Hospitality, and Other Services



Source: NYS Department of Labor; DOB staff estimates.

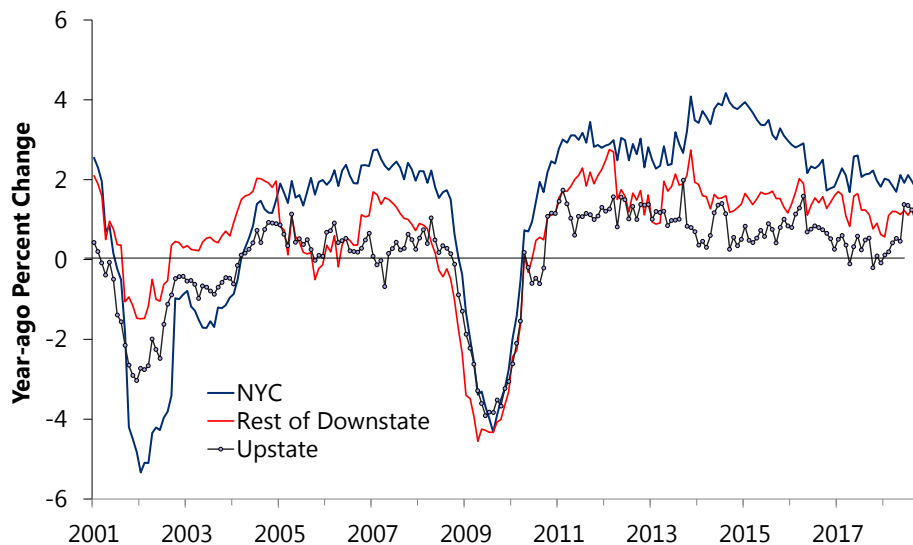
Recent Regional Job Growth Trends

Figure 66 indicates that prior to the financial crisis, employment growth was quite variable across the State’s regions. Between October 2003 and October 2008, the State’s private sector added 337,200 jobs, a 4.8 percent increase. Fully 75.8 percent of these jobs were added in New York City. The City economy, and its tourism, financial, and business services sectors in particular, serves not just a national, but a global market. Employment growth in the downstate region excluding New York City was weaker, and the growth in the upstate region was even weaker.

By the middle of 2008, the national recession and the housing market contraction began to hit New York. As shown in Figure 66, the downstate region outside of New York City was the first to be affected. But the New York City labor market took a big hit when the credit crisis intensified with the fall of Lehman Brothers in September 2008. Most of the job losses in the financial and business

services sectors were in the City. In addition, the synchronized global economic recession put significant downward pressure on the City’s tourism-related establishments, including airlines, hotels, and restaurants, resulting in severe job losses. Meanwhile, the upstate economy’s continued relative dependence on manufacturing – particularly the auto, machinery and equipment industries – meant that the weakening demand for cars and light trucks, and investment goods more generally, resulted in extensive layoffs, especially in the western part of the State.

Figure 66
NYS Private Sector Employment by Region



Source: NYS Department of Labor.

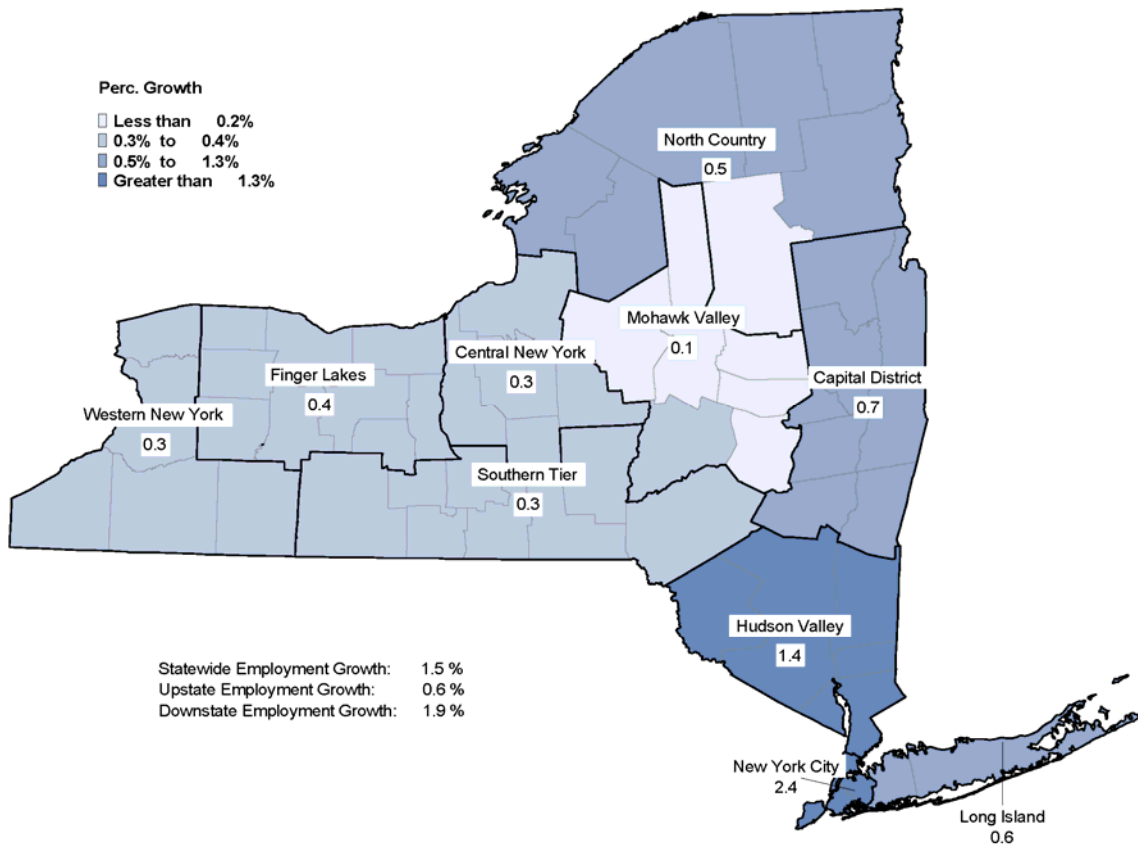
Figure 66 shows job losses turned to growth in 2010, starting in New York City and spreading to the remainder of the State later in the year, consistent with the beginning of the recovery in January 2010. Figure 66 also indicates the regional economy was impacted by the various setbacks that plagued the early phase of the U.S. recovery, including sovereign debt crisis in 2010, the U.S. debt crisis in 2011, and the intensification of the global slowdown in 2012. Both New York City and the rest of Downstate experienced job losses in November 2012 in the wake of Superstorm Sandy, though much of those losses were temporary. The job market in these areas started to pick up again in 2013, with job growth in New York City peaking in 2014. Since 2014, with the slowing of global economy and stronger dollar, New York City job gains also slowed, particularly in leisure hospitalities and other services, and the retail sales sector. Weak global economic growth led to weak demand for the State’s other goods and services as well, depressing rates of job growth upstate and in the rest of the downstate region. With the slowdown of global economy and the deceleration of national economy, weaker growth of state employment is expected across the State.

Figure 67 compares the relative performance of New York’s 10 regions between the first half of 2017 and the first half of 2018, the most recent period for which the most accurate data – Quarterly Census of Employment and Wages (QCEW) data – are available. These data indicate that job

growth over the period was broad-based. Private-sector employment for the State as a whole grew 1.5 percent, with the downstate regions showing faster growth of 1.9 percent. Meantime, the upstate region grew 0.6 percent. A more detailed analysis of regional employment trends can be found in Table 12 through Table 15 on pages 121-123.

Figure 67
Regional Employment Growth for the First Half of 2018

3



Risks to the New York Forecast

Although the State's private-sector labor market has stabilized at a healthy pace of growth, there are many risks to the forecast. All the risks to the U.S. forecast apply to the State forecast as well, although, as the nation's financial capital, both the volume of financial market activity and the volatility in equity markets pose a particularly large degree of uncertainty for New York. The uncertainty surrounding the macroeconomic outlook for the national and global economies is amplified in the financial markets, as demonstrated by the recent 19.8 percent decline in the S&P500 over a scant three months. Risks related to the impact of tariffs, the strong dollar, and weakening global growth are likely to continue to create volatility and restrain equity market growth over the near-term. Due to the disproportionate global tilt of financial markets, the State's finance sector is particularly vulnerable to these risks. Financial markets also tend to amplify the perturbations associated with shifting monetary policy, as businesses and investors adjust to interest rates that are approaching their highest levels in 10 years. Weaker and/or more volatile markets than anticipated could result in weaker bonus and wage growth, as well as lower taxable capital gains realizations than reflected in this forecast. In contrast, stronger equity markets, along with stronger national and global growth, could result in stronger employment and wage growth than is reflected in this forecast.

Table 12

NEW YORK STATE PRIVATE EMPLOYMENT BY INDUSTRY										
INDUSTRY	Employment in Thousands					Percent Change				
	2014	2015	2016	2017	2018*	2014	2015	2016	2017	2018*
Mining and Manufacturing	455.4	457.5	452.8	448.6	443.7	(0.8)	0.5	(1.0)	(0.9)	(0.7)
Construction and Real Estate	530.0	554.2	575.4	586.7	582.4	4.0	4.6	3.8	2.0	2.2
Trade, Trans., and Warehousing	1,509.5	1,526.0	1,526.5	1,525.0	1,500.1	1.7	1.1	0.0	(0.1)	(0.7)
Information	263.9	265.2	265.9	269.3	271.9	1.6	0.5	0.3	1.3	2.5
Finance and Insurance	499.6	507.1	508.6	509.9	509.5	1.3	1.5	0.3	0.3	0.6
Business and Professional Svs.	1,228.5	1,263.6	1,289.4	1,314.5	1,319.2	2.2	2.9	2.0	1.9	1.8
Education and Health Care	1,694.2	1,739.2	1,792.6	1,848.6	1,904.0	2.2	2.7	3.1	3.1	3.5
Leisure, Hospitality, and Other Svs.	1,221.4	1,256.3	1,287.0	1,315.1	1,305.4	3.5	2.9	2.4	2.2	1.3
Other **	79.0	77.7	82.7	82.0	85.4	8.4	(1.6)	6.4	(0.8)	6.8
Statewide	7,481.4	7,646.7	7,780.9	7,899.6	7,921.6	2.2	2.2	1.8	1.5	1.5

* Levels for 2018 are based on the first two quarters of the year; 2018 growth rates are relative to the same period in 2017.

** Includes agriculture, utilities, and unclassified firms.

Table 13

NEW YORK STATE PRIVATE EMPLOYMENT BY REGION										
REGION	Employment in Thousands					Percent Change				
	2014	2015	2016	2017	2018*	2014	2015	2016	2017	2018*
New York City	3,433.6	3,544.3	3,626.4	3,714.1	3,765.8	3.8	3.2	2.3	2.4	2.4
Long Island	1,062.2	1,077.1	1,093.7	1,107.5	1,098.8	1.4	1.4	1.5	1.3	0.6
Hudson Valley	736.4	750.7	760.3	771.5	771.8	1.7	1.9	1.3	1.5	1.4
Capital District	395.7	403.4	408.9	413.8	410.7	1.2	1.9	1.4	1.2	0.7
Mohawk Valley	125.7	126.1	128.2	129.8	128.1	(0.2)	0.3	1.7	1.3	0.1
North Country	104.7	105.0	105.8	105.9	104.1	0.2	0.3	0.7	0.1	0.5
Central New York	278.0	278.8	280.4	279.9	277.6	0.6	0.3	0.6	(0.2)	0.3
Southern Tier	228.7	228.9	228.4	227.8	226.2	(0.8)	0.1	(0.2)	(0.3)	0.3
Western New York	515.6	520.6	523.8	523.4	518.0	0.8	1.0	0.6	(0.1)	0.3
Finger Lakes	457.3	462.2	467.2	468.6	464.7	0.7	1.1	1.1	0.3	0.4
Unclassified	143.5	149.7	158.0	157.3	155.8	(0.5)	4.3	5.5	(0.4)	2.5

* Levels for 2018 are based on the first two quarters of the year; 2018 growth rates are relative to the same period in 2017.

Table 14

REGIONAL EMPLOYMENT SHARES BY INDUSTRY									
REGION	Mining/ Manuf.	Constr. & Real Estate	Trade, Trans. & Wareh.	Finance and Info.	Bus. & Prof. Svs.	Health Care	Leisure, Hosp. & Other Svs.	Other	
New York City	1.9	7.5	16.0	5.1	8.8	19.1	24.1	16.8	0.7
Long Island	6.4	8.8	23.4	1.6	4.5	14.9	22.9	16.5	0.9
Mid Hudson	5.6	8.8	22.3	1.8	3.6	13.6	25.4	17.3	1.5
Capital Region	8.5	6.8	20.6	2.3	5.2	14.5	23.7	17.3	1.2
Mohawk Valley	13.0	4.3	24.4	1.7	5.1	7.4	27.9	15.3	1.0
North Country	9.8	6.7	24.9	1.6	2.2	7.0	25.3	19.1	3.3
Central New York	11.0	6.5	22.7	1.7	3.9	13.1	22.1	16.7	2.4
Southern Tier	15.4	4.9	19.7	1.6	3.3	9.7	27.2	16.7	1.5
Western New York	12.5	5.9	21.0	1.5	5.7	13.7	20.7	18.0	0.9
Finger Lakes	13.6	6.2	18.8	1.7	3.2	14.5	24.9	15.1	1.9
Statewide	5.6	7.5	19.1	3.4	6.4	16.7	23.6	16.6	1.1

Note: Shares are based on the period from 2017Q3 through 2018Q2.

Table 15

REGIONAL EMPLOYMENT TRENDS: 2014-2018

Region	Employment ('000's)					Percent Change				
	2014	2015	2016	2017	2018*	2014	2015	2016	2017	2018*
Manufacturing and Mining										
New York City	76.0	77.5	75.8	73.0	70.5	(0.0)	1.9	(2.2)	(3.7)	(3.9)
Long Island	71.4	71.0	71.0	71.1	70.4	(2.7)	(0.6)	(0.1)	0.2	(0.8)
Hudson Valley	45.6	45.5	44.6	43.7	43.8	(3.9)	(0.2)	(1.9)	(2.2)	0.3
Capital District	32.8	34.1	34.8	35.3	35.4	0.6	3.9	2.1	1.4	1.2
Mohawk Valley	16.6	16.7	16.9	17.0	16.8	1.5	0.9	0.8	0.7	(0.8)
North Country	10.9	10.8	10.4	10.4	10.3	(0.6)	(0.5)	(3.4)	(0.6)	1.2
Central New York	30.5	30.6	30.3	30.7	30.6	0.3	0.3	(0.8)	1.1	0.8
Southern Tier	36.1	35.9	35.3	35.1	35.0	(1.9)	(0.6)	(1.5)	(0.6)	0.3
Western New York	68.1	67.5	66.7	66.0	65.3	1.5	(0.8)	(1.2)	(1.1)	(0.7)
Finger Lakes	66.2	66.6	65.6	64.3	63.4	(0.5)	0.7	(1.5)	(2.1)	(0.7)
Unclassified	1.3	1.3	1.4	2.1	2.2	(12.5)	(0.2)	4.1	57.3	4.5
Statewide	455.4	457.5	452.8	448.6	443.7	(0.8)	0.5	(1.0)	(0.9)	(0.7)
Construction and Real Estate										
New York City	248.2	262.0	272.6	279.6	282.0	4.4	5.5	4.0	2.6	2.7
Long Island	86.2	89.1	93.8	97.0	96.1	5.0	3.4	5.3	3.4	2.2
Hudson Valley	60.4	64.5	66.5	68.0	67.6	6.7	6.8	3.1	2.3	1.9
Capital District	26.5	27.7	27.7	28.1	27.0	4.8	4.5	0.0	1.4	0.1
Mohawk Valley	5.4	5.3	5.4	5.6	5.3	(3.6)	(1.5)	1.7	3.4	1.0
North Country	6.5	6.6	6.9	6.9	6.8	(3.4)	2.0	4.1	(0.3)	9.6
Central New York	17.0	17.1	18.0	17.7	17.6	(1.7)	1.0	5.1	(1.5)	4.9
Southern Tier	11.2	10.9	11.3	11.3	10.5	(0.9)	(2.3)	3.3	0.6	(1.4)
Western New York	29.3	30.3	31.5	30.9	29.4	4.3	3.4	3.9	(1.9)	0.1
Finger Lakes	27.2	27.5	28.9	29.1	28.1	1.9	1.3	5.0	0.6	1.1
Unclassified	12.2	13.1	12.8	12.6	12.0	(1.4)	7.7	(2.2)	(1.9)	0.4
Statewide	530.0	554.2	575.4	586.7	582.4	4.0	4.6	3.8	2.0	2.2
Trade, Transportation, and Warehousing										
New York City	589.9	598.7	599.4	601.8	595.3	2.8	1.5	0.1	0.4	(0.3)
Long Island	257.6	259.4	259.1	260.2	257.3	1.8	0.7	(0.1)	0.4	(0.1)
Hudson Valley	172.4	174.3	173.2	173.2	171.2	1.8	1.1	(0.6)	0.0	(0.1)
Capital District	85.3	85.8	86.5	85.7	84.1	1.5	0.6	0.8	(0.9)	(0.6)
Mohawk Valley	31.0	30.7	31.3	31.8	31.1	(0.5)	(0.8)	1.8	1.5	(0.8)
North Country	27.3	27.1	27.0	26.7	25.9	0.8	(0.6)	(0.4)	(1.2)	(1.7)
Central New York	66.1	66.7	66.1	64.5	62.4	0.3	0.9	(1.0)	(2.4)	(2.4)
Southern Tier	45.9	46.0	45.9	45.2	44.3	(1.3)	0.1	(0.3)	(1.5)	(1.2)
Western New York	112.6	113.7	113.0	110.8	108.1	1.8	1.0	(0.6)	(2.0)	(1.5)
Finger Lakes	87.8	88.2	88.8	88.9	87.0	0.1	0.5	0.6	0.1	(1.0)
Unclassified	33.4	35.1	36.2	36.2	33.3	(2.0)	4.9	3.0	0.2	(6.5)
Statewide	1,509.5	1,526.0	1,526.5	1,525.0	1,500.1	1.7	1.1	0.0	(0.1)	(0.7)
Information										
New York City	171.1	174.8	178.0	186.5	191.9	4.5	2.2	1.8	4.8	4.9
Long Island	21.2	19.6	18.5	18.1	17.3	(7.4)	(7.6)	(5.7)	(2.2)	(4.1)
Hudson Valley	15.8	15.5	15.1	14.5	14.4	(6.9)	(1.9)	(2.7)	(4.1)	(2.2)
Capital District	9.4	9.4	9.5	9.3	9.6	0.4	0.2	0.3	(1.8)	2.1
Mohawk Valley	2.3	2.3	2.4	2.3	2.1	3.4	(1.3)	2.4	(3.6)	(10.0)
North Country	1.8	1.7	1.7	1.7	1.7	(0.0)	(2.6)	0.2	(2.4)	(0.3)
Central New York	4.7	4.5	4.7	4.8	4.7	(1.9)	(3.0)	4.1	0.7	(2.8)
Southern Tier	4.4	3.9	3.6	3.6	3.7	7.5	(11.5)	(8.2)	(0.5)	2.4
Western New York	8.3	7.9	7.6	7.6	8.0	0.7	(4.5)	(4.1)	(0.1)	6.2
Finger Lakes	8.9	9.0	8.7	8.1	8.0	2.7	1.3	(3.3)	(6.6)	(1.5)
Unclassified	16.0	16.4	16.2	13.0	10.6	(6.5)	2.7	(1.3)	(20.1)	(12.5)
Statewide	263.9	265.2	265.9	269.3	271.9	1.6	0.5	0.3	1.3	2.5

(Cont'd on next page)

REGIONAL EMPLOYMENT TRENDS: 2014-2018 (cont'd)

Region	Employment (000's)					Percent Change				
	2014	2015	2016	2017	2018*	2014	2015	2016	2017	2018*
Finance and Insurance										
New York City	318.3	324.8	327.9	328.3	329.6	2.5	2.0	1.0	0.1	1.4
Long Island	53.1	53.0	51.5	51.2	49.5	0.5	(0.1)	(2.8)	(0.5)	(3.7)
Hudson Valley	28.9	28.4	28.0	28.1	27.8	(1.2)	(2.0)	(1.4)	0.5	(0.6)
Capital District	21.5	21.7	21.9	21.4	21.4	(0.2)	1.0	1.0	(2.3)	0.1
Mohaw k Valley	7.0	6.9	6.8	6.6	6.5	(0.9)	(1.4)	(1.3)	(2.7)	(0.9)
North Country	2.2	2.3	2.3	2.3	2.4	(3.0)	3.9	(0.3)	1.5	2.7
Central New York	12.5	12.3	11.8	11.2	10.7	(2.5)	(1.5)	(4.2)	(5.3)	(5.6)
Southern Tier	8.0	7.9	7.8	7.6	7.6	(2.9)	(1.8)	(0.9)	(2.6)	(0.2)
Western New York	26.5	27.6	28.3	30.2	29.9	0.6	4.3	2.4	6.7	(0.9)
Finger Lakes	15.0	15.1	15.0	14.7	15.2	(1.4)	1.0	(0.8)	(2.1)	3.1
Unclassified	6.7	7.1	7.4	8.3	8.9	(7.9)	6.8	3.3	12.5	11.1
Statewide	499.6	507.1	508.6	509.9	509.5	1.3	1.5	0.3	0.3	0.6
Professional and Business Services										
New York City	639.7	668.4	685.8	707.7	716.4	3.8	4.5	2.6	3.2	2.5
Long Island	162.2	163.8	166.7	166.5	161.9	0.8	1.0	1.7	(0.1)	(1.1)
Hudson Valley	99.9	100.7	102.4	105.2	105.0	0.9	0.8	1.7	2.8	1.5
Capital District	57.3	58.7	59.2	60.5	59.6	0.6	2.4	0.9	2.1	(0.7)
Mohaw k Valley	9.7	9.7	9.7	9.6	9.6	(2.8)	0.6	0.2	(1.6)	1.5
North Country	7.4	7.0	7.2	7.4	7.4	2.1	(4.7)	2.3	2.3	3.2
Central New York	35.5	34.8	34.9	35.8	36.8	1.1	(2.0)	0.3	2.6	5.0
Southern Tier	23.7	23.2	22.4	22.1	22.0	1.1	(1.9)	(3.3)	(1.7)	0.1
Western New York	74.0	74.2	73.3	71.9	70.7	(2.7)	0.3	(1.3)	(1.9)	0.0
Finger Lakes	66.5	68.0	68.3	68.0	67.7	0.2	2.3	0.4	(0.3)	0.3
Unclassified	52.7	55.0	59.5	60.0	62.2	2.8	4.5	8.2	0.8	7.6
Statewide	1,228.5	1,263.6	1,289.4	1,314.5	1,319.2	2.2	2.9	2.0	1.9	1.8
Education, Health Care, and Social Assistance										
New York City	798.3	822.3	850.1	885.8	922.1	3.9	3.0	3.4	4.2	4.6
Long Island	231.3	238.8	246.3	251.6	256.8	1.1	3.2	3.1	2.2	2.6
Hudson Valley	177.4	183.7	189.1	195.0	199.4	1.3	3.6	2.9	3.1	2.8
Capital District	91.5	92.8	94.8	97.1	98.8	0.7	1.4	2.1	2.5	2.3
Mohaw k Valley	33.5	34.0	34.9	35.8	36.3	(0.3)	1.6	2.9	2.5	2.0
North Country	25.3	25.8	26.4	26.8	27.0	0.1	2.0	2.4	1.3	0.8
Central New York	59.4	60.0	61.6	61.6	62.2	0.9	1.0	2.6	0.1	0.8
Southern Tier	59.7	61.3	61.8	62.0	62.6	(2.5)	2.7	0.7	0.4	0.3
Western New York	101.7	102.6	105.1	107.1	109.8	0.1	0.9	2.5	1.9	3.0
Finger Lakes	108.0	109.4	112.7	115.8	117.9	1.9	1.2	3.0	2.7	2.3
Unclassified	8.1	8.5	9.9	10.0	11.1	15.7	4.9	16.6	0.9	14.3
Statewide	1,694.2	1,739.2	1,792.6	1,848.6	1,904.0	2.2	2.7	3.1	3.1	3.5
Leisure, Hospitality, and Other Services										
New York City	568.8	593.1	611.6	627.2	631.3	5.4	4.3	3.1	2.6	1.7
Long Island	169.9	173.3	177.0	181.9	179.0	2.7	2.0	2.1	2.8	1.6
Hudson Valley	125.7	128.0	130.5	132.9	131.3	4.0	1.8	2.0	1.8	1.9
Capital District	66.7	68.4	69.8	71.6	69.9	1.5	2.6	1.9	2.7	0.8
Mohaw k Valley	19.1	19.1	19.5	19.9	19.1	0.9	0.2	1.8	2.1	(0.8)
North Country	20.2	20.2	20.4	20.4	19.3	0.5	0.4	1.0	(0.1)	(1.3)
Central New York	46.1	46.6	46.7	46.9	45.9	1.6	1.3	0.1	0.5	(1.0)
Southern Tier	36.3	36.4	36.9	37.5	37.3	1.8	0.2	1.3	1.6	2.9
Western New York	90.4	91.7	93.1	94.2	92.3	1.7	1.4	1.6	1.1	0.4
Finger Lakes	68.9	69.4	70.1	70.9	69.3	0.6	0.8	1.1	1.1	(0.5)
Unclassified	9.4	10.0	11.3	11.6	10.6	(18.3)	6.3	13.5	2.9	(4.3)
Statewide	1,221.4	1,256.3	1,287.0	1,315.1	1,305.4	3.5	2.9	2.4	2.2	1.3

* Levels for 2018 are based on the first two quarters of the year; 2018 growth rates are relative to the same period in 2017.
Source: NYS Department of Labor.

New York State Adjusted Gross Income

Receipts from the personal income tax account for almost 60 percent of the State's total tax revenue stream. New York State adjusted gross income (NYSAGI) forms the basis for taxable income, from which taxpayers' personal income tax liability is computed, in conformity with New York State tax laws.⁴⁸ Detailed knowledge of the composition of this personal income tax base and its determinants is critical to accurately projecting New York's largest revenue source.

At the aggregate level the components of NYSAGI, such as dividend income and capital gains income, vary with the State and national economies. The Budget Division's forecast of the components of personal income depends on these linkages. Changes in tax laws themselves can generate considerable volatility. The Budget Division forecast incorporates these linkages as well.

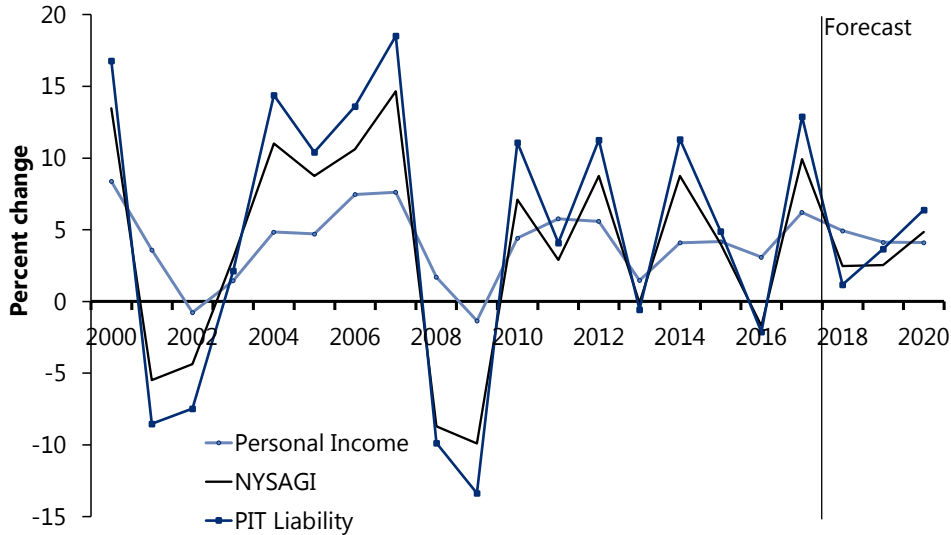
Following the Great Recession, NYSAGI growth has been volatile yet on average lower than pre-recession average annual growth (see Figure 68). During this period of sustained but slow economic recovery much of the volatility in NYSAGI has been the result of income shifting, in response to anticipated tax law changes at the federal level. For example, because they expected a lower tax rate to expire at the end of 2012, taxpayers realized capital gains early and firms distributed dividends and bonuses early, creating a shift in income from 2013 into 2012 that led to 8.7 percent NYSAGI growth in 2012 followed by a small decline of 0.1 percent in 2013 (see Table 16). NYSAGI growth of 8.7 percent in 2014 was also affected by the shift, since that growth rate is based on a lower 2013 level.

Likewise, the election of the current president, who ran in part on a pledge to cut corporate and personal tax rates, appears to have resulted in a more substantial shift, with NYSAGI falling 1.7 percent in 2016, only to roar back with estimated growth of 9.9 percent in 2017 (this is the most recent year for which preliminary data are available). This shift also affects anticipated growth in 2018, not only because of the larger base in the prior year, but also because the new federal tax law, the Tax Cuts and Jobs Act of 2017 (TCJA), passed and signed into law just before Christmas 2017, put a new tax regime in place for the 2018 tax year. The new law severely limits itemized deductions, particularly the federal deductibility of state and local taxes (SALT), including property taxes, thus creating a fresh incentive to shift SALT payments in the opposite direction, from 2018 into 2017, to take advantage of the last tax year under the prior federal law.

One more factor affecting income in 2017 was a 10-year-old law that required the repatriation of hedge fund incentive or management fees that managers had been able to defer receiving or recognizing if they were charged to offshore funds. These deferred fees had to be recognized for tax purposes by the end of 2017, according to Federal law, helping to amplify NYSAGI's growth that year. In contrast, the budget Division expects NYSAGI growth to slow to 1.6 percent in 2018, improving to 2.4 percent in 2019.

⁴⁸ Box 4 on page 137 discusses in detail the relationship between three important indicators of the size of the State's personal income tax base, personal income tax liability, NYSAGI, and state personal income.

Figure 68
The Indicators of New York State’s Tax Base



Note: Personal income tax (PIT) liability is computed based on 2002 NY State tax law; 2017 liability and NYSAGI data are preliminary.
Source: NYS Department of Taxation and Finance; Moody’s Analytics; DOB staff estimates.

The Major Components of NYSAGI

Budget Division forecasts for the components of NYSAGI are based on detailed historical tax return data from samples of State taxpayers through the 2014 tax year, made available by the New York State Department of Taxation and Finance. Beginning with the 2015 tax year and going forward, preliminary processing data are based on the entire population of tax returns and are used to construct estimates for all the income components.

Although the measure of taxable wages derived from State tax returns does not precisely match the dollar amount derived from Quarterly Census of Employment and Wages (QCEW) data, they tend to follow a similar trend. To be consistent with the Budget Division’s New York macroeconomic forecast, projected growth rates for taxable wages from 2016 onward are based on the forecast growth of total State wages derived from the macroeconomic forecast, which is based on QCEW data. For a discussion of the Budget Division forecast for State wages, see Outlook for State Income beginning on page 89.

Table 16

CHANGES IN NYSAGI AND ITS MAJOR COMPONENTS

	2013	2014	2015	2016	2017*	2018	2019	2020
	----- Actual -----				----- Estimated -----			
NYSAGI								
Level (\$ Billions)	714.0	776.5	807.8	794.1	872.9	886.6	908.1	952.4
Change (\$ Billions)	(0.7)	62.4	31.3	(13.7)	78.8	13.6	21.5	44.3
% Change	(0.1)	8.7	4.0	(1.7)	9.9	1.6	2.4	4.9
Wages								
Level (\$ Billions)	525.9	558.9	584.3	592.1	624.9	648.8	672.1	698.6
Change (\$ Billions)	10.3	32.9	25.5	7.8	32.8	23.9	23.3	26.5
% Change	2.0	6.3	4.6	1.3	5.5	3.8	3.6	3.9
Capital Gains								
Level (\$ Billions)	71.7	93.5	95.9	75.3	99.5	99.5	94.3	102.7
Change (\$ Billions)	(9.2)	21.8	2.4	(20.6)	24.2	(0.1)	(5.2)	8.4
% Change	(11.4)	30.5	2.6	(21.5)	32.2	(0.1)	(5.2)	8.9
Partnership/S Corporation								
Level (\$ Billions)	82.8	86.3	92.5	91.3	107.9	97.5	100.4	108.5
Change (\$ Billions)	3.4	3.5	6.2	(1.2)	16.6	(10.4)	2.9	8.1
% Change	4.3	4.2	7.2	(1.3)	18.1	(9.6)	3.0	8.0

Source: NYS Department of Taxation and Finance; DOB staff estimates.

* 2017 Estimates are based on processing data except for wages.

Positive Capital Gains Realizations

Positive capital gains realizations play a large role in determining NYSAGI, both because they provide a relatively large share of income and because of their volatile nature. The Budget Division’s forecasting model attempts to capture the inherent volatility in capital gains income by incorporating those factors that are most likely to influence realization behavior, such as anticipated and actual tax law changes, financial market activity, and real estate market activity.⁴⁹ This component plunged 21.5 percent in 2016 after growth of just 2.6 percent in 2015. Economic growth was weak in 2016 but the U.S. economy was not in recession, implying that there were other forces at work. As alluded to above, taxpayers appear to have delayed realizing capital gains from 2016 into 2017, in anticipation of a capital gains tax rate reduction that never came to pass. This shift both depressed capital gains growth in 2016 and elevated the growth in 2017. With 2017 being the most recent year for which some processing information is available, it appears that capital gains jumped 32.2 percent. The Budget Divisions projects a dip of 0.1 percent in 2018 with a more

⁴⁹ For a discussion of the Budget Division’s traditional approach to modeling capital gains realizations, see L. Holland, H. Kayser, R. Megna and Q. Xu “The Volatility of Capital Gains Realizations in New York State: A Monte Carlo Study,” *Proceedings, 94th Annual Conference on Taxation*, National Tax Association, Washington, DC, 2002, pages 172-183.

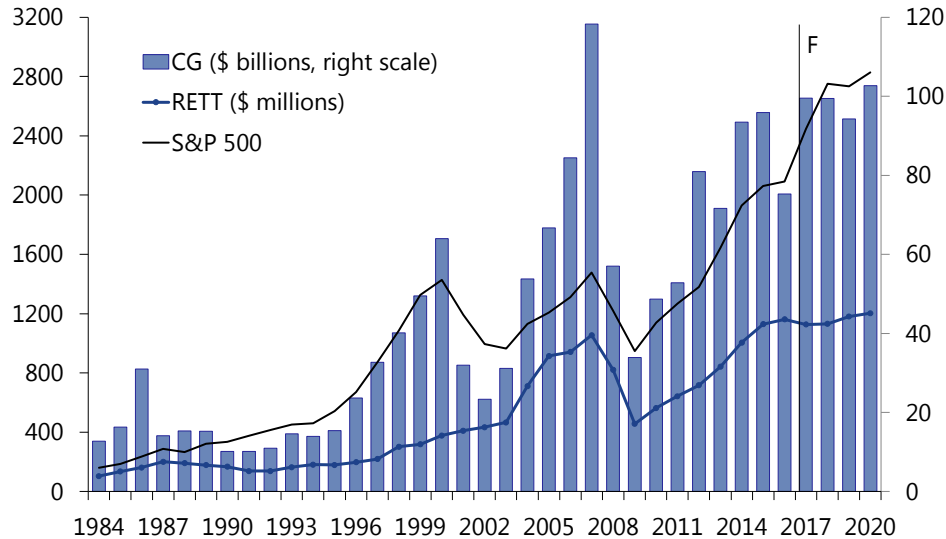
substantial decline of 5.2 percent in 2019 as the economy cools and financial markets find their footing (see Table 16).

Realization behavior has been shown in the past to be greatly affected by federal and State taxes on capital gains income because they constitute a cost associated with the buying and selling of capital assets. Taxpayers may decide to realize capital gains earlier than planned if they expect taxes on capital gains to increase. As an example, the federal capital gains tax rate increased to 20 percent from 15 percent at the end of 2012. In addition, pursuant to a provision of the Affordable Care Act of 2010, a Medicare tax surcharge on investment income took effect in 2013, further raising the federal tax on capital gains realizations by 3.8 percent. While congressional negotiations were still under way as 2012 ended, it was widely expected that tax rates would go up at least for higher-income taxpayers, who also account for most capital gains. Taxpayers responded strategically by shifting long-term gains realizations from 2013 to 2012 to avoid the higher tax burden, resulting in 53.2 percent realizations growth in 2012 but then a drop of 11.4 percent in 2013. Because of this shift, the capital gains realizations base was low in 2013, artificially inflating the 2014 growth rate to an estimated 30.5 percent, which is well above what underlying economic drivers would have implied.

Figure 69 shows how fluctuations in equity markets (measured by the S&P 500 index) and real estate markets (measured by State real estate transfer tax collections) help explain the magnitude of fluctuations in capital gains realizations. After strong growth for both markets during the period from 2003 to 2007, both saw sharp declines in both 2008 and 2009. The collapse of capital gains realizations during the Great Recession is particularly striking, while the magnitude of the S&P 500's decline was roughly similar to that of the 2001-02 recession. The concurrent collapse of the real estate market clearly contributed to the unprecedented collapse in capital gains realizations in 2008-09. New York taxpayers lost a combined \$84.4 billion in capital gains realizations income between 2007 and 2009; even with the apparent capital gains boom in 2017, New Yorkers will have made up only \$65.6 billion of those losses, based on preliminary data.

After years of steady growth (though with slowing in 2015 and 2016), equity markets went on a wild ride in 2018 with the Dow Jones Industrial Average experiencing triple-digit swings in both directions several times in November and December; the index had an all-time high close during the first half of October. The S&P 500, up 17.0 percent in 2017 on an annual average basis, appears to have slowed to 12.1 percent growth on the same basis in 2018, but the annual average growth rate masks the fact that the index lost all of its 2018 gains in the final quarter of the year. Going forward, the Budget Division anticipates the S&P 500 will fall 3.3 percent in 2019, which would be its first decline on an annual average basis since the Great Recession, before reviving to a 3.8 percent gain in 2020. With its upward momentum broken, and signs of a global slowing in economic activity, risks to the capital gains forecast appear weighted to the downside.

Figure 69
Capital Gains Realizations, Real Estate Transfer Taxes
and S&P 500 Index



Note: 2017 CG realizations are an estimate, 2018 RETT and S&P500 are actuals.
 Source: Moody's Analytics; NYS Dept. of Taxation and Finance; DOB staff estimates.

As suggested above, the health of the real estate market also plays a critical role in determining capital gains realizations. Gains from both residential and commercial real estate transactions are taxable, though gains earned from the sale of a primary home are exempt up to a certain limit, for example, up to \$500,000 for married couples filing jointly.⁵⁰ California data show that in 2012, 9.2 percent of positive capital gains realizations there came from real estate transactions. The share has fluctuated from a low of 6.2 percent in 2010 to a high of 32.4 percent in 1990. A study based on national data indicated that 22 percent of net capital gains realizations in the U.S. were generated by real estate transactions in 1993.⁵¹

State real estate transfer tax (RETT) data provide a timely indicator of the strength of real estate sales and therefore of the possible impact of the real estate market on taxable gains. Real estate transfer tax collections fell by 56.7 percent from their 2007 peak in just two years, but collections recovered by 2015 and in 2016 exceeded the old peak by 10.1 percent (see Figure 69). RETT collections fell by nearly 3 percent in 2017. The Budget Division expects only continued slow improvement in a weak housing sector, though the pace may be more uncertain as rising house prices confront expected higher long-term interest rates that will make financing more expensive. The impact of the SALT cap also injects downside risk to New York real estate gains. Thus, the residential housing market's contributions to capital gains realizations in coming years likely will not be substantial.

⁵⁰ Taxpayers can claim this exclusion if they have lived in their home for a total of two years within the 5-year period ending on the date they sold or exchanged their home and if they have not sold or exchanged another home within the 2-year period ending on the date they sold or exchanged their home.

⁵¹ L. E. Burman and P. R. Ricoy, "Capital Gains and the People Who Realize Them," *National Tax Journal* 50(3), September 1997, pages 427-451.

Fluctuating levels of both activity and profitability of private equity and hedge funds also contribute to capital gains realizations. Private equity firms own stakes in companies not listed on a public stock exchange, generally receiving a return on their investment in one of three ways: through a sale or merger of the company; a recapitalization; or by selling shares back to the public through an initial public offering (IPO). The returns on private equity investments often are not realized for several years, but the rate of return is generally high relative to returns on publicly held stocks, in order to compensate for the higher degree of risk and the value added through the extraction of operating efficiencies. Though related to the performance of equity markets and real estate markets, capital gains from private equity funds have their own dynamics.

Hedge fund performance was weaker in 2018 than in the year prior, with Hedge Fund Research, Inc., saying that the industry suffered its largest annual loss since 2011, a drop of 4.1 percent on a fund-weighted basis.⁵² The article also noted that 2018 was the worst year for the S&P 500 index since the financial crisis during the Great Recession. Using a different metric, the eVestment research firm came to a similar conclusion, as the hedge fund industry closed out 2018 with five straight months of negative performance. eVestment said that aggregate performance for 2018 was -4.86 percent, its second-worst year since 2011 when the aggregate return was -4.99 percent. The worst performance on record, according to eVestment, was -15.75 percent during the Great Recession year of 2008. In contrast, eVestment said hedge funds had “strong aggregate performance of 8.93 percent” in 2017 with “almost universally positive performance among hedge fund markets, strategies and geographies.”⁵³ Both the *hedgeweek.com* and Bloomberg articles noted that hedge-fund performance was bifurcated with some funds outperforming while others had “staggering losses” (Bloomberg).

Private equity meanwhile appeared to have a good year in 2018, both in terms of deals and in terms of changes in Federal tax law which seem to be positive for them on net. The tax rate on corporations was slashed to 21 percent from 35 percent by the TCJA – which *Forbes* magazine called “an enormous boon to private equity returns, and by extension to the carried interest compensation of fund managers (tied to capital gains).”⁵⁴ Carried interest is still treated as a capital gain, but private equity firms will have to hold on to portfolio investments for three years (rather than a single year per prior law), but the longer holding period is considered negligible since most firms already hold on to companies in their portfolios for longer than this. The TCJA also imposed a 30 percent limit on deductibility of corporate interest during the first four years of the TCJA’s life, but this only applies to U.S. entities.⁵⁵ Meanwhile, 2018 appears to have built on the previous year’s strength, as an estimated 5,050 deals closed, up from 4,551 in the prior year, with the \$803.5 billion in estimated deal value just shy of the \$807.2 billion record set in 2017. Firms are said to have “a

⁵² Shelly Hagan, “Hedge Fund Performance in 2018: The Good, the Bad and the Ugly,” January 9, 2019, at Bloomberg.com. Available at <https://www.bloomberg.com/news/articles/2019-01-09/hedge-fund-performance-in-2018-the-good-the-bad-and-the-ugly?srnd=premium>. Accessed on January 9, 2019.

⁵³ “Hedge funds end 2018 with near historic performance woes, says eVestment,” *hedgeweek.com*, January 10, 2019. Available at <https://www.hedgeweek.com/2019/01/10/271945/hedge-funds-end-2018-near-historic-performance-woes-says-vestment>. Accessed January 14, 2019.

⁵⁴ Todd Boudreau and Christopher Converse, “2018 Private Equity Industry Overview,” November 4, 2018, from Foley & Lardner LLP. Available at https://www.foley.com/2018-Private-Equity-Industry-Overview-11-05-2018/?utm_source=Mondaq&utm_medium=syndication&utm_campaign=View-Original. Accessed January 14, 2019.

⁵⁵ *Ibid.* Boudreau and Converse.

ton of dry powder laying around,” referring to funds that are available to be committed to deals.⁵⁶ According to another research report, “dry powder” exceeded \$1.1 trillion in the U.S. for the first time early in 2018.⁵⁷

At this juncture it appears that negative risks to the forecast are more in evidence than positive ones. Weighing in on the negative side are indications of slowing economies in China, Germany and Japan, not to mention continued uncertainty regarding the fate of “Brexit” in the United Kingdom; uncertainty regarding the Fed’s monetary policy; the fate of President Trump’s trade war with China; and questions regarding the direction of the stock market. A pause in rate hikes by the Fed, cessation of trade hostilities with China, and signs that the selloff in equities has ended would each individually constitute an upside risk to the capital gains (and hence NYSAGI and liability) forecast.

Rent, Royalty, Partnership, and S Corporation Gains

Partnership and S corporation income, once the third-largest component of NYSAGI after capital gains income (though often close to it in magnitude), recently overtook capital gains income for the title of second largest income component after wages, but with considerably less volatility than capital gains.

While growing at an average 10.0 percent annually over its history, partnership and S corporation income growth has slowed more recently. Consistent with slow economic growth, partnership and S corporation income grew 4.3 percent in 2013, slowing barely to 4.2 percent rate in 2014. While growth rebounded to 7.2 percent in 2015, it fell 1.3 percent in 2016, consistent with financial market turmoil early in that year, once again, income shifting likely played a role. Partnership and S corporation income jumped 18.1 percent growth in 2017, followed by a 9.6 percent plunge in 2018 before growth of 3.0 percent in 2019.

Federal tax law changes play a significant role in the gyrating forecast for this component of income. In 2017, Partnership and S corporation income saw its strongest growth since 1988. Although improving national and global economic growth surely played a role, a federal law that dates back to the Great Recession crisis period appears to have had a profound effect on partnership income. The law pertained to hedge fund managers who had been able to defer the receipt and recognition of certain management or incentive fees that were charged to offshore funds. Any fees earned and deferred before January 1, 2009, were supposed to be recognized for tax purposes by the end of 2017. While it is difficult to parse this income out, it is estimated that this could have increased (primarily) partnership income by upwards of \$12 billion. This one-time declaration of income would have to be removed from the 2017 base to discern the true underlying growth in this component of adjusted gross income.

⁵⁶ Alex Lykken, “Massive 4Q leads to PE’s biggest year since the crisis,” January 11, 2019, at PitchBook.com. Available at <https://pitchbook.com/news/articles/massive-4q-leads-to-pes-biggest-year-since-the-crisis>, Accessed January 14, 2019.

⁵⁷ *2019 Global Private Equity Outlook*, September 24, 2018, by Dechert LLP. Available at <https://www.acuris.com/2019-global-private-equity-outlook>. Accessed January 14, 2019.

When the Tax Reform Act of 1986 altered the differential between the corporate and individual income tax rates in favor of the latter, partnership and S corporation income grew an impressive 43 percent when the law became fully effective in 1988. The TCJA's cut in the corporate tax rate has already been discussed. Besides this, qualifying taxpayers are able to deduct a maximum of 20 percent of "qualified business income" (QBI) earned from businesses set up as sole proprietorships or as "pass-through" entities such as S-corporations or partnerships. This results in a tax-rate differential that favors businesses organized as C corporations, all else being equal. Boudreau and Converse note that this provision does not affect private equity firms, since it does not apply to income derived from investment management. But income flowing to members of a private equity firm organized as a pass-through entity would be taxed at a 37 percent rate rather than the 21 percent corporate rate – so the incentive to reorganize is still present.⁵⁸

Partnership income is the largest contributor to this NYSAGI component, much of which originates within the finance and real estate industries. A second large contributor is income from S corporation ownership. Prior to the passage of the TCJA and its corporate tax rate cut, opting for S corporation status allowed firms to pass earnings through to a limited number of shareholders, avoiding corporate taxation while still enjoying the limited liability that corporate status affords.

Growth in income from partnership and S corporations is related to both the economy and financial markets. However, average annual growth of 5.6 percent during the current expansion through 2017 is lower than pre-recession relationships would suggest, based on the strength of both the economy and equity markets. Partnership and S corporation income gains and losses tend to rise and fall together, suggesting that the growth rates are linked at least in part to births and deaths of partnerships and S corporations. The severity of the Great Recession forced a large number of entities to exit the market, and it appears that tight credit markets have made it difficult for new entities to enter as economic conditions improved.

The Budget Division's partnership and S corporation income forecast contains both upside and downside risks. Like capital gains income, partnership and S corporation income is also sensitive to the performance of the private-equity sector and hedge funds, where incomes can be very volatile. In addition, the real estate market is not captured independently in the forecast model. Since there is a high concentration of real estate partnerships in New York State, a better-than-predicted real estate market (due to an improved employment situation and a decline in foreclosures) could lead to higher-than-expected partnership and S corporation gains. On the other hand, a slowing real estate market could result in smaller than expected gains.

Dividend Income

Taxable dividend income in New York is a very volatile component, as witnessed by the fact that growth rates in State taxpayers' dividend income have ranged from a 28.7 percent drop in 2009 to 26.6 percent advance in 2004. The volatility has continued during the last few years, partly due to income shifting. Taxable dividend income grew 19.7 percent in 2014 in between 4.8 percent declines in 2013 and 2015. These growth rates were affected by early dividend payouts made in 2012 to avoid the higher tax rate in 2013, which in turn lowered the 2013 level of dividends and

⁵⁸ Boudreau and Converse, citation in footnote 7.

consequently resulted in a higher growth rate for 2014. Preliminary data shows dividend income rising 9.7 percent in 2017, with growth slowing to 7.6 percent and 3.8 percent in 2018 and 2019, respectively.

Taxable dividend income is expected to rise and fall with dividend income in the nation as a whole, a component of the NIPA definition of U.S. personal income; long-term interest rates, as represented by the 10-year Treasury yield; and the performance of equity markets. State taxable dividends have proven to grow more slowly yet be more variable than U.S. dividend income, increasing at an average annual rate of 6.2 percent between 1976 and 2016 with a standard deviation of 12.7 percentage points, while U.S. dividend income grew an average 9.1 percent annually, with a lower standard deviation of 10.5 percentage points over the same period.

Average annual growth in taxable dividend income has been strong since the end of the recession, growing on average 12.2 percent annually from 2010 to 2014, presumably as a result of sizeable dividend payouts from publicly traded private equity firms and other businesses whose valuation improved greatly with the surge in the equity markets through 2014. While equity markets treaded water in 2015 and 2016, the market was roaring in 2017, routinely setting and then breaking new records. This should lead to stronger growth rates going forward.

Risks to the dividend income forecast are closely linked to the risks embedded in the U.S. equity markets, corporate profitability and the performance of publicly traded private equity firms.

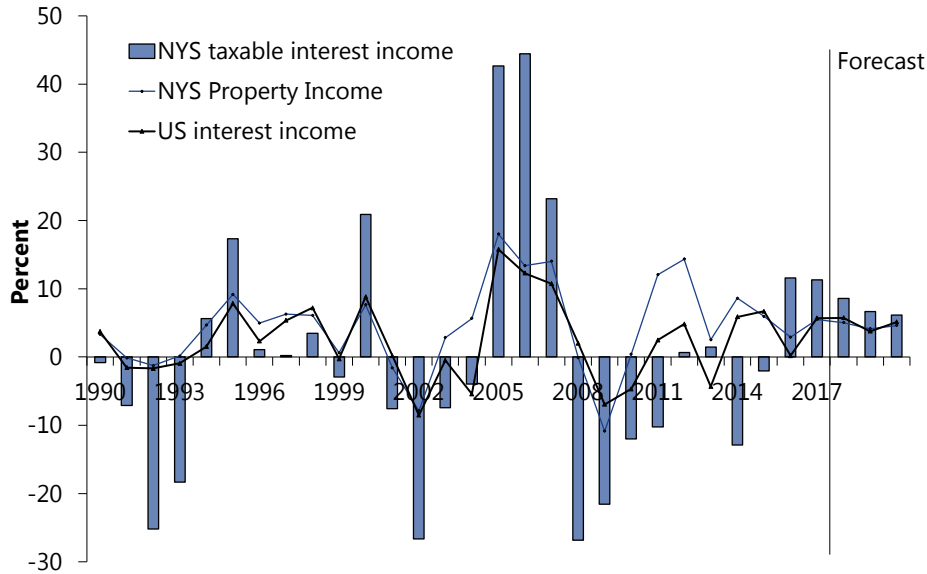
Interest Income

With a 2.0 percent decline in 2015, taxable interest income extended its streak of either declines or very low growth to an eighth year, on the heels of 12.9 percent drop in the prior year. But with the Federal Reserve finally beginning to normalize the target band for the federal funds rate in December 2015, interest income grew 11.6 percent in 2016 while preliminary data for 2017 shows comparable growth of 11.3 percent. The Budget Division expects slower growth of 8.6 percent and 6.7 percent in 2018 and 2019, respectively.

An increase in interest rates will increase interest income for a given amount of assets. In addition, New York property income, a component of the NIPA definition of state personal income that includes interest income, has been found to be a good indicator of the trend in taxable interest income for the State, although it is much less volatile (see Figure 70). For the period from 1977 to 2016, the average growth rate for New York property income was 6.5 percent, with a standard deviation of 7.2 percentage points, and the average growth rate for U.S. interest income, a component of the NIPA definition of U.S. personal income, was 5.7 percent, with a standard deviation of 7.6 percentage points. In contrast, State taxable interest income averaged 3.5 percent annual growth over the same period, with a standard deviation of 17.3 percentage points. The additional volatility in this component of NYSAGI could be related to the behavioral response of State taxpayers to past changes in tax law.

Figure 70

Interest Income



Note: 2017 NYS taxable interest income is preliminary.

Source: Moody's Analytics; NYS Department of Taxation and Finance; DOB staff estimates.

The risks to the interest income forecast are clearly linked to the pace of interest rate hikes by the Federal Reserve. If the economy should experience a downturn, or if inflation falls below the Fed's 2 percent goal, it may slow the pace of interest rate hikes, which would lower the forecast for interest income. On the other hand, if inflation shows signs of overshooting the Fed's target it may need to hike more and faster, thus helping interest income growth to outpace DOB's forecast.

Small Business and Farm Income

This NYSAGI component contains income from operating a business, practicing a profession as a sole proprietor, or operating a farm. It is expected to vary with the overall strength of the national and State economies, with some added volatility due to income shifting. Business and farm income grew 4.9 percent in 2014, after 1.1 percent growth in 2013, with 2013 income most likely lower because of some movement of income from 2013 into 2012 to avoid higher tax rates. The lower base in 2013 caused amplified growth in the following year. It was nearly flat in 2016, growing just 0.4 percent. Preliminary data show 5.2 percent growth in 2017, with the Budget Division expecting 6.7 percent growth in 2018, slowing to a 5.9 percent increase in 2019. Once again, it is likely there was some income-shifting over 2016-2018 period, as the new administration raised expectations in late 2016 and early 2017 for rapid changes in federal tax law, though the new law was not enacted until December 2017.

Small business and farm income growth and volatility has shrunk over the years. This component of taxable income grew at an annual average rate of 11.5 percent from 1980 to 1990 with a standard deviation of 10.8 percent but between 1991 and 2013 small business income grew only at an annual average rate of 4.1 percent, with a standard deviation of 4.7 percent. Proprietors' income, as defined

under NIPA, experienced similar changes in growth, falling from 10.5 percent growth and a standard deviation of 8.4 percent to annual average growth of 4.2 percent and a standard deviation of 7.9 percent thereafter.

One factor that likely contributed to the very low average growth of just 2.8 percent over the 2009-2014 period was a tight credit market. The credit contraction caused by the financial crisis was especially difficult for small businesses since credit availability is particularly critical to them. Since small businesses historically have higher failure rates, small-business lending is among the highest-risk lending for banks and so one of the first to be cut back when economic conditions worsen. In an environment of tight credit, obtaining loans to maintain or grow activity became difficult for many small businesses. As credit becomes more available in a slow but ongoing economic recovery, business and farm income growth is seen as picking up speed.

Risks to the forecast of business income are closely linked to the risks to the overall economic forecast because sole proprietors' income is particularly responsive to the state of the business cycle.

Pension Income

Growth in pension income in the near term is expected to remain well below longer term average growth. It rose just 1.5 percent in 2016 though preliminary data for 2017 shows growth of 5.1 percent. The Budget Division anticipates slower growth of 2.8 percent and 3.8 percent for 2018 and 2019, respectively.

Pension income includes payments from retirement plans, life insurance annuity contracts, profit-sharing plans, military retirement pay, and employee savings plans. It is linked to prior year long-term interest rates, suggesting that firms base the level of pension and life-insurance benefits they offer to employees on their expectations of future profitability, which is in turn tied to the future strength of the economy. Pension income has grown steadily over the years, although the growth rate has declined considerably over time. The average annual growth rate between 1980 and 1990 was 12.6 percent, but it fell to 6.3 percent between 1991 and 2013. This coincides with a decline in the average 10-year Treasury yield from 10.4 percent in the former period to 4.9 percent in the latter. Both declines are likely the result of lower inflation rates in the later period, not to mention the severity of the Great Recession of December 2007-June 2009.

Long-term Treasury yields have been at exceptionally low levels and fell continuously from a local high of 6.0 percent in 2000 to 1.8 percent in 2012 because of a combination of factors, including highly accommodative monetary both in the U.S. and abroad, including both a near-zero federal funds rate and the Federal Reserve's now-ended long-term asset purchasing programs known as "Quantitative Easing." The safe-haven status of U.S. Treasuries has also put downward pressure on long-term rates, particularly during periods when investors search for a flight to safety as they did during the financial crisis and subsequent sovereign debt crises. Long-term Treasury yields increased slightly to 2.5 percent in 2014 from 2.4 percent the year before, but then fell back to 2.1 percent in 2015. Despite a further slide to 1.8 percent in 2016 they are expected to rise gradually over the course of the next few years, to 2.9 percent in 2018 after an increase to 2.3 percent in 2017. The 10-year rate is expected to move to 3.1 percent in 2019, but this is dependent on the pace

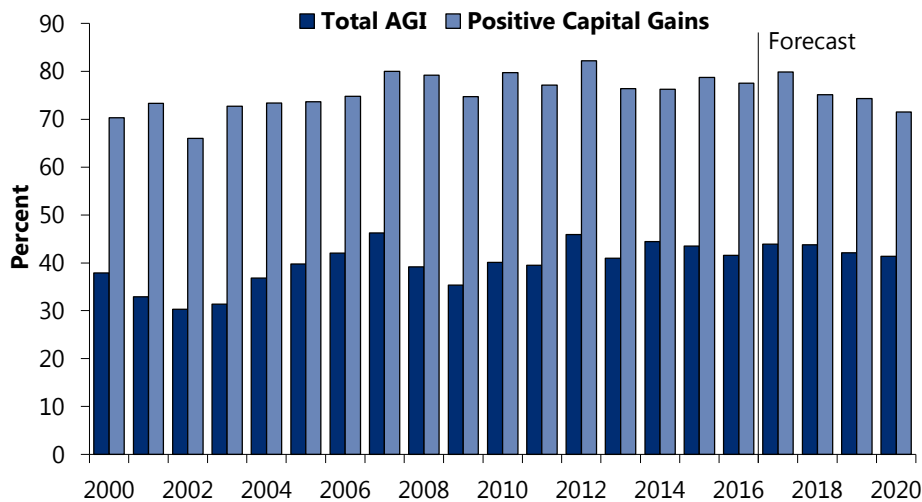
of any further federal funds rate target increases by the Fed. Pension income should follow in train of these increases.

The risks to the forecast for pension income are related mainly to the risks to long-term interest rates. If the economy sputters rather than continues its current pace of expansion, the Fed may slow increases in the federal funds rate, thus affecting long-term interest rates and therefore pension income.

Changes in the State Distribution of Income and Revenue Risk

As shown in Figure 68 above, NYSAGI exhibits more volatility than State personal income, while tax liability is more volatile than NYSAGI. Box 4 compares these three important indicators of the State’s personal income tax base and discusses their respective volatilities.

Figure 71
Income Shares of the Top One Percent Taxpayers
AGI and Capital Gains Realizations

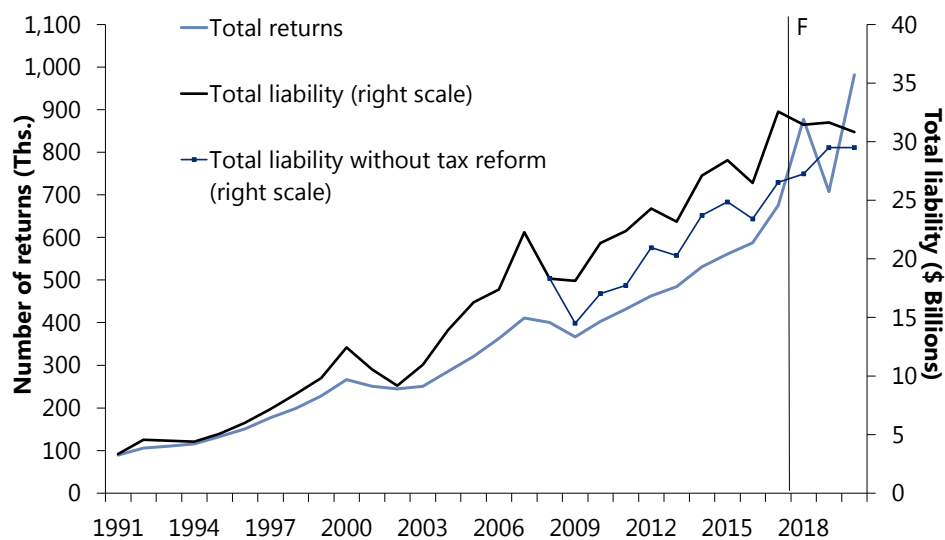


Note: For nonresident taxpayers, shares are based on total income.
Source: NYS Department of Taxation and Finance; DOB staff estimates.

The most volatile components of taxable income, such as bonuses and capital gains realizations, are highly concentrated among the State’s highest-income taxpayers. While the top one percent of taxpayers, as determined by their NYSAGI, accounted for 43.9 percent of adjusted gross income in the preliminary data of 2017, they also accounted for nearly 80 percent of capital gains realizations (see Figure 71). Note that at the recent peak share of capital gains (in 2012) these filers represented 45.9 percent of NYSAGI and 82.2 percent of realized capital gains. This was approximately where this very small number of taxpayers was in 2007, just prior to the Great Recession, when they accounted for 46.2 percent of NYSAGI and 80.0 percent of capital gains realizations. Since the income of wealthy taxpayers is taxed at the highest rate, an accurate projection of these income components is critical to an accurate projection of personal income tax liability.

Between 1985 and 2007 (or prior to the Great Recession), the number of returns generated by high-income taxpayers – those reporting NYSAGI of \$200,000 or more – grew substantially, at an average annual rate of 12.8 percent. During the same period, the liability generated by these taxpayers grew more rapidly, at an annual average rate of 14.2 percent (see Figure 72). Liability was also affected by a temporary tax measure that added two more tax brackets for wealthier taxpayers, raising the State’s top income tax rate to 8.97 percent for tax years 2009 to 2011, from 6.85 percent.⁵⁹ As the economy recovered after 2009, returns and tax liability for wealthier taxpayers also rebounded, with an estimated increase of 57.9 percent in returns, though the increase in liability was a lower 48.6 percent over the period, thanks in part to a decline from 2015 to 2016 as the economy slowed and income shifting occurred (preliminary data for 2017 not included).

Figure 72
New York State High-Income Tax Returns



Note: High-income taxpayers are those reporting NYSAGI of \$200,000 or more.
Source: NYS Department of Taxation and Finance; DOB staff estimates.

⁵⁹ See the “Personal Income Tax” section for more detail on the temporary income brackets and tax rates and the tax reform of 2011.

Box 4

INCOME TAX LIABILITY AND ALTERNATIVE MEASURES OF INCOME

A major focus of the Budget Division's forecasting effort is an accurate projection of personal income tax receipts. This requires estimates of income tax liability, which depends on taxpayer income. New York State tax law determines the components of income to be taxed and the corresponding tax rates.

Personal income tax liability is the amount which State taxpayers actually owe for a given tax year and thus measures the State's tax base.¹ Personal income tax liability is derived from taxpayers' New York State adjusted gross income (NYSAGI), in conformity with State tax law. A measure that is closely related to NYSAGI is State personal income, a U.S. Bureau of Economic Analysis national income and product accounts (NIPA) concept that measures income derived from value added to current production.² This widely available data source is often used as a proxy for NYSAGI. The relative volatility of personal income tax liability, NYSAGI, and State personal income, is presented in Figure 68 on page 125. For example, in 2014, personal income grew 4.0 percent, while NYSAGI grew a stronger estimated 8.6 percent and personal income tax liability at constant law grew an even stronger estimated 11.6 percent.

Economists use the concept of elasticity to measure the sensitivity of one economic indicator to another. Elasticity is defined as the percentage change in one economic indicator when another changes by one percent. Since tax revenues tend to vary with the business cycle, we are often interested in the elasticity of the tax base with respect to a broad measure of economic conditions, such as GDP. The more sensitive a particular tax base measure is to a change in GDP, the higher the elasticity.

Typically, the elasticity of NYSAGI tends to be higher than that of personal income because NYSAGI measures the taxable components of income, which include realized capital gains and losses. Gains and losses earned on changes in asset prices are not included in the NIPA concept of personal income since they do not represent changes to the value of current production.³ Unlike the primary drivers of personal income – employment and wages, which have relatively stable bases – income from capital gains realizations can rise and fall dramatically. In an asset market downturn such as in 2008, for example, taxpayers can refrain from selling, causing a 51.8 percent decline in capital gains realizations. In addition to behavioral responses to changes in market conditions, NYSAGI fluctuations can result from statutory changes and taxpayers' strategic responses to such changes. Taxpayers realized capital gains and received compensation early to avoid higher tax rates in 2013, shifting taxable income from 2013 to 2012.

Personal income tax liability is even more elastic than NYSAGI, primarily because of the progressivity of the State tax system. The volatile components of taxable income, such as bonuses and capital gains realizations, tend to be concentrated among the State's high-income taxpayers, who are also taxed at the highest marginal tax rate. As the more volatile income components respond strongly to changing economic conditions, the effective or average tax rate changes. Furthermore, as incomes rise, some taxpayers move into higher income tax brackets, increasing the effective tax rate and the amount of liability generated from a given amount of adjusted gross income. The opposite occurs as incomes fall. For example, the average effective tax rate fell from a high of 4.81 percent in 2000 to a low of 4.51 percent in 2002 without any significant changes in tax law. This impact is exacerbated in New York by provisions in State laws that recapture the benefits of portions of income being taxed at lower rates for high income taxpayers.

The fact that the most volatile components of income can and have accounted for a large portion of the change in NYSAGI poses significant risks to the Division of the Budget's personal income tax forecast.⁴ Therefore, the Budget Division has consistently maintained that cautious projections are warranted.

¹ For a detailed discussion of personal income tax liability, see Tax Receipt Section "Personal Income Tax."

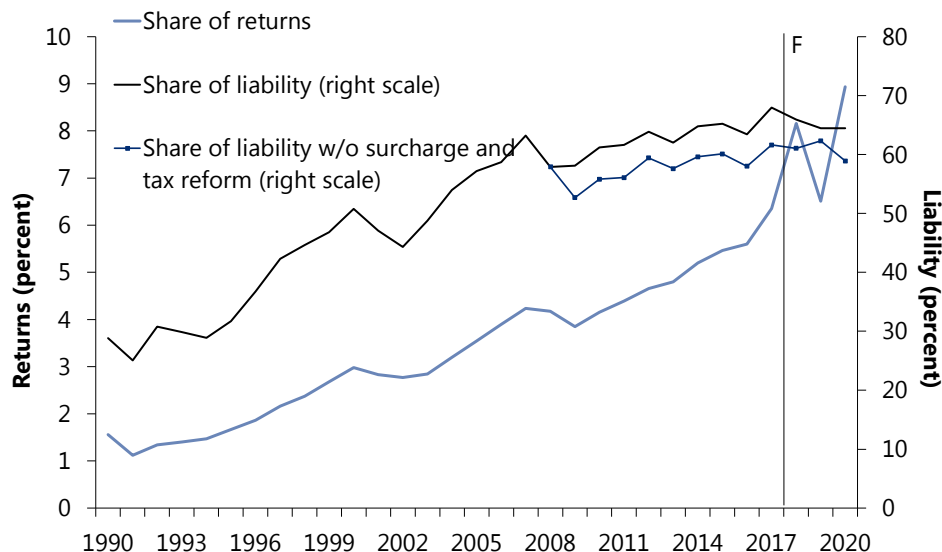
² For a detailed explanation of how the Budget Division constructs State personal income, see Box 2 on page 93.

³ However, any transaction cost generated by such a sale would add value to current production and would therefore be included in personal income.

⁴ The *New York State Economic, Revenue and Spending Methodologies*, November 2018, provides a detailed explanation of the Budget Division's use of fan charts to compute prediction intervals around forecasts (<http://www.budget.ny.gov/pubs/supporting/MethodologyBook.pdf>).

The large decline in capital gains realizations and thus NYSAGI brought about by the recession temporarily unwound some of the concentration of income, but by 2012 the estimated liability share of high-income taxpayers exceeded the 2007 peak and by 2015 it exceeded that peak by 1.1 percentage points, in part helped by a new high top marginal tax rate of 8.82 percent that started with the implementation of the December 2011 tax reform in tax year 2012 (see Figure 73). The 8.82 percent rate was subsequently extended to tax year 2019 even as a multiyear middle-class tax cut began on schedule in 2018. Note that in the absence of the rate increase under the tax reform, high income taxpayers’ share of liability would not have been expected to exceed that peak within the forecast horizon, though preliminary data anticipates a new peak share under the reform law in 2017.

Figure 73
High-Income Taxpayers as Percentage of Total Returns and Liability



Note: High-income taxpayers are those reporting NYSAGI of \$200,000 or more.
 Source: NYS Department of Taxation and Finance; DOB staff estimates.

Table 17 shows the changes in the concentration of income and liability from the pre-recession peak in 2007 to the trough in 2009 and to 2017, the last year for which some taxpayer data are available. Because of the recession, the share of nonwage income accruing to the top 10 percent of taxpayers fell by 7.2 percentage points between 2007 and 2009; but by 2017, the group had exceeded the 2007 share (80.2 percent versus 79.8 percent). For wage income, which is more evenly distributed across taxpayers, the share of the top 10 percent of taxpayers fell 2.0 percentage points between 2007 and 2009, but the share 10 years later was just a bit above its 2007 mark. One indication of the severity of the Great Recession can be seen in the fact that even as late as 2017 the shares of gross income, wage income, nonwage income and liability are still generally lower than their counterparts in 2007, even among the most affluent State tax filers.

Table 17

THE CONCENTRATION OF STATE INCOME AND LIABILITY
2007, 2009, and 2017

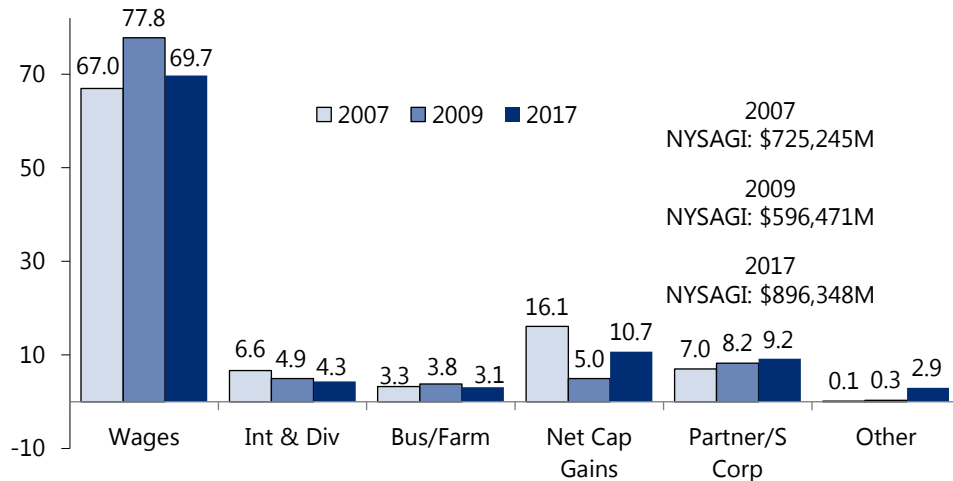
	Number of Returns	Gross Income	Wage Income	Nonwage Income	Liability
2007					
Total (\$ in millions)	8,860,413	\$778,402	\$485,565	\$292,837	\$35,217
Share: Top 1%	—	34.4	19.5	59.2	46.4
Share: Top 5%	—	49.7	35.4	73.3	65.1
Share: Top 10%	—	59.2	46.7	79.8	75.2
Share: Top 25%	—	76.7	68.5	90.4	90.2
2009					
Total (\$ in millions)	9,524,621	\$646,935	\$463,939	\$182,995	\$31,168
Share: Top 1%	—	25.8	15.9	50.7	42.6
Share: Top 5%	—	41.6	32.3	65.2	61.5
Share: Top 10%	—	52.6	44.7	72.6	72.6
Share: Top 25%	—	73.5	67.8	87.8	89.5
2017					
Total (\$ in millions)	10,492,628	\$943,781	\$624,938	\$318,843	\$48,585
Share: Top 1%	—	30.4	16.4	57.8	44.4
Share: Top 5%	—	47.2	34.2	72.7	63.0
Share: Top 10%	—	58.2	46.9	80.2	73.7
Share: Top 25%	—	77.4	68.9	94.0	88.8

Note: Returns are ranked on the basis of gross income and based on a weighted statistical sample of all tax returns in the State; data for 2017 are preliminary.
 Source: NYS Department of Taxation and Finance; DOB staff estimates.

Figure 74 and Figure 75 display the decomposition of NYSAGI into its main components for the 2007 peak year, the 2009 trough year and the projected components for 2017, for all taxpayers and for high-income taxpayers, defined here as those reporting NYSAGI of \$200,000 or more.

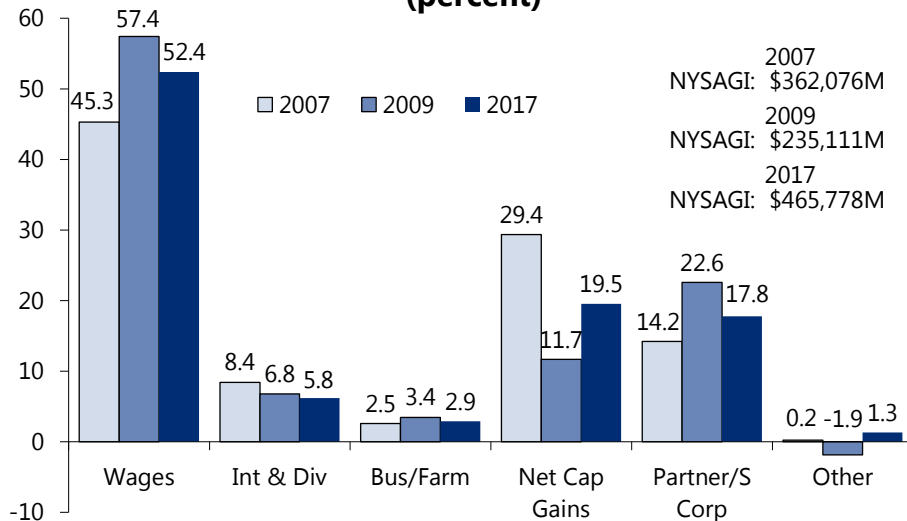
With faster economic growth over the past two years, the shares of NYSAGI based on preliminary 2017 data resemble those of 2007 more closely. At 69.7 percent the wage income share is closer to the 67.0 share of 2007, and shares of business and farm income and of net capital gains have also moved closer. Partnership income, at 9.2 percent, is a larger share than in 2007 as is the “other” income category. The share from interest and dividends has fallen, likely in part due to reasons discussed earlier in this section.

Figure 74
Composition of NYSAGI for All Taxpayers
(percent)



Note: Both capital gains and partnership/S corporation gains income are net of losses. 2017 numbers are projections based on processing information.
Source: NYS Department of Taxation and Finance; DOB staff estimates.

Figure 75
Composition of NYSAGI for High-Income Taxpayers
(percent)



Note: Both capital gains and partnership/S corporation gains income are net of losses. High-income taxpayers are those reporting NYSAGI of \$200,000 or more. All 2017 numbers are projections.
Source: NYS Department of Taxation and Finance; DOB staff estimates.

The similarity to 2007 is less pronounced among the high-income filers (Figure 75). Wage income remains more prominent in 2017 than it was in 2007; the same is true of partnership income. The

2017 share of net capital gains is nearly 10 percentage points lower than it was in 2007. The “other” income category, which contains taxable pensions, alimony, IRA income, and other such components, is a much larger share at 1.1 percent than it was in 2007 (0.2 percent).

Another factor in 2017 was no doubt the effect of the presidential election in November 2016 and the expectation of very rapid action on lowering federal tax rates and otherwise revising federal tax law. This led to income shifting from 2016 into 2017 among those who were able to do so, in expectation that rates would be lower in the latter year.

Interestingly, even after so many years since the Great Recession, some of the large changes in income shares brought about by the Great Recession do not appear to have been unwound yet, testifying to the weak nature of the ongoing recovery. In particular, both high-income filers and taxpayers overall remain more dependent on wage income now than in 2007 (and more strikingly so for the high-income taxpayers) while the share of NYSAGI made up of net capital gains income, which in 2007 was much larger than the share from partnership income, is now roughly equal to the latter.

Risks to the Forecast

The Budget Division’s forecast for the personal income tax provides a balanced picture of upside and downside risks, particularly with respect to its most volatile components. As forecasts of the components of New York State’s adjusted gross income are consistent with economic indicator variables from the Budget Divisions macroeconomic forecasting models, much of the risks to the personal income tax are the same as the risks to the New York and national economies. However, because of the prominence of bonus income and capital gains realizations in taxable income, the risks and uncertainties are heightened and, as a consequence of the progressive tax system, even more so for personal income tax revenues.

SELECTED ECONOMIC INDICATORS (Calendar Year)

	2017 (actual ¹)	2018 (estimate)	2019 (forecast)	2020 (forecast)	2021 (forecast)	2022 (forecast)	1977-2017 Average ²
U.S. Indicators³							
Gross Domestic Product (current dollars)	4.2	5.2	4.7	4.5	4.3	4.2	5.9
Gross Domestic Product Consumption	2.2	2.9	2.4	2.1	1.9	1.9	2.8
Residential Fixed Investment	2.5	2.7	2.9	2.2	1.8	1.7	3.0
Nonresidential Fixed Investment	3.3	(0.3)	(0.4)	2.2	2.5	2.7	2.2
Change in Inventories (dollars)	5.3	6.8	3.9	3.8	3.5	3.4	4.7
Exports	22.5	43.3	51.1	46.4	45.8	47.2	39.0
Imports	3.0	4.0	2.7	3.7	3.7	3.8	5.5
Government Spending	4.6	4.8	4.9	3.5	2.9	2.8	5.8
Corporate Profits ⁴	(0.1)	1.6	1.9	0.9	0.6	0.6	1.7
Personal Income	3.2	8.3	6.4	4.6	4.4	4.4	6.7
Wages	4.4	4.4	4.1	4.3	4.1	3.9	6.1
Nonagricultural Employment	4.6	4.4	4.1	4.3	3.8	3.5	5.7
Unemployment Rate (percent)	1.6	1.6	1.4	1.2	0.8	0.6	1.5
S&P 500 Stock Price Index	4.4	3.9	3.6	3.5	3.6	3.9	6.3
Federal Funds Rate	17.0	12.1	(3.3)	3.8	3.8	4.0	8.9
10-year Treasury Yield	1.0	1.8	2.6	3.1	3.2	3.2	5.1
Consumer Price Index	2.3	2.9	3.1	3.5	3.8	4.0	6.4
	2.1	2.5	2.2	2.4	2.3	2.3	3.7
New York State Indicators							
Personal Income ⁵	6.2	4.5	4.0	4.2	4.2	4.2	5.7
Wages and Salaries ⁵							
Total	5.4	3.8	3.6	3.8	4.0	4.0	5.3
Without Bonus ⁶	4.5	4.9	4.2	4.1	3.9	3.9	5.0
Bonus ⁶	12.3	(3.1)	(0.9)	1.5	4.4	4.5	8.8
Finance and Insurance Bonuses ⁶	20.4	(7.6)	(0.8)	(0.2)	4.1	4.4	13.5
Wage Per Employee	4.0	2.5	2.4	2.7	3.1	3.1	4.5
Property Income	5.5	5.3	4.0	4.5	4.7	4.7	6.6
Proprietors' Income	10.7	4.7	5.2	4.7	4.6	4.6	7.3
Transfer Income	10.1	5.4	4.9	5.3	4.9	4.9	6.1
Nonfarm Employment ⁵							
Total	1.4	1.3	1.1	1.1	0.8	0.9	0.8
Private	1.5	1.4	1.2	1.2	1.1	1.0	0.9
Unemployment Rate (percent)	4.7	4.2	4.1	4.1	4.2	4.2	6.5
Composite CPI of New York ⁶	2.0	2.1	2.1	2.3	2.3	2.3	3.7
New York State Adjusted Gross Income (NYSAGI)							
Capital Gains	32.2	(0.1)	(5.2)	8.9	4.0	4.0	15.3
Partnership/ S Corporation Gains	18.1	(9.6)	3.0	8.0	6.5	6.5	10.0
Business and Farm Income	5.2	6.7	5.9	5.4	5.1	5.0	6.0
Interest Income	11.3	8.6	6.7	6.2	5.0	4.6	3.8
Dividends	9.7	7.6	3.8	5.3	5.7	5.5	6.2
Total NYSAGI	9.9	1.6	2.4	4.9	5.2	4.3	5.3

¹ For NYSAGI variables, 2017 is preliminary.

² Partnership and S corporation gains data start in 1978, NYSAGI and Business and Farm data in 1980.

³ All indicators are percent changes except change in inventories, the unemployment rate, and interest rates; all GDP components refer to chained 2012 dollars, unless otherwise noted.

⁴ Includes inventory valuation and capital consumption adjustments.

⁵ Nonagricultural employment, wage, and personal income numbers are based on CEW data.

⁶ Series created by the Division of the Budget.

Source: Moody's Analytics; NYS Department of Labor; NYS Department of Taxation and Finance; DOB staff estimates.

SELECTED ECONOMIC INDICATORS (State Fiscal Year)

	2017-18 (actual)	2018-19 (estimate)	2019-20 (forecast)	2020-21 (forecast)	2021-22 (forecast)	2022-23 (forecast)	1977-78 - 2017-18 Average
U.S. Indicators¹							
Gross Domestic Product (current dollars)	4.3	5.4	4.5	4.5	4.3	4.2	5.9
Gross Domestic Product	2.4	3.0	2.2	2.1	1.9	1.9	2.8
Consumption	2.5	3.0	2.6	2.1	1.8	1.7	2.9
Residential Fixed Investment	2.4	(0.9)	0.7	2.3	2.5	2.8	2.0
Nonresidential Fixed Investment	5.8	6.2	3.7	3.7	3.5	3.4	4.7
Change in Inventories (dollars)	30.7	49.5	49.2	45.9	46.2	47.2	39.0
Exports	3.4	3.6	2.9	3.7	3.7	3.9	5.5
Imports	4.8	4.8	4.6	3.3	2.8	2.9	5.7
Government Spending	0.1	2.0	1.6	0.8	0.5	0.6	1.7
Corporate Profits ²	3.9	9.1	5.3	4.5	4.3	4.4	6.7
Personal Income	4.4	4.3	4.1	4.3	4.0	3.9	6.1
Wages	4.7	4.2	4.2	4.2	3.7	3.5	5.6
Nonagricultural Employment	1.5	1.6	1.3	1.1	0.7	0.6	1.5
Unemployment Rate (percent)	4.2	3.8	3.5	3.5	3.7	3.9	6.3
S&P 500 Stock Price Index	16.7	6.3	(1.0)	3.5	3.9	4.0	8.9
Federal Funds Rate	1.2	2.1	2.7	3.1	3.2	3.2	5.0
10-year Treasury Yield	2.4	2.9	3.2	3.5	3.8	4.0	6.3
Consumer Price Index	2.1	2.4	2.3	2.4	2.3	2.3	3.6
New York State Indicators							
Personal Income ³	5.7	4.1	4.1	4.3	4.2	4.3	5.7
Wages and Salaries ³							
Total	4.7	3.3	3.6	4.1	4.0	4.0	5.3
Without Bonus ⁴	4.4	4.5	4.1	4.1	3.9	3.9	5.1
Bonus ⁴	6.3	(4.7)	(0.6)	4.0	4.5	4.5	8.5
Finance and Insurance Bonuses ⁴	11.6	(9.6)	(1.2)	3.9	4.4	4.4	13.6
Wage Per Employee	3.3	2.1	2.5	3.0	3.1	3.1	4.5
Property Income	5.2	5.1	4.1	4.5	4.7	4.7	6.6
Proprietors' Income	9.0	4.9	5.1	4.7	4.6	4.6	7.4
Transfer Income	10.1	4.4	5.4	5.1	4.9	4.9	5.9
Nonfarm Employment ³							
Total	1.3	1.2	1.1	1.1	0.8	0.9	0.8
Private	1.5	1.4	1.2	1.1	1.0	1.0	0.9
Unemployment Rate (percent)	4.7	4.0	4.1	4.1	4.2	4.2	6.6
Composite CPI of New York ⁴	1.9	2.1	2.2	2.3	2.3	2.3	3.8

¹ All indicators are percent changes except change in inventories, the unemployment rate, and interest rates; all GDP components refer to chained 2012 dollars, unless otherwise noted.

² Includes inventory valuation and capital consumption adjustments.

³ Nonagricultural employment, wage, and personal income numbers are based on CEW data.

⁴ Series created by the Division of the Budget.

Source: Moody's Analytics; NYS Department of Labor; DOB staff estimates.

Comparison of New York State Tax Structure with Other States



Comparison of New York State Tax Structure with Other States

An important consideration in State tax policy decisions, and by extension in setting Budget priorities, is the relative position of the State in terms of state and local tax rates and tax bases relative to other states.

An emphasis on tax reduction in New York over much of the past four decades has moderately reduced the disparity between New York State tax rates and burdens and those of the rest of the nation. However, local taxes in New York State remain very high relative to other states.

The data presented here suggest there is pressure on states to remain competitive with respect to tax policy. This is evidenced by the gradual clustering over time of states around the national average tax-to-income ratio. However, there is also a strong tendency for a state tax position to be highly persistent over time; this means movements towards the average have been slow. The persistence most likely reflects a combination of localized spending pressures and priorities and different state and regional attitudes towards tax policy.

Several important points on comparative tax structures can be seen by examining the accompanying tables.

Total State and Local Taxes

- Overall, state and local tax structures are broadly similar in both the taxes imposed and the rates applied. Average rates measured by the tax-to-income ratios are also roughly equivalent across states, especially when aggregating both state and local taxes.
- The variability across states within each category of tax (e.g., income, sales, or property taxes examined in isolation) is greater than the dispersion for taxes when examined in the aggregate (all state and local taxes added together). For example, a fairly large number of states have excluded the personal income tax from their fiscal policy mix; a smaller subset has excluded corporate taxes, and a few impose no sales tax.
- In general, it appears that the spread of state and local tax burdens across states has been narrowing over time. This may reflect both competitive pressures to keep taxes in line with other states, and the more widespread use of income taxes nationwide.
- The national average state and local tax-to-income ratio has remained relatively stable over time and significantly below that of New York.
- The state and local tax-to-income ratio for New York exceeded the national average by \$4.53 per \$100 of personal income, or 43.6 percent in 1977, ranking New York second nationally. In 2016, the gap was down to \$4.20 (43 percent) above the national average, ranking New York first nationally.

State Taxes

- Prior to the 2016 Executive Budget Comparison, New York's tax-to-personal income ratio had been inherently overstated. The numerator included all personal income tax receipts, whether from residents or non-residents. The denominator, as calculated by the U.S. Bureau of Economic Analysis, excluded the personal income of non-N.Y. residents. Beginning with the FY 2016 Executive Budget Comparison, an adjustment was made to add the personal income of non-New York residents that pay New York personal income tax to the denominator.
- New York is a slightly above average tax state when looking only at state taxes.
- New York's tax burden, as measured by taxes per \$100 of personal income, was \$0.40 (6.7 percent) above the national average of \$6.00 in 2016.
- New York taxes per \$100 of personal income declined from \$7.12 in 1977 to \$6.39 in 2016.
- New York's state tax rank was eleventh highest in 1977 and improved to sixteenth highest in 2016.
- Legislation enacted in 2012 that reduced the income tax rates of middle-income families, as well as legislation enacted in 2014 that reduced corporate and estate taxes, should continue to serve to lower New York's ranking in future years.

Local Taxes

- At least a portion of New York's significant local tax burden is due to the large portion of sales tax retained by New York localities. This contrasts sharply with other states and reflects, at least in part, the need at the local level in New York for receipts to pay for the local share of Medicaid.
- New York City uniquely imposes taxes that comprise a large portion of New York's total local burden. In 2016, nearly \$1.77 of New York's local burden of \$7.57 per \$100 of state personal income was due to New York City (NYC) personal and corporate income taxes. This accounted for approximately 23.4 percent of the total local burden.

Property Taxes in New York State

- Higher than average property taxes as a share of income (53 percent above the 2016 national average) in New York are tied, for the most part, to the rapid escalation in local Medicaid costs and uncapped growth in school property taxes through 2011. The property tax cap went into effect for local fiscal years beginning in 2012 for local governments and school districts (excluding NYC).

- Significant disparities exist within New York with respect to the property tax burden. Property tax burdens as a percent of median home value are felt most heavily in Upstate counties due to relative weakness in home value appreciation and other demographic factors. In fact, in 2017 three of the top ten highest property tax counties in the nation as measured by property taxes paid as a percent of a median-valued home in that county¹ (and 9 of the top 20) were in Upstate New York. This is an improvement from 2011 (before the property tax cap went into effect) when, according to this measure, seven of the top ten (and 12 of the top 20) counties were in Upstate New York.
- Mass Transportation Authority (MTA) District counties excluding New York City (Westchester, Rockland, Putnam, Orange, Dutchess, Suffolk, and Nassau) experienced high property taxes as a percent of each county's respective median household income in 2017. Using this metric, four of the ten highest property tax counties in the nation in 2017 were clustered Downstate. At least in part, this is a housing supply issue that characterizes Downstate and disproportionately affects the elderly and middle class.
- Noticeably, the five counties of New York City did not have relatively high residential property tax burdens in 2017 when compared to other New York counties. This is the result of the more diverse tax structure in the City and a large and valuable commercial property tax base.
- Chapter 97 of the Laws of 2011 generally imposed a growth cap of 2 percent on the annual property tax levy of local taxing jurisdictions. With data through 2017 available, the impact of the property tax cap can be seen as the rankings of many New York State counties based on taxes as a percentage of median home value improved compared to 2011.

Table Construction

This section compares the state and local tax structure in New York State with other states. Table 1 reports tax rates for the major tax sources utilized by state and local governments. The first and second data columns of the table show the top personal income tax rate by state, and the income level at which the top rate takes effect; the third column lists top corporate tax rates (most state corporate tax structures have relatively flat rate structures, so the rate reported often applies to all corporate income subject to tax); the fourth column reports state sales tax rates; and the final column reports the average combined state and local sales tax rates imposed by the various jurisdictions within such state. The rates are those in effect as of 2018. The income and corporate tax rates reported exclude local rates. This exclusion is important since New York is one of only a handful of states where significant local personal income and corporate taxes are imposed, as in PIT for New York City.

Tables 2 and 3 report state taxes collected by source divided by state personal income for 1977 and for 2016, respectively, with 2016 being the latest year for which complete state and local tax

¹ Source: Moodyanalytics.com; DOB Staff Estimates

Comparison of New York State Tax Structure with Other States



information is available. New York's rank in terms of state taxes fell from eleventh highest to sixteenth highest over this period.

Tables 4 and 5 report local taxes as a share of state personal income by state in 1977 and in 2016. In 2016, New York had the highest local tax burden using this measure, the same ranking it held in 1977. New York decreased from \$3.86 above the mean local tax burden in 1977 to \$3.80 in 2016. The above-average local tax burden is caused by relatively high property taxes, the large sales tax burden imposed at the local level, and the high ratio in the other category that picks up the income and corporate taxes imposed by New York City.

Tables 6a, 6b and 7 report state and locally imposed taxes as a percentage of state personal income. The data used in the calculations are for fiscal years ending in 1977 and 2016. The tax-to-income ratios included on table 7 are: state and local income taxes, state and local corporate taxes, state and local sales taxes, local property taxes, all other state and local taxes, and finally combined state and local taxes.

Table 8a reports changes in the state tax-to-income ratio over the 1977-2016 period. During this time, New York's state tax burden fell relative to the mean, and has been below the mean for all but seven of the last twenty-eight recorded years, though these seven years have all occurred since 2009. These results reflect the State's temporary high-income Personal Income Tax (PIT) bracket first imposed in 2009. Table 8b reports changes in the state and local tax-to-income ratio over the 1977-2016 period. In 1977, New York state and local taxes as a percent of personal income were 4.53 percentage points above the national average. In 2016, New York was 4.20 percentage points above the national average. The average state and local tax-to-income ratio in 2016 has declined by 6 percent compared to 1977, while the New York ratio has declined 6.4 percent over the same period. In every year since 1977, New York has been at least 2.03 percentage points above the mean.

The bottom of tables 1-7 report the mean for each tax category, as well as the standard deviation and the Coefficient of Variation (CV). Additionally, the difference between the national average and New York values is reported. While the standard deviation provides a sense of how the data are dispersed around the average value for all states, the CV allows comparisons of spread for data with different averages and is defined simply as the standard deviation divided by the average and is reported as a percentage. It essentially provides a normalized, unit-free measure of dispersion.

Table 9 reports U.S. Census Bureau data on county-level property tax collections on owner-occupied housing for the 39 New York State counties, out of a total of 806 U.S. counties that had populations of at least 65,000 as of July 1, 2017. The data has been compiled and calculated by DOB based on the methodology used by the Tax Foundation in prior years' reports. Table 9 is sorted by county, in descending order of median property taxes paid on homes in that county as a percentage of the same county's median home value. Median values report the data point for which half of the data set values are higher and half lower. They differ from mean values (the sum of all observations divided by the number of observations) in that outlying values, such as particularly expensive homes, do not skew the computation. The rankings reported indicate the



Comparison of New York State Tax Structure with Other States

relative ordering of the counties with respect to the 806 U.S. counties covered, and are not relative solely to the counties of New York State.

The Tax-to-Income Percentage

The tax-to-personal-income percentage offers one simple and commonly used way of comparing states with respect to relative tax burdens. It must be noted that the real effort of tax burden analysis should be to determine who actually faces the economic consequences of a tax, not who is legally required to pay the tax. All simple measures of tax burden across states are inadequate from this perspective. In general, any single indicator of burden will necessarily be limited in value. The following three additional issues should be taken into consideration when relying on this measure:

Tax Exportation

In using taxes per dollar of personal income as a measure of tax burden it must be noted that for many states a significant portion of the tax base is “exported” or paid by out-of-state taxpayers.

For example, in New York, a large number of workers from New Jersey and Connecticut pay tax on New York source income and on taxable sales while in New York. This means that, unless a portion of Connecticut’s and New Jersey’s personal income is also shifted to New York State; the actual burden on New Jersey residents will appear to be a burden on New York residents. Beginning with the FY 2016 Executive Budget Comparison, a residence adjustment has been made to the personal income calculation for each state. The denominator now includes New York source income earned by non-New York residents. The same adjustment has been made for all 50 states.

One example of tax exportation can be seen in states with a large tourism economy. These states will realize increases in their sales tax collections and other excise taxes that may overstate the tax burden actually paid by their citizens.

Another example is that methods used to apportion corporate taxable income are neither consistent across states, nor are they necessarily representative of actual activity. For example, some states use a three-factor allocation formula that takes into account the percentage of a taxpayer’s property, payroll and receipts amounts in the state compared to those amounts everywhere. Other states use different formulas. These differences in allocation formulas could result in either tax importation or exportation, again distorting this measure as a method of comparison of true tax burden imposed on each state’s residents.

Overall, it would seem likely that New York State is a net exporter of tax burdens relative to other states. This serves to bias the tax-to-income percentage for New York upward – making burdens in New York appear too high using this measure. The inclusion of the residence adjustment has helped rectify one of the tax exportation issues facing New York.

Income Adjustments

Given two states with identical marginal tax rate structures, differences in the incomes of individuals could yield different tax-to-income percentage results. For example, if New York State and Alabama had identical progressive income brackets built into their respective tax codes, the higher average personal incomes of New York State residents would tend to lead to higher taxes per dollar of personal income due to the nature of the income tax.

Particularly important is the distinction between the National Income and Product Account (NIPA) measure of personal income as defined by the Bureau of Economic Analysis (BEA), and taxable personal income as defined by each state's respective tax code. For example, the NIPA personal income measure does not include capital gains (by the definition of personal income). However, capital gains are a component of New York Adjusted Gross Income (NYAGI) that contributes significantly to personal income tax receipts in New York State. States with high income individuals, like New York, would be more likely to have the tax-to-income percentage distorted upward. In the gains example, the percentage of personal income used in Table 2 will be influenced because the numerator will include taxes on capital gains income that is not included in the denominator, effectively overstating the tax burden relative to other states since New York has a disproportionate share of taxpayers with large capital gains incomes.

Federal Offsets

The Federal tax structure allows for the deductibility of certain state and local taxes. Following the 2017 Federal Tax Reform, taxpayers can deduct only up to \$10,000 of their state and local taxes. Residents of states with relatively higher state income, property and corporate tax burdens, such as New York State, receive a larger deduction, thereby offsetting a portion of the individual's total tax burden. Again, this is not reflected in the tax-to-income percentage reported here. So again, it would appear this serves to bias the measure in a way that makes New York look like a relatively higher tax state than is actually the case.

With all three issues, the tax-to-income percentage calculation likely biases the tax burden in New York upward.



Comparison of New York State Tax Structure with Other States

Table 1 - Comparison of 2018 State Top Rates

State	Top PIT Rate	Highest Tax Bracket (Married Filing Joint)	Top Corp. Rate	State Sales Rate	Combined State and Local Sales Tax Rate ¹
Alabama	5	\$6,000	6.5	4	9.10
Alaska	-	NA	9.4	-	1.76
Arizona	4.54	\$310,317	4.9	5.6	8.33
Arkansas	6.9	\$35,099	6.5	6.5	9.4
California	13.3	\$1,074,996	8.84	7.25	8.54
Colorado	4.63	Flat Rate	4.63	2.9	7.5
Connecticut	6.99	\$1,000,000	8.25	6.35	6.35
Delaware	6.6	\$60,000	8.7	-	-
Florida	-	NA	5.5	6	6.8
Georgia	6	\$10,000	6	4	7
Hawaii	11	\$400,000	6.4	4	4.35
Idaho	7.4	\$22,086	7.4	6	6.03
Illinois	4.95	Flat Rate	9.5	6.25	8.70
Indiana	3.23	Flat Rate	6	7	7
Iowa	8.98	\$71,910	12	6	6.8
Kansas	5.7	\$60,000	7	6.5	8.68
Kentucky	6	\$75,000	6	6	6
Louisiana	6	\$100,000	8	5	10.02
Maine	7.15	\$101,550	8.93	5.5	5.5
Maryland	5.75	\$300,000	8.25	6	6
Massachusetts	5.1	Flat Rate	8	6.25	6.25
Michigan	4.25	Flat Rate	6	6	6
Minnesota	9.85	\$266,700	9.8	6.875	7.4
Mississippi	5	\$10,000	5	7	7.07
Missouri	5.9	\$9,072	6.25	4.225	8.03
Montana	6.9	\$17,900	6.75	-	-
Nebraska	6.84	\$60,480	7.81	5.5	6.89
Nevada	-	NA	-	6.85	8.14
New Hampshire	5	Flat Rate	8.2	-	-
New Jersey	8.97	\$500,000	9	6.625	6.60
New Mexico	4.9	\$24,000	5.9	5.125	7.66
New York	8.82	\$2,155,350	6.5	4	8.49
North Carolina	5.499	Flat Rate	3	4.75	7.0
North Dakota	2.9	\$424,950	4.31	5	6.80
Ohio	4.997	\$213,350	-	5.75	7.15
Oklahoma	5	\$12,200	6	4.5	8.91
Oregon	9.9	\$250,000	7.6	-	-
Pennsylvania	3.07	Flat Rate	9.99	6	6.34
Rhode Island	5.99	\$149,150	7	7	7
South Carolina	7	\$14,860	5	6	7.37
South Dakota	-	NA	-	4.5	6.40
Tennessee	3.00	Flat Rate	6.5	7	9.46
Texas	-	NA	-	6.25	8.17
Utah	5	Flat Rate	5	5.95	6.77
Vermont	8.95	\$416,650	8.5	6	6.18
Virginia	5.75	\$17,000	6	5.3	5.63
Washington	-	NA	-	6.5	9.18
West Virginia	6.5	\$60,000	6.5	6	6.37
Wisconsin	7.65	\$329,810	7.9	5	5.42
Wyoming	-	NA	-	4	5.5
Mean Values	5.46		6.22	5.10	6.52
Standard Deviation	2.97		2.83	1.96	2.39
Coefficient of Variation	54.51		45.41	38.40	36.66

"-" indicates either no tax or a tax that is not strictly comparable is imposed.
¹Source: Tax Foundation as of January 1, 2018. Reflects combined state and average local rate for each state.

Comparison of New York State Tax Structure with Other States



Table 2 - 1977 Components and Percentage of Total State Tax Burden per \$100 Personal Income

State	Total State Taxes		PIT			Sales and Use			Corporate			Other		
	Taxes	Rank	Percent of Total	Rank	Percent of Total	Rank	Percent of Total	Rank	Percent of Total	Rank	Percent of Total	Rank	Percent of Total	
Alabama	6.37	26	1.19	33	18.7	4.12	10	64.7	0.34	38	5.4	0.71	27	11.2
Alaska	14.12	1	3.84	1	27.2	1.20	49	8.5	0.65	10	4.6	8.42	1	59.7
Arizona	7.02	12	1.15	34	16.4	4.30	7	61.2	0.31	40	4.5	1.25	10	17.9
Arkansas	6.34	27	1.29	28	20.4	3.87	15	61.1	0.53	21	8.4	0.64	32	10.1
California	6.50	24	1.87	18	28.8	3.10	33	47.7	0.85	5	13.0	0.68	31	10.5
Colorado	5.16	44	1.62	20	31.5	2.64	41	51.1	0.39	31	7.5	0.52	42	10.0
Connecticut	5.63	36	0.23	42	4.1	4.07	12	72.3	0.78	6	13.8	0.55	38	9.8
Delaware	8.04	5	3.45	2	43.0	1.42	48	17.6	0.60	14	7.4	2.57	3	31.9
Florida	5.10	45	0.00	45	0.0	3.76	19	73.8	0.30	41	5.9	1.04	15	20.3
Georgia	5.73	34	1.49	24	26.0	3.41	24	59.5	0.51	22	9.0	0.32	49	5.5
Hawaii	8.49	2	2.51	9	29.6	5.51	2	64.9	0.34	39	4.0	0.13	50	1.5
Idaho	6.32	28	1.93	15	30.6	3.03	35	47.8	0.53	20	8.4	0.83	22	13.2
Illinois	5.56	38	1.48	25	26.6	3.15	29	56.7	0.40	29	7.2	0.53	40	9.5
Indiana	5.66	35	1.25	31	22.2	3.75	20	66.2	0.23	44	4.0	0.43	47	7.6
Iowa	6.08	30	2.11	13	34.6	2.69	38	44.3	0.43	27	7.1	0.85	20	14.0
Kansas	5.83	33	1.26	29	21.6	3.13	31	53.7	0.74	9	12.7	0.70	29	12.0
Kentucky	7.14	10	1.55	22	21.7	3.83	16	53.7	0.60	13	8.4	1.16	13	16.2
Louisiana	6.90	15	0.54	40	7.8	3.42	23	49.5	0.38	32	5.5	2.56	4	37.1
Maine	6.73	21	1.08	37	16.0	4.25	8	63.2	0.51	23	7.5	0.89	18	13.3
Maryland	6.87	17	2.60	8	37.9	3.19	28	46.5	0.37	35	5.4	0.70	30	10.2
Massachusetts	6.57	22	2.67	7	40.6	2.63	42	40.1	0.89	2	13.5	0.38	48	5.8
Michigan	6.75	20	2.04	14	30.3	3.02	36	44.7	1.10	1	16.3	0.59	35	8.8
Minnesota	8.25	3	3.18	4	38.5	3.26	26	39.6	0.86	4	10.4	0.95	17	11.6
Mississippi	7.49	8	1.02	38	13.6	5.42	3	72.3	0.35	37	4.7	0.70	28	9.4
Missouri	4.54	47	1.11	36	24.4	2.64	40	58.2	0.30	42	6.6	0.49	44	10.8
Montana	6.00	31	2.15	12	35.8	1.59	47	26.6	0.48	26	8.0	1.78	7	29.6
Nebraska	5.45	40	1.52	23	27.8	3.05	34	56.0	0.37	34	6.8	0.51	43	9.3
Nevada	5.50	39	0.00	45	0.0	4.30	6	78.2	0.00	47	0.0	1.20	12	21.8
New Hampshire	3.53	50	0.12	43	3.5	2.01	46	56.9	0.57	16	16.3	0.82	24	23.3
New Jersey	5.32	42	1.22	32	22.9	2.70	37	50.8	0.57	17	10.7	0.83	23	15.6
New Mexico	7.72	7	0.34	41	4.5	4.86	5	62.9	0.38	33	4.9	2.14	5	27.7
New York	7.12	11	3.00	5	42.1	2.63	43	36.9	0.86	3	12.1	0.64	33	8.9
North Carolina	6.82	18	2.24	11	32.8	3.23	27	47.3	0.58	15	8.6	0.77	26	11.3
North Dakota	6.77	19	1.26	30	18.6	3.77	18	55.7	0.50	24	7.4	1.25	11	18.4
Ohio	4.44	49	0.76	39	17.2	2.65	39	59.7	0.39	30	8.8	0.63	34	14.2
Oklahoma	5.98	32	1.14	35	19.0	2.59	45	43.3	0.37	36	6.2	1.88	6	31.4
Oregon	5.19	43	3.00	6	57.7	0.85	50	16.4	0.49	25	9.4	0.86	19	16.5
Pennsylvania	6.26	29	1.32	27	21.1	3.14	30	50.2	0.75	8	11.9	1.05	14	16.8
Rhode Island	6.54	23	1.55	21	23.6	3.80	17	58.1	0.61	12	9.3	0.59	36	9.0
South Carolina	6.88	16	1.68	19	24.5	4.12	11	59.8	0.62	11	9.0	0.46	46	6.7
South Dakota	4.47	48	0.00	45	0.0	3.89	14	86.9	0.06	46	1.3	0.53	41	11.8
Tennessee	5.59	37	0.08	44	1.5	4.13	9	73.9	0.57	18	10.2	0.81	25	14.5
Texas	5.07	46	0.00	45	0.0	3.40	25	67.0	0.00	47	0.0	1.68	9	33.0
Utah	6.37	25	1.90	16	29.8	3.69	21	57.9	0.30	43	4.7	0.49	45	7.7
Vermont	7.46	9	2.28	10	30.6	3.66	22	49.1	0.55	19	7.4	0.96	16	12.9
Virginia	5.44	41	1.89	17	34.8	2.59	44	47.7	0.42	28	7.7	0.54	39	9.8
Washington	7.00	13	0.00	45	0.0	5.30	4	75.7	0.00	47	0.0	1.70	8	24.3
West Virginia	7.80	6	1.42	26	18.2	5.60	1	71.7	0.20	45	2.6	0.58	37	7.4
Wisconsin	8.13	4	3.40	3	41.9	3.13	32	38.5	0.75	7	9.2	0.85	21	10.4
Wyoming	6.91	14	0.00	45	0.0	3.93	13	56.8	0.00	47	0.0	2.99	2	43.2
Mean	6.46		1.49		22.4	3.39		54.1	0.47		7.5	1.10		16.1
Standard Deviation	1.52		1.00			1.02			0.24			1.21		
Coefficient of Variation	23.52		66.79			29.97			50.97			109.53		
NYS Diff. from Mean	0.66		1.51		19.7	(0.76)		(17.2)	0.38		4.6	(0.47)		(7.2)

Source: Moody's Economy.com, U.S. Census Bureau



Comparison of New York State Tax Structure with Other States

Table 3 - 2016 Components and Percentage of Total State Tax Burden per \$100 Personal Income

State	Total State Taxes		PIT			Sales and Use			Corporate			Other		
	Taxes	Rank	PIT	Rank	Percent of Total	and Use	Rank	Percent of Total	Corporate	Rank	Percent of Total	Other	Rank	Percent of Total
Alabama	5.26	36	1.85	31	35.2	2.71	28	51.5	0.20	38	3.8	0.50	32	9.5
Alaska	2.50	50	0.00	44	0.0	0.63	50	25.0	0.51	6	20.4	1.37	7	54.6
Arizona	5.25	37	1.42	40	27.0	3.11	23	59.1	0.20	36	3.9	0.52	29	9.9
Arkansas	7.95	5	2.34	22	29.4	3.86	6	48.6	0.38	12	4.8	1.37	6	17.3
California	6.87	10	3.57	4	52.0	2.36	37	34.4	0.44	10	6.4	0.50	33	7.2
Colorado	4.44	45	2.25	26	50.7	1.70	44	38.3	0.22	35	4.9	0.27	46	6.1
Connecticut	6.44	15	3.19	5	49.6	2.60	31	40.3	0.30	21	4.7	0.35	43	5.4
Delaware	7.31	8	2.31	24	31.6	1.12	48	15.3	0.66	2	9.0	3.22	4	44.1
Florida	3.96	48	0.00	44	0.0	3.20	17	80.8	0.24	30	6.0	0.52	31	13.1
Georgia	4.86	41	2.37	20	48.7	1.91	43	39.2	0.22	33	4.6	0.37	42	7.6
Hawaii	9.52	2	2.91	7	30.6	5.94	1	62.4	0.15	41	1.6	0.52	30	5.5
Idaho	6.30	18	2.28	25	36.2	3.17	20	50.3	0.28	23	4.5	0.57	26	9.0
Illinois	5.75	30	2.04	29	35.5	2.74	27	47.6	0.50	7	8.7	0.47	34	8.2
Indiana	6.21	21	1.84	33	29.7	3.74	7	60.3	0.37	14	5.9	0.26	48	4.1
Iowa	6.63	13	2.47	17	37.2	3.19	19	48.1	0.26	26	3.9	0.72	18	10.8
Kansas	5.88	26	1.63	37	27.7	3.16	22	53.7	0.29	22	4.9	0.81	16	13.8
Kentucky	6.66	12	2.42	18	36.4	3.17	21	47.6	0.34	15	5.2	0.73	17	10.9
Louisiana	4.65	42	1.43	39	30.8	2.67	30	57.5	0.09	44	1.8	0.46	36	9.9
Maine	7.05	9	2.65	12	37.6	3.55	11	50.3	0.23	31	3.3	0.62	22	8.8
Maryland	6.31	17	2.57	16	40.8	2.70	29	42.8	0.34	16	5.4	0.70	19	11.0
Massachusetts	6.02	25	3.18	6	52.9	1.92	42	31.8	0.51	5	8.6	0.40	41	6.7
Michigan	6.20	22	2.10	28	33.9	2.99	24	48.3	0.20	37	3.3	0.90	13	14.6
Minnesota	8.61	4	3.67	2	42.6	3.46	12	40.2	0.52	4	6.0	0.96	12	11.2
Mississippi	7.39	7	1.74	35	23.5	4.61	3	62.4	0.45	8	6.0	0.60	24	8.1
Missouri	4.53	44	2.23	27	49.2	1.96	40	43.3	0.12	43	2.7	0.22	49	4.8
Montana	5.78	28	2.60	15	44.9	1.24	47	21.4	0.26	25	4.5	1.68	5	29.1
Nebraska	5.34	35	2.34	21	43.9	2.47	35	46.2	0.32	18	6.0	0.21	50	3.9
Nevada	6.13	23	0.00	44	0.0	4.85	2	79.1	0.00	47	0.0	1.28	8	20.9
New Hampshire	3.76	49	0.13	42	3.3	1.40	46	37.2	1.00	1	26.5	1.24	10	33.0
New Jersey	6.21	20	2.63	13	42.3	2.59	32	41.8	0.44	9	7.1	0.55	27	8.8
New Mexico	6.73	11	1.74	36	25.8	3.61	8	53.6	0.14	42	2.1	1.24	9	18.5
New York	6.39	16	3.65	3	57.2	1.95	41	30.5	0.33	17	5.1	0.46	35	7.2
North Carolina	6.02	24	2.77	11	46.0	2.56	33	42.6	0.25	29	4.1	0.45	38	7.4
North Dakota	8.88	3	0.84	41	9.5	3.59	10	40.4	0.25	28	2.8	4.21	1	47.4
Ohio	5.44	34	1.55	38	28.5	3.45	13	63.5	0.01	46	0.1	0.43	39	7.9
Oklahoma	5.16	38	1.82	34	35.3	2.29	39	44.5	0.20	39	3.9	0.84	15	16.3
Oregon	5.69	31	3.96	1	69.6	0.79	49	13.9	0.31	20	5.5	0.62	21	11.0
Pennsylvania	5.77	29	1.84	32	31.9	2.98	25	51.6	0.38	11	6.6	0.57	25	10.0
Rhode Island	6.26	19	2.37	19	37.9	3.19	18	51.0	0.28	24	4.4	0.42	40	6.7
South Carolina	4.87	40	1.97	30	40.5	2.36	38	48.4	0.22	32	4.6	0.32	44	6.5
South Dakota	4.18	46	0.00	44	0.0	3.44	14	82.4	0.08	45	1.9	0.66	20	15.7
Tennessee	4.55	43	0.11	43	2.4	3.30	16	72.5	0.52	3	11.5	0.62	23	13.6
Texas	4.04	47	0.00	44	0.0	3.60	9	88.9	0.00	47	0.0	0.45	37	11.1
Utah	5.51	33	2.63	14	47.6	2.36	36	42.8	0.26	27	4.7	0.27	47	4.8
Vermont	9.88	1	2.34	23	23.7	3.30	15	33.4	0.31	19	3.2	3.93	2	39.7
Virginia	4.95	39	2.85	8	57.7	1.61	45	32.5	0.18	40	3.5	0.31	45	6.3
Washington	5.57	32	0.00	44	0.0	4.41	4	79.2	0.00	47	0.0	1.16	11	20.8
West Virginia	7.78	6	2.80	9	36.0	3.89	5	50.1	0.22	34	2.8	0.87	14	11.1
Wisconsin	6.52	14	2.77	10	42.5	2.86	26	43.9	0.37	13	5.6	0.52	28	8.0
Wyoming	5.85	27	0.00	44	0.0	2.51	34	42.9	0.00	47	0.0	3.34	3	57.1
Mean	6.00		1.96		31.9	2.85		48.3	0.29		5.1	0.89		14.7
Standard Deviation	1.42		1.08			1.01			0.18			0.89		
Coefficient of Variation	23.76		55.26			35.42			63.16			100.08		
NYS Diff. from Mean	0.40		1.69		25.3	(0.91)		(17.8)	0.04		0.0	(0.43)		(7.5)

Source: Moody's Economy.com, U.S. Census Bureau

Comparison of New York State Tax Structure with Other States



Table 4 - 1977 Components and Percentage of Total Local Taxes Per \$100 of Personal Income

State	Total		Property			Sales			Other		
	Total	Rank	Property	Rank	Percent of Total	Sales	Rank	Percent of Total	Other	Rank	Percent of Total
Alabama	2.14	47	0.87	50	40.6	0.89	4	41.6	0.38	8	17.9
Alaska	2.94	39	2.31	36	78.6	0.59	14	20.0	0.04	48	1.4
Arizona	4.62	15	3.78	19	81.8	0.74	10	16.0	0.11	31	2.3
Arkansas	2.00	48	1.82	44	90.9	0.12	29	6.1	0.06	41	3.0
California	5.83	4	4.97	8	85.2	0.64	13	11.0	0.22	16	3.8
Colorado	5.16	10	3.91	17	75.9	1.09	3	21.0	0.16	21	3.1
Connecticut	4.99	12	4.95	9	99.1	0.00	44	0.0	0.04	45	0.9
Delaware	1.89	49	1.61	46	85.0	0.00	42	0.2	0.28	12	14.7
Florida	3.19	35	2.69	31	84.4	0.39	20	12.1	0.11	28	3.5
Georgia	3.55	31	2.89	30	81.3	0.54	17	15.2	0.12	26	3.5
Hawaii	2.31	43	1.85	43	80.1	0.22	25	9.4	0.24	15	10.5
Idaho	3.07	37	2.99	28	97.3	0.02	37	0.8	0.06	40	2.0
Illinois	4.52	16	3.70	20	81.9	0.65	12	14.5	0.16	20	3.6
Indiana	3.38	33	3.26	24	96.6	0.01	41	0.1	0.11	30	3.3
Iowa	4.11	20	3.98	16	96.9	0.01	39	0.2	0.12	27	2.9
Kansas	4.33	19	4.08	14	94.1	0.16	27	3.8	0.09	33	2.1
Kentucky	2.37	42	1.59	47	66.9	0.11	31	4.6	0.68	5	28.5
Louisiana	3.12	36	1.52	49	48.5	1.47	1	47.1	0.14	24	4.4
Maine	3.57	29	3.54	22	99.3	0.00	45	0.0	0.03	50	0.7
Maryland	4.98	13	3.24	25	65.1	0.22	24	4.4	1.51	1	30.4
Massachusetts	6.40	3	6.36	1	99.4	0.00	45	0.0	0.04	49	0.6
Michigan	4.37	18	4.01	15	91.6	0.04	35	1.0	0.32	11	7.4
Minnesota	3.72	27	3.57	21	96.0	0.07	33	2.0	0.08	36	2.1
Mississippi	2.28	44	2.16	38	94.5	0.08	32	3.7	0.04	47	1.8
Missouri	3.79	25	2.64	33	69.8	0.77	7	20.2	0.38	9	9.9
Montana	5.18	8	4.98	7	96.1	0.00	45	0.0	0.20	17	3.9
Nebraska	5.41	6	5.04	6	93.3	0.24	22	4.4	0.13	25	2.3
Nevada	3.96	22	2.67	32	67.5	0.74	9	18.7	0.55	6	13.9
New Hampshire	5.75	5	5.64	3	98.1	0.00	45	0.0	0.11	29	1.9
New Jersey	6.48	2	5.85	2	90.1	0.55	16	8.5	0.09	35	1.3
New Mexico	1.87	50	1.53	48	81.7	0.21	26	11.0	0.14	23	7.4
New York	7.79	1	5.33	4	68.4	1.45	2	18.7	1.00	3	12.9
North Carolina	2.55	41	2.10	41	82.4	0.40	19	15.5	0.05	42	2.0
North Dakota	3.40	32	3.28	23	96.5	0.02	38	0.6	0.10	32	3.0
Ohio	3.99	21	3.04	27	76.3	0.14	28	3.5	0.81	4	20.3
Oklahoma	2.88	40	2.02	42	70.0	0.81	6	28.3	0.05	43	1.7
Oregon	4.95	14	4.56	12	92.3	0.11	30	2.2	0.27	13	5.5
Pennsylvania	3.90	24	2.58	35	66.2	0.03	36	0.9	1.28	2	32.9
Rhode Island	4.44	17	4.40	13	99.1	0.00	45	0.0	0.04	46	0.9
South Carolina	2.26	45	2.11	40	93.2	0.00	43	0.1	0.15	22	6.7
South Dakota	5.20	7	4.71	10	90.6	0.24	23	4.6	0.25	14	4.9
Tennessee	3.27	34	2.22	37	67.9	0.86	5	26.3	0.19	18	5.8
Texas	3.66	28	3.14	26	85.8	0.45	18	12.2	0.07	37	2.0
Utah	3.56	30	2.91	29	81.8	0.56	15	15.7	0.09	34	2.6
Vermont	5.17	9	5.10	5	98.7	0.00	45	0.0	0.07	39	1.3
Virginia	3.75	26	2.59	34	69.0	0.75	8	19.9	0.42	7	11.1
Washington	3.02	38	2.12	39	69.9	0.73	11	24.2	0.18	19	5.9
West Virginia	2.18	46	1.78	45	81.8	0.06	34	2.8	0.33	10	15.3
Wisconsin	3.94	23	3.89	18	98.7	0.01	40	0.1	0.05	44	1.2
Wyoming	5.07	11	4.66	11	92.0	0.33	21	6.6	0.07	38	1.4
Mean	3.93		3.33		83.8	0.35		9.6	0.24		6.6
Standard Deviation	1.31		1.31			0.38			0.31		
CV	33.43		39.41			109.40			126.26		
NYS Diff. from Mean	3.86		2.00		(15.3)	1.10		9.1	0.76		6.3

Source: Moody's Economy.com, U.S. Census Bureau

Note: "Other" includes NYC imposed taxes and other categories.



Comparison of New York State Tax Structure with Other States

Table 5 - 2016 Components and Percentage of Total Local Taxes Per \$100 of Personal Income

State	Total		Property			Sales			Other		
	Total	Rank	Property	Rank	Percent of Total	Sales	Rank	Percent of Total	Other	Rank	Percent of Total
Alabama	3.00	40	1.23	49	40.9	1.35	5	44.9	0.43	10	14.2
Alaska	4.28	14	3.38	13	78.8	0.81	19	18.9	0.10	30	2.3
Arizona	3.60	29	2.29	35	63.5	1.16	10	32.2	0.16	23	4.3
Arkansas	2.00	49	0.85	50	42.4	1.12	11	56.1	0.03	50	1.5
California	3.70	25	2.60	28	70.3	0.83	17	22.5	0.27	18	7.2
Colorado	4.42	12	2.73	24	61.7	1.50	2	34.0	0.19	20	4.3
Connecticut	4.50	10	4.43	5	98.5	0.00	50	0.0	0.07	45	1.5
Delaware	2.09	48	1.70	46	81.2	0.03	46	1.6	0.36	13	17.2
Florida	3.60	30	2.75	23	76.3	0.63	25	17.6	0.22	19	6.1
Georgia	3.69	26	2.49	31	67.5	1.09	12	29.6	0.11	27	2.9
Hawaii	3.19	34	2.24	38	70.2	0.62	26	19.4	0.33	14	10.4
Idaho	2.54	47	2.37	33	93.5	0.07	42	2.6	0.10	31	3.9
Illinois	4.98	5	4.01	7	80.6	0.83	18	16.6	0.14	25	2.7
Indiana	2.86	46	2.26	37	79.1	0.08	40	2.7	0.52	6	18.2
Iowa	3.98	18	3.44	11	86.4	0.40	30	10.1	0.14	24	3.5
Kansas	3.66	27	2.68	26	73.1	0.89	15	24.3	0.09	34	2.6
Kentucky	2.93	44	1.62	48	55.2	0.39	31	13.2	0.92	5	31.5
Louisiana	4.45	11	2.04	41	45.9	2.30	1	51.8	0.10	29	2.3
Maine	4.77	7	4.72	4	98.9	0.01	48	0.2	0.04	48	0.8
Maryland	4.66	8	2.59	29	55.6	0.25	33	5.4	1.82	1	39.0
Massachusetts	3.72	23	3.55	10	95.4	0.09	39	2.4	0.08	39	2.3
Michigan	2.96	41	2.71	25	91.6	0.06	43	2.1	0.19	21	6.3
Minnesota	2.89	45	2.67	27	92.3	0.12	37	4.3	0.10	32	3.4
Mississippi	3.01	39	2.82	21	93.5	0.11	38	3.7	0.08	38	2.8
Missouri	3.77	22	2.18	39	57.8	1.19	8	31.7	0.40	11	10.5
Montana	2.96	43	2.86	20	96.5	0.02	47	0.7	0.08	42	2.8
Nebraska	4.79	6	3.80	9	79.4	0.50	27	10.5	0.48	8	10.1
Nevada	3.47	31	2.02	42	58.1	1.16	9	33.4	0.29	16	8.5
New Hampshire	5.40	3	5.35	2	99.0	0.00	49	0.1	0.05	47	0.9
New Jersey	5.65	2	5.53	1	97.8	0.04	45	0.7	0.08	41	1.5
New Mexico	3.27	33	1.84	44	56.4	1.34	6	40.9	0.09	37	2.7
New York	7.57	1	4.34	6	57.3	1.46	3	19.3	1.77	2	23.4
North Carolina	3.13	35	2.28	36	72.8	0.75	21	23.9	0.10	28	3.3
North Dakota	3.11	36	2.34	34	75.0	0.69	22	22.3	0.08	40	2.7
Ohio	4.42	13	2.78	22	63.1	0.50	28	11.2	1.14	3	25.7
Oklahoma	3.08	38	1.66	47	54.1	1.35	4	43.9	0.06	46	2.0
Oregon	3.80	21	3.03	15	79.7	0.28	32	7.3	0.49	7	13.0
Pennsylvania	4.21	15	2.91	18	69.1	0.21	34	5.0	1.09	4	25.9
Rhode Island	5.02	4	4.89	3	97.5	0.06	44	1.1	0.07	44	1.4
South Carolina	3.82	20	2.93	17	76.7	0.42	29	10.9	0.48	9	12.4
South Dakota	3.93	19	2.87	19	73.0	0.97	13	24.6	0.09	35	2.4
Tennessee	2.96	42	1.89	43	63.9	0.94	14	31.7	0.13	26	4.4
Texas	4.66	9	3.81	8	81.9	0.76	20	16.4	0.08	43	1.8
Utah	3.36	32	2.41	32	71.9	0.85	16	25.3	0.10	33	2.8
Vermont	1.90	50	1.79	45	94.2	0.07	41	3.9	0.04	49	1.9
Virginia	4.00	17	3.03	16	75.6	0.66	23	16.5	0.31	15	7.9
Washington	3.62	28	2.10	40	57.9	1.26	7	34.7	0.27	17	7.3
West Virginia	3.09	37	2.53	30	81.9	0.18	36	5.8	0.38	12	12.3
Wisconsin	3.70	24	3.42	12	92.4	0.20	35	5.3	0.09	36	2.3
Wyoming	4.06	16	3.24	14	79.8	0.65	24	16.1	0.17	22	4.1
Mean	3.76		2.84		75.1	0.63		17.2	0.30		7.7
Standard Deviation	0.99		0.99			0.52			0.39		
CV	26.26		35.01			83.65			130.85		
NYS Diff. from Mean	3.80		1.50		(17.8)	0.84		2.2	1.47		15.7

Source: Moody's Economy.com, U.S. Census Bureau

Note: "Other" includes NYC imposed taxes and all other categories.

Comparison of New York State Tax Structure with Other States



Table 6a - State/Local Split of 1977 Tax-to-Income Ratio

State	State Taxes	Local Taxes	State/Local Total	Total Rank
Alabama	6.37	2.14	8.51	46
Alaska	14.12	2.94	17.05	1
Arizona	7.02	4.62	11.64	11
Arkansas	6.34	2.00	8.34	48
California	6.50	5.83	12.33	5
Colorado	5.16	5.16	10.32	18
Connecticut	5.63	4.99	10.62	17
Delaware	8.04	1.89	9.93	30
Florida	5.10	3.19	8.29	50
Georgia	5.73	3.55	9.29	38
Hawaii	8.49	2.31	10.80	16
Idaho	6.32	3.07	9.40	36
Illinois	5.56	4.52	10.08	25
Indiana	5.66	3.38	9.03	42
Iowa	6.08	4.11	10.19	20
Kansas	5.83	4.33	10.16	22
Kentucky	7.14	2.37	9.51	34
Louisiana	6.90	3.12	10.02	27
Maine	6.73	3.57	10.30	19
Maryland	6.87	4.98	11.84	9
Massachusetts	6.57	6.40	12.97	3
Michigan	6.75	4.37	11.12	13
Minnesota	8.25	3.72	11.97	8
Mississippi	7.49	2.28	9.77	31
Missouri	4.54	3.79	8.33	49
Montana	6.00	5.18	11.19	12
Nebraska	5.45	5.41	10.85	15
Nevada	5.50	3.96	9.45	35
New Hampshire	3.53	5.75	9.28	39
New Jersey	5.32	6.48	11.81	10
New Mexico	7.72	1.87	9.60	33
New York	7.12	7.79	14.91	2
North Carolina	6.82	2.55	9.36	37
North Dakota	6.77	3.40	10.17	21
Ohio	4.44	3.99	8.43	47
Oklahoma	5.98	2.88	8.86	44
Oregon	5.19	4.95	10.14	24
Pennsylvania	6.26	3.90	10.16	23
Rhode Island	6.54	4.44	10.98	14
South Carolina	6.88	2.26	9.14	41
South Dakota	4.47	5.20	9.68	32
Tennessee	5.59	3.27	8.87	43
Texas	5.07	3.66	8.74	45
Utah	6.37	3.56	9.93	29
Vermont	7.46	5.17	12.62	4
Virginia	5.44	3.75	9.19	40
Washington	7.00	3.02	10.03	26
West Virginia	7.80	2.18	9.98	28
Wisconsin	8.13	3.94	12.07	6
Wyoming	6.91	5.07	11.98	7
Mean Values	6.46	3.93	10.38	
Standard Deviation	1.52	1.31	1.66	
Coefficient of Variation	23.52	33.43	15.94	
NYS Diff. from Avg.	0.66	3.86	4.53	

Source: Moody's Economy.com, U.S. Census Bureau



Comparison of New York State Tax Structure with Other States

Table 6b - State/Local Split of 2016 Tax-to-Income Ratio

State	State Taxes	Local Taxes	State/Local Total	Total Rank
Alabama	5.26	3.00	8.26	45
Alaska	2.50	4.28	6.79	50
Arizona	5.25	3.60	8.86	38
Arkansas	7.95	2.00	9.94	20
California	6.87	3.70	10.56	14
Colorado	4.44	4.42	8.86	37
Connecticut	6.44	4.50	10.94	10
Delaware	7.31	2.09	9.40	28
Florida	3.96	3.60	7.56	48
Georgia	4.86	3.69	8.55	43
Hawaii	9.52	3.19	12.72	2
Idaho	6.30	2.54	8.84	39
Illinois	5.75	4.98	10.73	12
Indiana	6.21	2.86	9.07	34
Iowa	6.63	3.98	10.61	13
Kansas	5.88	3.66	9.55	26
Kentucky	6.66	2.93	9.58	25
Louisiana	4.65	4.45	9.10	33
Maine	7.05	4.77	11.82	5
Maryland	6.31	4.66	10.97	9
Massachusetts	6.02	3.72	9.73	23
Michigan	6.20	2.96	9.17	30
Minnesota	8.61	2.89	11.50	7
Mississippi	7.39	3.01	10.41	15
Missouri	4.53	3.77	8.30	44
Montana	5.78	2.96	8.74	40
Nebraska	5.34	4.79	10.13	17
Nevada	6.13	3.47	9.60	24
New Hampshire	3.76	5.40	9.16	31
New Jersey	6.21	5.65	11.86	4
New Mexico	6.73	3.27	9.99	18
New York	6.39	7.57	13.96	1
North Carolina	6.02	3.13	9.15	32
North Dakota	8.88	3.11	12.00	3
Ohio	5.44	4.42	9.85	22
Oklahoma	5.16	3.08	8.23	46
Oregon	5.69	3.80	9.48	27
Pennsylvania	5.77	4.21	9.99	19
Rhode Island	6.26	5.02	11.28	8
South Carolina	4.87	3.82	8.69	42
South Dakota	4.18	3.93	8.11	47
Tennessee	4.55	2.96	7.52	49
Texas	4.04	4.66	8.70	41
Utah	5.51	3.36	8.87	36
Vermont	9.88	1.90	11.79	6
Virginia	4.95	4.00	8.95	35
Washington	5.57	3.62	9.19	29
West Virginia	7.78	3.09	10.87	11
Wisconsin	6.52	3.70	10.22	16
Wyoming	5.85	4.06	9.92	21
Mean Values	6.00	3.76	9.76	
Standard Deviation	1.42	0.99	1.39	
Coefficient of Variation	23.76	26.26	14.22	
NYS Diff. from Avg.	0.40	3.80	4.20	

Source: Moody's Economy.com, U.S. Census Bureau

Comparison of New York State Tax Structure with Other States



Table 7 - 2016 Ratios of Tax Collections to Personal Income by Category

State	State PIT	Local PIT	State Corporate	Local Corporate	State Sales	Local Sales	Local Property	All Other	Total State/Local
Alabama	1.85	0.06	0.20	0.00	2.71	1.35	1.23	0.86	8.26
Alaska	0.00	0.00	0.51	0.00	0.63	0.81	3.38	1.47	6.79
Arizona	1.42	0.00	0.20	0.00	3.11	1.16	2.29	0.68	8.86
Arkansas	2.34	0.00	0.38	0.00	3.86	1.12	0.85	1.40	9.94
California	3.57	0.00	0.44	0.00	2.36	0.83	2.60	0.76	10.56
Colorado	2.25	0.00	0.22	0.00	1.70	1.50	2.73	0.46	8.86
Connecticut	3.19	0.00	0.30	0.00	2.60	0.00	4.43	0.41	10.94
Delaware	2.31	0.12	0.66	0.01	1.12	0.03	1.70	3.45	9.40
Florida	0.00	0.00	0.24	0.00	3.20	0.63	2.75	0.74	7.56
Georgia	2.37	0.00	0.22	0.00	1.91	1.09	2.49	0.47	8.55
Hawaii	2.91	0.00	0.15	0.00	5.94	0.62	2.24	0.85	12.72
Idaho	2.28	0.00	0.28	0.00	3.17	0.07	2.37	0.67	8.84
Illinois	2.04	0.00	0.50	0.00	2.74	0.83	4.01	0.61	10.73
Indiana	1.84	0.47	0.37	0.00	3.74	0.08	2.26	0.31	9.07
Iowa	2.47	0.07	0.26	0.00	3.19	0.40	3.44	0.78	10.61
Kansas	1.63	0.00	0.29	0.00	3.16	0.89	2.68	0.90	9.55
Kentucky	2.42	0.77	0.34	0.10	3.17	0.39	1.62	0.78	9.58
Louisiana	1.43	0.00	0.09	0.00	2.67	2.30	2.04	0.56	9.10
Maine	2.65	0.00	0.23	0.00	3.55	0.01	4.72	0.66	11.82
Maryland	2.57	1.57	0.34	0.00	2.70	0.25	2.59	0.95	10.97
Massachusetts	3.18	0.00	0.51	0.00	1.92	0.09	3.55	0.49	9.73
Michigan	2.10	0.11	0.20	0.00	2.99	0.06	2.71	0.98	9.17
Minnesota	3.67	0.00	0.52	0.00	3.46	0.12	2.67	1.06	11.50
Mississippi	1.74	0.00	0.45	0.00	4.61	0.11	2.82	0.68	10.41
Missouri	2.23	0.14	0.12	0.03	1.96	1.19	2.18	0.44	8.30
Montana	2.60	0.00	0.26	0.00	1.24	0.02	2.86	1.77	8.74
Nebraska	2.34	0.00	0.32	0.00	2.47	0.50	3.80	0.69	10.13
Nevada	0.00	0.00	0.00	0.00	4.85	1.16	2.02	1.58	9.60
New Hampshire	0.13	0.00	1.00	0.00	1.40	0.00	5.35	1.29	9.16
New Jersey	2.63	0.00	0.44	0.00	2.59	0.04	5.53	0.63	11.86
New Mexico	1.74	0.00	0.14	0.00	3.61	1.34	1.84	1.33	9.99
New York	3.65	0.91	0.33	0.51	1.95	1.46	4.34	0.81	13.96
North Carolina	2.77	0.00	0.25	0.00	2.56	0.75	2.28	0.55	9.15
North Dakota	0.84	0.00	0.25	0.00	3.59	0.69	2.34	4.29	12.00
Ohio	1.55	0.98	0.01	0.05	3.45	0.50	2.78	0.54	9.85
Oklahoma	1.82	0.00	0.20	0.00	2.29	1.35	1.66	0.90	8.23
Oregon	3.96	0.00	0.31	0.04	0.79	0.28	3.03	1.07	9.48
Pennsylvania	1.84	0.77	0.38	0.07	2.98	0.21	2.91	0.83	9.99
Rhode Island	2.37	0.00	0.28	0.00	3.19	0.06	4.89	0.49	11.28
South Carolina	1.97	0.00	0.22	0.00	2.36	0.42	2.93	0.79	8.69
South Dakota	0.00	0.00	0.08	0.00	3.44	0.97	2.87	0.75	8.11
Tennessee	0.11	0.00	0.52	0.00	3.30	0.94	1.89	0.75	7.52
Texas	0.00	0.00	0.00	0.00	3.60	0.76	3.81	0.53	8.70
Utah	2.63	0.00	0.26	0.00	2.36	0.85	2.41	0.36	8.87
Vermont	2.34	0.00	0.31	0.00	3.30	0.07	1.79	3.96	11.79
Virginia	2.85	0.00	0.18	0.00	1.61	0.66	3.03	0.63	8.95
Washington	0.00	0.00	0.00	0.00	4.41	1.26	2.10	1.43	9.19
West Virginia	2.80	0.00	0.22	0.00	3.89	0.18	2.53	1.24	10.87
Wisconsin	2.77	0.00	0.37	0.00	2.86	0.20	3.42	0.61	10.22
Wyoming	0.00	0.00	0.00	0.00	2.51	0.65	3.24	3.51	9.92
Mean Values	1.96	0.12	0.29	0.02	2.85	0.63	2.84	1.06	9.76
Standard Deviation	1.08	0.32	0.18	0.07	1.01	0.52	0.99	0.88	1.39
Coefficient of Variati	55.26	264.45	63.16	447.55	35.42	83.65	35.01	83.23	14.22
NYS Diff. from Avg.	1.69	0.79	0.04	0.49	(0.91)	0.84	1.50	(0.24)	4.20

Source: Moody's Economy.com, U.S. Census Bureau



Comparison of New York State Tax Structure with Other States

Table 8a - State Tax Burdens as a Pct. Of Personal Inc., 1977 - 2016

Year	Mean	NYS	Standard Deviation	Coefficient of Variation	NY difference from mean
1977	6.46	7.12	1.53	23.76	0.66
1978	6.34	6.64	1.25	19.65	0.30
1979	6.41	6.45	1.58	24.62	0.04
1980	6.40	6.33	2.49	38.95	(0.08)
1981	6.42	6.22	3.71	57.86	(0.20)
1982	6.57	6.36	3.35	50.93	(0.21)
1983	6.38	6.18	2.43	38.06	(0.20)
1984	6.59	6.50	2.23	33.84	(0.09)
1985	6.66	6.67	1.96	29.51	0.01
1986	6.60	6.87	1.91	28.96	0.27
77-86 avg.	6.48	6.53	2.24	34.61	0.05
1987	6.53	6.98	1.29	19.74	0.45
1988	6.61	6.75	1.35	20.45	0.14
1989	6.53	6.36	1.33	20.42	(0.17)
1990	6.51	6.42	1.36	20.92	(0.09)
1991	6.55	6.34	1.51	23.10	(0.21)
1992	6.49	6.35	1.24	19.15	(0.14)
1993	6.75	6.44	1.56	23.16	(0.32)
1994	6.65	6.55	1.22	18.30	(0.10)
1995	6.74	6.47	1.35	20.09	(0.27)
1996	6.59	6.10	1.28	19.43	(0.49)
87-96 avg.	6.60	6.48	1.35	20.48	(0.12)
1997	6.62	5.89	1.27	19.23	(0.73)
1998	6.56	5.76	1.24	18.93	(0.80)
1999	6.56	5.82	1.28	19.45	(0.74)
2000	6.58	5.82	1.16	17.61	(0.76)
2001	6.50	6.04	1.12	17.16	(0.46)
2002	6.16	5.86	1.05	17.00	(0.30)
2003	6.11	5.63	1.04	17.10	(0.48)
2004	6.24	5.81	1.08	17.29	(0.43)
2005	6.55	6.20	1.30	19.81	(0.35)
2006	6.73	6.42	1.38	20.54	(0.30)
97-06 avg.	6.46	5.92	1.19	18.41	(0.54)
2007	6.79	6.53	1.53	22.52	(0.26)
2008	6.97	6.63	3.12	44.70	(0.34)
2009	6.53	6.76	1.90	29.17	0.23
2010	6.11	6.35	1.63	26.72	0.25
2011	6.26	6.39	1.92	30.63	0.13
2012	6.34	6.38	2.19	34.60	0.04
2013	6.50	6.48	1.89	29.06	(0.02)
2014	6.24	6.49	1.74	27.95	0.25
2015	6.19	6.33	1.73	27.98	0.14
2016	6.00	6.39	1.44	24.00	0.40
07-16 avg.	6.39	6.47	1.91	29.73	0.08

Source: Moody's Economy.com, U.S. Census Bureau

Comparison of New York State Tax Structure with Other States



Table 8b - State/Local Tax Burdens as a Pct. Of Personal Inc., 1977 - 2016

Year	Mean	NYS	Standard Deviation	Coefficient of Variation	NY Difference From Mean
1977	10.38	14.91	1.67	16.11	4.53
1978	10.10	14.11	1.42	14.07	4.01
1979	10.04	13.41	1.66	16.58	3.37
1980	9.89	13.05	2.55	25.78	3.17
1981	9.81	12.79	3.72	37.90	2.97
1982	10.03	12.95	3.41	33.96	2.92
1983	9.92	12.75	2.64	26.60	2.83
1984	10.08	13.04	2.46	24.43	2.96
1985	10.23	13.38	2.27	22.17	3.15
1986	10.23	13.64	2.27	22.15	3.41
77-86 avg.	10.07	13.40	2.41	23.97	3.33
1987	10.29	13.99	1.59	15.46	3.70
1988	10.34	13.55	1.53	14.82	3.21
1989	10.22	13.10	1.37	13.42	2.88
1990	10.27	13.18	1.40	13.64	2.90
1991	10.40	13.51	1.57	15.08	3.11
1992	10.26	13.50	1.31	12.72	3.24
1993	10.62	13.81	1.63	15.35	3.19
1994	10.53	13.88	1.16	11.00	3.35
1995	10.61	13.45	1.30	12.24	2.84
1996	10.36	12.95	1.12	10.84	2.59
87-96 avg.	10.39	13.49	1.40	13.46	3.10
1997	10.37	12.74	1.11	10.71	2.37
1998	10.25	12.50	1.11	10.82	2.25
1999	10.18	12.36	1.01	9.91	2.18
2000	10.08	12.11	0.98	9.71	2.03
2001	10.05	12.14	0.97	9.70	2.09
2002	9.83	12.03	0.90	9.20	2.21
2003	9.87	12.38	0.96	9.73	2.51
2004	10.00	12.85	1.04	10.43	2.85
2005	10.35	13.52	1.21	11.69	3.17
2006	10.53	13.77	1.27	12.03	3.25
97-06 avg.	10.15	12.64	1.06	10.39	2.49
2007	10.61	13.86	1.47	13.81	3.25
2008	10.82	14.05	3.11	28.71	3.22
2009	10.71	14.25	1.94	18.09	3.54
2010	10.19	13.67	1.62	15.86	3.48
2011	10.15	13.65	1.88	18.55	3.50
2012	10.10	13.53	2.17	21.51	3.43
2013	10.28	13.92	1.83	17.82	3.64
2014	9.98	14.00	1.70	17.02	4.02
2015	9.93	13.97	1.65	16.61	4.04
2016	9.76	13.96	1.40	14.36	4.20
07-16 avg.	10.25	13.89	1.88	18.24	3.63

Source: Moody's Economy.com, U.S. Census Bureau



Comparison of New York State Tax Structure with Other States

Table 9 - 2017 Property Taxes on Owner-Occupied Housing, by County

County	Median Property Taxes		Median Home Value	Taxes as % of Home Value		Median Income		
	Paid on Homes	Rank		Taxes as % of Home Value	Rank	for Home Owners	Taxes as % of Income	Rank
Monroe County	\$4,687	83	\$147,700	3.2%	2	\$78,395	6.0%	45
Cattaraugus County	\$2,796	245	\$88,300	3.2%	3	\$58,102	4.8%	92
Niagara County	\$3,600	143	\$124,900	2.9%	8	\$69,455	5.2%	70
Broome County	\$3,233	188	\$114,200	2.8%	12	\$63,048	5.1%	73
Wayne County	\$3,529	152	\$125,000	2.8%	13	\$61,914	5.7%	53
Chautauqua County	\$2,457	327	\$87,500	2.8%	15	\$55,767	4.4%	127
Oswego County	\$2,885	231	\$103,300	2.8%	16	\$65,571	4.4%	131
Sullivan County	\$4,942	73	\$177,500	2.8%	18	\$71,062	7.0%	25
Steuben County	\$2,703	268	\$97,500	2.8%	19	\$57,612	4.7%	99
Schenectady County	\$4,533	90	\$164,400	2.8%	21	\$85,321	5.3%	64
St. Lawrence County	\$2,595	293	\$94,300	2.8%	22	\$57,131	4.5%	113
Putnam County	\$9,737	7	\$359,700	2.7%	24	\$111,594	8.7%	3
Onondaga County	\$3,964	113	\$146,700	2.7%	25	\$78,669	5.0%	78
Chemung County	\$2,943	225	\$112,900	2.6%	30	\$67,378	4.4%	136
Livingston County	\$3,516	153	\$135,300	2.6%	32	\$68,575	5.1%	74
Orange County	\$6,943	25	\$269,100	2.6%	34	\$98,320	7.1%	22
Oneida County	\$3,104	201	\$124,000	2.5%	38	\$67,978	4.6%	110
Erie County	\$3,833	120	\$153,300	2.5%	39	\$74,181	5.2%	71
Ontario County	\$4,143	107	\$166,100	2.5%	40	\$79,206	5.2%	68
Cayuga County	\$3,012	211	\$120,900	2.5%	41	\$69,341	4.3%	138
Tompkins County	\$5,051	69	\$205,300	2.5%	42	\$77,357	6.5%	34
Madison County	\$3,585	146	\$145,800	2.5%	43	\$62,154	5.8%	49
Rensselaer County	\$4,795	81	\$196,000	2.4%	44	\$82,913	5.8%	48
Ulster County	\$5,499	55	\$233,000	2.4%	49	\$80,084	6.9%	28
Suffolk County	\$9,183	12	\$394,600	2.3%	51	\$106,748	8.6%	4
Rockland County	\$10,001	1	\$439,100	2.3%	57	\$122,827	8.1%	8
Dutchess County	\$6,170	35	\$279,300	2.2%	63	\$96,856	6.4%	35
Clinton County	\$3,008	213	\$136,900	2.2%	65	\$69,781	4.3%	145
Albany County	\$4,650	86	\$227,000	2.0%	87	\$95,349	4.9%	87
Nassau County	\$10,001	1	\$489,900	2.0%	89	\$125,009	8.0%	9
Westchester County	\$10,001	1	\$547,800	1.8%	129	\$133,969	7.5%	11
Warren County	\$3,267	183	\$194,200	1.7%	177	\$77,557	4.2%	155
Jefferson County	\$2,476	320	\$148,300	1.7%	180	\$63,227	3.9%	201
Saratoga County	\$4,228	101	\$258,600	1.6%	186	\$100,145	4.2%	153
Bronx County	\$3,856	118	\$400,300	1.0%	433	\$80,336	4.8%	93
Richmond County	\$4,665	84	\$501,300	0.9%	454	\$100,892	4.6%	107
New York County	\$8,769	13	\$976,100	0.9%	478	\$150,703	5.8%	46
Queens County	\$4,659	85	\$545,800	0.9%	519	\$84,048	5.5%	56
Kings County	\$4,572	88	\$701,800	0.7%	685	\$96,996	4.7%	97
United States	\$2,428	NA	\$217,600	1.1%	NA	\$75,876	3.2%	NA

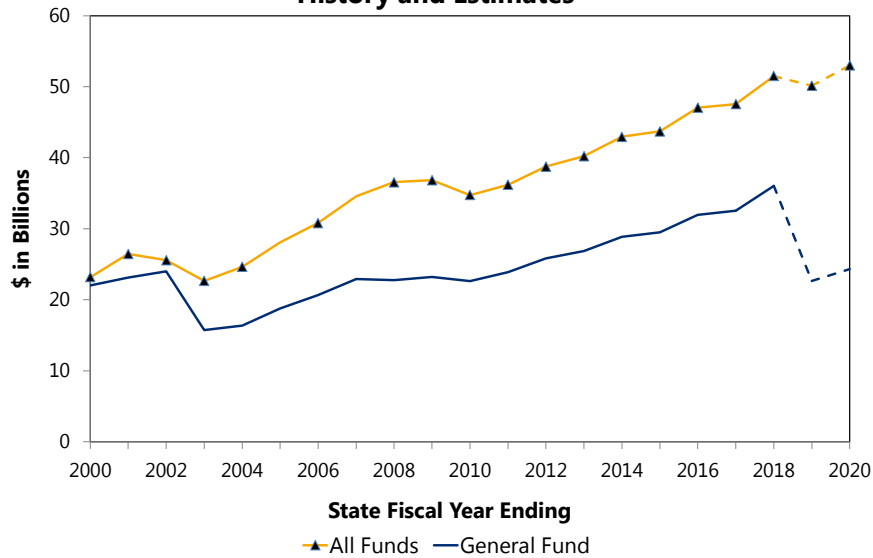
Source: U.S. Census Bureau, DOB Staff Estimates

Tax Receipts

PERSONAL INCOME TAX (millions of dollars)							
	FY 2018 Actual	FY 2019 Estimated	Change	Percent Change	FY 2020 Projected	Change	Percent Change
General Fund	36,036.9	22,648.0	(13,388.9)	(37.2)	24,321.3	1,673.3	7.4
Other Funds	15,464.4	27,496.4	12,032.0	77.8	28,693.0	1,196.6	4.4
All Funds	51,501.3	50,144.4	(1,356.9)	(2.6)	53,014.7	2,870.3	5.7

Note: Totals may differ due to rounding.

Personal Income Tax Receipts History and Estimates



PERSONAL INCOME TAX BY FUND (millions of dollars)				
	General Fund Receipts	Special Revenue Funds ¹	Debt Service Funds ²	All Funds Receipts
FY 2010	22,654	3,409	8,688	34,751
FY 2011	23,894	3,263	9,053	36,210
FY 2012	25,843	3,233	9,692	38,768
FY 2013	26,884	3,286	10,057	40,227
FY 2014	28,864	3,357	10,740	42,961
FY 2015	29,485	3,297	10,927	43,710
FY 2016	31,957	3,335	11,764	47,055
FY 2017	32,535	3,139	11,892	47,566
FY 2018	36,037	2,589	12,875	51,501
Estimated				
FY 2019	22,648	2,424	25,072	50,144
FY 2020				
Current Law	23,784	2,417	26,201	52,403
Proposed Law	24,321	2,186	26,507	53,015

¹ School Tax Relief Fund.
² Revenue Bond Tax Fund.

Proposed Legislation

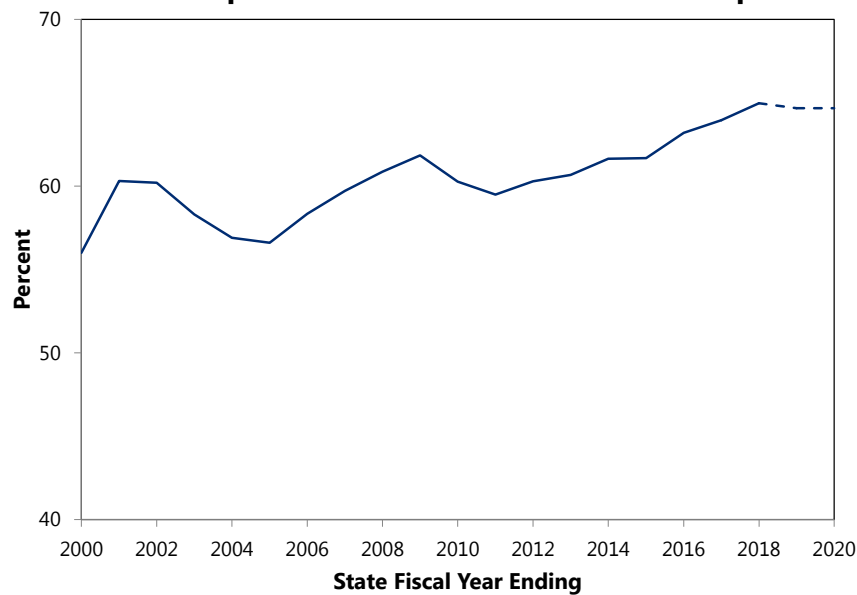
Legislation proposed with this Budget would:

- Expand the Employee Training Incentive Program Credit;
- Make the E-File Mandate Permanent;
- Permanently Extend Tax Shelter Reporting;
- Extend Clean Heating Fuel Credit for Three Years;
- Extend Workers with Disabilities Credit for Three Years;
- Expand the Historic Properties Rehabilitation Credit;
- Create the New York State Employer-Provided Child Care Credit;
- Create the Employer Recovery Hiring Tax Credit;
- Close the Carried Interest Loophole;
- Include Certain NYS Gambling Winnings in NYS Nonresident Income;
- Make Technical Changes to the Farm Workforce Retention Credit;
- Extend Higher Personal Income Tax Rates for Five Years;
- Extend Personal Income Tax Limitation on Charitable Contributions for Five Years;
- Cap Annual Growth in STAR Exemption Benefits at 0%; and
- Lower Basic STAR Income Eligibility Requirement.

Description

The personal income tax (PIT) is by far New York State's largest source of tax receipts. The PIT accounted for approximately 65 percent of All Funds tax receipts in FY 2018.

PIT Receipts as a Share of All Funds Tax Receipts



Note: PIT Receipts are defined as gross receipts minus refunds.

Tax Base

The State’s PIT structure adheres closely to the definitions of adjusted gross income and itemized deductions used for Federal PIT purposes, with certain modifications, such as: 1) the inclusion of investment income from debt instruments issued by other states and municipalities and the exclusion of income on certain Federal obligations, 2) the exclusion of pension income received by Federal, New York State and local government employees, private pension and annuity income up to \$20,000 (\$40,000 for married couples filing jointly), and any Social Security income and refunds otherwise included in Federal adjusted gross income, and 3) the subtraction of State and local income taxes from Federal itemized deductions.

New York allows either a standard deduction or itemized deductions, whichever is greater. Although New York generally conforms to Federal rules pertaining to itemized deductions, the State imposes some additional limitations. New York limits itemized deductions for taxpayers with New York State Adjusted Gross Incomes (NYSAGI) between \$525,000 and \$1 million to only 50 percent of federally allowed deductions, and for taxpayers with incomes above \$1 million to only 50 percent of charitable contributions. For tax years 2010 to 2019, itemized deductions are limited to only 25 percent of charitable contributions for taxpayers with NYSAGI above \$10 million.

Tax Rates and Structure

As partially shown below in Table 1, in tax years 2003 through 2005, a temporary PIT surcharge added two new brackets applicable to taxpayers with taxable income over \$150,000 and taxable income over \$500,000, and increased the top rate to 7.7 percent. In 2006, the top rate returned to 6.85 percent, reflecting the sunset of the temporary surcharge, and the standard deduction for

married taxpayers filing jointly increased from \$14,600 to \$15,000. For tax years 2009 through 2011, two new tax brackets and rates were added, applicable to taxpayers with taxable incomes over \$300,000 for married filing jointly (with lower levels for other filing categories) and taxable incomes over \$500,000 for all filers, and the top bracket tax rates were increased to 8.97 percent. For tax years 2012 to 2014, four new tax brackets and rates replaced the former bracket and rate applicable to taxpayers with taxable income above \$40,000 for married filing jointly returns (with lower levels for other filing categories). The tax rate for taxpayers (married filing jointly returns) with taxable income in the \$40,000 to \$150,000 and \$150,000 to \$300,000 brackets was lowered to 6.45 percent and 6.65 percent respectively, while the rate on the \$300,000 to \$2 million tax bracket remained unchanged from 2008 law at 6.85 percent. The top rate for those earning \$2 million and above (married filing jointly returns) was increased (compared to 2008 law) to 8.82 percent. The tax brackets and standard deduction amounts were also indexed to the Consumer Price Index (CPIU) starting in tax year 2013. These brackets and rates, as well as indexing, were extended through tax year 2017 as part of the FY 2014 Enacted Budget.

Legislation included as part of the FY 2017 Enacted Budget established permanent tax rate reductions for taxpayers with taxable income between \$26,000 and \$300,000.¹ The tax years 2013 through 2017 tax brackets with marginal tax rates of 5.9 percent, 6.45 percent, and 6.65 percent are scheduled to be replaced by two tax brackets with marginal tax rates of 5.5 percent and 6 percent. Barring further legislation, these rate reductions will be phased in over the course of eight years, with full implementation occurring in tax year 2025.

The top tax bracket, with its associated marginal tax rate of 8.82 percent, was extended through tax year 2019 as part of the FY 2018 Enacted Budget.

TABLE 1
PERSONAL INCOME TOP TAX RATES, STANDARD DEDUCTIONS, AND DEPENDENT EXEMPTIONS

	2003-2005	2006-2008	2009-2011	2012	2013*	2014*	2015*	2016*	2017-2018
Top Rate (Percent)	7.70	6.85	8.97	8.82	8.82	8.82	8.82	8.82	8.82
Thresholds									
Married Filing Jointly	500,000	40,000	500,000	2,000,000	2,058,550*	2,092,800*	2,125,450*	2,140,900*	2,155,350
Single	500,000	20,000	500,000	1,000,000	1,029,250*	1,046,350*	1,062,650*	1,070,350*	1,077,550
Head of Household	500,000	30,000	500,000	1,500,000	1,543,900*	1,569,550*	1,594,050*	1,605,650*	1,616,450
Standard Deduction									
Married Filing Jointly	14,600	15,000	15,000	15,000	15,400	15,650	15,850	15,950	16,050
Single	7,500	7,500	7,500	7,500	7,700	7,800	7,900	7,950	8,000
Head of Household	10,500	10,500	10,500	10,500	10,800	10,950	11,100	11,150	11,200
Dependent Exemption	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000

* Tax Brackets and standard deductions are subject to indexing based on the CPIU

¹The cited taxable income amounts apply to taxpayers filing joint returns and are shown absent the influence of Consumer Price Index adjustments. Tax reductions apply at lower taxable income levels for single and head of household returns.

**TABLE 2
TAX SCHEDULES FOR 2018 LIABILITY YEAR***
(dollars)

Married - Filing Jointly			Single			Head of Household		
Taxable Income	\$/Tax Rate	Of Amt. Over	Taxable Income	Tax Rate Percent	Of Amt. Over	Taxable Income	Tax Rate Percent	Of Amt. Over
0 to 17,150	\$0		0 to 8,500	\$0		0 to 12,800	\$0	
	+4.00%	0		+4.00%	0		+4.00%	0
17,150 to 23,600	\$686		8,500 to 11,700	\$340		12,800 to 17,650	\$512	
	+4.50%	17,150		+4.50%	8,500		+4.50%	12,800
23,600 to 27,900	\$976		11,700 to 13,900	\$484		17,650 to 20,900	\$730	
	+5.25%	23,600		+5.25%	11,700		+5.25%	17,650
27,900 to 43,000	\$1,202		13,900 to 21,400	\$600		20,900 to 32,200	\$901	
	+5.90%	27,900		+5.90%	13,900		+5.90%	20,900
43,000 to 161,550	\$2,093		21,400 to 80,650	\$1,042		32,200 to 107,650	\$1,568	
	+6.33%	43,000		+6.33%	21,400		+6.33%	32,200
161,550 to 323,200	\$9,597		80,650 to 215,400	\$4,793		107,650 to 269,300	\$6,344	
	+6.57%	161,550		+6.57%	80,650		+6.57%	107,650
323,200 to 2,155,350	\$20,218		215,400 to 1,077,550	\$13,646		269,300 to 1,616,450	\$16,964	
	+6.85%	323,200		+6.85%	215,400		+6.85%	269,300
2,155,350 and over	\$145,720		1,077,550 and over	\$72,703		1,616,450 and over	\$109,244	
	+8.82%	2,155,350		+8.82%	1,077,550		+8.82%	1,616,450

* Benefits of graduated tax rates are recaptured for taxpayers with adjusted gross incomes above \$107,650.

Tax Expenditures

Tax expenditures are defined as features of the Tax Law that by exclusion, exemption, deduction, allowance, credit, deferral, preferential tax rate, or other statutory provision reduce the amount of a taxpayer’s liability to the State by providing either economic incentives or tax relief to particular entities to achieve a public purpose. The PIT structure includes various exclusions, exemptions, tax credits, and other statutory devices designed to adjust State tax liability. For a more detailed discussion of tax expenditures, see the Annual Report on New York State Tax Expenditures, prepared by the Department of Taxation and Finance and the Division of the Budget.

Significant Legislation

Significant statutory changes made to the State PIT since 2013 are summarized below.

Subject	Description	Effective Date
Legislation Enacted in 2013		
Empire State Film Production Credit	Extended the Empire State film production tax credit of \$420 million per year for an additional five years (2015 - 2019). For the period 2015 through 2019, certain upstate counties will receive an additional 10 percent credit for wages and salaries paid.	January 1, 2015
	Restrictions on the post-production portion of the credit were reduced and additional reporting will be required to document the effectiveness of the credit in creating jobs.	March 28, 2013
New York State Business Incubator and Innovation Hot Spot Program	Created a new high tech incubator program in which start-up businesses will be free of property, sales and business income taxes for the first five years. Hot spots must demonstrate an affiliation with, and the support of, at least one college, university or independent research institution and offer programs consistent with regional economic development strategies.	March 28, 2013

Subject	Description	Effective Date
Limitation on Itemized Deductions	Extended, for three additional years, the limitation on itemized deductions for taxpayers with NYSAGI over \$10 million.	2013-2015
Royalty Income Loophole	Closed a loophole that allowed New York companies that earn royalty income to avoid paying taxes on that income. New York taxpayers must show on their tax return that the taxpayer's non-New York parent company included the royalty income in its tax liability. The demonstration absolves taxpayers of the obligation to pay tax on their royalty income.	January 1, 2013
Historic Preservation Tax Credit	Extended for five years the Historic Preservation Tax Credit \$5 million cap, which had previously been scheduled to revert to \$100,000 following the conclusion of tax year 2014, and permanently made the credit refundable for tax years beginning on or after January 1, 2015.	January 1, 2015
Charge NY Electric Vehicle Recharging Equipment Credit	Created a credit equal to 50 percent or \$5,000 per station, whichever is less, of the cost of electric vehicle recharging or alternative fuel vehicle refueling equipment. The credit sunsets December 31, 2017.	January 1, 2013
Suspension of Drivers' Licenses of Delinquent Persons	Provided for the suspension of New York State driver's licenses of taxpayers who owe taxes in excess of \$10,000.	March 28, 2013
Warrantless Wage Garnishment	Allowed the Department of Taxation and Finance to garnish wages of delinquent taxpayers without filing a warrant and replaced the warrant requirement with a faster public notification requirement.	March 28, 2013 - March 31, 2015
Credit for Rehabilitation of Historic Homes	Extended for five years the maximum credit amount of \$50,000 (scheduled to revert to \$25,000), and the refundability of the credit for filers with income less than \$60,000.	January 1, 2015
Small Business and Small Farm Income Subtraction	Provided a Full Alliance Group Inc. (FAGI) modification equal to a percentage of business or farm income for taxpayers with business or farm income not exceeding \$250,000. The modification reduces FAGI by 3 percent in tax year 2014, 3.75 percent in tax year 2015, and 5 percent for tax years 2016 and beyond.	January 1, 2014
Hire-a-Vet Tax Credit	Provided a refundable tax credit for tax years 2015 and 2016 equaling 10 percent of the wages paid to a qualified veteran (capped at \$5,000) and 15 percent of wages paid to a qualified veteran (capped at \$15,000).	January 1, 2015
Middle-Class Family Tax Credit	Provided a refundable \$350 credit in each of tax years 2014 through 2016 to taxpayers with dependents under the age of 17, zero or positive tax liability, and income between \$40,000 and \$300,000.	January 1, 2014
Youth Works Tax Credit	Provided a four year refundable tax credit capped at \$6 million per year for tax years 2014 through 2017 for hiring unemployed, low-income or at risk youth ages 16-24 in cities with populations greater than 55,000 or towns with populations greater than 480,000.	January 1, 2014
Minimum Wage Reimbursement Credit	Provided a refundable tax credit for tax years 2014 through 2018 equal to the product of the number of hours worked by qualifying minimum wage-earning employees and 1) \$0.75 in tax year 2014; 2) \$1.31 in tax year 2015; or 3) \$1.35 in tax years 2016 through 2018. Qualifying employees must be students aged 16 to 19, and the credit is reduced if the federal minimum wage is increased to a level in excess of 85 percent of the New York minimum wage.	January 1, 2014
PIT Reform Extension	Extended the December 2011 PIT reform program for three additional tax years, 2015 through 2017.	January 1, 2015

Subject	Description	Effective Date
START-UP NY	Established tax-free zones on or near qualifying university and college campuses. Qualifying businesses operating within such zones are exempt from taxation for a ten-year period under the personal income tax. During the first five years of the exemption period, qualifying new employees are fully exempt from New York State and New York City personal income tax on wages earned while working in a tax-free zone. During the last five years of the exemption period, qualifying employees are exempt from taxation on wages up to \$200,000 for single filers, \$250,000 for head-of-household filers, and \$300,000 for joint filers.	January 1, 2014
Excelsior Jobs Program	Changed the job requirement parameters for the Excelsior Jobs Program and allowed a portion of the unallocated tax credits from any taxable year to be used to award tax credits in another taxable year.	May 27, 2013
Trust Taxation Loophole Closer	Closed a loophole that allowed resident taxpayers to completely avoid New York income tax through the creation of an incomplete gift, non-grantor trust. Also taxes the accumulated distribution income of New York resident beneficiaries when the income is distributed by an exempt resident trust.	January 1, 2014
Legislation Enacted in 2014		
Middle-Class Family Tax Credit	Modified the delivery of the Middle-Class Family Tax Credit to eliminate the prepayment element for tax years 2015 and 2016.	January 1, 2015
Real Property Tax Freeze Credit	Established, through the use of a refundable credit, a two-year tax relief program to offset school and municipal property tax increases for New York State homeowners. The credit is limited to properties that have STAR property tax exemption eligibility and are located within a New York State Property Tax Cap-compliant school/municipal district.	January 1, 2014
Enhanced Real Property Tax Credit	Established a refundable credit for residents of New York City based on qualifying real property taxes paid or the real property tax equivalent. For taxpayers with household gross income (HGI) under \$100,000, the credit is equal to 4.5 percent of real property taxes, or the real property tax equivalent paid in excess of 4 percent of HGI. For taxpayers with HGI between \$100,000 and \$150,000, the credit is equal to 3 percent of real property taxes, or the real property tax equivalent paid in excess of 5 percent of HGI. For taxpayers with HGI between \$150,000 and \$200,000, the credit is equal to 1.5 percent of real property taxes, or the real property tax equivalent paid in excess of 6 percent of HGI.	January 1, 2014
Enhanced Earned Income Tax Credit	Extended the non-custodial parent earned income tax credit for two years, through and including tax year 2016.	January 1, 2015
Minimum PIT Repeal	Repealed the additional minimum personal income tax.	January 1, 2014
Length of Service Awards	Provided for an AGI subtraction modification equal to the amount of awards paid to volunteer firefighter or volunteer ambulance workers from a length of service defined contribution plan or defined benefit plan.	January 1, 2014
Property Tax Credit for Manufacturers	Made qualified New York manufacturers eligible for a new tax credit equal to 20 percent of the real property taxes paid.	January 1, 2014
Enhance the Youth Works Tax Credit	Enhanced the credit by providing additional credit for youth retained in either a full-time or part-time status for one additional year, lowered the part-time hourly threshold from 20 hours to 10 hours for full-time high school students and increased the allocation from \$6 million to \$10 million for programs two through five (2014-2018).	January 1, 2014
Expand the Upstate Counties Eligible for the Enhanced Film Production Tax Credit	Added the counties of Albany and Schenectady to the list of upstate counties eligible for the additional 10 percent credit on wages and salaries.	January 1, 2015

Subject	Description	Effective Date
Workers with Disabilities Tax Credit	Provided a non-refundable tax credit for tax years 2015 through 2019 equaling 15 percent of wages paid to a developmentally disabled individual employed full time (capped at \$5,000) and 10 percent of wages paid if the individual is employed part time (capped at \$2,500). This credit has an annual allocation of \$6 million.	January 1, 2015
Musical and Theatrical Production Credit	Provided a refundable tax credit for tax years 2015 through 2018 equaling 25 percent of qualified expenses for qualified musical and theatrical productions in certain upstate theaters. This credit has an annual allocation of \$4 million annually.	January 1, 2015
START-UP NY Amendments	Provided a refundable tax credit equal to the excise tax paid on telecommunications services paid by businesses in START-UP NY areas. Added four correctional facilities owned by the State of New York to be included as START-UP NY areas.	January 1, 2014 July 26, 2014
Empire State Commercial Production Tax Credit	Extended the annual allocation of \$7 million for two years through tax year 2016. Also, lowered the minimum required production costs for upstate productions from \$200,000 to \$100,000.	March 31, 2014
Legislation Enacted in 2015		
Limitation on Itemized Deductions	Extended the limitation on itemized deductions for taxpayers with NYSAGI over \$10 million for two additional years.	January 1, 2016
Property Tax Relief Credit	Established a refundable tax credit, administered as an advanced credit payment, to offset property tax increases for all eligible taxpayers who own and primarily reside in real property located within eligible school districts that are compliant with the 2 percent annual property tax cap. The credit sunsets December 31, 2019.	January 1, 2016
Warrantless Wage Garnishment	Extended, for two additional years, authority for the Department of Taxation and Finance to garnish wages of delinquent taxpayers without filing a warrant.	April 1, 2015
Enhanced Real Property Tax Circuit Breaker Extender	Extended the Enhanced Real Property Tax Circuit Breaker credit for four years. The credit sunsets December 31, 2019.	January 1, 2016
Expand the Excelsior Jobs Program	Expanded eligibility for the program to include entertainment companies that meet certain criteria, music production companies and video game software developers.	April 13, 2015
Employee Training and Incentive Program (ETIP) Tax Credit	Provided a refundable tax credit for tax years 2015 and after equaling 50 percent of employee training costs (\$10,000 cap per employee) or internship costs (\$3,000 cap per intern). The amount of tax credits allocated per year is capped at \$5 million and will be allotted from funds available under the Excelsior Jobs Program.	January 1, 2015
Urban Youth Jobs Program	Enhanced the credit (formerly the New York Youth Works Tax Credit) by increasing the allocation from \$10 million to \$20 million for programs three through five (2015-2017).	April 13, 2015
Alternative Fuel Vehicle Refueling Property Tax Credit	Allowed the credit for spending not covered by a grant. The amount of the credit is amended to equal the lesser of \$5,000 or the product of 50 percent and the cost of any property less any costs paid from the proceeds of a grant.	January 1, 2015
Brownfields Clean-Up Program	Reformed the program and extended the tax credits through March 31, 2026. Reforms included the prioritization of 1) site redevelopment in economically distressed areas, 2) low income housing, or 3) properties that are upside down or underutilized; also provided for the creation of an expedited remediation program (BCP-EZ), a more detailed description of eligible costs for redevelopment tax credits, and allowed the real property tax and environmental remediation insurance credits to sunset.	July 1, 2015

<u>Subject</u>	<u>Description</u>	<u>Effective Date</u>
START-UP NY Amendments	Added two airport facilities owned by the State of New York to be included as START-UP NY areas.	April 13, 2015
Legislation Enacted in 2016		
Hire a Veteran Credit	Extended the credit for two additional years to January 1, 2019.	January 1, 2017
Commercial Production Credit	Extended the credit for two additional years to January 1, 2019.	January 1, 2017
Credit for Companies That Provide Transportation to People with Disabilities	Extended the expiration date of this credit for six years until December 31, 2022.	December 31, 2016
Low-Income Housing Credit	Extended the statewide limitation for the aggregate dollar amount of credit the Commissioner of Division of Housing and Community Renewal (DHCR) may allocate to eligible low-income buildings. The credit allocation pool was increased \$8 million for each of the next five fiscal years.	April 1, 2017
Clean Heating Fuel Credit	Modified and extended the clean heating fuel credit. The minimum biodiesel fuel thresholds were increased. The credit was extended for three years to January 1, 2020.	January 1, 2017
Excelsior Jobs Program Tax Credit	Extended claims period through 2026, allowing Empire State Development the ability of offering a 10 year benefit period for companies entering the program in 2016 and 2017. Unused credits from previous years will be used to fund the extension. Reduced annual credit allocations a total of \$150 million over the period 2016 through 2024.	April 13, 2016
Urban Youth Jobs Tax Credit	Increased the allocation for the final two program years from \$20 million to \$50 million.	April 13, 2016
Economic Transformation and Facility Redevelopment Program	Modified to include any psychiatric facility previously owned by New York State and located within the MCTD (excluding NYC) to qualify as a closed facility under this program. Prospective participants must submit an application by September 1, 2016.	April 13, 2016
The Farm Workforce Retention Credit	Created a refundable credit that is available to farm employers equal to a fixed amount per eligible farm employee. The credit varies between \$250 per eligible farm employee in tax year 2017 up to \$600 for tax year 2021. This credit expires after tax year 2021.	January 1, 2017
STAR Transformation Credit	Replaced, for new and relocated homeowners, the STAR property tax exemption with a STAR tax credit.	April 13, 2016
Enhanced Earned Income Tax Credit	Permanently extended the Enhanced Earned Income Tax Credit for non-custodial parents.	January 1, 2017
Tax Shelter Reporting Requirements	Extended tax shelter reporting requirements through July 1, 2019.	April 13, 2016
NYC Resident STAR Credit	Converted the STAR Personal Income Tax credit for eligible NYC resident taxpayers from a credit against NYC tax liability to a credit against NYS tax liability.	January 1, 2016
Middle Income Tax Cut	Provided reduced middle-income personal income tax rates over the course of eight years. The rate cuts begin in tax year 2018 and, when fully phased in, the range of marginal tax rates on middle incomes will be reduced from between 5.9 percent and 6.65 percent to between 5.5 percent and 6 percent.	January 1, 2018
Legislation Enacted in 2017		
Non-resident Co-op Sale Loophole Closer	Closed a loophole that had previously allowed non-residents to evade taxation on gains from the sale of ownership interests in New York-based cooperative housing corporations.	January 1, 2017

Subject	Description	Effective Date
Non-resident Asset Sale Loophole Closer	Closed a loophole that had previously allowed non-residents to avoid taxation on gains from the sale of New York-source partnership assets.	April 10, 2017
Top Rate Extension	Extended the 8.82 percent top-tax bracket and rate through the end of tax year 2019.	January 1, 2018
Limitation on Itemized Deductions	Extended the limitation on itemized deductions for taxpayers with NYSAGI over \$10 million for two additional years. The limitation sunsets December 31, 2019.	January 1, 2018
Warrantless Wage Garnishment	Extended, for three additional years, authority for the Department of Taxation and Finance to garnish wages of delinquent taxpayers without filing a warrant. The authority to act without warrant sunsets March 31, 2020.	April 1, 2017
Warrantless Bank Account Data Matching	Expanded, for three years, the financial institution data match system to require financial institutions to include past due liabilities that have become fixed and final.	April 10, 2017
Child and Dependent Care Credit Enhancement	Increased the Child and Dependent Care Credit value to between 60 percent and 100 percent of the Federal credit for tax filers with NYSAGI between \$50,000 and \$150,000. Expanded qualifying expenses to include costs related to up to five eligible dependents.	January 1, 2018
STAR Conversion Credit	Converted the STAR-related New York City PIT rate reduction benefit into a New York State PIT credit for New York City taxpayers.	January 1, 2017
Credit for Farm Donations to Food Pantries	Created a refundable credit equal to 25 percent of the fair market value of qualified donations by qualified farmers to eligible food pantries, up to a \$5,000 maximum credit annually.	January 1, 2018
Union Dues Deduction	Allowed an itemized deduction for union dues paid during the tax year that aren't deductible for Federal tax purposes.	January 1, 2018
Establish Life Sciences Tax Incentives	Established tax incentives to support the State's new life sciences initiative. Existing life science companies are eligible to participate in the Excelsior Jobs Program and new life sciences companies can receive a 15 or 20 percent refundable tax credit on new research and development expenditures based on company size.	January 1, 2018
Extend the Empire State Film and Post Production Tax Credits	Extended the credit for three additional years through 2022.	April 10, 2017
Extend the Alternative Fuels Property and Electric Vehicle Recharging Property Credit	Extended the credit for five additional years through 2022.	April 10, 2017
Treat Disregarded Entities as a Single Taxpayer for Tax Credit Purposes	Protects existing tax credit structures following an August 2016 decision of the Tax Appeals Tribunal that could have resulted in most taxpayers losing their tax credits. An individual taxpayer and associated single-member LLCs (disregarded entities) will now be treated as one entity for tax credit purposes.	April 10, 2017
Excelsior Jobs Program	Doubled the excelsior research and development credit cap from three to six percent.	January 1, 2018
	Reduced the minimum required net new job requirements for most industries and added a definition for significant capital investment.	April 10, 2017

Subject	Description	Effective Date
Employee Training Incentive Program	Expanded the current program to include incumbent worker training as an eligible expense, given that such trainings are part of a company's expansion and retention projects. The requirement to create additional jobs is removed.	April 10, 2017
New York Youth Jobs Program	Extended the credit for two additional years to January 1, 2020 with an annual allocation of \$40 million beginning with the 2018 allocation year.	April 10, 2017
Empire State Apprenticeship Tax Credit program	Created a carve out from the New York Youth Jobs Program for an apprenticeship credit. Provides a tax credit of \$10 million annually for tax years 2018 through 2022 to certified employers that employ a qualified apprentice for at least 6 months of the calendar year.	January 1, 2018
Legislation Enacted in 2018		
Quarterly Wage Reconciliation	Replaced annual employee-level wage and withholding reconciliation with quarterly reconciliation.	January 1, 2019
Statute of Limitations on Amended Returns	Extended the statute of limitations on amended tax returns to allow assessments based on changes or corrections in an amended return to be made at any time up to one year after the amended return is filed.	April 12, 2018
Payment of Fixed and Final Unwarranted Debt Against Unclaimed Funds	Authorized the Department of Taxation and Finance to share information with the Comptroller to collect unclaimed funds from taxpayers that have unwarranted fixed and final debts.	April 12, 2018
New York Residency Clarification	Codified that statutory residency for personal income tax purposes is based on all days that the taxpayer is present in New York, regardless of whether the taxpayer is also a part year domiciliary.	January 1, 2019
Maintenance of Empire State Child Tax Credit Benefits	Maintained the value of the Empire State Child Tax Credit at the same level that existed in 2017, prior to the enactment of the Tax Cuts and Jobs Act of 2017.	January 1, 2018
Decouple from TCJA-related Changes	Decoupled from the federal \$10,000 state and local tax itemized deduction limit, the temporary medical expense deduction increase, and the repeal and limitation of other federal itemized deductions. Also maintained the New York single filer standard deduction and eliminated the restriction that a New York filer may only itemize deductions if deductions were itemized on the filer's federal return.	January 1, 2018
Employer Compensation Expense Program	Established an optional employer compensation expense tax, entitling employees of participating employers to a credit equal to a percentage of wages earned in excess of \$40,000.	April 12, 2018
State and Local Charitable Gifts	Established the Charitable Gifts Trust Fund to accept donations to fund health care and education programs. Provided an 85 percent tax credit for contributions made to Charitable Gifts Trust Fund accounts or for qualified contributions to the Health Research Inc., the SUNY Impact Foundation, or the CUNY Research Foundation. Authorized school districts and municipalities to establish charitable funds through local law and provide up to a 95 percent tax credit for donations to such funds.	April 12, 2018
Historic Building Rehabilitation Credit	Extended the credit for an additional five years and decoupled from the Federal credit to continue to allow the credit to be claimed for a single year.	January 1, 2018
Low-Income Housing Credit	Expanded the credit to allow transferability to third parties.	January 1, 2019
Hire-a-Veteran Credit	Extended the credit for two additional years to January 1, 2021.	January 1, 2019

Subject	Description	Effective Date
Empire State Musical and Theatrical Production Credit	Extended the credit for four additional years to March 31, 2022.	April 12, 2018
New York Youth Jobs Program	Increased the credit amounts for each certified hire.	January 1, 2018
	Required employers to provide the State additional information pertaining to certified hires.	January 1, 2019

Withholding Changes

Various changes in tax rates, deductions and exemptions have been reflected in withholding tables as follows:

Effective Date	Feature	Changes
July 1, 1995	Deduction Allowance	Increased to \$5,650 for single individuals, \$6,150 for married couples.
	Rate Schedule	Lowered the maximum rate to 7.59 percent and reduced the number of tax brackets.
April 1, 1996	Deduction Allowance	Increased to \$6,300 for single individuals, \$6,800 for married couples.
	Rate Schedule	Lowered the maximum rate to 7 percent and broadened the wage brackets to which the rates apply.
January 1, 1997	Deduction Allowance	Increased to \$6,975 for single individuals, \$7,475 for married couples.
	Rate Schedule	Lowered the maximum rate to 6.85 percent and broadened the wage brackets to which the rates apply.
July 1, 2003	Rate Schedule	Raised maximum rate to 8.55 percent and added two new wage brackets.
January 1, 2004	Rate Schedule	Decreased maximum rate to 7.7 percent and lowered rate for second highest bracket from 7.5 percent to 7.375 percent.
January 1, 2005	Rate Schedule	Lowered rate for second highest bracket from 7.375 to 7.25 percent.
January 1, 2006	Rate Schedule	Eliminated top two rates to reflect expiration of the temporary tax surcharge.
May 1, 2009	Rate Schedule	Raised maximum rate to 8.97 percent and added two new wage brackets; added new higher rate to reflect phase out of itemized deductions.
January 1, 2012	Rate Schedule	Lowered rates for middle income taxpayers and created a new 8.82 percent tax rate and bracket for tax years through 2014.
January 1, 2013	Deduction Allowance	Annual deduction increases to reflect inflation (CPIU) indexing. Applied to tax years 2013 through 2017.
	Rate Schedule	Annual tax bracket adjustment to reflect indexing. Applied to tax years 2013 through 2017.
January 1, 2018	Rate Schedule	Lowered rates for middle income taxpayers by reducing the 6.45 percent and 6.65 percent marginal tax rates. ¹ Applied to tax years 2018 and 2019.

¹ Part of a scheduled eight-year phase-in of middle income tax cuts through 2025.

Limited Liability Companies

A limited liability company (LLC) can be formed in New York by one or more persons by filing its articles of organization with the Secretary of State and paying an annual filing fee. The fee is reflected in the returns component of the PIT. The fees/minimum taxes applicable to all LLC and non-LLC partnerships, C corporations, and S corporations are based on New York source income. The annual filing fee has been imposed since 1994 and applies to any LLC that has any income, gain, loss or deduction attributable to New York sources in the taxable year. Filing fees for the tax year are due no later than the fifteenth day of the third month of the following year. Table 3 shows historical and 2019 estimated LLC fees.

TABLE 3 LIMITED LIABILITY COMPANY AND PARTNERSHIP FEES (thousands of dollars)	
SFY	Amount
2009	56,219
2010	67,469
2011	68,667
2012	71,589
2013	71,690
2014	84,129
2015	86,902
2016	91,694
2017	99,892
2018	103,523
2019 Estimated	108,699

Administration

Timing of the Payment of Refunds

The payment of refunds during the final quarter of the State’s fiscal year (i.e., January-March period) has been administratively managed in accordance with cash flow expectations and to minimize potential year-end imbalances in the State’s General Fund. The FY 2017 “cap” on refunds declined to \$1,750 million but increased to \$2,249 million in FY 2018. A total of \$2,250 million is scheduled to be paid out in FY 2019.

School Tax Relief Fund

Legislation enacted in 1998 created the School Tax Relief (STAR) program and the STAR Fund. The program provides residential homeowners with State-funded tax exemptions, and tax relief under the New York City income tax for NYC residents. In addition to school property tax exemptions, NYC residents who have relatively low homeownership rates are provided several PIT

credits. To reimburse school districts for the costs of the program, a portion of State PIT receipts are deposited to the STAR Fund. Pursuant to State Finance Law, payments are currently made to school districts in October through March and to NYC in September and June.

FY 2017 Enacted Budget legislation replaced, for new and relocated homeowners, the STAR property tax exemption with a STAR credit against the New York State PIT. This legislation also converted the NYC school tax credit, which previously had been funded through the STAR Fund and applied against NYC PIT, into a credit against New York State PIT.

Effective tax year 2017, FY 2018 Enacted Budget legislation converted the STAR-related New York City PIT rate reduction benefit into a New York State PIT credit for New York City taxpayers.

Revenue Bond Tax Fund

Legislation enacted in 2001 authorized the issuance of State PIT Revenue Bonds and provided a source of payment for the debt service on those Bonds by earmarking a portion of PIT receipts to the newly created Revenue Bond Tax Fund (RBTF). Effective May 2002, such legislation directs the State Comptroller to deposit an amount equal to 25 percent of estimated monthly State PIT receipts (after payment of refunds and STAR deposits). Effective April 1, 2007, deposits to the RBTF are calculated before the deposit of income tax receipts to the STAR Fund. Although this decreases General Fund PIT receipts, RBTF deposits in excess of debt service requirements are transferred back to the General Fund.

Effective April 2018, FY 2019 Enacted Budget legislation increased the Revenue Bond Tax Fund deposit requirement from 25 percent to 50 percent.

Taxpayer Characteristics

Table 4 examines changes in NYSAGI and in liability between 2006 and 2016, broken down by taxpayer characteristics. Shares of NYSAGI, the income base that determines personal income tax liability, and of liability both differ noticeably between the two years across taxpayer groups. Not only did the nation suffer a severe recession in the time between these two years, but the State's personal income tax structure changed markedly. In 2006 the top marginal tax rate was 6.85 percent starting at \$40,000 for married filing joint taxpayers, but by 2016, the tax structure had become much more progressive with the top rate of 8.82 percent starting at \$2 million for married joint filers. Thus, while NYSAGI grew 27.1 percent over the period of 2006 to 2016, liability increased a much faster 41.1 percent.

Both 2006 and 2016 were years of economic expansion for the State. While in 2006 New York State was in its third full year of expansion following the 2001-2003 State recession, 2016 was the seventh year of recovery from the 2008-2009 recession. However, national economic growth was stronger in 2006 as real gross domestic product (GDP) increased 2.9 percent, versus 1.6 percent in 2016, down from 2.9 percent in the year prior. Moreover, following the national election in 2016, anticipation of high-end tax rate reductions incentivized taxpayers to shift both wage and nonwage income out of the end of 2016 into 2017. Total wage growth in New York State slowed to 2.2

percent in 2016 from 4.4 percent in 2015, with bonus payouts falling 5.6 percent across all industries, following 1.2 percent growth in 2015. Nonwage income similarly fell in 2016, declining 9.6 percent following growth of 2.2 percent in 2015.

With the movement to the suburbs, the share of State personal income tax liability accounted for by residents and nonresidents shifted in favor of the latter, with the resident share slipping from 83.6 percent in 2006 to 82.7 percent in 2016; at the same time, the nonresident share grew from 16.4 percent to 17.8 percent. Indeed, at 27.2 percent, the number of nonresident returns grew almost three times as fast as resident returns at 10.5 percent. Consistent with these trends, the proportion of NYSAGI accounted for by residents fell by a percentage point, to 85.8 percent in 2016 from 86.8 percent in 2006. Resident wage growth trailed that of nonresidents (32.6 percent for residents versus 35.5 percent for nonresidents), while the differential was even greater for nonwage income, which grew 44.4 percent for nonresidents, compared with 10.5 percent for residents. Nonwage income includes items of income such as dividends, interest received, and capital gains.

While a majority of the returns filed in 2016 came from single filers (52.2 percent), those persons electing married filing jointly status accounted for the lion's share of liability (67.9 percent) and NYSAGI (62.2 percent). But this masks the much higher growth rates that single filers displayed from 2006 to 2016. Single filer returns grew 22.1 percent between 2006 and 2016, while married filing jointly returns rose 5.4 percent and head of household returns increased just 0.4 percent. While NYSAGI from married filing jointly returns and from head of household returns grew 23.2 percent and 27.0 percent, respectively, NYSAGI grew 36.2 percent among single filers.

Single filers saw their income from wages increase 48.4 percent over the period while married filing jointly filers and heads of households experienced much slower (and more similar) wage growth of 26.9 percent and 27.2 percent, respectively. While head of household filers make up a small share of nonwage income (3.7 percent in 2006 and 4.0 percent in 2016, versus 70.1 percent and 71.3 percent in those two years respectively for married filing jointly filers), these filers had the highest growth of the three filer types as nonwage income grew 24.2 percent from 2006 to 2016, against 15.4 percent growth for married filing jointly filers and an increase of just 6.7 percent among the single filers. Those who filed as head of household accounted for just 3.8 percent of liability in 2016, up from 2.6 percent in 2006, but again the growth was outsized: 107.4 percent, as against growth of 44.7 percent among the single filers and a gain of 37.2 percent in the married filing jointly category.

Taxpayers who itemized their deductions made up 25.9 percent of all filers in 2006, but this share fell 4.3 percentage points by 2016, to 21.6 percent. This trend is consistent with a 2009 change in the State tax law limiting high-income filers to just a fraction of their State itemized deductions. The number of filers taking the standard deduction correspondingly increased 19.1 percent, their share of total filers rising from 74.1 percent in 2006 to 78.4 percent of filers in 2016. The share of liability accounted for by itemizers fell from 68.1 percent in 2006 to 53.0 percent by 2016, while the share coming from standardizers increased from 31.9 percent to 46.9 percent over the period. With more affluent filers being pushed into filing using the standard deduction, NYSAGI from standard deduction users jumped 68.8 percent over 2006-2016 while that of itemizers fell 0.8 percent. Standard deduction takers accounted for a majority of NYSAGI in 2016 -- 53.1 percent -- as opposed to 40.0 percent in 2006.

TABLE 4
PERCENT SHARES OF STATE AGI, WAGES, NONWAGE INCOME AND LIABILITY
BY VARIOUS TAXPAYER CHARACTERISTICS, 2006 AND 2016
 (Values for AGI, wages, nonwage income and liability in millions of dollars)

	2006					2016				
	Returns	NYSAGI	Wages	Nonwage Income	Liability	Returns	NYSAGI	Wages	Nonwage Income	Liability
Total	9,316,507	641,807	445,210	204,549	29,587	10,492,628	815,729	592,135	232,087	41,736
percent change						12.6	27.1	33.0	13.5	41.1
Residents	8,352,599	557,134	380,202	183,956	24,747	9,231,335	700,003	504,201	203,301	34,522
percent share	89.7	86.8	85.4	89.9	83.6	88.0	85.8	85.1	87.6	82.7
percent change						10.5	25.6	32.6	10.5	39.5
Nonresidents	963,908	84,673	65,009	20,593	4,841	1,225,897	116,801	88,081	29,746	7,415
percent share	10.3	13.2	14.6	10.1	16.4	11.7	14.3	14.9	12.8	17.8
percent change						27.2	37.9	35.5	44.4	53.2
Married Filing Jointly	3,297,935	411,789	272,994	143,440	20,650	3,476,852	507,339	346,549	165,558	28,323
percent share	35.4	64.2	61.3	70.1	69.8	33.1	62.2	58.5	71.3	67.9
percent change						5.4	23.2	26.9	15.4	37.2
Head of Household	1,529,362	53,383	46,736	7,499	763	1,535,463	67,794	59,427	9,310	1,582
percent share	16.4	8.3	10.5	3.7	2.6	14.6	8.3	10.0	4.0	3.8
percent change						0.4	27.0	27.2	24.2	107.4
Single Filers	4,489,210	176,635	125,481	53,610	8,174	5,480,313	240,596	186,159	57,219	11,830
percent share	48.2	27.5	28.2	26.2	27.6	52.2	29.5	31.4	24.7	28.3
percent change						22.1	36.2	48.4	6.7	44.7
Itemized Deduction	2,412,986	385,070	236,328	152,315	20,146	2,265,884	382,147	240,058	145,123	22,136
percent share	25.9	60.0	53.1	74.5	68.1	21.6	46.8	40.5	62.5	53.0
percent change						-6.1	-0.8	1.6	-4.7	9.9
Standard Deduction	6,901,749	256,652	208,804	52,227	9,437	8,222,193	433,124	351,769	86,812	19,569
percent share	74.1	40.0	46.9	25.5	31.9	78.4	53.1	59.4	37.4	46.9
percent change						19.1	68.8	68.5	66.2	107.4

Source: NYS Department of Taxation and Finance; DOB staff estimates

Recent Liability History

PIT liability is derived from the New York State Adjusted Gross Income (NYSAGI) income base. Table 5 lists the major components, growth rates and shares of NYSAGI (see also Economic Backdrop – New York State Adjusted Gross Income section). NYSAGI growth has been somewhat volatile in the years since the Great Recession, with strong 8.7 percent growth in 2012 and 2014, but declines of 0.1 percent and 1.2 percent in 2013 and 2016, respectively, both years of slower economic growth than the surrounding years. However, growth rates in recent years also show the impact of taxpayers behaving strategically by shifting income in anticipation of tax law changes. These adjustments can enhance or swamp the economic drivers of NYSAGI in some cases. For example, lower tax rates established under the Economic Growth and Tax Relief Reconciliation Act of 2001 (EGTRRA) were originally scheduled to sunset at the end of 2010. Though the sunset was shifted to the end of 2012, evidence suggests that taxpayers moved income from 2011 to 2010 in anticipation of a possible tax rate increase. With actual tax rates increasing at the close of 2012, taxpayers engaged in a more substantial shift of income out of 2013 into 2012. Income shifting seems to have been again in evidence in 2016, 2017, and 2018.

TABLE 5
DISTRIBUTION OF THE MAJOR COMPONENTS OF NEW YORK ADJUSTED GROSS INCOME (NYSAGI)
(millions of dollars)

Component of Income	2012	2013	2014	2015	2016	2017*	2018	2019	2020
	Actual				Estimate				
NYSAGI									
Amount	714,698	714,046	776,477	807,775	794,105	872,930	886,552	908,054	952,401
Percent Change	8.7	(0.1)	8.7	4.0	(1.7)	9.9	1.6	2.4	4.9
Wages									
Amount	515,645	525,924	558,857	584,317	592,135	624,938	648,812	672,129	698,612
Percent Change	3.2	2.0	6.3	4.6	1.3	5.5	3.8	3.6	3.9
Share of NYSAGI	72.1	73.7	72.0	72.3	74.6	71.6	73.2	74.0	73.4
Net Capital Gains									
Amount	77,248	68,492	90,918	93,409	72,465	96,082	96,459	91,159	99,474
Percent Change	58.3	(11.3)	32.7	2.7	(22.4)	32.6	0.4	(5.5)	9.1
Share of NYSAGI	10.8	9.6	11.7	11.6	9.1	11.0	10.9	10.0	10.4
Interest and Dividends									
Amount	33,433	32,604	34,970	33,591	35,014	38,601	41,674	43,671	46,127
Percent Change	14.3	(2.5)	7.3	(3.9)	4.2	10.2	8.0	4.8	5.6
Share of NYSAGI	4.7	4.6	4.5	4.2	4.4	4.4	4.7	4.8	4.8
Taxable Pension									
Amount	39,040	40,394	42,461	44,131	44,815	47,119	48,438	50,295	52,229
Percent Change	5.4	3.5	5.1	3.9	1.6	5.1	2.8	3.8	3.8
Share of NYSAGI	5.5	5.7	5.5	5.5	5.6	5.4	5.5	5.5	5.5
Net Business and Partnership Income									
Amount	84,363	83,995	89,448	95,745	94,548	110,326	98,712	101,259	108,961
Percent Change	13.8	(0.4)	6.5	7.0	(1.3)	16.7	(10.5)	2.6	7.6
Share of NYSAGI	11.8	11.8	11.5	11.9	11.9	12.6	11.1	11.2	11.4
All Other Incomes and Adjustments¹									
Amount	(35,031)	(37,363)	(40,178)	(43,418)	(44,873)	(44,136)	(47,542)	(50,459)	(53,001)
Percent Change	11.7	6.7	7.5	8.1	3.4	(1.6)	7.7	6.1	5.0
Share of NYSAGI	(4.8)	(4.9)	(5.2)	(5.2)	(5.4)	(5.7)	(5.1)	(5.4)	(5.6)

* Estimates for 2017 are based on processing data.

¹ Includes alimony received, unemployment income, IRA income, and other incomes. This number is negative due to Federal and New York adjustments to income, which together reduce final NYSAGI.

Source: NYS Department of Taxation and Finance; DOB staff estimates.

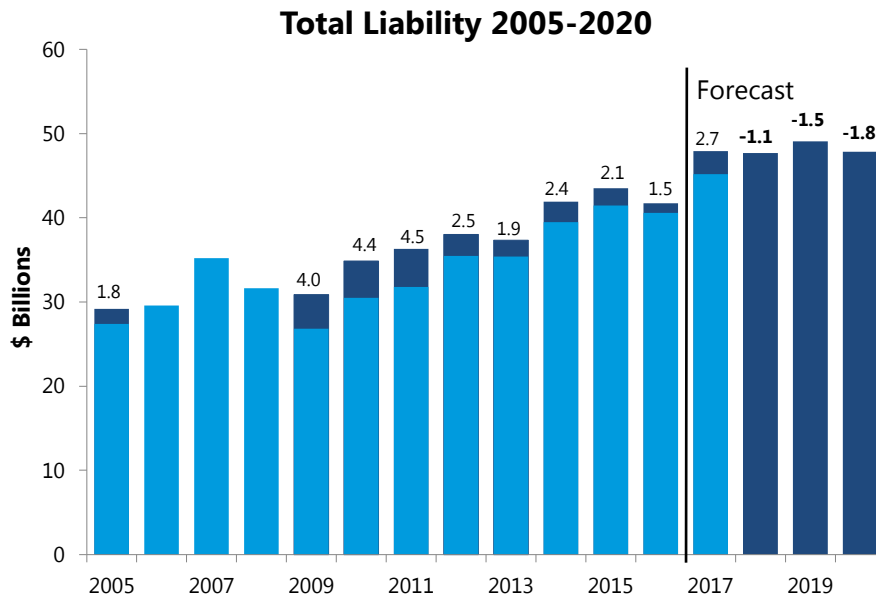
Looking at changes in the composition of NYSAGI shows that the surge in both net capital gains and net partnership income in the 2017 forecast year cut the wage share of NYSAGI to 71.6 percent (a recent low) despite 5.5 percent year-over-year estimated wage growth.

The election of Donald J. Trump in November 2016 appears to have led to another round of strategic income shifting. With a strong promise of rapid action from the new President and Congress on cutting Federal taxes, it seems that investors may have thought it wise to postpone gains into 2017, since there was some chatter about tax changes being made retroactive to that year. Net capital gains fell 22.4 percent in 2016, with the share falling to 9.1 percent, its lowest in four years. Preliminary data for 2017 indicates a jump of 32.6 percent with its share rising to 11.0 percent before nearly flat growth of just 0.4 percent in 2018. With a slowing economy anticipated for 2019, net capital gains are expected to fall 5.5 percent and its share to fall to 10.0 percent of NYSAGI.

Note that Table 5 shows net business and partnership income undergoing similar though less extreme changes in growth in the same years, though its share of NYSAGI is more stable generally. Net business and partnership income fell 1.3 percent in 2016 after growing 7.0 percent in 2015 and

then surging 16.7 percent in 2017, based on preliminary information. Part of the explanation for this sudden growth is the fulfillment of a requirement in Federal tax law that hedge fund managers repatriate incentive or management fees that were lodged offshore by the 2017 tax year (for more on this, see the “New York State Adjusted Gross Income” section in the “Economic Backdrop” portion of this document). Net business and partnership income growth does diverge from that of net capital gains in the 2018 and 2019 forecast years, falling 10.5 percent then growing 2.6 percent in the respective years.

Preliminary data indicate that NYSAGI growth jumped 9.9 percent in 2017, after falling 1.7 percent in 2016. With income shifted into 2017, NYSAGI is estimated to grow just 1.6 percent in 2018 as wages and net capital gains both grow more slowly than in the prior year, while net business and partnership income drops. NYSAGI growth is expected to improve to 2.4 percent in 2019, despite a decline in net capital gains as business and partnership income returns to positive growth.



Note: Values above bars indicate additional liability due to brackets and rates in effect for those tax years relative to 2008 law, as represented by the dark blue shading; values for 2018 through 2020 show the worth of the middle class tax cut for the first three years.

Source: New York State Department of Taxation and Finance; DOB staff estimates.

TABLE 6
LIABILITY AND EFFECTIVE TAX RATES*
Current Law
2005-2019
(millions of dollars)

	NYSAGI		Liability		Effective Tax Rate (percent)
	Amount	Growth Rate	Amount	Growth Rate	
2005	571,955	8.7	28,481	10.6	4.98
2006	632,601	10.6	29,838	4.8	4.72
2007	725,245	14.6	35,215	18.0	4.86
2008	662,053	(8.7)	31,621	(10.2)	4.78
2009	596,471	(9.9)	31,166	(1.4)	5.23
2010	638,855	7.1	34,834	11.8	5.45
2011	657,298	2.9	36,296	4.2	5.52
2012	714,698	8.7	38,017	4.7	5.32
2013	714,046	(0.1)	37,331	(1.8)	5.23
2014	776,477	8.7	41,910	12.3	5.40
2015	807,775	4.0	43,503	3.8	5.39
2016	794,105	(1.7)	41,736	(4.1)	5.26
2017**	872,930	9.9	47,909	14.8	5.49
2018**	886,552	1.6	47,677	(0.5)	5.38
2019**	908,054	2.4	49,068	2.9	5.40

* Liability divided by AGI.
** Estimate/Forecast
Source: NYS Department of Taxation and Finance; DOB staff estimates.

Risks to the Liability Forecast

Over time the State has become increasingly reliant on its high-income taxpayers as a source of income tax revenues. The State tax law reform enacted in December 2011 and effective with the 2012 tax year increased the share of liability stemming from the top one percent of filers to 43.2 in its first year, a recent high. A particular risk to liability estimates also stems from these taxpayers – namely, the challenge of estimating one-time payments to these filers (which can be sizable), since by their nature no prior time pattern or amount is available.

The complex interaction between tax policy and taxpayer behavior is only one example of how changes in the economy, government policy, or the institutional practices of firms (i.e., the timing and types, not to mention the size, of bonus payments) that affect a small number of taxpayers in the high-income groups can have disproportionately large effects on State tax revenues. A particular concern to New York State is the severe limits that 2017's Federal Tax Cuts and Jobs Act (TCJA) imposed on itemized deductions, especially the deduction for State and local taxes, including the property tax. Of course, if the national or State economies slow more than expected, the expected 2018 decline could deepen and growth for 2019 could fall. On the other hand, more positive developments could spur liability growth or improved growth.

**TABLE 7
PERCENT DISTRIBUTION OF RETURNS, LIABILITY
AND AGI BY INCOME GROUPS UNDER CURRENT LAW**

Income Group	2016 (Actual)			2019 (Forecast)		
	Returns	Liability	AGI	Returns	Liability	AGI
0 - \$50,000	63.7	2.9	12.7	56.3	2.9	12.8
\$50,000 - \$100,000	19.4	14.1	18.2	23.2	14.8	18.9
\$100,000 - \$200,000	11.2	19.5	20.3	13.3	18.4	19.5
\$200,000 - \$1,000,000	5.1	27.2	23.9	7.5	27.0	24.1
\$1,000,000 and above	0.5	36.3	24.8	1.1	36.9	24.8

Source: NYS Department of Taxation and Finance; DOB staff estimates.

**TABLE 8
CHANGES IN THE SHARE OF LIABILITY ORIGINATING WITH
THE TOP ONE PERCENT OF NYS TAXPAYERS**

Year	1995-2002, 2006-08 Tax Law			2003-05, 2009-11 Brackets and Rates; Reformed Law Begins in 2012		
	Liability, Top 1 Percent (millions)	Liability, All Taxpayers (millions)	Top 1 Percent Share of Total Liability	Liability, Top 1 Percent (millions)	Liability, All Taxpayers (millions)	Top 1 Percent Share of Total Liability
2005	9,794	26,741	36.6%	11,093	28,481	38.9%
2006	11,539	29,587	39.0%	--	--	--
2007	15,195	35,215	43.1%	--	--	--
2008	11,890	31,621	37.6%	--	--	--
2009	9,138	27,522	33.2%	12,194	31,166	39.1%
2010	10,548	30,349	34.8%	14,282	34,834	41.0%
2011	10,733	31,596	34.0%	14,513	36,296	40.0%
2012	12,976	35,258	36.8%	16,408	38,017	43.2%
2013	11,925	35,214	33.9%	14,913	37,331	39.9%
2014	13,945	39,643	35.2%	17,590	41,910	42.0%
2015	14,297	41,795	34.2%	18,019	43,503	41.4%
2016	12,643	40,359	31.3%	15,907	41,736	38.1%
2017*	15,668	45,015	34.8%	19,884	47,909	41.5%
2018*	14,371	45,409	31.6%	18,384	47,677	38.6%
2019*	14,480	47,031	30.8%	18,544	49,068	37.8%

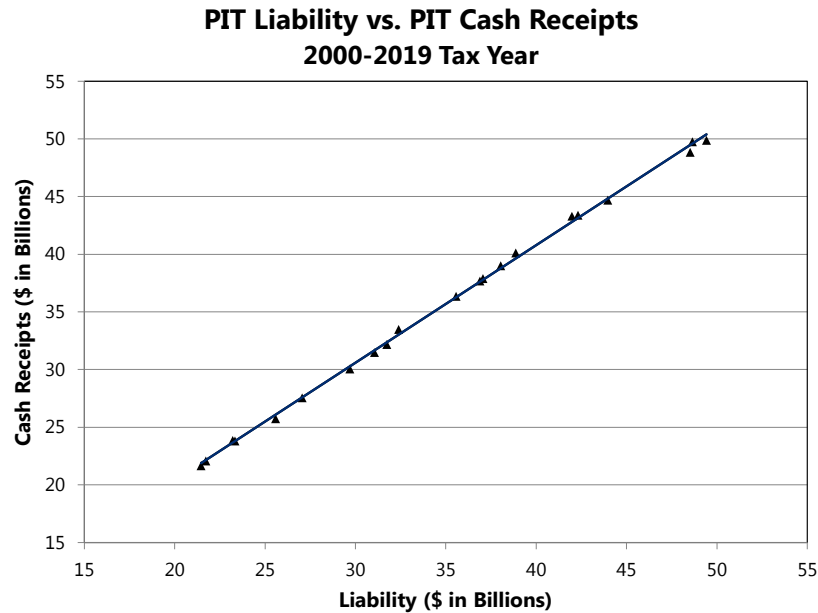
* Estimated

Notes: The 2003-2005 surcharges expired at the end of the 2005 tax year; the 2009-2011 brackets and rates expired at the end of the 2011 tax year.

Source: NYS Department of Taxation and Finance, DOB staff estimates.

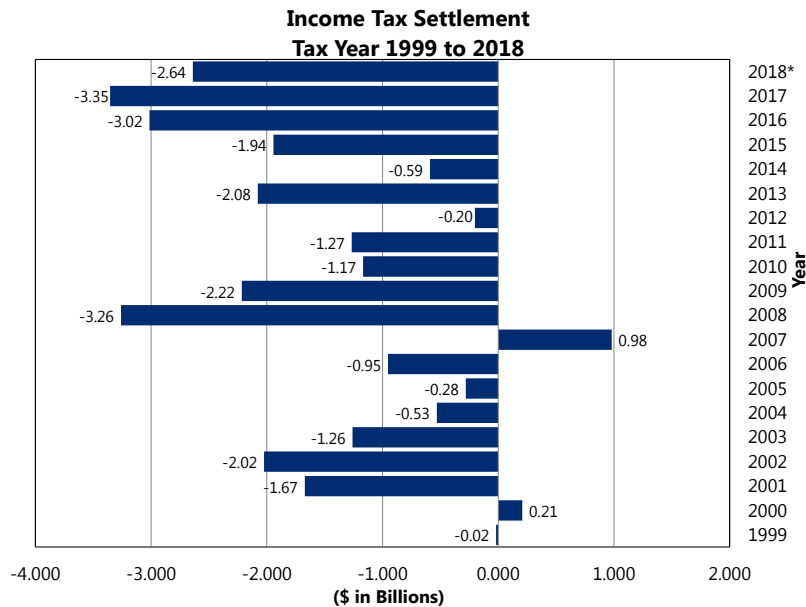
Tax Liability and Cash Payments

Although significant risks remain in any estimates of income tax liability, estimated tax liability for a particular tax year leads, with a high degree of confidence, to the approximate level of cash receipts that can be expected for the particular tax year. The consistency in this relationship is shown in the graph below, which shows a trend line for the history of liability and cash receipts beginning in 2000, and data points to denote actual liability and cash results or estimates.



Despite the strong relationship between tax-year liability and cash receipts, estimation of cash payments is subject to an important complication that pervades forecasts for the Executive Budget and other State Financial Plan updates. This complication is determining the portions of tax-year liability that will occur in particular State fiscal years. Income tax prepayments – withholding tax and quarterly estimated tax payments – tend to be received not long after income is earned. For example, most withholding tax payments and quarterly estimated tax payments for the 2018 tax year will be received before the end of FY 2019. Settlement payments – those payments received when taxpayers file final returns for a tax year – tend to be received in the next State fiscal year after the end of a tax year. Thus, settlement payments for the 2018 tax year will be received largely in FY 2020.

As is evident in the following graph showing net settlement payments for the 1999 through 2018 tax years, the amount of liability received in the settlement can vary widely from year to year. In most years, the net settlement has been very negative, with State settlement outlays (such as refunds and offsets) far exceeding taxpayer settlement payments (such as those sent with returns and extension requests). There have been some important exceptions to this pattern – most notably during times of tax reform and rapid economic growth, and during periods with large increases in non-wage income.



* Projection

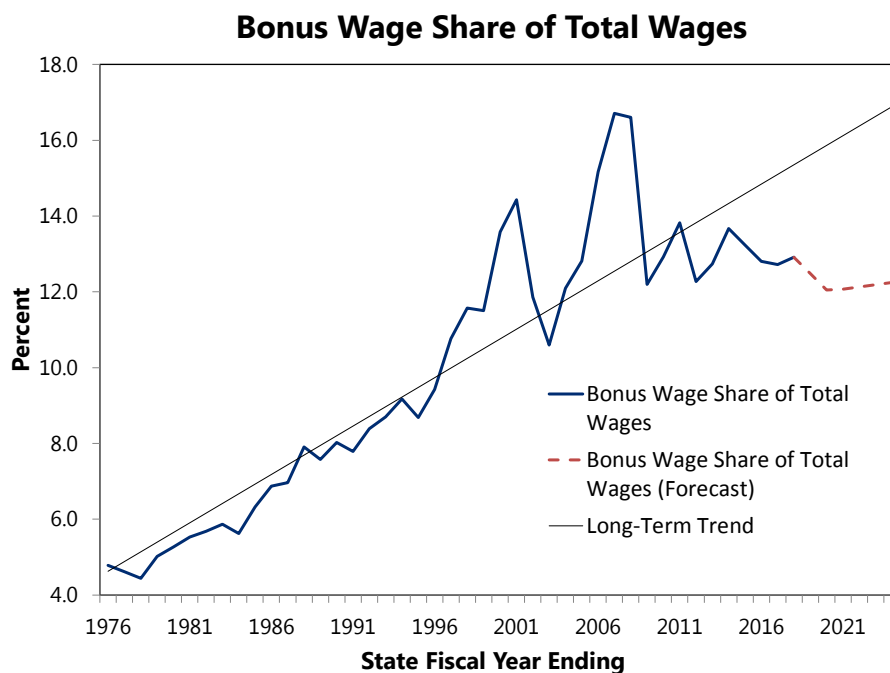
The income tax settlement varies significantly on a year-to-year basis, but is typically negative, and has been consistently negative since tax year 2008. Due to the recessionary economic environment, the 2008 settlement was extremely negative (\$3.26 billion). The significantly less negative 2009 settlement (\$2.22 billion) was the result of an income tax surcharge that went into effect part-way through the tax year. Due to strong extension payments, the 2010 settlement ended at a smaller negative \$1.17 billion. Extension payments declined in 2011, leading to a slightly more negative net settlement of \$1.27 billion. In 2012, strong end-of-year capital gains realizations (due to impending Federal Tax Law changes) led to record-high April extension payments, improving the settlement to negative \$200 million. The net settlement for tax year 2013 shifted to a firmly negative \$2.08 billion, the result of a nearly 35 percent decline in extension payments following an inflated 2012 base. Driven by robust growth in nonwage income, extension payments and final returns related to tax year 2014 grew rapidly while refund payments increased conservatively, ultimately improving the net settlement to approximately negative \$590 million.

The alteration in Family Tax Relief credit payment timing, from an advanced credit to a “standard” credit, provided strong growth in current refunds related to tax year 2015. This was coupled with a correction of quarterly estimated payment overpayment, in the form of a year-over-year decline in extension payments, resulting in a net settlement of negative \$1.94 billion. In 2016, the settlement was more negative (\$3.02 billion), primarily due to a second consecutive extension payment decline. Unlike the tax year 2015 extension decline, the tax year 2016 extension decline was the result of a decline in overall nonwage income, including particularly weak capital gains income. The tax year 2017 settlement further declined to an estimated \$3.35 billion, due to a combination of refund growth and the Tax Cuts and Jobs Act-related acceleration of payments into December 2017 current estimated payment at the expense of extension payments. The tax year 2018 settlement is projected to improve to negative \$2.64 billion, primarily due to the expectation that tax year 2018 current estimated and extension payments revert to a pattern consistent with historical norms.

Withholding Risk

Bonus wages are typically concentrated among high income earners who are withheld at relatively high tax rates, resulting in more revenue per dollar of bonus wage income than revenue per dollar of non-bonus wage income. Bonus payments have historically been volatile, but the long-term trend shows an increasing bonus share of total wages due to bonus growth that, on average, has exceeded growth in non-bonus wages. This trend explains, in part, long-term constant-law quarterly withholding elasticities that range between 1.22 and 1.29.

In recent years, the bonus share rate of change has fallen below the long-term trend and is projected to remain below that trend over the forecast horizon. If a new long-term trend is emerging, one in which bonus payments grow at a rate that is similar to that of non-bonus growth, forward-looking elasticity expectations should be reduced. Too few historical data points exist to conclusively demonstrate that a structural shift has taken place, but the possibility of a new wage-withholding relationship remains a significant risk.



For a more detailed discussion of the methods and models used to develop estimates and projections for the PIT, please see the *Economic, Revenue, and Spending Methodologies* at www.budget.ny.gov.

Receipts: Estimates and Projections

All Funds

FY 2019 Estimates

All Funds preliminary receipts through December are \$32,523 million, a decrease of \$1,509 million (4.4 percent) from the comparable period in the prior fiscal year.

All Funds FY 2019 receipts are estimated to be \$50.1 billion, a decrease of \$1.4 billion (2.6 percent) from FY 2018. This primarily reflects moderate growth in total refunds, coupled with a decline in current estimated payments for tax year 2018, partially offset by weak growth in withholding and moderate growth in final returns.

Withholding in FY 2019 is projected to be \$713 million (1.8 percent) higher compared to the prior year, reflecting a combination of moderate growth in non-bonus wages and weak growth in bonus wages. Total estimated payments are expected to decrease by \$1.5 billion (8.6 percent). Estimated payments for tax year 2018 are projected to decrease by \$1.6 billion (11.2 percent), driven by a combination of a 4.1 percent decline in nonwage income and a steep year-over-year decline in the fourth quarterly estimated payment from an inflated base. Extension payments (i.e., prior year estimated) for tax year 2017 increased \$75 million (2.2 percent). Delinquent collections are projected to be \$7 million (0.5 percent) lower, and final return payments are projected to increase by \$151 million (6.1 percent).

The tax year 2017 fourth quarterly estimated payment benefitted from record year-over-year growth, driven by the combination of strong nonwage income growth, Federal tax reform, and the expiration of a Federal ten-year window to repatriate foreign hedge fund earnings. The Tax Cuts and Jobs Act of 2017, among its many provisions, capped deductible state and local taxes paid at \$10,000 annually, beginning with tax year 2018. This legislation prompted taxpayers to accelerate payments into December 2017 to benefit from the final year of uncapped state and local tax deductions. Tax year 2018 payments are expected to revert to a pattern consistent with historical norms.

The increase in total refunds of \$688 million (6.5 percent) reflects increases of \$457 million (75 percent) in advanced credit payments attributable to tax year 2018, \$96 million (18.3 percent) in refunds related to tax years previous to 2017, and \$317 million (37 percent) in the State-City offset, partially offset by a \$183 million (2.9 percent) decline in prior year refunds related to tax year 2017. The strong growth in advanced credit payments attributable to tax year 2018 reflects increases in the Property Tax Relief Credit and the Homeowners STAR Conversion Credit.

Table 9 shows the components of the PIT from FY 2018 through FY 2020.

TABLE 9
FISCAL YEAR COLLECTION COMPONENTS
ALL FUNDS
(millions of dollars)

	FY 2018 (Actual)	FY 2019 (Estimated)	FY 2020 (Projected)
Receipts			
Withholding	40,269	40,982	42,854
Estimated Payments	17,781	16,256	17,472
Current Year	14,329	12,729	13,256
Prior Year*	3,452	3,527	4,216
Final Returns	2,478	2,629	2,748
Current Year	308	286	301
Prior Year*	2,170	2,343	2,447
Delinquent Collections	1,507	1,500	1,564
Gross Receipts	62,036	61,367	64,638
Refunds			
Prior Year*	6,293	6,110	6,327
Previous Years	527	623	653
Current Year*	2,249	2,250	1,750
Advanced Credit Payment	610	1,067	1,894
State-City Offset*	856	1,173	999
Total Refunds	10,534	11,223	11,623
Net Receipts	51,501	50,144	53,015

* These components, collectively, are known as the "settlement" on the prior year's tax liability.

The primary risks to FY 2019 receipts estimate result from uncertainty surrounding both bonus payments paid by financial services companies and the fourth quarterly estimated tax payment. With respect to financial sector bonuses, a large portion of these payments are typically paid in the last quarter of the state fiscal year. Consequently, complete information about such payments is not available when Budget estimates are constructed. Similarly, the fourth quarterly estimated tax payment is consistently the largest payment, and a significant portion of this revenue is not received until after the Division's forecast has been produced. Furthermore, the degree to which the limit on state and local tax deductions will affect the timing of taxpayer payments - between FY 2019 current estimated payments and FY 2020 extensions – is uncertain and presents a significant risk to the forecast.

FY 2020 Projections

All Funds FY 2020 receipts are projected to be \$53 billion, an increase of \$2.9 billion (5.7 percent) from FY 2019.

This total increase primarily reflects increases of \$1.9 billion (4.6 percent) in withholding and \$1.2 billion (7.5 percent) in total estimated payments, partially offset by a \$401 million (3.6 percent) increase in total refunds. The increase in total estimated payments is inclusive of a \$527 million (4.1 percent) increase in current estimated payments related to tax year 2019 and a \$689 million (19.5 percent) increase in extension (i.e., prior year estimated) payments for tax year 2018. The

increase in tax year 2018 extension payments reflects the aforementioned expected return of total estimated payments to normal historical patterns, following an unusually low percentage of tax year 2017 total estimated payments paid through extension payments. The growth in withholding is driven by projected FY 2020 wage growth of 3.6 percent, and the underlying growth in estimated payments related to tax year 2019 is in response to projected nonwage income decline of 0.8 percent. Payments from final returns are expected to increase \$119 million (4.5 percent) and delinquent collections are projected to increase by \$64 million (4.3 percent) compared to the prior year.

The \$401 million increase in total refunds is driven by increases of \$827 million (77.5 percent) in advanced credit payments related to tax year 2019, \$218 million (3.6 percent) in prior year refunds related to tax year 2018, and \$30 million (4.8 percent) in refunds related to tax years previous to 2018, partially offset by declines of \$500 million (22.2 percent) in the administrative refund cap in January to March 2019 and \$174 million (14.8 percent) in the State-City offset. The growth in advanced credit payments is attributable to an increase in Property Tax Relief Credit payments.

All Funds FY 2020 receipts are inclusive of \$612 million in increased revenue from FY 2020 Executive Budget proposals. Withholding includes \$771 million attributable to the proposal to extend higher personal income tax rates for five years. Current estimated payments related to tax year 2019 include \$14 million from the proposal to permanently extend tax shelter reporting. Prior year refunds related to tax year 2018 are reduced by \$12 million due to the proposed additional auditors at the Department of Taxation and Finance. Advanced credit payments related to tax year 2019 are increased by \$185 million due to the proposals to lower the Basic STAR income eligibility requirement and cap annual growth in exemption benefits at zero percent.

General Fund

General Fund net PIT receipts are estimated to be \$22,648 million in FY 2019 and are projected to be \$24,321 million in FY 2020.

Other Funds

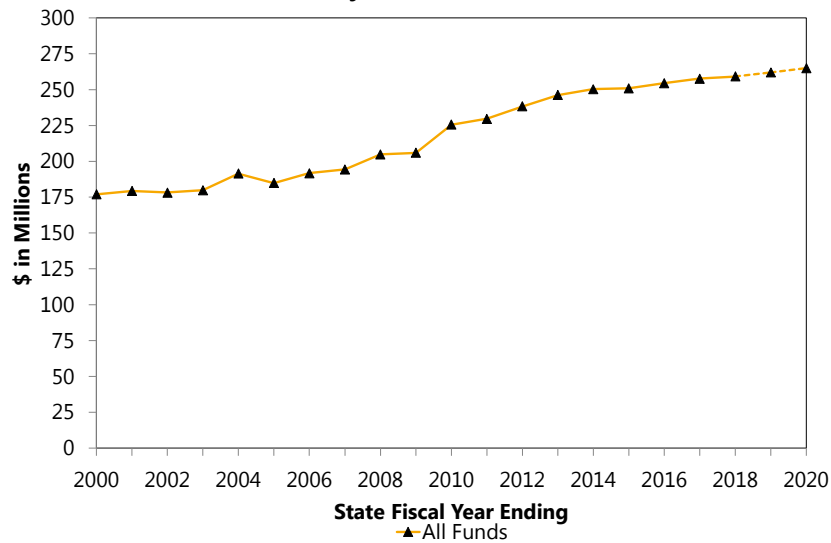
In FY 2019 and FY 2020, respectively, dedicated PIT receipts of \$2,424 million and \$2,186 million will be deposited into the School Tax Relief Fund (STAR). The decline in FY 2020 deposits is attributable to the ongoing conversion of STAR homeowner benefits into a PIT credit for new and relocating homeowners. The STAR Transformation credit was enacted as part of the FY 2017 Budget, and conversion will continue indefinitely. The FY 2020 School Tax Relief Fund projection is inclusive of a \$231 million reduction due to FY 2020 Executive Budget proposals.

In FY 2019 and FY 2020, respectively, dedicated receipts of \$25,072 million and \$26,507 million will be deposited into the Revenue Bond Tax Fund (RBTF). This increase reflects the growth in net income tax collections upon which the RBTF is based.

ALCOHOLIC BEVERAGE TAXES (millions of dollars)							
	FY 2018	FY 2019		Percent	FY 2020		Percent
	Actual	Estimated	Change	Change	Projected	Change	Change
General Fund	259.2	262.0	2.8	1.1	265.0	3.0	1.1
Other Funds	0.0	0.0	0.0	0.0	0.0	0.0	0.0
All Funds	259.2	262.0	2.8	1.1	265.0	3.0	1.1

Note: Totals may differ due to rounding.

Alcoholic Beverage Tax Receipts History and Estimates



ALCOHOLIC BEVERAGE TAXES BY FUND (millions of dollars)

	General Fund	All Funds Receipts
FY 2010	226	226
FY 2011	230	230
FY 2012	238	238
FY 2013	246	246
FY 2014	250	250
FY 2015	251	251
FY 2016	255	255
FY 2017	258	258
FY 2018	259	259
Estimated		
FY 2019	262	262
FY 2020		
Current Law	265	265
Proposed Law	265	265

Proposed Legislation

No new legislation proposed with this Budget.

Description

Tax Base and Rate

New York State imposes excise taxes at various rates on liquor, beer, wine and specialty beverages.

STATE TAX RATES (dollars per unit of measure)		
Liquor over 24 percent alcohol	1.70	per liter
All other liquor with more than 2 percent alcohol	0.67	per liter
Liquor with not more than 2 percent alcohol	0.01	per liter
Naturally sparkling wine	0.30	per gallon
Artificially carbonated sparkling wine	0.30	per gallon
Still wine	0.30	per gallon
Beer with 0.5 percent or more alcohol	0.14	per gallon
Cider with more than 3.2 percent alcohol	0.04	per gallon

Administration

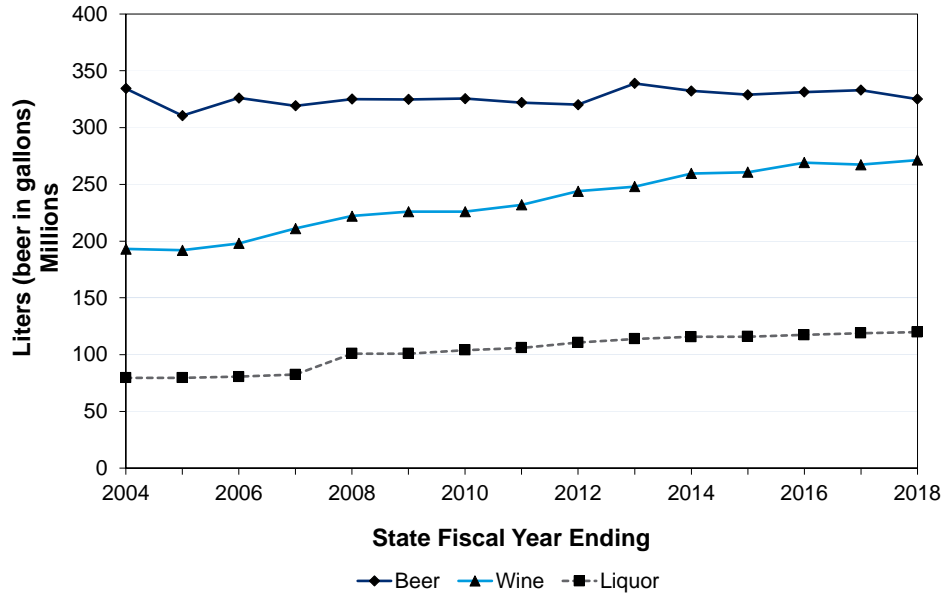
Generally, the tax is remitted by licensed distributors and noncommercial importers of such beverages in the month following the month of delivery. Small taxpayers file the tax annually.

Significant Legislation

Significant statutory changes to alcoholic beverage taxes since 2013 are summarized below.

Subject	Description	Effective Date
Legislation Enacted in 2016		
Tasting Exemptions	Exempted any product used in on-site tastings from the alcoholic beverage tax.	March 31, 2016

Total Consumption of Alcoholic Beverages



Tax Liability

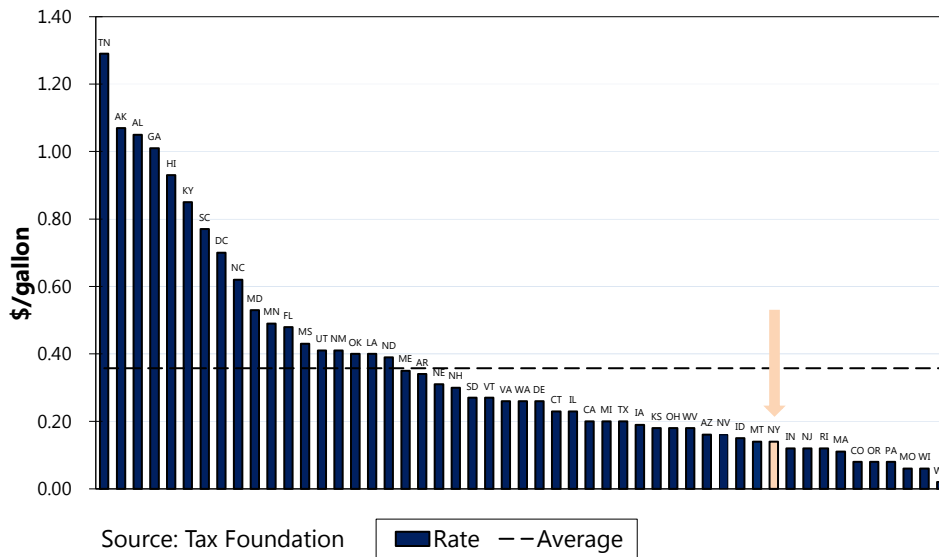
Generally, consumption of taxed wine and liquor has slightly increased annually since FY 2008, while taxable beer consumption has remained relatively flat, with a few exceptions (e.g., craft brewery boom and leveling off), during the same period.

Other States

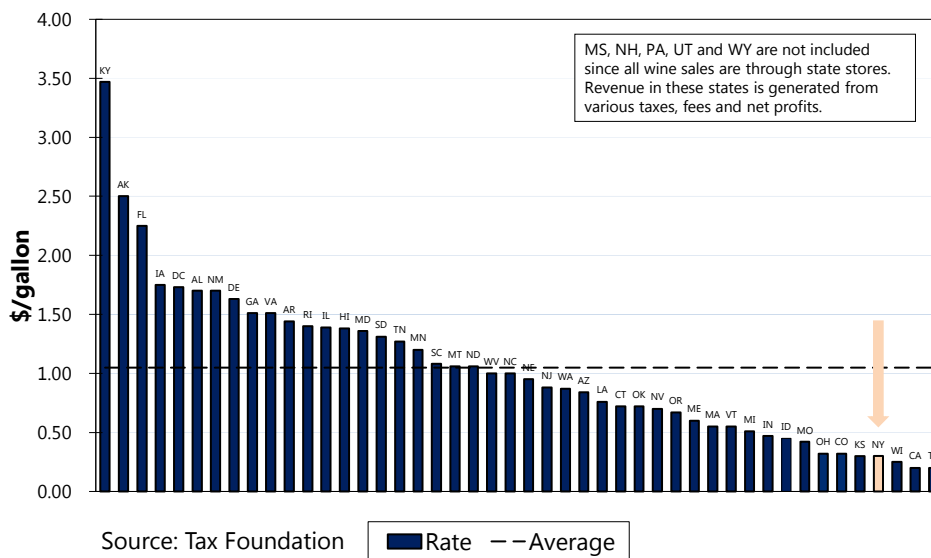
Compared with the alcohol tax rates in the other states in the nation, New York State currently has:

- The eleventh lowest beer tax;
- The fourth lowest wine tax; and
- The twenty-first highest liquor tax.

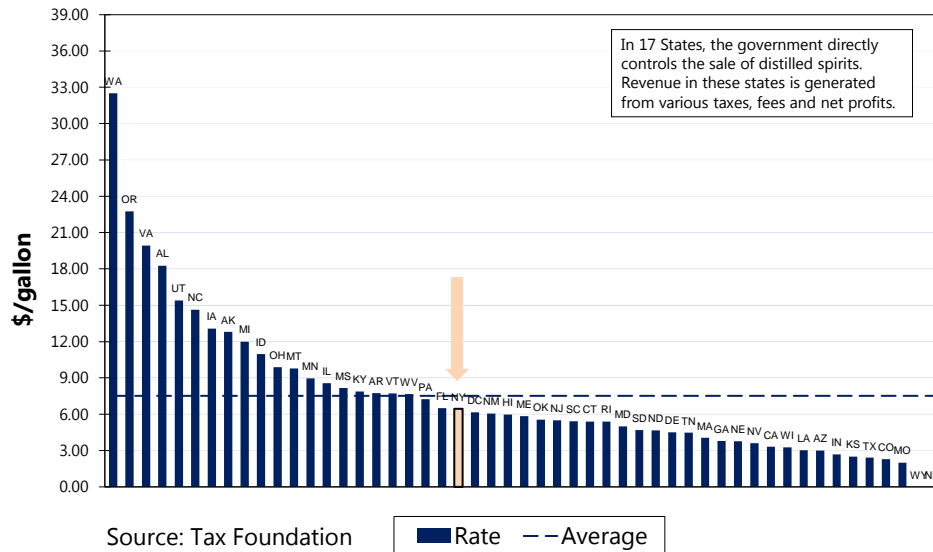
Beer Tax Rates by State (January 2018)



Wine Tax Rates by State (January 2018)



Liquor Tax Rates by State (January 2018)



Note: 17 States have direct control over the sale of distilled spirits. The implied excise tax rate is calculated using methodology designed by the Distilled Spirits Council of the United States (DISCUS).

The New York State tax on liquor is relatively high compared to other forms of alcohol, but still below the average of all states. The alcoholic beverage enforcement provisions summarized below support the State’s liquor industry and tax base, thereby improving State alcoholic beverage tax receipts.

Alcoholic Beverage Tax Enforcement Provisions

Violations	Volume	Penalties
Import liquor without registration		Class A misdemeanor
Produce, distill, manufacture, compound, mix or ferment liquors without registration or tax payments		Class A misdemeanor
Cause liquor covered by a warehouse receipt to be removed from a warehouse		Class A misdemeanor
Three or more above violations in a five-year period		Class E felony
Import liquor without registration	More than 360 liters within one year	Class E felony
Produce, distill, manufacture, compound, mix or ferment liquors without registration or tax payments	More than 360 liters within one year	Class E felony
Cause liquor covered by a warehouse receipt to be removed from a warehouse	More than 360 liters within one year	Class E felony

Violations	Volume	Penalties
Custody, possession or control of liquor without registration or tax payments		Class B misdemeanor
Custody, possession or control of liquor without registration or tax payments	Exceeds 360 liters	Class E felony
Import liquor without registration	More than 90 liters	Seize transportation vehicles and liquor.
Distribute or hold liquor for sale without paying alcoholic beverage taxes	More than 90 liters	Seize transportation vehicles and liquor.
Failure by a distributor to pay the tax		10 percent of the tax amount due, plus 1 percent each month after the expiration. The penalty shall not be less than \$100 but shall not exceed 30 percent in aggregate.
Failure by any other person to pay the tax		50 percent of the tax amount due, plus 1 percent each month after the expiration. The penalty shall not be less than \$100.

For a more detailed discussion of the methods used to develop estimates and projections for the alcoholic beverage taxes, please see the *Economic, Revenue, and Spending Methodologies* at www.budget.ny.gov.

Receipts: Estimates and Projections

All Funds

FY 2019 Estimates

All Funds receipts through December are \$198.6 million, an increase of \$1.3 million (0.6 percent) from the comparable period in the prior fiscal year.

All Funds FY 2019 receipts are estimated to be \$262 million, an increase of \$2.8 million (1.1 percent) from FY 2018. Estimated growth is primarily based on the continuation of recent wine and liquor consumption trend growth.

Total estimated receipts are composed of \$195.5 million from liquor, \$45.7 million from beer, and \$20.8 million from wine and other taxed beverages.

COMPONENTS OF ALCOHOLIC BEVERAGE TAXES RECEIPTS (millions of dollars)							
	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	Estimated FY 2019	Projected FY 2020
Beer	46.7	46.0	46.5	47.1	45.6	45.7	45.8
Liquor	183.8	185.3	188.0	190.3	193.2	195.5	198.0
Wine and Other	19.8	19.5	20.0	20.3	20.4	20.8	21.2
Total	250.3	250.8	254.5	257.7	259.2	262.0	265.0

FY 2020 Projections

All Funds FY 2020 receipts are projected to be \$265 million, an increase of \$3 million (1.1 percent) from FY 2019.

Liquor and wine consumption are expected to grow slightly, while beer consumption is expected to remain relatively flat.

Total projected alcoholic beverage tax receipts are composed of \$198 million from liquor, \$45.8 million from beer, and \$21.2 million from wine and other specialty beverages.

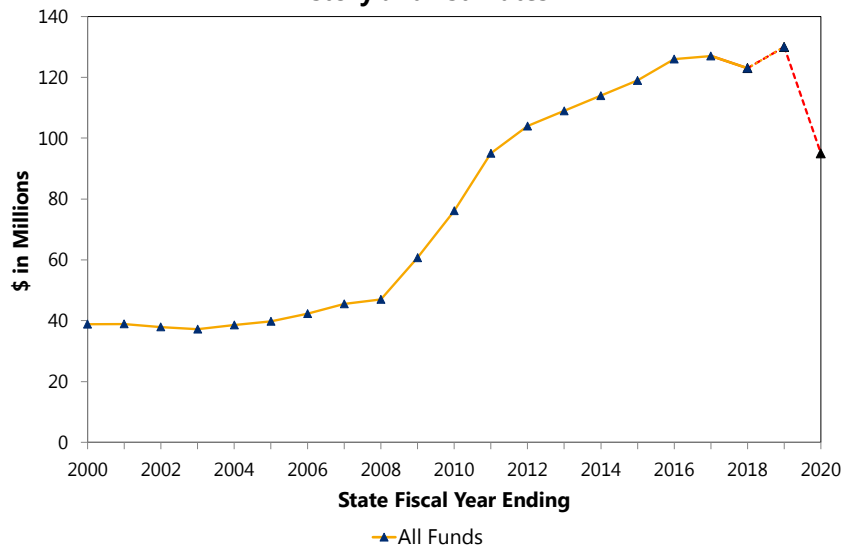
General Fund

Currently, all receipts from the alcoholic beverage tax are deposited in the General Fund.

AUTO RENTAL TAX (millions of dollars)							
	FY 2018 Actual	FY 2019 Estimated	Change	Percent Change	FY 2020 Projected	Change	Percent Change
General Fund	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Funds	123.0	130.0	7.0	5.7	95.0	-35.0	-26.9
All Funds	123.0	130.0	7.0	5.7	95.0	-35.0	-26.9

Note: Totals may differ due to rounding.

Auto Rental Tax Receipts History and Estimates



AUTO RENTAL TAX BY FUND (millions of dollars)			
	Capital Project Funds ¹	Special Revenue Funds ²	All Fund Receipts
FY 2010	52	24	76
FY 2011	60	35	95
FY 2012	65	39	104
FY 2013	68	41	109
FY 2014	71	43	114
FY 2015	74	45	119
FY 2016	79	47	126
FY 2017	78	49	127
FY 2018	78	45	123
Estimated			
FY 2019	81	49	130
FY 2020			
Current Law	84	51	135
Proposed Law	84	11	95

¹Dedicated Highway and Bridge Trust Fund.
²MTA Aid Trust Account and the PTSOA

Proposed Legislation

Legislation proposed with this Budget would:

- Change the process for distributing auto rental tax revenues to the Metropolitan Transportation Authority (MTA).
- Impose a supplemental auto rental tax of 5 percent on receipts from the rental of a passenger car outside the Metropolitan Commuter Transportation District (MCTD).

Description

Tax Base and Rate

On June 1, 1990, the State imposed a 5 percent tax on charges for the rental or use in New York State of a passenger car with a gross vehicle weight of 9,000 pounds or less. On June 1, 2009, the rate was increased to 6 percent and a supplemental tax at the rate of 5 percent was imposed on the receipts from the rental of a passenger car within the Metropolitan Commuter Transportation District (MCTD).

The auto rental tax applies to a vehicle rented by a resident or a nonresident, regardless of where the vehicle is registered. The tax does not apply to a car lease covering a period of one year or more.

Administration

The auto rental tax is remitted quarterly by the vendor on the vendor's sales tax return to the Department of Taxation and Finance.

Tax Liability

Receipts from the auto rental tax are influenced by the overall health of the economy, particularly consumer and business spending on travel. Unusual events that affect travel have had a significant influence on receipts.

For a more detailed discussion of the methods and models used to develop estimates and projections for the auto rental tax, please see the *Economic, Revenue, and Spending Methodologies* at www.budget.ny.gov.

Receipts: Estimates and Projections

All Funds

FY 2019 Estimates

All Funds preliminary receipts through December are \$105.9 million, an increase of \$7 million (7.1 percent) from the comparable period in the prior fiscal year.

All Funds FY 2019 receipts are estimated to be \$130 million, an increase of \$7 million (5.7 percent) from FY 2018. This growth reflects a continuing increase in New York tourism and business spending.

FY 2020 Projections

All Funds FY 2020 receipts are projected to be \$95 million, a decline of \$35 million (26.9 percent) from FY 2019. Excluding the Budget proposals (see below), receipts are projected to increase by \$5 million (3.9 percent).

General Fund

No auto rental tax receipts are deposited into the General Fund.

Other Funds

All receipts from the State auto rental tax are deposited to the Dedicated Highway and Bridge Trust Fund. Receipts are estimated to be \$81 million in FY 2019 and \$84 million in FY 2020.

All receipts from the supplemental tax on passenger cars in the MCTD are deposited to the MTA Aid Trust Account of the MTA Financial Assistance Fund. Receipts are estimated to be \$49 million in FY 2019.

Beginning in FY 2020, legislation proposed with this Budget would:

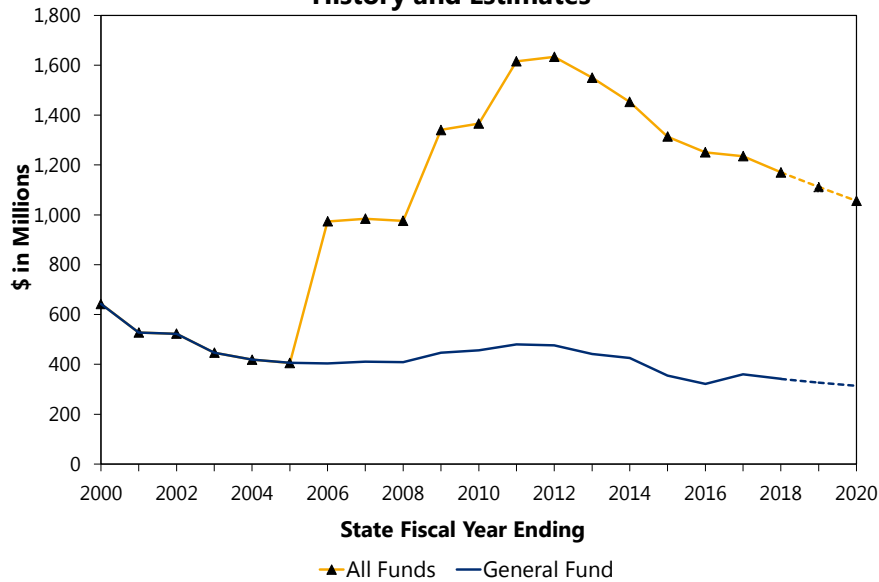
- Deposit receipts from the proposed supplemental tax of 5 percent on the rental of passenger cars outside the MCTD to the Public Transportation Systems Operating Assistance Account (PTSOA); and
- No longer direct receipts from the supplemental tax on passenger cars in the MCTD to the MTA Aid Trust Account of the MTA Financial Assistance Funds. Receipts would be directly provided to the MTA.

Receipts from the proposed supplemental tax on passenger cars outside the MCTD are estimated to be \$11 million in FY 2020.

CIGARETTE AND TOBACCO TAXES (millions of dollars)							
	FY 2018 Actual	FY 2019 Estimated	Change	Percent Change	FY 2020 Projected	Change	Percent Change
General Fund	341.8	327.0	(14.8)	(4.3)	312.0	(15.0)	(4.6)
Other Funds	828.7	785.0	(43.7)	(5.3)	736.0	(49.0)	(6.2)
All Funds	1,170.5	1,112.0	(58.5)	(5.0)	1,048.0	(64.0)	(5.8)

Note: Totals may differ due to rounding.

Cigarette and Tobacco Taxes Receipts History and Estimates



CIGARETTE AND TOBACCO TAXES BY FUND (millions of dollars)			
	General Fund	Special Revenue Funds	All Funds Receipts
FY 2009	446	894	1,340
FY 2010	456	910	1,366
FY 2011	480	1,136	1,616
FY 2012	471	1,162	1,633
FY 2013	443	1,108	1,551
FY 2014	426	1,027	1,453
FY 2015	355	958	1,313
FY 2016	322	928	1,250
FY 2017	360	876	1,235
FY 2018	342	829	1,171
Estimated			
FY 2019	327	785	1,112
FY 2020			
Current Law	314	742	1,056
Proposed Law	312	736	1,048

Proposed Legislation

Legislation proposed with this Budget would enact a comprehensive tobacco control policy.

Description

Tax Base and Rate

The New York State cigarette excise tax is imposed by Article 20 of the Tax Law on the sale or use of cigarettes within the State. The current tax rate is \$4.35 per package of 20 cigarettes.

The Federal government imposes a cigarette excise tax at a rate of \$1.01 per pack on manufacturers and first importers of cigarettes. New York City also levies a separate cigarette excise tax of \$1.50 per pack.

STATE, FEDERAL AND NEW YORK CITY CIGARETTE EXCISE TAX RATES Per Pack of 20 Cigarettes (since 1939)					
State	Rate	Federal	Rate	New York City	Rate
	(cents)		(cents)		(cents)
July 1, 1939	2	Before November 1, 1951	7	Before May 1, 1959	1
January 1, 1948	3	November 1, 1951	8	May 1, 1959	2
April 1, 1959	5	January 1, 1983	16	June 1, 1963	4
April 1, 1965	10	January 1, 1991	20	January 1, 1976	8
June 1, 1968	12	January 1, 1993	24	July 2, 2002	150
February 1, 1972	15	January 1, 2000	34		
April 1, 1983	21	January 1, 2002	39		
May 1 1989	33	April 1, 2009	101		
June1 1990	39				
June 1, 1993	56				
March 1, 2000	111				
April 3, 2002	150				
June 3, 2008	275				
July 1, 2010	435				

The State also imposes a tax on other tobacco products, such as chewing tobacco, snuff, cigars, pipe tobacco and roll-your-own cigarette tobacco, at a rate of 75 percent of their wholesale price except for snuff products, which are taxed at a rate of \$2.00 per ounce. Cigars with a weight of less than 4 pounds per 1,000 are taxed at a rate equivalent to the state cigarette tax. The Federal government also imposes an excise tax on manufacturers and importers of tobacco products at various rates, depending on the type of product.

Retail establishments that sell cigarettes are required to register with the Department of Taxation and Finance. Vending machine owners are required to purchase stickers from the Department. The following table provides a comparison of state cigarette tax rates.

CIGARETTE TAX RATES			
Cents Per Pack Ranked by State Tax Rate			
<i>As of October 1, 2018</i>			
Rank (High to Low)	State Rate	Rank (High to Low)	State Rate
DC	450.0	New Mexico	166.0
Connecticut	435.0	Ohio	160.0
New York	435.0	South Dakota	153.0
Rhode Island	425.0	Texas	141.0
Massachusetts	351.0	Iowa	136.0
Hawaii	320.0	Florida	133.9
Vermont	308.0	Oregon	133.0
Minnesota	304.0	Kansas	129.0
Washington	302.5	West Virginia	120.0
California	287.0	Arkansas	115.0
New Jersey	270.0	Kentucky	110.0
Pennsylvania	260.0	Louisiana	108.0
Wisconsin	252.0	Indiana	99.5
Delaware	210.0	Colorado	84.0
Oklahoma	203.0	Mississippi	68.0
Alaska	200.0	Alabama	67.5
Arizona	200.0	Nebraska	64.0
Maine	200.0	Tennessee	62.0
Maryland	200.0	Wyoming	60.0
Michigan	200.0	Idaho	57.0
Illinois	198.0	South Carolina	57.0
Nevada	180.0	North Carolina	45.0
New Hampshire	178.0	North Dakota	44.0
Montana	170.0	Georgia	37.0
Utah	170.0	Virginia	30.0
US MEDIAN	166.0	Missouri	17.0

Source: www.tobaccofreekids.org.

Administration

State-registered stamping agents, who are mostly wholesalers, purchase tax stamps from the State and affix the stamps to cigarette packages to be sold by New York State registered retailers. The excise tax is paid by the stamping agent and is passed on. Purchasers of non-State stamped cigarettes, such as cigarettes sold out-of-State or on Native American lands, must remit the cigarette excise tax directly to the Department of Taxation and Finance. An individual may bring two cartons into the State without being subject to the excise tax.

Tax Evasion

Cigarette tax evasion is a serious problem in New York and throughout the Northeast. The most significant area of concern is the importation of cigarettes from low-tax states. Widespread evasion not only reduces State and local revenues, but also reduces the income of legitimate wholesalers and retailers. The Department of Taxation and Finance continues to vigorously pursue stopping cigarette bootlegging through investigatory and enforcement efforts. These efforts may lead to less severe declines in taxable cigarette consumption than otherwise would have occurred.

In 2013, legislation was enacted that increased the penalty for possession of unstamped or unlawfully stamped cigarettes from \$150 per carton to \$600 per carton to reflect increases in the excise tax on cigarettes and to strengthen the deterrent effect in the current environment.

In 2014, a multi-agency task force was formed to reduce illegal tobacco trafficking and sales. The multi-agency Cigarette Strike Force is composed of state, local and federal agencies dedicated to stopping the influx of counterfeit and untaxed tobacco products into New York. The Strike Force also focuses on tracing any illicit financial earnings from that criminal activity.

Significant Legislation

Significant statutory changes to cigarette and tobacco taxes since 2013 are summarized below.

Subject	Description	Effective Date
Legislation Enacted in 2013		
Cigarette Tax	Increased the penalty for possession of unstamped or unlawfully stamped cigarettes from a maximum of \$150 per carton or fraction of a carton to a maximum of \$600 per carton or fraction of a carton.	June 1, 2013

Tax Liability

Taxable cigarette consumption is a function of retail cigarette prices and a long-term downward trend in consumption. The decline in consumption reflects the impact of increased public awareness of the adverse health effects of smoking, smoking restrictions imposed by governments, anti-smoking education programs, and changes in consumer preferences toward other types of tobacco.

For a more detailed discussion of the methods and models used to develop estimates and projections for the cigarette and tobacco taxes, please see the *Economic, Revenue, and Spending Methodologies* at www.budget.ny.gov.

Receipts: Estimates and Projections

All Funds

FY 2019 Estimates

All Funds receipts through December are \$875.5 million, a decrease of \$42.7 million (4.6 percent) from the comparable period in the prior fiscal year.

All Funds FY 2019 receipts are estimated to be \$1,112 million, a decrease of \$58.5 million (5 percent) from FY 2018.

FY 2020 Projections

All Funds FY 2020 receipts are projected to be \$1,056 million, a decrease of \$56 million (5 percent) from FY 2019.

Health Care Reform Act (HCRA)

Currently, 76 percent of the proceeds from the State cigarette tax of \$4.35 per pack are deposited in the HCRA Resources Pool.

HCRA receipts through December are \$616.5 million, a decrease of \$34.8 million (5.3 percent) from the comparable period in the prior fiscal year. HCRA FY 2019 receipts are estimated to be \$785 million, a decrease of \$43.7 million (5.3 percent) from FY 2018, due to a continued greater-than-trend decline in cigarette consumption (as discussed under the Tax Liability section), in part due to bootlegging. It is estimated that this decline has been partly reduced due to enforcement efforts of the Governor's Cigarette Strike Force.

HCRA FY 2020 receipts are projected to be \$736 million, a decrease of \$49 million (6.2 percent) from FY 2019, due to a continuation of the aforementioned greater-than-trend decline and enforcement efforts of the Strike Force. This includes a decrease of \$6 million due to an Executive Budget proposal that would enact a comprehensive tobacco control policy.

As part of the agreement allowing New York City to increase its cigarette tax from eight cents to \$1.50 per pack in July 2002, the City provides the State with 46 percent of the receipts generated from its tax. These receipts are deposited into the HCRA Resources Pool. The New York State share of the City's cigarette tax is projected to be \$28 million in FY 2019 and \$25 million in FY 2020.

General Fund

Currently, 24 percent of the proceeds from the State cigarette tax of \$4.35 per pack and 100 percent of the proceeds from the State tobacco products tax are deposited in the General Fund.

General Fund receipts through December are \$259 million, a decrease of \$7.8 million (2.9 percent) from the comparable period in the prior fiscal year.

General Fund FY 2019 receipts are estimated to be \$327 million, a decrease of \$14.8 million (4.3 percent) from FY 2018. Receipts from the cigarette tax are estimated to be \$247.9 million, a decrease of \$13.8 million (5.3 percent) from FY 2018. This decrease reflects the continued greater than trend decline in cigarette consumption noted above. Receipts from the tobacco products tax are estimated to decrease to \$72.1 million.

Receipts from retail cigarette registrations are estimated to be \$7 million in FY 2019.

Cigarette and Tobacco Tax



General Fund FY 2020 receipts are projected to be \$312 million, a decrease of \$15 million (4.6 percent) from FY 2019. Cigarette tax receipts are projected to be \$234 million, a decrease of \$13.9 million (5.6 percent) from FY 2019. The cigarette tax decrease again reflects the continued greater than trend decline in cigarette consumption and Executive Budget proposal previously noted. Tobacco products tax receipts are projected to be \$73 million, an increase of \$0.9 million (1.2 percent) from FY 2019.

Receipts from retail registrations are projected to be \$7 million in FY 2020.

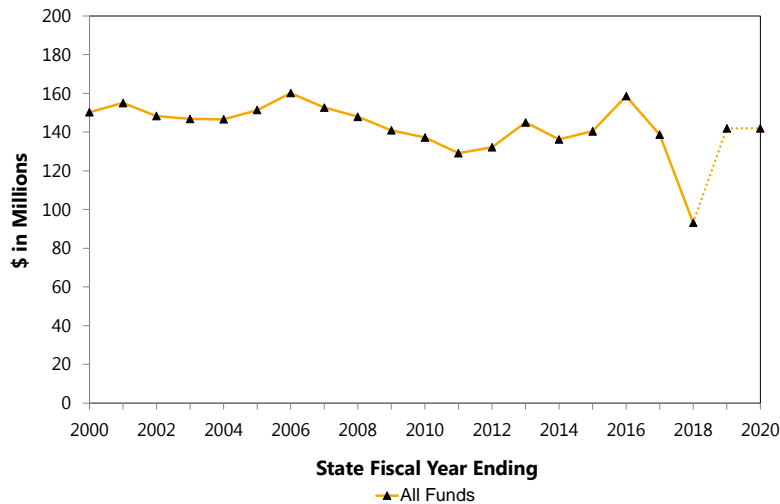
CIGARETTE AND TOBACCO TAXES RECEIPTS						
(millions of dollars)						
Fiscal Year	General Fund			Total	HCRA	General Fund Plus HCRA
	Cigarette Tax	Tobacco Tax	Other		Cigarette Tax	
FY 2010	378	64	14	456	910	1,366
FY 2011	382	96	3	481	1,136	1,616
FY 2012	367	103	2	471	1,162	1,633
FY 2013	348	91	3	443	1,108	1,551
FY 2014	324	95	7	426	1,027	1,453
FY 2015	303	46	7	355	959	1,314
FY 2016	293	22	7	322	928	1,251
FY 2017	277	76	7	360	876	1,235
FY 2018	262	73	7	342	829	1,171
Estimated						
FY 2019	248	72	7	327	785	1,112
FY 2020	232	73	7	312	736	1,048

Note: Components may not add to total due to rounding.

HIGHWAY USE TAX (millions of dollars)							
	FY 2018 Actual	FY 2019 Estimated	Change	Percent Change	FY 2020 Projected	Change	Percent Change
General Fund	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Funds	93.2	144.0	50.8	54.5	142.0	(2.0)	(1.4)
All Funds	93.2	144.0	50.8	54.5	142.0	(2.0)	(1.4)

Note: Totals may differ due to rounding.

Highway Use Tax Receipts History and Estimates



HIGHWAY USE TAX COLLECTIONS BY FUND (millions of dollars)			
	Capital Projects Funds ¹	Special Revenue Funds ²	All Funds Receipts
FY 2010	137	N/A	137
FY 2011	129	N/A	129
FY 2012	132	N/A	132
FY 2013	145	N/A	145
FY 2014	136	N/A	136
FY 2015	140	N/A	140
FY 2016	159	N/A	159
FY 2017	137	2	139
FY 2018	91	2	93
Estimated			
FY 2019	146	(2)	144
FY 2020			
Current Law	142	0	142
Proposed Law	142	0	142

¹ Dedicated Highway and Bridge Trust Fund.
² Highway Use Tax Administration Account.

Proposed Legislation

No new legislation is proposed with this Budget.

Description

Articles 21 and 21-A of the Tax Law impose a highway use tax on commercial vehicles using the public highways of the State. Highway use tax revenues are derived from three sources: the truck mileage tax, the fuel use tax and registration fees.

Truck Mileage Tax

The truck mileage tax (TMT) is levied on commercial vehicles having a loaded gross weight of more than 18,000 pounds, or an unloaded weight in excess of 8,000 pounds for trucks and 4,000 pounds for tractors. The tax is imposed at rates graduated according to gross vehicle weight. Under the gross weight method, the tax is calculated by multiplying the number of “laden” or “unladen” miles traveled on public highways of the State by the appropriate tax rate.

BASE TRUCK MILEAGE TAX RATES			
Gross Weight Method		Unloaded Weight Method	
Laden Miles		Unloaded Weight of Truck	
Gross Weight of Vehicle	Mills Per Mile	Unloaded Weight of Truck	Mills Per Mile
18,001 to 20,000	6.0	8,001 to 9,000	4.0
20,001 to 22,000	7.0	9,001 to 10,000	5.0
(increased gradually to)		(increased gradually to)	
74,001 to 76,000	35.0	22,501 to 25,000	22.0
76,001 and over	add 2 mills per ton and fraction thereof	25,001 and over	27.0
Unladen Miles		Unloaded Weight of Tractor	
Unloaded Weight of Truck	Mills Per Mile	Unloaded Weight of Tractor	Mills Per Mile
18,001 to 20,000	6.0	4,001 to 5,500	6.0
20,001 to 22,000	7.0	5,501 to 7,000	10.0
(increased gradually to)		(increased gradually to)	
28,001 to 30,000	10.0	10,001 to 12,000	25.0
30,001 and over	add 0.5 mill per ton and fraction thereof	12,001 and over	33.0
Unloaded Weight of Tractor			
7,001 to 8,500	6.0		
8,501 to 10,000	7.0		
(increased gradually to)			
16,001 to 18,000	10.0		
18,001 and over	add 0.5 mills per ton and fraction thereof		

Fuel Use Tax

The fuel use tax is a complement to the motor fuel tax and the sales tax, and is levied on commercial vehicles: (1) having two axles and a gross vehicle weight of more than 26,000 pounds; (2) having three or more axles, regardless of weight; or (3) used in combination when the gross vehicle weight exceeds 26,000 pounds. In contrast to the sales tax and motor fuel tax, which are imposed upon the amount of fuel purchased within the State, the fuel use tax is imposed on fuel purchased outside but used within New York. This tax is based on the number of miles traveled on the public highways of the State.

The aggregate fuel use tax rate is the sum of the appropriate motor fuel tax rate and the sales tax rate. The motor fuel tax component is eight cents per gallon. The sales tax component is derived by adding the amount from the State sales tax rate and the amount from the lowest county sales tax rate. The current fuel use tax rate is \$0.24. A credit or refund is allowed for motor fuel tax, petroleum business tax or sales tax paid on fuels purchased in New York, but not used within the State.

Registration System

The current registration system is based on the license plate number of each vehicle and a registration decal. The Commissioner can deny registration if the carrier has not paid monies due from any other tax and there is a civil penalty for any person who fails to obtain a certificate of registration when it is required. Special permits are issued for the transportation of motor vehicles, for automotive fuel carriers, and for trips into New York State not to exceed 72 hours.

The FY 2017 Enacted Budget eliminated the separate HUT registration (previously \$15) and decal (previously \$4) fees and replaced them with a HUT registration fee of \$1.50.

Administration

Most taxpayers remit the truck mileage tax on a monthly basis. The tax is remitted on or before the last day of each month for the preceding month. Fuel use taxpayers file quarterly with their home state under the rules of the International Fuel Tax Agreement (IFTA). The home state subsequently distributes the funds to the state where the liability occurred.

Significant Legislation

Significant statutory changes to the highway use tax since 2013 are summarized below.

Subject	Description	Effective Date
Legislation Enacted in 2014		
Alternative Fuel	Extended the exemption on alternative fuels through August 31, 2016.	September 1, 2014

Subject	Description	Effective Date
Legislation Enacted in 2016		
Registration Fees	Replaced the HUT registration and decal fees with a combined HUT registration and decal fee of \$1.50.	April 13, 2016
Alternative Fuel	Extended the exemption on alternative fuels through August 31, 2021.	September 1, 2016

Tax Liability

Highway use tax receipts are a function of the demand for trucking, which fluctuates with national and State economic conditions.

For a more detailed discussion of the methods and models used to develop estimates and projections for the highway use tax, please see *Economic, Revenue, and Spending Methodologies* at www.budget.ny.gov.

Receipts: Estimates and Projections

All Funds

FY 2019 Estimates

All Funds preliminary receipts through December are \$111.4 million, an increase of \$50.5 million (82.9 percent) from the comparable period in the prior fiscal year.

All Funds FY 2019 receipts are estimated to be \$144 million, an increase of \$50.8 million (54.5 percent) from FY 2018. The increase is largely due to a return to long-term trend levels following litigation-induced refund increases in FY 2018. Net truck mileage tax receipts are estimated at \$120 million, fuel use tax receipts at \$25 million, IFTA decal fees at \$0.5 million, and registration fees at a net loss of \$2 million.

FY 2020 Projections

All Funds FY 2020 receipts are projected to be \$142 million, a decrease of \$2 million (1.4 percent) from FY 2019.

General Fund

No highway use tax receipts are deposited into the General Fund.

Other Funds

Prior to April 13, 2016, all highway use tax receipts were directed to the Dedicated Highway and Bridge Trust Fund (DHBTF). As of April 13, 2016, revenue from registrations (\$1.50) is directed to the HUT Administration Account (HUTAA) while all other revenue is directed to the DHBTF.

In FY 2019, the DHBTF will receive an estimated \$146 million and the HUTAA will receive an estimated net loss of \$2 million. There was a shift of \$3.2 million from HUTAA to the DHBTF to correct an accounting error in which monies from penalties and interest were directed to HUTAA instead of the DHBTF in FY 2017 and FY 2018.

In FY 2020, the DHBTF will receive a projected \$141.6 million and the HUTAA will receive a projected \$0.4 million.

MEDICAL CANNABIS TAX (millions of dollars)							
	FY 2018 Actual	FY 2019 Estimated	Change	Percent Change	FY 2020 Projected	Change	Percent Change
General Fund	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Funds	1.9	3.5	1.6	84.2	3.5	0.0	0.0
All Funds	1.9	3.5	1.6	84.2	3.5	0.0	0.0

Note: Totals may differ due to rounding.

MEDICAL CANNABIS TAX BY FUND (thousands of dollars)		
	Special Revenue Funds	All Funds Receipts
FY 2016	11	11
FY 2017	584	584
FY 2018	1,881	1,881
Estimated		
FY 2019	3,500	3,500
FY 2020		
Current Law	3,500	3,500
Proposed Law	3,500	3,500

Proposed Legislation

Legislation proposed with this Budget would enact the Cannabis Regulation and Taxation Act.

Description

Tax Base and Rate

On July 5, 2014, the medical use of cannabis was authorized, and the dispensing of medical cannabis began on January 7, 2016.

As of January 2, 2019, there were 2,115 registered practitioners authorizing the medical use of cannabis to 85,791 certified patients for the following conditions and ailments:

- Cancer;
- Positive status for human immunodeficiency virus or acquired immune deficiency syndrome;
- Amyotrophic lateral sclerosis;

- Parkinson's disease;
- Multiple sclerosis;
- Damage to the nervous tissue of the spinal cord with objective neurological indication of intractable spasticity;
- Epilepsy;
- Inflammatory bowel disease;
- Neuropathies;
- Huntington's disease;
- Chronic pain;
- Post-traumatic stress disorder; and
- Any condition for which an opioid can be prescribed.

In addition, medical cannabis can be prescribed for a complication of treatment for:

- Cachexia or wasting syndrome;
- Severe or chronic pain;
- Severe nausea;
- Seizures;
- Severe or persistent muscle spasms;
- Post-traumatic stress disorder; and
- Opioid use disorder.

The Commissioner of the Department of Health has the authority to add conditions to either list. The product must be administered in a smokeless form.

A seven percent excise tax is imposed when a New York dispensary sells the product to a patient or designated caregiver and is remitted by the dispensary. The tax amount cannot be added as a separate charge on a receipt given to the retail customer.

Administration

Five registered organizations were selected in 2015, and an additional five registered organizations were authorized in August 2017 to manufacture and dispense medical cannabis in the State. Each manufacturer can have up to four dispensing sites. As of December 2018, three organizations have yet to open a dispensing site. The manufacturers and dispensaries are geographically distributed throughout the State, as statutorily required.

Revenues from the State excise tax will be directed to the Medical Cannabis Trust Fund. The monies of the Fund are split in the following order:

- 22.5 percent transferred to the counties in which the medical cannabis was manufactured and allocated in proportion to the gross sales originating from medical cannabis manufactured in each such county;
- 22.5 percent transferred to the counties in which the medical cannabis was dispensed and allocated in proportion to the gross sales occurring in each such county;
- 5 percent transferred to the Office of Alcoholism and Substance Abuse Services. The monies will be used for additional drug abuse prevention, counseling and treatment services;
- 5 percent transferred to the Division of Criminal Justice Services. The monies will be used to provide discretionary grants to state and local law enforcement agencies. These grants could be used for personnel costs of state and local law enforcement agencies; and
- The law is silent on the distribution of the remaining amount.

Receipts: Estimates and Projections

All Funds

FY 2019 Estimates

All Funds receipts through December are \$2.4 million, an increase of \$1.2 million (96.4 percent) from the comparable period in the prior fiscal year.

All Funds FY 2019 receipts are estimated to be \$3.5 million, an increase of \$1.6 million (84.2 percent) from FY 2018. This increase is due to an increased number of practitioners and patients. The number of patients has more than doubled.

FY 2020 Projections

All Funds FY 2020 receipts are projected to be \$3.5 million, unchanged from FY 2019.

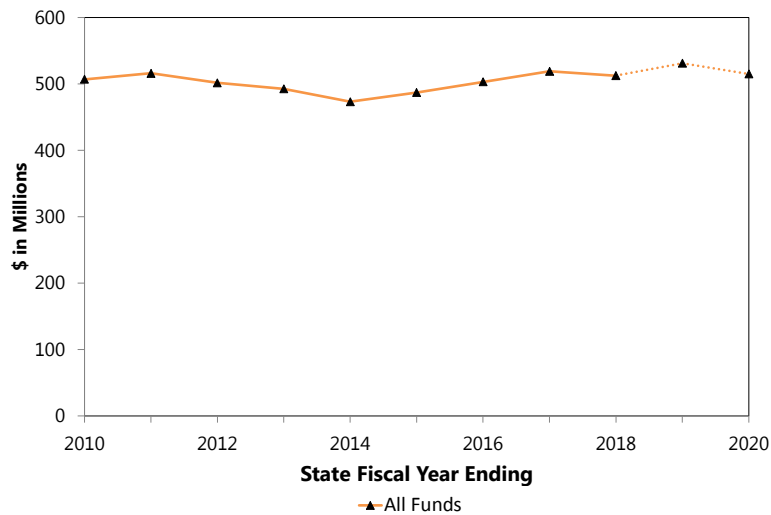
Other Funds

All receipts from the medical marijuana tax are deposited to the Medical Cannabis Trust Fund.

MOTOR FUEL TAX (millions of dollars)							
	FY 2018 Actual	FY 2019 Estimated	Change	Percent Change	FY 2020 Projected	Change	Percent Change
General Fund	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Funds	512.5	531.0	18.5	3.6	515.0	(16.0)	(3.0)
All Funds	512.5	531.0	18.5	3.6	515.0	(16.0)	(3.0)

Note: Totals may differ due to rounding.

Motor Fuel Tax Receipts History and Estimates



MOTOR FUEL TAX BY FUND (millions of dollars)			
	Special Revenue Funds ¹	Capital Projects Funds ²	All Funds Receipts
FY 2010	106	401	507
FY 2011	108	408	516
FY 2012	105	396	501
FY 2013	103	389	492
FY 2014	99	375	474
FY 2015	101	386	487
FY 2016	105	398	503
FY 2017	109	410	519
FY 2018	109	403	512
Estimated			
FY 2019	111	420	531
FY 2020			
Current Law	108	407	515
Proposed Law	108	407	515

¹ Dedicated Mass Transportation Trust Fund.
² Dedicated Highway and Bridge Trust Fund.

Proposed Legislation

No new legislation is proposed with this Budget.

Description

Tax Base

Gasoline motor fuel and diesel motor fuel taxes are imposed by Article 12-A of the Tax Law upon the sale, generally for highway use, of motor fuel and diesel motor fuel, respectively. The motor fuel tax is levied primarily on fuel used in motor vehicles operating on the public highways of the State or on fuel used in recreational motorboats operating on the State's waterways. Exemptions, credits and refunds are allowed for certain other uses of gasoline and diesel motor fuel.

Tax Rate

The motor fuel tax on gasoline motor fuel and diesel fuel is eight cents. A motor fuel tax of two cents was imposed on gasoline motor fuel in 1929. The tax on gasoline was increased to 3 cents in 1932, to four cents in 1937, to six cents in 1956, to seven cents in 1959 and to eight cents in 1972. A motor fuel tax of two cents was imposed on diesel motor fuel in 1936. The tax on diesel fuel was increased to four cents in 1947, to six cents in 1956, to nine cents in 1959 and to ten cents in 1972. The tax on diesel fuel was reduced to eight cents in 1996. Compared to other states, New York is ranked tenth on overall State taxes per gallon imposed on fuel.

RANKING OF STATE TAXES PER GALLON (January 1, 2019) ¹		
State	State Motor Fuel Tax (cents per gallon)	Total State Tax ² (cents per gallon)
PENNSYLVANIA	0.0	57.6
CALIFORNIA*	41.7	53.7
WASHINGTON	49.4	49.4
NEW JERSEY**	10.5	41.4
CONNECTICUT**	25.0	39.3
W. VIRGINIA	20.5	35.7
MARYLAND	26.6	35.3
N. CAROLINA	35.1	35.1
OREGON	34.0	34.0
NEW YORK *	8.0	33.7
RHODE ISLAND	33.0	33.0
IDAHO	32.0	32.0
MONTANA	31.5	31.5
WISCONSIN	30.9	30.9
ILLINOIS *	19.0	30.7
IOWA	30.5	30.5
MAINE	30.0	30.0
UTAH	30.0	30.0
VERMONT	12.5	29.9
MINNESOTA	28.5	28.5
NEBRASKA	28.4	28.4
INDIANA *	18.0	28.0
OHIO	28.0	28.0
S. DAKOTA	28.0	28.0
GEORGIA	26.8	26.8
MICHIGAN	26.3	26.3
TENNESSEE	25.0	26.0
KENTUCKY	24.6	24.6
KANSAS	24.0	24.0
MASSACHUSETTS	24.0	24.0
WYOMING	23.0	24.0
NEVADA	24.0	24.0
DIST. OF COLUMBIA	23.5	23.5
DELAWARE	23.0	23.0
N. DAKOTA	23.0	23.0
NEW HAMPSHIRE	22.2	22.2
COLORADO	22.0	22.0
ARKANSAS	21.5	21.5
TEXAS	20.0	20.0
LOUISIANA	20.0	20.0
S. CAROLINA	20.0	20.0
OKLAHOMA	19.0	19.0
FLORIDA	4.0	18.1
ARIZONA	18.0	18.0
MISSISSIPPI	18.0	18.0
MISSOURI	17.0	17.0
NEW MEXICO	17.0	17.0
HAWAII *	17.0	17.0
VIRGINIA	16.2	16.2
ALABAMA	16.0	16.0
ALASKA	8.0	8.0

NOTES:
¹ Assumes a base price of \$2.00.
² Includes applicable State taxes (local taxes not included).
* State sales tax applies on sales of gasoline in these states - NYS's rate capped at 8 cents per gallon.
** Includes other tax based on price of fuel.
Source: OPA compilation from various sources including CCH Tax Guides and FTA.

Administration

Although the motor fuel tax is imposed on the consumer, the tax is remitted upon importation into New York. This tax-on-first-import system is designed to reduce gasoline tax evasion, which previously involved bootlegging from other states and successions of tax-free sales among “dummy” corporations masked by erroneous record keeping and reporting.

Prior to 1988, the diesel motor fuel tax was collected at the time of retail sale or use by a bulk user. Since 1988, taxes on diesel motor fuel have been collected upon the first non-exempt sale in the State. Interdistributor sales of highway diesel motor fuel sold below the rack are considered tax-exempt.

The tax is generally remitted monthly, although vendors whose average monthly tax is less than \$200 may remit quarterly. Chapter 55 of the Laws of 1992 required accelerated remittance of the tax by taxpayers with annual liability of more than \$5 million for motor fuel and petroleum business tax (PBT) combined. These taxpayers are required to remit taxes electronically or by certified check by the third business day following the first 22 days of each month. Taxpayers can choose to make either a minimum payment of three-fourths of the comparable month’s tax liability for the preceding year, or 90 percent of actual liability for the first 22 days. Taxes for the balance of the month are remitted by the twentieth of the following month.

Tax Expenditures

Exemptions from the motor fuel tax include:

- Kerosene and crude oil;
- Fuel not used in motor vehicles. “Motor vehicle” is defined as any vehicle propelled by power, except muscular power. However, vehicles such as boats (other than pleasure craft), road building machinery and tractors used exclusively for agricultural purposes are excluded from the definition of motor vehicles;
- Fuel used in tanks of vehicles entering New York State;
- Sales to state, local and Federal governments, the United Nations and qualifying Native American nations; and
- Certain exempt organizations.

Other exemptions apply only to the diesel motor fuel tax, including certain sales for heating purposes and sales of kero-jet fuel for use in airplanes.

Full and partial refunds and credits for tax paid are available for fuel used by:

- Omnibus carriers or taxicabs;

- Nonpublic school vehicle operators, exclusively for education-related purposes; and
- Volunteer ambulance services.

Significant Legislation

Significant statutory changes to the motor fuel tax since 2013 are summarized below.

Subject	Description	Effective Date
Legislation Enacted in 2013		
Interdistributor Sales	Allowed for tax free interdistributor sales of highway diesel motor fuel sold below the rack (i.e., not delivered by truck).	August 1, 2013
Legislation Enacted in 2014		
Alternative Fuels	Extended the exemption on alternative fuels through August 31, 2016.	September 1, 2014
Legislation Enacted in 2016		
Alternative Fuels	Extended the exemption on alternative fuels through August 31, 2021.	September 1, 2016
Expand Motor Fuel Wholesaler Registration Requirements	Required certain wholesalers of motor fuel to file informational returns and register with the Department of Taxation and Finance. This information will be used to detect and prevent tax evasion.	December 1, 2016

Tax Liability

Gasoline and Diesel Monthly Prices



Source: U.S. Department of Energy, Energy Information Administration (EIA)

Gasoline taxable consumption is heavily influenced by fuel prices which in turn are influenced by domestic and international economic conditions. In January 2015, gas prices dropped below \$3.00 and have remained below that level ever since. The overall decline in crude oil prices is largely the

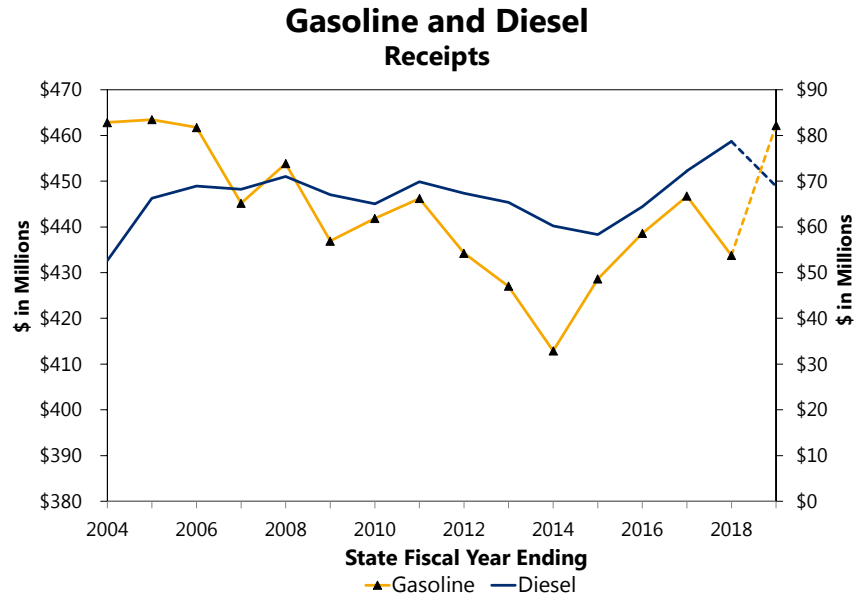
result of an increase in OPEC oil production contributing to an ever-growing global supply, as well as falling global oil consumption. However, since 2016, crude oil prices have been steadily climbing, with the 12-month average gasoline price reaching \$2.49 in 2017 and approaching an average of \$2.83 in 2018. In recent months, between May and October 2018, fuel prices have reached levels close to the \$3.00 threshold, not seen since 2014. As of November 2018, the New York gasoline price average is \$2.80 per gallon.

A further discussion of energy prices can be found in the Economic Backdrop section of this report.

Diesel consumption is also correlated with economic activity. With the collapse of the financial markets and the deterioration of labor markets in the Great Recession, diesel receipts declined from \$71.1 million in FY 2008 to \$65 million in FY 2010. As the economy slowly began to recover, diesel receipts rebounded in FY 2011 to \$69.9 million. Over the next few years, diesel receipts declined mainly due to the amount of refunds that were processed due to multiple Wall Street firms selling off large quantities of tax-paid gallons of highway diesel fuel. These large refunds were paid out for highway diesel motor fuel gallons that were sold outside of New York State up to two years after the tax was originally collected. Effective August 1, 2013, interdistributor sales of highway diesel motor fuel are no longer taxable, meaning the tax is not imposed on highway diesel until it is sold at the rack. The last few years have seen diesel receipts increase due to lower refund payments.

For a more detailed discussion of the methods and models used to develop estimates and projections for the motor fuel tax, please see the *Economic, Revenue, and Spending Methodologies* at www.budget.ny.gov.

Receipts: Estimates and Projections



All Funds

FY 2019 Estimates

All Funds preliminary receipts through December are \$406.3 million, an increase of \$14.9 million (3.8 percent) from the comparable period in the prior fiscal year.

All Funds FY 2019 receipts are estimated to be \$531 million, an increase of \$18.5 million (3.6 percent) from FY 2018. Gasoline receipts are estimated to increase by \$29 million due to the strong growth in gasoline fuel consumption. This is partially offset by a \$10 million decrease in diesel fuel receipts that is largely driven by a decline in audit collections.

The previously noted increase in fuel prices during the past year has had the predictable effect of lowering the total amount of “vehicle miles” traveled within New York State. According to the Federal Highway Administration, total miles traveled for NYS is down 0.1 percent for the first nine months in 2018 and was down 4.2 percent in 2017. With such a continuous decline, historical trends would indicate that this would lead to lower gasoline consumption. However, gasoline receipts are estimated to reach levels not seen in over a decade.

There appears to be several factors that have counteracted the rise in fuel prices. One such factor is that New Jersey increased their gasoline tax by 23 cents in 2016 and 4.3 cents in 2018. Since the gasoline tax rate increase in 2016, New Jersey has experienced a year-over-year taxable gasoline gallonage decline of over 200 million gallons. With rates that are more comparable to New York’s, the financial incentive to purchase fuel in New Jersey compared to New York has dissipated.

Another factor pertains to the strong growth in light truck sales in contrast to smaller vehicles, or cars. Given that light trucks require more fuel consumption than cars, this could partly explain the strong growth in gasoline fuel consumption with less miles travelled. From April to November 2018, truck purchases have increased by 8.9 percent while car sales have declined over 21 percent.

FY 2020 Projections

All Funds FY 2020 receipts are projected to be \$515 million, a decline of \$16 million (3.0 percent) from FY 2019. The decline in gasoline receipts is mainly due to an anticipated decline in gasoline demand, partially offset by an anticipated increase in audit collections in addition to a slight decline in refund payments. The projected decline in diesel receipts is due to an increase in refund payments and a decrease in audit collections. The Division will continue to closely monitor the factors and conditions influencing gasoline receipts in FY 2019 to see if these changes are more of a short-term reaction or the beginning of a longer-term trend.

General Fund

No motor fuel tax receipts are deposited into the General Fund.

Other Funds

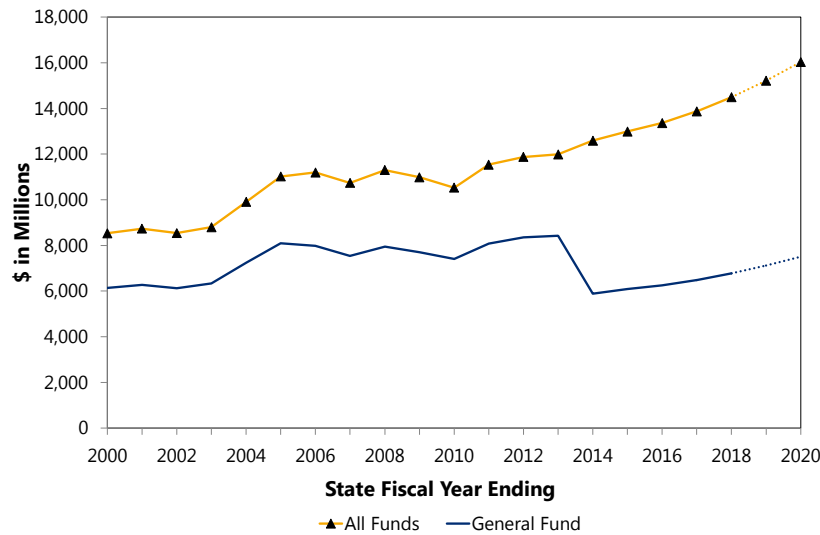
The current law distribution of motor fuel tax receipts is shown below.

Motor fuel tax receipts in FY 2019 are estimated to be \$420 million for the DHBTF and \$111 million for the DMTTF. Motor fuel tax receipts in FY 2020 are projected to be \$407 million for DHBTF and \$108 million for the DMTTF.

SALES AND USE TAX (millions of dollars)							
	FY 2018 Actual	FY 2019 Estimated	Change	Percent Change	FY 2020 Projected	Change	Percent Change
General Fund	6,776.5	7,120.0	343.5	5.1	7,506.0	386.0	5.4
Debt Service	6,776.5	7,120.0	343.5	5.1	7,506.0	386.0	5.4
MTOAF	942.0	972.0	30.0	3.2	1,020.5	48.5	5.0
All Funds	14,495.0	15,212.0	717.0	4.9	16,032.5	820.5	5.4

Note: Totals may differ due to rounding.

Sales and Use Tax Receipts History and Estimates



SALES AND USE TAX BY FUND (millions of dollars)				
	General Fund	Special Revenue Funds ¹	Debt Service Funds ²	All Funds Receipts
FY 2010	7,404	656	2,467	10,527
FY 2011	8,085	756	2,697	11,538
FY 2012	8,346	750	2,780	11,875
FY 2013	8,423	758	2,809	11,989
FY 2014	5,885	802	5,901	12,588
FY 2015	6,243	874	6,243	13,360
FY 2016	6,243	874	6,243	13,360
FY 2017	6,483	903	6,483	13,869
FY 2018	6,777	942	6,777	14,495
Estimated				
FY 2019	7,120	972	7,120	15,212
FY 2020				
Current Law	7,396	1,021	7,396	15,812
Proposed Law	7,506	1,021	7,506	16,033

¹Mass Transportation Operating Assistance Fund.
²Local Government Assistance Corporation Fund and Sales Tax Revenue Bond Fund.

Proposed Legislation

Legislation proposed with this Budget would:

- Eliminate Internet Tax Advantage;
- Discontinue the energy services sales tax exemption;
- Extend certain sales tax exemption related to the Dodd-Frank Protection Act for an additional two years; and
- Permanently extend certain provisions related to DTF's authorizations to manage delinquent sales tax vendors.

Description

Tax Base

In general, all retail sales of tangible personal property are taxed under Article 28 of the Tax Law unless specifically exempt, but services are taxable only if they are enumerated in the Tax Law.

Specifically, the sales tax is applied to receipts from the retail sale of:

- Tangible personal property (unless specifically exempt);
- Certain gas, electricity, refrigeration and steam and telephone service;
- Selected services;
- Food and beverages sold by restaurants, taverns and caterers;
- Hotel occupancy; and
- Certain admission charges and dues.

Examples of taxable services include installing or maintaining tangible personal property and protective and detective services.

Until recently, a vendor must have had some physical presence or nexus in a state to be required to collect that particular state's sales tax. However, the recent Supreme Court decision, *South Dakota v Wayfair, Inc.*, removed this long-standing rule that prohibited the collection of states' sales tax on any retailer that was not physically present in the state. The Tax Department has issued guidance reminding out-of-state sellers that meet existing statutory transaction thresholds that they need to register as sales tax vendors and begin collecting and remitting applicable taxes.

A compensating use tax complements the sales tax, and is imposed on the use of taxable property or services in-state, if the transaction has not already been subject to tax. This will include, for example, taxable items purchased via mail order or on the Internet if the vendor has no taxable nexus with New York. The use tax also applies to certain uses of self-produced property or services. With some exceptions, the base of the use tax mirrors the base of the sales tax. The use tax is remitted by the purchaser directly to the New York State Department of Taxation and Finance.

Effective with the 2003 personal income tax filing year, the New York State personal income tax return contains a line on which taxpayers may enter the amount of use tax owed for the preceding calendar year. New York State collected \$39.7 million from this program in FY 2017 and \$45.3 million in FY 2018.

Tax Rate

The sales and compensating use tax was enacted in 1965 at a rate of 2 percent. The tax rate was increased to 3 percent in 1969, to 4 percent in 1971 and temporarily to 4.25 percent in 2003. The rate reverted to 4 percent on June 1, 2005.

Effective June 1, 2006, the State sales tax rate on motor fuel and diesel motor fuel was capped at 8 cents per gallon.

An additional 5 percent sales tax is imposed on the receipts from the sale of telephone entertainment services that are exclusively delivered aurally.

Counties and cities are authorized to impose general sales tax rates up to 3 percent. Of the 57 counties that impose the general sales tax, only four counties (Saratoga, Warren, Washington and Westchester) impose at the statutory 3 percent maximum general sales tax rate. Of the 20 cities that impose the general sales tax, only three cities (New York City, Oswego and Yonkers) received legislative authority to impose additional rates of tax above the statutory 3 percent general sales tax rate. Over 95 percent of the State's population resides in an area where the tax rate equals or exceeds 8 percent.

An additional 0.375 percent sales and use tax is imposed in the Metropolitan Commuter Transportation District (MCTD). All proceeds from the additional MCTD tax are earmarked for the Mass Transportation Operating Assistance Fund (MTOAF).

SALES TAX VENDORS AND TAXABLE SALES			
Filing Status	Number of Active Vendors*	Percent of Total Vendors	Percent of State and Local Receipts
Monthly PromptTax	7,300	1.3	62.0
Monthly Other	47,284	8.6	26.7
Quarterly	250,209	45.7	10.9
Annual	242,945	44.4	0.4
Total	547,738	100.0	100.0

*Vendors identified as of November 6, 2018
 Selling period March 1, 2016 through February 28, 2017
 Source: New York State Department of Taxation and Finance

Quarterly and annual sales tax filers are allowed to retain a portion of the sales tax that they have collected, both as partial compensation for the administrative costs of collecting and remitting the tax and as an incentive for timely payment of the tax to the State. The vendor allowance applies to non-monthly filers and is 5 percent of tax liability, up to a maximum of \$200 per quarter for returns filed on time.

To reduce tax evasion, special provisions for remitting the sales tax on motor fuel and cigarettes have been enacted. Since 1985, the sales tax on gasoline has been remitted by the first importer of the fuel into New York. Effective September 1, 2017, for the three regions computing the prepaid sales tax, the rate in Regions 1 (MCTD, excluding Long Island) and 2 (Long Island) is 16 cents per gallon and in Region 3 (all other counties) it is 15 cents per gallon. These rates are reviewed in April and in October and can be adjusted if the new calculated rate would increase the prepaid sales tax by two or more cents per gallon. The cigarette prepayment rate is 8 percent and is prepaid by cigarette agents at the same time as payment for cigarette excise tax stamps.

Tax Expenditures

Numerous exemptions from the sales tax have been enacted over the life of the tax. Broad exemptions have been provided for sales for resale and for machinery and equipment used in production or in research and development. These particular exemptions prevent multiple taxation of the same property, a situation known as tax pyramiding.

Other exemptions, such as sales to exempt organizations, certain vending machine sales and certain other coin-operated sales, are also provided. Legal, medical and other professional services, sales of real property, and rental payments are also excluded from the base of the sales tax. For a more detailed discussion of tax expenditures, see the *Annual Report on New York State Tax Expenditures*, prepared by the Department of Taxation and Finance and the Division of the Budget.

Significant Legislation

Significant statutory changes to the sales and use tax since 2013 are summarized below.

Subject	Description	Effective Date
Legislation Enacted in 2013		
New York State Business Incubator and Innovation Hot Spot Program	Created a new high tech incubator program in which start-up businesses will be free of property, sales and business income taxes for the first five years. Hot spots must demonstrate an affiliation with, and the support of, at least one college, university or independent research institution and offer programs consistent with regional economic development strategies.	March 28, 2013
Segregated Bank Accounts	Extension of the requirement to deposit sales tax into a separate bank account until December 31, 2016.	January 1, 2014
IDA reform	Placed restrictions on Industrial Development Agencies' (IDAs) ability to provide assistance for retail projects and added new clawback requirements.	March 28, 2013
Drivers License Suspension	Ability to suspend drivers' licenses of taxpayers with a past-due tax liability of \$10k or more.	April 1, 2013
START-UP NY	Established tax-free zones on or near qualifying university and college campuses. Qualifying businesses operating within such zones are exempt from taxation.	January 1, 2014
Protection Programs	Tax exemption for water and sewer service line protection programs sold to residential property owners.	October 21, 2013
Vehicles Sold To Military Members	Tax exemption for vehicles purchased out-of-State by an active military member.	December 18, 2013
Legislation Enacted in 2014		
Vending Machine	Increased the sales tax exemption from \$0.75 to \$1.50 on certain food and drink items sold through vending machines.	June 1, 2014
Fuel Prepaid	Established three regions for the prepaid sales tax on fuel to reduce evasion at retail.	June 1, 2014
Lower Manhattan	Retroactively extended the lease period for commercial office space for the Murray Street and lower Manhattan areas. The exemption for the Murray Street area is extended to December 1, 2016, and the lower Manhattan area is extended to December 1, 2018.	March 31, 2014
Alternative Fuels	Extended alternative fuel exemptions through August 31, 2016.	September 1, 2014
Legislation Enacted in 2015		
Alcoholic Beverage Tastings	Exempted beer, cider and liquor used at tastings (per Alcohol Beverage Control Law) from the use tax, as well as bottles, corks and labels used in packaging. Also clarified that items used in wine packaging at tastings are exempt, and wine tastings held on- or off-premises may qualify.	June 1, 2015
Prepaid Mobile Calling Services	Clarified that the imposition of tax is sourced to (1) the location of the retailer of such services; (2) unless an item is shipped directly to a consumer, in which case the tax is sourced to the shipping address; or (3) the billing address of the consumer if an item is neither shipped nor sold at a retail location.	April 1, 2015
Solar Power Purchase Agreements	Exempted certain solar-generated electricity produced by equipment located at the customer's residence and owned by a person other than the purchaser of the electricity from tax.	December 1, 2015

Subject	Description	Effective Date
Cap Tax on Boats	Exempted the portion of the purchase or lease of a boat in excess of \$230,000; and provided a 90-day "safe harbor" from use tax for boats brought in from out-of-State by conforming the imposition of such tax to the Department of Motor Vehicles' registration requirements.	June 1, 2015
Lower Manhattan	Retroactively extended the lease period for commercial office space for the Murray street and lower Manhattan areas. The exemption for the Murray Street area is extended to December 1, 2018, and the lower Manhattan area is extended to December 1, 2020.	June 23, 2015
General Aviation Aircraft Exemption	Exempted general aviation aircraft and machinery or equipment installed on such aircraft from tax.	September 1, 2015
Dodd-Frank Conformity	Exempted certain related-party sales arising as a result of the Federal Dodd-Frank Wall Street Reform and Consumer Protection Act. The exemption expires on July 1, 2019.	September 1, 2015
Small Brewer Informational Returns	Exempted certain brewers that produce less than 60,000 barrels of beer annually from filing informational tax returns.	August 14, 2015
Small Winery Informational Returns	Exempted certain wineries that produce less than 150,000 gallons annually from filing informational tax returns.	November 20, 2015
Legislation Enacted in 2016		
Expand Motor Fuel Wholesaler Registration Requirements	Required certain wholesalers of motor fuel to file informational returns and register with the Department of Taxation and Finance. This information will be used to detect and prevent tax evasion.	December 1, 2016
Comply with Federal Tax Regulations on Aviation Fuel	Repealed the local sales tax on aviation fuel. Required that all petroleum business tax revenue imposed on aviation fuel is directed to a new dedicated airport fund.	December 1, 2017
Alternative Fuels	Extended alternative fuel exemptions through August 21, 2021.	September 1, 2016
Commercial Fuel Cell Systems	Exempted commercial fuel cell systems and the servicing of such systems from the sales tax.	June 1, 2016
Feminine Hygiene Products	Exempted certain feminine hygiene products from the sales tax.	September 1, 2016
Room Remarketers	Streamlined the collection of sales tax on remarketed hotel rooms.	June 1, 2016
Legislation Enacted in 2017		
Related Entities Loophole	Closed tax loopholes related to non-resident business purchases and leasing below cost to related entities.	April 10, 2017
Lower Manhattan	Extended the sales tax free lease period for commercial office space for the Murray street and lower Manhattan areas. The exemption for the Murray Street area is extended to December 1, 2021, and the lower Manhattan area is extended to December 1, 2023.	June 29, 2017
Cemetery Monuments	Exempted monuments or memorials that are constructed on a cemetery lot or plot from the sales and use tax.	September 1, 2017
Prepaid Sales Tax on Motor Fuel and Diesel Motor Fuel	Reduced the prepaid sales tax amount on motor fuel and diesel motor fuel in all three regions and allows for the Commissioner of DTF to adjust these amounts in the future, should significant changes in fuel prices occur.	September 1, 2017

Tax Liability

The sales and compensating use tax, which accounted for 18.3 percent of FY 2018 All Funds tax receipts, is the second largest State tax revenue source (the personal income tax is the largest). In the long run, sales tax receipts are a function of changes in the tax rate and economic activity, as measured by such factors as disposable income and employment. Short-run fluctuations in receipts can result from rapid changes in consumer prices, auto sales, and home sales. The following table shows the growth rate of major economic factors affecting the sales tax. For a more detailed discussion of the methods and models used to develop estimates and projections for the sales and use tax, please see the latest *Economic, Revenue, and Spending Methodologies* at www.budget.ny.gov.

Although numerous exemptions from tax on the sales of tangible personal property have been enacted (see *Tax Expenditure Report*), roughly 45 percent of total sales and purchases subject to the sales and use tax are collected by the retail trade industry. The increase in the retail trade share after 2008 reflects repeal of the clothing exemption from October 2010 to April 2012. The service industry (including accommodations, food and administrative services), the next largest share of taxable sales and purchases at roughly 29 percent, continues to increase its share, reflecting the rise of the service economy.

HISTORY OF INDUSTRY SHARES OF NEW YORK SALES TAX RECEIPTS ¹									
FYE ²	Retail Trade	Services	Wholesale Trade	Information	Other ³	Utilities	Manufacturing	Construction	Unclassified
2008	44.1	25.0	8.8	7.6	4.8	3.5	2.8	2.5	1.0
2009	44.2	25.1	9.0	7.7	4.6	3.6	2.7	2.5	0.7
2010	45.1	25.4	8.4	7.8	4.6	3.5	2.5	2.3	0.4
2011 ⁴	48.2	25.7	5.0	6.4	4.5	3.5	4.3	2.3	0.2
2012	48.4	26.2	5.2	6.0	4.5	3.1	4.2	2.4	0.0
2013	46.4	26.7	5.5	7.0	4.6	3.1	4.2	2.5	0.1
2014	45.8	27.3	5.6	6.8	4.6	3.0	4.1	2.7	0.2
2015	45.3	28.1	5.6	6.7	4.7	2.8	4.1	2.6	0.1
2016	45.2	28.7	5.7	6.4	4.7	2.6	3.9	2.8	0.1
2017 ⁵	44.9	28.9	5.7	6.4	4.8	2.4	3.9	2.8	0.2

¹ Industry shares within a FYE may not add to 100 due to rounding.
² March to February
³ Includes Agriculture, Mining, Transportation, FIRE (Finance, Insurance and Real Estate), Education, and Government.
⁴ The shift in industry shares in 2011 reflects the updating of NAICS code during the re-registration process and suspension of the clothing exemption.
⁵ Preliminary
Source: New York State Department of Taxation and Finance.

Receipts: Estimates and Projections

All Funds

FY 2019 Estimates

All Funds receipts through December are \$11,568.3 million, an increase of \$576.9 million (5.2 percent) from the comparable period in the prior fiscal year.

All Funds FY 2019 receipts are estimated to be \$15,212 million, an increase of \$717 million (4.9 percent) from FY 2018. Through December, there has been year-over-year taxable sales growth in most of the industries measured. The three largest sales tax collection industries, food services, motor vehicles and wholesale trade, exhibited growth in taxable sales of 5.1 percent, 3.3 percent, and 5.2 percent, respectively. For the first three fiscal year quarters, the sales tax base (i.e., excluding law changes) has grown 9.6 percent, 8.1 percent and 5.6 percent, respectively.

Base growth during the final quarter of FY 2019 is estimated to be 2.5 percent. This equates to total base growth of 6.4 percent for FY 2019.

FY 2020 Projections

All Funds FY 2020 receipts are projected to be \$16,032.5 million, an increase of \$820.5 million (5.4 percent) from FY 2019. The total base growth of 3.2 percent for FY 2020 reflects a projected year-over-year decline in disposable income and employment. This includes a \$221 million increase in revenues from Budget proposals and a \$53 million increase due to expected guidance related to the Supreme Court's Wayfair decision.

The primary risk factor for the sales and use tax estimate is the economic forecast, which provides the basis for the sales tax estimates. Unexpected slowdowns in income, employment, auto sales, and the associated consumption of taxable goods and services would adversely impact the level of taxable sales.

General Fund

Direct deposits to the General Fund for FY 2019 are estimated to be \$7,120 million, an increase of \$343.5 million (5.1 percent) from FY 2018 receipts. General Fund receipts for FY 2020 are projected to be \$7,506 million, an increase of \$386 million (5.4 percent) from FY 2019 receipts.

Local Government Assistance Corporation Fund

The Local Government Assistance Corporation (LGAC) was created in 1990 to help the State eliminate its annual spring borrowing. To pay the debt service on the bonds issued by LGAC, the State has diverted an amount equal to the yield of one-fourth of net sales and use tax collections from the 4 percent statewide sales tax to the Local Government Assistance Tax Fund (LGATF). Sales tax deposits to LGATF are estimated to be \$3,560 million in FY 2019, and \$3,753 million in FY 2020. LGATF receipts in excess of debt service requirements on LGAC bonds are transferred to the General Fund.

Sales Tax Revenue Bond Fund

Effective April 1, 2013, receipts from one percent of the State's four percent sales tax rate are directed to the Sales Tax Revenue Bond Fund (STBF). This increases to a two percent rate when LGAC bonds have been retired or defeased. Sales tax deposits to the STBF are estimated to be

\$3,560 million in FY 2019 and \$3,753 million in FY 2020. STBF receipts in excess of debt service requirements on STBF bonds are transferred to the General Fund.

Mass Transportation Operating Assistance Fund

The Mass Transportation Operating Assistance Fund (MTOAF) was created in 1981 to finance State public transportation needs. MTOAF derives part of its revenues from the 0.375 percent sales and compensating use tax imposed in the MCTD. MTOAF will receive an estimated \$972 million in FY 2019 and \$1,020.5 million in FY 2020. All proceeds from the MCTD tax are earmarked for MTOAF.

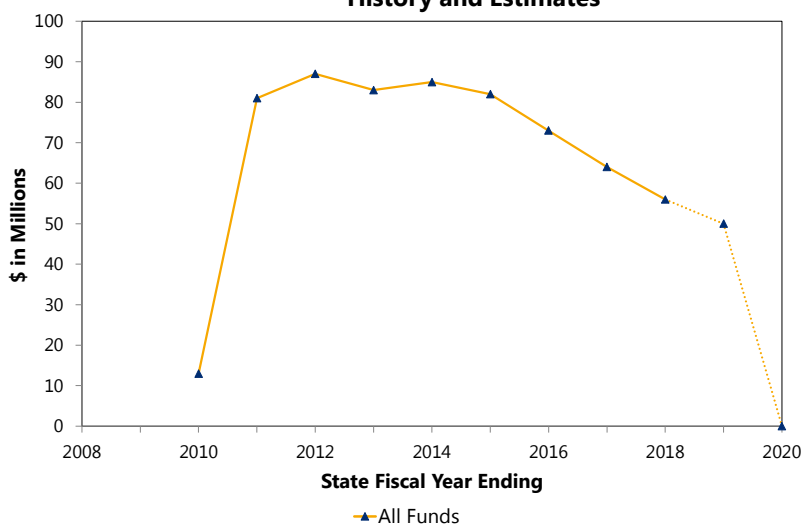
Taxicab and Hail Vehicle Trip Tax



TAXICAB AND HAIL VEHICLE TAX (millions of dollars)							
	FY 2018	FY 2019		Percent	FY 2020		Percent
	Actual	Estimated	Change	Change	Projected	Change	Change
General Fund	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Funds	55.9	50.0	-5.9	(10.6)	0.0	-50.0	-100.0
All Funds	55.9	50.0	-5.9	(10.6)	0.0	-50.0	-100.0

Note: Totals may differ due to rounding.

Taxicab and Hail Vehicle Tax Receipts History and Estimates



TAXICAB AND HAIL VEHICLE TAX BY FUND (millions of dollars)

	Special Revenue Funds ¹	All Funds Receipts
FY 2010	13	13
FY 2011	81	81
FY 2012	87	87
FY 2013	83	83
FY 2014	85	85
FY 2015	82	82
FY 2016	73	73
FY 2017	64	64
FY 2018	56	56
Estimated		
FY 2019	50	50
FY 2020		
Current Law	50	50
Proposed Law	0	0

¹ MTA Aid Trust Account.

Proposed Legislation

Legislation proposed with this Budget would change the process for distributing taxicab/hail vehicle trip tax revenues to the Metropolitan Transportation Authority (MTA).

Description

Tax Base and Rate

A tax of 50 cents is imposed on all New York City taxicab and hail vehicle trips that originate in New York City and end in the Metropolitan Commuter Transportation District. The quarterly period and filing due dates are:

Quarterly Period	Due Date for Filing Return
January through March	April 20
April through June	July 20
July through September	October 20
October through December	January 20

Receipts: Estimates and Projections

All Funds

FY 2019 Estimates

Preliminary taxicab/hail tax receipts through December are \$39.1 million, a decrease of \$2.7 million (6.6 percent) from the comparable period in the prior fiscal year.

Taxicab/hail tax FY 2019 receipts are estimated to be \$50 million, a decrease of \$5.9 million (10.6 percent) from FY 2018. The decrease reflects an increase in the use of alternative transportation options not subject to the taxicab/hail tax in New York City as well as non-remittance of taxes owed.

FY 2020 Projections

The FY 2020 Executive Budget projects no FY 2020 Metropolitan Transportation Authority Financial Assistance Fund (MTAF) revenue from taxicab/hail vehicle trip tax due to the Executive Budget proposal to provide the revenue directly to the MTA. Excluding the Budget proposal, receipts are projected to be unchanged in FY 2020.

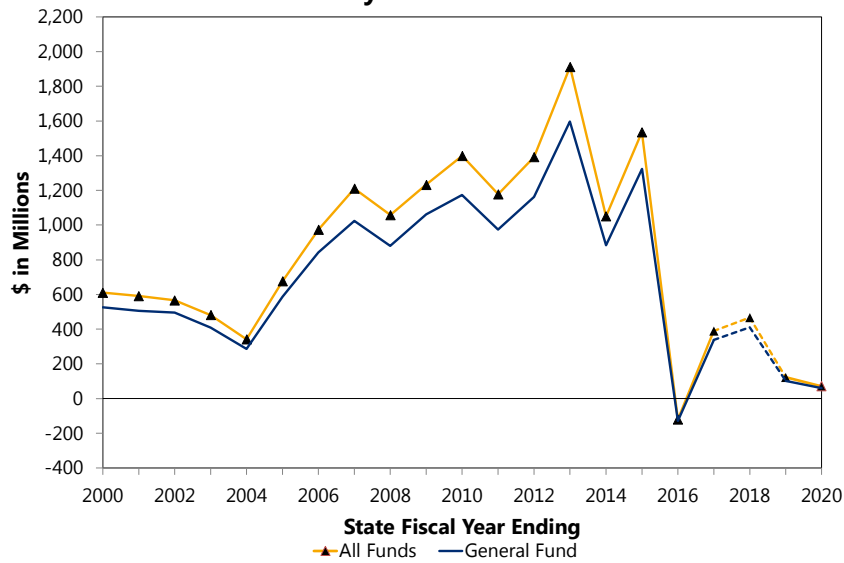
Other Funds

The Executive Budget proposal would no longer direct revenues to the MTAFAP. Revenues would now be directly provided to the MTA.

BANK TAX (millions of dollars)							
	FY 2018 Actual	FY 2019 Estimated	Change	Percent Change	FY 2020 Projected	Change	Percent Change
General Fund	410.1	102.0	(308.1)	(75.1)	60.0	(42.0)	(41.2)
Other Funds	57.0	21.0	(36.0)	(63.2)	11.0	(10.0)	(47.6)
All Funds	467.1	123.0	(344.1)	(73.7)	71.0	(52.0)	(42.3)

Note: Totals may differ due to rounding.

Bank Tax Receipts History and Estimates



BANK TAX BY FUND (millions of dollars)			
	General Fund	Special Revenue Funds ¹	All Funds Receipts
FY 2010	1,173	226	1,399
FY 2011	973	205	1,178
FY 2012	1,163	229	1,392
FY 2013	1,597	315	1,912
FY 2014	888	162	1,050
FY 2015	1,323	213	1,536
FY 2016 ²	(129)	8	(121)
FY 2017	410	57	467
FY 2018	410	57	467
Estimated			
FY 2019	102	21	123
FY 2020	60	11	71

¹ Receipts from the MTA surcharge are deposited in the Mass Transportation Operating Assistance Fund.

² Corporate tax reform merged the bank tax with the corporation franchise tax.

Description

The bank tax (Article 32) was merged with the corporation franchise tax (Article 9-A), effective with tax years beginning on and after January 1, 2015. Chapter 59 of the Laws of 2014 enacted corporate tax reform which established a single system of taxation for general business corporations and banking corporations by repealing the separate provisions of the Tax Law for banking corporations (Article 32) and amending the business corporation tax under Article 9-A to accommodate changes in the financial services industry and make other modernization changes.

Receipts: Estimates and Projections

All Funds

FY 2019 Estimates

All Funds receipts through December are \$60.6 million, a decrease of \$367.6 million (85.8 percent) from the comparable period in the prior fiscal year.

All Funds FY 2019 receipts are estimated to be \$123 million, a decrease of \$344.1 million (73.7 percent) from FY 2018. This decrease stems from lower audits and increased refunds.

FY 2020 Projections

All Funds FY 2020 receipts are projected to be \$71 million, a decrease of \$52 million (42.3 percent) from FY 2019. This decrease is mainly due to lower projected audit receipts.

General Fund

General Fund FY 2019 receipts are expected to be \$102 million, a decrease of \$308.1 million (75.1 percent) from FY 2018.

For FY 2020, General Fund receipts are projected to be \$60 million, a decrease of \$42 million (41.2 percent) from FY 2019.

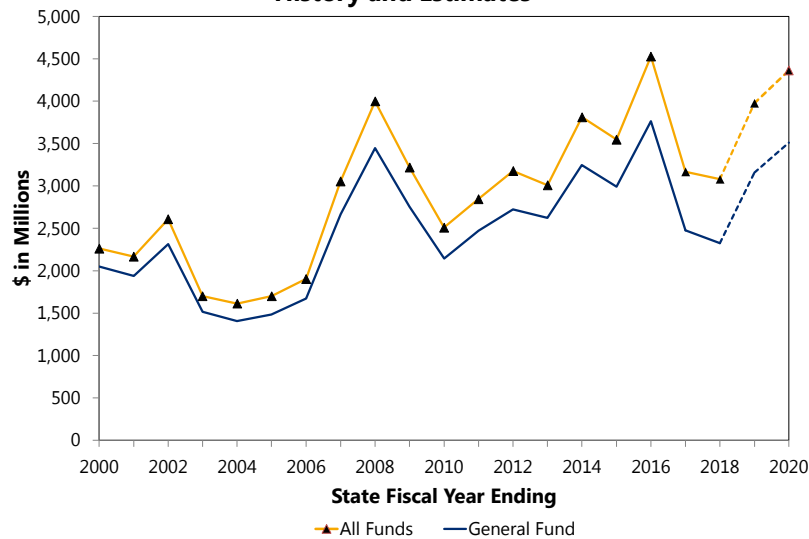
Other Funds

Bank tax receipts from the business tax surcharge deposited to MTOAF generally reflect the All Funds trends described above. The MCTD business tax surcharge will result in MTOAF deposits of an estimated \$21 million in FY 2019 and a projected \$11 million in FY 2020.

CORPORATION FRANCHISE TAX (millions of dollars)							
	FY 2018 Actual	FY 2019 Estimated	Change	Percent Change	FY 2020 Projected	Change	Percent Change
General Fund	2,326.2	3,157.0	830.8	35.7	3,510.0	353.0	11.2
Other Funds	753.8	820.0	66.2	8.8	852.0	32.0	3.9
All Funds	3,080.0	3,977.0	897.0	29.1	4,362.0	385.0	9.7

Note: Totals may differ due to rounding.

Corporation Franchise Tax Receipts History and Estimates



CORPORATION FRANCHISE TAX BY FUND (millions of dollars)			
	General Fund	Special Revenue Funds ¹	All Funds Receipts
FY 2010	2,145	366	2,511
FY 2011	2,472	374	2,846
FY 2012	2,724	452	3,176
FY 2013	2,624	385	3,009
FY 2014	3,245	567	3,812
FY 2015	2,990	558	3,548
FY 2016 ²	3,763	764	4,527
FY 2017	2,476	690	3,166
FY 2018	2,326	754	3,080
Estimated			
FY 2019	3,157	820	3,977
FY 2020			
Current Law	3,510	852	4,362
Proposed Law	3,510	852	4,362

¹ Receipts from the MTA surcharge are deposited in the Mass Transportation Operating Assistance Fund.

² Corporate tax reform merged the bank tax into the corporation franchise tax.

Proposed Legislation

Legislation proposed with this Budget would:

- Expand the Employee Training Incentive Program Credit;
- Make the E-File Mandate Permanent;
- Permanently Extend Tax Shelter Reporting;
- Provide a Sourcing Rule for GILTI Apportionment;
- Decouple from IRC Federal Basis for NYS Manufacturing Test;
- Extend Clean Heating Fuel Credit for Three Years;
- Extend Workers with Disabilities Credit for Three Years;
- Expand the Historic Properties Rehabilitation Credit;
- Create the New York State Employer-Provided Child Care Credit;
- Create the Employer Recovery Hiring Tax Credit;
- Deduct Capital Grants from New York State Taxable Income; and
- Technical corrections to the Tax Law and NYC Administrative Code.

Description

Tax Base and Rate

Chapter 59 of the Laws of 2014 enacted corporate tax reform which established a single modern system of taxation for general business corporations and banking corporations by repealing the separate provisions of the Tax Law for banking corporations (Article 32) and amending the business corporation tax under Article 9-A to accommodate changes in the financial services industry and make other modernization changes. This was accomplished by replacing the entire net income base with a similar business income base, effective January 1, 2015, subject to a fully effective tax rate of 6.5 percent effective January 1, 2016.

The corporation franchise tax is levied by Articles 9-A and 13 of the Tax Law. Article 9-A imposes a franchise tax on domestic and foreign corporations for the privilege of exercising their corporate franchise or doing business, employing capital, owning or leasing property, or maintaining an office in New York. The Article 9-A tax is made up of business entities classified as either C corporations

or S corporations. Article 13 of the Tax Law imposes a 9 percent tax on certain not-for-profit entities on business income earned from activities not related to their exempt purpose.

For C corporations, current law requires corporation franchise tax liability to be computed under three alternative bases, with tax due based on the highest tax calculated under three alternative bases. The three alternative bases are:

- A business income base, which begins with Federal taxable income before net operating loss deductions and special deductions, and is further adjusted by the exclusion, deduction or addition of certain items. The resulting base is allocated to New York and subject to a tax rate of 6.5 percent. Certain manufacturers and qualified emerging technology companies are subject to the rates as shown in the table below.

Type of Business	Tax Year 2018 and Thereafter
Qualified New York Manufacturers	0%
Qualified Emerging Technology Companies (QETCs)	4.875%
Remaining Taxpayers	6.5%

- A capital base imposed at a rate of 0.075 percent (effective January 1, 2018) on business and investment capital allocated to New York. For most taxpayers, the maximum annual tax is \$5 million. The capital base is being phased out over six years following the schedule shown below.

Type of Business	Tax Year 2018	Tax Year 2019	Tax Year 2020	Tax Year 2021 and Thereafter
Qualified New York Manufacturers and QETCs	0.056%	0.038%	0.019%	0%
Cooperative Housing Corporations	0.040%	0.040%	0.025%	0%
Remaining Taxpayers	0.075%	0.050%	0.025%	0%

- A fixed dollar minimum tax, which is based on a taxpayer's New York receipts as shown in the following schedule.

QUALIFIED NEW YORK MANUFACTURER C CORPORATIONS AND QETCS FIXED DOLLAR MINIMUM TAXES		
New York Receipts	Tax Year 2017	Tax Year 2018 and Thereafter
\$100,000 or less	\$21	\$19
\$100,001 - \$250,000	\$63	\$56
\$250,001 - \$500,000	\$148	\$131
\$500,001 - \$1,000,000	\$423	\$375
\$1,000,001 - \$5,000,000	\$1,269	\$1,125
\$5,000,001 - \$25,000,000	\$1,961	\$2,625
Over \$25,000,000	\$4,230	\$3,750

REMAINING C CORPORATION TAXPAYERS FIXED DOLLAR MINIMUM TAXES	
New York Receipts	Tax Year 2015 and Thereafter
\$100,000 or less	\$25
\$100,001 - \$250,000	\$75
\$250,001 - \$500,000	\$175
\$500,001 - \$1,000,000	\$500
\$1,000,001 - \$5,000,000	\$1,500
\$5,000,001 - \$25,000,000	\$3,500
\$25,000,001 - \$50,000,000	\$5,000
\$50,000,001 - \$100,000,000	\$10,000
\$100,000,001 - \$250,000,000	\$20,000
\$250,000,001 - \$500,000,000	\$50,000
\$550,000,001 - \$1,000,000,000	\$100,000
Over \$1 billion	\$200,000

S corporations are subject to a fixed dollar minimum tax imposed at the rates shown in the table below.

S CORPORATIONS FIXED DOLLAR MINIMUM TAXES	
New York Receipts	S Corp Min Tax
\$100,000 or less	\$25
\$100,001 - \$250,000	\$50
\$250,001 - \$500,000	\$175
\$500,001 - \$1,000,000	\$300
\$1,000,001 - \$5,000,000	\$1,000
\$5,000,001 - \$25,000,000	\$3,000
Over \$25,000,000	\$4,500

Effective January 1, 2016, Real Estate Investment Trusts (REITs) and Regulated Investment Companies (RICs) are subject to a fixed dollar minimum tax imposed at the rates shown in the table below.

REITs/RICs FIXED DOLLAR MINIMUM TAXES	
New York Receipts	S Corp Min Tax
\$100,000 or less	\$25
\$100,001 - \$250,000	\$75
\$250,001 - \$500,000	\$175
Over \$500,000	\$500

Additionally, corporations conducting business in the Metropolitan Commuter Transportation District (MCTD) are subject to a surcharge on the portion of the total State tax liability allocated to the MCTD region. The tax year 2018 surcharge tax rate was 28.6 percent. The rate for 2019 is 28.9 percent. The Department of Taxation and Finance will compute the surcharge tax rate for each tax year beginning with tax year 2016 with the goal of achieving revenue neutrality for the MCTD based on the most recent Enacted Budget forecast. Additionally, the MCTD surcharge is now permanent. Collections from the surcharge are deposited into the Mass Transportation Operating Assistance Fund (MTOAF).

Administration

Corporations that reasonably expect their tax liability to exceed \$1,000 for the current tax year are required to make a mandatory first installment of estimated tax and three additional estimated payments. The mandatory first installment is due 75 days from the end date of a taxpayer's fiscal year. The remaining three estimated tax payments are due on the 15th day of the third month of the fiscal year quarter. The majority of taxpayers have a fiscal year that ends December 31. The mandatory first installment for these taxpayers is due March 15 with the remaining three estimated payments due on June 15, September 15 and December 15. A final payment is also required of all taxpayers. This payment is due 106 days (April 15 for taxpayers that have a fiscal year that ends December 31) from the end date of a taxpayer's fiscal year. Taxpayers that expect their tax liability to exceed \$100,000 for the current tax year are required to make a mandatory first installment equal to 40 percent of their tax from two tax years prior. Taxpayers with expected liability greater than \$1,000 and less than \$100,000 are required to make a mandatory first installment equal to 25 percent of their tax from two tax years prior. Taxpayers may make periodic adjustments to these payments after the close of the tax year as their actual liability for a given tax year becomes more definite.

Tax Expenditures

Tax expenditures are defined as features of the Tax Law that by exclusion, exemption, deduction, allowance, credit, deferral, preferential tax rate or other statutory provisions reduce the amount of

a taxpayer’s liability to the State by providing either economic incentives or tax relief to particular entities to achieve a public purpose. The corporation franchise tax structure includes various tax expenditures, and the distribution of these benefits varies widely among firms and industries. Among the major tax expenditure items for the corporation franchise tax are modifications to federal taxable income for qualified residential loan portfolios and community banks and small thrifts and deductions for investment income and other exempt income from New York business income as well as the investment tax credit, Empire Zones, the Excelsior Jobs Program, Brownfields and Film Production tax credits, and the preferential tax rates for manufacturers. For a more detailed discussion of tax expenditures, see the *Annual Report on New York State Tax Expenditures*, prepared by the Department of Taxation and Finance and the Division of the Budget.

Significant Legislation

Significant statutory changes to the corporation franchise tax since 2013 are summarized below.

Subject	Description	Effective Date
Legislation Enacted in 2013		
Empire State Film Production Credit	Extended the Empire State film production tax credit allocation of \$420 million per year for an additional five years (2015 - 2019). For the period 2015 through 2019 certain upstate counties will receive an additional 10 percent credit for wages and salaries paid.	January 1, 2015
	Reduced restrictions on the post production portion of the credit and required additional reporting to document the effectiveness of the credit in creating jobs.	March 28, 2013
Royalty Income Loophole	Closed a loophole that allowed New York companies earning royalty income to avoid paying taxes on that income. New York taxpayers must show on their tax return that the taxpayer’s Non-New York parent company included the royalty income in its tax liability. The demonstration absolves taxpayers of the obligation to pay tax on their royalty income.	January 1, 2013
New York State Business Incubator and Innovation Hot Spot Program	Created a new high tech incubator program in which start-up businesses will be free of property, sales and business income taxes for the first five years. Hot spots must demonstrate an affiliation with, and the support of, at least one college, university or independent research institution and offer programs consistent with regional economic development strategies.	March 28, 2013
Hire-a-Vet Tax Credit	Provided a refundable tax credit for tax years 2015 and 2016 equaling 10 percent of the wages paid to a qualified veteran (capped at \$5,000) and 15 percent of wages paid to a qualified veteran (capped at \$15,000).	January 1, 2015
Youth Works Tax Credit	Provided a four year refundable tax credit capped at \$6 million per year for tax years 2014 through 2017 for hiring unemployed, low-income or at risk youth ages 16-24 in cities with populations greater than 55,000 or towns with populations greater than 480,000.	January 1, 2014
Excelsior Jobs Program	Changed the job requirement parameters for the Excelsior Jobs Program and allowed a portion of the unallocated tax credits from any taxable year to be used to award tax credits in another taxable year.	May 27, 2013
Manufacturer Tax Reduction	Provided a phased in manufacturing tax reduction of 9.2 percent in tax year 2014, 12.3 percent in 2015, 15.4 percent in 2016 and 2017, and 25 percent effective for tax years beginning in 2018.	January 1, 2014

Subject	Description	Effective Date
Historic Properties Tax Credit	Extended for five years the maximum Historic Preservation Tax Credit amount of \$5 million, which had previously been scheduled to revert to \$100,000 following the conclusion of tax year 2014, and permanently made the credit refundable for tax years beginning on or after January 1, 2015.	January 1, 2015
Charge NY Electric Vehicle Recharging Equipment Credit	Created a credit equal to 50 percent or \$5,000 per station, whichever is less, of the cost of electric vehicle recharging or alternative fuel vehicle refueling equipment. The credit sunsets December 31, 2017.	January 1, 2013
Minimum Wage Reimbursement Credit	Provided a refundable tax credit for tax years 2014 through 2018 equal to the product of the number of hours worked by qualifying minimum wage-earning employees and 1) \$0.75 in tax year 2014; 2) \$1.31 in tax year 2015; and 3) \$1.35 in tax years 2016 through 2018. Qualifying employees must be students aged 16 to 19, and the credit is reduced if the federal minimum wage is increased to a level in excess of 85 percent of the New York minimum wage.	January 1, 2014
START-UP NY	Established tax-free zones on or near qualifying university and college campuses. Qualifying businesses operating within such zones are exempt from taxation under the Corporate Franchise Tax.	January 1, 2014
Legislation Enacted in 2014		
Corporate Tax Reform	Merged the bank tax with the corporation franchise tax. Repealed the separate provisions of the bank tax and amended the corporate franchise tax to accommodate changes in the financial services industry and make other modernization changes.	January 1, 2015
	Lowered the business income tax rate from 7.1 percent to 6.5 percent for non-manufacturers.	January 1, 2016
	Phased out the capital base over a 6-year period.	January 1, 2016
	Made the MTA surcharge permanent.	January 1, 2015
Property Tax Credit for Manufacturers	Made qualified New York manufacturers eligible for a new tax credit equal to 20 percent of the real property taxes paid.	January 1, 2014
Enhance the Youth Works Tax Credit	Enhanced the credit by providing additional credit for youth retained in either a full-time or part-time status for one additional year, lowered the part-time hourly threshold from 20 hours to 10 hours for full-time high school students and increased the allocation from \$6 million to \$10 million for programs two through five (2014-2017).	January 1, 2014
Expand the Upstate Counties Eligible for the Enhanced Film Production Tax Credit	Added the counties of Albany and Schenectady to the list of upstate counties eligible for the additional 10 percent credit on wages and salaries.	January 1, 2015
Workers with Disabilities Tax Credit	Provided a non-refundable tax credit for tax years 2015 through 2019 equaling 15 percent of wages paid to a developmentally disabled individual employed full time (capped at \$5,000) and 10 percent of wages paid if the individual is employed part time (capped at \$2,500). This credit has an annual allocation of \$6 million.	January 1, 2015
Musical and Theatrical Production Credit	Provided a refundable tax credit for tax years 2015 through 2018 equaling 25 percent of qualified expenses for qualified musical and theatrical productions in certain upstate theaters. This credit is capped at \$4 million annually.	January 1, 2015
START-UP NY Amendments	Provided a refundable tax credit equal to the excise tax paid on telecommunications services paid by businesses in START-UP NY areas.	January 1, 2014
	Added four correctional facilities owned by the State of New York to be included as START-UP NY areas.	January 1, 2014

Subject	Description	Effective Date
Entire Net Income Tax Rate for Qualified Manufacturers	Lowered the entire net income tax rate to zero percent.	January 1, 2014
Empire State Commercial Production Tax Credit	Extended the annual allocation of \$7 million for two years through tax year 2016. Also, lowered the minimum required production costs for upstate productions from \$200,000 to \$100,000.	March 31, 2014
Legislation Enacted in 2015		
Expand the Excelsior Jobs Program	Expanded eligibility for the program to include entertainment companies that meet certain criteria, music production companies and video game software developers.	April 13, 2015
Employee Training and Incentive Program (ETIP) Tax Credit	Provided a refundable tax credit for tax years 2015 and after in the amount of 50 percent of employee training costs (\$10,000 cap per employee) or internship costs (\$3,000 cap per intern). The amount of tax credits allocated per year is capped at \$5 million and will be allotted from funds available under the Excelsior Jobs Program.	January 1, 2015
Section 186-e on Mobile Telecommunication Services	Imposed a state excise tax rate of 2.9 percent and a 0.721 percent MCTD rate on the sale of mobile communications services and dedicated 7.6 percent of Section 186-e receipts to the MTOAF and the DHBTF. Both of these changes are effective May 1, 2015.	May 1, 2015
Urban Youth Jobs Program	Enhanced the credit (formerly the New York Youth Works Tax Credit) by increasing the allocation from \$10 million to \$20 million for programs three through five (2015-2017).	April 13, 2015
Alternative Fuel Vehicle Refueling Property Tax Credit	Allowed the credit for spending not covered by a grant. The amount of the credit is amended to equal the lesser of \$5,000 or the product of 50 percent and the cost of any property less any costs paid from the proceeds of a grant.	January 1, 2015
Brownfields Clean-Up Program	Reformed the program and extended the tax credits through March 31, 2026. Reforms included the prioritization of (1) site redevelopment in economically distressed areas, (2) low income housing, or (3) properties that are upside down or underutilized; also provided for the creation of an expedited remediation program (BCP-EZ), a more detailed description of eligible costs for redevelopment tax credits, and allowed the real property tax and environmental remediation insurance credits to sunset.	July 1, 2015
START-UP NY Amendments	Added two airport facilities owned by the State of New York to be included as START-UP NY areas.	April 13, 2015
Corporate Tax Reform Technical Amendments	Made several changes to the 2014 Corporate Tax Reform statute. including: changes to the definition of investment capital and income; changes to the apportionment rules for qualified financial instruments (QFI); clarifications to the economic nexus test, certain tax rates for QETC and qualified manufacturers, net operating losses, and the alternative base tax credit.	January 1, 2015
Legislation Enacted in 2016		
Conform to New Federal Tax Filing Dates	Changed New York State tax filing deadlines to conform to federal filing deadlines. C corporations are now required to file their final return on or before the 15 th day of the fourth month following the close each taxable year, which is April 15 for calendar year filers. Taxpayers are still required to remit mandatory first installments (MFI) of estimated taxes on or before the 15 th day of the third month following the close of each taxable year, which is March 15 for calendar year filers. The amount of the MFI will now be a percentage of tax from two tax years prior, instead of the preceding year's tax.	January 1, 2016
Hire-a-Veteran Credit	Extended the credit for two additional years to January 1, 2019.	January 1, 2017
Commercial Production Credit	Extended the credit for two additional years to January 1, 2019.	January 1, 2017



Corporation Franchise Tax

Subject	Description	Effective Date
Credit for Companies That Provide Transportation to People with Disabilities	Extended the expiration date of this credit for six years until December 31, 2022.	December 31, 2016
Low-Income Housing Credit	Extended the statewide limitation for the aggregate dollar amount of credit the Commissioner of Division of Housing and Community Renewal (DHCR) may allocate to eligible low-income buildings. The credit allocation pool was increased by \$8 million for each of the next five fiscal years.	April 1, 2017
Clean Heating Fuel Credit	Modified and extended the clean heating fuel credit. The minimum biodiesel fuel thresholds were increased. The credit was extended for three years to January 1, 2020.	January 1, 2017
Excelsior Jobs Program Tax Credit	Extended claims period through 2026, allowing Empire State Development the ability of offering a 10 year benefit period for companies entering the program in 2016 and 2017. Unused credits from previous years will be used to fund the extension. Reduce annual credit allocations a total of \$150 million over the period 2016 through 2024.	April 13, 2016
Real Property Tax Credit for Manufacturers	Extended the real property tax credit for manufacturers to agricultural businesses. This change conforms the Article 9-A credit to the personal income tax credit for these businesses.	January 1, 2014
Urban Youth Jobs Tax Credit	Increased the allocation for the final two program years from \$20 million to \$50 million.	April 13, 2016
Economic Transformation and Facility Redevelopment Program	Modified to include any psychiatric facility previously owned by New York State and located within the MCTD (excluding NYC) to qualify as a closed facility under this program. Prospective participants must submit an application by September 1, 2016.	April 13, 2016
Special Additional Mortgage Recording Tax Credits	Allowed Article 9-A taxpayers to claim a refund of the credit attributable to the special additional mortgage recording tax that a taxpayer pays on or after January 1, 2015 as a lender with respect to residential mortgages.	January 1, 2015
Alcoholic Beverage Production Credit	Expanded the beer production credit available under the corporation franchise tax to include wine, liquor and cider.	January 1, 2016
The Farm Workforce Retention Credit	Created a refundable credit that is available to farm employers equal to a fixed amount per eligible farm employee. The credit varies between \$250 per eligible farm employee in tax year 2017 up to \$600 for tax year 2021. This credit expires after tax year 2021.	January 1, 2017
Legislation Enacted in 2017		
Establish Life Sciences Tax Incentives	Established tax incentives to support the State's new life sciences initiative. Existing life science companies are eligible to participate in the Excelsior Jobs Program and new life sciences companies can receive a 15 or 20 percent refundable tax credit on new research and development expenditures based on company size.	January 1, 2018
Extend the Empire State Film and Post Production Tax Credits	Extended the credit for three additional years through 2022.	April 10, 2017
Extend the Alternative Fuels Property and Electric Vehicle Recharging Property Credit	Extended the credit for five additional years through 2022.	April 10, 2017

Subject	Description	Effective Date
Treat Disregarded Entities as a Single Taxpayer for Tax Credit Purposes	Protected existing tax credit structures following an August 2016 decision of the Tax Appeals Tribunal that could have resulted in certain taxpayers losing their tax credits. An individual taxpayer and associated single-member LLCs (disregarded entities) will now be treated as one entity for tax credit purposes.	April 10, 2017
Excelsior Jobs Program	Doubled the excelsior research and development credit cap from three to six percent.	January 1, 2018
	Reduced the minimum required net new job requirements for most industries and added a definition for significant capital investment.	April 10, 2017
Employee Training Incentive Program	Expanded the current program to include incumbent worker training as an eligible expense, given that such training is part of a company's expansion and retention projects. The requirement to create additional jobs is removed.	April 10, 2017
New York Youth Jobs Program	Extended the credit for two additional years to January 1, 2020 with an annual allocation of \$40 million beginning with the 2018 allocation year.	April 10, 2017
Empire State Apprenticeship tax credit program	Created a carve out from the New York Youth Jobs Program for an apprenticeship credit. Provides a tax credit of \$10 million annually for tax years 2018 through 2022 to certified employers that employ a qualified apprentice for at least 6 months of the calendar year.	January 1, 2018
Investment Tax Credit	Modified the investment tax credit to exclude costs related to the production and delivery of steam or water and the delivery of natural gas as credit-eligible activities.	April 10, 2017
Real Estate Investment Trusts (REITs)/Regulated Investment Companies (RICs)	Amended the business allocation rules and Fixed Dollar Minimum (FDM) tax to allow REITs/RICS to utilize the 8 percent qualified financial instrument allocation election for sourcing New York income and added a separate State fixed dollar minimum schedule.	January 1, 2016
Credit for Farm Donations to Food Pantries	Created a refundable credit equal to 25 percent of the fair market value of qualified donations by qualified farmers to eligible food pantries, up to a \$5,000 maximum credit per farm annually.	January 1, 2018
Legislation Enacted in 2018		
Decouple from Federal Deduction for Deemed Repatriated Foreign Income	Preserved the taxable base by requiring Insurance taxpayers to add back income reduced at the Federal level for income earned overseas. Add-backs are required for State and New York City tax purposes.	January 1, 2017
Historic Building Rehabilitation Credit	Extended the credit for an additional five years and decoupled from the Federal credit to continue to allow the credit to be claimed for a single year.	January 1, 2018
Low-Income Housing Credit	Expanded the credit to allow transferability to third parties.	January 1, 2019
Hire-a-Veteran Credit	Extended the credit for two additional years to January 1, 2021.	January 1, 2019
Empire State Musical and Theatrical Production Credit	Extended the credit for four additional years to March 31, 2022.	April 12, 2018
New York Youth Jobs Program	Increased the credit amounts for each certified hire.	January 1, 2018
	Required employers to provide the State additional information pertaining to certified hires.	January 1, 2019

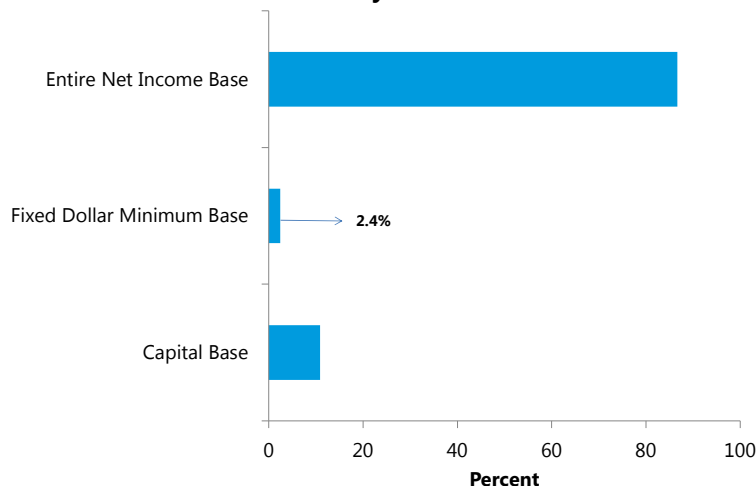
Tax Liability

The Corporation Franchise Tax Study File, which is compiled by the Department of Taxation and Finance’s Office of Tax Policy Analysis (OTPA), contains the most recent tax liability data available for corporations filing under Article 9-A. The most current liability information is for the 2015 tax year. Liability for tax years 2010 through 2012 is artificially inflated as a result of 2010 legislation that deferred certain tax credit claims (to tax years 2013 through 2015) that would have otherwise been included on tax returns for tax years 2010 through 2012.

Although the Division of the Budget Corporation Franchise Tax Study File does not include information on non-allocating fixed dollar minimum tax filers and S corporations, OTPA compiles corporate tax return data relating to the total number of C and S corporations and tax liability for these entities. For 2015, approximately 281,369 taxpayers filed as C corporations, while approximately 421,107 taxpayers filed as S corporations.

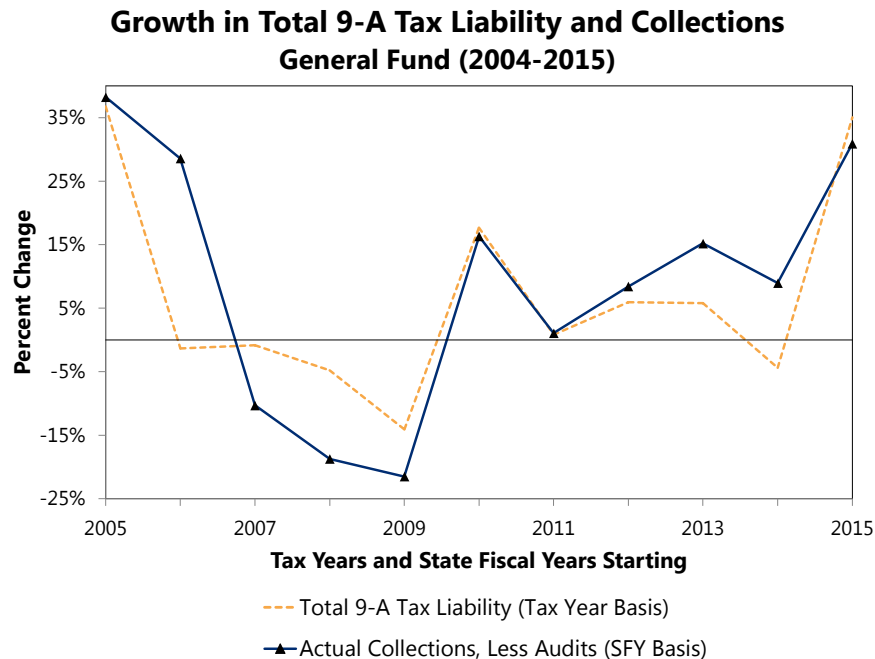
In tax year 2015, C corporations paid under the highest of three alternative bases. In 2015, about 87 percent of liability was paid under the entire net income base (see graph below). The capital base was the second largest liability base, at nearly 11 percent. For the past several years the fixed dollar minimum tax base has represented a minimal percentage of total tax liability.

**2015 Distribution of C Corporation Tax Liability
By Tax Base**



The link between underlying corporate tax liability and cash receipts in any given State fiscal year is often obscured by the timing of payments, the carry forward of prior year losses or credits and the reconciliation of prior year liabilities. Tax collections are the net payments and adjustments made by taxpayers on returns and extensions over the course of a State fiscal year. Taxpayers with a fiscal year ending December 31 make up the majority of taxpayers and follow the payment schedule described earlier under “Administration.”

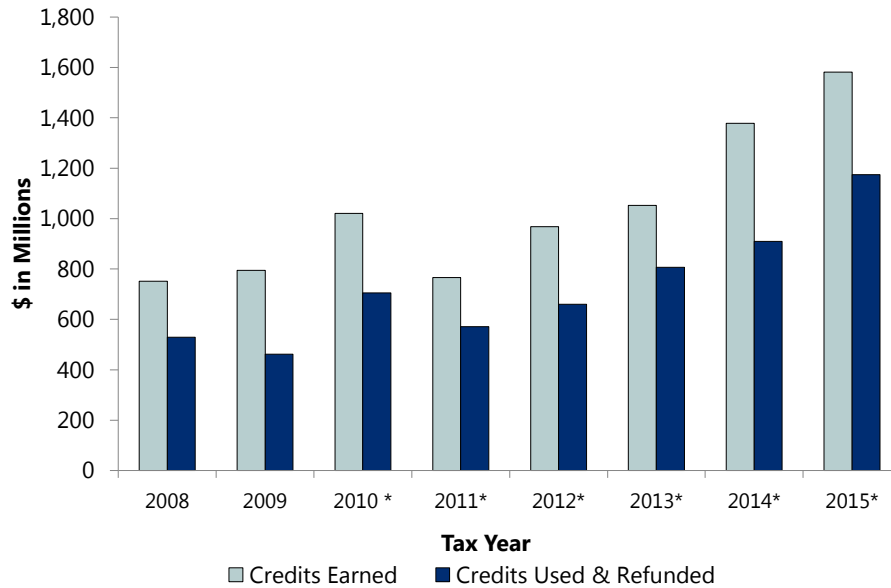
Tax liability in the current year is based on estimated performance for the same year. It is generally calculated by using tax bases, tax rates, special deductions and additions, losses, and tax credits. Since taxpayers must pay estimated taxes months in advance of knowing actual liability, it is difficult for taxpayers to determine the proper level of payments needed over the course of a year. This is especially true if business or economic conditions change. The graph below illustrates the volatility in the underlying relationship between payments and liability, which, for many taxpayers, is often compounded by the difference between a taxpayer’s tax year and the State fiscal year.



Credits

The following graph shows all available credits earned and used by Article 9-A taxpayers, and illustrates that the amount of credits earned has exceeded the amount of credits used. The increase in earned and used and refunded credits seen in 2015 is attributable to the Empire Zones Program. Credit earned is the amount of credit earned by a taxpayer in the current tax year. This is prior to any credit recapture, and does not include credits earned in or carried over from prior years. Generally, Tax Law provisions prevent taxpayers from using tax credits to reduce final liability below the fixed dollar minimum tax. This results in taxpayers carrying forward a significant amount of non-refundable tax credits into subsequent tax years. The majority of recently enacted tax credits are refundable. Refundable credits can be used to more than offset tax liability through requests for cash refunds. For these credits, the credit earned and credit used and refunded amounts will be equal for a tax year. The four largest tax credit programs in terms of credits earned and credits used and refunded over the period shown in the following chart are the Investment Tax Credit (including the now-expired Financial Services Investment Tax Credit), Empire Zones credits, the Film Production Tax Credit, and the Rehabilitation of Historic Properties Credit.

Total Credits Earned and Credits Used/Refunded (2008-2015)



*Amounts shown assume credits deferred to tax years 2013-2015 under the tax credit deferral program were used or refunded in the year shown.

As seen above, credits earned and credits used and refunded have generally trended upward, with credits earned consistently exceeding credits used and refunded. Deviation from this upward trend is primarily driven by the Brownfields Clean-Up Program and the Empire Zone Program. These two programs reflect the number and size of projects being completed. There are no new entrants into the Empire Zone Program (it expired June 30, 2010 and was replaced with the Excelsior Jobs Program), but current participants will be claiming credits for the remainder of their benefit period which will result in credits earned and credits used and refunded continuing for several more years. The Investment Tax Credit program can also be skewed by the number and size of projects, although that program has been more stable. Credits earned and credits used and refunded for the Empire State Film Production Tax Credit have increased steadily over this period and are expected to continue that trend in the future. The program is currently funded through tax year 2022 and demand for the program continues to be robust. The Film Production Tax Credit is the largest tax credit program in the State's current economic development portfolio in terms of dollars spent. Tax year 2012 was the first year of credit claims for the Excelsior Jobs Program. This program is expected to continue to grow in the future.

For a more detailed discussion of the methods and models used to develop estimates and projections for the corporation franchise tax, please see the *Economic, Revenue and Spending Methodologies* at www.budget.ny.gov.

Receipts: Estimates and Projections

All Funds

FY 2019 Estimates

All Funds receipts through December are \$3,009.8 million, an increase of \$479.6 million (19 percent) from the comparable period in the prior fiscal year.

All Funds FY 2019 receipts are estimated to be \$3,977 million, an increase of \$897 million (29.1 percent) from FY 2018. The increase mainly reflects higher gross receipts as many taxpayers are remitting more cash compared to last fiscal year when they had larger overpayment balances from tax year 2015. These higher gross receipts also include various flow-through impacts from the Federal Tax Cuts and Job Act (TCJA).

FY 2020 Projections

All Funds FY 2020 receipts are projected to be \$4,362 million, an increase of \$385 million (9.7 percent) from FY 2019. This increase reflects projected growth in corporate profits and higher audits.

General Fund

General Fund FY 2019 receipts are estimated to be \$3,157 million, an increase of \$830.8 million (35.7 percent) from FY 2018. The increase reflects the same trends impacting All Funds receipts for FY 2019.

General Fund FY 2020 receipts are projected to be \$3,510 million, an increase of \$353 million (11.2 percent) from FY 2019. The increase reflects the same trends impacting All Funds receipts for FY 2020.

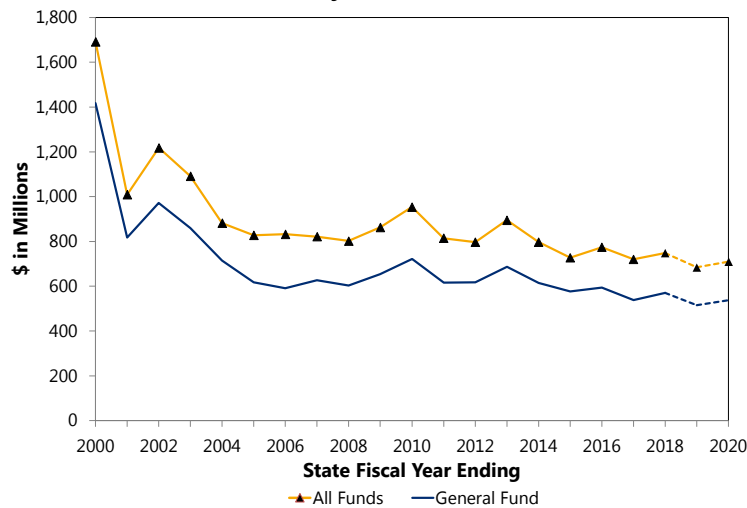
Other Funds

Corporation franchise tax receipts from the business tax surcharge deposited to MTOAF generally reflect the All Funds trends described above. The MCTD business tax surcharge will result in MTOAF deposits of an estimated \$820 million in FY 2019 and a projected \$852 million in FY 2020.

CORPORATION AND UTILITIES TAXES (millions of dollars)							
	FY 2018 Actual	FY 2019 Estimated	Change	Percent Change	FY 2020 Projected	Change	Percent Change
General Fund	570.1	515.0	(55.1)	(9.7)	537.0	22.0	4.3
Other Funds	177.9	169.0	(8.9)	(5.0)	172.6	3.6	2.1
All Funds	747.9	684.0	(63.9)	(8.5)	709.6	25.6	3.7

Note: Totals may differ due to rounding.

Corporation and Utilities Tax Receipts History and Estimates



CORPORATION AND UTILITIES TAXES BY FUND (millions of dollars)				
	General Fund	Special Revenue Funds ¹	Capital Projects Funds ²	All Funds Receipts
FY 2010	722	212	20	954
FY 2011	616	181	16	814
FY 2012	617	167	13	797
FY 2013	686	194	15	895
FY 2014	615	169	14	797
FY 2015	577	141	10	727
FY 2016	594	165	15	774
FY 2017	538	167	15	720
FY 2018	570	164	14	748
Estimated				
FY 2019	515	155	14	684
FY 2020				
Current Law	537	159	14	710
Proposed Law	537	159	14	710

¹ Receipts from the MTA surcharge and a portion of receipts from the taxes imposed by sections 183, 184 and 186-e of the Tax Law deposited in accounts of the Mass Transportation Operating Assistance Fund (MTOAF).

² A portion of receipts from taxes imposed by sections 183, 184 and 186-e of the Tax Law deposited to Dedicated Highway and Bridge Trust Fund (DHBTF).

Description

Tax Base and Rate

Article 9 of the Tax Law imposes taxes and fees on a number of specialized industries, including public utilities, transportation and transmission companies, and agricultural cooperatives. The telecommunications industry and regulated utilities are the primary collection sources.

Section 183 provides for a franchise tax on the capital stock of transportation and transmission companies, including telecommunication, trucking, railroad, and other transportation companies. The tax is imposed at the highest of the following three alternatives:

- 1.5 mills per dollar of the net value of capital stock allocated to New York State;
- 0.375 mills per dollar of par value for each one percent of dividends paid on capital stock if dividends amount to six percent or more; or
- A minimum tax of \$75.

Section 184 levies an additional franchise tax of 0.375 percent on the gross earnings of transportation and transmission companies. Gross earnings from international, interstate, and inter-Local Access Transport Areas (LATAs) services and 30 percent of intra-LATA gross receipts are excluded from the tax.

Railroad and trucking companies that elected to remain subject to Article 9 taxes (rather than to become subject to the corporate franchise tax imposed under Article 9-A) pay the tax at a rate of 0.375 percent of gross earnings, including an allocated portion of receipts from interstate transportation-related transactions.

Section 186-a imposes a two percent gross receipts tax on charges for the transportation, transmission, distribution, or delivery of electric and gas utility services for residential customers.

Section 186-e imposes a 2.5 percent gross receipts tax on charges for non-mobile telecommunication services. A 2.9 percent gross receipts tax is imposed on mobile telecommunication services.

Article 9 taxpayers that conduct business in the Metropolitan Commuter Transportation District (MCTD) are subject to a 17 percent surcharge on their liability attributable to the MCTD. The collections from the surcharge are deposited into the Mass Transportation Operating Assistance Fund (MTOAF).

Administration

Taxpayers subject to Sections 184, 186-a and 186-e make quarterly tax payments of equal installments on an estimated basis in June, September and December. A final payment is made in April. Additionally, in March of every year, taxpayers are required to make a mandatory first installment equal to 40 percent of their tax from two tax years prior.

Significant Legislation

Significant statutory changes to the corporation and utilities taxes since 2013 are summarized below.

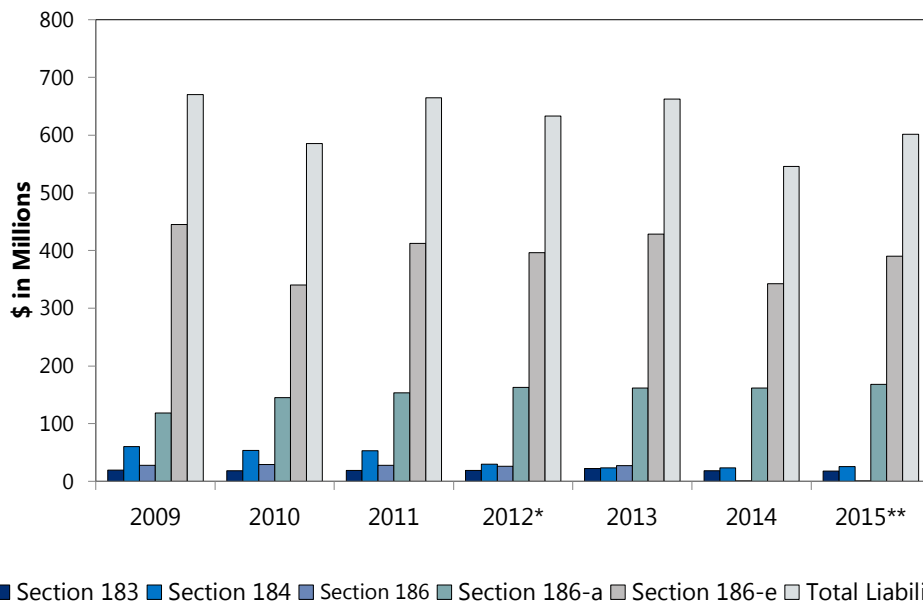
Subject	Description	Effective Date
Legislation Enacted in 2013		
Charge NY Electric Vehicle Recharging Equipment Credit	Created a credit equal to 50 percent or \$5,000 per station, whichever is less, of the cost of electric vehicle recharging or alternative fuel vehicle refueling equipment. The credit sunsets December 31, 2017.	January 1, 2013
LIPA Restructuring	Eliminated the requirement for LIPA to pay tax under Section 186. LIPA is still liable for the MTA surcharge.	January 1, 2014
Sections 183 and 184	Extended the distribution to the Metropolitan Mass Transportation Operating Assistance account of 54 percent of receipts and the Public Transportation Systems Operating Assistance account's distribution of 26 percent of receipts, through March 30, 2018.	April 1, 2013
START-UP NY	Established tax-free zones on or near qualifying university and college campuses. Qualifying businesses operating within such zones are exempt from taxation under Sections 180 and 181.	January 1, 2014
Minimum Wage Reimbursement Credit	Provided a refundable tax credit for tax years 2014 through 2018 equal to the product of the number of hours worked by qualifying minimum wage-earning employees and 1) \$0.75 in tax year 2014; 2) \$1.31 in tax year 2015; and 3) \$1.35 in tax years 2016 through 2018. Qualifying employees must be students aged 16 to 19, and the credit is reduced if the federal minimum wage is increased to a level in excess of 85 percent of the New York minimum wage.	January 1, 2014
Legislation Enacted in 2014		
Repeal the franchise tax on agricultural cooperatives (Section 185)	Repealed the Article 9, Section 185 tax on agricultural co-operatives effective for tax years beginning on or after January 1, 2018.	January 1, 2018
Corporate Tax Reform	Repealed the organization tax on In-State corporations (Section 180) and the license and maintenance fees on Out-of-State corporations (Section 181).	January 1, 2015
	Made the MTA surcharge permanent.	January 1, 2015
Legislation Enacted in 2015		
Section 186-e on Mobile Telecommunication Services	Imposed a state excise tax rate of 2.9 percent and a 0.721 percent MCTD rate on the sale of mobile communications services and dedicated 7.6 percent of Section 186-e receipts to the MTOAF and the DHBTF. Both of these changes are effective May 1, 2015.	May 1, 2015

<u>Subject</u>	<u>Description</u>	<u>Effective Date</u>
Alternative Fuel Vehicle Refueling Property Tax Credit	Allowed the credit for spending not covered by a grant. The amount of the credit is amended to equal the lesser of \$5,000 or the product of 50 percent and the cost of any property less any costs paid from the proceeds of a grant.	January 1, 2015
Brownfields Clean-Up Program	Reformed the program and extended the tax credits through March 31, 2026. Reforms included the prioritization of (1) site redevelopment in economically distressed areas, (2) low income housing, or (3) properties that are upside down or underutilized; also provided for the creation of an expedited remediation program (BCP-EZ), a more detailed description of eligible costs for redevelopment tax credits, and allowed the real property tax and environmental remediation insurance credits to sunset.	July 1, 2015
START-UP NY Amendments	Added two airport facilities owned by the State of New York to be included as START-UP NY areas.	April 13, 2015
Legislation Enacted in 2016		
Conform to New Federal Tax Filing Dates	New York State tax filing deadlines were changed to conform to federal filing deadlines. Taxpayers that file under Section 184, 184-a, 186-A, 186-e and 186-c are now required to file their final return on or before April 15. Taxpayers are still required to remit mandatory first installments (MFI) of estimated taxes on or before March 15. The amount of the MFI will now be a percentage of tax from two tax years prior, instead of the preceding year's tax.	January 1, 2016
	Taxpayers filing under Sections 183 and 183-a are subject to the same changes described above.	January 1, 2017
Clean Heating Fuel Credit	Modified and extended the clean heating fuel credit. The minimum biodiesel fuel thresholds were increased. The credit was extended for three years to January 1, 2020.	January 1, 2017
Legislation Enacted in 2017		
Extend the Alternative Fuels Property and Electric Vehicle Recharging Property Credit	Extended the credit for five additional years through 2022.	April 10, 2017
Treat Disregarded Entities as a Single Taxpayer for Tax Credit Purposes	Protected existing tax credit structures following an August 2016 decision of the Tax Appeals Tribunal that could have resulted in certain taxpayers losing their tax credits. An individual taxpayer and associated single-member LLCs (disregarded entities) will now be treated as one entity for tax credit purposes.	April 10, 2017
Excelsior Jobs Program	Doubled the Excelsior Research and Development Tax Credit cap from three to six percent.	January 1, 2018
	Reduced the minimum required net new job requirements for most industries and added a definition for significant capital investment.	April 10, 2017

Tax Liability

The chart below shows Article 9 liability by tax section over the most recent seven available years, from 2009 through 2015. Data for 2015, the most recent data available, is from the Article 9 Tax Study File compiled by the Department of Taxation and Finance's Office of Tax Policy Analysis (OTPA). Liability for tax years 2010 through 2012 is artificially inflated as a result of 2010 legislation that deferred certain credit claims (to tax years 2013 through 2015) that would have otherwise been included on tax returns for tax years 2010 through 2012. An increase in the telecommunications excise tax imposed under Section 186-e to 2.9 percent from 2.5 percent for wireless services effective May 1, 2015, coincides with an increase in tax liability for telecommunications providers observed in tax year 2015.

**Article 9 Tax Liability
(2009-2015)**



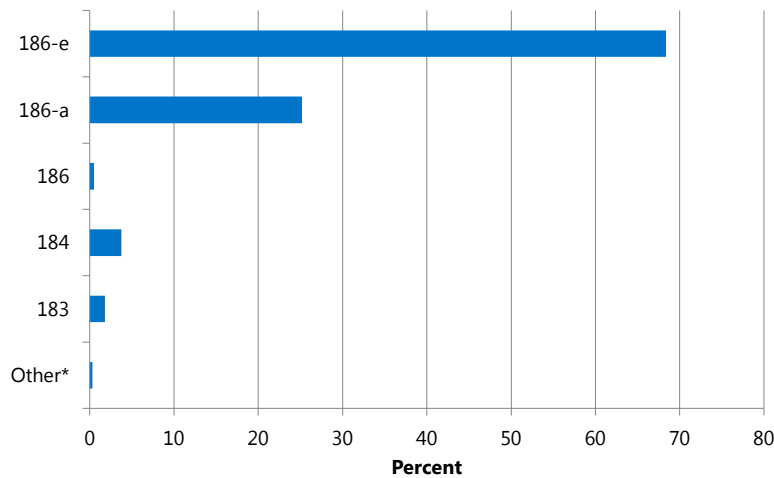
■ Section 183 ■ Section 184 ■ Section 186 ■ Section 186-a ■ Section 186-e ■ Total Liability

*Section 184 includes amended returns from taxpayers that provide mobile telecommunication services.
 **The telecommunications excise tax imposed under Section 186-e was increased from 2.5 percent to 2.9 percent for wireless services, effective May 1, 2015.

Receipts: By Section

The bar graph below depicts the share of total FY 2018 Article 9 All Funds attributable to each section of Article 9. Section 186-e, the gross receipts tax on telecommunications services, represents nearly 68 percent of All Funds receipts. The next largest section, 186-a, the gross receipts tax on utility services, represents approximately 25 percent.

FY 2018 All Funds Percent Distribution by Section



* Other includes sections 180, 181 and 185

The table below reflects the tax collections attributable to each section of Article 9 for FY 2018, FY 2019, and FY 2020. The All Funds total reflects taxes from the various sections prior to the distribution of receipts from sections 183, 184 and 186-e to MTOAF and DHBTF.

CORPORATION AND UTILITIES BY TAX LAW SECTION (millions of dollars)				
Section of Law	Type of Companies	FY 2018 Actual	FY 2019 Estimated	FY 2020 Projected
180 ¹	Organization tax on New York (domestic) corporations	0.0	0.0	0.0
181 ^{1,2}	License and maintenance fees on out-of-State (foreign) corporations	2.9	0.0	0.0
183	Franchise tax on transportation and transmission companies	13.8	14.3	13.9
184	Additional franchise tax on transportation and transmission companies	22.1	23.1	22.3
185 ³	Franchise tax on agricultural cooperatives	(0.2)	0.0	0.0
186	Franchise tax on water, steam, gas, electric, light and power companies	(0.8)	1.0	1.0
186a	Gross receipts tax on public utilities	167.2	193.0	204.0
186e	Excise tax on telecommunications	434.1	347.0	359.0
Other	186-a (non-PSC) and 189	(0.2)	0.0	0.0
Various	MTA Surcharge	109.0	105.7	109.4
All Funds Total		747.9	684.1	709.6
Less Other Funds				
	MTA Surcharge	109.0	105.7	109.4
	MTOAF ⁴	55.1	49.7	49.5
	DHBTF ⁴	13.8	13.7	13.7
General Fund		570.0	515.0	537.0

¹ Repealed for tax years beginning on or after January 1, 2015.
² Due to the filing period, payments are expected to continue to be received through FY 2018.
³ Repealed for tax years beginning on or after January 1, 2018.
⁴ Includes Sections 183, 184, and a portion of 186e.

Note: Totals may differ due to rounding.

For a more detailed discussion of the methods and models used to develop estimates and projections for the corporation and utilities tax, please see the *Economic, Revenue, and Spending Methodologies* at www.budget.ny.gov.

Receipts: Estimates and Projections

All Funds

FY 2019 Estimates

All Funds receipts through December are \$414.4 million, a decrease of \$44.8 million (9.8 percent) from the comparable period in the prior fiscal year.

All Funds FY 2019 receipts are estimated to be \$684 million, a decrease of \$63.9 million (8.5 percent) from FY 2018. The decrease is primarily attributed to a decline in telecommunications gross receipts combined with a decline in overall audit collections.

FY 2020 Projections

All Funds FY 2020 receipts are projected to be \$709.6 million, an increase of \$25.6 million (3.7 percent) from FY 2019. The increase is primarily attributed to an increase in expected 2019 liability payments for the telecommunications and utilities industries.

General Fund

General Fund FY 2019 receipts are estimated to be \$515 million, a decrease of \$55.1 million (9.7 percent) from FY 2018. This decrease reflects the same trends impacting FY 2019 All Funds receipts.

General Fund FY 2020 receipts are projected to be \$537 million, an increase of \$22 million (4.3 percent) from FY 2019. This increase reflects the same trends impacting FY 2020 All Funds receipts.

Other Funds

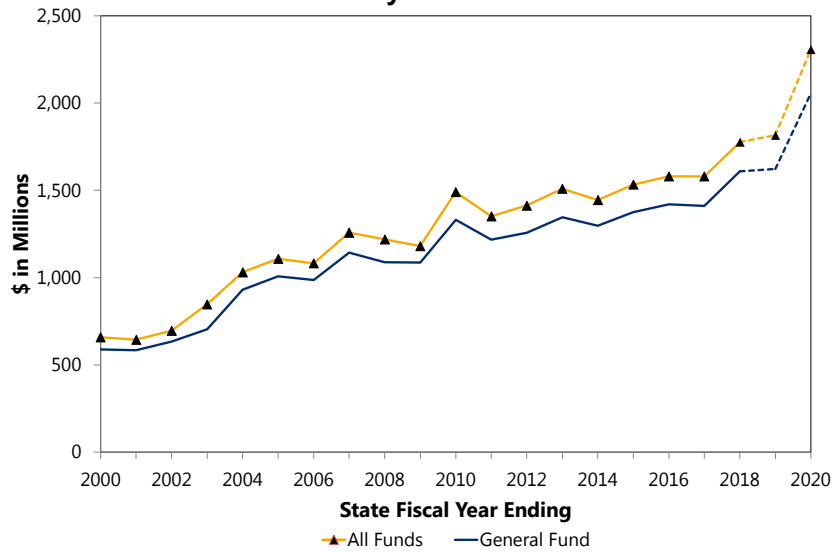
Eighty percent of Section 183 and 184 and 6.08 percent of Section 186-e collections are deposited into the MTOAF and will total an estimated \$49.7 million for FY 2019 and \$49.5 million for FY 2020. The remaining twenty percent of Section 183 and 184 and 1.52 percent of Section 186-e are earmarked for the DHBTF. DHBTF receipts are estimated at \$13.7 million in FY 2019 and projected at \$13.7 million for FY 2020.

Corporation and utilities tax receipts from the business tax surcharge deposited to MTOAF generally reflect the All Funds trends described above. The MCTD 17 percent business tax surcharge will result in MTOAF deposits of an estimated \$105.7 million in FY 2019 and a projected \$109.4 million in FY 2020.

INSURANCE TAXES (millions of dollars)							
	FY 2018 Actual	FY 2019 Estimated	Change	Percent Change	FY 2020 Projected	Change	Percent Change
General Fund	1,609.3	1,622.0	12.7	0.8	2,056.3	434.3	26.8
Other Funds	167.6	194.0	26.4	15.8	251.4	57.4	29.6
All Funds	1,776.8	1,816.0	39.2	2.2	2,307.7	491.7	27.1

Note: Totals may differ due to rounding.

Insurance Tax Receipts History and Estimates



INSURANCE TAXES BY FUND (millions of dollars)			
	General Fund	Special Revenue Funds ¹	All Funds Receipts
FY 2010	1,331	160	1,491
FY 2011	1,217	134	1,351
FY 2012	1,257	157	1,414
FY 2013	1,346	163	1,509
FY 2014	1,298	146	1,444
FY 2015	1,375	158	1,533
FY 2016	1,419	161	1,580
FY 2017	1,410	170	1,580
FY 2018	1,609	168	1,777
Estimated			
FY 2019	1,622	194	1,816
FY 2020			
Current Law	2,056	251	2,308
Proposed Law	2,056	251	2,308

¹ Receipts from the MTA surcharge are deposited in the Mass Transportation Operating Assistance Fund.

Proposed Legislation

Legislation proposed with this Budget would:

- Provide a Sourcing Rule for GILTI Apportionment;
- Expand the Historic Properties Rehabilitation Credit;
- Create the Employer Recovery Hiring Tax Credit;
- Create the New York State Employer-Provided Child Care Credit; and
- Deduct Capital Grants from New York State Taxable Income.

Description

Tax Base and Rate

Under Article 33 of the Tax Law and the Insurance Law, the State imposes taxes on insurance corporations, insurance brokers and certain insured for the privilege of conducting business or otherwise exercising a corporate franchise in New York.

Tax Rate on Non-Life Insurers

Non-life insurers are subject to a premiums-based tax. Accident and health premiums received by non-life insurers are taxed at the rate of 1.75 percent and all other premiums received by non-life insurers are taxed at the rate of 2 percent. A \$250 minimum tax applies to all non-life insurers.

Tax Rate on Life Insurers

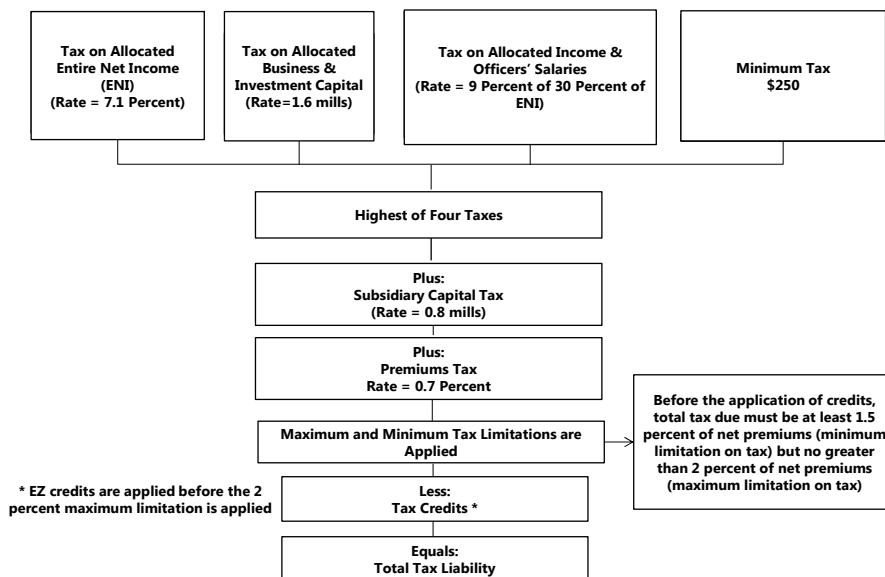
The franchise tax on life insurers has two components. The first component is a franchise tax computed under four alternative bases, with tax due based on the highest tax calculated under the four alternative bases. In addition, a 0.8 of one mill tax rate applies to each dollar of subsidiary capital allocated to New York.

Tax is allocated to New York under the entire net income (ENI) base by a formula that apportions ENI based on weighted ratios of premiums (with a weight of nine) and wages (with a weight of one) earned or paid in New York, to total premiums and total wages for all employees for the tax year.

The second component is an additional franchise tax on gross premiums, less returned premiums. The tax rate on premiums is 0.7 percent and applies to premiums written on risks located or resident in New York. This tax is added to the sum of the tax due on the highest of the alternatives from the income base plus the tax imposed on subsidiary capital.

Maximum and minimum tax limitations are computed based on net premiums. Life insurers determine their maximum limitation by multiplying net premiums by 2 percent and their minimum limitation by multiplying net premiums by 1.5 percent. Under these limitations, the total tax calculated under the highest of the four alternative bases plus the tax imposed on subsidiary capital plus the 0.7 percent tax on net premiums must be at least as high as the minimum tax or “floor” (1.5 percent of net premiums) but no greater than the maximum limitation (2 percent of net premiums).

Computation of Article 33 Tax on Life Insurance Companies



Generally, taxpayers with a tax liability that exceeds the floor may not reduce their liability with tax credits to a level below the floor. However, taxpayers may use Empire Zone and Zone Equivalent Area tax credits to do so. Entry into the Empire Zone Program expired on June 30, 2010. There are no new entrants into the program, but current participants will be claiming credits for the remainder of their benefit period.

Article 33 taxpayers conducting business in the Metropolitan Commuter Transportation District (MCTD) are subject to a 17 percent surcharge on the portion of their tax liability which is attributable to the MCTD area. The collections from the surcharge are deposited into the Mass Transportation Operating Assistance Fund (MTOAF).

Article 33 of the Tax Law also imposes a premiums tax on captive insurance companies licensed by the Superintendent of the Department of Financial Services (DFS) for the privilege of conducting business or otherwise exercising a corporate franchise in New York. The tax is imposed on net premiums and net reinsurance premiums (gross premiums less return premiums) written on risks located or resident in the State at rates which vary with the amount of net premiums. The top rate is 0.4 percent on direct premiums and 0.225 percent on reinsurance premiums. Captive (i.e., affiliates that insure the risks of the other corporate members) insurers are subject to a minimum

tax of \$5,000. Tax credits are not allowed against the tax imposed on captive insurance companies and these companies are not subject to the MTA business tax surcharge.

Other Taxes Imposed on Insurers

Article 33-A of the Tax Law imposes a tax at the rate of 3.6 percent of premiums on independently procured insurance. This tax is imposed on any insured purchasing or renewing an insurance contract covering certain property and casualty risks from an unauthorized insurer where the home state of the insured is New York. An unauthorized insurer is an insurer not authorized to transact business in New York under a certificate of authority from the Superintendent of the DFS.

The Insurance Law imposes a premiums tax on a licensed excess line (i.e., covering unique or very large risks) insurance broker when a policy covering a risk where the home state of the insured is New York is procured through such broker from an unauthorized insurer. Transactions involving a licensed excess lines broker and an insurer not authorized to do business in New York are permissible under limited circumstances delineated in Article 21 of the Insurance Law. The tax is imposed at a rate of 3.6 percent of premiums covering risks located in New York.

The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 gave the “home state” of the insured the sole authority to regulate and collect taxes on these transactions. Generally, the insured’s home state is the state where it is headquartered, or in the case of individuals, their place of residence.

The Insurance Law authorizes the Superintendent of the DFS to assess and collect retaliatory taxes from a foreign insurance corporation when the overall tax rate imposed by its home jurisdiction on New York companies exceeds the comparable tax rate imposed by New York on such foreign insurance companies.

Retaliatory taxes have been employed by the states since the nineteenth century to ensure a measure of fairness in the interstate taxation of insurance corporations. Retaliatory taxes deter other states from discriminating against foreign corporations and effectively require states with a domestic insurance industry to maintain an overall tax rate on insurance corporations that is generally consistent with other states.

Nevertheless, there are a variety of mechanisms for taxing insurance corporations throughout the states, and differences in overall tax rates among the states are inevitable. New York provides an additional measure of protection for its domestic insurance industry by allowing domestic corporations to claim a credit under Article 33 of the Tax Law for 90 percent of the retaliatory taxes legally required to be paid to other states.

Administration

Insurance companies that reasonably expect their tax liability to exceed \$1,000 for the current tax year are required to make a mandatory first installment of estimated tax and three additional estimated payments. The mandatory first installment is due 75 days from the end date of a taxpayer's fiscal year. The remaining three estimated tax payments are due on the 15th day of the third month of the fiscal year quarter. The majority of taxpayers have a fiscal year that ends December 31. The mandatory first installment for these taxpayers is due March 15 with the remaining three estimated payments due on June 15, September 15 and December 15. A final payment is also required of all taxpayers. This payment is due 106 days (April 15 for taxpayers that have a fiscal year that ends December 31) from the end date of a taxpayer's fiscal year. Taxpayers that expect their tax liability to exceed \$100,000 for the current tax year are required to make a mandatory first installment equal to 40 percent of their tax from two tax years prior. Taxpayers with expected liability greater than \$1,000 and less than \$100,000 are required to make a mandatory first installment equal to 25 percent of their tax from two tax years prior. Life insurance companies with expected liability of less than \$1,000 make no mandatory first installment.

Tax Expenditures

Tax expenditures are defined as features of the Tax Law that by exclusion, exemption, deduction, allowance, credit, deferral, preferential tax rate or other statutory provision reduce the amount of a taxpayer's liability to the State by providing either economic incentives or tax relief to particular entities to achieve a public purpose. Article 33 taxpayers are eligible for several targeted tax credits, including the investment tax credit (ITC), the long-term care insurance credit, the low income housing credit, and the Excelsior Jobs Program tax credits. For a more detailed discussion of tax expenditures, see the *Annual Report on New York State Tax Expenditures*, prepared by the Department of Taxation and Finance and the Division of the Budget.

There are also several types of insurance contracts that are exempt from the franchise tax. These include, but are not limited to, certain annuity contracts, certain reinsurance premiums and certain health insurance contracts for insureds aged 65 years and older. Certain corporations and other entities that provide insurance are exempt from State franchise taxes and the regional business surcharge. Non-profit medical expense indemnity corporations and other health service corporations, organized under Article 43 of the Insurance Law, are exempt from these State taxes. In addition, cooperative insurance companies in effect (operation) prior to January 1, 1974, are exempt from taxation while those formed on or after that date are subject to the tax.

Significant Legislation

Significant statutory changes to insurance taxes since 2013 are summarized below.

Subject	Description	Effective Date
Legislation Enacted in 2013		
Royalty Income Loophole	Closed a loophole that allowed New York companies that earn royalty income to avoid paying taxes on that income. New York taxpayers must show on their tax return that the taxpayer's non-New York parent company included the royalty income in its tax liability. The demonstration absolves taxpayers of the obligation to pay tax on their royalty income.	January 1, 2013
Historic Properties Tax Credit	Extended for five years the maximum Historic Preservation Tax Credit amount of \$5 million, which had previously been scheduled to revert to \$100,000 following the conclusion of tax year 2014, and permanently made the credit refundable for tax years beginning on or after January 1, 2015.	January 1, 2015
Hire-a-Vet	Provided a refundable tax credit for tax years 2015 and 2016 equaling 10 percent of the wages paid to a qualified veteran (capped at \$5,000) and 15 percent of wages paid to a qualified veteran (capped at \$15,000).	January 1, 2015
Minimum Wage Reimbursement Credit	Provided a refundable tax credit for tax years 2014 through 2018 equal to the product of the number of hours worked by qualifying minimum wage-earning employees and 1) \$0.75 in tax year 2014; 2) \$1.31 in tax year 2015; and 3) \$1.35 in tax years 2016 through 2018. Qualifying employees must be students aged 16 to 19, and the credit is reduced if the federal minimum wage is increased to a level in excess of 85 percent of the New York minimum wage.	January 1, 2014
Excelsior Jobs Program	Changed the job requirement parameters for the Excelsior Jobs Program and allowed a portion of the unallocated tax credits from any taxable year to be used to award tax credits in another taxable year.	May 27, 2013
Legislation Enacted in 2014		
Corporate Tax Reform	Made the MTA surcharge permanent.	January 1, 2015
Legislation Enacted in 2015		
Expand the Excelsior Jobs Program	Expanded eligibility for the program to include entertainment companies that meet certain criteria, music production companies and video game software developers.	April 13, 2015
Brownfields Clean-Up Program	Reformed the program and extended the tax credits through March 31, 2026. Reforms included the prioritization of (1) site redevelopment in economically distressed areas, (2) low income housing, or (3) properties that are upside down or underutilized; also provided for the creation of an expedited remediation program (BCP-EZ), a more detailed description of eligible costs for redevelopment tax credits, and allowed the real property tax and environmental remediation insurance credits to sunset.	July 1, 2015
Legislation Enacted in 2016		
Conform to New Federal Tax Filing Dates	New York State tax filing deadlines were changed to conform to federal filing deadlines. C corporations are now required to file their final return on or before the 15 th day of the fourth month following the close each taxable year, which is April 15 for calendar year filers. Taxpayers are still required to remit mandatory first installments (MFI) of estimated taxes on or before the 15 th day of the third month following the close of each taxable year, which is March 15 for calendar year filers. The amount of the MFI will now be a percentage of tax from two tax years prior, instead of the preceding year's tax.	January 1, 2016

Subject	Subject	Subject
Hire a Veteran Credit	Extended the credit for two additional years to January 1, 2019.	January 1, 2017
Low-Income Housing Credit	Extended the statewide limitation for the aggregate dollar amount of credit the Commissioner of DHCR (Division of Housing and Community Renewal) may allocate to eligible low-income buildings. The credit allocation pool was increased by \$8 million for each of the next five fiscal years.	April 1, 2017
Economic Transformation and Facility Redevelopment Program	Modified to include any psychiatric facility previously owned by New York State and located with the MCTD (excluding NYC) to qualify as a closed facility under this program. Prospective participants must submit an application by September 1, 2016.	April 13, 2016
Legislation Enacted in 2017		
Treat Disregarded Entities as a Single Taxpayer for Tax Credit Purposes	Protected existing tax credit structures following an August 2016 decision of the Tax Appeals Tribunal that could have resulted in many taxpayers losing their tax credits. An individual taxpayer and associated single-member LLCs (disregarded entities) will now be treated as one entity for tax credit purposes.	April 10, 2017
Excelsior Jobs Program	Doubled the Excelsior Research and Development Tax Credit cap from three to six percent.	January 1, 2018
	Reduced the minimum required net new job requirements for most industries and added a definition for significant capital investment.	April 10, 2017
Employee Training Incentive Program	Expanded the current program to include incumbent worker training as an eligible expense, given that such training is part of a company's expansion and retention projects. The requirement to create additional jobs is removed.	April 10, 2017
Legislation Enacted in 2018		
Decouple from Federal Deduction for Deemed Repatriated Foreign Income	Preserved the taxable base by requiring Insurance taxpayers to add back income reduced at the Federal level for income earned overseas. Add-backs are required for State and New York City tax purposes.	January 1, 2017
Historic Building Rehabilitation Credit	Extended the credit for an additional five years and decoupled from the Federal credit to continue to allow the credit to be claimed for a single year.	January 1, 2018
Low-Income Housing Credit	Expanded the credit to allow transferability to third parties.	January 1, 2019
Health Care Facility Transformation Program	Legislation increased the taxable base by allowing the conversion of a managed care provider from non-profit to for-profit.	April 1, 2018

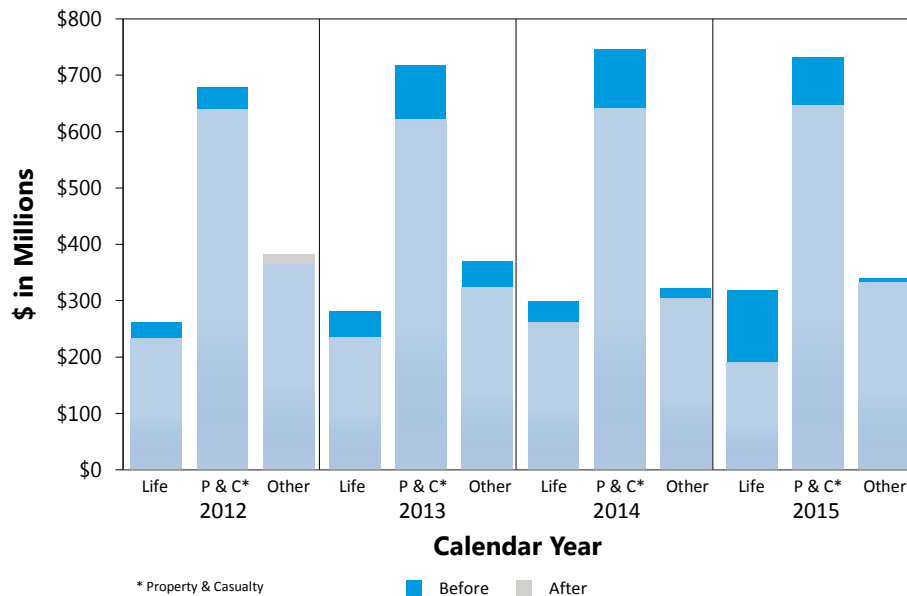
Tax Liability

The Department of Taxation and Finance's Insurance Franchise Tax Study File contains tax liability data for the 2015 tax year, the most recent year for which such data are available. Liability for tax years 2010 and 2012 is artificially inflated as a result of 2010 legislation that deferred certain tax credit claims (to tax years 2013 through 2015) that would have otherwise been included on tax returns for tax years 2010 through 2012. The most recent Study File indicates that the property

and casualty sector is the largest sector, accounting for 55 percent of total tax liability. Other insurers, which include accident and health insurers, are the second largest, with 28 percent of total liability. The 17 percent balance is attributable to life insurers. These ratios have remained consistent over the past several years.

The following graph shows insurance tax liability for life insurers, property and casualty insurers and all other insurers from 2012 through 2015 before and after the application of the limitation of tax due as determined by taxable premiums and credits.

**Article 33 Tax Liability *Before* and *After* Limitation and Credits
(2012-2015 by Type of Insurer)**



Property and Casualty and Life Companies

The table below reports actual property and casualty premiums and growth from 2011 through 2017 for New York State. The three largest lines of business under the property and casualty sector in 2017 were automobile, worker's compensation and general liability. Total premiums for property and casualty companies grew by 2.2 percent in 2017, a slight decline in growth relative to previous years.

PROPERTY AND CASUALTY INSURANCE PREMIUMS							
NEW YORK CALENDAR YEAR							
(millions of dollars/percent)							
Lines of Insurance	2011	2012	2013	2014	2015	2016	2017
Automobile	12,148.3	12,636.8	13,074.0	13,583.6	14,145.1	15,004.4	15,875.5
percent change	2.1	4.0	3.5	3.9	4.1	6.1	5.8
Worker's Compensation	4,157.4	4,754.7	5,191.5	5,261.1	5,523.6	5,893.9	5,942.5
percent change	14.7	14.4	9.2	1.3	5.0	6.7	0.8
Commercial Multi-Peril	3,056.9	3,249.5	3,487.5	3,613.5	3,591.8	3,659.4	3,863.0
percent change	2.4	6.3	7.3	3.6	(0.6)	1.9	5.6
General Liability	4,089.0	4,466.1	4,977.7	5,313.7	5,709.7	5,829.8	5,646.7
percent change	(1.2)	9.2	11.5	6.8	7.5	2.1	(3.1)
Homeowner's Multi-Peril	4,499.7	4,704.4	4,901.5	5,085.5	5,195.8	5,224.1	5,286.0
percent change	3.8	4.5	4.2	3.8	2.2	0.5	1.2
Other	6,196.3	6,133.0	6,373.1	6,436.3	6,391.7	6,380.8	6,294.5
percent change	2.7	(1.0)	3.9	1.0	(0.7)	(0.2)	(1.4)
TOTAL P/C PREMIUMS	34,147.6	35,944.4	38,005.2	39,293.8	40,557.8	41,992.5	42,908.3
percent change	3.4	5.3	5.7	3.4	3.2	3.5	2.2

Source: New York State Department of Financial Services Annual Report to the Governor and the Legislature and the NAIC's I-site for 2017.

For a more detailed discussion of the methods and models used to develop estimates and projections for insurance taxes, please see the *Economic, Revenue, and Spending Methodologies* at www.budget.ny.gov.

Receipts: Estimates and Projections

All Funds

FY 2019 Estimates

All Funds receipts through December are \$1,133.3 million, an increase of \$45.9 million (4.2 percent) from the comparable period in the prior fiscal year.

All Funds FY 2019 receipts are estimated to be \$1,816 million, an increase of \$39.2 million (2.2 percent) from FY 2018. Projected growth in tax year 2018 liability as well as lower expected credit claims for assessments paid to the Life Insurance Guaranty Corporation (LIGC) account for the year-over-year increase.

FY 2020 Projections

All Funds FY 2020 receipts are projected to be \$2,307.7 million, an increase of \$491.7 million (27.1 percent) from FY 2019. Projected growth in insurance tax premiums combined with lower expected LIGC credit claims contribute to this year-over-year growth. FY 2020 also includes the first full-year revenue increase from the conversion of a not-for-profit health insurer to a for-profit health insurer.

General Fund

General Fund FY 2019 receipts are estimated to be \$1,622 million, an increase of \$12.7 million (0.8 percent) from FY 2018. The increase reflects the same trends impacting FY 2019 All Fund receipts.

General Fund FY 2020 receipts are projected to be \$2,056.3 million, an increase of \$434.3 million (26.8 percent) from FY 2019. The increase reflects the same trends impacting All Funds receipts for FY 2020.

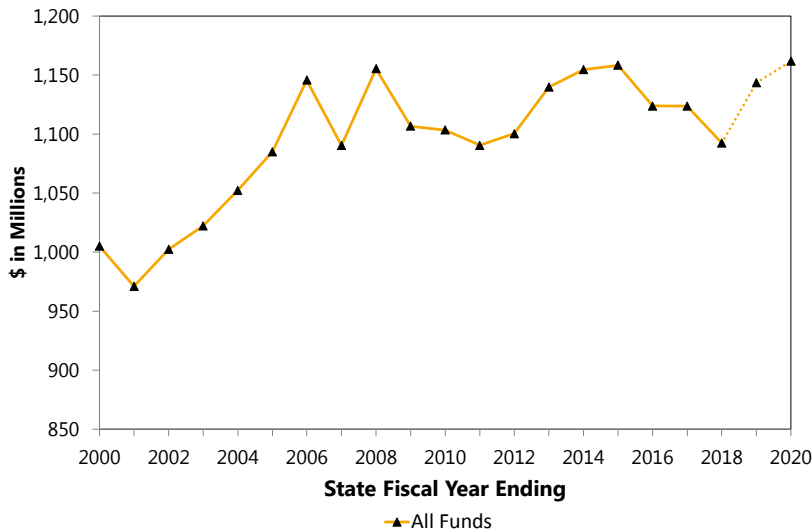
Other Funds

Insurance tax receipts from the business tax surcharge deposited to MTOAF generally reflect the All Funds trends described above. The MCTD 17 percent business tax surcharge will result in MTOAF deposits of an estimated \$194.0 million in FY 2019 and a projected \$251.4 million in FY 2020.

PETROLEUM BUSINESS TAXES (millions of dollars)							
	FY 2018 Actual	FY 2019 Estimated	Change	Percent Change	FY 2020 Projected	Change	Percent Change
General Fund	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Funds	1,092.0	1,143.5	51.5	4.7	1,161.8	18.3	1.6
All Funds	1,092.0	1,143.5	51.5	4.7	1,161.8	18.3	1.6

Note: Totals may differ due to rounding.

Petroleum Business Tax Receipts History and Estimates



PETROLEUM BUSINESS TAXES BY FUND (millions of dollars)				
	General Fund	Special Revenue Funds ¹	Capital Projects Funds ²	All Funds Receipts
FY 2010	0	491	613	1,104
FY 2011	0	484	606	1,090
FY 2012	1	488	611	1,100
FY 2013	0	506	634	1,140
FY 2014	0	514	641	1,155
FY 2015	0	514	644	1,158
FY 2016	0	499	625	1,124
FY 2017	0	500	624	1,124
FY 2018	0	485	607	1,092
Estimated				
FY 2019	0	503	641	1,144
FY 2020				
Current Law	0	510	652	1,162
Proposed Law	0	510	652	1,162

¹ Dedicated Mass Transportation Trust Fund and Mass Transportation Operating Assistance Fund.
² Dedicated Highway and Bridge Trust Fund.

Proposed Legislation

No new legislation is proposed with this Budget.

Description

Tax Base and Rate

Article 13-A of the Tax Law imposes a tax on petroleum businesses for the privilege of operating in the State, based upon the quantity of various petroleum products imported for sale or use in the State. PBT rates have two components: the base tax, whose rates vary by product type; and the supplemental tax, which is imposed, in general, at a uniform rate.

Tax rates are indexed with annual adjustments made on January 1 of each year to the base and supplemental tax rates to reflect the percent change in the producer price index (PPI) for refined petroleum products for the 12 months ending August 31 of the preceding year. To prevent significant changes in tax rates resulting from large changes in the petroleum PPI, tax rates cannot increase or decrease by more than 5 percent per year. In addition to the 5 percent cap on tax rate changes, the statute requires, in general (i.e., excluding diesel), that the base and supplemental tax rates each be rounded to the nearest tenth of one cent. As a result, the percentage change in tax rates is usually less than the 5 percent limit.

Based on changes in the petroleum PPI, the PBT rate index increased by 5 percent on January 1, 2018, and increased by 5 percent on January 1, 2019. The petroleum PPI is estimated to decline by 8.1 percent through August 2019, resulting in a 5 percent decline in PBT rates on January 1, 2020.

PETROLEUM BUSINESS NET TAX RATES FOR 2018 - 2020 (cents per gallon)									
Petroleum Product	2018			2019			2020 ¹		
	Base	Supp	Total	Base	Supp	Total	Base	Supp	Total
Automotive fuel									
Gasoline and other non diesel	10.10	6.80	16.90	10.60	7.10	17.70	10.10	6.70	16.80
Highway Use Diesel	10.10	5.05	15.15	10.60	5.35	15.95	10.10	4.95	15.05
Aviation gasoline or Kero-Jet Fuel	6.80	0.00	6.80	7.10	0.00	7.10	6.70	0.00	6.70
Non-Highway Use diesel fuels									
Commercial Gallonage	9.30	0.00	9.30	9.70	0.00	9.70	9.10	0.00	9.10
Nonresidential heating	5.00	0.00	5.00	5.20	0.00	5.20	4.80	0.00	4.80
Residual petroleum products									
Commercial gallonage	7.10	0.00	7.10	7.40	0.00	7.40	6.90	0.00	6.90
Nonresidential heating	3.80	0.00	3.80	3.90	0.00	3.90	3.60	0.00	3.60
Railroad diesel fuel	8.80	0.00	8.80	9.30	0.00	9.30	8.80	0.00	8.80

¹ Projected – The projected petroleum producer price index decline of 8.1 percent through August 2019 will result in a projected decline of 5 percent in the PBT rate index on January 1, 2020.

PETROLEUM PPI AND PETROLEUM BUSINESS TAX RATE INDEX (percent change)		
Year	Petroleum PPI	PBT Rate Index
2010	(34.9)	(5.0)
2011	18.6	5.0
2012	29.8	5.0
2013	9.2	5.0
2014	(0.8)	(0.8)
2015	(3.2)	(3.2)
2016	(29.1)	(5.0)
2017	(30.4)	(5.0)
2018	13.3	5.0
2019	26.1	5.0
2020*	(8.1)	(5.0)

* Estimated

The Motor Fuel Tax section contains a table showing New York’s combined fuel tax ranks 10th among the 50 states and the District of Columbia.

Administration

The tax is collected monthly in conjunction with the State motor fuel tax (Article 12-A). Article 13-A also imposes the petroleum business carrier tax on fuel purchased outside New York and consumed within the State. The carrier tax is collected quarterly along with the fuel use tax portion of the highway use tax (see section titled Highway Use Tax).

Businesses with yearly motor fuel and petroleum business tax liability of more than \$5 million are required to remit, using electronic funds transfer, their tax liability for the first 22 days of the month within three business days after that date. Taxpayers can choose to make either a minimum payment of three-fourths of the comparable month’s tax liability for the preceding year, or 90 percent of actual liability for the first 22 days. The tax for the balance of the month is paid with the monthly returns filed by the twentieth of the following month.

Tax Expenditures

Specifically exempted from Article 13-A taxes are fuels used for manufacturing, residential or not-for-profit organization heating purposes, fuel sold to governments, sales for export from the State, kerosene other than kero jet fuel, crude oil, liquefied petroleum gas (LPG), certain bunker fuel, and motor fuels sold to volunteer ambulance and volunteer fire departments. For a complete list of tax expenditure items related to the PBT, see the *New York State Tax Expenditure Report*.

Significant Legislation

Significant statutory changes to petroleum business taxes since 2013 are summarized below.

Subject	Description	Effective Date
Legislation Enacted in 2013		
Volunteer First Responders	Provides a reimbursement for motor fuel and diesel motor fuel used by volunteer ambulance and fire departments.	June 1, 2013
Interdistributor Sales	Allowed for tax free interdistributor sales of highway diesel motor fuel sold below the rack (i.e., not delivered by truck).	August 1, 2013
Legislation Enacted in 2014		
Alternative Fuels	Extended the exemption on alternative fuels through August 31, 2016.	September 1, 2014
Legislation Enacted in 2016		
Alternative Fuels	Extended the exemption on alternative fuels through August 31, 2021.	September 1, 2016
Expand Motor Fuel Wholesaler Registration Requirements	Required certain wholesalers of motor fuel to file informational returns and register with the Department of Taxation and Finance. This information will be used to detect and prevent tax evasion.	December 1, 2016
Comply with Federal Tax Regulations on Aviation Fuel	Required that all revenue collected from the petroleum business tax on aviation fuel is directed to a new dedicated airport fund.	April 1, 2017

Tax Liability

Petroleum business tax receipts are primarily a function of the number of gallons of fuel imported into the State by distributors. Taxable gallonage is largely determined by overall fuel prices, the number of gallons held in inventories, the fuel efficiency of motor vehicles and State economic performance. In terms of the share of PBT base and supplemental receipts in FY 2018, gasoline and diesel comprised of 85 and 12 percent, respectively.

For a more detailed discussion of the methods and models used to develop estimates and projections for the petroleum business taxes, please see the *Economic, Revenue, and Spending Methodologies* at www.budget.ny.gov.

Receipts: Estimates and Projections

All Funds

FY 2019 Estimates

All Funds preliminary receipts through December are \$873.8 million, an increase of \$48.8 million (5.9 percent) from the comparable period in the prior fiscal year.

All Funds FY 2019 receipts are estimated to be \$1,143.5 million, an increase of \$51.5 million (4.7 percent) from FY 2018. The increase in receipts is primarily due to the 5 percent increase in the PBT index on January 1, 2018, paired with a 5 percent increase in the PBT index on January 1, 2019.

Petroleum business tax receipts derived from motor fuel and diesel motor fuel are assumed to follow the same consumption trends as fuel subject to the motor fuel excise tax (see section titled Motor Fuel Tax).

FY 2020 Projections

All Funds FY 2020 receipts are projected to be \$1,161.8 million, an increase of \$18.3 million (1.6 percent) from FY 2019. The slight increase is due to a 5 percent increase in the PBT index, effective January 1, 2019, partially offset with an estimated 5 percent decline in the PBT index on January 1, 2020.

General Fund

No PBT receipts are deposited into the General Fund.

Other Funds

Petroleum business tax receipts in FY 2019 are estimated to be \$133 million for the Mass Transportation Operating Assistance Fund (MTOA), \$641 million for the Dedicated Highway and Bridge Trust Fund (DHBTF), and \$370 million for the Dedicated Mass Transportation Trust Fund (DMTTF). Petroleum business tax receipts in FY 2020 are projected to be \$134 million for MTOA, \$652 million for the DHBTF, and \$376 million for DMTTF. Effective FY 2018, revenue collected from the tax on aviation fuel is directed to an Aviation Purpose Account within the DHBTF. This revenue is estimated to be \$13 million in FY 2019 and \$11 million in FY 2020.

EMPLOYER COMPENSATION EXPENSE PROGRAM RECEIPTS (millions of dollars)							
	FY 2018 Actual	FY 2019 Estimated	Change	Percent Change	FY 2020 Projected	Change	Percent Change
General Fund	N/A	0.1	N/A	N/A	1.2	1.1	1,000.0
Other Funds	N/A	0.1	N/A	N/A	1.2	1.1	1,000.0
All Funds	N/A	0.2	N/A	N/A	2.4	2.2	1,000.0

Note: Totals may differ due to rounding.

Proposed Legislation

No new legislation is proposed with this Budget.

Description

The Employer Compensation Expense Program (ECEP) allows employers to pay an optional tax, which is intended to mitigate the tax burden for employees affected by the state and local tax (SALT) deduction limit. While the Tax Cuts and Jobs Act of 2017 limits deductibility for individuals, it does not cap deductibility for ordinary and necessary business expenses paid or incurred by employers in carrying on a trade or business.

Half of all revenues generated from the ECEP are directed to the Revenue Bond Tax Fund.

Tax Base and Rate

Article 24 of the Tax Law establishes the Employer Compensation Expense Program and imposes an optional tax on employers. Employers that elect to participate in the ECEP program are subject to a State tax on all annual payroll expenses in excess of \$40,000 per employee. The tax rate is 1.5 percent in 2019, 3 percent in 2020, and 5 percent in all years after 2020.

Administration

To participate in the ECEP during a given year an employer must indicate so to the Department of Taxation and Finance by December 1 of the prior year.

Participating employers must make ECEP tax payments electronically, and must remit ECEP tax payments at the same time that withholding tax payments are due. These payments are due within three days of the respective payroll date. Taxpayers who make quarterly withholding payments must make quarterly ECEP tax payments. These payments are due on the last business day of the month following the end of the calendar quarter in which the taxpayer made the payroll (e.g., January 31 for the calendar quarter ending December 31).

A participating employer may not deduct from an employee's wages an amount representing all or any portion of ECEP taxes.

Employer Compensation Expense Program



Revenue Bond Tax Fund

The State Comptroller is directed to deposit an amount equal to 50 percent of estimated monthly ECEP tax receipts (after payment of refunds) into the Revenue Bond Tax Fund (RBTF) to support payments for debt service. RBTF deposits in excess of debt service requirements are transferred to the General Fund.

Significant Legislation

Significant statutory changes to the Employer Compensation Expense Program since 2018 are summarized below:

Subject	Description	Effective Date
Legislation Enacted in 2018		
Enactment of the Employer Compensation Expense Program	Established the Employer Compensation Expense Program, with Tax Year 2019 as the first year of participation eligibility.	April 12, 2018

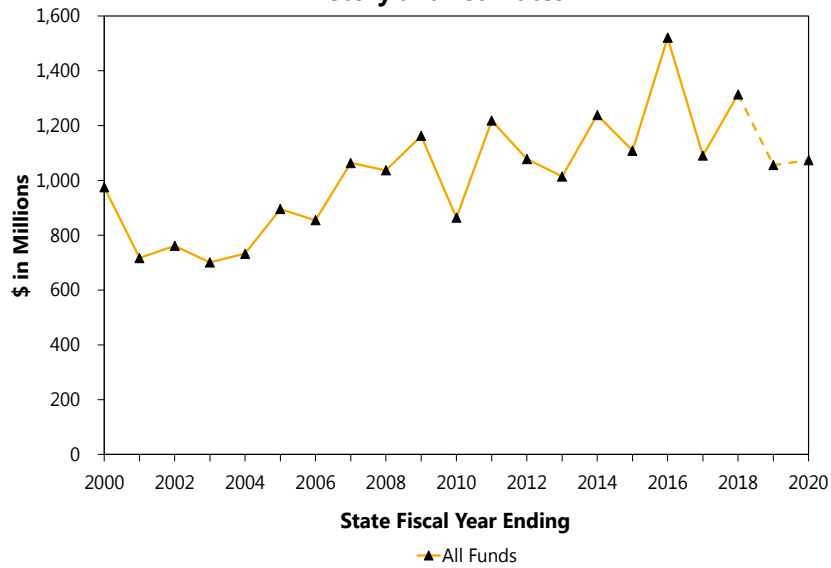
FY 2019 Estimates and FY 2020 Projections

Inaugural ECEP taxes will be remitted after January 1, 2019. All Funds FY 2019 receipts are estimated to be \$0.2 million, based on the first quarter of remittances of the employers that have opted to participate. All Funds FY 2020 receipts are projected to be \$2.4 million, an increase of \$2.2 million from FY 2019. The projected increase reflects the first full year of ECEP receipts and anticipated increases in participation, wage growth, and rate increase.

ESTATE TAX (millions of dollars)							
	FY 2018 Actual	FY 2019 Estimated	Change	Percent Change	FY 2020 Projected	Change	Percent Change
General Fund	1,307.7	1,056.0	(251.7)	(19.2)	1,074.0	18.0	1.7
Other Funds	0.0	0.0	0.0	0.0	0.0	0.0	0.0
All Funds	1,307.7	1,056.0	(251.7)	(19.2)	1,074.0	18.0	1.7

Note: Totals may differ due to rounding. Excludes gift tax residual payments.

Estate Tax Receipts History and Estimates



ESTATE TAX BY FUND (millions of dollars)		
	General Fund	All Funds Receipts
FY 2010	865	865
FY 2011	1,218	1,218
FY 2012	1,078	1,078
FY 2013	1,014	1,014
FY 2014	1,238	1,238
FY 2015	1,108	1,108
FY 2016	1,521	1,521
FY 2017	1,091	1,091
FY 2018	1,308	1,308
Estimated		
FY 2019	1,056	1,056
FY 2020		
Current Law	1,074	1,074
Proposed Law	1,074	1,074

Proposed Legislation

Legislation proposed with this Budget would extend the gift three-year addback rule and require a binding NYS QTIP election.

Description

Tax Base and Rate

New York imposes a tax on the estates of deceased State residents and on the part of a nonresident's estate made up of real and tangible personal property located within New York State. The New York estate tax is based on the estate tax provisions of the Federal Internal Revenue Code, with New York modifications.

The tax base is calculated by first determining the value of the gross estate using Federal estate tax provisions. The Federal gross estate comprises the total amount of real estate, stocks and bonds, mortgages, notes, cash, insurance on the decedent's life, jointly owned property, other miscellaneous property, transfers during the decedent's life, powers of appointment, and annuities that the decedent owned.

The Federal gross estate is reduced by the Qualified Conservation Easement Exclusion and the following deductions: funeral expenses and expenses incurred in administering property subject to claims; debts of the decedent; mortgages and liens; net losses during administration, and expenses incurred in administration of the property not subject to claims; bequests to a surviving spouse (marriage deduction); charitable, public, and similar gifts; and a qualified family-owned business interest deduction. This yields the taxable estate for New York and becomes the basis for calculating New York's estate tax.

The total value of all items of real and tangible personal property of the taxpayer located outside of New York State is divided by the taxpayer's Federal gross estate to arrive at the proportion of the estate outside New York State. This proportion is then used to allocate the taxable estate to New York.

The computation of New York State estate taxes is a graduated schedule with rates that range from 3.06 percent on adjusted taxable estates not in excess of \$500,000, to 16 percent on adjusted taxable estates for New York State of \$10,100,000 or more. Practically, however, the tax is not imposed below the threshold as noted in the following paragraph.

Intended to provide tax relief to farmers and small businesses, the FY 2014 Enacted Budget replaced the unified threshold of \$1 million (associated with the State's prior "pick-up tax" methodology) with an applicable credit equal to the tax on a basic threshold amount equal to \$2,062,500 for those dying in FY 2015; \$3,125,000 in FY 2016; \$4,187,500 in FY 2017; and \$5,250,000 from April 1, 2017 to December 31, 2018. The basic threshold will equal the Federal basic threshold amount pursuant to Federal law as it existed on December 1, 2017, with annual inflation indexing for those dying on or after January 1, 2019. This threshold amount is set to equal

\$5,740,000 for those dying in calendar year 2020. The credit, similar to the results under the pick-up tax, phases out in the range from the threshold amount to 5 percent above the threshold amount (i.e., taxable estates at more than 105 percent of the threshold pay the full tax calculated on the rate table). If a taxable estate is more than 105 percent of the threshold then the entire taxable estate is taxed, not just the portion of the estate above the threshold.

The Tax Cut and Jobs Act of 2017 temporarily doubled the Federal basic threshold amount from \$5,000,000 to \$10,000,000 before adjusting for inflation. The 2019 Federal threshold amount is set to equal \$11,400,000 for those dying in calendar year 2020. This higher threshold calculation will remain in effect until January 1, 2026.

Administration

The Surrogate Court has jurisdiction of the probate of the estate and the authority to finalize the amount of the tax. The tax due is required to be paid on or before the date fixed for filing the return, nine months after the decedent's date of death. A twelve-month extension may be granted by the Commissioner of Taxation and Finance.

If the payment of the tax will cause undue hardship, the Commissioner may authorize a payment extension for up to four years from the decedent's date of death. It may be necessary for the taxpayer to provide a bond in an amount of no more than twice the amount due if an extension is approved for payment of the tax.

If the payment of the tax due is not made within nine months of the decedent's date of death, additional interest is charged to the remaining payments of the tax. The interest for extended payments is computed and compounded daily on the portion remaining from the first day of the tenth month following the decedent's date of death to the date of the payment. There is no discount for early payment of the estate tax.

The executor and the beneficiaries who have received property are personally liable for the payment of the estate tax. If there is no will, the Federal, New York and foreign death taxes paid or payable by the estate's representatives are apportioned among the beneficiaries.

There is reciprocity with other states for the collection of inheritance and estate taxes in nonresident estates. Refund claims of an overpayment of the tax must be filed by the executor within three years from the time the return was filed or two years from the time the tax was paid, whichever is later.

Significant Legislation

Significant statutory changes to the estate tax since 2013 are summarized below.

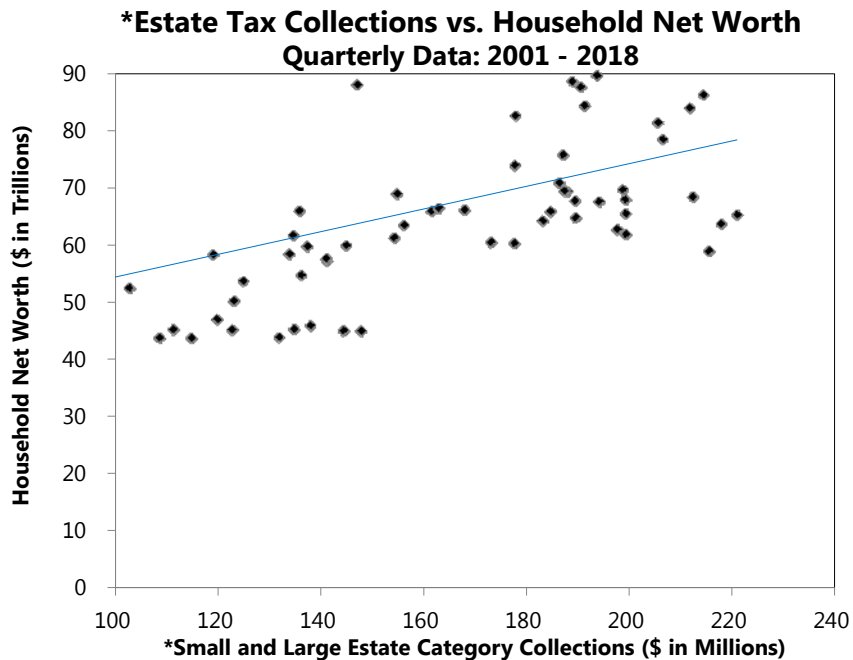
Subject	Description	Effective Date
Legislation Enacted in 2014		
Reform Estate Tax	Created a “stand-alone” NYS estate tax with a basic threshold amount that increases over four years and equals the Federal basic exemption amount (pursuant to Federal Law as it existed on December 1, 2017) starting January 1, 2019.	April 1, 2014

Tax Liability

The recent yield of this tax has been heavily influenced by two factors: 1) annual variations in the relatively small number of extra-large and super-large estates, and 2) the value of the equity market, given the large component of corporate stock in large taxable estates. As a result, volatility is expected to remain a characteristic of this revenue source.

In developing projections for estate tax receipts, the value of household net worth is used to forecast receipts from estates that make payments of less than \$4 million. In addition to the value of equities, a distributional analysis is utilized to estimate receipts and the number of estates where payments exceed \$4 million.

For a more detailed discussion of the methods and models used to develop estimates and projections for the estate tax, please see the *Economic, Revenue, and Spending Methodologies* at www.budget.ny.gov.



Receipts: Estimates and Projections

ESTATE TAX RECEIPTS BY SIZE OF ESTATE (millions of dollars)						
	Super-Large¹ and Extra-Large² Estates		Large Estates³		Small Estates⁴	Grand Total
	Number	Taxes	Number	Taxes	Taxes	Taxes
FY 2010	23	220	197	236	408	865
FY 2011	34	421	279	344	453	1,218
FY 2012	30	232	306	372	474	1,078
FY 2013	25	220	273	307	487	1,014
FY 2014	36	435	285	327	476	1,238
FY 2015	38	321	285	331	457	1,108
FY 2016	55	733	358	432	356	1,521
FY 2017	44	443	385	451	196	1,091
FY 2018	56	750	409	471	86	1,308
Estimated						
FY 2019	49	539	424	497	20	1,056
FY 2020	48	526	432	514	33	1,074

¹ Payment of at least \$25 million.
² Payment of at least \$4 million, but less than \$25 million.
³ Payment of at least \$0.5 million, but less than \$4 million.
⁴ Payment less than \$0.5 million. (Small estates include all CARTS less all refunds.)

Note: Components may not add to total due to rounding.

FY 2019 Estimates

All Funds receipts through December are \$849 million, a decrease of \$113.7 million (11.8 percent) from the comparable period in the prior fiscal year.

All Funds FY 2019 receipts are estimated to be \$1,056 million, a decrease of \$251.7 million (19.2 percent) from FY 2018. This decrease is mainly the result of an estimated decrease in the number and average value of super-large payments compared to FY 2018 combined with 2014 legislation that raised the estate tax threshold.

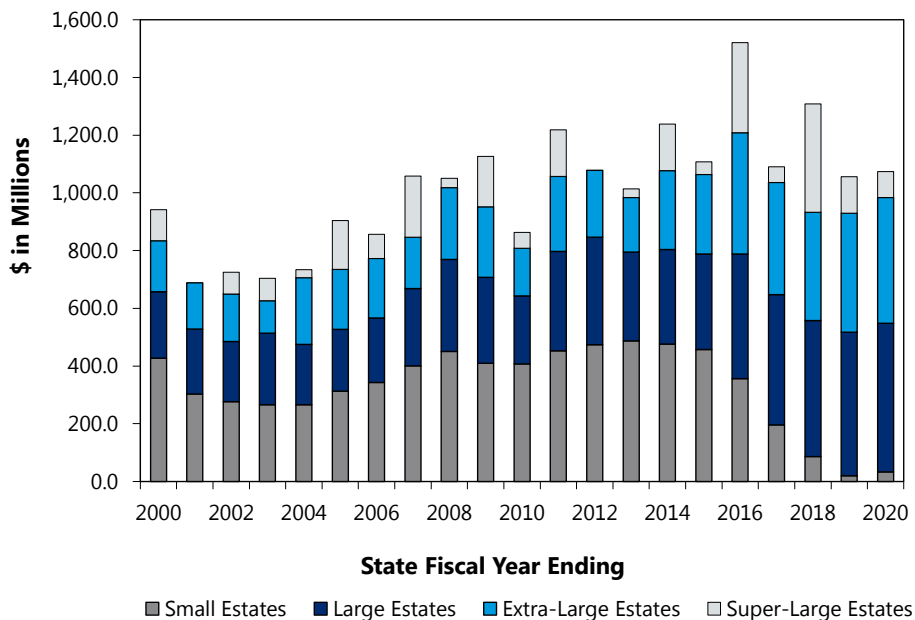
Small estate FY 2019 receipts are estimated to be \$20.1 million, a decrease of \$66.3 million (76.7 percent) from FY 2018. Large estate FY 2019 receipts are estimated to be \$497 million, an increase of \$25.5 million (5.4 percent) from FY 2018. Extra-large (payments between \$4 million and \$25 million) and super-large (payments greater than \$25 million) estate FY 2019 payments are estimated to be a combined \$538.9 million, a decrease of \$211 million (28.1 percent) from FY 2018.

FY 2020 Projections

All Funds FY 2020 receipts are projected to be \$1,074 million, an increase of \$18 million (1.7 percent) from FY 2019. This increase is mainly the result of projected growth in household net worth, partially offset by a projected decrease in the number of super-large estate payments compared to FY 2019.

Large estate FY 2020 receipts are projected to be \$514.4 million, an increase of \$17.4 million (3.5 percent), and receipts from small estate payments are projected to be \$33.4 million, an increase of \$13.3 million (66.2 percent) from FY 2019. Super-large and extra-large estate FY 2020 receipts are projected to be a combined \$526.2 million, a decrease of \$12.7 million (2.4 percent) from FY 2019.

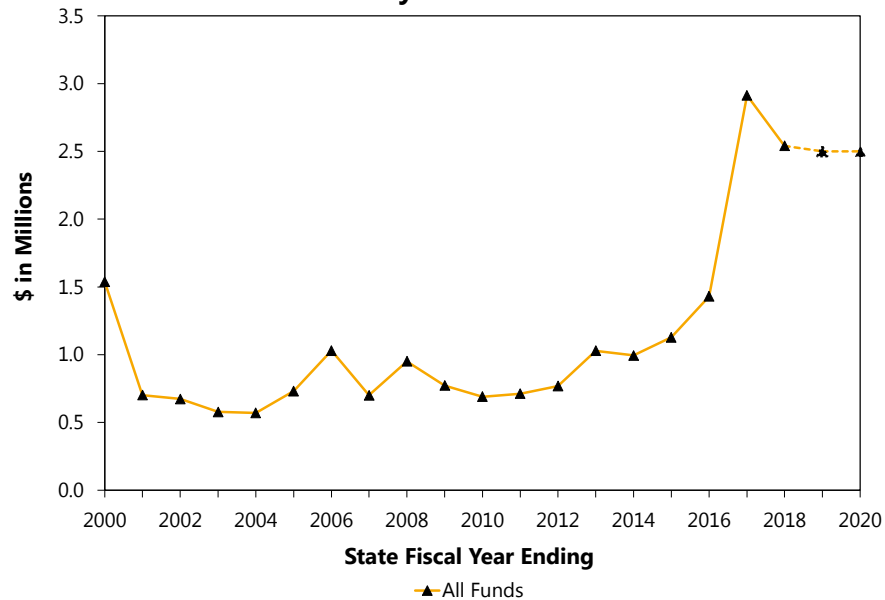
New York State Estate Tax Receipts



OTHER TAXES (millions of dollars)							
	FY 2018 Actual	FY 2019 Estimated	Change	Percent Change	FY 2020 Projected	Change	Percent Change
General Fund	2.5	2.5	0.0	0.0	2.5	0.0	0.0
Other Funds	0.0	0.0	0.0	0.0	0.0	0.0	0.0
All Funds	2.5	2.5	0.0	0.0	2.5	0.0	0.0

Note: Totals may differ due to rounding.

Other Taxes Receipts History and Estimates



OTHER TAXES BY FUND (thousands of dollars)			
	General Fund		All Funds Receipts
	Admissions	Combative Sports	
FY 2010	340	350	690
FY 2011	352	361	713
FY 2012	355	413	768
FY 2013	371	658	1,029
FY 2014	350	645	995
FY 2015	501	627	1,128
FY 2016	554	871	1,425
FY 2017	536	2,378	2,914
FY 2018	508	2,033	2,541
Estimated			
FY 2019	600	1,900	2,500
FY 2020			
Current Law	500	2,000	2,500
Proposed Law	500	2,000	2,500

Proposed Legislation

No new legislation proposed with this Budget.

Description

Tax Base and Rate

Racing Admissions Tax – A tax is levied on the charge for admissions to racetracks and simulcast theaters throughout the State. The racing admissions tax rate is 4 percent of the admissions charge.

Authorized Combative Sports Tax – There are two different categories of authorized combative sports:

- Boxing, sparring, and wrestling events.
 - A 3 percent tax on gross receipts from ticket sales (maximum amount of tax due per event is \$50,000).
 - A 3 percent tax on gross receipts from broadcasting rights (maximum amount of tax due per event is \$50,000).
- Kick boxing, single discipline martial arts, and mixed martial arts events.
 - An 8.5 percent tax on gross receipts from ticket sales, with no maximum amount of tax due per event.
 - A 3 percent tax on gross receipts from broadcasting rights and digital streaming over the Internet (maximum amount of tax due per event is \$50,000).

Administration

The Department of Taxation and Finance is responsible for collecting the receipts of the racing admissions tax and the authorized combative sports tax.

Tax Liability

The major factors that affect racing admissions tax liability are the number of customers who attend on-track races and the price of admission. Customer volume is dependent on factors such as the weather and competition from other types of entertainment.

The major factors that affect authorized combative sports tax liability are the notoriety of the participants and the number of high profile events held in a given fiscal year.

Receipts: Estimates and Projections

All Funds

FY 2019 Estimates

All Funds receipts through December are \$2.2 million, a decrease of \$0.2 million (6.6 percent) from the comparable period in the prior fiscal year. All Funds FY 2019 receipts are estimated to be \$2.5 million, unchanged from FY 2018.

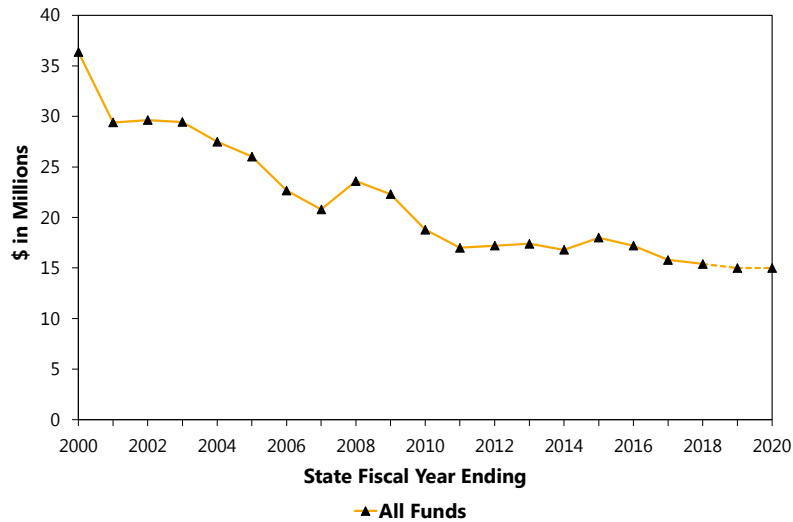
FY 2020 Projections

All Funds FY 2019 receipts are projected to be \$2.5 million, unchanged from FY 2019. Any small decline in racing admissions tax collections is expected to be offset by an uptick in authorized combative sports tax collections due to higher profile fight participants.

PARI-MUTUEL TAXES (millions of dollars)							
	FY 2018 Actual	FY 2019 Estimated	Change	Percent Change	FY 2020 Projected	Change	Percent Change
General Fund	15.4	15.0	(0.4)	(2.6)	15.0	0.0	0.0
Other Funds	0.0	0.0	0.0	0.0	0.0	0.0	0.0
All Funds	15.4	15.0	(0.4)	(2.6)	15.0	0.0	0.0

Note: Totals may differ due to rounding.

Pari-Mutuel Taxes Receipts History and Estimates



PARI-MUTUEL TAXES BY FUND (thousands of dollars)				
	General Fund			All Funds Receipts
	Flat	Harness	OTB	
FY 2010	6,710	669	11,439	18,818
FY 2011	7,355	661	9,024	17,040
FY 2012	10,903	589	5,706	17,198
FY 2013	11,407	593	5,416	17,416
FY 2014	11,039	538	5,244	16,821
FY 2015	12,428	482	5,128	18,038
FY 2016	11,423	466	5,293	17,182
FY 2017	10,604	426	4,726	15,756
FY 2018	10,318	378	4,676	15,373
Estimated				
FY 2019	10,100	380	4,520	15,000
FY 2020				
Current Law	10,100	380	4,520	15,000
Proposed Law	10,100	380	4,520	15,000

Proposed Legislation

Legislation proposed with this Budget would:

- Extend certain tax rates and certain simulcasting provisions for five years; and
- Allow Off-Track Betting reforms.

Description

Tax Base and Rate

The State has levied taxes on pari-mutuel wagering activity conducted at horse racetracks since 1940. There are numerous tax rates imposed on wagering on horse races, which vary depending upon the type of racing, the type of wager (regular, multiple, or exotic) and location at which it is placed.

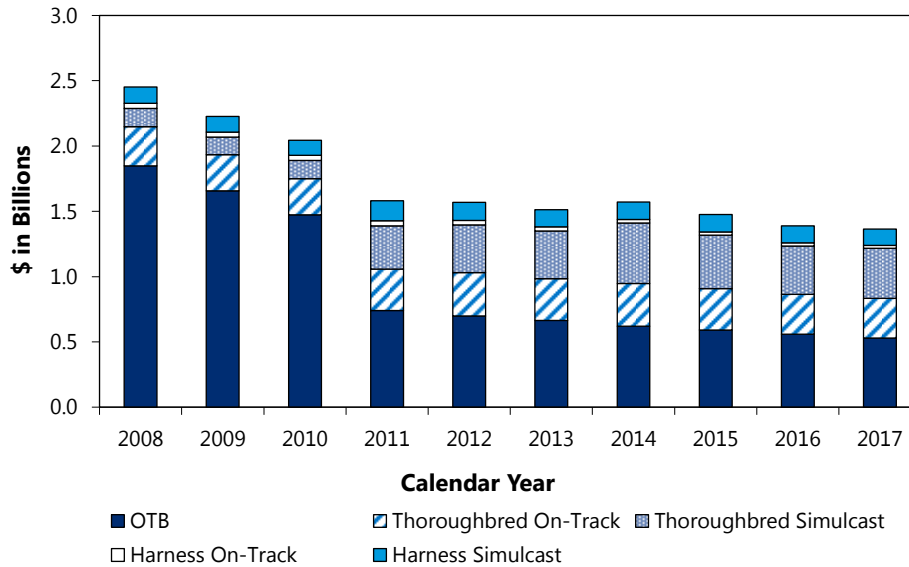
Receipts are broken down into three categories:

- Flat: There are four thoroughbred (“flat”) facilities including Finger Lakes, Aqueduct, Belmont and Saratoga. In 2008, the State awarded a 25-year license to the New York Racing Association (NYRA) to operate Aqueduct, Belmont, and Saratoga Racetracks;
- Harness: There are seven harness tracks located at Batavia, Buffalo, Monticello, Saratoga, Tioga, Vernon and Yonkers; and
- Off-track Betting (OTB): There are operational OTBs in five regions (Capital District, Catskill, Nassau, Suffolk and Western). Since the demise of the New York City OTB in December 2010, the statewide handle from OTBs has declined from over 75 percent to 39 percent in 2017.

To promote industry growth, the State has authorized higher take-outs to support capital improvements at non-NYRA tracks and, more importantly, reduced its on-track tax rates by as much as 90 percent at thoroughbred and harness tracks, authorized the expansion of simulcasting at racetracks and OTB facilities, allowed in-home simulcasting experiments and telephone betting, lowered the tax rates on simulcast wagering, reduced tax rates on NYRA bets, and directed a portion of video lottery gaming receipts to be used for purse enhancements and for the breeders’ fund.

The following chart compares handle by source for the calendar year since 2008.

New York State Pari-Mutuel Handle by Source



Administration

The New York State Gaming Commission has general jurisdiction over all horse racing activities and all pari-mutuel betting activities, both on-track and off-track, in the State and over the corporations, associations, and persons engaged in gaming activities. Racetracks and OTBs calculate the pari-mutuel tax owed to the State from the portion of the commission (the “takeout”) withheld from wagering pools (the “handle”) and then remit the taxes to the Department of Taxation and Finance as prescribed by law.

Significant Legislation

Significant statutory changes to pari-mutuel taxes since 2013 are summarized below.

Subject	Description	Effective Date
Legislation Enacted in 2013		
Market Origin Fee	Provided for the regulation of out-of-state advanced deposit wagering (ADW) and imposed a Market Origin Fee equal to five percent of wagers taken by out-of-state ADWs from New York residents. Five percent of the Market Origin Fee is transferred to the Department of Taxation and Finance to be treated as pari-mutuel taxes.	January 1, 2014

Receipts: Estimates and Projections

All Funds

FY 2019 Estimates

All Funds receipts through December are \$12.6 million, a decrease of \$0.2 million (1.6 percent) from the comparable period in the prior fiscal year.

All Funds FY 2019 receipts are estimated to be \$15 million, a decrease of \$0.4 million (2.6 percent) from FY 2018.

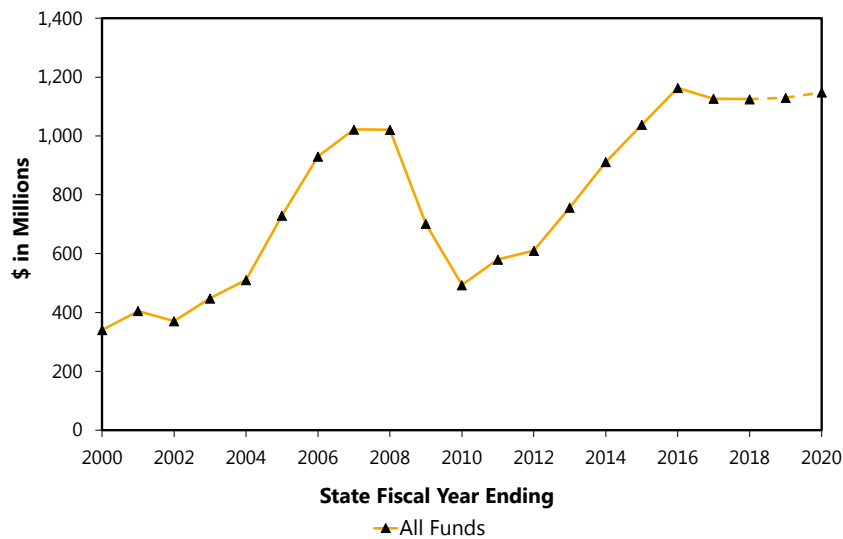
FY 2020 Projections

All Funds FY 2020 receipts are projected to be \$15 million, unchanged from FY 2019.

REAL ESTATE TRANSFER TAX (millions of dollars)							
	FY 2018 Actual	FY 2019 Estimated	Change	Percent Change	FY 2020 Projected	Change	Percent Change
General Fund	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Funds	1,125.1	1,130.0	4.9	0.4	1,148.0	18.0	1.6
All Funds	1,125.1	1,130.0	4.9	0.4	1,148.0	18.0	1.6

Note: Totals may differ due to rounding.

Real Estate Transfer Tax Receipts History and Estimates



REAL ESTATE TRANSFER TAX BY FUND (millions of dollars)			
	Capital Projects Funds ¹	Debt Service Funds ²	All Funds Receipts
FY 2010	199	294	493
FY 2011	119	461	580
FY 2012	119	491	610
FY 2013	119	637	756
FY 2014	119	792	911
FY 2015	119	919	1,038
FY 2016	119	1,043	1,162
FY 2017	119	1,007	1,126
FY 2018	119	1,006	1,125
Estimated			
FY 2019	119	1,011	1,130
FY 2020			
Current Law	119	1,029	1,148
Proposed Law	119	1,029	1,148

¹ Environmental Protection Fund.
² Clean Water/Clean Air Bond Debt Service Fund.

Proposed Legislation

No new legislation is proposed with this Budget.

Description

Tax Base and Rate

The New York State real estate transfer tax is imposed by Article 31 of the Tax Law on each conveyance of real property or interest therein, when the consideration exceeds \$500, at a rate of \$4 per \$1,000 of consideration (price). The tax became effective August 1, 1968. Prior to May 1983, the rate was \$1.10 per \$1,000 of consideration. Effective July 1, 1989, an additional 1 percent tax was imposed on residential conveyances for which the consideration is \$1 million or more.

Administration

Typically, the party conveying the property (grantor) is responsible for payment of the tax, either through the purchase of adhesive documentary stamps, by the use of a metering machine, or through other approaches provided by the Commissioner of Taxation and Finance.

For deeded transfers, the tax is paid to a recording agent (generally the county clerk). For non-deeded transactions, payments are made directly to the Commissioner of Taxation and Finance (“central office” collections). All payments are due to the recording agent within 15 days of the transfer. For counties with more than \$1.2 million in liability during the previous calendar year, payments received between the first and fifteenth day of the month are due to the Commissioner by the twenty-fifth day of the same month. Payments received in such counties between the sixteenth and the final day of the month are due to the Commissioner by the tenth day of the following month. Payments from all other counties are due to the Commissioner by the tenth day of the month following their receipt. Although the county payment schedule is statutory, it is not useful for predicting monthly cash flows, due to the unpredictable payment behavior of some large counties.

Tax Expenditures

The tax rate imposed on conveyances into new or existing real estate investment trusts (REITs) is \$2 per \$1,000 of consideration. New York State (including agencies, instrumentalities, subdivisions, and public corporations), the United States (including agencies and instrumentalities), and the United Nations are exempt. If an exempt entity is the grantor in a transfer, the tax burden falls upon the grantee. Other significant exemptions from the tax are: conveyances pursuant to the Federal bankruptcy act and mere change of identity conveyances. A deduction from taxable consideration is allowed for any lien or encumbrance remaining at the time of sale involving a one, two, or three-family house or individual residential condominium unit.

Significant Legislation

Significant statutory changes to the real estate transfer tax since 2013 are summarized below.

Subject	Description	Effective Date
Legislation Enacted in 2013		
START-UP NY	Established tax-free zones on or near qualifying university and college campuses. Qualifying businesses operating within such zones are exempt from taxation under the real estate transfer tax.	January 1, 2014

Tax Liability

Real estate transfer tax receipts are a function of the number and type of conveyances and the consideration per conveyance. Conveyances and prices are largely determined by mortgage rates, vacancy rates and inflation. The Manhattan commercial real estate market, which has historically been subject to large swings in demand and capacity, can have a significant impact on receipts.

For a more detailed discussion of the methods and models used to develop estimates and projections for the real estate transfer tax, please see the *Economic, Revenue, and Spending Methodologies* at www.budget.ny.gov.

Receipts: Estimates and Projections

All Funds

FY 2019 Estimates

All Funds receipts through December are \$884.9 million, an increase of \$19.9 million (2.3 percent) from the comparable period in the prior fiscal year.

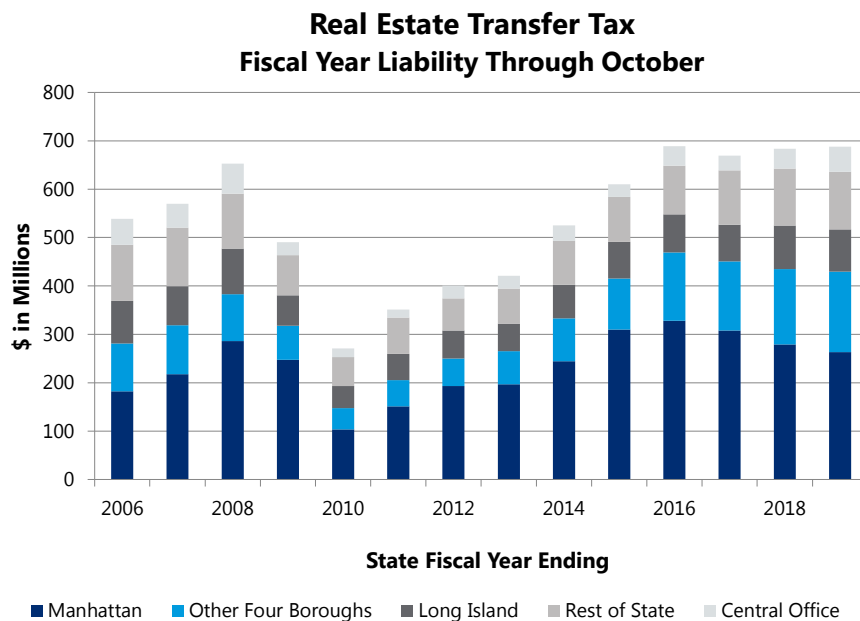
All Funds FY 2019 receipts are estimated to be \$1,130 million, an increase of \$4.9 million (0.4 percent) from FY 2018.

New York’s recent residential real estate experience has largely followed nationwide trends. Pending and closed sales have exhibited small declines statewide through November 2018 compared to the same period in the prior year. Meanwhile, the statewide average and median sales prices have grown between 5 and 6 percent through November 2018. Rising mortgage rates are expected to continue to increase into 2019 due to the Federal Reserve’s rate increases in December 2018 and expected rate increases in 2019. Statewide, the expectation for the remainder of the fiscal year is that market growth will be relatively weak compared to the same period in FY 2018 as year-to-date trends continue over the final few months.

New York City specifically has seen slow growth in both housing prices and transaction volumes compared to the record growth exhibited in recent years as the market correction continues. Manhattan has seen its median and average sales prices decline moderately through December 2018 compared to the same period in the prior year. Total number of sales have declined by approximately 14 percent over the same period, while inventory has risen as it has shifted towards a buyer’s market. The Manhattan residential market appears to have been hampered by a decline in foreign buyer activity, as well as the impact of the new Federal tax law. Rising mortgage rates, uncertainty about the economy in the short-term, and increased stock market volatility also have likely contributed to declining market activity. Brooklyn and Queens have exhibited record growth in both average and median sales prices during 2018, but both have experienced moderate declines in sales volume.

The mansion tax has played an important role in the receipts growth that has characterized recent fiscal years. In FY 2008, mansion tax receipts were \$316 million (31.1 percent of total receipts). In FY 2018, mansion tax receipts were \$432 million (38.4 percent of total receipts), substantially higher than the 2008 pre-recession peak. This growth in mansion tax receipts has largely been driven by an increase in the volume of sales as the number of transactions in FY 2018 was 36 percent higher than the number in FY 2008.

The following chart compares tax liability by location through October since FY 2006.



In New York City, commercial real estate sales volume has grown significantly through November 2018 compared to the same period in the prior year when the market experienced a correction and dropped to a more sustainable level. Sales volume still remains well below its 2015 peak. Overall, the Manhattan commercial market has exhibited slightly lower vacancy rates when compared to the prior year. Downtown’s vacancy rates increased to 9.6 and 9.7 percent,

respectively, during the second and third quarter of 2018 compared to 9.4 and 9.4 percent during the same period in 2017. While, Midtown rates decreased from 8.1 and 8.1 percent to 7.3 and 7 percent during the same period.

Vacancy Rates in Manhattan



FY 2020 Projections

All Funds FY 2020 receipts are projected to be \$1,148 million, an increase of \$18 million (1.6 percent) from FY 2019.

The short term outlook for the housing market is based upon several factors, including relatively weak growth in both housing starts and housing prices, mortgage rates continuing to rise, and steady, albeit moderating, overall economic growth. The impact of the new Federal tax bill on the housing market continues to cause uncertainty and pose a negative risk, likely concentrated on the high-end portion of the market. Some of this risk is mitigated by the high percentage of foreign buyers in New York City who are unaffected by the Federal tax law changes (even though they, in turn, might be constrained by a relatively stronger U.S. dollar).

In FY 2020, weak growth in commercial real estate activity is expected following the market correction that occurred during FY 2018. While increasing interest rates and reduced foreign investment pose negative risks to the commercial market, the continuing diversification of the NYC economy is likely to positively impact the commercial market and demand for office space moving forward.



General Fund

The General Fund receives no direct deposit of real estate transfer tax receipts.

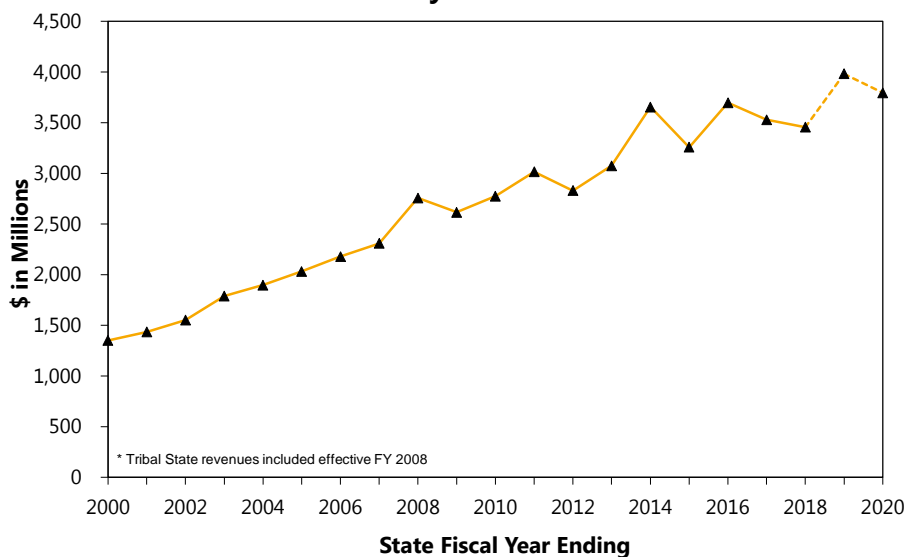
Other Funds

A statutory annual amount of real estate transfer tax receipts of \$119.1 million is deposited into the Environmental Protection Fund. Remaining real estate transfer tax receipts are deposited into the Clean Water/Clean Air Fund for debt service. The balance of the Clean Water/Clean Air Fund not needed for debt service is transferred into the General Fund.

MISCELLANEOUS RECEIPTS - GAMING (millions of dollars)							
	FY 2018	FY 2019		Percent	FY 2020		Percent
	Actual	Estimated	Change	Change	Projected	Change	Change
General Fund	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Funds	3,454.9	3,981.6	526.7	15.2	3,783.0	(198.6)	(5.0)
All Funds	3,454.9	3,981.6	526.7	15.2	3,783.0	(198.6)	(5.0)

Note: Totals may differ due to rounding.

Gaming Receipts History and Estimates



GAMING RECEIPTS BY COMPONENT (millions of dollars)						
	Traditional Lottery	VLTs	Commerical Gaming*	IFS	TSC*	Total Receipts
FY 2010	2,152.2	492.5	N/A	N/A	129.6	2,774.3
FY 2011	2,108.2	906.6	N/A	N/A	0.0	3,014.8
FY 2012	2,147.4	681.7	N/A	N/A	0.0	2,829.1
FY 2013	2,217.0	857.0	N/A	N/A	0.0	3,074.0
FY 2014	2,235.0	937.7	N/A	N/A	481.9	3,654.6
FY 2015	2,190.6	906.8	N/A	N/A	160.9	3,258.3
FY 2016	2,350.7	961.2	151.0	N/A	232.7	3,695.6
FY 2017	2,322.0	958.2	38.2	3.2	206.8	3,528.4
FY 2018	2,301.1	958.3	109.6	4.8	81.1	3,454.9
Estimated						
FY 2019	2,533.0	939.0	168.0	5.0	336.6	3,981.6
FY 2020						
Current Law	2,422.0	950.0	189.0	5.0	212.0	3,778.0
Proposed Law	2,422.0	955.0	189.0	5.0	212.0	3,783.0

*For commercial gaming and Tribal State Compact, a portion of receipts are directed to localities

Proposed Legislation

Legislation proposed with this Budget would:

- Simplify Video Lottery Gaming (VLG) rate and additional commission provisions;
- Impose a statutory cap on casino free play;
- Allow breeding funds to be used for equine aftercare;
- Authorize entry into the Mid-Atlantic Drug Compact;
- Extend the Equine Drug Testing Advisory Committee and remove Morrisville restriction;
- Make technical changes to Gaming provisions;
- Reduce Gaming Commission employment restrictions; and
- Streamline occupational licensing for casino employees.

Description

Gaming revenue includes receipts from traditional lottery games, Video Lottery Gaming (VLG), commercial gaming, interactive fantasy sports (IFS) and the various Tribal State Compacts (TSC).

Traditional Lottery

There are three types of traditional lottery games:

- Instant scratch-off games have either a 65 or 75 percent prize-payout (approximately 52 games are currently active with prices ranging from \$1 to \$30). In FY 2018, roughly 36 percent of the education contribution from traditional lottery games was derived from scratch-off games;
- Jackpot games include Mega Millions, Powerball, Lotto and Cash4Life. For Lotto, Mega Millions and Powerball games, the value of any top prize not won is added to the top prize in the subsequent drawing. On October 28, 2017, the Mega Millions game changed significantly with an increased cost to play, jackpot starting at \$40 million and higher odds of winning. Now, Powerball, Cash4Life and Mega Millions all cost \$2 to play. In FY 2018, roughly 16 percent of the education contribution from traditional lottery games was derived from jackpot games; and
- Daily games include Numbers, Win 4, Quick Draw, Take 5 and Pick 10. Instant Win, Lucky Sum, and Close Enough are offered as add-on games to Numbers and Win 4. The base

top payout is \$500,000 in Pick 10 and \$100,000 in Quick Draw. In FY 2018, roughly 48 percent of the education contribution from traditional lottery games was derived from daily games.

The table below shows the statutory distribution of lottery sales among prizes, revenue for education and the allowance for expenses related to administration of the games. Any unused administration revenue is earmarked for education.

PERCENT DISTRIBUTION OF LOTTERY SALES AND FREQUENCY OF DRAWINGS					
	Prizes	Education	Admin. Allowance	Inception Date	Frequency of Drawings
Cash4Life	55	30	15	2014	Monday and Thursday at 9:30 PM
Instant (65%)	65	10	15	1999	N/A
Instant (75%)	75	10	15	2002	N/A
Lotto	40	45	15	1976	Wednesday and Saturday at 11:21 PM
Mega Millions*	50	35	15	2002	Tuesday and Friday at 11:00 PM
Numbers	50	35	15	1980	Twice Daily
Pick 10	50	35	15	1988	Once Daily
Powerball*	50	35	15	2010	Wednesday and Saturday at 10:59 PM
Quick Draw	60	25	15	1995	Every four minutes
Take 5	50	35	15	1992	Once Daily
Win 4	50	35	15	1981	Twice Daily

* Mega Millions and Powerball can offer a prize payout up to 55 percent.

Video Lottery Gaming

Video Lottery Gaming is authorized at certain thoroughbred and harness tracks; also Nassau and Suffolk Off-Track Betting (OTB) are authorized to have one site each with up to 1,000 terminals. There are currently Video Lottery Terminals (VLT) at Batavia Downs Gaming, Empire City Casino (Yonkers Raceway), Finger Lakes Gaming & Racetrack, Hamburg Gaming, Jake’s 58 (Suffolk OTB facility), Monticello Casino & Raceway, Resorts World Casino (which also hosts the Nassau OTB terminals), Saratoga Casino and Vernon Downs Casino. In FY 2018, roughly 72 percent of the education contribution from VLT facilities was derived from Resorts World and Empire City.

The following table shows the current distribution of VLT Net Machine Income (NMI) (after prize payouts) among revenue for education, administration, operator commission, and funds available for promotions and capital awards. Distributions to purses and breeders’ funds are made from the facilities’ commissions and are not separately shown. A Budget proposal would simplify the current distribution structure of VLT NMI, by reducing the number of VLG commission rates from no less than 27 to just 7.

DISTRIBUTION OF VLT RECEIPTS AFTER PRIZES*
(Percent)

Tracks with 1,100 or more machines (Saratoga)

Net Machine Income	Lottery				
	Education	Administration	Commission	Marketing	Capital
Up to \$62.5 million	45	10	31	10	4
More than \$62.5 million up to \$100 Million	49	10	31	10	0
Over \$100 million	51	10	31	8	0

Tracks with 1,100 or more machines west of State Route 14 (Finger Lakes)

Net Machine Income	Lottery				
	Education	Administration	Commission	Marketing	Capital
Up to \$62.5 million	45	10	31	10	4
Over \$62.5 million	49	10	31	10	0

Tracks with less than 1,100 machines west of State Route 14 (Batavia)

Net Machine Income	Lottery				
	Education	Administration	Commission	Marketing	Capital
Up to \$50 million	41	10	35	10	4
More than \$50 million to \$62.5 million	48	10	28	10	4
More than \$62.5 million up to \$100 Million	52	10	28	10	0
More than \$100 million up to \$150 Million	54	10	28	8	0
Over \$150 million	57	10	25	8	0

Tracks within 15 miles of a Class III Native American Casino (Vernon)**

Net Machine Income	Lottery				
	Education	Administration	Commission	Marketing	Capital
Up to \$62.5 million	35	10	41	10	4
More than \$62.5 million to \$100 million	39	10	41	10	0
Over \$100 million	41	10	41	8	0

Tracks within 15 miles of a Class III Native American Casino west of State Route 14 (Buffalo Fairgrounds)

Net Machine Income	Lottery				
	Education	Administration	Commission	Marketing	Capital
Up to \$62.5 million	35	10	41	10	4
Over \$62.5 million	39	10	41	10	0

Tracks Located in Sullivan County within 60 miles of Gaming Facility in a Contiguous State (Monticello)

Net Machine Income	Lottery				
	Education	Administration	Commission	Marketing	Capital
Up to \$100 million	41	10	39	10	0
Over \$100 million	43	10	39	8	0

Facilities located in Nassau or Suffolk County operated by an Off-Track Betting Corporation***

Net Machine Income	Lottery				
	Education	Administration	Commission	Marketing	Capital
Up to \$100 million	45	10	35	10	0
Over \$100 million	47	10	35	8	0

Tracks with 1,100 or more machines located in Westchester County (Yonkers)

Net Machine Income	Lottery				
	Education	Administration	Commission	Marketing	Capital
Up to \$62.5 million	47	10	31	8	4
Over \$62.5 million	51	10	31	8	0

Aqueduct Racetrack

Net Machine Income	Lottery		Commission (see note 1)	Marketing	Capital
	Education	Administration			
No Nassau OTB terminals hosted	44	10	38	8	0
400 to 999 Nassau OTB terminals hosted	43	10	38	8	1
1,000 or more Nassau OTB terminals hosted	40	10	38	8	4

* Not less than 90 percent of sales must be used for prizes.

** For FY 18 and FY 19, Vernon Downs will receive additional monies to sustain operation of the facility (as determined by the Gaming Commission) and has flexibility to use capital award monies for operations.

*** Includes terminals designated as hosted by Resorts World on behalf of Nassau OTB.

Does not include the additional commission that Saratoga, Monticello and Finger Lakes receive due to a competing casino operating in their gaming region.

Net Machine Income is gross receipts minus prize payments. Free-play, up to 15 percent of the facilities' NMI, is excluded from the calculation of NMI.

Commercial Gaming

Chapter 174 of the Laws of 2013 established two casino development zones:

- Zone one is the city of New York and the counties of Nassau, Putnam, Rockland, Suffolk and Westchester.
 - Region one consists of Putnam, Rockland and Westchester counties;
 - Region two consists of Bronx, Kings, New York, Queens and Richmond counties; and
 - Region three is Nassau and Suffolk counties.
- Zone two includes all other counties.
 - Region one consists of Columbia, Delaware, Dutchess, Greene, Orange, Sullivan and Ulster counties;
 - Region two consists of Albany, Fulton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie and Washington counties;
 - Region three consists of Clinton, Essex, Franklin, Hamilton, Jefferson, Saint Lawrence and Warren counties;
 - Region four consists of Cayuga, Chenango, Cortland, Herkimer, Lewis, Madison, Oneida, Onondaga, Oswego and Otsego counties;
 - Region five consists of Broome, Chemung (east of State Route 14), Schuyler (east of State Route 14), Seneca, Tioga, Tompkins, and Wayne (east of State Route 14) counties; and
 - Region six consists of Allegany, Cattaraugus, Chautauqua, Chemung (west of State Route 14), Erie, Genesee, Livingston, Monroe, Niagara, Ontario, Orleans, Schuyler (west of State Route 14), Steuben, Wayne (west of State Route 14), Wyoming, and Yates counties.

Based on authorization, the following four gaming facility licenses were awarded in regions one, two, and five:

- Resorts World (RW) Catskills (formerly Montreign Resort Casino) in region one;
- Rivers Casino & Resort at Mohawk Harbor in region two;
- del Lago Resort and Casino in region five; and

- Tioga Downs Casino Resort in region five.

Tioga Downs, which was an existing Video Lottery Terminal Facility, opened in December 2016. Rivers and del Lago both opened in February 2017, while Resorts World Catskills opened in February 2018. Three more casino licenses can be issued in New York, but not earlier than December 2023 (without the State incurring a financial penalty).

In late January 2019, the Gaming Commission is expected to propose rules and regulations to allow sports wagering at each of the four commercial gaming facilities, as authorized by Chapter 174 of the Laws of 2013.

Interactive Fantasy Sports

On August 3, 2016, the State legalized the operation of Interactive Fantasy Sports (IFS) in New York State. Interactive Fantasy Sports operators offer fee-based contests in which participants (using their skills and knowledge) assemble a fantasy roster of players and compete against other participants. There is a 15 percent tax on IFS gross revenue generated in New York and an additional tax rate of one-half of one percent (capped at \$50,000 per taxpayer annually). The law put in place consumer safeguards to protect the integrity of the contests (see the New York State Gaming Commission website for a full list). All revenues are directed to the IFS Fund for the sole purpose of providing aid to education. In October 2018, the New York State Supreme Court rendered a split decision that IFS is in violation of the State Constitution as a form of unlawful gambling, but it does not constitute gambling under New York State Penal Law. The State Attorney General appealed the decision in November 2018, which stayed the lower court ruling. The Gaming Commission has continued with the regulation and taxation of IFS and will do so during the appeals process.

Tribal State Compact

The Indian Gaming Regulatory Act permitted federally recognized Indian tribes to conduct gaming activities such as bingo, pull tabs, lotto, punch boards, tip jars, and certain card games on tribal land. However, it requires a Tribal State Compact (TSC) for all other forms of gaming. The State has compact agreements with three Nations, the Seneca Nation of Indians, the St. Regis Mohawk and the Oneida Nation of New York to host “class III gaming” facilities.

The Seneca Nation operates three casinos in the Western region including Seneca Niagara Casino (2002), Seneca Allegany Casino (2004) and Seneca Buffalo Casino (2007). In 2013, the Seneca Nation and the State reached a settlement agreement of \$349.7 million, in which \$209.8 million was directed to the State and \$139.9 million was directed to host counties. Seneca kept \$209 million (that would have otherwise gone to the State) and resumed ongoing payments from casino slot machine operations to the State. The Western New York zone is excluded from bidding on casino gaming. In FY 2017, 60.5 percent of State TSC revenue was derived from Seneca payments. The Nation stopped remitting payments to the State in FY 2018, so New York State and the Seneca Nation entered into arbitration. The issue was whether the Nation had to continue to make payments from Years 15 to 21 of the Compact. On January 7, 2019, the majority of the arbitration panel concluded that the Nation was obligated to make such payments to the State.

The Mohawk Nation operates the Akwesasne Mohawk Casino (1999). There was a settlement payment of \$30 million in 2013 from which the State received \$23 million, and the remaining \$7 million was directed to the host counties. Under the agreement, the State will not authorize casino gaming in the eight-county Mohawk exclusivity zone. The agreement did not resolve outstanding land claim disputes between the Tribe, the State and St. Lawrence and Franklin Counties.

The Oneida Nation operates three casinos, Turning Stone (1993), Yellow Brick Road (2015) and Point Place (2018). In 2014, the State, the Oneida Nation and Oneida and Madison Counties came to an agreement in which Madison County received a one-time payment of \$11 million from the Oneida Nation to settle past tax claims and would receive an annual amount of \$3.5 million from the State share. Oneida County is considered the host county (25 percent of the State's payment) and receives an additional \$2.5 million annual payment from the State for 19 and one-quarter years to settle prior property tax claims. Turning Stone, which was the only operational casino at the time of the settlement agreement, is located in Oneida County, while the other two facilities are located in Madison County. Based on the agreement, Oneida County is considered the host county for all three casinos.

Administration

Gaming components noted herein are administered by the New York State Gaming Commission.

Traditional Lottery and VLT Games

The Gaming Commission develops new lottery games, markets and advertises, distributes games, provides terminals and computer programming, regulatory oversight and otherwise performs all functions necessary to operate an effective State lottery. The Comptroller, pursuant to an appropriation, distributes all net receipts from the Lottery directly to school districts. This aid includes special allowances for textbooks for all school children and additional amounts for pupils in approved State-supported schools for the deaf and the blind.

The Lottery game vendor notifies sales agents of the State's share of sales proceeds by the Monday following the liability week. The agent has until Tuesday to deposit sufficient funds into a specified bank account, at which time the operations vendor sweeps the funds and transfers them to the Gaming Commission by Wednesday morning. For VLTs, the Commission sweeps the accounts daily. All gaming funds are transferred to the State on Wednesday.

The FY 2019 Budget eliminated the transfer from the Commercial Gaming Revenue Fund for education to the State Lottery Fund for education to maintain VLT base year revenue

The Gaming Act also provides that two facilities (Monticello and Saratoga) will receive additional commission to offset the reduction in revenues due to competition from a nearby casino (2016 legislation enabled Finger Lakes to receive additional commission as well). The Gaming Commission shall remit this additional commission two months after the end of the fiscal year. A proposal included with this Executive Budget would eliminate the additional commission and instead increase their commission rate by an additional commission amount.

Commercial Gaming

The Gaming Commission regulates commercial gaming facilities and administers the tax on gaming revenues. The Commission also collects license fees as established by the New York State Resort Gaming Facility Location Board.

Commercial gaming taxes are paid as a percent of gaming revenue generated at each licensed facility. Factors that affect commercial gaming revenue include proximity to population centers, regional income variations, proximity to and competition from existing facilities, and the applicable tax rates in the different gaming regions. Those rates are: 10 percent on table game revenue (this includes sports wagering revenue) in all regions; 39 percent on slot machine revenue at Resorts World Catskills (Region One); 45 percent on slots at Rivers (Region Two); and 37 percent on slots at Lago and Tioga (Region Five).

All commercial gaming tax (see below) and license fee revenue collected by the Gaming Commission is deposited into the Commercial Gaming Revenue Fund. From that Fund, tax and license fee revenue is distributed as follows: 80 percent of all commercial gaming revenue; 10 percent of the revenue generated by any commercial gaming facility in a gaming region is provided equally to the host county and municipality in that region and 10 percent of the revenue generated by any commercial gaming facility in a gaming region is provided on a per capita basis to non-host counties within such region.

Interactive Fantasy Sports

The New York State Gaming Commission administers and regulates IFS entities and administers the two tax components. The Commission also imposes regulatory fees to cover the cost of regulating this industry. Registrants must file an annual report by June 30 covering activity from June of the previous year to May of the current year detailing the number of accounts held by all players and experienced players, new and closed accounts, financial information and the number of registrants that excluded themselves from contests (similar to other gaming venues where customers voluntarily ban themselves from a gaming establishment). The Commission must then publish a report based on this information no later than 180 days after submission. Based on the CY 2017 report, 9.4 percent of players were residents of New York, 2.3 percent of all accounts were held by experienced players, the number of new accounts that were established in the preceding year dropped from 1.5 million to 312,009, and 390 players excluded themselves from the contests.

The first filing date was October 10, 2016, and filing will continue on a monthly basis. Fifteen entities have been issued temporary permits.

Tribal State Compact

Section 99-h of the State Finance Law established the tribal-state revenue account. Based on the compacts, the State receives a payment of 25 percent of the net drop from gaming devices of which the host county or counties receive 25 percent of this payment. The Gaming Act directed 10 percent of the State payment to the regional communities on a per capita basis.

The Gaming Commission regulates Indian gaming facilities and administers the payments made to the State on gaming revenues and the distribution to localities. The Gaming Commission maintains a twenty-four hour presence in each casino, in which inspectors ensure that gaming operations, such as dealing procedures, internal accounting and other controls, strictly conform to the applicable provisions of the compact and their appendices.

The Certification and Registration Unit is responsible for the review and subsequent approval or denial of the applications submitted by all persons involved with Indian gaming in the State. No employee or manager may be employed by the casino operator unless the individual has been previously approved by the Board. All applicants are fingerprinted and must undergo a background investigation by the Federal Bureau of Investigation, the New York State Division of Criminal Justice Services and the New York State Police - Casino Detail.

All the State's regulatory expenses, for both personnel and equipment, are paid for or reimbursed by the regulated Indian Nation or Tribe as required under federal law.

Significant Legislation

Significant gaming statutory changes since 2013 are summarized below.

Subject	Description	Effective Date
Legislation Enacted in 2013		
Video Lottery Gaming	Authorized two video lottery facilities with up to 1,000 terminals each in Nassau and Suffolk Counties operated by Off-Track Betting Corporations.	January 1, 2014
Commercial Gaming	Authorized up to four resort destination gaming facilities.	January 1, 2014
Legislation Enacted in 2014		
Video Lottery Gaming	Increased the free-play allowance from 10 to 15 percent.	March 31, 2014
Legislation Enacted in 2015		
Electronic Games	Provided that electronic table games that include an element of skill can be offered at certain racetracks.	May 1, 2015
Legislation Enacted in 2016		
Additional Compensation	Provided for an additional commission for the Finger Lakes facility.	January 1, 2014
Legislation Enacted in 2017		
NYRA	Provided for the reprivatization of NYRA.	April 1, 2017
Drug Testing	Modified requirements for horsemen and racetracks to contribute to equine drug testing.	April 1, 2017
Vernon Downs	Provided for financial relief to Vernon Downs.	June 29, 2017
Legislation Enacted in 2018		
Hold Harmless Transfer	Eliminated the Video Lottery Gaming Hold Harmless Transfer Provision.	April 1, 2019

Receipts: Estimates and Projections

All Funds

FY 2019 Estimates

All Funds FY 2019 receipts are estimated to be \$3,981.6 million, an increase of \$526.7 million (15.2 percent) from FY 2018.

All Funds FY 2019 traditional lottery receipts are estimated to be \$2,533 million, an increase of \$231.9 million (10.1 percent) from FY 2018. There are two main reasons for the increase compared to FY 2018: 1) Mega Millions revenue is estimated to increase by \$70 million to reflect the \$1.5 billion jackpot in November 2018; and 2) the administrative allowances and miscellaneous income is estimated to be \$160 million higher than in FY 2018 to reflect a large rollover of the unused fund balance.

All Funds FY 2019 VLT receipts are estimated to be \$939 million, a \$19.3 million decrease (2 percent) from FY 2018. This reflects \$19.6 and \$17.6 million paid out to Saratoga and Finger Lakes, respectively, for the additional commission liability that occurred in FY 2018.

All Funds FY 2019 commercial gaming receipts are estimated to be \$168 million, an increase of \$58.4 million (53.3 percent) from FY 2018. This reflects that all four casinos are now fully operational.

All Funds FY 2019 IFS receipts are estimated to be \$5 million, an increase of \$0.2 million (4.2 percent) from FY 2018.

All Funds FY 2019 TSC revenues are estimated to be \$336.6 million, an increase of \$255.5 million from FY 2018. The main basis of the increase is the expectation that the Seneca Nation will remit full payments owed since the start of FY 2018 based on the arbitration decision. In addition, the estimate reflects additional revenues from the opening of Oneida Nation's Point Place in February 2018.

FY 2020 Projections

All Funds FY 2020 receipts are projected to be \$3,783 million, a decrease of \$198.6 million (5 percent) from FY 2019. This includes an increase of \$5 million from Budget proposals.

All Funds FY 2020 traditional lottery receipts are projected to be \$2,422 million, a decrease of 111 million (4.4 percent) from FY 2019. Mega Millions and the administrative allowances and miscellaneous income are projected to return to more historical levels.

All Funds FY 2020 VLT receipts are projected to be \$955 million, a \$16 million increase (1.7 percent) from FY 2019. This increase reflects a Budget proposal to amend the VLT rate structure and the expected increase in Nassau OTB machines at Resort World NYC from 505 to 1,000.

All Funds FY 2020 commercial gaming receipts are projected to be \$189 million, an increase of \$21 million (12.5 percent) from FY 2019. This increase reflects continued growth at each of the four casinos, especially RW Catskills which has several projects projected to be completed during the course of the year. This also reflects a projected \$4 million increase from the first full year of sports wagering operations.

All Funds FY 2020 IFS receipts are projected to be \$5 million, unchanged from FY 2019.

All Funds FY 2020 TSC revenues are projected to be \$212 million, a decrease of \$124.6 million (37 percent) from FY 2019. This decrease reflects a return to the regular payment schedule from the Seneca Nation to the State.

General Fund

TSC payments are deposited into the Tribal State Compact Revenue Account. 65 percent of these payments (less \$6 million in annual aid payments, plus any interest) is directed to the General Fund. TSC payments are estimated to be \$213.3 million in FY 2019 and \$132.1 million in FY 2020.

Other Funds

Revenues from traditional lottery, VLT lottery and IFS, are all directed to education. Eighty percent of commercial gaming receipts are directed to education. FY 2019 receipts of \$3,611.4 million and FY 2020 receipts of \$3,541 million will be directed for aid to education.

Twenty percent of commercial gaming receipts and 35 percent of TSC revenues (plus \$6 million in annual aid payments) are directed to certain localities. FY 2019 receipts of \$123.3 million and FY 2020 receipts of \$79.9 million will be directed to certain localities.

MISCELLANEOUS RECEIPTS - CAPITAL PROJECTS FUNDS							
(millions of dollars)							
	FY 2018	FY 2019		Percent	FY 2020		Percent
	Results	Estimated	Change	Change	Projected	Change	Change
State Funds	5,727	7,405	1,678	29%	7,409	4	0%
Federal Funds	2,120	2,428	308	15%	2,223	(205)	-8%
All Funds	7,847	9,833	1,986	25%	9,632	(201)	-2%

Note: Totals may differ due to rounding.

MISCELLANEOUS RECEIPTS - CAPITAL PROJECTS FUNDS			
(millions of dollars)			
	FY 2018	FY 2019	FY 2020
Authority Bond Proceeds			
Transportation	1,125	2,564	2,266
Public Protection	311	303	342
Health and Social Welfare	160	987	1,067
Education	18	70	84
Mental Hygiene	97	231	218
Economic Development	1,201	1,407	1,370
General Government	117	219	241
Other	2,235	1,184	922
State Park Fees	32	36	36
Environmental Revenues	120	60	60
All Other	955	988	1,404
Total	6,371	8,049	8,010
Accounting Adjustment	(644)	(644)	(601)
Financial Plan Total	5,727	7,405	7,409

Miscellaneous receipts in the Capital Projects Fund type include reimbursements from the proceeds of bonds sold by public authorities, fees, and other sources of revenue dedicated to specific capital projects funds, primarily for environmental or transportation capital purposes. The Miscellaneous Receipts table reflects an accounting adjustment for spending made directly from bonds sold by public authorities for State projects. This capital activity, commonly referred to as “Off-Budget Spending,” is not reflected in the Comptroller’s accounting system, but is included in the Five-Year Capital Program and Financial Plan estimates and projections. Federal Funds receipts are shown above to provide a more complete picture of non-tax receipts, but the discussion of Federal Funds is included in a separate section.

State Funds receipts finance two types of capital spending. Authority bond proceeds are used for spending financed with Authority Bonds, while Other Miscellaneous Receipts (Parks, Environmental, and Other receipts) finance State Pay-As-You-Go spending. Federal Funds receipts (Federal Grants) finance Federal Pay-As-You-Go spending.

Reimbursement from Authority Bond Proceeds

Pursuant to statutory authorizations, State agencies enter into contractual arrangements with public authorities to provide for the financing of State capital projects. Such contractual arrangements for financing capital project spending exist with the Empire State Development Corporation, the Dormitory Authority of the State of New York, the Environmental Facilities Corporation, the New York State Housing Finance Authority, and the New York State Thruway Authority. Currently, the primary functional areas for which authority bond proceeds finance capital projects spending are transportation, higher education, and economic development. After the State makes payments directly from appropriations for project costs, it is reimbursed by the public authority from the proceeds of bonds sold previously, except for the “Off-Budget Spending” mentioned previously. The amount of reimbursements received annually reflects the level of bondable capital spending in that year and may fluctuate depending upon when the spending occurs and the timing of related bond sales. As bondable spending fluctuates to reflect the progress of capital programs across all areas, so do the bond receipts received as reimbursements.

State Parks, Environmental, and Other Revenues

The following miscellaneous receipts do not include reimbursements from authority bond proceeds:

State Parks user fees are deposited into the State Parks Infrastructure Fund and the Miscellaneous Capital Projects Fund. These revenues, which are projected at \$36 million in FY 2019 and \$36 million in FY 2020, will be used to finance improvements at various facilities across the State’s park system.

Other miscellaneous environmental revenues include receipts primarily from the sale of surplus State lands, the leases of coastal State property, and the sale of environmental license plates. These are deposited into the Environmental Protection Fund. Other environmental revenues from settlements with individuals and other parties who are liable for damage caused to State environmental properties are deposited in the Natural Resource Damages Fund.

Other moneys and fees are received in the various Capital Projects Funds to support capital programs. Finally, certain receipts reimburse the State for capital spending on behalf of municipalities, public authorities, and private corporations, primarily for transportation and environmental projects. A major portion of these receipts reflect repayments pursuant to previously negotiated agreements.

MISCELLANEOUS RECEIPTS - DEBT SERVICE FUNDS (millions of dollars)							
	<u>FY 2018</u> <u>Results</u>	<u>FY 2019</u> <u>Estimated</u>	<u>Change</u>	<u>Percent</u> <u>Change</u>	<u>FY 2020</u> <u>Projected</u>	<u>Change</u>	<u>Percent</u> <u>Change</u>
General Fund	0	0	0	0.0	0	0	0.0
Other Funds	471	498	27	5.8	393	(105)	(21.1)
All Funds	471	498	27	5.8	393	(105)	(21.1)

Note: Totals may differ due to rounding.

MISCELLANEOUS RECEIPTS - DEBT SERVICE FUNDS (millions of dollars)			
	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>
Mental Hygiene Patient Receipts	314	350	245
Health Patient Receipts	153	144	144
All Other	5	4	4
	<u>471</u>	<u>498</u>	<u>393</u>

Miscellaneous receipts in the Debt Service fund type include patient revenues, rental fees, medical insurance payments, interest income on investments, and other revenues. These revenues are typically first dedicated for the payment of lease-purchase agreements, contractual obligations, and debt service. These revenues support about 8 percent of the State's debt service payments and have been pledged as security for bonds issued for Mental Hygiene facilities and Department of Health facilities. The revenues are also used by the State to pay debt service on general obligation housing bonds. After such requirements are satisfied, the balance of most miscellaneous receipts, together with other receipts and transfers, flow back to the General Fund or to Special Revenue funds to offset the cost of State operations.

Mental Hygiene Patient Receipts

Payments from patients and various third-party payers, including Medicare and insurance companies, for services provided by the mental hygiene agencies are deposited in the Mental Health Services Fund as miscellaneous receipts. The revenues received are used to make lease-purchase payments to the Dormitory Authority of the State of New York (DASNY) for debt service on mental health services bonds. Additionally, portions of State and local assistance and Federal Medicaid payments to not-for-profit community facilities are earmarked to pay their share of debt service. These are also deposited as miscellaneous receipts in the Mental Health Services Fund. DASNY makes loans to eligible not-for-profit agencies providing mental health services and, in return, the voluntary agencies make rental payments equal to the amount of debt service on bonds issued to finance their projects.

Miscellaneous Receipts

Debt Service Funds



The FY 2020 Executive Budget includes legislation to remit not-for-profit lease payments on mental hygiene facilities directly to bond trustees. The proposed change simplifies a complex fund transfer process and allows monies collected from non-profits to be remitted to bondholders sooner. If enacted, mental hygiene patient receipts will be reduced by the amount sent directly to trustees beginning in FY 2020.

Health Patient Receipts

Patient care reimbursements from the Department of Health's hospitals and the veterans' homes (Oxford, New York City and Western New York) are deposited into the Health Income Fund to make lease-purchase rental payments to DASNY. Similar to the Mental Hygiene Services Fund, the receipts are pledged for debt service of bonds issued by DASNY to finance the construction and rehabilitation of State hospitals and veterans' homes. These receipts consist of payments from Medicaid, Medicare, insurance, and individuals.

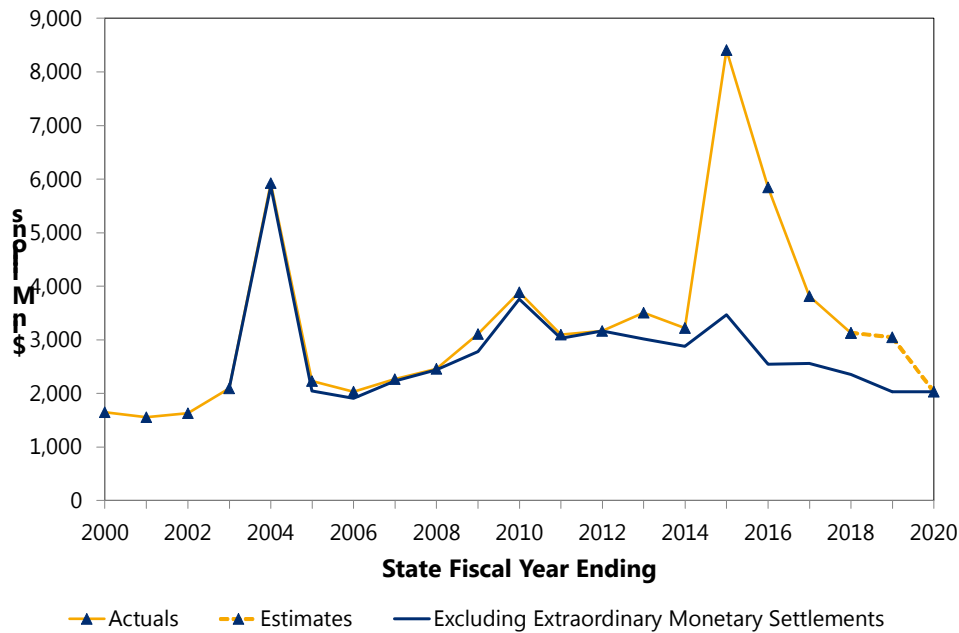
All Other

The all other miscellaneous receipts category primarily includes investment income receipts from the Local Government Assistance Corporation, and payments from local housing agencies to finance the debt service costs on general obligation bonds.

MISCELLANEOUS RECEIPTS - GENERAL FUND (millions of dollars)							
	FY 2018	FY 2019		Percent	FY 2020		Percent
	Actual	Estimated	Change	Change	Projected	Change	Change
General Fund	3,129.0	3,109.0	(20.0)	(0.6)	2,071.0	(1,038.0)	(33.4)

Note: Totals may differ due to rounding.

Miscellaneous Receipts History and Estimates



MISCELLANEOUS RECEIPTS - GENERAL FUND (millions of dollars)					
	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
	Actual	Actual	Actual	Estimated	Projected
Licenses, Fees, Etc.	630.0	644.0	669.0	670.0	693.0
Abandoned Property	527.0	438.0	460.0	450.0	450.0
Reimbursements	232.0	246.0	275.0	107.0	109.0
Investment Income	13.0	24.0	60.0	90.0	38.0
ABC License Fees	66.0	61.0	65.0	66.0	66.0
Motor Vehicle Fees	194.0	174.0	252.0	269.0	303.0
Other Transactions	4,180.0	2,226.0	1,348.0	1,457.0	412.0
Total	5,842.0	3,813.0	3,129.0	3,109.0	2,071.0

Note: Totals may differ due to rounding.

Proposed Legislation

Legislation proposed with this Budget would:

- Expand the New York State Bottle Bill program;
- Impose a bus inspection fee;
- Increase the Notice of Violation fine; and
- Impose a penalty on the use of lead paint.

Description

Miscellaneous receipts cover a broad range of unrelated revenue sources with significant recurring income derived from abandoned property, investment earnings, fees, licenses, fines, and various reimbursements to the State’s General Fund. Each year, reported receipts may be significantly impacted by various nonrecurring transactions.

Significant Legislation

Significant statutory changes to the General Fund Miscellaneous Receipts since 2013 are summarized below.

Subject	Description	Effective Date
Legislation Enacted in 2013		
18-a Utility Assessment	Extended the temporary PSL Article 18-a utility assessment.	April 1, 2013
Legislation Enacted in 2014		
Motor Vehicle Fees	Simplified the fund distribution of Motor Vehicle Fee Receipts.	March 31, 2014
Legislation Enacted in 2015		
Fee Repeal	Repealed 16 nuisance fees charged by various State agencies.	April 1, 2015
Legislation Enacted in 2017		
e-911 Wireless Surcharge	Expanded the e-911 surcharge on wireless phones to include pre-paid cellular phones and cards.	April 1, 2017
Ridesharing for Upstate New York	Authorized Transportation Network Companies (i.e. Uber and Lyft) to operate across New York and levied a 4 percent assessment fee.	July 1, 2017

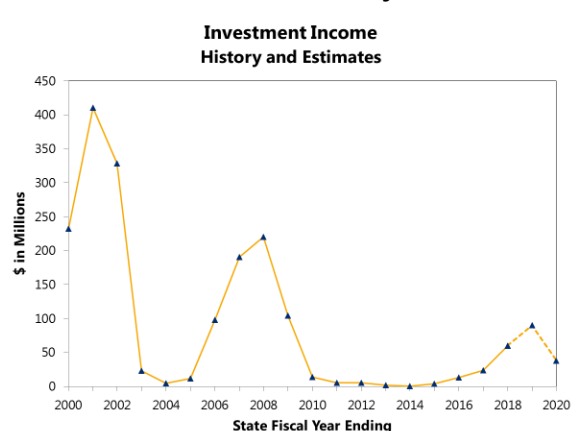
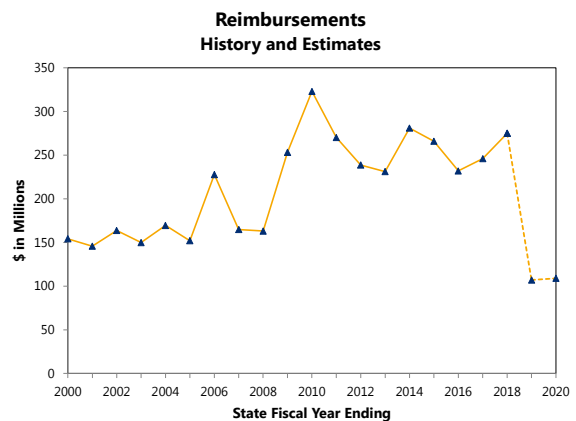
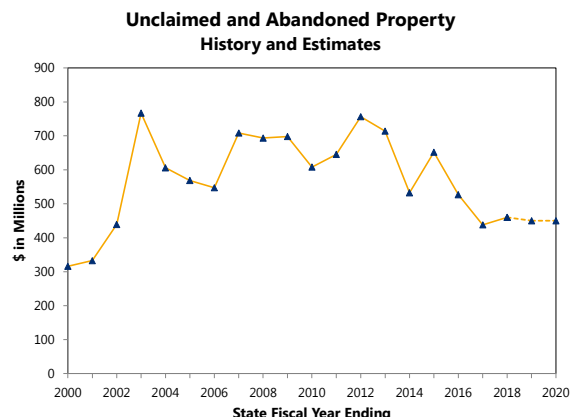
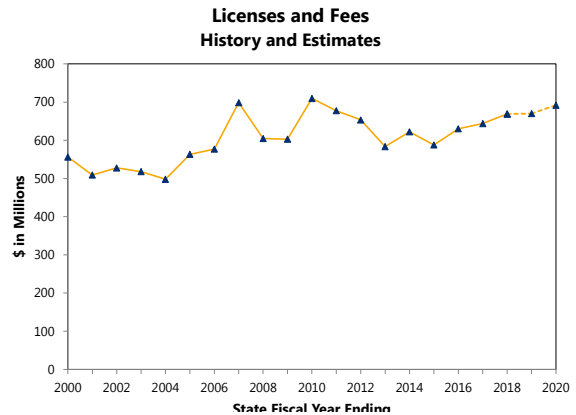
Components of Miscellaneous Receipts

Historically, General Fund license and fee revenues have grown modestly and consistently, aside from minimal peaks and troughs associated with law changes. In FY 2019 and FY 2020, revenues are expected to exhibit moderate growth.

Historically, unclaimed and abandoned property revenue has remained relatively stable with minimal growth, aside from spikes in FY 2003 and FY 2004. This property was associated with the sale of stocks as well as a reduction in the dormancy period of uncashed checks. Unclaimed and abandoned property revenue increased significantly in FY 2012 due to 2011 legislation that reduced dormancy periods on several items, then decreased in FY 2013 and FY 2014 as more claims were paid. In FY 2019 and FY 2020, revenues are expected to remain constant.

Historically, reimbursements of General Fund expenses and revenue advances have remained on a relatively constant three-year cycle with occasional exceptions. In FY 2006, a portion of General Fund Federal Grants were reclassified to this category. FY 2018 indirect cost fund shifts account for the steep decline in FY 2019. FY 2020 receipts are expected to maintain FY 2019 levels.

Trends in investment income are directly related to General Fund Account balances and interest rates. For example, the large increases in FY 2001 and FY 2007 followed by the severe drops in FY 2003 and FY 2010 were the result of the impact of economic growth and subsequent recession on State finances; balances declined and interest rates declined sharply. Investment income receipts are expected to display moderate growth in FY 2019 and FY 2020.



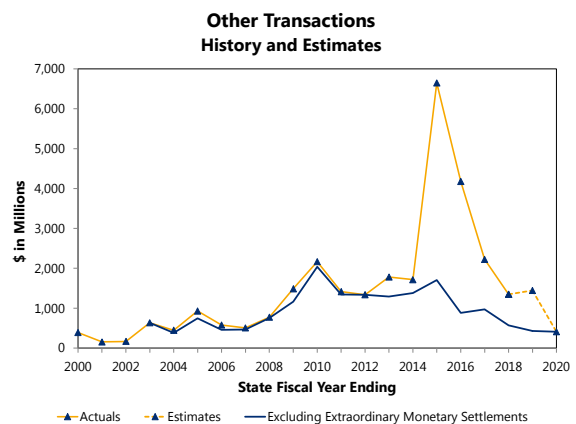
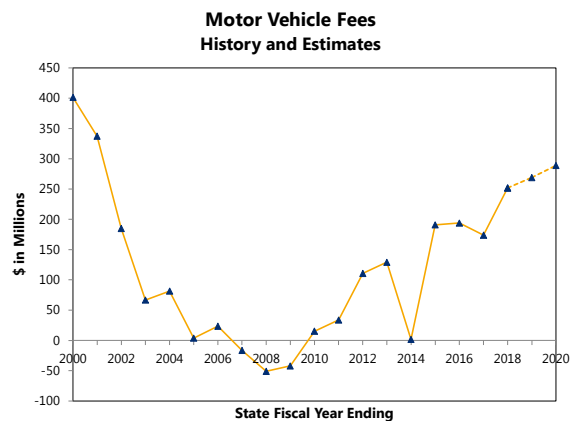
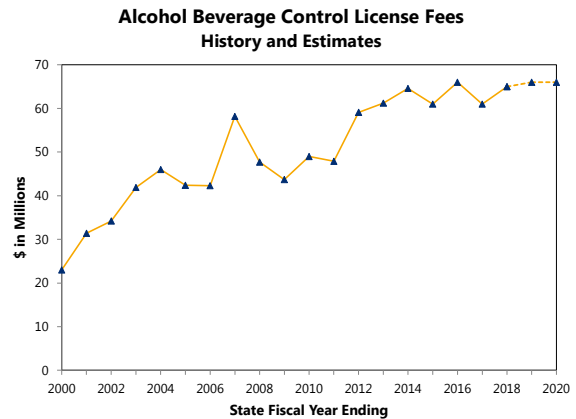
Miscellaneous Receipts General Fund



Alcoholic beverage control license receipts are directly correlated to their license cycles. Though the number of alcoholic beverage control licenses has historically remained relatively constant, statutory changes in license fees and lengths of license cycles have caused variations in receipts. Receipts estimates for FY 2019 and FY 2020 are expected to remain unchanged.

From FY 2006 to FY 2014, \$169.4 million of General Fund motor vehicle fee receipts were swept into the Dedicated Transportation Funds. Effective FY 2015, this fund sweep was replaced with generic transfers to these Dedicated Funds. In addition, all revenue from the Driver Responsibility Assessment is now directed to the Dedicated Highway and Bridge Trust Fund. These changes had no net impact on the Financial Plan. For more information about this revenue source, please see the *Motor Vehicle Fees* section of this document.

Other transactions are an unrelated grouping of transactions and payments, which do not fall under the other miscellaneous receipts categories. Differences in collections year-to-year are the result of large, unusual, and often one-time payments to the State, including: bond issuance charges; a supplemental wireless surcharge; State of New York Mortgage Agency (SONYMA); and extraordinary monetary settlements. Between FY 2015 and FY 2018, other transactions received nearly \$10.3 billion in one-time extraordinary monetary settlements reached by the Department of Financial Services (DFS), Department of Law, and Manhattan District Attorney's Office. For more information on settlements, please see the *Extraordinary Monetary Settlements* section in the *5 Year Financial Plan* volume of this publication.



FY 2019 Estimates

General Fund FY 2019 receipts are estimated to be \$3,109 billion, a decrease of \$20 million (0.6 percent) from FY 2018 results. The FY 2019 estimate includes: \$1,019 million in outstanding monetary settlements; \$670 million in fees, licenses, fines, royalties, and rents; \$450 million in unclaimed and abandoned property; \$269 million in receipts from motor vehicle fees; \$107 million in reimbursements; \$99 million in additional bond issuance charges and cost recovery assessments; \$99 million in Bottle Bill proceeds; \$90 million from the supplemental wireless surcharge; \$90 million in interest earnings on short-term investments and bank accounts (this amount is net of certain expenses incurred in providing banking services to various State agencies); \$70 million in medical provider assessments; \$66 million in receipts from alcohol beverage control license fees; \$30 million in realized refunding savings from the city of New York associated with Sales Tax Asset Receivable Corporation (STARCO) bonding accruals; \$23 million in resources transferred from the New York State Energy Research and Development Authority (NYSERDA) to the General Fund from proceeds collected from the auction or sale of carbon dioxide emissions under the Regional Greenhouse Gas Initiative (RGGI); \$20 million in payments from the New York Power Authority; and \$7 million for certain health care revenues, pursuant to the proposed consolidation of operations from the DOH offset accounts to the General Fund as part of an ongoing effort to simplify the State accounting structure.

FY 2020 Projections

Miscellaneous receipts are projected to be \$2.071 billion in fiscal year FY 2019, a decrease of \$1.038 billion (33.4 percent) from FY 2019 estimates. The FY 2020 projection includes: \$693 million in fees, licenses, fines, royalties, and rents; \$450 million in unclaimed and abandoned property; \$303 million in receipts from motor vehicle fees; \$109 million in reimbursements; \$98 million in additional bond issuance charges and cost recovery assessments; \$95 million in Bottle Bill proceeds; \$90 million from the supplemental wireless surcharge; \$79 million in medical provider assessments; \$66 million in receipts from alcohol beverage control license fees; \$38 million in interest earnings on short-term investments and bank accounts (this amount is net of certain expenses incurred in providing banking services to various State agencies); \$23 million in resources transferred from the New York State Energy Research and Development Authority (NYSERDA) to the General Fund from proceeds collected from the auction or sale of carbon dioxide emissions under the Regional Greenhouse Gas Initiative (RGGI); \$20 million in payments from the New York Power Authority; and \$7 million for certain health care revenues, pursuant to the proposed consolidation of operations from the Department of Health (DOH) offset accounts to the General Fund as part of an ongoing effort to simplify the State accounting structure.

Miscellaneous Receipts Special Revenue Funds



MISCELLANEOUS RECEIPTS - SPECIAL REVENUE FUNDS (millions of dollars)							
	FY 2018 Results	FY 2019 Estimated	Change	Percent Change	FY 2020 Projected	Change	Percent Change
State Fund	17,734	18,399	665	3.7%	17,084	(1,315)	-7.1%
Federal Funds	199	202	3	1.5%	202	0	0.0%
All Funds	17,933	18,601	668	3.7%	17,286	(1,315)	-7.1%

Miscellaneous receipts deposited to special revenue funds represent roughly 20 percent of total special revenue receipts, excluding transfers from other funds. These receipts include: SUNY tuition, fees, and patient income; revenues from lottery ticket sales and Video Lottery Terminals (VLTs) for supplemental education aid; health care surcharges, assessments, and conversion proceeds used to finance Health Care Reform Act (HCRA) programs; assessments on regulated industries, and a variety of fees and licenses. All of which are dedicated to support specific programs. The following table summarizes miscellaneous receipts for FY 2018 results through projected FY 2020.

MISCELLANEOUS RECEIPTS - SPECIAL REVENUE FUNDS (millions of dollars)			
	FY 2018	Estimated	
		FY 2019	FY 2020
HCRA	5,044	5,081	5,206
State University Income	4,776	4,839	4,671
Lottery and VLTs	3,425	3,525	3,432
Industry Assessments	698	687	688
Medicaid (non-HCRA)	858	886	845
Motor Vehicle Fees	414	422	229
All Other	2,718	3,161	2,215
Total	17,933	18,601	17,286

HCRA Financing

HCRA receipts include recurring surcharges and assessments on hospital revenues, physician procedures, a “covered lives” assessment paid by insurance carriers, a portion of cigarette tax revenues, and other revenues dedicated by statute, as well as proceeds from insurance company conversions. These resources help finance the State’s Medicaid program, workforce recruitment and retention, the Elderly Pharmaceutical Insurance Coverage (EPIC) program, Child Health Plus (CHP), Graduate Medical Education, AIDS programs, disproportionate share payments to hospitals and other various public health initiatives and the NYSOH Exchange.

State University Income

The majority of special revenue receipts that support SUNY's operations are provided by tuition, patient revenue, and user fees. SUNY's three teaching hospitals at Brooklyn, Stony Brook and Syracuse, as well as the Long Island Veterans' Home, receive patient revenue from third-party payers including Medicare, Medicaid, insurance companies, and individuals. User fees, which include fees for food, parking, career placement and recreation, are generated from service users; including students, faculty, staff, and the public. Other receipts primarily include interest earnings and fringe benefit recoveries from SUNY's other special revenue accounts.

Lottery

Receipts from the sale of lottery tickets and proceeds from VLTs at racetracks are used to support public education, as well as administrative costs associated with Lottery operations. The State Lottery is discussed in detail in a separate section.

Industry Assessments

State agencies funded entirely from assessments include the Department of Financial Services, the Public Service Commission, and the Workers' Compensation Board.

Medicaid

In addition to the General Fund, State Medicaid costs are financed by various Special Revenue Funds which include the HCRA Resources Fund (described above) and the Provider Assessments Fund, which is currently supported by a partially-reimbursable assessment of 6 percent on nursing home revenues and a 0.35 percent assessment on hospital and home care revenues.

Motor Vehicle Fees

Motor vehicle fees are imposed by the Vehicle and Traffic Law. In general, motor vehicles, motorcycles, trailers, semi-trailers, buses, and other types of vehicles operating in New York are required to be registered with the Department of Motor Vehicles. Numerous other fees, related to the processes of registration or licensing, are also components of motor vehicle fees. Examples are: fees for inspection and emission stickers; repair shop certificates; and insurance civil penalties. Motor Vehicle Fees are discussed in more detail in a separate section.

All Other

ALL OTHER COMPONENTS OF MISCELLANEOUS RECEIPTS (millions of dollars)		
	Estimated	
	FY 2019	FY 2020
Health Care Transformation Fund	1,068	468
Tribal State Compact	337	212
SUNY Dormitory	344	344
Commercial Gaming	456	337
All Other	957	854
Total Miscellaneous Receipts	3,161	2,215

This category includes fees, licenses, and other assessments collected by State agencies, primarily to support all or specific components of their operations. The major sources of all other miscellaneous receipts are detailed below.

The Health Care Transformation Fund contains revenues derived from Fidelis Care’s converting to a for-profit health insurance company in order to enter New York’s health insurance marketplace. It is expected to contribute an estimated \$2 billion in both direct payments and taxes over five years. The revenues are expected to be used to offset State costs for health care activities, including enhancing access to affordable quality healthcare and healthcare related services for the poor, disabled, disadvantaged, elderly, and/or underserved people of the State.

Tribal State Compact receipts consist of all revenues resulting from tribal state compacts executed pursuant to Executive Law.

SUNY Dormitory revenue is generated by student rents of these facilities. All rental revenues initially flow to DASNY for the payment of debt service on SUNY Dormitory Facilities, after which the balance of rental revenues is credited to the State's SUNY Dormitory Income Fund to support other costs associated with SUNY Dormitory Facilities.

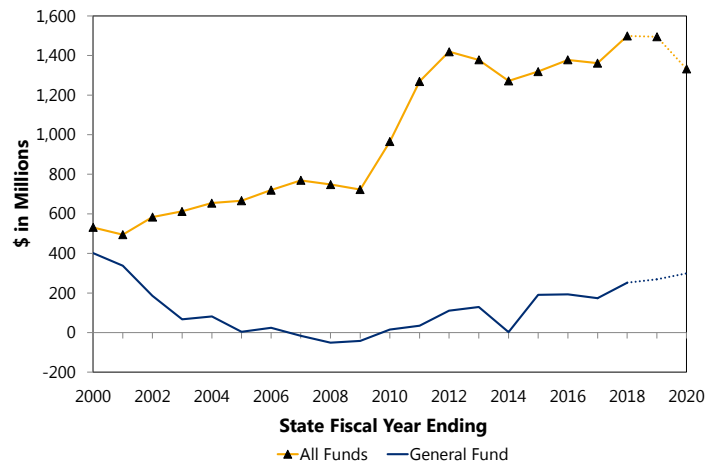
Commercial Gaming revenues represent licensing fee revenue collected by the Gaming Commission from licensed commercial gaming facilities. Commercial Gaming is discussed in more detail in a separate section.

Consistent with past years, the aggregate spending projections (i.e., the sum of all projected spending by individual agencies) in State Special Revenue Funds have been adjusted downward in all fiscal years, based on typical spending patterns and the observed variance between estimated and actual results over time. A corresponding downward adjustment is also made to miscellaneous receipts which is reflected in all other miscellaneous receipts.

MOTOR VEHICLE FEES (millions of dollars)							
	FY 2018 Actual	FY 2019 Estimated	Change	Percent Change	FY 2020 Projected	Change	Percent Change
General Fund	252.2	269.0	16.8	6.7	299.0	30.0	11.2
Capital Funds	833.1	808.1	(25.0)	(3.0)	808.1	0.0	0.0
SR Funds	413.6	418.0	4.4	1.1	225.0	(193.0)	(46.2)
All Funds	1,498.9	1,495.1	(3.8)	(0.3)	1,332.1	(163.0)	(10.9)

Note: Totals may differ due to rounding.

**Motor Vehicle Fee Receipts
History and Estimates**



MOTOR VEHICLE FEES BY FUND (millions of dollars)				
	General Fund	Special Revenue Funds ¹	Capital Projects Funds ²	All Fund Receipts
FY 2010	15	322	628	965
FY 2011	34	422	813	1,269
FY 2012	111	496	812	1,419
FY 2013	129	453	796	1,378
FY 2014	2	485	785	1,272
FY 2015	191	401	727	1,319
FY 2016	194	431	754	1,378
FY 2017	174	401	787	1,362
FY 2018	252	414	833	1,499
Estimated				
FY 2019	269	418	808	1,495
FY 2020				
Current Law	299	421	808	1,528
Proposed Law	299	225	808	1,332

¹Dedicated Mass Transportation Trust Fund (DMTTF), the MTA Aid Trust Account and other SR Accounts.
²Dedicated Highway and Bridge Trust Fund (DHBTf).

Proposed Legislation

Legislation proposed with this Budget would change the process for distributing certain motor vehicle fees revenues to the Metropolitan Transportation Authority (MTA).

Description

Fee Base

Motor vehicle fees are imposed by the Vehicle and Traffic Law. In general, motor vehicles, motorcycles, trailers, semi-trailers, buses, and other types of vehicles operating in New York are required to be registered with the Department of Motor Vehicles. In 2017, 11.3 million vehicles were registered in New York State, including 9.5 million standard series vehicles and 775,400 commercial vehicles. The Vehicle and Traffic Law also requires drivers to be licensed by the Department of Motor Vehicles. The current license renewal period is eight years. In 2017, New York State had 12.1 million licensed drivers. Numerous other fees, related to the processes of registration or licensing, are also components of motor vehicle fees. Examples are: fees for inspection and emission stickers; repair shop certificates; and insurance civil penalties.

Fee Schedules

Most vehicle registration fees in New York are based on weight. Two important exceptions are buses, which are charged according to seating capacity, and semi-trailers, which are charged a flat fee. Registration fees for vehicles weighing less than 18,000 pounds are imposed biennially. The main registration fees are as follows:

MAIN REGISTRATION FEES		
Type of Vehicle	Weight of Vehicle	Annual Fee* (dollars)
Passenger vehicle	Each 100 lbs. or major fraction thereof up to 3,500 lbs.	0.81
	Plus: for each 100 lbs. or major fraction thereof above 3,500 lbs.	1.21
Passenger vehicle - minimum fee		12.94
Passenger vehicle - maximum fee		70.08
Passenger vehicle propelled by electricity		16.18
Auto truck and light delivery vehicle	Each 500 lbs. maximum gross weight or fraction thereof	3.60
Tractors (registered separately from semi-trailers)	Each 100 lbs. maximum gross weight or fraction thereof	1.51
Trailers	Each 500 lbs. maximum gross weight or fraction thereof	5.39
Semi-trailers - pre-1989 model year		28.75 per year
Semi-trailers - model year 1989 or later		28.75 per year or 86.25 for a period of 5.5 to 6.5 years
Bus - seating capacity 15 to 20 passengers		74.75

*This does not include the \$25 supplemental fee imposed on registrations in the Metropolitan Commuter Transportation District (MCTD).

The main licensing fees are listed below:

MAIN DRIVER LICENSING FEES	
Type of License	Fee* (dollars)
Photo Fee	12.50
Original/Renewal	
<ul style="list-style-type: none"> A, B, CDL, or C (Commercial) 	9.50 - for each six months
<ul style="list-style-type: none"> Non CDL/C or E 	6.25 - for each six months
<ul style="list-style-type: none"> D (Passenger) 	3.25 - for each six months
<ul style="list-style-type: none"> M (Motorcycle) 	3.75 - for each six months
*This does not include the \$1 supplemental fee per six months imposed on licenses in the MCTD.	

Administration

Registration and licensing occur in person or by mail at the central and district offices of the Department of Motor Vehicles, and county clerks' offices in most counties. Many transactions can also be completed via the Internet. County clerks receive 12.7 percent of gross receipts as compensation. This totaled \$46.8 million in FY 2018.

Fee Exemptions

Certain vehicles registered in New York are exempt from registration fees. The exemptions include: vehicles owned by the State or municipalities; passenger vehicles owned by consular offices; and vehicles owned and used for the transportation of animals by societies for the prevention of cruelty to animals. Vehicles owned by nonresidents and registered with a political jurisdiction outside the State are not usually required to be registered in New York. The revenue loss from these exemptions is minimal.

Significant Legislation

Significant statutory changes to motor vehicle fees since 2013 are summarized below.

Subject	Description	Effective Date
Legislation Enacted in 2014		
GF MVF Transfer	General Fund transfers to the DMTTF and DHBTf that are specifically sourced from General Fund motor vehicle fee receipts were replaced with generic General Fund transfers to these two funds.	April 1, 2014
Legislation Enacted in 2016		
Redirect funds to DHBTf	Redirected fees from the DMV Seized Assets, Compulsory Insurance, Internet Point Insurance Reduction Program, and the Motorcycle Safety Funds to the DHBTf.	April 13, 2016

Fee-Liability

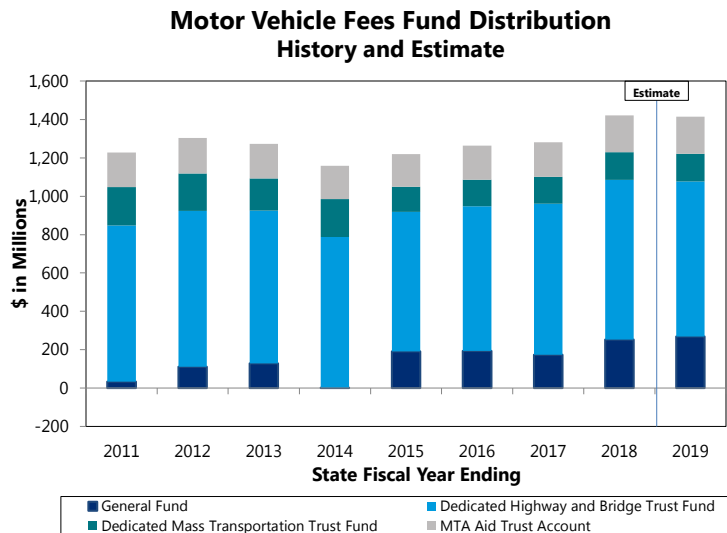
Vehicle registration and driver licensing fee totals are a function of fee schedules, the number of licensed drivers and registered vehicles, and the number of years between license and vehicle registration renewals. These motor vehicle fees have fluctuated little as a result of economic conditions, but law changes in 2000 and in 2009 altered revenue collections. In 2000, the license renewal period was extended from four to eight years. In 2009, most registration and license fees were increased by 25 percent.

Receipts: Estimates and Projections

All Funds

FY 2019 Estimates

All Funds FY 2019 receipts are estimated to be \$1,495 million, a decrease of \$3.9 million (0.3 percent) from FY 2018.



FY 2020 Projections

All Funds FY 2020 receipts are projected to be \$1,332 million, a decrease of \$163 million (10.9 percent) from FY 2019. Excluding the Budget proposal (see below), receipts are projected to increase by \$33 million.

General Fund

General Fund motor vehicle fees are estimated to be \$269 million in FY 2019 and \$299 million in FY 2020.

Other Funds

Revenues from the 25 percent registration and license fee increase, effective September 1, 2009, are directed solely to the Dedicated Highway and Bridge Trust Fund (DHBTF). The balance of registration and license fees is dedicated as follows: 80 percent to the DHBTF and 20 percent to the Dedicated Mass Transportation Trust Fund (DMTTF).

All receipts from the supplemental fee on registrations and licenses are dedicated to the MTA Aid Trust Account of the MTA Special Assistance Fund.

In FY 2019, the DHBTF will receive an estimated \$808 million and the DMTTF will receive an estimated \$144 million. The MTA Aid Trust Account is estimated to receive \$193 million. Various other dedicated funds (Special Revenue Other) are estimated to receive a total of \$81 million.

In FY 2020, the DHBTF is projected to receive \$808 million and the DMTTF is projected to receive \$144 million. Various other dedicated funds (Special Revenue Other) are projected to receive a total of \$81 million.

Beginning in FY 2020, legislation proposed with this Budget would no longer direct receipts from the supplemental fee on registrations and licenses to the MTA Aid Trust Account of the MTA Financial Assistance Funds. Receipts would be directly provided to the MTA.

To qualify to receive Federal grants, the State must comply with guidelines established by the Federal government. Each Federal grant must be used pursuant to Federal laws and regulations. Additionally, the State is required to follow specific cash management practices regarding the timing of cash draws from the Federal government pursuant to regulations for each grant award. In most cases, the State finances spending in the first instance, then receives reimbursement from the Federal government.

Total receipts from the Federal government are projected at \$62.8 billion in FY 2019 and \$63.8 billion in FY 2020. These revenues represent approximately one-third of total receipts in governmental funds, excluding general obligation bond proceeds, and are deposited into the General Fund, Special Revenue, Capital Projects and the Debt Service fund types.

FEDERAL GRANTS BY FUND (millions of dollars)								
	General	Special Revenue Funds			Capital	Debt	Total	
	Fund	Medicaid	Welfare	All Other				Total
					Funds	Funds	Funds	Funds
FY 2003	6	17,297	2,542	11,847	31,686	1,567	0	33,259
FY 2004	654	21,435	2,018	11,668	35,121	1,548	0	37,323
FY 2005	9	22,666	1,998	9,828	34,492	1,721	0	36,222
FY 2006	0	21,524	2,097	9,741	33,362	1,767	0	35,129
FY 2007	151	22,906	2,243	8,540	33,689	1,738	0	35,578
FY 2008	69	22,417	2,184	8,494	33,095	1,745	0	34,909
FY 2009	45	24,844	2,597	9,466	36,907	1,882	0	38,834
FY 2010	71	30,054	2,721	10,605	43,380	2,061	13	45,525
FY 2011	55	31,423	2,674	12,596	46,693	2,499	57	49,304
FY 2012	60	28,195	2,520	11,640	42,355	2,115	80	44,610
FY 2013	62	27,043	2,583	10,950	40,576	2,126	79	42,843
FY 2014	0	26,538	3,168	11,699	41,405	2,313	71	43,789
FY 2015	2	31,852	2,633	12,044	46,531	2,030	73	48,636
FY 2016	0	34,874	2,863	11,368	49,105	2,146	73	51,324
FY 2017	0	38,923	2,300	11,502	52,725	2,608	73	55,406
FY 2018	0	43,002	2,161	11,581	56,744	2,125	73	58,942
Estimated								
FY 2019	0	46,487	2,927	10,888	60,302	2,433	74	62,809
FY 2020	0	48,073	2,627	10,770	61,470	2,229	73	63,772

General Fund

Federal grants are deposited into the General Fund only in limited instances. The Federal subsidy payment related to Medicare Part D was the main Federal grant in the General Fund in prior years, however, starting in FY 2014, the State has received this payment through a different reimbursement mechanism.

Special Revenue Funds

Federal grants account for nearly two-thirds of all special revenue receipts and are used to support a wide range of programs at the State and local government level. Medicaid is the single largest program supported by Federal funds, and helps finance health care, medical supplies, and professional services for eligible persons. The State receives funds from the Federal government to make payments to providers for both State-operated and non-State-operated facilities. The State-operated category includes facilities of the Offices of Mental Health and People with Developmental Disabilities. These facilities receive Medicaid funds for the delivery of eligible services to patients.

Other Federal grants in the Special Revenue Funds support programs administered primarily by the departments of Education, Family Assistance, Health, and Labor. These programs include Public Assistance, Foster Care, Food and Nutrition Services, and Supplementary Educational Services. The State also receives Federal grants to support extraordinary costs associated with disaster assistance.

Capital Projects Funds

Federal grants in Capital Projects Funds finance transportation planning, engineering, and construction projects. Federal grants also support local wastewater treatment projects financed through the State's Revolving Loan Fund. Other Federal grants are for the rehabilitation of State armories, eligible housing programs, and other environmental purposes.

Debt Service Funds

Federal grants in the Debt Service fund type reflect interest subsidies received on Build America Bonds (BABs), pursuant to a financing option provided to the State through the American Recovery and Reinvestment Act (ARRA).

All or portions of several tax sources, including the personal income tax, transportation-related taxes and fees, cigarette taxes, sales and use taxes, and corporate taxes are statutorily dedicated to various Special Revenue, Debt Service and Capital Projects Funds. The following discussion identifies the statutory provisions which establish the dedicated funds, the source of dedicated tax receipts, the formula used to allocate tax receipts to the funds, and the purposes for which those deposits may be used.

The following sections do not include the estimated revenue associated with the FY 2020 Executive Budget proposal to create a recreational cannabis tax.

Special Revenue Funds

School Tax Relief Fund (“STAR” Fund-053)

The School Tax Relief Fund (STAR) was established by Section 97 of the State Finance Law. The Fund consists of all moneys credited or transferred thereto from the General Fund or from any other fund or sources. The moneys of the Fund are appropriated for school property tax exemptions granted pursuant to the Real Property Tax Law.

SCHOOL TAX RELIEF FUND (STAR)						
(millions of dollars)						
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
	Actual	Estimated	Recommended	Recommended	Recommended	Recommended
Personal Income Tax	2,589	2,424	2,186	2,073	1,979	1,858
Total STAR	2,589	2,424	2,186	2,073	1,979	1,858

Dedicated Mass Transportation Trust Fund (“DMTTF” Fund-073)

The Dedicated Mass Transportation Trust Fund (DMTTF) was established by Section 89-c of the State Finance Law. State tax receipts of the DMTTF are derived from the State’s motor fuel tax, motor vehicle fees, and a portion of the petroleum business tax. The moneys of the DMTTF, pursuant to an appropriation, are used for the reconstruction, replacement, purchase, modernization, improvement, reconditioning, preservation and maintenance of mass transit facilities, vehicles, and rolling stock, or the payment of debt service or operating expenses incurred by mass transit operating agencies, and for rail projects. Revenue shown below does not include an annual General Fund transfer of \$62.7 million, effective FY 2015, or motor vehicle fees.

DEDICATED MASS TRANSPORTATION TRUST FUND (DMTTF)						
(millions of dollars)						
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
	Actual	Estimated	Recommended	Recommended	Recommended	Recommended
Petroleum Business Tax	355	370	376	359	353	350
Motor Fuel Tax	109	111	108	108	108	108
Total DMTTF	465	481	484	467	460	458

Metropolitan Transportation Authority Financial Assistance Fund (“MTAFAF” Fund-225)

The Metropolitan Transportation Authority Financial Assistance Fund (MTAFAF) was established by Section 92-ff of the State Finance Law under the joint custody of the Commissioner of Taxation and Finance and the State Comptroller. The fund contains all revenues derived from the metropolitan commuter transportation mobility tax, supplemental motor vehicle fees, the supplemental tax on passenger car rentals in the Metropolitan Commuter Transportation District (MCTD) and the tax on New York City taxicab and hail vehicle trips. Revenues generated from the mobility tax are directed to the Mobility Tax Trust Account of the MTA Financial Assistance Fund. Revenues generated from the supplemental motor vehicle fees, supplemental tax on car rentals, and the tax on taxicab rides are directed to the MTA Aid Trust Account of the MTA Financial Assistance Fund. Revenue shown below does not include motor vehicle fees.

Due to the mobility tax revenue distribution change, there is no MTAFAF revenue from the mobility tax after FY 2018.

The FY 2020 Executive Budget projects no MTAFAF revenue from the auto rental tax and the taxicab surcharge after FY 2019 due to the Executive Budget proposal to provide the revenues directly to the MTA.

METROPOLITAN TRANSPORTATION AUTHORITY FINANCIAL ASSISTANCE FUND (MTAFAF)						
(millions of dollars)						
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
	Actual	Estimated	Recommended	Recommended	Recommended	Recommended
Payroll Tax	1,439	0	0	0	0	0
Auto Rental Tax	45	49	0	0	0	0
Taxicab Surcharge	56	50	0	0	0	0
Total MTAFAF	1,540	99	0	0	0	0

Mass Transportation Operating Assistance Fund (“MTOA” Fund-313)

The Mass Transportation Operating Assistance Fund (MTOA) was established by Section 88-a of the State Finance Law. Tax receipts dedicated to the fund are comprised of a business tax surcharge levied on the portion of the State general business corporation tax, corporations and utilities tax, and the insurance tax allocated to the Metropolitan Commuter Transportation District (MCTD), a 0.375 percent sales tax levied in the MCTD, a portion of the petroleum business tax, and a portion of the taxes on transportation and transmission companies and telecommunication services. The moneys of the MTOA are subject to appropriation and are allocated among two accounts within the Fund. The moneys in each account must be used for the transportation assistance purposes for which each account was established.

The FY 2020 Executive Budget proposes a new supplemental auto rental tax of five percent on receipts from the rental of a passenger car outside the Metropolitan Commuter Transportation District (MCTD). All receipts would be directed to the Public Transportation Systems Operating Assistance Account.

Dedicated Fund Tax Receipts



The accounts of MTOA include:

- Public Transportation Systems Operating Assistance Account (PTOA - Fund 313-01); and
- Metropolitan Mass Transportation Operating Assistance Account (MMTOA - Fund 313-02).

The PTOA receives:

- 45 percent of the 19.7 percent of the basic petroleum business tax that is dedicated to the MTOA;
- 26 percent of the receipts collected from the tax imposed on transportation and transmission companies by Sections 183 and 184 of Article 9 of the Tax Law; and
- 1.976 percent of the receipts collected from the tax on charges for telecommunication services by section 186-e of Article 9 of the Tax Law.

The MMTOA receives:

- 54 percent of the receipts collected from the taxes imposed on transportation and transmission companies by Sections 183 and 184 of Article 9 of the Tax Law;
- 4.104 percent of the receipts collected from the tax on charges for telecommunication services by section 186-e of Article 9 of the Tax Law;
- All tax receipts from the business tax surcharge imposed on taxpayers that are subject to the corporation franchise tax, corporation and utilities tax, and the insurance tax and that conduct business in the MCTD;
- Tax receipts from the 0.375 percent sales and use tax imposed in the MCTD; and
- 55 percent of the 19.7 percent of the basic petroleum business tax that is dedicated to the MTOA.

MASS TRANSPORTATION OPERATING ASSISTANCE FUND (MTOA)						
(millions of dollars)						
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
	Actual	Estimated	Recommended	Recommended	Recommended	Recommended
Corporate Surcharges						
Corporate Franchise Tax	754	820	852	888	932	978
Corporation and Utilities Tax	109	106	109	113	117	120
Insurance Tax	168	194	251	253	266	280
Bank Tax	57	21	11	0	0	0
Other						
Sales and Use Tax	942	972	1,021	1,063	1,099	1,137
Petroleum Business Tax	129	132	134	128	126	119
Transmission Tax ¹	55	50	50	49	49	49
Auto Rental Tax	0	0	11	22	22	22
Total MTOA	2,213	2,295	2,439	2,517	2,610	2,705

Health Care Reform Act Resources Fund (“HCRA” Fund-061)

The Health Care Reform Act (HCRA) Resources Fund was established by Section 92-dd of the State Finance Law and receives 76 percent of total State cigarette tax revenues. Other revenues dedicated to this Fund include hospital surcharges and assessments, a Covered Lives Assessment on commercial insurers and a portion of cigarette revenue from New York City’s locally imposed cigarette tax. These resources support numerous public health, Medicaid and insurance programs for the uninsured/underinsured; including Family Health Plus, Healthy NY, Child Health Plus, anti-tobacco initiatives, graduate medical education, working disabled, and indigent care.

The FY 2020 Executive Budget proposes a new comprehensive tobacco control policy which includes a new vapor products excise tax. All receipts would be directed to the Health Care Reform Act Resources Fund.

HEALTH CARE REFORM ACT RESOURCE FUND (HCRA)						
(millions of dollars)						
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
	Actual	Estimated	Recommended	Recommended	Recommended	Recommended
Cigarette Tax	829	785	736	691	658	627
Vapor Excise Tax	0	0	10	39	39	39
Total HCRA	829	785	746	730	697	666

Medical Marihuana Trust Fund (“MMTF” Fund-S02)

The Medical Marihuana Trust Fund (MMTF) was established by Section 89-h of the State Finance Law. The Fund consists of all moneys from a seven percent excise tax imposed when a New York dispensary sells medical marihuana to a patient or designated caregiver, which is remitted by the dispensary.

MEDICAL MARIHUANA TRUST FUND (MMTF)						
(millions of dollars)						
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
	Actual	Estimated	Recommended	Recommended	Recommended	Recommended
Medical Marihuana Tax	2	4	4	4	4	4
Total MMTF	2	4	4	4	4	4

Highway Use Tax Administration Account (“HUTAA” Fund S-03)

The Highway Use Tax Administration Account (HUTAA) was established by Section 99-y of the State Finance Law. This account consists of all monies collected from highway use tax registration fees collected pursuant to the highway use tax. The revenue generated from these fees is used for costs of the Commissioner of Taxation and Finance to administer the highway use tax.

HIGHWAY USE TAX ADMINISTRATION ACCOUNT (HUTAA)						
(millions of dollars)						
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
	Actual	Estimated	Recommended	Recommended	Recommended	Recommended
Highway Use Tax	2	(2)	0.4	0.4	1	0.4
Total HUTAA	2	(2)	0.4	0.4	1	0.4

Interactive Fantasy Sports Fund (“IFS” Fund-S04)

There is a 15 percent tax on interactive fantasy sports gross revenue generated in New York and an additional tax rate of one-half of one percent (capped at \$50,000 per taxpayer annually). Based on Section 71 of the State Finance Law, OSC will direct all revenues to the Interactive Fantasy Sports Fund for the sole purpose of providing aid to education.

INTERACTIVE FANTASY SPORTS (IFS)						
(millions of dollars)						
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
	Actual	Estimated	Recommended	Recommended	Recommended	Recommended
IFS Tax	5	5	5	5	5	5
Total IFS	5	5	5	5	5	5

Debt Service Funds

General Debt Service Fund (“GDS” Fund-311)

The General Debt Service Fund (GDS) includes the Revenue Bond Tax Fund and the Sales Tax Revenue Bond Fund.

The Revenue Bond Tax Fund was established by Section 92-z of the State Finance Law. The Fund receives 25 percent of the receipts from the State personal income tax imposed by Article 22 of the Tax Law. Effective April 1, 2018, the FY 2019 Enacted Budget legislation increased the Revenue Bond Tax Fund deposit requirement from 25 percent to 50 percent. Payments from the Fund are pledged to pay the debt service on State-supported Personal Income Tax Revenue Bonds, which support a variety of capital projects. No later than the fifteenth day of each month, the Comptroller is required to pay over to the General Fund all money in the RBTF in excess of the aggregate amount required to be set aside for debt service.

The Sales Tax Revenue Bond Fund was established by Section 92-h of the State Finance Law. The Fund receives moneys collected from the imposition of the State sales and compensating use taxes in an amount attributable to a one percent rate of taxation. This will increase to a two percent rate when LGAC bonds have been retired or defeased. Payments from the Fund are dedicated to pay the debt service on State Sales Tax Revenue Bonds which, along with State PIT Revenue Bonds, are used to finance various State capital purposes. The Comptroller is required to pay over to the General Fund all money in the STBF in excess of the aggregate amount required to be set aside for debt service.

GENERAL DEBT SERVICE (GDS) (millions of dollars)						
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
	Actual	Estimated	Recommended	Recommended	Recommended	Recommended
Personal Income Tax	12,875	25,072	26,507	27,877	29,513	31,280
Sales and Use Tax	3,388	3,560	3,753	3,931	4,064	4,206
Total GDS	16,264	28,632	30,260	31,808	33,577	35,486

Clean Water/Clean Air Fund (“CWCAF” Fund-361)

The Clean Water Clean Air Fund (CWCAF) was established by Section 97-bbb of the State Finance Law. The Fund receives all real estate transfer taxes in excess of the deposit to the Environmental Protection Fund. The moneys in the Fund are used to reimburse the General Fund for transfers made to the General Debt Service Fund to pay the debt service on 1996 Clean Water/Clean Air general obligation bonds. At the end of each month, the Comptroller is required to pay over to the General Fund all moneys in the CWCAF in excess of the aggregate amount required for such reimbursements.

CLEAN WATER/CLEAN AIR FUND (CWCAF) (millions of dollars)						
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
	Actual	Estimated	Recommended	Recommended	Recommended	Recommended
Real Estate Transfer Tax	1,006	1,011	1,029	1,064	1,100	1,144
Total CWCAF	1,006	1,011	1,029	1,064	1,100	1,144

Local Government Assistance Tax Fund (“LGATF” Fund-364)

The Local Government Assistance Tax Fund (LGATF) was established by Section 92-r of the State Finance Law. The Fund receives moneys collected from the imposition of the State sales and compensating use taxes in an amount attributable to a 1 percent rate of taxation. Payments from the Fund are dedicated to pay the debt service on State-supported Local Government Assistance Corporation Bonds originally issued in the early 1990s to finance payments to local governments previously financed by the State. The Comptroller is required to pay over to the General Fund all money in the LGATF in excess of the aggregate amount required to be set aside for debt service. In addition, local aid payments due to New York City and assigned by the City to the Sales Tax Asset Receivable Corporation (STARC) are appropriated from the LGATF.

LOCAL GOVERNMENT ASSISTANCE TAX FUND (LGATF) (millions of dollars)						
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
	Actual	Estimated	Recommended	Recommended	Recommended	Recommended
Sales and Use Tax	3,388	3,560	3,753	3,931	4,064	4,206
Total LGATF	3,388	3,560	3,753	3,931	4,064	4,206

Capital Projects Funds

Dedicated Highway and Bridge Trust Fund (“DHBTF” Fund-072)

The Dedicated Highway and Bridge Trust Fund (DHBTF) was established by Section 89-b of the State Finance Law. The DHBTF receives moneys from the motor fuel tax, motor vehicle fees, highway use tax, auto rental tax, petroleum business tax, and a portion of the taxes on transportation and transmission companies and telecommunication services. The moneys of the Fund, pursuant to an appropriation, are used to support transportation, including the reconstruction, replacement, reconditioning, restoration, rehabilitation and preservation of State, county, town, city and village roads, aviation projects, matching Federal highway grants, snow and ice removal, acquisition of real property, bus safety inspection, rail freight facilities, intercity rail passenger facilities, state, municipal and private ports, ferry lines, and certain DMV expenses. Payments from the Fund are also pledged to support the debt service on State-supported Dedicated Highway and Bridge Trust Fund Bonds. Revenue shown below does not include an annual General Fund transfer of roughly \$66 million, effective FY 2015, or motor vehicle fees. Revenue collected from taxes on aviation fuel is directed to an Aviation Purpose Account within the DHBTF.

DEDICATED HIGHWAY AND BRIDGE TRUST FUND (DHBTF)						
(millions of dollars)						
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
	Actual	Estimated	Recommended	Recommended	Recommended	Recommended
Petroleum Business Tax	608	641	651	622	611	606
Motor Fuel Tax	403	420	407	407	407	407
Highway Use Tax	91	146	142	143	144	146
Transmission Tax	14	14	14	14	14	14
Auto Rental Tax	78	81	84	87	90	93
Total DHBTF	1,194	1,301	1,298	1,272	1,266	1,266

Environmental Protection Fund (“EPF” Fund-078)

The Environmental Protection Fund (EPF) was established by Section 92-s of the State Finance Law. The Fund currently receives real estate transfer taxes in the amount of \$119.1 million annually. Moneys in the Fund are deposited to the following accounts:

- The Solid Waste Account for any non-hazardous municipal landfill closure project, municipal waste reduction or recycling project, or local solid waste management plans.
- The Parks, Recreation and Historic Preservation Account for any municipal park project, historic preservation project, urban cultural park project, waterfront revitalization program, or coastal rehabilitation project.
- The Open Space Account for any open space land conservation project, bio-diversity stewardship and research, non-point source abatement and control projects, upon the request of the Director of the Division of the Budget.

ENVIRONMENTAL PROTECTION FUND (EPF)						
(millions of dollars)						
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
	<u>Actual</u>	<u>Estimated</u>	<u>Recommended</u>	<u>Recommended</u>	<u>Recommended</u>	<u>Recommended</u>
Real Estate Transfer Tax	119	119	119	119	119	119
Total EPF	119	119	119	119	119	119

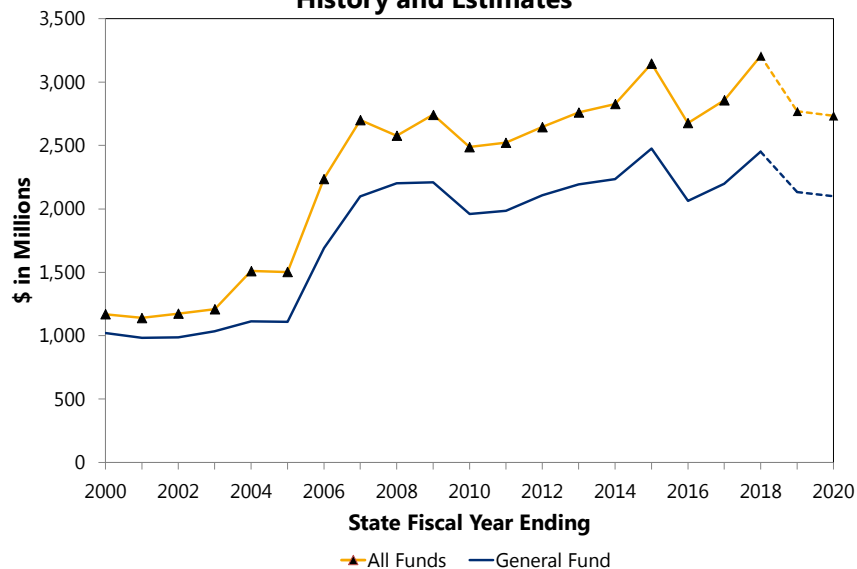
Audit and Compliance Receipts



AUDIT AND COMPLIANCE RECEIPTS (millions of dollars)							
	FY2018	FY2019		Percent	FY2020		Percent
	Actual	Estimated	Change	Change	Projected	Change	Change
General Fund	2,451.1	2,132.0	(319.1)	(13.0)	2,100.0	(32.0)	(1.5)
Other Funds	755.5	638.0	(117.5)	(15.6)	635.0	(3.0)	(0.5)
All Funds	3,206.6	2,770.0	(436.6)	(13.6)	2,735.0	(35.0)	(1.3)

Note: Totals may differ due to rounding.

Audit and Compliance Receipts History and Estimates



Estimated Receipts for FY 2019

ALL FUNDS AUDIT AND COMPLIANCE COLLECTIONS BY TAX TYPE (millions of dollars)				
	FY2018	FY2019	Change from Prior Year	Percent Change from Prior Year
Personal Income Tax	1,343	1,352	9	0.7
User Taxes and Fees	554	482	(72)	(12.9)
Business Taxes	1,270	904	(366)	(28.8)
Corporation and Utilities Taxes	88	44	(44)	(49.9)
Corporation Franchise Tax	679	576	(103)	(15.1)
Bank Tax	439	263	(176)	(40.1)
Insurance Tax	37	9	(28)	(75.5)
Petroleum Business Taxes	28	12	(16)	(57.3)
Other Taxes	40	32	(8)	(19.4)
Total	3,207	2,770	(437)	(13.6)

Audit and compliance receipts for FY 2019 are estimated to be \$2.770 billion, a decrease of \$437 million (13.6 percent) from FY 2018. The decrease is driven primarily by lower corporation franchise tax and bank tax receipts.

Estimated Receipts for FY 2020

ALL FUNDS AUDIT AND COMPLIANCE COLLECTIONS BY TAX TYPE (millions of dollars)				
	FY2019	FY2020	Change from Prior Year	Percent Change from Prior Year
Personal Income Tax	1,352	1,411	59	4.4
User Taxes and Fees	482	441	(41)	(8.5)
Business Taxes	904	854	(50)	(5.5)
Corporation and Utilities Taxes	44	44	0	0.0
Corporation Franchise Tax	576	697	121	21.0
Bank Tax	263	71	(192)	(73.0)
Insurance Tax	9	31	22	244.4
Petroleum Business Taxes	12	11	(1)	(8.3)
Other Taxes	32	29	(3)	(9.4)
Total	2,770	2,735	(35)	(1.3)

Audit and compliance receipts for FY 2020 are projected to be \$2.735 billion, a decrease of \$35 million (1.3 percent) from FY 2019. The decrease in bank tax and user taxes is partially offset by higher corporation franchise tax and personal income tax receipts.

Proposed Legislation

Legislation proposed with this Budget would:

- Increase audit assessment activities through the hiring of additional auditors at the Department of Taxation and Finance.

Description

This section summarizes the cash collected by the Department of Taxation and Finance related to its audit and compliance activities. The amounts reported are already reflected in the estimates of individual tax receipts contained in this volume.

The Department of Taxation and Finance’s Office of Tax Enforcement (OTE) is composed of the Audit Division, the Division of Collections and Civil Enforcement (“Collections”) and the Criminal Division. The Audit Division is responsible for verifying that the correct tax has been paid and the Compliance Division is responsible for collecting the correct tax.

The collections base of OTE activities is the correct amount of taxes legally required to be paid, which is verified through the audit process. Receipts from enforcement activities are the result of incorrect tax payments, including filing returns with math errors, filing past due returns or the

incorrect return, the improper interpretation of Tax Law, regulations or instructions, and tax evasion that results in a gap between the amount that is legally due and required to be paid and the amount that was voluntarily paid. In certain instances, taxpayers may also be subject to penalties and interest.

Growth in Recent Collections

GROWTH ALL FUNDS AUDIT AND COMPLIANCE COLLECTIONS			
(millions of dollars)			
	All Funds Audit and Compliance Collections	Change from Prior Year	Percent Change from Prior Year
FY 2002	1,209	68	6.0
FY 2003	1,510	301	24.9
FY 2004	1,232	(278)	(18.4)
FY 2005	1,503	271	22.0
FY 2006	2,237	734	48.8
FY 2007	2,705	468	20.9
FY 2008	2,585	(120)	(4.4)
FY 2009	2,743	158	6.1
FY 2010	2,489	(254)	(9.3)
FY 2011	2,522	33	1.3
FY 2012	2,646	124	4.9
FY 2013	2,759	113	4.3
FY 2014	2,827	68	2.5
FY 2015	3,146	319	11.3
FY 2016	2,677	(469)	(14.9)
FY 2017	2,857	180	6.7
FY 2018	3,207	350	12.2
Estimated			
FY 2019	2,770	(437)	(13.6)
FY 2020	2,735	(35)	(1.3)

All amounts after FY 2009 include Metropolitan Commuter Transportation Mobility Tax (through FY 2018) and Taxicab Surcharge receipts. All amounts after FY 2017 include Metropolitan Commuter Transportation District Auto Rental and Sales Tax receipts.

Trends in All Funds Audit and Tax Receipts

The table below reports All Funds audit and compliance collections, All Funds tax receipts, and All Funds audit and compliance collections as a percent of All Funds tax receipts. Although All Funds audit and compliance receipts have fluctuated over time, they have consistently comprised roughly 3 percent to 5 percent of total All Funds tax receipts. This pattern is expected to continue in both FY 2019 and FY 2020.

All FUNDS AUDIT AND COMPLIANCE COLLECTIONS			
as a Percent of All Funds Tax Receipts			
(millions of dollars)			
	All Funds Audit and Compliance Collections	All Funds Tax Receipts	Audit and Compliance as a Percent of All Funds
FY 2002	1,209	42,475	2.8
FY 2003	1,510	39,626	3.8
FY 2004	1,232	42,851	2.9
FY 2005	1,503	48,598	3.1
FY 2006	2,237	53,578	4.2
FY 2007	2,705	58,740	4.6
FY 2008	2,585	60,871	4.2
FY 2009	2,743	60,338	4.5
FY 2010	2,489	57,668	4.3
FY 2011	2,522	60,871	4.1
FY 2012	2,646	64,299	4.1
FY 2013	2,761	66,300	4.2
FY 2014	2,827	69,690	4.1
FY 2015	3,146	71,034	4.4
FY 2016	2,677	74,673	3.6
FY 2017	2,857	74,373	3.8
FY 2018	3,207	79,268	4.0
Estimated			
FY 2019	2,770	77,781	3.6
FY 2020	2,735	82,762	3.3

All amounts after FY 2009 include Metropolitan Commuter Transportation Mobility Tax (through FY 2018) and Taxicab Surcharge receipts. All amounts after FY 2017 include Metropolitan Commuter Transportation District Auto Rental and Sales Tax receipts.

As shown in the following table, the historical distribution of audit and compliance receipts by broad tax categories (i.e., personal income tax, business taxes, user taxes and fees, and miscellaneous/other taxes) differs significantly from the distribution of total receipts by tax category. As a result of significant audit collections, the share of audit receipts derived from business taxes is much greater than the share of All Funds tax receipts derived from business taxes. Since 2008, the business tax share of audit receipts has been between 37 and 53 percent compared to 9 to 14 percent of All Funds tax receipts. In contrast, the share of All Funds revenue derived from the personal income tax has been greater (60 percent or higher) than its share of audit receipts (46 percent or less). The share of audit receipts derived from user taxes and fees has averaged about 15 percent since 2008 compared to roughly 22 percent for its share of All Funds revenue.

In FY 2019 and FY 2020, the share of audit receipts from the business taxes category is expected to remain below recent levels, at 33 and 31 percent, respectively. This percentage share reduction is mainly due to a decline in large case settlements and an increase in the personal income tax share. The FY 2019 and FY 2020 audit and compliance share for the personal income tax is expected to remain above recent levels. The share of audit receipts from user taxes and fees is expected to remain at recent historical levels in FY 2019 and FY 2020.

Audit and Compliance Receipts



	PERCENT OF ALL FUNDS AUDIT AND COMPLIANCE Collections By Tax Category				PERCENT OF ALL FUNDS Collections By Tax Category			
	Business	Other	User	Personal	Business	Other	User	Personal
	Taxes	Taxes and Fees	Taxes and Fees	Income Tax	Taxes	Taxes and Fees	Taxes and Fees	Income Tax
FY 2002	32	5	20	43	12	8	19	61
FY 2003	31	4	20	45	13	8	22	57
FY 2004	27	4	23	46	12	8	23	57
FY 2005	34	3	21	42	12	8	23	57
FY 2006	51	3	15	31	12	8	21	59
FY 2007	57	3	13	27	15	3	23	59
FY 2008	53	1	14	32	14	3	23	60
FY 2009	53	2	14	31	13	3	23	61
FY 2010	44	2	15	39	13	5	22	60
FY 2011	44	2	17	37	12	5	23	60
FY 2012	48	2	15	36	12	5	23	60
FY 2013	47	2	14	37	12	5	22	61
FY 2014	48	1	13	38	12	5	22	61
FY 2015	47	1	12	40	12	5	22	61
FY 2016	38	2	15	45	11	5	21	63
FY 2017	37	1	16	46	9	5	22	64
FY 2018	40	1	17	42	9	5	21	65
Estimated								
FY 2019	33	1	17	49	10	3	22	65
FY 2020	31	1	16	52	10	3	22	65

All amounts after FY 2009 include Metropolitan Commuter Transportation Mobility Tax (through FY 2018) and Taxicab Surcharge receipts. All amounts after FY 2017 include Metropolitan Commuter Transportation District Auto Rental and Sales Tax receipts.

Significant Legislation

Significant statutory changes that have had an impact on audit and compliance activities since 2013 are summarized below.

Subject	Description	Effective Date
Legislation Enacted in 2013		
Suspension of Driver's Licenses of Persons Delinquent in the Payment of Past-Due Tax Liabilities	Allowed for suspending the New York State drivers' licenses of certain taxpayers who owe past-due tax liabilities equal to or in excess of \$10,000 and fail to pay the past due amount or enter into a payment agreement with the Department of Taxation and Finance.	March 28, 2013
Warrantless Wage Garnishment	Authorized the Department of Taxation and Finance (DTF) to serve income executions (wage garnishments) on individual tax debtors if the taxpayer fails to pay within 21 calendar days after a notice and demand is issued. These provisions expire April 1, 2015.	March 28, 2013

<u>Subject</u>	<u>Description</u>	<u>Effective Date</u>
Legislation Enacted in 2015		
Warrantless Wage Garnishment Extension	Extended the sunset date to April 1, 2017 for allowing the Tax Department to serve an income execution (wage garnishments) to individual tax debtors.	April 13, 2015
Legislation Enacted in 2016		
Extend Tax Shelter Reporting Provisions	Extended the sunset date for the current tax shelter disclosure and reporting provisions in the Tax Law to July 1, 2019.	July 2, 2015
Legislation Enacted in 2017		
Close Sales Tax Related Entities Loopholes	Closed tax loopholes related to non-resident business purchases, and leasing below cost to related entities.	April 10, 2017
Streamline Bank Account Data Matching	Authorized the Department of Taxation and Finance (DTF) to submit fixed and final debt to financial institutions for delinquent taxpayer data matching purposes through March 31, 2020.	April 10, 2017
Warrantless Wage Garnishment Extension	Extended the sunset date to April 1, 2020 for allowing the Tax Department to serve an income execution (wage garnishments) to individual tax debtors.	April 1, 2017
Legislation Enacted in 2018		
Allow Unwarranted Tax Debt to be Assessed Against Unclaimed Funds	Authorized the Department of Taxation and Finance (DTF) to submit fixed and final debt to the Office of the State Comptroller (OSC) for delinquent taxpayer debt satisfaction purposes.	April 12, 2018
Provide for Employee Wage Reporting Consistency Between the Department of Taxation and Finance and the Department of Labor	Modified employee wage reporting frequency from annual reporting to quarterly reporting.	January 1, 2019

Risk to the Forecast

Even though the share of audit and compliance receipts received from business taxes is expected to remain below the high levels of FY 2006 through FY 2009, these taxes still represent above 30 percent of total expected audit and compliance receipts. Audit and compliance receipts for the FY 2006 through FY 2009 period were driven by voluntary compliance programs and the settlement of several large financial services and multi-state taxpayer cases. Corporate tax reform legislation enacted in the FY 2015 Budget is expected to improve voluntary tax compliance which would, in the long run, reduce audit collections from the corporation franchise tax. Quantifying the impact of this shift will be difficult until tax returns beginning with tax year 2015 are audited.