New York City Independent Budget Office Fiscal Outlook

December 2018

Still Rolling On:

Slower Economic Growth Ahead, But Tax Revenue Will Continue to Rise

New York City has experienced an unusually long run of good economic and fiscal times. It would be easy to predict the expansion, which began after the 2008-2009 recession, has to end soon. But IBO's latest forecast for the local economy and tax collections does not foresee a steep slide through at least 2022. While we see job growth that is roughly one-third the record levels of a few years ago and tax revenue that continues to grow steadily but not robustly, the city's fiscal outlook remains guardedly postitive over the next three and a half years. Guardedly because of the recent gyrations on Wall Street; political volatility in Washington and overseas; and the costly problems faced by the city's public housing, public hospitals, and transit system pose considerable economic and fiscal risks.

Absent substantial fallout from these risks, the city's fiscal condition is expected to remain positive for the near-term. IBO's latest projections of revenues and spending under the contours of the Mayor's November 2018 Financial Plan show the city ending the current fiscal year with a surplus of nearly $400 million. Assuming this year's surplus is used to prepay some of next year's expenses, we project a shortfall of $2.1 billion for fiscal year 2020, just 3.0 percent of city-funded expenditures. With a reserve of nearly $1.3 billion already built into next year's budget, this gap is very manageable, as has been the case in recent years. Our projected gaps for 2021 and 2022 are of a similar size and those years also have comparable levels of reserves in place.

Other highlights from IBO's economic and revenue forecast and review of the Mayor's spending plan include:

- Employment growth has slowed in 2018, and is expected to total 64,000 (fourth quarter to fourth quarter), nearly one-third lower than in 2017.
- We expect positive employment growth to continue in 2019 through 2022 but to be well below the average of 97,000 in the preceding eight years. Assuming Amazon's HQ2 project proceeds as scheduled, it will moderate, but not reverse, the trend.
- IBO forecasts tax revenue of $60.8 billion in 2019 growing to $67.9 billion in 2022, with much of the increase attributable to the property tax, which is expected to grow at an average rate of 5.5 percent annually over that period. After an extraordinary 2018, growth in personal income tax revenue will fall off to a more typical pace.
- IBO's tax forecast exceeds the de Blasio Administration's by $558 million in 2019, $1.0 billion in both 2020 and 2021, and $1.6 billion in 2022, with much of the difference attributable to the outlook for property and the income taxes.
- IBO projects that total city spending will grow from $90.6 billion this year to nearly $100.5 billion in 2022, an average annual rate of 3.5 percent and just below the 3.7 percent rate of growth we project for tax revenues.

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- As in past years, much of the growth in city spending is concentrated in just a few areas of the budget. We estimate that the cost of health care for city employees will rise from $6.7 billion in 2019 to $8.1 billion in 2022, an increase of nearly 7 percent.
- IBO projects city spending will exceed the amount budgeted by the Mayor by $205 million this year and $363 million next year. Much of the difference is in our estimate of the cost of providing shelter for the homeless and overtime expenses for police and firefighters.

Economic Outlook

IBO's outlook for the U.S. economy for the next two years is little changed from our forecast in May. We expect consumer spending to continue fueling the economic expansion, but economic growth will slow, from a projected 2.9 percent in 2018, to 2.6 percent and 1.8 percent in 2019 and 2020, respectively. (In our discussion of the economic outlook, years refer to calendar years and monthly and quarterly data are seasonally adjusted.) An increasingly tight labor market is expected to further reduce the unemployment rate, from an already low average of 3.9 percent this year to 3.4 percent on average in 2019, but also constrain growth and increase inflationary pressures. Incorporated into the forecast are the effects of the federal tax changes enacted at the end of 2017 and spending increases agreed to this past March, both of which provide a fiscal stimulus through 2019 and upward pressure on interest rates due to the swelling of the federal debt.

Looking at the local economy, which is now nine years into a record expansion, New York City employment growth has slowed in 2018 and is expected to weaken further in the years through 2022. We expect this weaker job growth to be accompanied by slower growth in wages and personal income and continued weakness in the markets for commercial and (especially) residential real estate. Amazon's HQ2 project, which we assume will roll out as scheduled, moderates but does not reverse the trend toward slower job growth. Near-term growth is strong enough to drop the city unemployment rate even further, from 4.0 percent in October 2018 to an average of 3.7 percent in 2019.

U.S. Economy. The U.S. economy has been growing for nine and a half years and IBO expects growth will continue through 2019, which would make the current economic expansion the longest in the post-World War II era. The strong labor market, which has reduced the unemployment rate to its lowest level in 49 years, continues to fuel consumer demand and the economy's production of goods and services. Adding to overall demand and economic growth is the fiscal stimulus generated by federal tax cuts and spending increases. Real (inflation-adjusted) gross domestic product (GDP) growth accelerated in 2018; for the full year IBO forecasts 2.9 percent growth followed by slightly slower growth of 2.6 percent for 2019. With the economy already operating with little slack in labor markets, inflationary pressures mounting, and continued tightening of monetary policy, U.S. economic growth is expected to slow considerably in 2020, before picking up modestly in 2021 and 2022.

By most measures, the U.S. economy has performed exceptionally well this past year. In the first three quarters of 2018 real GDP grew 2.8 percent on an annual basis, and IBO forecasts 2.9 percent growth for the year as a whole—up from 2.2 percent growth in 2017. The long economic expansion has attracted more people into the labor force, increasing output, employment, and consumer spending. The economy is on track to add 2.5 million jobs by the end

Total Revenue and Expenditure Projections
Dollars in millions

	2019	2020	2021	2022	Average Change
Total Revenue	**$90,964**	**$92,780**	**$95,574**	**$98,263**	**2.6%**
Total Taxes	60,826	63,167	65,628	67,903	3.7%
Total Expenditures	**90,577**	**95,297**	**98,397**	**100,461**	**3.5%**
IBO Revenue Less Expenditures	**$386**	**($2,518)**	**($2,823)**	**($2,198)**	
IBO Prepayment Adjustment 2019/2020	(386)	386	-	-	
IBO Surplus/(Gap) Projections	**-**	**($2,132)**	**($2,823)**	**($2,198)**	
Adjusted for Prepayments and Debt Defeasances:					
Total Expenditures	$94,633	$95,817	$98,397	$100,461	2.0%
City-Funded Expenditures	$69,795	$71,378	$73,623	$75,248	2.5%

NOTE: Figures may not add due to rounding. Average annual change for 2019 through 2022.

New York City Independent Budget Office

IBO versus Mayor's Office of Management and Budget Economic Forecasts						
	2017	**2018**	**2019**	**2020**	**2021**	**2022**
National Economy						
Real GDP Growth						
IBO	2.2	2.9	2.6	1.8	2.0	2.3
OMB	2.2	2.9	2.7	2.0	1.7	1.7
Inflation Rate						
IBO	2.1	2.5	2.3	2.0	2.2	2.2
OMB	2.1	2.5	2.4	2.5	2.3	2.3
Personal Income Growth						
IBO	4.4	4.6	4.9	4.1	3.6	4.2
OMB	4.4	4.5	4.8	4.8	4.5	4.4
Unemployment Rate						
IBO	4.3	3.9	3.4	3.8	4.7	5.0
OMB	4.4	3.8	3.4	3.5	3.7	3.9
10-Year Treasury Bond Rate						
IBO	2.3	3.0	3.5	3.5	3.9	4.3
OMB	2.3	2.9	3.3	3.5	3.6	3.5
Federal Funds Rate						
IBO	1.0	1.8	2.9	3.4	3.2	2.8
OMB	1.0	1.8	2.8	3.4	3.4	3.4
New York City Economy						
Nonfarm New Jobs (thousands)						
IBO (Q4 to Q4)	93.8	64.0	55.5	33.4	42.9	47.2
IBO (annual average)	81.0	70.9	65.1	41.4	37.9	46.9
OMB (annual average)	81.0	66.5	62.0	53.5	47.4	37.2
Nonfarm Employment Growth						
IBO (Q4 to Q4)	2.1	1.4	1.2	0.7	0.7	0.7
IBO (annual average)	1.9	1.6	1.4	0.9	0.8	1.0
OMB (annual average)	1.9	1.5	1.4	1.2	1.0	0.8
Inflation Rate (CPI-U-NY)						
IBO	2.0	2.0	2.4	2.1	2.4	2.6
OMB	2.0	2.1	2.4	2.5	2.4	2.4
Personal Income ($ billions)						
IBO	604.3	639.3	656.1	672.3	696.4	726.3
OMB	570.5	593.4	617.0	640.2	663.0	686.1
Personal Income Growth						
IBO	7.2	5.8	2.6	2.5	3.6	4.3
OMB	4.2	4.0	4.0	3.8	3.6	3.5
Manhattan Office Rents ($/sq.ft)						
IBO	79.3	79.8	83.0	84.5	87.2	88.4
OMB	79.0	78.5	83.5	86.5	89.6	92.4

SOURCE: IBO; Mayor's Office of Management and Budget
NOTES: Rates reflect year-over-year percentage changes except for unemployment, 10-Year Treasury Bond Rate, Federal Funds Rate, and Manhattan Office Rents. The local price index for urban consumers (CPI-U-NY) covers the New York/Northern New Jersey region. Personal income is nominal.

New York CIty Independent Budget Office

of the year—boosting employment 1.7 percent over 2017. This employment growth is remarkable given the tightness of the labor market. The unemployment rate has declined in each of the last three quarters to reach 3.7 percent in September through November, its lowest level since 1969.

Throughout 2018 the unemployment rate has been well below what most economists consider to be full employment, the threshold under which labor markets are tight enough to spur inflation. Inflationary pressures have been building and real wages are rising, albeit modestly. For 2018, IBO forecasts that inflation, as measured by the consumer price index, will average 2.5 percent, up from 1.5 percent and 2.1 percent in 2016 and 2017, respectively.

Consumer demand has been the primary driver of the current economic expansion, fueled by strong growth in employment, low debt burdens, and rising asset prices. Monetary policy has kept interest rates low, leaving the household sector's debt-service burdens, the share of after-tax income required to stay current on debt obligations, at historic lows. Rising housing prices and—until recently—record highs on Wall Street have swelled the wealth of many households, increasing their willingness to spend.

Economic growth has accelerated in 2018, stimulated by expansionary federal fiscal policies, a combination of tax cuts enacted in December 2017 with the Tax Cuts and Jobs Act (TCJA) and $300 billion of spending increases that lawmakers agreed to in March 2018. After-tax income of households has increased, and in the first three quarters of 2018 retail sales grew at one of the fastest rates during the current expansion—5.4 percent over the same period in 2017. Similarly, after-tax corporate profits have been rising at their fastest rate since 2012, and to the extent that they have been capitalized in stock prices, wealth effects have also increased. The combination, however, of TCJA's tax cuts and legislated spending increases are expected to swell the federal deficit, which is likely to breach $1 trillion, nearly 5 percent of GDP, in the current federal fiscal year ending September 30, 2019.

Although the tax cuts have initially spurred growth, given that the economy is already at or near full employment the added demand from households, businesses, and the government is likely to have more of an impact on prices than on economic output, add considerably to the federal government's deficits and debt load, and drive up long-term interest rates. While lower taxes would encourage businesses to invest, increases in long-term interest rates would have the opposite effect, negating much of the potential impact of the stimulus.

Though the fiscal stimulus will continue into 2019 and on balance add to real GDP, its effects will gradually diminish, leading to slower growth in the future. IBO forecasts that real GDP growth will slow to 2.6 percent in 2019. Further declines in the unemployment rate and other resource constraints will limit growth, and inflationary pressures will mount. With inflation averaging 2.5 percent this year (through November), somewhat above the 2.0 percent rate it considers optimal, the Federal Reserve System, or Fed, has signaled its intention to continue to raise the federal funds rate (the rate at which banks lend funds overnight to other banks) by small amounts in order to keep inflation in check. IBO anticipates several 0.25 percent rate increases in 2019, with the federal funds rate averaging 2.9 percent in 2019, compared with 1.8 percent in 2018. We project that a combination of Fed policy and slower growth will gradually push inflation back towards the Fed's target to a projected 2.3 percent in 2019 and 2.0 percent in 2020.

With the boost from fiscal stimulus largely exhausted by the end of 2019, economic growth is expected to slow further through the middle of 2020, and IBO forecasts 1.8 percent real GDP growth for the year as a whole. We assume that the Fed will continue to increase the federal funds rate in 2020, to a projected 3.4 percent on average for the year. Slower growth will curtail inflation, which is projected to average 2.0 percent (the Fed's target rate) in 2020, and the unemployment rate will gradually increase to a still low 3.8 percent on average. Growth is expected to remain modest in 2021 and 2022—with real GDP growth of 2.0 percent and 2.3 percent, respectively.

IBO's forecast does not assume any near-term change to federal fiscal policy to reduce the ballooning budget deficit. Similarly, we do not anticipate any additional fiscal stimulus in the next two years. The recent midterm elections resulted in a Congress divided along party lines, making it unlikely that both sides of the aisle will agree to deficit-financed tax cuts or to make permanent the recent personal income tax cuts that are scheduled to sunset in 2025.

The forecast is also premised on the Federal Reserve System being able to successfully raise interest rates and unwind quantitative easing (the central bank's unconventional policy of purchasing securities during the Great Recession) just enough to slow economic growth and tame inflation, but not so much as to substantially reduce business investment, consumer spending, or rapidly deflate asset prices. By putting upward pressure on inflation and interest rates, the fiscal stimulus makes meeting this challenge that much more difficult.

Finally, IBO's forecast is based on the assumption that there will be no external shocks to the U.S. economy, such as a major downturn in the global economy or a sudden

New York City Employment Growth *Q4 over Q4 change in thousands*										
	History					**Forecast**				
	2013	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Total Nonfarm	**117.9**	**136.1**	**117.3**	**67.5**	**93.8**	**64.0**	**55.5**	**33.4**	**42.9**	**47.2**
Total Private	**120.1**	**132.6**	**113.5**	**66.9**	**94.9**	**65.2**	**54.9**	**33.0**	**42.0**	**46.3**
Mining, Logging, and Construction	6.1	8.8	11.6	3.5	6.5	3.8	4.1	2.0	3.8	1.5
Manufacturing	1.0	0.3	0.9	(3.2)	(2.6)	(0.3)	(0.7)	(1.4)	(1.1)	(0.7)
Wholesale Trade	2.1	2.3	1.2	(1.5)	0.9	0.4	0.6	(0.0)	0.6	0.9
Retail Trade	13.3	10.1	(4.9)	(0.5)	2.4	3.5	3.0	(1.7)	(0.8)	1.0
Utilities	(0.1)	0.4	0.3	(0.0)	0.0	0.2	(0.2)	(0.2)	(0.2)	(0.1)
Transportation and Warehousing	1.1	3.4	5.5	2.6	3.0	(1.6)	1.5	0.5	0.7	1.5
Information	6.4	3.8	5.1	3.9	3.9	1.8	2.7	2.5	2.7	2.6
Finance and Insurance	0.7	7.9	8.0	(0.9)	4.0	2.2	1.9	2.1	2.1	2.6
Securities, Financial Investments, and Related Activities	(0.7)	3.7	5.1	0.3	2.0	0.6	1.1	1.2	1.1	1.3
Real Estate and Rental and Leasing	2.5	3.2	3.1	2.3	4.8	(2.4)	0.8	(0.2)	0.1	0.4
Professional, Scientific, and Technical Services	13.8	16.1	17.7	8.7	8.9	8.8	6.7	5.7	6.7	6.6
Management of Companies and Enterprises	1.9	3.0	(1.3)	1.4	1.8	0.9	0.2	0.6	0.5	0.2
Administrative and Support and Waste Management Services	5.0	10.1	13.2	9.6	8.2	4.7	6.4	1.8	5.2	5.9
Educational Services	13.1	12.7	8.8	3.4	3.2	0.5	1.9	1.3	1.9	2.4
Health Care and Social Assistance	23.5	23.2	21.3	24.6	37.9	29.6	19.7	13.2	14.4	14.7
Ambulatory Health Care Services	17.0	17.5	14.6	18.7	23.7	20.2	14.1	9.9	10.5	9.7
Arts, Entertainment, and Recreation	6.3	2.4	3.9	0.6	3.0	5.9	0.7	0.7	0.8	1.0
Accommodation and Food Services	19.2	18.3	14.7	8.9	7.2	3.9	3.8	4.5	4.3	4.3
Other Services	4.2	6.5	4.6	3.5	2.0	3.3	1.7	1.4	0.4	1.5
Government	(2.3)	3.5	3.8	0.6	(1.1)	(1.2)	0.5	0.4	1.0	0.9

SOURCES: Bureau of Labor Statistics; Moody's Analytics

New York City Independent Budget Office

spike in oil prices. But the geopolitical climate poses a major risk—an escalation of trade wars between the U.S. and other countries in which tariffs on each other's exports are increased. The recent trade agreement between Canada, Mexico, and the U.S. has lessened this risk, though it is not clear if the U.S. will avoid further tariffs on trade with China, the nation's largest trading partner.

IBO's economic forecast for 2019 and 2020 is similar to the projections presented by the Mayor's Office of Management and Budget (OMB) in the November plan. Both IBO and OMB expect somewhat slower GDP growth next year than this year and considerably slower growth in 2020. The trajectories of the two forecasts diverge after 2020, however: while IBO forecasts a gradual acceleration of growth in 2021 and 2022, OMB expects even slower growth in both years.

New York City Economy. Now nine years into a record expansion, New York City employment growth has slowed in 2018 and is expected to weaken further in the forecast period, accompanied by slower growth in wages and personal income and continued weakness in the markets for commercial and (especially) residential real estate. Wall Street profits have been strong and are projected to remain robust by historic standards, but it is the health care sector that has and will be the main engine of city job growth, while health care, education, and professional and business services will account for the lion's share of aggregate wage growth in New York City. Amazon's HQ2 project, which we assume will roll out as scheduled, moderates but does not reverse the trend toward slower job growth.

Employment. New York City added only 19,900 jobs through the first seven months (January-July) of 2018 but tallied almost twice that (39,100) over the next three months (August-October). This puts the city on a pace to finish out the year with a gain of 64,000 jobs, measured on fourth quarter over fourth quarter basis. This is far off the average

Projected Impact of the Amazon HQ2 Project on IBO's New York City Employment Forcast					
	2018	**2019**	**2020**	**2021**	**2022**
Payroll Employment (annual average; thousands)					
With Amazon HQ	4,497.6	4,562.7	4,604.2	4,642.0	4,688.9
Without Amazon HQ	4,497.6	4,561.8	4,600.6	4,634.3	4,677.7
Amazon Impact	**0.0**	**0.9**	**3.6**	**7.7**	**11.2**
Employment Growth (Q4 over Q4 change, thousands)					
With Amazon HQ	64.0	55.5	33.4	42.9	47.2
Without Amazon HQ	64.0	54.1	29.9	38.5	44.3
Amazon Impact	**0.0**	**1.4**	**3.5**	**4.5**	**3.0**

New York CIty Independent Budget Office

of almost 97,000 jobs per year added over the previous eight years of the city's expansion (2010 through 2017).

Employment growth has slowed notably over the past several years in professional services, education, trade, and food services, but has remained very strong in the health care and social assistance sector. Within that sector, home health care has been a standout, accounting for nearly a quarter of all New York City payroll employment growth in 2016 and 2017, and for almost a third of total growth in 2018 to date.

IBO forecasts a continued deceleration in city employment growth over the next two years, more or less in parallel with the projected slowdown in the national economy. Because health care and social assistance has historically been resilient in the face of cyclical shocks, we expect the sector will continue to add jobs throughout 2019 and 2020, providing a cushion that will prevent overall city employment growth from slowing even more sharply. Local job growth is expected to pick up again in 2021, but remain subdued relative to recent history.

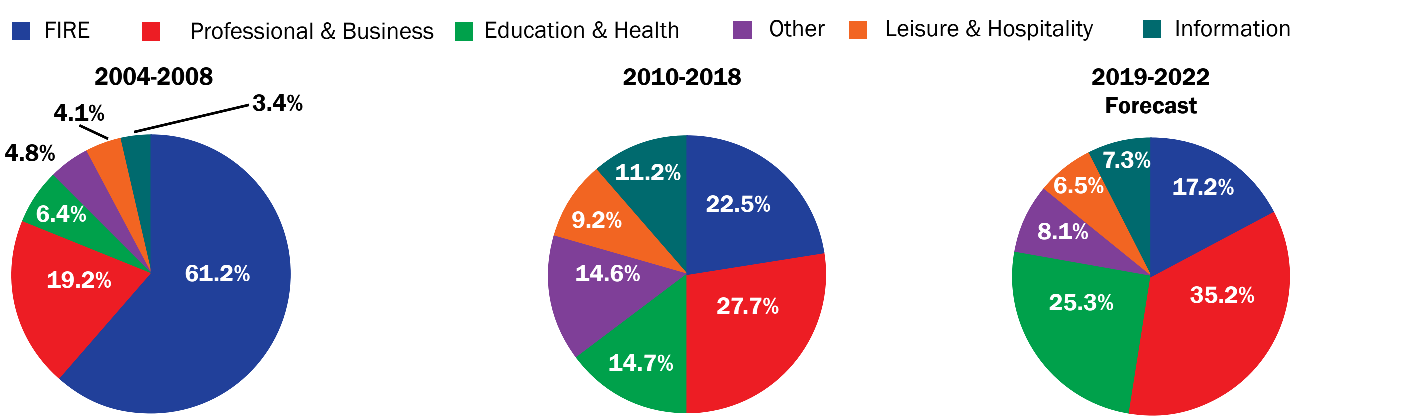
IBO's forecast assumes that the Amazon HQ2 deal goes forward as proposed, and this must be counted as a risk to our forecast, particularly in 2021 and 2022, given the continuing uncertainty surrounding the project.

Labor Force. Even as household employment growth has slowed over the past year, New York City's unemployment rate has fallen to a historic low (4.0 percent as of October 2018). There is enough momentum remaining in the city's economic expansion to drop the city unemployment rate even further in 2019: IBO expects the unemployment rate to bottom out at 3.6 percent midyear and average 3.7 percent for the year as a whole.

With much slower growth projected to start late in 2019 and run through 2020, this trend will be reversed. IBO expects the unemployment rate to average 4.0 percent in 2020 and 4.4 percent in 2021—both still low by historic New York City standards.

Wages and Personal Income. After adjusting for inflation, average wages in New York City grew 2.3 percent in 2017 and are expected to rise another 1.4 percent in 2018,

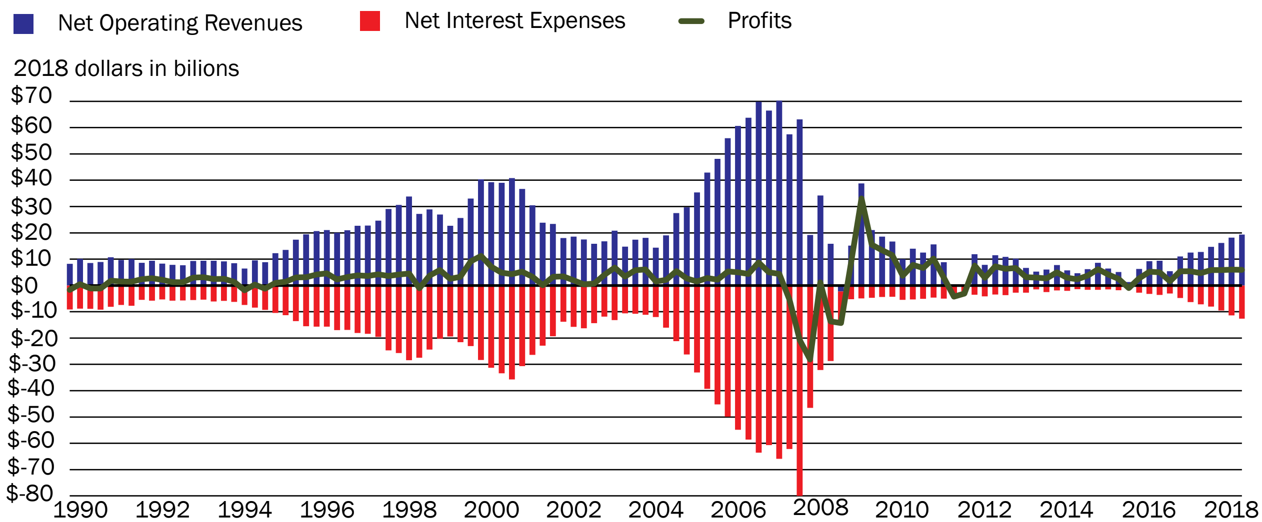
Shares of Aggregate Real Wage Growth in New York City



NOTE: "FIRE" stands for finance, insurance, and real estate. Other includes construction, manufacturing, trade, transportation, utilities, other services, and government.

New York City Independent Budget Office

Quarterly Net Operating Revenues, Net Interest Expenses, and Profits of New York Stock Exchange Member Firms



NOTE: Net operating revenues are non-interest revenues less non-interest expenses. Net interest expenses are interest revenues less interest expenses.

New York City Independent Budget Office

followed by projected real growth averaging 0.4 percent per year over the remainder of the forecast period. Personal income growth is also expected to slow, averaging 1.1 percent per year, adjusted for inflation, from 2019 through 2022.

Over 60 percent of the projected aggregate real wage growth over the forecast period will be generated by professional and business services (35.3 percent) and education and health care services (25.3 percent). This continues the marked shift in the composition of wages since the pre-crisis period, when the securities industry alone accounted for more than half of all aggregate wage growth in the city.

Wall Street. While 2017 was a banner year for New York Stock Exchange (NYSE) member firm broker-dealer profits ($25.1 billion), so far 2018 has been even stronger ($20.6 billion in profits through the first three quarters). IBO projects profits of $25.8 billion for the current year as a whole, followed by $22.2 billion in 2019, $19.3 billion in 2020, and $20.5 billion in 2021; these declines mirror the projected dip in U.S. economic growth. (All amounts here and below are in 2018 constant dollars.)

Profits of broker-dealers have been buoyed in the post-crisis period by very low net interest expenses, but such expenses have been increasing in recent years, climbing from an inflation-adjusted trough of $6.6 billion in 2015 to an estimated $46.6 in 2018. Increases in net interest expenses have, however, been more than offset by the concurrent rise in net operating revenues from $21.9 billion to $72.9 billion over the same period. Even so, both current net operating revenues and net interest expenses remain far below the real dollar peaks attained during the Wall Street boom periods of 1997-2001 and 2005-2008, and we project them to remain far below those peaks over the period of the financial plan.

Real Estate. IBO estimates that taxable real estate sales in New York City will total around $113 billion in 2018, an 18 percent jump that offsets part of the nearly 30 percent real dollar decline in sales over the previous two years. These swings have largely been driven by volatility in commercial sales, which fell from an inflation-adjusted $83.9 billion in 2015 to $38.6 billion in 2017, and are expected to rebound to nearly $61 billion in 2018.

However, this year's commercial sales were buoyed (especially in the third quarter) by a number of very high-value transactions not necessarily related to overall economic conditions, topped by a pair of $1.8 billion sales stemming from the acquisition of Westfield Corporation by Unibail-Rodamco and a $1.4 billion transaction stemming from the merger of Time-Warner with AT&T. IBO projects that commercial sales will slip back to about $54 billion next year—a 12 percent decline.

Residential sales, meanwhile, are projected to tick down about 8 percent in 2018 (to $52 billion), breaking a six-year string of rising inflation-adjusted sales. This year's residential sales drop is sharpest in Manhattan. Residential properties selling for between $1 million and $10 million make up the bulk of Manhattan sales, and the drop in sales in this price range is the main driver of the overall 19 percent real decline in the borough. Residential sales are declining to a lesser degree in Brooklyn and Queens, while sales in the Bronx and Staten Island are up.

In IBO's forecast residential sales growth will not keep pace with inflation in 2019, and overall (residential plus commercial) real estate sales will fall by 7 percent to an inflation-adjusted $105 billion. Over the remainder of the forecast period overall sales are projected to rise at roughly the rate of inflation, eking out a real-dollar increase of just $1 billion from 2019 through 2022.

Taxes and Other Revenue

IBO's forecast of revenue from taxes and other sources including fines, fees, and state and federal aid totals $91.0 billion for the current fiscal year, with two-thirds of the total ($60.8 billion) coming from city taxes; 27.3 percent ($24.8 billion) from noncity sources such as state, federal, and other categorical grants; and the balance from nontax city revenues (primarily fees, fines, and asset sales). Our 2019 revenue forecast is $2.4 billion (2.7 percent) greater than the total in 2018. (All years in this section and the following sections refer to fiscal years unless otherwise noted). Most of the additional revenue comes from the projected $1.9 billion (3.2 percent) increase in city taxes, with large increases in the forecasts of real property tax, real property transfer tax, and sales tax collections, offset in part by projected declines in the personal income tax and corporation tax. A slight $151 million decline in nontax city revenue is expected, but adding to total revenue growth are a projected $662 million increase in state grants, mostly education-related aid, and a $68 million increase in federal grants.

While total revenue growth from 2019 to 2020 is projected to be modest—$1.8 billion, or 2.0 percent—IBO expects a faster, 3.8 percent ($2.3 billion) increase in total tax revenues. The city's nontax revenues for next year are projected to be $381 million lower than in 2019, due primarily to a lower forecast of miscellaneous revenue. Noncity revenues next year are expected to be 1.7 percent lower ($415 million) than in 2019 thanks largely to an anticipated drop in federal grants under OMB's assumption that much of the remaining aid from Hurricane Sandy is actually spent in 2019.

After 2020, IBO projects larger increases in total revenue, which is projected to grow at an average annual rate of 2.9 percent in 2021 and 2022 and reach $98.3 billion in the last year of the financial plan. City taxes are expected to outpace growth from other city revenue sources, as well as state and federal grants in 2021 and 2022. Taxes are forecast to increase at an average annual rate of 3.7 percent, while growth in noncity revenue sources is projected to average 1.6 percent a year in 2021 and 2022.

The first part of this section presents IBO's tax revenue forecast, followed by a detailed discussion of each of the city's major tax sources. It concludes with a brief overview of the outlook for nontax revenues.

Tax Revenue. IBO's forecast for tax revenue in the current fiscal year is $60.8 billion, a gain of 3.2 percent ($1.9 billion) from 2018. This growth would be slower than all but one other year in the current expansion and far slower than in 2018, when tax revenue increased 8.4 percent. Total tax revenue growth will be faster in 2020 and subsequent years but will still be modest compared with growth earlier in post 2009 expansion. For 2020, IBO forecasts $63.2 billion in total tax revenue, 3.8 percent ($2.3 billion) greater than the 2019 forecast. We project that tax revenue will rise at an average rate of 3.7 percent annually over the final two years of the financial plan period and total $67.9 billion in 2022.

IBO forecasts large increases in 2019 revenue from the real property, general sales, general corporation, and real property transfer taxes, together totaling $2.6 billion. The general corporation and real property transfer taxes are among the most volatile streams of city tax revenue, and the increases would reverse a three-year decline in the former and a two-year decline in the latter. Large declines in revenue from the personal income tax and the mortgage recording tax are also forecast for this year, which together will offset $667 million of the increases. The 2018-to-2019 decrease in personal income tax (PIT) receipts is not the result of weak income growth. Rather, several factors that boosted 2018 PIT collections to a record-shattering amount will not recur this year, resulting in the PIT's expected decline.

For 2020, IBO forecasts $63.2 billion in total tax collections, a 3.8 percent revenue increase—faster revenue growth in comparison to the 3.2 percent increase being forecast this year. Collections of each major tax are expected to increase in 2020. Growth of all of the major taxes is expected to continue in 2021 and 2022, though slower growth is forecast for some taxes: the personal income and general corporation taxes, two taxes that are particularly sensitive to the business cycle; and the mortgage recording tax, which is sensitive to interest rate movements. The property tax is also expected to slow over the last two years of the forecast, but will maintain enough momentum to rank as the fastest growing of the city's taxes in 2021. Even with some slowdown, the average

IBO Revenue Projections
Dollars in millions

	2019	2020	2021	2022	Average Change
Tax Revenue					
Property	$27,898	$29,633	$31,241	$32,776	5.5%
Personal Income	12,778	13,373	13,637	13,842	2.7%
General Sales	7,941	8,232	8,442	8,733	3.2%
General Corporation	3,718	3,677	3,810	3,847	1.1%
Unincorporated Business	2,255	2,372	2,473	2,571	4.5%
Real Property Transfer	1,497	1,482	1,533	1,576	1.7%
Mortgage Recording	984	965	1,033	1,052	2.3%
Utility	407	411	409	415	0.7%
Hotel Occupancy	601	623	624	629	1.5%
Commercial Rent	903	894	923	952	1.8%
Cigarette	36	34	33	32	-3.9%
Other Taxes and Audits	1,809	1,471	1,471	1,477	-6.5%
Total Taxes	**$60,826**	**$63,167**	**$65,628**	**$67,903**	**3.7%**
Other Revenue					
STaR Reimbursement	$185	$182	$180	$178	-1.3%
Miscellaneous Revenue	7,142	6,825	6,811	6,787	-1.7%
Unrestricted Intergovernmental Aid	61	-	-	-	n/a
Disallowances	(15)	(15)	(15)	(15)	n/a
Total Other Revenue	**$7,373**	**$6,992**	**$6,976**	**$6,950**	**-2.0%**
Less: Intra-City Revenue	**($2,074)**	**($1,804)**	**($1,805)**	**($1,803)**	
TOTAL CITY-FUNDED REVENUE	**$66,125**	**$68,355**	**$70,799**	**$73,050**	**3.4%**
State Categorical Grants	$15,115	$15,322	$15,789	$16,264	2.5%
Federal Categorical Grants	8,034	7,536	7,429	7,396	-2.7%
Other Categorical Aid	1,000	911	904	898	-3.5%
Interfund Revenue	690	655	654	655	-1.7%
TOTAL REVENUE	**$90,964**	**$92,780**	**$95,574**	**$98,263**	**2.6%**

NOTES: Remaining banking corporation tax revenue reported with general corporation tax. Figures may not add due to rounding. Average annual growth rates from 2019 through 2022.

New York City Independent Budget Office

annual growth rate of total tax collections in 2021 and 2022 will be 3.7 percent, only slightly lower than growth in 2020. IBO projects $67.9 billion in total tax revenue in 2021, 15.2 percent more than 2018 revenue.

IBO's tax forecast exceeds OMB's by $558 million in 2019 and by $1.0 billion for 2020. These differences are 0.9 percent in 2019 and 1.6 percent in 2020. In the current year, the largest differences in percentage terms are in the general corporation tax (2.6 percent) and the sales tax (2.0 percent). In dollar terms, the largest differences are in the personal income tax ($156 million) and the sales tax ($155 million). In the last two years of the financial plan, the differences are $1.0 billion (1.6 percent) and $1.6 billion (2.4 percent), respectively.

Real Property Tax. IBO projects property tax revenue will grow from $27.9 billion in 2019 to $29.6 billion in 2020, a 6.2 percent increase. For the four years of the financial plan period, we expect revenue to grow at an average annual pace of 5.7 percent from 2018 through 2022. By comparison, OMB expects increases in property tax revenue to average 4.7 percent a year through 2022.

Background. The amount of tax owed on real property in New York City depends on the type of property, its value for tax purposes, and the applicable tax rate. Under New York State's property tax law, there are four classes of property in the city: Tax Class 1 consists of one-, two-, and three-family homes; Tax Class 2 comprises apartment buildings, including rentals, cooperatives, and condominiums; Tax Class 3 is exclusively real property owned by utility companies; and Tax Class 4 consists of all other commercial and industrial properties. Each class's share of the levy is determined under state law that allows only small shifts in the share of the overall property tax borne by each class. The city then divides the apportioned citywide levy by the taxable assessed value of property for each class, resulting in a class-specific tax rate that determines how much a taxpayer in a particular class owes per $100 of their property's taxable value.

The assessed value of a property for tax purposes (taxable assessed value) is established by the Department of Finance. The department estimates each property's fair market value and then applies an assessment percentage, which reduces the amount of the property's value subject to the property tax. For Tax Class 1 property, no more than 6 percent of fair market value is taxable, while 45 percent of fair market value is taxable in Tax Classes 2, 3, and 4; the assessment rates for each class are set by the Finance Commissioner. A property's resulting assessed value is then further reduced by any property tax exemptions in order to reach taxable assessed value.

Because of differences in assessment percentages, exemptions, and assessment practices across property types, the share of the levy borne by each class is not proportional to its share of market value. One critical difference in assessment practices affects taxable assessed values for coops and condos in Tax Class 2. Under state law, the city is required to value coops and condos as if they were income producing rental properties rather than based on sales values as Tax Class 1 properties are. IBO estimates that valuing coops and condos based on income results in market values for tax purposes that are discounted by roughly 78 percent compared with sales-based estimates.

Disparities Between Market Values and Levy Share
Dollars in billions

	Department of Finance Fiscal Year 2019 Final Roll		Market Values With IBO Estimate of Tax Class 2		City Council Tax Fixing Resolution	
Tax Class	Total Market Value	Share of the Total Market Value	Estimated Market Value	Share of the Total Market Value	Share of the Levy	Levy
1	$594.3	47.9%	$594.3	32.2%	14.7%	$4.3
2	$309.7	24.9%	$915.0	49.5%	37.8%	$11.2
3	$34.5	2.8%	$34.5	1.9%	6.2%	$1.8
4	$303.6	24.4%	$303.6	16.43%	41.3%	$12.2

New York City Independent Budget Office

Tax Class 1 property accounts for a much smaller share of the levy (14.7 percent) than their share of market value as reported by the Department of Finance (47.9 percent), or as a share of IBO's estimate incorporating sales-based values of coops and condos (32.2 percent). Based on the market values reported by the Department of Finance, Tax Class 2 accounts for 24.9 percent of market value, a share that almost doubles if IBO's sales-based market value estimates are used for coops and condos. Tax Class 2 share of the levy—37.8 percent—is more than its share of market values reported by the Department of Finance, but less than IBO's estimated market share. The other classes bear a disproportionately large share of the property tax burden because their shares of the levy exceed their shares of market value, regardless of how it is measured.

Assessment Roll for 2020. The tentative assessment roll for fiscal year 2020 is scheduled for release in January 2019. After a period for appeals and review, a final roll will be released in May. IBO projects that aggregate market value on the final roll will be 6.2 percent greater than on last year's roll, while assessed value for tax purposes is forecast to grow by 5.9 percent.

Tax Class 1. The aggregate market value of Tax Class 1 properties on the 2020 roll is expected to be 7.1 percent higher than this year's. From 2017 to 2018 (through October), the median sales price of all Tax Class 1 properties grew 6.6 percent. Average sales prices grew slightly less, 6.3 percent. Single-family homes in the boroughs outside of Manhattan account for 44.2 percent of all Tax Class 1 properties, and their median sales price so far this year is $565,000, a $37,500 (7.1 percent) increase over last year.

IBO projects assessed value for tax purposes in 2020 will increase by 3.9 percent over 2019. The difference between market value growth and assessment growth results from a provision of state property tax law. For Tax Class 1 properties in New York City, the assessed value moves toward a target assessment of 6.0 percent of market value, with assessment increases capped at 6.0 percent a year or 20.0 percent over five years. As long as a parcel's assessed value under the cap is less than the target assessment of 6.0 percent of market value, the ratio of assessed value to market value will trend upwards towards 6.0 percent. When the housing market is strong, the median ratio of assessed value to market value tends to fall as increases in market value outpace increases in the capped assessments. For single-family homes outside Manhattan, the median ratio of assessed to market value declined from 5.4 percent in

2004 to a low of 3.7 percent in 2008. More recently, the median ratio for single-family homes outside Manhattan has been slowly rising, growing from 4.0 percent in 2009 to 4.6 percent in 2019—still well below the 6.0 percent target.

Tax Classes 2 and 4. IBO projects that on the final roll for 2020, the official aggregate market value for Tax Class 2 will total $331.2 billion, a 7.0 percent increase over 2019. Aggregate market value for Tax Class 4 property is expected to reach $325.7 billion, a 4.1 percent increase over 2019.

Aggregate assessed value for tax purposes for Tax Class 2 is expected to be $94.0 billion, a 6.2 percent increase from the 2019 roll, and $123.5 billion for Tax Class 4, a 6.2 percent change from the previous year.

The growth in Tax Classes 2 and 4 assessments for tax purposes is partly attributable to the city's method of translating changes in market value into assessed value. In most cases changes in parcels' assessed values are phased in over five years. The assessed value changes from the preceding four years that have yet to be recognized on the tax roll form a pipeline of future increases. IBO's assessed value projections thus are in part a reflection of the strong real estate market in recent years, which has allowed the pipeline to increase fourfold from $6.3 billion in 2011 to $24.1 billion in 2020.

Outlook for Market & Assessed Values, 2021 & 2022. IBO forecasts an increase in aggregate market value of 6.9 percent in 2021 and 6.6 percent in 2022, the last two years of the financial plan. Market value in Tax Class 1 is expected to grow 8.2 percent in 2021 and 7.6 percent in 2022, while the increase in market value in Tax Class 2 is expected to equal 7.0 percent each year. Market value growth for Tax Class 4 is projected to be 4.7 percent in 2021 and 4.5 percent in 2022.

Aggregate assessed value for tax purposes is projected to grow by 5.5 percent in 2021 and 5.0 percent in 2022. IBO anticipates 5.5 percent annual average growth for Tax Class 4 in both 2021 and 2022. Tax Classes 1 and 2 taxable assessed values are expected to grow an average of 3.9 percent and 5.2 percent, respectively, in those years. Based on these estimates, the pipeline of changes in assessed value for Tax Classes 2 and 4 remaining to be recognized on the tax roll will fall from $24.1 billion in 2020 to $23.1 billion in 2020 and $22.9 billion in 2021.

Revenue Outlook. IBO anticipates property tax revenue will total $27.9 billion at the close of 2019 and $29.6 billion in 2020—an increase of 6.2 percent. Growth is expected to average 5.2 percent annually over the following two years, with revenue reaching $32.8 billion in 2022. In contrast, OMB forecasts 2019 and 2020 revenue of $27.8 billion and $29.3 billion, respectively, followed by average annual growth of 4.0 percent through 2022, when they project property tax revenue will total $32.7 billion.

Much of the difference between IBO's forecast and OMB's stems from elements of the property tax system other than the market outlook. The amount of property tax revenue the city collects in any fiscal year is determined not just by the assessment roll and tax rates, but also by the delinquency rate, abatements granted, refunds for disputed assessments, collections from prior years, and other property tax debits and credits collectively known as the property tax reserve. Most of the variance between IBO's and OMB's property tax revenue projections is attributable to differences in forecasting items included in the reserve. Some reserve components, such as delinquencies, are counted as debits, thus reducing current year tax revenue. Other components, such as payments made in a given fiscal year for prior year liability, are counted as credits, thus increasing current year tax revenue. Because the dollar value of the debits generally exceeds the dollar value of the credits, the net value of the reserve is nearly always negative, which is why anticipated revenue is always less than the forecast for the property tax levy.

At this point in the fiscal year, with the assessment roll and levy finalized last spring, the only differences between the IBO and OMB property tax revenue forecasts for 2019 will stem from the reserve. Virtually the entire difference between OMB's and IBO's revenue forecast is due to four components in the reserve: prior-year collections, refunds, delinquencies, and cancelled taxes. Later in the forecast period, differences in the levy forecasts play a greater role so that by 2022, differences between IBO's and OMB's reserve forecast for these four components account for about half of the difference in the forecasts of total property tax revenue.

Payment Changes for Installment Agreements. The City Council introduced a bill (Intro 1143-2018) to amend the Administrative Code pertaining to installment payments for owners who are delinquent on their property taxes. Property owners currently have the option to enter into an agreement with Department of Finance to pay any property tax arrears over a period of 10 years. However, the current payment plans do not take into account incomes of property owners, which is a major factor in their ability to pay. For owners with combined incomes of $50,000 or less, the City Council proposal would allow owners in arrears to pay installments based on a percentage of their incomes. There is also a component that would allow owners who are 65 years or older to defer payment until death or transfer of the property. These changes are expected to reduce the number of residences of low-income owners that become subject to inclusion in the tax lien sale. The Commissioner of the Department of Finance testified that expansion of the payment options is not expected to have any fiscal impact on the city's budget, but only on the timing of the city's cash flow.

Real Estate-Related Taxes. The city receives revenue from two taxes related to real estate purchases or financing. The real property transfer tax (RPTT) is levied on the value of real estate sold, while the mortgage recording tax (MRT) is levied on the value of mortgages, including certain refinancing activity. Together these two taxes are referred to as the transfer taxes. Another tax, the commercial rent tax (CRT), is levied on the value of certain commercial property leases in parts of Manhattan.

After declines in 2017 and 2018, IBO projects modest growth of around $43 million (1.8 percent) in transfer tax revenue in 2019, for a total of almost $2.5 billion. IBO forecasts a small decline of $34 million (-1.4 percent) in 2020 and a resumption of growth in 2021. By 2022 revenues are projected to reach just over $2.6 billion, well below the levels of 2015 and 2016, and especially the all-time peak of 2007 ($3.3 billion in nominal dollars) that immediately preceded the financial crisis.

Real Property Transfer Tax. Revenue from the real property transfer tax was just under $1.4 billion in 2018, a decline of 1.9 percent from 2017. RPTT collections vary with both the level and the composition of real estate sales. Commercial properties are taxed at a higher rate than residential properties, and for both commercial and residential sales, the tax rate is higher when the price exceeds $500,000.

Real estate sales and RPTT revenue peaked in 2007, declined over the next three years in the wake of the financial crisis, and began a recovery in 2011. In 2015 and 2016, RPTT revenue was just under $1.8 billion, the highest nominal level recorded since the tax was established in 1959. RPTT collections fell 20.3 percent in 2017, and an additional 1.9 percent in 2018, to just under $1.4 billion. Tax revenue from commercial sales dropped sharply during these years, while RPTT receipts from residential sales increased and exceeded the totals from commercial properties.

RPTT revenue from commercial property sales surged in the first four months of 2019, thanks to an unusually high number of very large transactions. RPTT collections from residential sales have also been solid, though not as strong as receipts from commercial transactions. IBO expects RPTT revenue to accrue at a slower pace during the rest of the year, but still reach almost $1.5 billion. RPTT revenue is projected to dip slightly in 2020, as higher mortgage rates and slower economic growth have a dampening effect on real estate markets. RPTT growth is projected to resume in 2021, with revenue reaching just under $1.6 billion by 2022.

Mortgage Recording Tax. MRT revenue was $1.05 billion in 2018, far below the all-time nominal peak of $1.6 billion in 2007, and considerably under the $1.2 billion collected in 2016, which is the highest level reached since the financial crisis. Rising interest rates have especially discouraged refinancing, but have also discouraged financings of initial mortgages. According to national-level data from the Mortgage Bankers Association, the total value of mortgage originations for one- to four-family dwellings fell 9.4 percent in 2018 compared with the previous year, and refinancing accounted for 33 percent of the total value of mortgages this year, down from 43 percent in 2017.

The MRT does not track the value of real estate sales as closely as does the RPTT, because not all sales involve a mortgage, and for sales with a mortgage, the fraction of the purchase price that is financed varies by transaction. In addition, mortgage refinancing, which may be subject in whole or in part to the MRT, is not connected to a property sale.

Historically, periods of high MRT collections have generally occurred when interest rates are low and there is significant refinancing activity. Mortgage rates fell in the aftermath of the financial crisis, but the depressed economy and credit restrictions kept lending activity at a low level. As the economy recovered, continued low interest rates and a gradual loosening of credit constraints stimulated borrowing, including refinancing. However, since roughly the beginning of 2018, mortgage rates have been steadily rising, and are projected to continue gradually trending upward for the next several years.

IBO projects that MRT revenue will decline 6.2 percent in 2019, to $984 million, and fall by an additional 1.9 percent, to $965 million, in 2020. We forecast modest increases, however, in MRT collections over the last two years of the financial plan, despite our expectation that mortgage rates will continue to rise. MRT revenue is projected to reach just under $1.1 billion in 2022, below the level reached in 2016, and far short of collections during the years leading up to the financial crisis.

IBO's forecasts of transfer tax revenue follow a similar pattern to those of OMB, but are consistently higher. For 2019, IBO's forecast is just 0.6 percent higher in the case of the RPTT and 0.9 percent higher for the MRT. For the entire 2019-2022 period, IBO's RPTT forecast is 2.5 percent higher than OMB's, and IBO's MRT forecast is 5.3 percent higher.

New York City Comptroller Scott Stringer recently released a proposal to eliminate the MRT for mortgages tied to residential purchases, but maintain it for mortgages used to buy commercial property, as well as for both residential and commercial mortgage refinancing. Under the Comptroller's proposal, purchases of residential property would be subject to a new combined version of the city and state RPTT, which would be more progressive than the existing one. The expected addition to RPTT revenue over what the current tax would bring in would be dedicated to subsidized housing for very low-income households. If adopted, all purchases of residential property valued at $2 million or less would be subject to a reduced RPTT bill, compared with current liability, as would many purchases of properties of a higher value that have substantial mortgages.

Commercial Rent Tax. IBO expects commercial rent tax (CRT) revenue to total $903 million in 2019, up 5.8 percent from 2018. CRT revenue is expected to drop slightly (-1.0 percent) in 2020, and then grow at a rate of just over 3 percent annually, reaching $952 million in 2022.

The CRT is a tax imposed on tenants who rent space for business, professional, or commercial purposes in certain areas of Manhattan below 96th Street. Not-for-profit entities, subtenants, tenants located in the World Trade Center area, and tenants located in the Commercial Revitalization Program abatement zone are all exempt from the tax. Over time both the tax rate and the geographic area subject to the tax have been reduced.

Until recently, tenants with annual gross rents less than $250,000 were exempt from the tax, and a sliding tax credit was applied to tenants with annual or annualized rents from $250,000 to $300,000. A bill passed by the City Council in November 2017 created a credit that eliminates the tax for tenants paying from $250,000 to $499,999 in annualized rent, provided the total income of the tenant is $5 million or less. Effective July 1, 2018, tenants paying rents of $250,000 to $499,999 but with income of $5 million to $10 million are eligible for a partial tax credit, as are tenants paying from $500,000 to $550,000 whose income does not exceed $10 million. OMB estimates that the expanded credit will lower CRT revenue by $36.8 million in 2019, increasing to $40.1 million by 2022.

IBO's commercial rent tax projections take into account the reduction in the scope of the tax, but also growth in average rents and new rental space coming online. Even after accounting for the impact of the enacted tax cut, for 2019 we forecast $903 million in CRT revenue, a $50 million (5.8 percent) increase from 2018. As rental activity slows, IBO projects a decline of 1.0 percent, to $894 million in 2020. Growth in CRT collections is expected to resume the following year, with increases of 3.2 percent in 2021 and 3.1 percent in 2022, when CRT revenue will reach $952 million.

IBO's CRT forecasts are nearly identical to OMB's. The largest difference is for 2019, when IBO's forecast is $8 million (less than 1 percent) below OMB's. For the period 2020-2022, IBO's forecast is $11 million higher, a difference of just 0.4 percent from OMB.

Personal Income Tax. IBO forecasts $12.8 billion in personal income tax revenue, net of refunds, in 2019, which is $602 million (4.5 percent) less than the total for 2018. The projected decline is not the result of weakness in the city's economy and tax base. Rather, it follows the exceptionally large increase in PIT revenue collected in 2018—an increase driven by one-time changes in state and federal policy. In 2020, PIT revenue is expected to increase 4.7 percent to yield $13.4 billion. With slower economic growth forecast for calendar years 2020 through 2022, IBO expects only modest increases in PIT collections in fiscal years 2021 and 2022, at an average annual rate of 1.7 percent.

PIT revenue in 2018 was $13.4 billion, 20.9 percent ($2.3 billion) greater than 2017 collections. Three developments substantially boosted 2018 revenue. First, the state eliminated the remaining component of STAR-related benefits delivered through the city's PIT—a roughly 6 percent reduction in marginal tax rates on taxable incomes below $500,000 that has been in effect since 1999.[2] Though the elimination of lower rates was retroactive to January 1, 2017, there was no impact on city PIT revenue until July 1, the start of the 2018 city fiscal year, when withholding tables were adjusted.

Second, a federal tax change enacted in 2008 required many managers of offshore hedge funds to repatriate and pay taxes on deferred compensation that had been held in hedge funds' offshore accounts since 2008. The 2008 legislation gave managers up to 10 years to repatriate already earned deferred compensation. With the 10-year deferral period coming to an end on December 31, 2017, a substantial amount of previously deferred earnings became taxable, greatly adding to PIT withholding revenue in 2018.

Third, the Tax Cuts and Jobs Act enacted by Congress in December 2017 generated a surge of estimated payments that were received by the city in late December 2017 and the very beginning of January 2018. TCJA's $10,000 limit on the amount of state and local tax payments that can be claimed as itemized deductions from federal adjusted gross income became effective January 1, 2018, and it motivated taxpayers across the country—including many New Yorkers—to prepay state and local taxes by the end of December, giving themselves the full benefit of the deduction one last time before the limits went into effect on January 1. Even though the fourth quarterly payment for calendar year 2017 liability was not due until later in January, almost $1.4 billion in PIT estimated payments were received from city taxpayers during the last week of December and first week of January; the latter were payments that had likely been made before January 1, although not received by the city until after the year had ended.

The factors that swelled PIT revenue last year will not recur and as a result, collections will decline from 2018 to 2019. IBO forecasts that PIT revenue will total $12.8 billion this year, $602 million (4.5 percent) lower than in 2018. The revenue decline is primarily due to a projected $723 million (24.2 percent) decrease in revenue from quarterly estimated payments. Estimated payments—the second largest component of PIT revenue—are made by taxpayers who are self-employed or who anticipate realizing capital gains from the sale of real property and financial assets as installments against anticipated tax liability. Quarterly payments against expected calendar year 2018 liability, made from April 2018 through November, are 17.9 percent greater than collections over the same eight-month period last year. If we adjust 2018 estimated payments to remove the effects of the deferred capital gains realizations, the impact of the TCJA on taxpayer behavior, and the need for hedge fund managers to repatriate foreign earnings, IBO's 2019 forecast of estimated payments—$2.3 billion—would be greater than 2018 receipts.

Estimated payments made by taxpayers filing for extension beyond the April 15th deadline are tallied separately from installment estimated payments. IBO projects that PIT collections in 2019 will include $950 million of extension payments, a 30 percent increase over 2018. The many changes to federal income taxes that took effect on January 1, 2018, and their interaction with state and local taxes, will complicate tax returns for many taxpayers, making it more likely that they (and their accountants) will need more time to complete their calendar year 2018 returns. Extension payments, however, are a wild card in the PIT forecast. In the last dozen years they have ranged from $457 million to $1.4 billion.

With growth in employment and personal income gradually slowing in calendar year 2018, IBO forecasts a moderate 2.8 percent increase in withholding receipts—by far the largest component of PIT revenue—yielding $9.6 billion in tax revenue for the current fiscal year. So far in 2019 (through November), withholding collections are up 4.6 percent compared with the same period last year. But we expect slower withholding growth during the months of December through March, the period when firms are most likely to pay year-end bonuses, reducing withholding growth for the year as a whole. Our forecast of relatively small increases in bonus compensation during the current bonus season are based on our expectation that Wall Street profits for the current calendar year, although strong, will barely exceed profit levels in 2017.

PIT revenue growth is expected to resume after 2019, although at a slower rate each year. For 2020, IBO forecasts $13.4 billion in PIT revenue, 4.7 percent ($595 million) over projected 2019 collections. The increase in PIT revenue is expected to come from withholding growth (also a projected 4.7 percent) and an expected increase in final returns payments. After 2020, PIT revenue will continue to increase, albeit at sluggish rates of 2.0 percent in 2021 and 2.5 percent in 2022. IBO's PIT forecast for 2022 is $13.8 billion, $205 million more than the 2021 projection. Withholding receipts will continue to increase in 2021 and 2022, but at slower rates due to the projected decline in employment growth—in particular in calendar year 2020, when employment growth is expected to drop by a third. There also will be only small increases in estimated payments due to slower U.S. economic growth, which will limit capital gains realizations.

IBO's PIT forecast exceeds OMB's projections in each year of the financial plan period, with the greatest difference in 2020. Our forecast of PIT revenue exceeds OMB's by $156 million (1.2 percent) this fiscal year and $404 million (3.1 percent) in 2020. After 2020, the difference between the two revenue forecasts narrows to $247 million (1.8 percent) in 2021 and $120 million (0.9 percent) in 2023.

Business Income Taxes. Totaling $5.6 billion, net revenue from the city's business income taxes increased by $169 million (3.1 percent) in 2018, following two successive years of decline. IBO projects more robust growth in business tax revenue in 2019, with collections increasing by $353 million (6.3 percent) to reach $6.0 billion. Growth is expected to continue throughout the remainder of the forecast period, albeit at a more moderate pace, increasing by 1.3 percent in 2020, 3.9 percent in 2021, and 2.2 percent in 2022. By 2022 business tax collections are expected to reach an all-time high of $6.4 billion.

Corporate Taxes. With $3.4 billion in net collections, 2018 saw a third consecutive year of declining corporate tax revenue, although the decline was a miniscule $8 million (0.2 percent). Monthly collections started off weak but steadily improved as the year went on, a trend that has continued into the first months of the current fiscal year. Thus, a robust recovery in corporate tax revenue is now forecast for 2019, with IBO projecting that revenue will grow to just over $3.7 billion, an increase of over $280 million (8.2 percent). This growth is driven by strength in corporate and securities industry profits, as well as strong earnings in finance, trade, information, and other sectors. Some of this boost can also be attributed to the continued rollout of provisions under the federal Tax Cuts and Jobs Act. While federal corporate tax rates have been substantially reduced, the tax base was also broadened in ways that flow through to the city's tax definitions, including a limit on deductions for interest expenses and the inclusion of global intangible low-tax income, generally known as GILTI.

IBO expects slower U.S. economic growth beginning in the second half of calendar year 2019 to have an impact on corporate tax collections, with fiscal year 2020 collections projected to contract by $41 million (1.1 percent). This is followed by a return to growth of $133 million (3.6 percent) in 2021 and $36 million (just under 1.0 percent) in 2022. Collections are expected to reach $3.8 billion in 2022, a four-year increase of $409 million and an average annual growth rate of 2.9 percent from 2018 through 2022. This total still falls short of peak corporate tax collections of $4.1 billion in 2015.

IBO's corporate tax forecast includes the expected impact of Amazon's recent decision to open a second headquarters in Long Island City. By boosting employment and earnings in relevant sectors, IBO estimates that the opening of the new headquarters within the city will increase corporate tax collections by $9 million in 2021 and $19 million in 2022. However, we also expect that these gains will be more than offset by Amazon taking advantage of the city's Relocation and Employment Assistance Program, which allows a $3,000 per-employee refundable corporate tax credit for new or relocated jobs in designated parts of the city. Amazon's use of this program is projected to cost the city $15 million in 2021 and $21 million in 2022.

OMB's corporate tax forecast follows a similar path as IBO's, although OMB projects somewhat less growth in 2019, with collections increasing by $188 million (5.5 percent). OMB expects corporate tax revenue to weaken over the remainder of the forecast period, with collections essentially flattening out, in contrast to IBO's forecast that sees a return to growth by 2021. Over the four-year forecast period, OMB projects corporate tax revenue to increase by a total of $167 million—an average annual growth rate of 1.2 percent from 2018 through 2022, compared with 2.9 percent in the IBO forecast.

Unincorporated Business Tax. Unlike corporate taxes, which are recovering from sustained decline and are not projected to grow steadily in the coming years, unincorporated business tax (UBT) collections grew markedly in 2018 and are expected to continue on this path. In 2018, UBT collections totaled $2.2 billion, an increase of $178 million (8.9 percent) over the previous year. For 2019, IBO forecasts that UBT revenue will reach $2.3 billion, an increase of $75 million (3.3 percent). This upward trajectory is projected to continue throughout the forecast period, with collections growing by an additional $117 million (5.2 percent) in 2020, $101 million (4.3 percent) in 2021, and $99 million (4.0 percent) in 2022. By 2022 the UBT is expected to bring in a total of $2.6 billion, for an average annual growth rate of 4.2 percent from 2018 through 2022.

UBT growth is based on expectations of continued strength in key earnings areas, including the professional services sector and income from proprietorships. While the drivers of UBT revenue are also susceptible to downward pressure from the generally weaker U.S. economic growth IBO forecasts beginning late in calendar year 2019, UBT revenue tends to be more insulated and less heavily impacted by such fluctuations than corporate tax revenue, as the latter is somewhat more heavily concentrated in cyclically sensitive sectors such as finance and trade.

The IBO forecast model also identifies a small boost in UBT revenue from the location of the new Amazon headquarters, resulting from additional economic activity generated by the construction process and the relocation of new Amazon employees to the city. IBO estimates that the opening of the new Amazon headquarters will boost UBT revenue by $1.3 million in 2021 and $3.0 million in 2022. The addition to UBT receipts from Amazon's presence will grow larger in subsequent years.

Compared with IBO's forecasts, OMB projects slower UBT growth in 2019 at 2.0 percent, but faster growth in 2020 at 6.6 percent. Despite the difference in timing, both projections end up essentially identical in 2020, at $2.4 billion. Although the two forecasts of UBT growth in 2021 are very similar (roughly 4 percent), OMB expects much slower growth in 2022, a drop-off that IBO does not anticipate. By 2022, OMB projects that UBT will bring in $2.5 billion, for an average annual growth rate of 3.4 percent from 2018 through 2022.

Sales Tax. The general sales tax is the third largest source of tax revenue for New York City, bringing in almost 13 percent of all tax collections in 2018. Sales tax collections increased a robust 6.1 percent in 2018, and IBO forecasts another strong increase this year (6.7 percent) to yield $7.9 billion in 2019 sales tax revenue. We expect that growth in sales tax revenue in 2020 will slow to about half of its pace in 2019, with collections rising 3.7 percent to reach $8.2 billion. Revenue growth over the last two years of the forecast period remains subdued, with increases averaging 3.0 percent projected to yield collections of $8.7 billion in 2022.

Sales tax revenue is correlated with the share of disposable (after tax) income allocated to purchasing goods and services. The city's Department of Finance estimates that recent changes in the federal income tax code will reduce calendar year 2018 federal tax liability of New York City residents by $1.4 billion, boosting retail spending in fiscal year 2019. Over the past few years, strong financial markets and—until recently—rising stock prices have also had a positive wealth effect on spending, giving consumers more confidence to purchase goods and services.

IBO expects, however, that weaker growth in income and employment of city residents will dampen increases in retail sales and sales tax collections through 2020. We forecast that disposable income in calendar years 2019 and 2020 will grow by 2.5 percent and 2.4 percent, respectively, which is less than half the 5.6 percent rate of growth in 2018.

Local employment growth, which peaked in 2014, has also been slowing for several years. We expect this trend to continue, with job growth forecast to slow from 1.4 percent this year to 1.2 percent in 2019 and just 0.7 percent in 2020. Diminished growth in employment and disposable income are projected to constrain increases in retail sales and, in turn, the tax revenue that flows from those sales.

We forecast that local employment will continue to grow from calendar year 2019 through the end of the financial plan period, albeit at the modest annual rate of 0.7 percent. Personal income growth dips to 2.5 percent in calendar year 2020 before accelerating again. IBO forecasts that on balance these dynamics will result in sluggish growth in sales tax revenues in fiscal years 2021 and 2022.

The city's sales tax revenue also depends on the purchase of goods and services by domestic and international visitors. IBO expects increases in domestic tourism and business travel to the city will slow over the next few years in line with the projected deceleration of domestic economic growth. International tourism and spending, on the other hand, are projected to grow faster due to the expected depreciation of the U.S. dollar relative to other foreign currencies (as measured by a weighted index of exchange rates) after 2019, partially offsetting the effect of slower growth in domestic tourism.

A key factor in the sales tax revenue forecast is the growth of online sales relative to in-store purchases. While untaxed out-of-state online sales can diminish tax revenue, the U.S. Supreme Court ruling last June in S*outh Dakota v. Wayfair Inc*. will allow states to collect taxes on purchases from out-of-state sellers. Prior to the Wayfair decision, New York State had successfully managed to compel Amazon, as well as some other large online retailers, to collect taxes on sales of their own products to New York residents. However, Amazon does not collect taxes on sales when it is merely a "third party" to sales—sales where its website merely facilitates transactions of other sellers who own and ship their own products to the purchaser. (The majority of Amazon sales are now third-party sales.) The state has proposed, but not yet passed, legislation that levies tax on all online transactions, including third-party sales. If passed, taxation of online sales will affect consumers by increasing the final price, but at the same time reduces the competitive disadvantage brick-and-mortar businesses currently face relative to out-of-state online sellers. Given the uncertainty regarding the contours of the state's post-Wayfair legislation, it is not yet clear how much additional city tax revenue will result.

IBO's forecast of sales tax revenue exceeds OMB's by $155 million in the current fiscal year and by $65 million in 2020. Conversely, OMB projects that sales tax collections will be nearly $50 million more than IBO expects in each of the last two years of the financial plan period.

Hotel Tax. New York City imposes a hotel occupancy tax on hotel stays that consists of a 5.875 percent tax on room charges plus $2 per room per night. Room charges are also subject to city and New York State general sales taxes. IBO forecasts an increase in hotel occupancy tax this year and in each of the following years, although year-over-year growth is uneven. For the current year, IBO forecasts $601 million in hotel tax collections, only 0.6 percent greater than 2018 receipts, followed by stronger growth of 3.6 percent to reach $623 million in 2020. After 2020, hotel tax collections are forecast to remain essentially flat, with a total of $629 million in hotel tax revenue in 2022.

The minimal increase in hotel tax revenue this year comes after several years of steady and strong revenue growth; from 2014 through 2018, increases in hotel tax collections averaged 2.8 percent a year. One factor constraining revenue growth has been the increase in the supply of competing accommodation services, from the pipeline of new hotels and hotel beds, as well as continued growth of rental platforms like Airbnb. The increased competition has reduced hotel occupancy rates and revenue per room from 2018 to 2019.

IBO projects more rapid increases in hotel occupancy rates and revenue per room in 2020, leading to a $22 million (3.6 percent) increase in hotel tax collections. International tourism is expected to contribute to this growth. Changes in the U.S. dollar exchange rate, which have slowed growth in international tourist spending in 2019, will be a positive factor contributing to more international visits to the city in 2020, as foreign currencies are projected to strengthen relative to the dollar.

IBO forecasts that hotel tax collections will remain at roughly their 2020 level through the remainder of the financial plan period. Slower U.S. economic growth starting in the middle of 2020 is expected to curtail domestic leisure and business travel to New York City, while international tourism will become more costly as the U.S. dollar appreciates against foreign currencies.

IBO's forecast of cumulative hotel tax revenue over the four years differs from OMB's four-year total by only $10 million, although the year-to-year variation is somewhat greater. For 2019, IBO's forecast is $16 million less than OMB's, while our 2020 forecast is $18 million more than OMB projects.

Other Revenue. The city's nontax revenue—a variety of fees, fines, charges, asset sales, interest income, and other miscellaneous revenue—are expected to total $7.4 billion this year, a drop of $151 million from 2018. IBO forecasts a further drop of $381 million to $7.4 billion in nontax city revenue in 2020, with the decline mostly among miscellaneous revenue. The changes in these revenue sources in 2019 and 2020 are fairly modest by recent standards. The Mayor's November financial plan anticipates little additional change in the total from these revenue sources from 2020 through 2022.

State, federal, and other categorical aid and interfund revenue are the remaining sources among noncity revenue. They are expected to total $24.8 billion this year, an increase of $528 million (2.2 percent) over 2018. After dropping by a projected $415 million in combined noncity funds in 2020, these sources are expected to grow by an average of $394 million in the two subsequent years. In 2022, the city anticipates $25.2 billion in noncity revenue.

Federal grants, which are projected to be $8.0 billion this year but then fall to $7.5 billion in 2020, are the basic reason that noncity revenue is expected to decrease in 2020. A decrease in Hurricane Sandy assistance from the federal government, from $402 million in 2019 to $55 million in 2020, accounts for most of the decline in federal aid. The projected decline is based on the assumption that 2019 Sandy-related federal aid will actually be spent this year and not rolled over into the 2020 budget. Assuming this money is spent as scheduled, the city will have received a total of over $5 billion from the federal government since 2013 to assist efforts to recover from Hurricane Sandy.

State grants account for $15.1 billion (65.3 percent) of total noncity revenue in 2019, with about three-quarters of state aid given for education purposes. Most of the state aid growth over the financial plan period is Foundation Aid (the largest category of state education aid), which is expected to increase by 5 percent annually.

Fiscal Overview

IBO continues to be cautiously optimistic about New York City's fiscal outlook for the current fiscal year. Despite an anticipation of slower growth in the U.S. economy and less-than-stellar job gains in the city, IBO projects continued strength in the local economy and growth in city tax collections—thanks largely to the property tax—at rates that exceed planned expenditures. Much of the risk to the city's fiscal condition results from budgetary stresses weighing on the New York City Housing Authority (NYCHA), New

York City Health + Hospitals (H+H), and the Metropolitan Transportation Authority (MTA), as well as potential actions at the federal and state level. Given the changing political makeup of Congress, however, the risk of additional federal policy changes that could have adverse impacts on the city's economy or tax base over the next few years has likely diminished.

The framework of the Mayor's November 2018 Financial Plan is similar to that of his recent financial plans. With relatively small budget gaps as a share of total city-funded spending and considerable funding set aside in reserve, the November financial plan continues the trend of unremarkable but conscientious financial planning.

Unlike the prior November plan, which did not assume surplus current-year resources that could be used to pay for some of the next year's expenses, the Mayor's current financial plan includes a surplus of $520 million in the current year that will be used to prepay 2020 expenses. This stems from the recognition of additional tax revenue in 2019 along with a savings program that provides $294 million of additional resources in the current year. Over 60 percent of these savings is the result of reductions in planned debt service expenses and fringe benefit adjustments resulting from lower-than-expected city employment and an increase in the federal fringe reimbursement rate, savings that would have occurred without the city having taken any action.

Based on IBO's analysis of the Mayor's plan, we estimate the city will have $591 million in additional city-generated revenue in the current year, offset by another $205 million of spending, enough to end the current fiscal year with an additional $386 million of surplus funds over and above OMB's projection of $520 million. Assuming the 2019 surplus is used to prepay some of next year's expenditures, and after accounting for $661 million of additional resources IBO estimates the city will accrue in 2020, we expect next year's budget gap will be just over $2.1 billion, 3.0 percent of city-funded expenditures.

IBO's 2019 surplus estimate does not include the $1.38 billion currently allocated for two reserves within the fiscal year 2019 budget—these reserves are currently counted as expenditures but do not support any specific spending needs. If these funds are not used to cover unexpected spending needs or revenue shortfalls in the current year, they will become part of the 2019 surplus, which would close all but $742 million of the remaining budget gap IBO forecasts for 2020.

We project relatively manageable shortfalls of $2.82 billion and $2.20 billion for the last two years of the 2019-2022 financial plan period. These gaps could be substantially reduced through the use of the reserves of $1.25 billion built into the financial plan each year for 2021 and 2022, assuming the reserves are not needed to fill revenue shortfalls or fund additional spending.

Spending

IBO projects that under the policies and programs articulated in the Mayor's latest financial plan, total city spending, including state and federal grant-funded programs, will grow from $90.6 billion this fiscal year to $95.3 billion next year. Adjusting this year's expenditures for the prepayment of expenses with prior year resources, IBO estimates that spending will grow by 1.2 percent between 2019 and 2020. Similarly, after adjusting for prepayments, we project that total spending over the financial plan period will increase at an average annual rate of 2.0 percent to reach $100.5 billion in 2022. Looking just at city-funded expenditures and again adjusting for prepayments, we expect spending to grow from $69.8 billion in 2019 to $71.4 billion next year and reach $75.2 billion in 2022, an average increase of 2.5 percent a year.

IBO expects a large share of the $1.6 billion city-funded spending increase in 2020 under the Mayor's November plan will be agency expenditures resulting from contracted salary increases, although as of now, most of these funds are still budgeted in the citywide labor reserve rather than individual agencies. Looking at agency budgets exclusive of centrally budgeted items such as pensions, health insurance, debt service, and the monies not yet moved from the labor reserve, we project that spending will increase by $448 million for the Department of Education (DOE), $87 million at the Department of Homeless Services, $38 million at the Department of Sanitation, and $36 million for the Department of Correction. Excluding centrally budgeted spending, city funding for most other city agencies will actually decline between 2019 and 2020 under the Mayor's November plan. As the salary increases under the new contracts take effect, funds will be transferred from the labor reserve into agency budgets. As a result, in future plans IBO expects that the trend will reverse and most agencies will see a year-over-year increase in their budgets, the product of increased salaries resulting from the contract settlements already signed and those expected to be settled in the coming months.

IBO Expenditure Projections
Dollars in millions

	2019	2020	2021	2022	Average Change
Agency Expenditures	**$65,750**	**$65,072**	**$65,839**	**$66,519**	**0.3%***
Fringe Benefits	10,325	11,377	11,815	12,485	5.5%*
Labor Reserve	1,444	1,785	2,258	1,698	n/a
Total Agency Expenditures	**$77,519**	**$78,234**	**$79,912**	**$80,702**	**1.1%***
Other Expenditures					
Debt Service	$3,210	$6,835	$7,680	$8,386	7.4%*
Pensions	9,850	9,951	10,418	10,864	3.3%
Judgments and Claims	697	712	727	742	2.1%
General Reserve	1,125	1,000	1,000	1,000	n/a
Capital Stabilization Reserve	250	250	250	250	n/a
Expenditure Adjustments	-	119	216	320	n/a
Subtotal	**92,651**	**97,101**	**100,203**	**102,264**	**1.9%***
Less: Intra-City Expenditures	$(2,074)	$(1,804)	$(1,805)	$(1,803)	
TOTAL EXPENDITURES	**90,577**	**95,297**	**98,397**	**100,461**	**2.0%***

NOTES: *Represents the annual average change after adjusting for prepayments, subsidies and debt defeasances. Expenditure adjustments include energy, lease, and nonlabor inflation adjustments. Figures may not add due to rounding. Average annual change 2019 through 2022.

New York City Independent Budget Office

Sources of Spending Growth. The November financial plan includes approximately $1 billion of additional city-funded spending in 2019 above the level set when the budget was adopted in June. Nearly all of the growth in spending is the result of increases to the labor reserve to fund the 2017 through 2021 round of contract settlements. The city's settlement of its labor contract with District Council 37 (DC 37) in June, a 44-month contract that provides a total of 7.42 percent compounded wage increases—2.0 percent for the first 12 months, 2.25 percent for the next 13 months, and 3.0 percent for the remaining 19 months—sets the wage increase pattern for the remaining city unions. In order to fund this pattern the city added an additional $427 million in 2019, $1.0 billion in 2020, $1.6 billion in 2021 and $2.1 billion in 2022 over and above what was already in the labor reserve.

The city, working in cooperation with the municipal labor unions, expects to partly offset these additional labor costs with $1.7 billion in health savings over the course of the financial plan period. Some of the savings will be achieved through capping annual health care expense increases while the remainder will be the result of a number of measures to be determined by a tripartite committee comprised of city and union representatives.

Soon after DC 37 settled its contract with the city, the United Federation of Teachers (UFT) adopted its contract for the 2017-2021 period. While the UFT settlement was in line with the previous DC 37 settlement, it included an additional cost for salary differentials for hard-to-staff positions in certain city schools. At the time the contract was settled, the city assumed that the cost of this differential would be included in funding already allocated within the DOE's budget. IBO estimates that DOE school budgets do not have sufficient slack to fully implement this differential payment program and that the DOE will require additional city funding not already allocated within its budget. Based on the limited information made available, IBO is unable to estimate the number of positions actually affected and therefore the ultimate cost of the program.

Increased Federal & State-Funded Spending. Much of the 2019 spending growth in the November plan identified by IBO results from the recognition of additional noncity funding. IBO estimates that 2019 noncity funding will increase by $138 million of state funds and $442 million of federal funds above the amounts allocated in the plan adopted in June. This deferred recognition of state and federal funding is consistent with the city's practice of waiting until some grants are received before adding the spending to the budget. An additional $120 million in other categorical funding brings the 2019 noncity funded increase to over $701 million since the budget was adopted in June.

Fringe Benefits, Debt Service Spending. Spending growth over the plan period is focused on a few areas within the budget, particularly in the costs of fringe benefits and debt service. The increase in the cost of providing fringe benefits for city employees and retirees, including health insurance costs, is the single largest area of spending growth across

Pricing Differences Between IBO and the de Blasio Administration
Items that Affect the Gap
Dollars in millions

	2019	2020	2021	2022
Gaps as Estimated by the Mayor	**$-**	**($3,179)**	**($3,535)**	**($3,361)**
Revenue				
Taxes				
Property	$109	$338	$530	$1,074
Personal Income	156	404	247	120
General Sales	155	65	(49)	(48)
General Corporation	93	71	170	243
Unincorporated Business	30	-	5	81
Real Property Transfer	9	47	48	44
Mortgage Recording	9	41	81	73
Utility	22	15	(1)	(6)
Hotel Occupancy	(16)	18	9	(1)
Commercial Rent	(8)	1	7	3
Cigarette	-	-	-	-
Other Taxes and Audits	-	-	-	-
Total Taxes	**$558**	**$1,000**	**$1,046**	**$1,586**
STaR Reimbursement	-	-	-	-
Misc. Revenue	33	39	38	38
TOTAL REVENUE	**$591**	**$1,039**	**$1,084**	**$1,624**
Expenditures				
Debt Service	$52	-	-	-
Fringe Benefits:				
Health Insurance-Education	-	15	33	27
Health Insurance-City University	-	1	1	1
Health Insurance-All Other Agencies	-	26	52	42
Education	(25)	(24)	(21)	(21)
Fire	(50)	(50)	(50)	(50)
Police	(75)	(50)	(50)	(50)
Correction	-	-	-	-
Homeless Services	(138)	(216)	(216)	(217)
Public Assistance	41	42	42	42
Parks	(10)	(18)	(19)	(20)
Sanitation	16	(7)	(46)	(75)
Housing	-	(11)	(13)	(13)
Campaign Finance Board	-	-	-	(40)
Board of Elections	(15)	(30)	(30)	(30)
Small Business Services	-	(55)	(57)	(57)
TOTAL EXPENDITURES	**($205)**	**($378)**	**($373)**	**($461)**
TOTAL IBO PRICING DIFFERENCES	**$386**	**$661**	**$711**	**$1,163**
IBO Prepayment Adjustment 2019/2020	(386)	386	-	-
IBO SURPLUS/(GAP) PROJECTIONS	**-**	**($2,132)**	**($2,823)**	**($2,198)**

NOTES: Negative pricing differences (in parentheses) widen the gaps, while positive pricing differences narrow the gaps. Remaining banking corporation tax revenues reported with general corporation tax. Figures may not add due to rounding.

New York City Independent Budget Office

the plan period. From 2019 through 2022 these costs are estimated to increase from approximately $10.6 billion to over $12.5 billion, an annual growth rate of 5.5 percent. IBO estimates that health care costs, by far the biggest component of fringe benefits, will grow at a rate of 6.8 percent during the same period, from $6.7 billion in 2019 to $8.1 billion in 2022.

Although the cost of debt service—payment of principal and interest on the funds the city borrows to finance capital projects—is currently lower than estimated when this year's budget was adopted last spring, over the course of the financial plan IBO expects debt service to rise substantially as the city issues additional debt to finance its capital program. After adjustment for prepayments, debt service is projected to grow at an average annual rate of 7.4 percent, from $6.8 billion this year to $8.4 billion in 2022, an increase of $1.6 billion.

Pension Spending. Pension costs, which are often cited as a primary driver of expenditure growth, are estimated to increase from $9.9 billion in 2019 to $10.9 billion by 2022, an average growth rate of 3.3 percent. The current rate of growth in pension costs is greater than at this time last year, with the increase primarily attributable to the recent contract settlements. The November plan includes an additional $1.1 billion for pension costs across the plan period. These funds were transferred from the labor reserve to cover the pension costs associated with the salary increases included in the settlements. The additional expenditures are partly offset by a $300 million reduction over the plan period resulting from higher-than-assumed returns on pension fund investments in 2018. Excluding the pension increases attributable to the recent contract settlements, annual growth in city-funded pension expenditures over the plan period would have been 1.2 percent.

Spending Re-estimates. IBO's estimates of some components of city-funded spending differ from those presented by the Mayor in the November plan, with some elements higher and others lower. Because the total amount under-budgeted exceeds the sum over-budgeted, IBO projects that city-funded spending will be about $205 million greater than projected by the Mayor in the current year and $363 million more in 2020. In the subsequent years of the financial plan period, we expect city-funded expenditures to exceed the Mayor's estimates by $373 million in 2021 and $461 million in 2022.

Areas where IBO projects less-than-budgeted spending:

Debt Service Savings. Although the de Blasio Administration reduced its forecast for 2019 debt service costs by $168 million in the November plan, we estimate that this year's cost of debt service will be $52 million below the Mayor's revised projections. Even with interest rates increasing, the de Blasio Administration's 2019 variable rate bond interest assumptions—3.53 percent for tax-exempt bonds—remain well above today's interest rates. IBO's projection of debt service savings are based on conservative estimates of current year variable interest rates using historical data and forecasts from financial institutions.

Health Care Cost Re-Estimates. The Mayor's November plan includes $6.4 billion for the city's provision of health care for current and retired city employees in 2019, rising to $8.6 billion in 2022. Increases in the cost of providing health care benefits to city employees and retirees is one of the principal drivers of increased city spending over the plan period. Based on historical increases in health care costs and federal forecasts, IBO's estimates of health care spending over the financial plan period are slightly lower than the Mayor projects. Although our estimate of city spending on health insurance in 2019 is the same as the de Blasio Administration's, we expect these costs to be lower than presented in the November plan by $42 million in 2020, $86 million in 2021, and $70 million in 2022.

Public Assistance Spending. IBO expects that city-funded spending on cash assistance for the poor will be lower than projected by the de Blasio Administration. Based upon the city's recent public assistance rolls, IBO estimates city-funded public assistance will be lower than OMB estimates by $41 million in 2019 and $42 million in each year from 2020 through 2022. In addition we project that state and federal funds for public assistance will be $93 million lower than OMB estimates in 2019 and $102 million lower in each year from 2020 through 2022.

Areas where IBO projects greater-than-budgeted spending:

Homeless Services. The cost of homeless services presents the most notable difference between the two forecasts, with IBO projecting an additional need of $138 million in city funds in the current year, rising to $217 million by 2022. The primary factor behind IBO's forecast of greater city costs for homeless services is our estimate of federal funding for family shelters. In the past few years the city has consistently received less federal funding than OMB has expected. IBO's estimates assume that the ratio of funding among the city, state, and federal governments will closely mirror that of recent years. As a result we project approximately $100 million less federal funding for family shelters than OMB in each year of the financial plan and assume that the shortfall will be remedied with an increase in city funding.

Additionally, the single adult homeless population has continued to grow steadily in recent years, a trend we assume will continue over the plan period. IBO estimates that continued increases in the single adult homeless population will cost the city an additional $38 million in 2019, rising to roughly $111 million a year in 2020 through 2022.

Uniformed Overtime. As in past years, we expect overtime costs for the police and fire departments will be higher than estimated in the Mayor's plan. Based on recent historical overtime usage in both departments, IBO anticipates that overtime costs for the police department will exceed the current plan by $75 million in 2019 and $50 million each year from 2020 through 2022. Similarly, we estimate that the city will spend an additional $50 million each year from 2019 through 2022 on fire department overtime costs.

Department of Education. IBO estimates that the city will need to provide an additional $25 million in the current year, $24 million in 2020, and $21 million in 2021 and 2022 for charter school lease expenses. The de Blasio Administration based its estimate of state aid for charter school leases on the assumption that once the city reaches $40 million in cumulative allowable charter school lease expenditures since 2015 (the year the state requirement that the city pay for charter schools' leases in private space took effect), it will receive 60 percent reimbursement from the state for lease expenses incurred. In contrast, IBO expects that the state will actually only reimburse 60 percent of the portion of allowable city charter school lease expenditures that exceeds $40 million in any given year.

Small Business Services. IBO believes that the Mayor has underestimated the Department of Small Business Services (SBS) budget in the out-years of the financial plan. As a result, we have increased city-funded expenditures for SBS by $55 million in 2020 and $57 million in both 2021 and 2022. IBO's estimate of higher costs is primarily the result of the city not accounting for funding of the NYC Bus Program beyond the current year of the plan. The program, established in 2014, provides funds to reverse significant wage cuts for certain school bus drivers, attendants, dispatchers, and mechanics. Initially the grant was for one year and capped at $42 million, but funding has been allocated every year since its implementation. The November plan includes funding for the program in 2019, but not for the remainder of the plan period. On the expectation that these payments will continue, IBO assumes the agency will need an additional $42 million each year from 2020 through 2022.

Similarly, SBS's financial plan does not include funding past the current year for several programs that have been funded annually in past budgets. IBO assumes that SBS will need an additional $15.1 million in each year from 2020 through 2022 for the programs to continue.

Board of Elections and Campaign Finance Board. IBO estimates that the city will spend $15 million more-than-budgeted in 2019 and $30 million more each of the remaining years of the financial plan period for the Board of Elections (BOE). The current year increase in the Board of Elections' budget is the result of the need for a citywide special election for Public Advocate, while increases over the remainder of the plan period were made to bring BOE's budget into line with recent levels of spending. In addition, IBO projects that the Campaign Finance Board (CFB) will spend $40 million more than budgeted for 2022, the year of the next citywide elections, including the election of a new mayor. IBO's re-estimate of CFB spending for 2022 are generally in line with expenditures in 2014, the last citywide election cycle without an incumbent mayor running for re-election.

Other Cost Increases. IBO estimates that the Department of Sanitation will spend $16 million less city funds in the current fiscal year but will require an additional $7 million in 2020, $46 million in 2021, and $75 million in 2022. Although we project that the cost of closing the Fresh Kills Landfill will be lower than expected, these savings will be more than offset from 2020 through 2022 by higher costs for personnel and for nonpersonnel costs of waste prevention and recycling.

IBO estimates that the parks department will require additional city funding in each year of the plan period. Assuming that agency expenditures in such areas as auto maintenance, funding for the city facilities managed by the Wildlife Conservation Society, and human resources will be similar to their average levels in recent years, the parks department will require an additional $10 million in 2019, increasing to $20 million by 2022.

We estimate that additional city funds totaling $11 million in 2020 and $13 million a year in 2021 and 2022 will be needed at the Department of Housing Preservation and Development. These additional costs are primarily the result of the de Blasio Administration not funding a number of current initiatives and programs it has funded routinely in the past that IBO assumes the agency will continue to fund in the future. These include, for example, emergency housing services for residents displaced when a building becomes uninhabitable.

Pressure Points. The November 2018 Financial Plan contains fewer risks than most of the recent financial plans. Some of the most serious risks in recent financial plans are largely resolved, most notably budgeting for the cost of labor settlements, assuming all of the city's municipal labor unions follow the pattern established in the city's contract with DC 37. These settlements, coupled with recent changes to the political landscape in Washington, have reduced a good deal of the uncertainty surrounding the city budget.

New York City Housing Authority. Yet despite these changes there still remain a number of areas of concern and potential budgetary uncertainty. The city's public housing stock, under management of the New York City Housing Authority, continues to deteriorate. NYCHA estimates that its housing portfolio currently has $32 billion of critical-needs capital upgrades to be completed over the next five years and a total capital need of $45 billion to bring all NYCHA properties into a state of good repair over the next 20 years. While the majority of NYCHA funding has traditionally been an obligation of the federal government, in recent years the share of the agency's capital plan funded by Washington has diminished. In the city's current plan the city is providing a total of $2.4 billion, slightly under half of NYCHA's $5.3 billion capital plan for the four years; notably the authority's capital plan covers less than 17 percent of what the agency has identified as its critical capital needs. The city may need to greatly increase its capital contribution to NYCHA in order to prevent further decline of the city's public housing stock.

In addition to handling NYCHA's longer-term capital needs, the city must resolve emergency issues at NYCHA related to mold and lead paint remediation, heating outages, and broken elevators. As a result of legal action taken against the city by the federal government, the de Blasio Administration agreed to the terms of a consent decree that placed NYCHA under a federal monitor and required the city to provide $1.2 billion in additional capital funding to complete these emergency projects. A recent judicial decision invalidated the consent decree and the city and federal government are now negotiating the terms of a new settlement. While the judge's approval is not necessarily contingent on additional funding, there is still the risk that the final consent decree could cost the city hundreds of millions of dollars more than what the city had previously agreed to.

Metropolitan Transportation Authority. Additional pressure on the city's financial plan emanates from the potential costs related to repair and improvement of the MTA's subway and bus system. Earlier this year the Mayor agreed to provide half the $856 million cost of an emergency Subway Action Plan aimed at stabilizing the city's deteriorating subway system; the state is providing the other half of the funds. The city is also slated to contribute $2.7 billion of the $17.1 billion of capital spending on subways and buses the MTA budgets in its current capital plan. This funding is likely not adequate to account for all of the system's critical needs, however. It has been estimated that it could cost $40 billion or more to properly modernize the city's subway system over the next decade.

NYC Health + Hospitals. The survival of the Affordable Care Act so far, coupled with a two-year delay of cuts to the federal Disproportionate Share Hospitals program, has provided some fiscal relief for NYC Health + Hospital system. The public hospital system still faces substantial financial challenges, however. The current H+H financial plan projects budget short-falls of over $156 million in 2018 increasing to $1.8 billion in 2022. H+H's most recent plan to close the gaps relies on existing Medicaid programs and revenue growing initiatives in the near-term, but in the out-years the plan relies almost exclusively on growth in health insurance payments and increased utilization. These revenue enhancements are paired with savings initiatives focused mainly on reductions of the agency's headcount. But H+H has already made multiple rounds of cuts and further reductions could undermine the goal of encouraging more patients to choose H+H facilities if wait times increase or services are eliminated. This makes it likely the city will face pressure to provide additional funding.

In Reserve

The Mayor and the City Council continue to place substantial funds into reserve that would be available to help balance the budget in the face of either a sharp drop in revenue or the need for unexpected spending. The November plan includes $1.38 billion in reserve funds for 2019—dollars budgeted as expenses but not attached to any specific budget function. If the funds go unused, as they have in the Mayor's prior budget plans, they then become part of the surplus and would be used to offset the shortfall projected for 2020. The financial plan also contains slightly smaller unallocated reserves of $1.25 billion in each year from 2020 through 2022.

In addition to these budgeted reserves, the de Blasio Administration has put aside an estimated $4.8 billion in the Retiree Health Benefits Trust. While funds in the trust can only be used to pay all or part of the cost of retiree health benefits in a given year, it is a sizable sum: $2.5 billion in 2019 and $2.6 billion in 2020. Retiree health costs paid with funds from the trust free up an equal amount of city funds in the budget for other needs, although dipping into the trust fund to provide budget relief only makes the city's challenge of funding its future health care obligations to retirees more difficult.

If IBO's economic forecast and our re-estimates of city revenues and expenditures prove generally correct, then the city's fiscal condition should remain stable, with current-year budget surpluses and future-year gaps of a size that the city has routinely managed in past years. We estimate that the city will end 2019 with a total surplus of $906 million before drawing down any portion of the unallocated reserve in this year's budget. This surplus would reduce the 2020 gap to $2.1 billion (3.1 percent of estimated city-funded expenses). Additionally, our forecasts of revenue and expenditures in the last two years of the financial plan reduce the city's budget gap in 2021 to $2.8 billion (3.8 percent of estimated city-funded spending) and $2.2 billion (2.9 percent of estimated city-funded spending) in 2022. If the city is unable to close these gaps with additional revenues or agency cost savings, the $1.25 billion in reserves budgeted for each year of the financial plan are available to help bring the budget into balance. Finally, the city could draw on an estimated $4.8 billion set-aside for the cost of future retiree health benefits to help eliminate budget gaps.

The city's fiscal condition, while relatively strong, still faces significant uncertainty. While the changing political makeup of the Congress has lessened the possibility of additional tax policy changes at the federal level, the Trump Administration tax cuts already enacted have driven the federal budget deficit to nearly $1 trillion. Growing federal deficits will increase federal debt, pushing up interest rates and increasing the cost of debt issuance for all levels of government. The stability of the financial markets, and reciprocally the city's financial sector, has already been affected by uncertainty from policies coming out of Washington. These and other factors could have negative effects on city tax revenue and strain the city's ability to provide services at current levels. On the spending side, pressing needs for NYCHA, H+H, and the MTA—agencies not directly under the city's control—could well result in demands for additional city funding. While the city's financial plan includes funds in reserve that could mitigate some increased demands on the city's finances, these funds would only temporarily postpone the need for changes in fiscal policy, through either increased taxes or decreased expenditures.

Endnotes

[1]Information on the payment plan option under current law is available at the Department of Finance website: https://www1.nyc.gov/site/finance/taxes/property-payment-plans.page

[2]Beginning in 1999 the STAR program reduced city marginal PIT tax rates by roughly 6 percent. While this lowered city residents' PIT liability, the city's budget was made whole through a state aid payment equal to the loss in tax revenue. Beginning with tax liability year 2017 the state has replaced the benefit tax filers previously received through the lower STAR rates with a credit of equal value against state income tax liability. The state had previously eliminated the lower marginal rates for tax filers with incomes above $500,000.