New York City Independent Budget Office Fiscal Outlook

January 2021

Hard Times Ahead?

While Projected Budget Gaps Are Modest, the Economic and Fiscal Risks NYC Faces Are Not

At this time last year IBO was cautiously confident about New York City's fiscal outlook, forecasting slowing but continued job and wage growth and steady increases in city tax collections. That outlook was quickly discarded as the Covid-19 pandemic took hold in the United States. The pandemic's effects on the city's public and fiscal health were dramatic in both their scope and the swiftness by which they spread. IBO estimates that compared with our tax revenue forecast for 2020 through 2023 produced shortly before the onset of the pandemic, the city will collect $11.3 billion less than we had anticipated—a 4.2 percent revenue shortfall that has tested the city's ability to meet its mandate to maintain a balanced budget. (All years refer to fiscal years unless otherwise noted.)

Neither Washington nor Albany has ridden to the city's aid to replace the lost revenue: assistance from the federal government has fallen well short of the city's needs and New York State, wrestling with its own shortfall, has threatened billions of dollars of cuts to state aid. Absent this assistance, the de Blasio Administration and City Council have been forced to scramble to find the necessary

Total Revenue and Expenditure Projections
Dollars in millions

	Actuals 2020	Plan 2021	Plan 2022	Plan 2023	Plan 2024	Average Change 2020-2024
Total Revenue	**$95,698**	**$93,694**	**$95,791**	**$98,921**	**$100,992**	**1.4%**
Total Taxes	62,924	60,496	64,901	67,822	69,865	2.7%
Total Expenditures	**93,620**	**92,875**	**99,170**	**101,254**	**102,503**	**2.3%**
IBO Revenue Less Expenditures	**n/a**	**$819**	**($3,376)**	**($2,333)**	**($1,509)**	
IBO Prepayment Adjustment 2021/2022	n/a	($819)	819	-	-	
IBO Surplus/(Gap) Projections		**$0**	**($2,557)**	**($2,333)**	**($1,509)**	
Adjustments for Prepayments and Non-Recurring Expenses						
Net Prepayments	($402)	($3,187)	($632)	$0	$0	
Reserve Funds	-	100	1,250	1,250	1,250	
Retiree Health Benefits Trust	(1,000)	(1,600)	-	-	-	
Other Adjustments	-	-	125	267	401	
Total Expenditures (net of adjustments)	$95,022	$97,562	$98,427	$99,736	$100,852	1.5%
City-Funded Expenditures (net of adjustments)	$70,429	$69,187	$71,714	$72,808	$73,892	1.2%

NOTES: Figures may not add due to rounding. Net prepayments include payments of debt service. Negative adjustments for prepayments add to the total expenditures, positive adjustments reduce total expenditures.

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budgetary savings and additional revenues at a time when city businesses have struggled, unemployment has skyrocketed, and food and housing insecurity have increased for many New Yorkers.

The financial plans submitted by the Mayor since the onset of the pandemic have included a variety of approaches for achieving budget balance while continuing to provide essential services for city residents. The Mayor has so far been able to achieve this balance utilizing a number of strategies, some of them questionable. They include: accessing available funds from budgetary reserves ($1.0 billion last year and $1.6 billion in the current year); labor savings that were unidentified at the time the budget was adopted in June ($1.0 billion in each year of the financial plan) and now only include the delay of certain labor payments from this year to future years ($639 million) thereby increasing the 2022 budget gap in the November plan by that amount; and non-recurring expense reductions (an estimated $1.3 billion in 2020 and 2021, primarily the result of underspending due to the pandemic).

Although uncertainty is a factor in all forecasts, analysts assessing the outlook for the city at this moment must acknowledge a much greater level of uncertainty than normal. A year ago, the idea that a global pandemic could reduce city tax revenues by over 4 percent was not within the realm of possibility. The coronavirus pandemic has added a new dimension of uncertainty to IBO's forecasts. The recent start of widespread vaccination efforts provides reasons for optimism that the nascent economic recovery that began over the summer will be sustained and accelerate during calendar year 2021. But this optimism is tempered by the knowledge that the city and the world are still treading in unknown waters, with much about the coming months to be determined by the course of the pandemic.

While risks to the near-term outlook remain, IBO expects the city to end the current fiscal year with a surplus of $1.5 billion, which we assume will be used to prepay 2022 expenses. Based on IBO's own forecasts of the economy, city tax revenue, and spending under the Mayor's plan, we estimate the city will have $1.3 billion in additional city-generated revenue in the current year compared with the Mayor's plan, offset by $138 million of additional spending and $342 million of labor savings that have yet to be identified. This would result in $819 million of surplus funds—over and above the $632 million projected by the Mayor and already included in his November 2020 Financial Plan. IBO estimates that after using the $1.5 billion from 2021 to prepay expenses for next year, the city will still face a $2.6 billion budget gap in 2022, which begins on July 1, 2021. In the final years of the financial plan period, we forecast budget gaps of $2.3 billion and $1.5 billion for 2023 and 2024, respectively.

The surplus of $632 million for 2021 included in the Mayor's November plan results from a combination of a higher revenue forecast compared with what the de Blasio Administration forecast in June coupled with agency savings. On the revenue side, the plan recognizes $748 million of additional tax revenue in 2021, which is offset by a $135 million reduction in non-tax revenues. The savings program provides $786 million of budget relief in the current year, which is offset by $767 million in agency new needs and adjustments. The lion's share of agency savings result from reductions in planned debt service expenses—savings that would have occurred without the city having taken any additional action.

While the city has routinely dealt with future budget gaps of this scale in the past, at this point the city has fewer resources available. Unlike in prior years, the city does not have a substantial sum of reserve funds built into the current year to assist in reducing next year's gap. In order to help balance the 2021 budget, the city used $1.15 billion of expense funds that were not allocated for a specific purpose—money that would normally have been set aside in reserve at the start of the year. While drawing down any remaining unallocated funds typically occurs later in the fiscal year, the budget pressure this year led the city to draw down the money at the very start of the year, leaving only the $100 million general reserve required under the City Charter to reduce the 2022 budget gap—assuming no unanticipated needs emerge in 2021.

Additionally, it is unlikely that any new or expanded sources of state or local revenue will materialize in time to help close the gap for 2022. The recent $900 billion Covid-19 relief package signed by President Trump provides little in the way of new assistance for the city and state budgets. While there is optimism that once the Biden Administration is installed there will be a renewed push for larger amounts of federal assistance to state and local governments, particularly if the Democrats were to win a thin majority in the new Senate, this is far from certain. Without an alternative funding source, such as direct assistance from the federal government, it is likely that the city will have to further draw down reserves, increase the taxes and fees that the city has control over, or implement steeper cuts in spending to bring the city's budget into balance. At a time when many households in the city are experiencing shrunken incomes, food insecurity, and threats of eviction for non-payment of rent, cuts to social service programs funded by the city would be particularly painful.

Following this introduction, this report presents IBO's economic forecasts for the U.S. and for New York City, followed by our forecast for city revenues. The report then turns to an overview of the projected expenditures and the city's fiscal outlook. It concludes with a discussion of the risks and pressure points for 2022 and beyond.

Economic Forecast

IBO projects that the sharp contraction in the U.S. economy during the first half of 2020 and the fitful recovery in the second half has led to a 3.6 percent decline in real gross domestic product (GDP) for the year as a whole. (In this economics section, years refer to calendar years unless otherwise noted.) Although we expect the economy to rebound, with GDP rising 3.9 percent this year and 3.3 percent in 2022, there are considerable downside risks to this forecast. Most important, IBO's economic forecast is predicated on the assumption that widespread vaccination will effectively resolve Covid-19's threat to public health by the second half of 2021. The outlook is also based on the expectation that expansionary fiscal and monetary policy will continue as necessary to avoid a new recession. With the impact of last spring's fiscal stimulus having faded, job growth has slowed in recent months. Slower economic growth coupled with a second wave of coronavirus infections that has been more widespread than expected has led to concern that the stimulus provided by the latest Covid-19 relief package may prove insufficient to sustain the economic recovery.

IBO versus Mayor's Office of Management and Budget Economic Forecasts

	2019	2020	2021	2022	2023	2024
National Economy						
Real GDP Growth						
IBO	2.2	(3.6)	3.9	3.3	3.0	2.5
OMB	2.2	(3.6)	3.1	2.5	2.5	2.9
Inflation Rate						
IBO	1.8	1.2	1.8	2.7	2.6	2.5
OMB	1.8	1.3	2.3	2.6	2.2	2.1
Personal Income Growth						
IBO	3.9	5.8	2.4	2.0	5.4	5.1
OMB	3.9	5.8	(1.4)	3.6	4.4	5.1
Unemployment Rate						
IBO	3.7	8.2	6.5	5.8	4.8	4.4
OMB	3.7	8.1	5.7	4.7	4.4	4.0
10-Year Treasury Note Rate						
IBO	2.1	0.8	1.1	2.1	2.9	3.6
OMB	2.1	0.9	1.0	1.2	1.4	1.6
Federal Funds Rate						
IBO	2.2	0.4	0.1	0.1	0.2	1.0
OMB	2.2	0.4	0.1	0.1	0.1	0.1
New York City Economy						
Nonfarm New Jobs (thousands)						
IBO (Q4 to Q4)	83.1	(661.8)	183.8	210.5	122.6	46.7
IBO (annual average)	100.2	(543.7)	7.0	226.3	150.5	71.4
OMB (annual average)	95.6	(518.2)	170.3	232.6	93.9	66.1
Nonfarm Employment Growth						
IBO (Q4 to Q4)	1.8	(14.1)	4.6	5.0	2.8	1.0
IBO (annual average)	2.2	(11.7)	0.2	5.5	3.5	1.6
OMB (annual average)	2.1	(11.1)	4.1	5.4	2.1	1.4
Inflation Rate (CPI-U-NY)						
IBO	1.7	1.7	1.9	3.0	3.0	2.8
OMB	1.7	1.8	2.2	2.5	2.3	2.1
Personal Income ($ billions)						
IBO	670.5	711.9	719.6	744.8	786.5	821.4
OMB	665.9	685.8	681.7	708.1	738.9	773.1
Personal Income Growth						
IBO	5.3	6.2	1.1	3.5	5.6	4.4
OMB	3.3	3.0	(0.6)	3.9	4.3	4.6
Manhattan Office Rents ($/sq.ft)						
IBO	79.9	75.8	72.9	79.7	83.2	86.0
OMB	79.8	72.4	72.6	76.6	78.7	81.3

SOURCES: IBO; Mayor's Office of Management and Budget
NOTES: Rates reflect year-over-year percentage changes except for unemployment, 10-Year Treasury Note 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.

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In comparison to its impact on the national economy, the pandemic has hit New York City's economy harder, and recovery has been slower. Employment in the city is heavily dependent on industries devastated by the pandemic: leisure and entertainment, travel, tourism, and trade. Despite very strong profits on Wall Street for the year, which typically bolster economic activity throughout the local economy, IBO projects that local employment has fallen by 662,000 jobs from the fourth quarter of 2019 to the fourth quarter of 2020, a 14.1 percent decline. Under the assumptions of renewed strength of the national economy and a quick abatement of the recent wave of Covid-19 infections in the city, IBO forecasts a resumption of local employment growth—increases of 4.6 percent and 5.0 percent in 2021 and 2022, respectively, followed by slower growth in 2023 and 2024. Even by the end of 2024, however, employment in the city is projected to remain below its pre-pandemic peak. While we expect recovery over the next few years, there is great uncertainty over the city's longer-term outlook, as residents and businesses reassess the risks and benefits of living and working in New York City.

U.S. Economy. IBO expects the recovery from the sharp economic contraction in the first half of 2020 will continue into 2021 and beyond. We forecast a 3.6 percent decline of real gross domestic product in 2020, followed by 3.9 percent growth in 2021. Recovery is expected to be slow through the first half of this year before accelerating in the latter half, once a significant share of the population has been vaccinated. Growth will weaken, but continue through the end of the financial plan period, with real GDP increases of 3.3 percent, 3.0 percent, and 2.5 percent in 2022, 2023, and 2024, respectively. There are substantial downside risks to IBO's economic forecast, however. Most critically, our projections are premised on the effectiveness, rapid distribution, and broad public acceptance of the recently approved vaccines. Moreover, we assume that expansionary fiscal and monetary policies will be sufficient to sustain the economy's growth until Covid-19's public health threat is resolved.

Public health shutdowns and restrictions imposed to limit the spread of coronavirus infections plunged the U.S. economy into recession in the first half of 2020. Starting in March, closures of all businesses not deemed essential took effect in many parts of the country, generating an economic contraction that became even more severe in the second quarter of 2020. Real (inflation-adjusted) GDP fell at annualized rates of 5.0 percent in the first quarter and then a jaw-dropping 31.4 percent in the second quarter—the deepest quarterly downturn since modern GDP records began in 1947. The nation's unemployment rate, which in the first quarter stood at 3.5 percent—its lowest level in 50 years— jumped to 14.7 percent in April. Real consumer spending, the biggest driver of the U.S. economy, declined at an annualized rate of 33.2 percent in the second quarter.

As deep as the economic downturn in the first half of 2020 was, it did not extend into the second half of the year. The shutdown, limits on public activity, and the arrival of warmer weather helped slow the spread of infections and prompted the easing of public health constraints. As restrictions were relaxed, many businesses were able to reopen, although some were limited to a fraction of their former capacity. The reopenings, combined with aggressive monetary and fiscal policies in Washington, provided the stimulus for the economy to rebound. The Federal Reserve (the Fed) announced its intention to provide whatever funding is necessary to keep credit flowing. It cut the federal funds interest rate to near zero; relaxed bank reserve requirements; and resumed quantitative easing by purchasing Treasury, municipal, and mortgage-backed securities, pumping trillions of dollars of liquidity into the economy. As it did during the 2008-2009 financial crisis, the Fed also set up a number emergency lending facilities to support markets for commercial paper, assets backed by consumer debt, and other forms of credit, along with some new facilities, notably one for municipal debt.

Last spring Congress enacted four emergency relief bills to address the impact of the coronavirus; the largest was the Coronavirus Aid, Relief and Economic Security Act, commonly known as the CARES Act. Taken together the legislation provided a total of $3 trillion of economic stimulus and relief for individuals, businesses, health care providers, states, and some local governments. The many provisions included loans and grants to businesses, checks to individual income tax filers, business tax cuts, tax credits to encourage firms to maintain their payrolls, expansion of unemployment insurance, and support for hospitals and health care providers. These measures bolstered household income and enabled many businesses to stay afloat and avoid layoffs, at least temporarily. Expanded unemployment insurance benefits included supplements of $600 per week for up to four months, and the extension of benefits to the self-employed and independent contractors (gig workers) who were not previously eligible for the program.

While many households and individuals saved their extra income or used it to draw down debts, the stimulus also fueled a sharp increase in consumer spending on goods and services. Real GDP rebounded in the third quarter, rising at an annualized rate of 33.4 percent. The unemployment rate, which peaked at 14.7 percent in April, fell to 7.9 percent by the end of the quarter. But growth has slowed considerably in the fourth quarter. Recent job gains have been much smaller than during the summer and initial claims for unemployment benefits remain higher than their peaks in past recessions. Consumer spending growth has also decelerated as the fiscal stimulus associated with the CARES Act and its accompanying legislation has waned. Despite the growth in the third and fourth quarters, IBO projects that GDP will decline 3.6 percent for 2020 as a whole, and that the average unemployment rate will be 8.2 percent.

IBO's forecast of 3.9 percent growth in real GDP in 2021 is based on our expectation that weak growth in the first half of the year will be followed by more robust growth in the second half. The current wave of Covid-19 infections will be severe enough to impede economic growth this winter and spring, but we expect continued expansionary fiscal and monetary policies to prevent the economy from slipping into another recession. Another round of fiscal stimulus—this one valued at $900 billion—was signed into law in late December, but only after much political wrangling. IBO's forecast assumes that should this round of stimulus prove to be insufficient, Washington will take further steps to avoid derailing the recovery.

As adopted by Congress, the legislation includes provisions that will increase consumer incomes relatively quickly. Most income tax filers will receive checks of $600 per adult and dependent child, and some already have their checks in hand. Unemployment insurance benefits will be extended for 11 weeks, with an additional $300 per week federal supplement to state benefits. The stimulus also renews the provision of unemployment benefits to gig workers, and it enhances child and earned income tax credits. Funding for many of the loan programs from the CARES Act have been renewed, including the allocation of $284 billion to the Paycheck Protection Program. The stimulus package explicitly discontinued the Fed's emergency lending facilities—including those for local governments—established by the CARES Act and required the return of the facilities' unused funds to the treasury department by the end of this year. The Fed, however, does retain the ability to establish different lending programs in response to future economic emergencies. IBO expects the Fed will maintain an expansionary monetary policy of a very low interest rate, at least through 2023, and continue to create new lending programs as needed.

Even with new stimulus spending and an accommodative monetary policy, as long as the pandemic continues many sectors of the U.S. economy will stagnate, especially retail, transportation, sports, arts and entertainment, accommodations, and other travel-related industries. We expect unemployment to remain high in the first half of the year and consumer spending to fall short of levels needed to fuel solid economic growth. Economic growth will accelerate once a resolution to the pandemic emerges. IBO expects that widespread vaccination by the summer and continued public health measures to limit new infections will effectively end the coronavirus's threat to public health and take the brakes off the U.S. economy. Pent-up demand for restaurants, live entertainment, recreation, and travel by high-income households, who have seen their savings rise during the pandemic, will fuel faster rates of growth in the second half of 2021 and continued growth—albeit at gradually diminishing rates—over the remainder of the forecast period. IBO forecasts real GDP growth of 3.9 percent in 2021, declining to 3.3 percent in 2022 and an average of 2.7 percent in 2023 and 2024. The unemployment rate is expected to gradually fall—to 6.5 percent in 2021 and 5.8 percent in 2022, and average 4.6 percent in 2023 and 2024.

There are a number of major risks to IBO's economic forecast, mostly on the downside. The biggest downside risk to the forecast comes from the second wave of coronavirus infections currently underway in most parts of the nation. If it is not contained soon, hospitals will become overwhelmed and the resulting shutdowns could fuel a wave of small business bankruptcies, bringing an end to the already fragile economic recovery. Other major risks concern fiscal policy. The recently enacted stimulus package is somewhat smaller than IBO anticipated when our forecast was developed, and may not provide enough stimulus to sustain economic growth. President-elect Biden and others have advocated additional stimulus, but it is not clear that Congress will approve new spending. The limited aid to hard-pressed states and localities might also slow the current recovery, particularly if it leads to further layoffs of public-sector employees or cutbacks in vital services such as transportation, which are essential for regional economic activity. One potential upside risk to the forecast comes from the availability of multiple vaccines and the earlier-than-expected start of vaccinations, which could hasten the resolution to the pandemic.

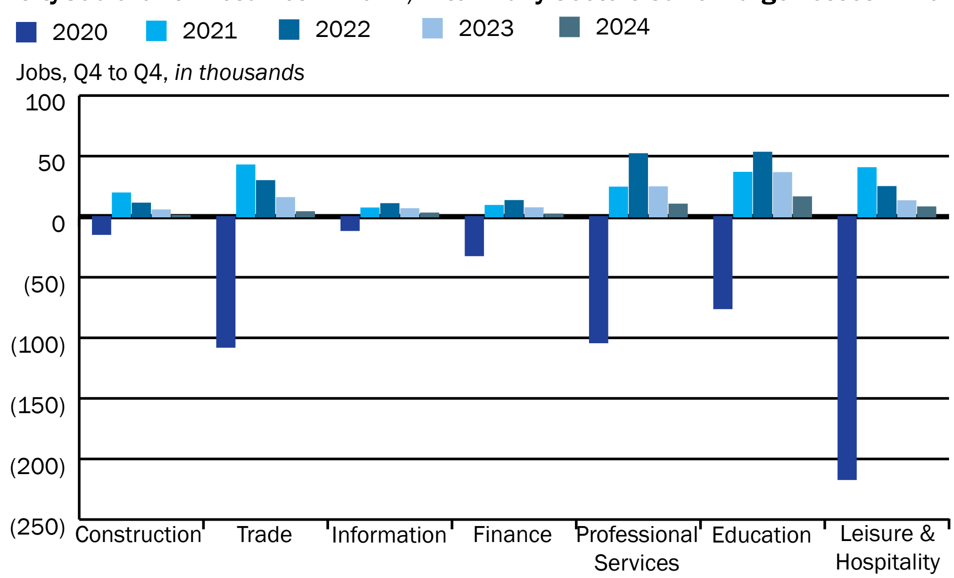
IBO and the Mayor's Office of Management and Budget (OMB) each forecast a 3.6 decrease in real GDP in 2020, followed by a rebound in 2021 and continued growth over the remainder of the financial plan period. IBO projects a somewhat stronger rebound than OMB in 2021, however, and faster economic growth through 2023. Our forecast for 2021 real GDP growth is 3.9 percent, compared with 3.1 percent in OMB's projections, a difference of 0.8 percentage points. The difference between the 2022 forecasts is also 0.8 percentage points—3.3 percent growth in IBO's forecast vs. 2.5 percent growth in OMB's. The two forecasts diverge after 2022, with IBO expecting GDP growth to slow from 3.0 percent in 2023 to 2.5 percent in 2024, while OMB projects growth to strengthen from 2.5 percent to 2.9 percent over the same period.

Local Economic Forecast. The pandemic has hit New York City with particular intensity, due both to its status as an early hotspot for the virus, and to its heavy reliance on leisure and entertainment, travel, tourism, and trade. The biggest impact on employment and commercial activity came in the second quarter of 2020, during the initial shutdowns and tightest restrictions on businesses and individuals. This was followed by a modest recovery in the third quarter. With the arrival of winter and virus rates beginning to rise again, however, the recovery will remain fragile and tentative for many more months, until vaccines are widely available and vaccination rates are high enough to allow a safe return to pre-pandemic behavior. While the recovery of the local economy is tentative, it is supported by relative strength in earnings, and by a very strong year for Wall Street profits. For now, the recovery has brought some renewed hiring, although it appears to be running out of steam. IBO projects that unemployment rates will decline further over the next few years, but we do not expect the rate to reach its pre-pandemic level by the end of the forecast period.

Employment. Since IBO's last full report in May, the projected employment landscape in response to the Covid-19 pandemic has shifted. The losses in the second quarter of 2020 were steeper than we projected in the spring, with nearly 878,000 jobs lost across all sectors, following 13,000 jobs lost in the first quarter. We estimate that roughly 186,000 new jobs were created or recovered in the third quarter of 2020, or about one-fifth of the jobs lost in the first half of the year. This recovery came as transmission and hospitalization rates slowed and warmer weather allowed for resumption of some economic activity, such as outdoor dining. As the latest wave of the pandemic continues, however, IBO projects that employment growth will weaken, to 43,000 jobs in the fourth quarter and 26,000 in the first quarter of 2021, before a more sustained expansion sets in for the rest of the forecast period. On an annual basis, IBO forecasts Q4-to-Q4 total employment losses of 662,000 for 2020, followed by gains of 184,000 in 2021, 211,000 in 2022, 123,000 in 2023, and 47,000 in 2024.

The job losses in 2020 were not distributed evenly across all sectors. By far the largest losses were concentrated in leisure and hospitality, resulting from the original shutdown and the subsequent restrictions on dining, the shuttering of live entertainment such as Broadway theaters, and the near cessation of travel into the city, which reduced demand for accommodations. In the fourth quarter of 2019

City Job Growth Resumes in 2021, After Many Sectors Suffer Large Losses in 2020



SOURCE: IBO projections

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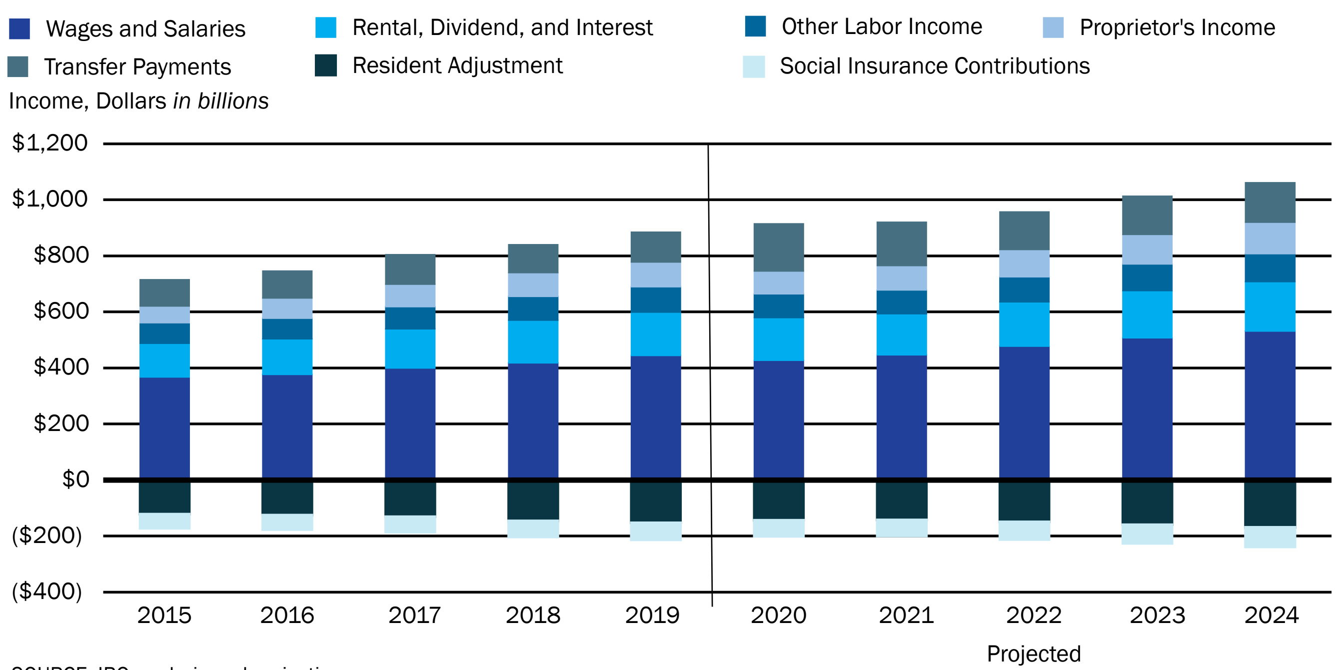
the leisure and hospitality sector employed nearly 466,000 people, but IBO estimates that by the fourth quarter of 2020 the sector will have lost roughly 217,000 jobs—nearly half (46.6 percent) of all employment in the sector. Other sectors bearing the brunt of employment losses last year include professional services, with a loss of 104,000 jobs (13.0 percent); education and health, which has lost 76,000 jobs (7.1 percent); and trade, with a loss of 73,000 jobs (15.1 percent).

IBO projects the largest rebound in employment for 2021 in the sectors most closely tied to consumer activity: leisure and hospitality, and trade. In the aftermath of the pandemic, demand for many previously unavailable services is expected to spike as shops, restaurants, bars, and theaters begin to reopen and travel begins to increase. We expect job gains in most other sectors to strengthen later in the recovery, peaking in 2022. Most notable are professional services and education and health, both adding more than 50,000 jobs each in 2022, following smaller increases in 2021.

Population, Labor Force, and Unemployment. Although the trend received little attention until recently, the city's population has been declining since the middle of 2016, even before the onset of the pandemic, the longest span of consecutive annual demographic decline in 40 years. This can be traced to an out-migration of New Yorkers that exceeded the inflow of domestic and international migrants. The pandemic has unquestionably exacerbated these trends, both for outflows and inflows. Many city residents have left the city to stay in locations with lower infection rates and/or fewer public health restrictions. Given the length of the pandemic, the mounting costs of maintaining an unused city residence, and the growing comfort of both employers and employees with remote working arrangements, we expect that not all will return, even when it is fully safe to do so. Although detailed data are not yet available to track recent trends, we assume that in-migration has fallen steeply this year, and may be slow to restart.

While the city's labor force has declined due to a shrinking population, this year the number of jobs located in New York City fell even more rapidly, driving up the rate of unemployment. IBO estimates that the local unemployment rate peaked at 17.9 percent in the second quarter of 2020, and that the rate for the year will average 13.6 percent. The unemployment rate is projected to begin a steady, if initially slow, descent from this peak, with larger declines beginning later in 2021 and an average rate of 13.9 percent for the year (this is slightly higher than the average for 2020 because the unemployment rate in the first quarter of 2020—before the onset of the pandemic—was very low). We expect that the rate will continue to fall, averaging 5.1 percent in 2024, which is still higher than the 4.0 percent recorded for 2019.

A Sharp Increase in Transfer Payments Sustains Personal Income Growth in New York City



SOURCE: IBO analysis and projections

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Personal Income and Wages. In contrast to employment, we project that personal income (income derived from all sources) in New York City actually increased last year, from an annual average of $670.5 billion in 2019 to $711.9 billion (growth of 6.2 percent) in 2020. However, this increase is primarily attributable to a sharp rise in transfer payments from the government to residents, including stimulus checks and enhanced unemployment benefits. All other major income categories, including wages and salaries, dividends and interest, and proprietor's income, have declined. This divergence is expected to reverse in subsequent years, as earnings from other types of income resume growth and transfer payments return to more typical levels, leading personal income growth to briefly slow in 2021 but remain positive throughout the forecast period, reaching $821.4 billion in 2024.

The largest income category by far is wages and salaries, totaling $444.2 billion in 2019 and accounting for 66.2 percent of all personal income for the year. IBO projects that wages and salaries contracted by $427.6 billion in 2020, a decline of 3.7 percent. While considerable, this decline is not as dramatic as the losses in employment reported above, in part because many of the job losses were concentrated in lower wage positions, both across and within industries. This can be seen more clearly by looking at the major sectors where the largest drops in wages and salaries are expected in 2020. These include: leisure and hospitality (declining from $24.0 billion to $12.1 billion, or 49.7 percent), construction (declining from $14.6 billion to $10.7 billion, or 26.7 percent), and trade (declining from $31.2 billion to $28.7 billion, or 8.0 percent).

Meanwhile, certain high-wage sectors (such as finance) that could continue to function more or less normally despite the shutdown and restrictions by having employees work from home, or those in especially high demand (such as health) saw increased wages and salaries. The biggest increase occurred in information, a growing sector in the city and one that has been critical to maintaining remote operations across all sectors throughout the pandemic. IBO projects that total earnings in the information sector have grown from $32.1 billion in 2019 to $36.2 billion in 2020, an increase of 12.6 percent.

After the overall decline in 2020, we project wage growth across most sectors to resume in 2021, increasing by 4.5 percent to total $446.9 billion—slightly above 2019 levels. Based on our forecast that wage growth will average 5.9 percent in the last three years of the forecast period, IBO expects aggregate wages to total $530.9 billion in 2024.

Real Estate. New York City real estate markets, particularly the commercial segment, have been hit hard by the pandemic. IBO estimates that taxable real estate sales will reach just $59 billion in 2020, compared with about $100 billion in 2019. While in 2019 residential and commercial sales each made up around half of the total, data through November suggest that the split for 2020 will be around 60 percent residential and 40 percent commercial. These numbers imply a 29 percent drop in aggregate residential sales and a 53 percent decline in total commercial sales from 2019 to 2020.

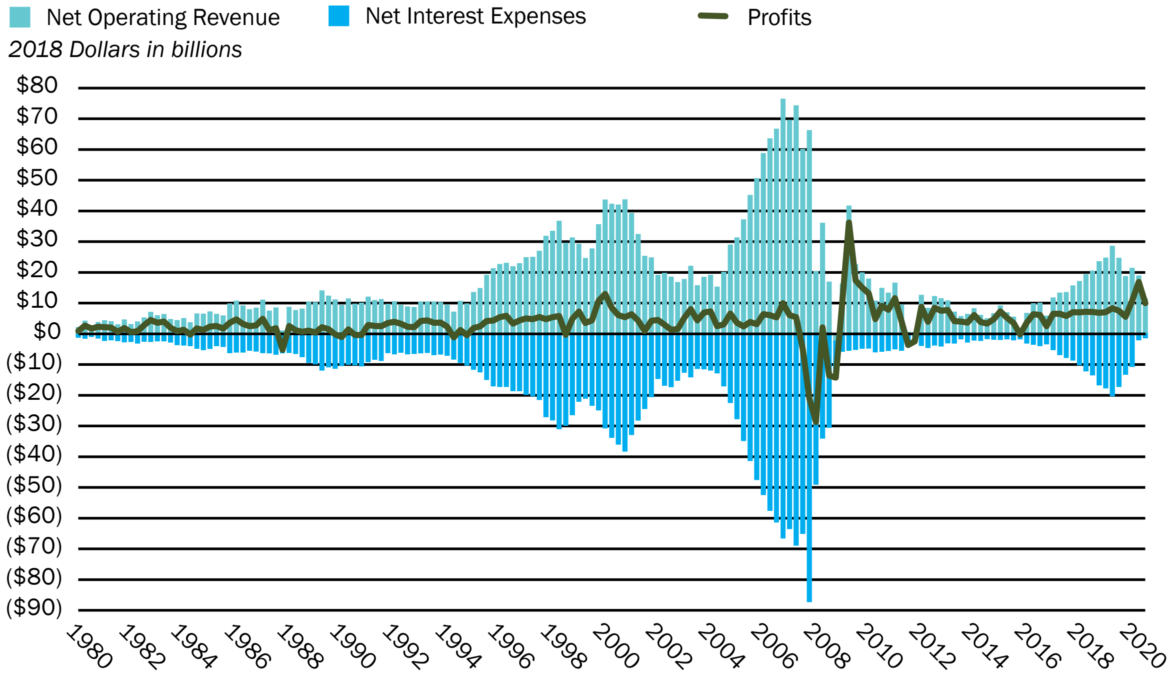
If IBO's forecast is correct, property sales in 2020 will be at their lowest since 2010, when in the aftermath of the financial crisis sales totaled roughly $50 billion, having recovered somewhat from $39 billion in sales the previous year. The financial crisis that decimated property markets in 2009-2010 had an even harsher impact on commercial real estate than the current pandemic, as credit markets were disrupted and financing for purchases became difficult. In 2009 and 2010 commercial sales comprised just 32 percent and 36 percent, respectively, of the total value of the city's taxable property transactions.

The pandemic has brought about, at least temporarily, a massive shift toward working remotely and has accelerated the move to online shopping, reinforcing trends already evident in vacant retail storefronts and Midtown office rents that had barely increased in recent years. These shifts raise questions about the future vitality of the commercial real estate sector in New York City. At the same time, there is significant evidence that the rise of working from home, coupled with concerns about public health issues and quality of life, have led substantial numbers of households to relocate outside the city on at least a temporary basis. It is too soon to know how many of these changes will be permanent, but it seems likely that New York City property markets will remain depressed, at least in the short run.

IBO projects that taxable real estate sales will begin to recover starting this year, with sales reaching around $80 billion in 2021, $89 billion in 2022, and $95 billion in 2023. These sales totals remain well below the average of the past several years and are similar to those in the 2010 through 2013 period, when the city's real estate market was emerging from the financial crisis.

Wall Street. New York Stock Exchange member firms profits soared to $27.6 billion over the first half of 2020, and IBO projects that profits will top $47 billion for the year as a whole—a total exceeded only in 2009, when Wall Street was rebounding from the steep losses at the onset of the Great

Quarterly Net Operating Revenues, Net Interest Expenses, and Profits of NYSE Member Firms



SOURCES: Intercontinental Exchange; IBO

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

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Recession. IBO forecasts Wall Street profits to subside to $25 billion in 2021 and then hold in the $23 billion to $25 billion range over the rest of the financial plan period.

The surge in profits over the first three quarters of 2020 was not driven by higher net operating revenues (non-interest revenues less non-interest expenses); on the contrary, real net operating revenues in the second quarter were down more than a third compared with a year earlier. But net interest expenses (interest revenue less interest expenses) have declined even more precipitously, and in the second quarter of 2020 shrank to close to zero (see figure above). This reflects cuts to the federal funds rate starting in mid-2019 and especially the drastic cuts to the funds rate in March and April of last year during the onset of the Covid-19 pandemic.

IBO projects net interest expenses to have shrunk further over the second half of 2020, but they are expected to gradually increase over the rest of the forecast period. We project that net operating revenues will increase in a similar fashion, offsetting the rising interest costs and keeping profits relatively stable over the next few years.

Taxes and Other Revenues

IBO's forecast of revenue from taxes and other sources including fines, fees, and state and federal aid totals $93.7 billion for the current fiscal year, $2.0 billion less than in 2020, as the coronavirus takes its toll on the city budget. (All years in this section and the following sections refer to fiscal years unless otherwise noted.)

Slightly under two-thirds of the city's total revenue this year ($60.5 billion) will come from city taxes; 29.9 percent ($28.0 billion) from non-city sources such as state, federal, and other categorical grants; and the balance from nontax city revenues (primarily fees, fines, and asset sales). With the exception of the real property and utility taxes, IBO expects revenue from every major city tax source to fall this year relative to 2020, with double-digit percentage declines in the corporate, real property transfer, mortgage recording, and hotel occupancy taxes. Federal grants to the city will grow by $1.7 billion (17.5 percent) this year, primarily due to almost $3.0 billion in federal emergency relief grants to reimburse some of the city's direct costs of responding to the pandemic.

IBO projects total revenue growth from 2021 to 2022 will be modest—$2.1 billion, or 2.2 percent, as brisk tax revenue growth of 7.3 percent ($4.4 billion) is offset by a decline of $3.6 billion in federal revenue as Covid-19 emergency relief grants are not expected to carry over into 2022.

After 2022, IBO forecasts growth of total revenues will pick up a bit, with annual growth averaging 2.7 percent in

IBO Revenue Projections *Dollars in millions*						
		Plan				**Average Change 2020-2024**
	Actuals 2020	**2021**	**2022**	**2023**	**2024**	
Tax Revenue						
Property	$29,650	$30,865	$32,234	$33,364	$34,154	3.6%
Personal Income	13,551	12,391	13,441	14,138	14,554	1.8%
General Sales	7,372	7,005	8,363	8,872	9,208	5.7%
Corporate	4,509	3,554	3,654	3,829	3,998	(3.0%)
Unincorporated Business	1,939	1,848	1,797	1,938	2,041	1.3%
Real Property Transfer	1,135	892	1,222	1,357	1,453	6.4%
Mortgage Recording	975	769	857	878	935	(1.0%)
Utility	356	365	400	401	416	3.9%
Hotel Occupancy	468	198	480	544	587	5.9%
Commercial Rent	864	823	874	923	941	2.2%
Cigarette	26	27	25	24	23	(2.5%)
Other Taxes and Audits	2,080	1,760	1,554	1,554	1,554	(7.0%)
Total Taxes	**$62,924**	**$60,496**	**$64,901**	**$67,822**	**$69,865**	**2.7%**
Other Revenue						
STaR Reimbursement	$165	$161	$159	$157	$155	(1.6%)
Miscellaneous Revenue	8,071	7,056	6,852	6,840	6,841	(4.0%)
Unrestricted Intergovernmental Aid	-	-	-	-	-	n/a
Disallowances	(5)	(15)	(15)	(15)	(15)	n/a
Total Other Revenue	**$8,232**	**$7,202**	**$6,996**	**$6,982**	**$6,981**	**(4.0%)**
Less: Intra- City Revenue	**($2,129)**	**($2,038)**	**($1,817)**	**($1,812)**	**($1,811)**	
TOTAL CITY-FUNDED REVENUE	**$69,027**	**$65,661**	**$70,080**	**$72,993**	**$75,035**	**2.1%**
State Categorical Grants	$15,334	$15,000	$16,370	$16,816	$16,866	2.4%
Federal Categorical Grants	9,581	11,256	7,652	7,425	7,408	(6.2%)
Other Categorical Aid	1,105	1,082	1,036	1,030	1,028	(1.8%)
Interfund Revenue	650	696	654	656	656	0.2%
TOTAL REVENUE	**$95,698**	**$93,694**	**$95,791**	**$98,921**	**$100,992**	**1.4%**

NOTES: Corporate taxes comprise three separate taxes: the business corporation tax for C corporations, the general corporation tax, and the banking corporation tax for S corporations. Figures may not add due to rounding.

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2023 and 2024 and reaching $101.0 billion by 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 2023 and 2024. Tax revenues are forecast to increase at an average annual rate of 3.8 percent, while growth in non-city revenue sources is projected to average only 0.5 percent a year in 2023 and 2024.

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 discussion of non-tax revenues.

Tax Revenues. IBO's forecast for tax revenues in the current fiscal year is $60.5 billion, a decline of 3.9 percent ($2.4 billion) from 2020, as the economic damage from the pandemic saps tax collections. IBO expects recovery from this year's economic contraction to pick up steam in calendar year 2021, leading to a sharp rebound in tax revenue in 2022, followed by somewhat slower but still strong growth in 2023 and 2024. For 2022, IBO forecasts $64.9 billion in total tax revenue, 7.3 percent ($4.4 billion) greater than the forecast for 2021. We project that tax revenues will rise at an average rate of 3.8 percent annually over the final two years of the financial plan and total $69.9 billion in 2024.

With the exception of the real property and utility taxes, collections from all of the city's other major tax sources are expected to fall in 2021. The real property tax is expected to grow by only 4.1 percent—the weakest property tax growth since 2008. Personal income tax collections are forecast to fall by $1.2 billion (8.6 percent) and corporate tax revenues will decline by $955 million (21.2 percent). General sales tax revenue is forecast to fall by $367 million (5.0 percent) from 2020 to 2021. IBO also expects very large declines in collections from the city's real property transfer tax ($243 million, or 21.4 percent) and the mortgage recording tax ($206 million, or 21.1 percent). The largest decline in percentage terms is forecast for the hotel occupancy tax. With tourist visits to the city all but ended, hotel occupancy and revenue have collapsed, leading to much lower tax liabilities.IBO projects hotel tax revenue will fall by 57.7 percent ($270 million) from 2020 to 2021.

For 2022, IBO forecasts $64.9 billion in total tax collections as the economic recovery gains traction. Most of the taxes will grow year-over-year with some of the strongest rebounds coming in the general sales tax (up by $1.4 billion or 19.4 percent) and the hotel occupancy tax which is expected to more than double from 2021 to 2022, growing from $198 million to $480 million. IBO forecasts that all of the major tax sources will grow in 2023 and again in 2024 as the city's economy moves past the recession and subsequent rebound to a more stable growth path.

IBO's tax forecast exceeds OMB's by $1.3 billion in 2021 and again by $1.3 billion for 2022. These differences are 2.1 percent in both 2021 and in 2022. The differences, which are not large in percentage terms, reflect IBO's somewhat stronger outlook for the local economy beginning in calendar year 2021 and continuing through 2022 and 2023. In the current year, the largest positive differences in percentage terms is between the forecasts for the mortgage recording tax (32.8 percent) and the largest negative difference is in the hotel occupancy tax forecasts (22.4 percent). The differences between IBO's and OMB's forecasts for 2023 are similar to the differences in 2022. There is a wider divergence in 2024, when IBO's total tax revenue forecast exceeds OMB's by $2.1 billion (3.1 percent).

Real Property Tax. The real property tax, which accounts for roughly half of the city's tax revenue, has been growing briskly in recent years. Growth averaged 6.0 percent annually from 2016 through 2021 and is expected to continue growing through the forecast period, albeit more slowly. IBO forecasts property tax revenue growth will slow to 4.1 percent in 2021 and 4.4 percent in 2022, with revenue rising from $30.9 billion in 2021 to $32.2 billion in 2022. Growth is expected to slow further in the remaining two years of the forecast period to an average annual pace of 2.9 percent, which would be the slowest annual growth since the Great Recession.

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 real property tax law, there are four classes of property in the city: Class 1 consists of one-, two-, and three-family homes; Class 2 comprises apartment buildings, including rentals, cooperatives and condominiums; Class 3 is exclusively real property owned by utility companies; and Class 4 consists of all other commercial and industrial properties. Each class's share of the levy is determined under a state law that allows only small shifts in the share of the overall property tax borne by each class.

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 tax. Practices in estimating market value, assessment percentages, exemptions, and tax rates vary across property types, and the share of the levy borne by each class is not proportional to its share of market value.

Assessment Roll for 2022. The tentative assessment roll for fiscal year 2022 is scheduled for release this month. After a period of appeals and review, a final roll will be released in May, which will be the basis for property owners' 2022 liabilities. IBO projects that aggregate market value on the final roll will be 0.9 percent greater than on last year's roll—the smallest increase in 10 years—while assessed value for tax purposes is forecast to grow by 4.1 percent.

Class 1. The aggregate market value of Class 1 properties on the 2022 roll is expected to be 0.4 percent higher than this year's. IBO projects the assessed value for tax purposes in 2022 will increase by 3.5 percent over 2021. The difference between market value growth and assessment growth results from a provision of the state property tax law.

For 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 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 the 6.0 percent target, although any increase is subject to the caps on assessment increases.

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. Conversely, when the housing market is weak, the median ratio of assessed value to market value tends to rise. 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 4.5 percent in 2021—still well below the 6.0 percent target.

Class 2 and Class 4. IBO projects that on the final roll for 2022, aggregate market value for Class 2 will total $353.7 billion, a 1.8 percent increase over 2021. Aggregate market value for Class 4 property is expected to reach $327.8 billion, a 0.6 percent increase over 2021. These growth rates are dramatically lower than those in recent years. Annual growth averaged 6.3 percent and 5.6 percent for Class 2 and Class 4, respectively, over the last 10 years.

The aggregate assessed value for these properties will grow more rapidly than aggregate market value in 2022, however, due to a feature of the property tax system that smooths out year-to-year changes in assessed values. In most cases, changes in assessed values in Class 2 and Class 4 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 assessment changes that can result in higher assessments, even when current market values are stable or declining. This feature of the property tax system makes property tax revenue less immediately sensitive to business cycle shocks. IBO's assessed value projections are thus in part a reflection of the strong real estate market in recent years, which has allowed the pipeline to more than double, from $6.3 billion in 2011 to a projected $13.6 billion in 2022.

The aggregate assessed value for tax purposes for Class 2 is expected to total $107.2 billion, a 4.3 percent increase from the 2021 roll, and $134.2 billion for Class 4, a 3.9 percent change from the previous year.

Outlook for Market and Assessed Values in 2023 and 2024. IBO forecasts an increase in aggregate market value of 1.3 percent in 2023 and 2.0 percent in 2024, the last two years of the financial plan. Market value in Class 1 is expected to grow by 2.2 percent in 2023 and 2.0 percent in 2024, while the increase in market value in Class 2 is expected to be 0.1 percent in 2023 and 2.1 percent in 2024. IBO expects aggregate Class 4 market value to grow by 0.1 percent and 1.5 percent in 2023 and 2024, respectively.

Given the structural lags between changes in market value and assessed value, IBO projects that growth in aggregate assessed value for tax purposes will exceed market value growth in both 2023 and 2024, increasing by 2.9 percent and 2.3 percent, respectively. While IBO projects steady growth in the aggregate assessed value of Class 1 in both 2023 and 2024, growth is expected to slow from 2023 to 2024 in both Class 2 and Class 4, falling from 2.7 percent to 1.9 percent in the former and from 2.7 percent to 2.0 percent in the latter. Because market value growth is forecast to continue slowing, IBO expects the pipeline of changes in assessed value for Classes 2 and 4 that remains to be recognized on the tax roll to fall to $7.9 billion in 2023 and $6.7 billion in 2024.

Revenue Outlook. IBO anticipates property tax revenue will total $30.9 billion in 2021 and $32.2 billion in 2022—an increase of 4.4 percent. Growth is expected to average 2.9 percent annually over the following two years, with revenue reaching $34.2 billion in 2024.

IBO's property tax revenue forecast exceeds OMB's by $174 million in 2021, $392 million in 2022, and by increasing amounts in subsequent years. 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 property tax reserve, which consists of items that either add to tax receipts (such as payments for prior-year liabilities) or reduce net collections (such as delinquencies on current liabilities or payment of refunds), also helps determine the amount of property tax revenue the city collects in any fiscal year. 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 generally less than the forecast for the property tax levy.

With the assessment roll and levy for 2021 finalized last spring, the only differences between IBO's and OMB's forecasts of property tax revenue for this year stem from differences in our estimates of the reserve. Similarly, most of the variance between the forecasts for 2022 also concern the reserve. After 2022, differences in the outlook for assessed value account for more of the divergence in the revenue forecasts. IBO's revenue forecast grows by an annual average of 2.9 percent from 2022 through 2024. During the same period, OMB's property tax revenue forecast increases by 1.9 percent annually, on average.

Risks to the Property Tax Revenue Forecast Due to Covid-19. The biggest near-term risk to property tax collection is the potential effect of the Covid-19 pandemic on tax delinquencies. While there are many reports of nonpayment of rent by both residential and commercial tenants, which would affect property owners' ability to pay their property taxes, so far there is little evidence of an increase in delinquency rates. Through November of the current fiscal year, the city has collected 54.0 percent of the property tax revenue due for the full year, which is the same share it collected through November of last year.

Of greater concern is the longer-term risk that the demand for residential and commercial space in the city stalls or declines, leading to a prolonged slump in property values and—ultimately—property tax revenue. So far, there is evidence of higher office and retail vacancies, lower residential sales prices, and rents. Whether these trends continue will depend on the course of the pandemic, the ability of public transportation in the region to recover, the return of tourists to the city, and more broadly, the demand for urban living. Given the lags built into the property tax system, any effects on revenue from these challenges are unlikely to be felt for several years.

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 taxes are often referred to as the transfer taxes.

The sum of RPTT and MRT revenues fell 20.2 percent in 2020, to $2.1 billion. IBO projects a further decline of 21.2 percent in 2021, to $1.7 billion, followed by a strong recovery in 2022 with combined revenues rising 25.2 percent. Growth is expected to moderate after 2022, with increases of 7.5 percent and 6.8 percent in 2023 and 2024, respectively. We forecast that revenue for the combined taxes in 2024 will total just under $2.4 billion. While these transfer tax revenues would be lower than in recent years, they are far above collections during the depths of the financial crisis in 2008, when mortgage markets froze and commercial sales, in particular, plummeted, shrinking revenues from an all-time high of $3.3 billion in 2007 to under $1.0 billion in 2010.

Real Property Transfer Tax. Revenue from the real property transfer tax was just over $1.1 billion in 2020, a decline of 26.7 percent from the previous year. Revenue in the first half of the fiscal year (July-December 2019) was strong ($660 million), but collections in January through June were just $463 million, with receipts in April and May plunging to $43 million and $36 million, respectively, before beginning a recovery in June.

As is typical in economic downturns, RPTT collections from commercial sales have fallen more steeply than collections from residential sales. Commercial RPTT dropped 38.2 percent between the first half of 2020 and the second, while residential RPTT dropped 28.1 percent over the same span. For 2020 as a whole, 44.4 percent of RPTT was derived from sales of commercial properties, compared with 53.6 percent in 2019. In the first four months of 2021, the commercial share of RPTT dipped further, to 38.9 percent.

Large commercial transactions, defined here as sales of commercial property priced over $100 million, are a major contributor to RPTT revenue. There were only 57 such transactions in 2020, compared with 108 in 2019. And in the first four months of 2021, there were just nine large commercial sales: five in the range of $100 million to $120 million, and only one, the $435 million purchase of 1375 Broadway, valued at over $400 million.

Residential sales, and their corresponding RPTT revenue, have held up better than commercial transactions, but still saw year-over-year declines. RPTT revenue from residential sales fell 7.9 percent in 2020 compared with 2019, far less than the 36.3 percent drop in commercial RPTT.

IBO's forecast of RPTT revenue for 2021 is $892 million, a decline of 21.4 percent from an already-low 2020, and just half the level of collections in 2016, which was the most recent peak in revenue. We project a strong rebound in RPTT revenue after this year, with receipts reaching $1.2 billion in 2022 and rising to $1.45 billion in 2024—still well below 2016, when RPTT revenue was just under $1.8 billion.

However, the outlook for property sales, and therefore RPTT revenue, in New York City is highly uncertain. There are reasons to expect that if the widespread practice of working from home persists after the pandemic ends, demand for Manhattan office space will decline. Retail space faces the challenge of persistent growth in online shopping, while demand for other commercial space could also contract depending on how industries such as leisure and hospitality recover from the devastation wreaked by the pandemic.

On the residential side, Manhattan may maintain its attractiveness in terms of proximity to amenities, but access to employment could become less important. IBO research-in-progress suggests that neighborhoods of one- to three-family houses in peripheral areas of the city experienced a relative decline in property values through 2018, compared with neighborhoods in and close to Manhattan. If physical access to center-city jobs becomes less important, and city residents seek less-dense neighborhoods either to be able to work from home more comfortably, or due to public health concerns, there may be a partial reversal of the Manhattan-centric pattern of residential prices.

The RPTT forecasts of both IBO and OMB follow a similar trajectory, with recovery beginning in 2022. However, IBO's forecasts are consistently above OMB's: $38 million (4.5 percent) higher in 2021, $222 million (22.2 percent) higher in 2022, $207 million (18.0 percent) higher in 2023, and $253 million (21.1 percent) higher in 2024.

Mortgage Recording Tax. Revenue from the mortgage recording tax does not track the value of real estate sales as closely as RPTT receipts do 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 associated with the sale of a property.

MRT collections fell in the second half of fiscal year 2020, and revenue for the year was $975 million, 11.1 percent less than 2019 collections. But the 2020 decline is far smaller than the 76.7 percent drop in MRT revenue that occurred during the financial crisis a dozen years ago, when obtaining new or refinanced mortgages became very difficult. Though Covid-19 has taken its toll on the economy, credit markets have continued to function. Persistently low mortgage rates have stimulated purchases of property, as well as the refinancing of existing mortgages, limiting the decline in MRT revenue.

IBO's forecast of MRT revenue for 2021 is $769 million, a decline of 21.1 percent from 2020 and we expect that revenues will rebound to $857 million in 2022, an increase of 11.4 percent over the previous year. A continued modest recovery is forecast over the next two years, with MRT revenues reaching $935 million in 2024, $161.6 million (14.7 percent) below their pre-pandemic, 2019 level. IBO projects that 30-year mortgage rates will be approaching 5 percent by the end of the forecast period. While this would be a roughly 2 percentage point increase from current mortgage rates of under 3 percent, by historical standards these rates are still relatively low.

IBO's mortgage recording tax forecasts are above OMB's in 2021 and 2022, by $190 million (32.8 percent) and $167 million (24.2 percent), respectively. Our forecasts for 2023 and 2024 are also higher than OMB's, but the differences are smaller: $87 million (11.0 percent) in 2023, and $107 million (12.9 percent) in 2024. IBO's more optimistic view stems from our expectation that there will be more sales of properties through 2024, and stronger refinancing activity through 2021 and the first half of 2022 than forecast by OMB.

Commercial Rent Tax. The commercial rent tax (CRT) is levied on the value of certain commercial property leases in parts of Manhattan. Despite the widespread incidence of working from home and the growing importance of online shopping, CRT revenues have so far maintained their strength in the midst of the pandemic. This suggests that commercial tenants are generally maintaining their leases, either in the expectation of a need for space in the future or because of the difficulties of terminating multi-year leases before they expire. Tenants who pay the CRT are typically medium to large businesses. A bill passed by the City Council in November 2017 eliminated or reduced the CRT for many tenants paying from $250,000 to $550,000 in annual rent, and tenants paying less than $250,000 were already exempt

CRT revenues declined 4.8 percent in 2020, to $864 million, the first decline in over 20 years. While the pandemic may have had a negative impact on receipts, IBO was already forecasting a decrease in CRT revenues because the full impact of the calendar year 2017 legislative changes were not expected to be felt until fiscal year 2020.

IBO projects that CRT revenues will decline an additional 4.7 percent in 2021, to $823 million. Revenues are projected to increase beginning in 2022, and reach $941 million by 2024. However, these forecasts are subject to greater than usual uncertainty, due to the possibility of major structural changes in Manhattan's markets for office and retail space.

Our CRT forecasts are slightly above OMB's: 2.7 percent higher in 2021 and 2022, 5.0 percent higher in 2023, and 3.4 percent higher in 2024. Over the entire 2021-2024 forecast period, IBO's revenue projections are a total of $120 million (3.5 percent) above OMB's.

Personal Income Tax. IBO forecasts $12.4 billion in personal income tax (PIT) revenue net of refunds in the current fiscal year, which is an 8.6 percent ($1.2 billion) decline relative to 2020. With IBO's expectation that medical, political, and economic developments will gradually reverse the negative impacts of the Covid-19 pandemic, we project a recovery of PIT revenue of comparable scale in 2022: an 8.5 percent ($1.0 billion) increase, leading to net revenue of $13.4 billion. We expect revenue growth to slow after 2022, to an average 4.1 percent a year in 2023 and 2024, leading to net revenue of $14.6 billion in the latter year.

Withholdings are the largest component of PIT collections, accounting for over two-thirds of total PIT revenue each year. As they are based on city residents' earnings from employment, they are also one of the most immediate indicators of changes in local economic activity. Since the beginning of the pandemic in March, monthly withholding collections have been consistently lower than the corresponding month last year due to job losses and business closures. We expect this trajectory to continue until the spring, resulting in total withholdings revenue of $9.3 billion in 2021, which is 6.7 percent less than last year's revenue of just under $10 billion. While substantial, the decline in withholding revenue has not been as extreme as the job losses in the city, mainly because the majority of lost jobs and closed businesses have occurred in moderate- and low-wage industries, such as retail and hospitality.

Following last spring's job losses—the steepest employment decline in New York City on record—the city has recovered roughly half of the jobs lost as of November. IBO expects job growth in many industries to accelerate over the coming months as Covid-19 vaccines become more widely available, in turn boosting withholdings. We forecast a 7.0 percent increase in withholding revenue next year, bringing in just under $10.0 billion in 2022.

The pace of the recovery from the pandemic recession will slow in the later years of the forecast period, with total employment gradually returning to the levels the city enjoyed prior to the pandemic. This expectation is rooted in an assumption of a more gradual recovery of industries hit hardest by the pandemic, including leisure and hospitality, food, and retail. With more moderate employment growth anticipated after calendar year 2021, we project withholdings to grow more slowly in fiscal years 2023 and 2024 at an average annual rate of 4.1 percent, resulting in total withholding revenue of $10.8 billion in the final year of the forecast period.

Estimated payments are made by taxpayers who realize capital gains from financial or property transactions, as well as by the self-employed. (Note: This paragraph excludes estimated payments made by taxpayers who file for extensions.) In the immediate aftermath of the pandemic-induced shutdowns in mid-March, stock prices fell sharply and estimated payments began to decline, leading to a 4.6 percent drop for the fiscal year as a whole. The decline has deepened in the current fiscal year, and thus far in 2021, estimated payments have been below the same period last year. However, we project that the increasing availability of the Covid-19 vaccine will strengthen economic growth over the upcoming calendar year, boosting estimated payments in the final months of the current fiscal year and moderating the extent of the decline.

IBO forecasts $1.6 billion in estimated payments in 2021, 8.2 percent lower than in 2020. As the economy recovers, we expect estimated payments toward calendar year 2021 liabilities to be stronger; our forecast of estimated payments in fiscal year 2022 is $1.9 billion, an 18.2 percent increase over estimated payments in 2021. We project more modest growth, averaging 3.6 percent a year, for the final two years of the forecast period, leading to $2.0 billion in estimated payments in 2024.

IBO forecasts $547 million in final returns payments this year, 1.6 percent less than in 2020, reflecting the loss of employment during calendar year 2020. Given the decline in estimated payments for the calendar year, overpayment of taxes is less likely, leading IBO to forecast a 6.1 percent decline in refunds in 2021. Based on our expectation that economic growth will strengthen as calendar year 2021 progresses, we project a 7.0 percent increase in final returns payments in fiscal year 2022, followed by slower growth—averaging 1.6 percent each year—in the last two years of the forecast period. Along with growth in estimated payments, refunds are also projected to increase, with growth of 1.2 percent in 2022, accelerating to an average of 5.0 percent in 2023 and 2024.

IBO's personal income tax forecast exceeds OMB's in each year of the financial plan. Both IBO and OMB have raised their PIT forecasts for 2021 since June, as the negative impacts of the pandemic on personal income proved less dramatic and quicker to resolve than had been expected. Our PIT forecast for 2021 is $469 million (3.9 percent) above OMB's—a difference almost completely rooted in our expectation of higher withholdings. There is a comparable difference for 2022, when our forecast is $466 million (3.6 percent) higher than OMB's. Where IBO projects estimated payments to grow strongly in that year, OMB projects further decline. Our forecast for the last two years is on average $347 million (2.5 percent) higher each year.

Business Income Taxes. Initially, last spring's shutdowns, stay-at-home orders and gradual reopenings, which were imposed to help contain the Covid-19 pandemic, have had a limited impact on the city's business income taxes—corporate taxes and the unincorporated business tax—although the reprieve is likely to be short-lived. In 2020, net collections of the business income taxes grew by $220 million (3.5 percent), to a record high of $6.4 billion, fueled by strong collections in the first half of the fiscal year and lags in when taxes are due. IBO projects a substantial reduction in collections for 2021, contracting by $1.0 billion (16.2 percent). Collections begin to recover over the rest of forecast period, growing by $49 million (0.9 percent) in 2022, and by an average of 5.3 percent in the next two years to yield $6.0 billion in 2024—still below the total for 2020.

Corporate Taxes. Since 2015, the city's corporate taxes, assessed on the profits of corporations operating within the city, are an amalgam of three separate taxes: the business corporation tax for C corporations, along with the general corporation tax, and the banking corporation tax for S corporations. In this report "corporate taxes" refers to the combined revenue collected from all three underlying taxes. In 2020, the corporate taxes brought in $4.5 billion in net collections, an increase of $309 million (7.4 percent) over 2019. This surpasses the amount previously projected for the year, resulting from stronger-than-expected corporate profits late in calendar year 2019, before the onset of the pandemic.

Corporate profits have declined as a result of reduced business activity during the initial shutdown and subsequent restrictions. While IBO expects profits to begin recovering after a sharp downturn, they are not projected to reach pre-pandemic levels until late in calendar year 2021.

We forecast $3.6 billion in collections (net of refunds) in 2021, a reduction of $955 million (21.2 percent). Revenue growth is expected to resume the following year, albeit weakly, increasing by $100 million (2.8 percent) in 2022. This modest level of growth reflects a nascent economic recovery in the aftermath of the pandemic, as consumer behavior rebounds and businesses resume regular operations. The recovery is projected to strengthen over the remainder of the forecast period, resulting in corporate tax revenues growing by $175 million (4.8 percent), and $169 million (4.4 percent) in 2023 and 2024, respectively.

IBO's projected decline of corporate tax revenues in 2021 is smaller than OMB's forecast of a $1.1 billion (23.7 percent) drop, leaving IBO's forecast $110 million (3.2 percent) greater than OMB's for the year. The situation reverses the following year, however. With IBO expecting a more gradual recovery than OMB, our forecast of corporate tax revenues for 2022 is lower than OMB's by $196 million (5.1 percent). This pattern continues into 2023, when IBO's forecast is $240 million (5.9 percent) lower, but reverses once again in the final year of the forecast period, when OMB projects a small decline in corporate tax revenues in contrast to our assumption of continued growth, leaving little difference between the two forecasts for 2024.

Unincorporated Business Tax. The unincorporated business tax (UBT) is assessed on profits from non-corporate businesses operating in the city, including proprietorships, partnerships, and limited liability companies. It is not unusual for the trajectory of UBT collections in any year to differ from changes in corporate tax collections. Unlike corporate tax revenues, which increased in the last two years, UBT collections declined in both 2019 and 2020, decreasing from $2.2 billion in 2018 to $1.9 billion in 2020. This decline came amidst slowing growth in both employment and wages for key sectors, including professional and technical services.

In response to the pandemic, employment in key sectors with many UBT filers has been declining and IBO does not expect a recovery to gain momentum until late in calendar year 2021. So far in fiscal year 2021, UBT collections appear to be continuing to decline gradually, rather than the precipitous drop projected for the corporate taxes this year. IBO forecasts two more years of decline, 4.7 percent this year and 2.7 percent next year, bringing UBT revenue (net of refunds) to $1.85 billion in 2021 and $1.8 billion in 2022. IBO projects growth to return after 2022, with collections increasing by an average of 6.6 percent annually in 2023 and 2024; by the latter year, we expect UBT revenue to reach $2.0 billion, just above its pre-pandemic level in 2019.

IBO's forecast of UBT revenue remains moderately higher than OMB's throughout the forecast period. For 2021, OMB projects a larger decline of $174 million (9.0 percent) than IBO, resulting in a difference of $83 million (4.7 percent) between the two forecasts. For 2022, the difference between the two estimates shrinks to $44 million (2.5 percent). For the final two years of the forecast period, IBO and OMB project similar rates of growth in UBT collections. By 2024, IBO's forecast is $61 million (3.1 percent) higher than OMB's.

Sales Tax. The public health shutdown of many businesses last spring, the spike in unemployment, and the deeply depressed state of the tourism industry has shrunk the city's sales tax base. Collections fell by $438 million (5.6

percent) in 2020 and IBO projects a second consecutive year of decline—a drop of $367 million, or 5.0 percent—for 2021. We expect a combination of gradual economic growth, pent-up demand, and widespread vaccination in calendar year 2021 will cause sales tax revenue to rebound in the upcoming fiscal year, with receipts rising $1.4 billion, or 19.4 percent. For the final two years of the forecast period, IBO projects slower but steady revenue growth at an average annual rate of 4.9 percent.

The sales tax is normally one of the least volatile of the city's revenue sources. Last fiscal year was different, however. Sales tax revenue in 2020 totaled $7.4 billion, $438 million (5.6 percent) below receipts in 2019. Not surprisingly, all of the decline in receipts occurred in the second half of the year—following the onset of the pandemic.

The Covid-19 pandemic, and the measures taken to limit its spread, very quickly reduced business activity and led to a plunge in sales tax revenue beginning in March. Business and leisure travel to the city and visitor spending declined precipitously, even before social distancing restrictions imposed in mid-March closed or severely restricted operations of many businesses and workplaces.

Two sectors of the economy were particularly hard hit by the public health orders to close or restrict operations: retail establishments (other than grocery stores and pharmacies, which were allowed to remain open); and leisure and hospitality venues, including hotels, restaurants, bars, theaters, sporting events, and cultural institutions. Taken together the portions of these sectors that were ordered to shutdown accounted for about 45 percent of the sales tax base in the 12 months preceding the March 2020 lockdown. Businesses still in operation in many other industries, such as transportation, are also experiencing sharp declines in sales.

For the current year, IBO forecasts $7.0 billion in sales tax revenue, $367 million less than receipts in 2020. Unlike 2020, when the year's total revenue was boosted by collections in the months before the onset of the pandemic, collections during all of 2021 revenue will be depressed by the pandemic. However, there already has been some pickup in monthly receipts this year, which IBO expects will continue for the remainder of 2021.

Starting with the reopening of non-essential businesses and the initiation of the outdoor dining program in June, restrictions on business activity have been gradually eased. Tax revenue in the July through September quarter were 16.3 percent higher than in the April through June quarter—significant growth given that in prior years, collections in the spring quarter were always greater than receipts in the summer quarter. The most recent taxable sales data, for June through August, reveal that spending in some types of the city's retail establishments—including general merchandising superstores, auto dealers and auto parts stores, and building materials retailers—exceeds what it was in the same period a year ago.

With the expectation that economic growth will accelerate in calendar year 2021, particularly after much of the population receives the vaccine, IBO forecasts that sales tax revenue will rebound to $8.4 billion in 2022, a $1.4 billion (19.4 percent) increase over collections in 2021. The return to more normal levels of economic activity will boost employment and consumer spending. Once it is considered safe to travel and attractions such as museums, theaters, and sporting events return, tourism will gradually increase, with visitor spending fueling growth in sales tax revenue. IBO expects economic growth to continue over the final two years of the forecast period, with sales tax collections rising at an average rate of 4.9 percent a year to reach $9.2 billion in 2024.

The general trajectory of IBO's sales tax forecast is the same as OMB's. Both expect another sharp decline in collections this year, followed by a strong, almost 20 percent bounce in revenue in 2022 and continued but slower rates of growth in 2023 and 2024. IBO's sales tax forecast exceeds OMB's for each year of the forecast period, with the annual differences ranging from $205 million to $292 million, reflecting our generally more optimistic outlook for employment and income.

Hotel Occupancy Tax. The Covid-19 pandemic has devastated tourism and business travel in New York City. Since last spring revenue from the hotel occupancy tax has decreased more steeply than any of the city's other taxes. For the current year, IBO forecasts $198 million in hotel tax revenue—a $270 million (57.7 percent) plummet from 2020 receipts, which were already depressed by the onset of the pandemic last spring.

This year is likely to be the nadir for hotel tax revenue, however. As the vaccine becomes more widely available and U.S. economic growth strengthens, IBO projects that tourism and business travel will rebound, with hotel tax revenue rising 142.5 percent to reach $480 million in 2022. Revenue growth will continue to be strong after 2022, averaging 10.6 percent over the following two years, though IBO's hotel tax forecast for 2024, $587 million, is below the pre-Covid-19 level of receipts.

In response to the decline in demand for accommodations, both room rates and occupancy rates have plunged. The average daily rate for a New York City hotel room in October was $135, compared with $336 a year earlier. Similarly, the occupancy rate of city hotel rooms has been hovering around 40 percent in recent months compared with 92 percent in October 2019, but the current occupancy rates understate the extent to which business is down.

More than 200 of the city's roughly 700 hotels have remained closed since the pandemic lockdown last March, thereby lowering the base count of rooms. Also, 63 other hotels are housing homeless individuals who have been moved from shelters in order to provide social distancing that is not possible in shelters—rentals that are paid for with public funds and therefore not subject to taxes. The Hotel Association of New York estimates that industry revenue is down 80 percent since March, and that tourist and business travelers now occupy only 10 percent of the hotel rooms available before the lockdown.

After 10 years of solid revenue growth averaging 6.2 percent annually, hotel tax collections in 2020 fell by 25.2 percent ($158 million) from their 2019 level to $468 million. Stronger-than-expected hotel revenue and the resulting tax collections in the first half of fiscal year 2020 offset some of the city's revenue loss in the second half of the year, but there has been nothing to cushion tax collections this year.

Hotel tax receipts through October of this fiscal year are one-ninth of what they were the year before. This slow pace of collections has prompted IBO to lower its forecast of hotel tax revenue in 2021 to $198 million—57.7 percent less than receipts in 2020. The forecast is premised on there being an increase in the pace of collections toward the end of the current fiscal year due to a modest uptick in the number of visitors in the spring, after the U.S. emerges from the winter's second wave of infections and the number of people being vaccinated begins to grow.

With economic growth projected to accelerate in the second half of calendar year 2021 as Covid-19 vaccination becomes more widespread, we expect tourism to rebound, boosting hotel occupancy and tax revenue. IBO forecasts $480 million in hotel tax receipts in fiscal year 2022, more than double our revenue projection for 2021. With many potential visitors having had to defer vacations and business trips during the pandemic, there will be pent-up demand that will boost hotel occupancy once travel is no longer deemed a public health risk. Our forecast is premised on Covid-19 vaccines being effective, allowing the resumption of theatre and music performances, sporting events, and other activities that attract visitors to the city. Domestic tourism in the city, particularly by people who live relatively close to New York, is expected to revive more quickly than international tourism.

The number of visitors to the city is expected to continue growing through the end of the forecast period, and IBO projects solid revenue growth after 2022. The hotel tax forecast for 2023 is $544 million, a 13.4 percent increase from the preceding year. IBO projects revenue of $587 million in 2024—an amount that is well below the pre-Covid-19 peak of $625 million in hotel tax revenue in 2019.

A major risk to the hotel tax forecast is that vaccination and other public health measures take longer to be effective against the pandemic, delaying a steady increase in the number of visitors. It is also possible that fewer tourists will favor the city as a vacation destination, even after there is a resolution to the pandemic, due to lingering fears of visiting a crowded city that once was the epicenter of Covid-19 infections and illness. Moreover, businesses and individuals have gained experience using telecommunications technology and improved their ability to operate remotely during the pandemic, which may lead some firms to conclude that business trips to the city may no longer be worth the expense.

The trajectory of IBO's hotel tax forecast is the same as OMB's, with a steep revenue decline this year followed by a strong rebound in 2022 and continued growth over the remainder of the forecast period. However, IBO's forecasts for each year of the financial plan are substantially lower than OMB's: by $57 million (22.4 percent) in 2021 and by an average of $85 million (13.7 percent) annually from 2022 through 2024.

Other Revenues. The city's non-tax revenues—a variety of fees, fines, charges, asset sales, interest income, and other miscellaneous revenue—are expected to total $7.2 billion this year, a drop of $1.0 billion from 2020. IBO forecasts a smaller drop of $206 million to $7.0 billion in non-tax city revenues in 2022, with the decline mostly among miscellaneous revenues. The changes in these revenue sources in 2021 and 2022 are fairly modest by recent standards. IBO anticipates little additional change in the total from these revenue sources from 2022 through 2024.

State, federal, and other categorical aid and interfund revenue are the remaining sources among non-city revenues. They are expected to total $28.0 billion this year, an increase of $1.4 billion (5.1 percent) over 2020. After dropping by a projected $2.3 billion in combined non-city funds in 2022, these sources are expected to grow by small amounts in the two subsequent years. In 2024, the city anticipates $26.0 billion in non-city revenues.

Federal grants, which are projected to grow by $1.7 billion this year to $11.3 billion but then fall to $7.7 billion in 2022 are the main reason non-city revenue is expected to increase in 2021 and fall in 2022. The city has assumed that it will receive almost $3.0 billion in Federal Emergency Management Agency (FEMA) grants for 2021 to cover the extraordinary costs the city incurred in responding to the pandemic last spring. OMB has assumed that the entire reimbursement will occur this year, which results in the sharp decline in anticipated federal grants for next year. Note that FEMA grants are not stimulus or fiscal relief funding, which the city is also lobbying for—so far with limited success. Instead, they usually reimburse costs—typically at 75 percent of the total—that states and localities incur when responding to an emergency, such as building field hospitals, acquiring ventilators, buying personal protective equipment, and deep cleaning public facilities.

State grants account for $15.0 billion in 2021, 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 5.1 percent annually from 2021 through 2024. Under the state budget adopted last spring, the Governor has the authority to impose cuts on state spending if the state budget is out of balance. The state budget office has indicated that the budget is indeed out of balance and that cuts of up to 20 percent in some areas—including education aid—may be necessary. Such an action would reduce state school aid for the city by about $2 billion.

Spending

IBO projects that within the framework of the Mayor's latest financial plan, total city spending, including state and federal grant-funded programs, will grow from $92.9 billion in the current fiscal year to $102.5 billion in 2024. Adjusting each year's expenditures for the prepayment of expenses with prior-year resources as well as for other non-recurring expenditures, IBO estimates that spending in 2021 will grow by 2.7 percent from 2020. Spending growth will then slow, increasing at an annual average rate of 1.1 percent from 2021 through 2024, from $97.6 billion to $100.9 billion. Considering solely city-funded expenditures and again adjusting for prepayments and non-recurring expenses, IBO estimates spending will decline from $70.4 billion in 2020 to $69.2 billion in 2021, and then grow to $71.7 billion in 2022, $72.8 billion in 2023, and $73.9 billion in 2024—an average increase of 1.2 percent a year from 2020 through 2024.

Nearly all expenditure growth in the financial plan results from centralized spending, rather than spending by individual agencies. Centralized spending includes debt service expenditures, fringe benefits (particularly health insurance costs), and funding allocated to the labor reserve, which is earmarked to cover prospective costs related to the settlement of municipal labor contracts. Once contracts are settled, however, the money is moved from the labor reserve into individual agency budgets, which shifts spending growth from the non-agency part of the budget to the agency side. The majority of new city-funded agency spending in the November plan is for Covid-19 related expenses: $157 million for school reopening costs at the Department of Education and $113 million for the Covid-19 food emergency program under the purview of the Department of Sanitation.

Fringe Benefits and Debt Service Spending. Much of the growth in expenditures over the plan period come from two areas not specifically allocated to agency budgets: fringe benefits and debt service. The cost of providing fringe benefits other than pensions for city employees and retirees is one of the largest areas of spending growth across the plan period. From 2020 through 2024, IBO projects that these costs will increase from approximately $11.1 billion to over $13.0 billion, an annual growth rate averaging 4.1 percent, greatly exceeding the annual growth rate of non-centralized agency expenditures (0.4 percent) during the same period. Health care costs, by far the biggest component of fringe benefits, will grow at an average annual rate of 5.4 percent during the same period, from $6.9 billion in 2020 to $8.5 billion in 2024.

IBO projects that after adjusting for prepayments, debt service, the payment of principal and interest on funds the city borrows to finance capital projects, will total approximately $6.6 billion in 2021. Over the course of the financial plan we expect debt service costs to rise substantially as the city issues additional debt to finance its historically large capital program. After adjustment for prepayments, debt service is forecast to grow from $7.0 billion spent in 2020 to a planned $8.8 billion in 2024, an average annual rate of 6.1 percent—faster than any other major expense in the budget.

IBO Expenditure Projections *Dollars in millions*						
	Actuals	**Plan**				**Average Change**
	2020	**2021**	**2022**	**2023**	**2024**	**2020 - 2024**
Operational Expenditures						
Agency Expenditures	$68,703	$69,969	$67,401	$67,607	$67,587	(0.4%)
Labor Reserve	-	893	1,293	955	1,142	n/a
Total Operational Expenditures	**$68,703**	**$70,863**	**$68,693**	**$68,563**	**$68,728**	**0.0%**
Other Expenditures						
Fringe Benefits	$11,112	$11,141	$11,572	$12,237	$13,041	4.1%
Debt Service*	6,554	3,402	7,052	8,469	8,826	7.7%*
Pensions	9,672	9,932	10,566	10,538	10,310	1.6%
Judgments and Claims	709	733	727	742	758	1.7%
Subtotal Recurring Expenses	**$96,749**	**$96,071**	**$98,611**	**$100,548**	**$101,663**	**4.4%**
General Reserve	-	$100	$1,000	$1,000	$1,000	n/a
Capital Stabilization Reserve	-	-	250	250	250	n/a
Retiree Health Benefits Trust	(1,000)	(1,600)	-	-	-	n/a
Unallocated Labor Savings		342	1,000	1,000	1,000	n/a
Other Adjustments	-	-	125	267	401	n/a
Subtotal Non-Recurring Expenses	**($1,000)**	**($1,158)**	**$2,375**	**$2,517**	**$2,651**	**n/a**
Less: Intra-City Expenditures	($2,129)	($2,038)	($1,816)	($1,812)	($1,811)	n/a
TOTAL EXPENDITURES	**$93,620**	**$92,875**	**$99,170**	**$101,254**	**$102,503**	**5.6%**

NOTES: Other non-recurring adjustments include reserve funds, energy, lease, and non-labor inflation adjustments.
*Debt service growth is unadjusted for prepayments of current year expenses with resources from the prior year. Adjusting for prepayments, annual average change in debt service costs is 6.1%. Fringe benefits include the cost of health benefits covered by the Retiree Health Benefits Trust.
Figures may not add due to rounding.

New York City Independent Budget Office

Pension Spending. The city's cost to fund its five pension systems continues to be a large share of the non-agency expenses in the financial plan. In 2020, the city spent $9.7 billion, or over 10.2 percent, of its adjusted expenditures on pension costs. Because the city's pension funds had subpar earnings in 2020 of 4.4 percent, below the 7.0 percent gains assumed for the plans' investments, the city increased its planned contributions by $84 million in 2022, $164 million in 2023, and $240 million in 2024 to make up for the shortfall. After accounting for these additional expenditures, the city's pension costs are estimated to increase from $9.9 billion in the current year to $10.3 billion in 2024, an average annual growth rate of 1.3 percent over the three years, slightly slower than the growth of the budget as a whole.

Agency Spending. Unlike centralized spending, such as debt service and pensions, which are expected to rise across the entire plan period, agency-specific spending is mostly flat, with most agencies experiencing decreased budgets over the period. This is due to the city's practice of budgeting the cost of anticipated future salary increases in the centralized labor reserve; money for the salary increases is not moved into the agency budgets until contracts are settled.

The only major city agencies in which we estimate annual growth in city-funded spending will exceed the average annual growth in city-funds revenue of 2.1 percent from 2020 through 2024 are the City University of New York (CUNY), the Human Resources Administration (HRA), the Department of Transportation (DOT), and the New York City Police Department (NYPD).

IBO estimates CUNY city-funds expenditures will grow by a modest 3.3 percent annually from 2021 through 2024, increasing by a total of $93 million, while HRA's city-funds expenditures will increase by $625 million from 2021 through 2024, or 2.8 percent annually. DOT's city-funded expenditures will grow by an average of 2.7 percent annually for a total increase of $56 million, while NYPD's budget will increase by 2.3 percent annually, a $346 million increase. Much of the growth in the NYPD's budget occurs between 2021 and 2022 and is the result of greatly reduced planned overtime expenditure in the current year, reductions which are not baselined in future years.

IBO Expenditure Projections for Major City Agencies, City Funds
Dollars in thousands

Agency	Plan 2021	2022	2023	2024	Average Change 2021-2024	Total Change 2021-2024
Education	$14,669,468	$14,516,523	$14,742,507	$15,052,625	0.9%	$383,157
Human Resources Administration	7,235,026	7,858,636	7,859,544	7,859,544	2.8%	624,518
Police	4,971,972	5,252,973	5,317,726	5,317,752	2.3%	345,780
Sanitation	1,872,061	1,746,665	1,760,953	1,760,506	(2.0%)	(111,555)
Fire	1,739,993	1,743,767	1,764,824	1,764,823	0.5%	24,830
Environmental Protection	1,355,599	1,315,686	1,310,419	1,309,053	(1.2%)	(46,546)
Homeless Services	1,269,930	1,348,768	1,350,357	1,350,357	2.1%	80,427
Correction	1,139,146	1,186,805	1,210,167	1,210,155	2.0%	71,009
Health	939,934	918,714	917,694	917,702	(0.8%)	(22,232)
City University	900,275	919,339	976,853	993,265	3.3%	92,990
Children's Services	860,296	860,296	851,079	851,079	(0.4%)	(9,217)
Transportation	666,650	711,938	721,768	722,986	2.7%	56,336

New York City Independent Budget Office

IBO estimates that city-funds spending in the Department of Education (DOE) will increase by an average of just 0.9 percent a year for the financial plan period. This growth rate is distorted by a large increase in city-funds expenditures for 2021 that were added in the November plan. DOE's 2021 budget plan was supplemented with an additional $746 million of city funds: $358 million for lump-sum payments for retroactive contracts; $200 million in additional funding for school transportation; $157 million for school reopening costs, including additional costs for substitute teachers, custodial operations and school nurse pay parity; and $45 million for Learning Bridges, which provides child care options for students in hybrid learning for days they are learning remotely, offset slightly by savings from furloughs and other deferrals. Absent the 2021 adjustments, the DOE's city-funded expenditures would increase by an average of 2.6 percent annually over the plan period.

Labor Costs. Approximately 84 percent of all city employees are currently working under the terms of existing labor contracts, with the costs of those contracts reflected in individual agency budgets. Funding to pay for salary increases and retroactive payments for the remaining 16 percent of city employees who are working under expired contracts are included in the city's labor reserve. This reserve currently contains sufficient funds to cover the cost of settling all expired contracts on the same basic terms that other municipal workers received under contracts settled earlier in the current round of collective bargaining.

The existing round of settled contracts will begin to expire over the next six months. Assuming that none of these contracts are settled quickly, by the end of 2021 nearly 46 percent of the city's labor force will be working under the terms of expired contracts, and by the end of 2022 roughly 98 percent of city employees' contracts will have expired.

The labor reserve currently includes funding for salary increases in the next round of collective bargaining agreements, but unlike in recent plans, there is no funding for increases in the first two years of these future settlements; funding is provided for 1 percent annual increases starting in the third year of the contract period. While budgeted centrally for now, the funds in the labor reserve will eventually be moved into the appropriate agencies' budgets once contracts are settled.

Planned Labor Savings. When the 2021 budget was adopted last June, it anticipated $1 billion of recurring savings to be identified through negotiations with the city's labor unions. If agreements could not be reached, the Mayor threatened to obtain the savings through layoffs. Although the layoff threat has been withdrawn, the negotiations so far have only identified one-time savings by deferring payments from the labor reserve due this year to next year. As a result of these agreements, $451 million of retroactive labor payments planned for 2021 were deferred to 2022. In addition, $188 million of payments to union welfare funds originally scheduled to be paid in 2021 were delayed until next year.

Increased Federal- and State-Funded Spending. Much of the agency spending growth in the November plan identified by IBO results from the recognition of additional state and federal (non-city) funding. IBO estimates that on net, 2021 non-city funding will be somewhat greater ($357 million) than currently budgeted. Similarly, we project that state and federal funding in 2022 through 2024 will exceed the Mayor's estimates by $742 million, $579 million and $568 million, respectively. This deferred recognition of state and federal funding is consistent with the city's practice of waiting until some grants have been received before adding the spending to the budget. Including these adjustments, IBO projects non-city funding will total $26.3 billion this year, $24.0 billion next year, $24.2 billion in 2023, and $24.3 billion in 2024. This year, non-city funding has been swelled by the inclusion of nearly $3.0 billion of federal funds for Covid-19 related costs.

Citywide Savings Plan. The November plan once again includes a citywide savings program comprised of actions that will either reduce agency expenditures or increase agency revenues. The current savings plan includes $786 million of savings in the current year and $537 million in 2022. Because much of the identified savings are non-recurring, however, annual savings decline in subsequent years. By far the single largest area of savings in the plan is in the city's debt service budget. Lower than previously anticipated debt service costs in 2021 and 2022 are expected to provide a total of over $983 million in savings, 74 percent of the two-year citywide savings total. Approximately $169 million, just under 13 percent of the 2021 and 2022 savings plan, is ascribed to agency efficiencies, including $60 million from continuing the city's hiring freeze and $81 million from a planned citywide cessation of new vehicle purchases.

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 $138 million greater than projected by the Mayor in the current year but $33 million less in 2022. In the final two years of the financial plan period, we expect city-funded expenditures to be lower than the Mayor's estimates by $285 million and $484 million, respectively.

Citywide Savings Program
Dollars in thousands

	2021	2022	2023	2024
Accruals	($7,380)	($4,144)	$0	$0
Additional Revenue	(4,146)	(8,496)	(7,354)	(7,354)
Debt Service	(684,237)	(299,024)	(220,387)	(297,259)
Efficiency	(50,935)	(120,038)	(30,681)	(31,393)
Funding Swap	(547)	(17,210)	0	0
Re-estimates	(33,976)	(51,598)	(300)	(300)
Service Reduction	(4,608)	(36,941)	(296)	(296)
TOTAL	**($785,829)**	**($537,451)**	**($259,018)**	**($336,602)**

SOURCE: IBO categorizations based on Mayor's Office of Management and Budget data

New York CIty Independent Budget Office

Areas where IBO projects less-than-budgeted spending:

Debt Service Savings. In the November plan the de Blasio Administration lowered its forecast of current year debt service costs by $684 million, primarily through refunding higher-cost debt with new, lower-cost issuances; these savings were counted by OMB as part of the Citywide Savings Plan's total. IBO estimates that this year's debt service costs will be an additional $83 million below the city's revised projections. The de Blasio Administration's 2021 variable rate bond interest assumption—3.23 percent for tax-exempt bonds—remains well above current interest rates. Based on a combination of historical data and forecasts from financial institutions, IBO projects that interest costs on variable rate debt will remain low over the remainder of this year.

OMB's interest rate assumptions for 2023 and 2024—4.25 percent for tax-exempt bonds—is also higher than most experts currently forecast. Given uncertainty regarding the city's future credit rating, however, IBO's forecast of debt service costs in those years follows OMB's. If interest rates were to continue at current levels for the remainder of the financial plan period, IBO projects that city debt service expenditures would be lower by an average of $136 million a year.

Health Care Cost Re-estimates. The November plan includes $7.0 billion for the city's provision of health care for current and retired city employees in 2021, growing to $8.4 billion in 2024. These amounts, however, reflect the annual labor cost savings that the Mayor proposed at budget adoption in June. The total $1 billion in annual savings was taken out of the health care budget as a placeholder. This artificially lowered health care costs because it is unlikely all of the labor savings will be generated through health care cost reductions. When actual areas of savings are determined, they are to be parsed out to other areas of the budget, thus increasing the city's budget for health care. As a result the city's current-year cost for the provision of health care for its employees

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

	2021	2022	2023	2024
Gaps as Estimated by the Mayor	**-**	**($3,752)**	**($2,966)**	**($3,102)**
Unallocated Planned Labor Savings	*(342)*	*(1,000)*	*(1,000)*	*(1,000)*
Re-estimated Gap	**($342)**	**($4,752)**	**($3,966)**	**($4,102)**
Revenue				`
Taxes				
Property	$174	$392	$658	$1,083
Personal Income	469	466	409	284
General Sales	239	274	205	292
Corporate	110	(196)	(240)	38
Unincorporated Business	83	44	49	61
Real Property Transfer	38	222	207	253
Mortgage Recording	190	167	87	107
Utility	-	-	-	-
Hotel Occupancy	(57)	(80)	(103)	(72)
Commercial Rent	22	23	44	31
Cigarette	-	-	-	-
Other Taxes and Audits	-	-	-	-
Total Taxes	**$1,268**	**$1,312**	**$1,316**	**$2,078**
STaR Reimbursement	-	-	-	-
Misc. Revenue	31	31	31	31
TOTAL REVENUE	**$1,299**	**$1,343**	**$1,347**	**$2,109**
Expenditures				
Debt Service	$83	$-	$-	$-
Fringe Benefits:				
Health Insurance-Education	96	202	306	392
Health Insurance-City University	4	9	13	16
Health Insurance-All Other Agencies	139	251	383	492
Public Assistance	(71)	(55)	(55)	(55)
Education	(92)	(111)	(103)	(103)
Fire	(25)	(50)	(50)	(50)
Police	(100)	(25)	(50)	(50)
Homeless Services	(144)	(101)	(102)	(102)
Board of Elections	(20)	(20)	(20)	(20)
Parks and Recreation	(8)	(12)	(12)	(12)
Small Business Services	-	(45)	(4)	(4)
Sanitation	-	(9)	(18)	(18)
Campaign Finance Board	-	-	(3)	(2)
TOTAL EXPENDITURES	**$(138)**	**$33**	**$285**	**$484**
TOTAL IBO PRICING DIFFERENCES	**$1,161**	**$1,376**	**$1,633**	**$2,593**
IBO Prepayment Adjustment 2021/2022	(819)	819	-	-
IBO SURPLUS/(GAP) PROJECTIONS	**-**	**($2,557)**	**($2,333)**	**($1,509)**

NOTES: Negative pricing differences (in parentheses) widen the gaps, while positive pricing differences narrow the gaps. Corporate taxes comprise three separate taxes: the business corporation tax for C corporations, the general corporation tax, and the banking corporation tax for S corporations.

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and retirees is actually $7.4 billion (the $7.0 billion as shown in the budget, plus $342 million in remaining unallocated labor savings for this year), increasing to $9.4 billion by 2024 (the $8.4 billion as shown in the budget plus the $1.0 billion unallocated).

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. The Mayor's plan assumes an average of 8.4 percent annual growth in the city's health care expenses. Based on historical increases in health care costs and federal forecasts, IBO estimates a slower growth rate for the city's health care costs, averaging 5.9 percent. As a result, we expect the city's health care costs (adjusted for the assumption of labor savings allocation elsewhere in the budget) will be lower than presented in the November plan by $239 million in 2021, $462 million in 2022, $702 million in 2023, and $900 million in 2024.

Areas where IBO projects greater-than-budgeted spending:

Public Assistance Spending. The city has not updated its estimate of the public assistance rolls since April 2019. The current estimates do not account for any increase in caseloads due to the recent economic downturn resulting from the Covid-19 pandemic. As a result, IBO projects that the public assistance budget for the current year is $110 million lower than the total funding needed. The city will need to fund approximately 65 percent, or $71 million, of this additional need, with the state providing $28 million and the federal government $11 million. For each of the remaining years of the forecast period, IBO projects that the city's public assistance expenditures will be $88 million greater than planned, with the city having to provide an additional $55 million a year.

Homeless Services. IBO estimates that the city will spend $144 million more than is included in the current financial plan for 2021 for the provision of shelter for homeless individuals and families. Similarly, we expect spending on shelter provision will be $101 million greater than the city plans in 2022 and $102 million greater in both 2023 and 2024. IBO's estimates are based on our view that the city has over-budgeted for the provision of shelter for families with children while vastly under budgeting for the provision of shelter for single adults.

The population of homeless families with children was on the decline prior to the pandemic, and has continued this downward trend throughout the past year. The trend is primarily attributable to the issuance of shelter exit housing vouchers by HRA, the ongoing moratorium on housing evictions, and the softening of the rental market for housing in the city. We estimate that the continued decline of this homeless population will reduce the city-funded planned expenditures in the current year by $54 million and by approximately $111 million in each of the remaining years of the financial plan.

Unlike homeless families with children, the population of single adults in the city's shelter system had been increasing prior to the pandemic. Rather than trending downward, however, the population of single adults in shelter has continued to rise over the past year, reaching record levels. High unemployment and the Covid-related release of a large share of the prison population has led the single adult shelter population to spike. IBO estimates that the city will incur an additional $191 million of expense in 2021 and $212 million in each of the remaining years of the plan period for this portion of the shelter population. A slight increase in the cost of providing shelter for adult families adds an additional $7 million in 2021 and $1 million in each year from 2022 through 2024.

Overtime Costs in Uniformed Agencies. IBO projects that the city's financial plan has under estimated the cost of uniformed overtime. The police department is currently on pace to spend $388 million on uniformed overtime in 2021, less than half the average over the past three years. However, the department's budget for the current year includes only $268 million for police overtime. IBO estimates that the department will require about $100 million more to fund its uniformed overtime expense need.

This amount is far less than the $400 million in additional need IBO estimated after the budget was adopted in June. Our previous estimate was made during a period of widespread protests against police misconduct, when New York's actual monthly police overtime expenditures were surging. At the time, it appeared that the increased level of uniformed police overtime expenditures could become the standard for the remainder of the 2020 calendar year, particularly in light of the possibility of unrest leading up to the November election. The eventual cessation of large-scale protests, the cancellation of most major public events in the city, and the relatively peaceful election process has led to a decline in the need for police overtime. With a second-wave of Covid-19 illness striking the region, it is likely that all large planned events will continue to be cancelled, thus reducing the planned need for police overtime at least for the remainder of the fiscal year.

IBO assumes that the current-year reduction in police overtime is a product of circumstances particular to this year, and that once the pandemic has passed, police overtime expenses will increase to pre-Covid levels. The police department's overtime budget for 2022 through 2024 is comparable to expenditures in years that are more typical and less fraught. We estimate that the department has under-budgeted police overtime expenses by $25 million in 2022 and $50 million each year in 2023 and 2024.

Unlike the police department, the fire department's planned and actual overtime expenditures have not fluctuated greatly from pre-Covid levels. Based on historical expenditures, IBO estimates the fire department's current plan for overtime expenditures is under-budgeted by $25 million in 2021 and $50 million in each of the remaining years of the financial plan.

While in the past IBO has usually found the Department of Correction's (DOC) plan for uniformed overtime to be under-budgeted, based on current year-to-date expenditures it appears that the department has sufficient funding to cover its overtime expenses in 2021. The gradual downward trend in the inmate population in recent years, augmented by additional Covid-related decreases in the population in the current year, has generally reduced the department's use of uniformed overtime. Based on our assumption that these trends will continue, IBO expects the DOC's overtime budget to be sufficient to cover overtime expenses for the remainder of the financial plan period.

Department of Education. IBO estimates that the city will need to provide an additional $92 million in the current year, $111 million in 2022, and $103 million each year in 2023 and 2024 for the Department of Education budget. The majority of our increased cost estimate stems from an expectation of additional costs related to the city's charter schools. IBO projects higher charter school enrollment in the current year and steeper enrollment growth in the out-years of the financial plan period than is assumed by the de Blasio Administration. Taking into account existing charter schools adding grades towards their fully authorized complement as well as schools that have been authorized but have not opened, we expect charter school enrollment for the 2021-2022 school year to be higher than the level projected by OMB. Based on our enrollment figures, we estimate the department will require an additional $72 million in 2021, $91 million in 2022, and $83 million in both 2023 and 2024 to meet the mandated funding for charter schools.

Additionally, IBO projects that the city will need to provide $20 million in each year of the financial plan based on our expectation that federal Medicaid funding for DOE transportation expenses will be lower than the de Blasio Administration anticipates. Earlier this year the state passed legislation that would make certain transportation costs eligible for Medicaid reimbursement, but the Governor's veto of the bill leaves the prior eligibility rules in effect. Although the DOE is still counting on $20 million of annual Medicaid reimbursements for eligible transportation expenses, IBO expects the city to fund these costs instead.

Small Business Services. IBO estimates that the Department of Small Business Services (SBS) budget is underfunded by $45 million in 2022 and $4 million in each of 2023 and 2024 (all in city funds). IBO's forecast of the need for $45 million in 2022 is primarily the result of the budget not including funding for the NYC Bus Program beyond 2021. The program, established in 2014 and funded through the SBS budget, provides grants to offset what would otherwise have been steep 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 the program's implementation and SBS has spent roughly $41 million on the program in each of the past two years.

The November plan includes funding for 2021, but not for the remainder of the plan period. Based on our expectation that these payments will continue for the remainder of the de Blasio Administration, IBO assumes SBS will need an additional $41 million in 2022. Because it is not clear whether the next mayoral administration will support the program or how the program would fit within the DOE's plan to bring some of its transportation services in-house, IBO made no changes to OMB's estimates of funding for 2023 and 2024. The remainder of the additional spending projected by IBO in 2022 through 2024 is for several programs that have been included annually in past budgets. IBO assumes that SBS will need an additional $4 million in each year from 2022 through 2024 for these programs to continue.

Board of Elections and Campaign Finance Board. Based on recent historical annual expenditures by the city's Board of Elections, IBO projects that the board will require an additional $20 million in each year of the financial plan.

The Campaign Finance Board (CFB) typically spends more in election years than in non-election years. The board's current financial plan assumes a similar level of expenditures in each of the out-years of the financial plan. Under the City Charter, every 20 years City Council terms are shortened to two years, rather than four. This is to allow City Council elections based on new district lines that are re-drawn using the new decennial census to take place sooner rather than later. As a result, in calendar year 2023 every seat in the City Council is up for election. IBO assumes that the CFB will require at least an additional $3 million in fiscal year 2023 and $2 million in fiscal year 2024 in order to provide public financing for all qualified candidates in City Council primaries and the general election.

Other Cost Increases. IBO estimates that the Department of Sanitation (DSNY) will spend $9 million more than budgeted in 2022, and $18 million more in each of 2023 and 2024. These additional expenses are mostly related to the continued cost of closing the Fresh Kills Landfill. Over the past five years, DSNY has spent nearly $60 million annually on landfill closure costs. IBO assumes that the department's current year costs will be similar to costs over the past several years. Although we project that DSNY will spend less on landfill closure in 2023 and 2024, these costs would still be 52 percent greater than the department currently plans.

IBO estimates that the parks department will require an additional $8 million of city funding in the current year and over $12 million in each of the remaining three years of the financial plan period. The additional needs occur in a number of areas of the department's budget, including the cost of fleet maintenance, executive management, and management of the city's zoos. The additional funds would bring spending in these areas over the plan period more in line with actual expenditures in recent years.

In Reserve

In previous financial plans, the Mayor and the City Council placed substantial funds into reserves 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 economic crisis created by the Covid-19 pandemic demonstrates how and when such reserve funds are needed. The city accessed $1.0 billion of funds set aside in the Retiree Health Benefits Trust (RHBT) in 2020 and an additional $1.6 billion in 2021 to assist in balancing both years' financial plans. After accessing the RHBT in 2020 and 2021, there still remains approximately $2.2 billion of funding available in the trust. However, dipping into the trust to provide budget relief only makes the city's challenge of funding its future health care obligations to retirees more difficult.

In order to help balance the 2021 budget, the city also utilized $1.15 billion of expense funds that were not allocated for a specific purpose—money that would normally have been set aside in reserve at the start of the year. While drawing down any remaining unallocated funds typically occurs later in the fiscal year, the budget pressure this year led the city to draw down the money at the very start of the year, leaving only the $100 million general reserve required under the City Charter. The November plan maintains the general reserve at $100 million for 2021, and leaves $1.25 billion of unallocated reserves in each year for 2022, 2023, and 2024. If the $100 million of current year reserve funds go unused, as they have in the Mayor's prior budget plans, they would become part of this year's surplus and can help offset the shortfall projected for 2022. Similarly, if the much larger unallocated reserves included in the plan for 2022, 2023, and 2024 were not needed to address unexpected expenses or revenue shortfalls, they could be used to help balance subsequent years' budgets.

If IBO's economic forecast and our re-estimates of city revenues and expenditures prove generally correct, then the city's fiscal condition would 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 2021 with a modest surplus of $1.5 billion before drawing down the remainder of the unallocated reserve in this year's budget. This surplus would reduce the 2022 gap to $2.6 billion (3.7 percent of estimated city-funded expenses). Additionally, our forecasts of revenue and expenditures in the last two years of the financial plan before using the unallocated reserves reduce the city's budget gap in 2023 to $2.3 billion (3.2 percent of estimated city-funded spending) and $1.5 billion (2.0 percent of estimated city-funded spending) in 2024. These gaps would be substantially reduced to the extent that the unallocated budgeted reserves remained available.

Pressure Points

While manageable by historical standards, this relatively sanguine outlook is overshadowed by a nearly unprecedented level of uncertainty. In the near term these uncertainties include: how fast production and distribution of Covid-19 vaccines can be ramped up to stem the course of the pandemic; the likelihood that the new President and Congress agree on a new round of fiscal relief and economic stimulus this year; and whether the legislation includes direct assistance for state and local governments. Longer-term issues that could alter our outlook include how long it will take for the city's economy to recover once the virus is contained; whether the pandemic results in structural changes to the city's economy; whether New York State can resolve its fiscal difficulties without shifting much of the burden to the city; and the likelihood that the Metropolitan Transportation Authority (MTA)—absent substantial federal support—will be forced to greatly reduce service, creating a major impediment to regional economic recovery.

Staunching the Pandemic's Spread. The roll-out of a Covid-19 vaccination program has created optimism that the epidemic could be largely controlled by the summer when the vaccine will be available to most Americans. Successful implementation of a vaccine distribution program would eliminate the need for many of the restrictions that have been in place over the last nine months, restrictions that have devastated many aspects of the nation's economy. But the start of vaccinations is no guarantee that a large enough share of the population to effectively establish herd immunity will avail themselves of the vaccines. Refusal by a large portion of the population to be vaccinated, combined with likely resistance to the need for continued public health restrictions well into calendar year 2021, would constrain efforts to staunch the spread of the virus.

Recovery. IBO's forecasts assume that once the spread of the virus is reasonably well controlled, the country will gradually return to something like the pre-pandemic normal. For the city, this would mean a resumption of economic activity, depressed since early in calender year 2020, as commuters return to their offices, tourists and business travelers return to the city, the long-shuttered entertainment and cultural industries again thrive, and restaurants and bars that have survived shutdowns and restrictions reopen to full capacity. However, none of these occurrences are a certainty. All that is truly certain is that post-pandemic New York City will not be the exact same city that existed prior to the pandemic.

In response to the pandemic, New Yorkers have had to alter nearly every aspect of their daily lives. It is likely that some of the changes made by businesses and residents in reaction to Covid-19 will remain long after the virus has run its course. Many of the city's businesses have been operating remotely since last March; some of these firms and their employees will decide that working from home is more efficient and more supportive of family life than commuting to an office. Some New Yorkers may decide that the close confines inherent in city dwelling are too hospitable to the spread of future viruses and will choose to live elsewhere. And even after the city's many attractions have reopened, there is no guarantee that tourists—particularly international tourists—will find the city as attractive a destination after the pandemic as they did before. New York City has shown a historical ability not just to survive but to flourish, and there is no reason to expect that this crisis will be an exception. But there is also no reason to expect that the city that emerges from the pandemic will be the same city it was before. How the city will change in the wake of the pandemic is the biggest unknown in the current economic forecast.

Federal Fiscal Relief and Stimulus Package. In March 2020 Congress passed a $2.2 trillion bill, the CARES Act, which combined economic stimulus and some degree of fiscal relief to help mitigate the impact of Covid-19. The legislation primarily provided direct financial support to businesses and households as well as enhanced unemployment benefits. What the CARES Act did not include was much direct funding to state and local governments to help offset revenue that had been lost as a result of the general shutdown of the economy. In the months since passage of the CARES Act, states and localities have continued to lobby for a new package that would include considerably more direct aid.

Both New York City and State concluded that passage of a new bill that included substantial funding for states and localities was unlikely until the outcome of the fall elections was clear. With this understanding, both the city and state delayed making major decisions on budgets and taxes. Although the prior Congress passed one final coronavirus aid bill on its watch, a $900 billion package that borrowed heavily from the CARES Act, states and localities were again left hoping for more. The December package combined payments to individuals, enhanced unemployment payments, loans and grants to small businesses, plus assistance for public health offices and vaccination distribution, but like the CARES Act, the new bill offered little unrestricted aid for states and localities.

Substantial federal aid may yet arrive, if President-elect Biden pushes for such a bill after he takes office. The passage of such legislation is far from certain, however. With the composition and leadership of the next Senate still unknown, and the Democrats' slim hold on power in the House of Representatives, there is little margin for dissent if a stimulus package including direct financial support for state and local governments is to be passed.

Metropolitan Transportation Authority. While the city has options that would allow it to avoid devastating cuts or tax increases, the Metropolitan Transportation Authority, which provides most of the region's public transportation, will likely be crippled without a substantial injection of federal funding. The MTA relies heavily on revenue from the fare box and with ridership still greatly depressed, it has burned through much of its own resources, as well as an earlier round of federal aid, trying to maintain service for the millions of individuals in the city and the region who rely on public transportation. A smaller, but still significant share of MTA revenue comes from regional taxes and bridge and tunnel tolls, which have also been battered by the recession brought on by public health restrictions imposed to contain the pandemic. The MTA currently estimates that it faces a multi-year $12 billion budget deficit. The latest federal legislation includes almost $4 billion in assistance for the MTA, which should allow the authority to get through this year and avoid devastating service cuts that had been threatened. The authority had said that without federal funding it would need to reduce bus and subway service by 40 percent and cease nearly its entire capital program in order to bring its budget into balance.

The congestion pricing plan was supposed to provide the authority with a stream of funds that it could use to finance necessary system-wide capital improvements. The plan was originally scheduled to commence early in calendar year 2021, but because of delays in federal approval, the plan is unlikely to be initiated for at least two more years. Deferring critical maintenance and upkeep of the mass transit infrastructure would have a lasting deleterious effect on the system and the region, a deterioration that could take many years and many billions of dollars of additional resources to overcome.

State Budget Gap. Even prior to the spread of Covid-19, New York State had already been facing budget shortfalls. Early in calendar year 2020, the state's financial plan projected out-year deficits that exceeded $6.0 billion, growing to nearly $9.0 billion by 2023, more than 11 percent of the state's projected general funds revenue for that year. These past concerns seem mundane compared with the perilous fiscal situation the state currently faces. The Division of the Budget now estimates that the state has a combined $31 billion revenue shortfall through March 30, 2022—that is, for the remainder of the current fiscal year (which ends March 30, 2021) and next year.

Governor Cuomo has so far decided to delay any irrevocable decisions to address the state's deficit in hopes that passage of a federal package will provide relief for the state's fiscal crisis. The wait-and-see approach to the budget has compelled the state to delay and reduce much of its current-year spending, including direct payments to localities. Without an injection of fiscal assistance from Washington, these delays in payments could turn into permanent reductions in state support.

New York City's financial plan currently assumes an inflow of nearly $15 billion of state resources for 2021 supporting over 16 percent of all current year city expenses. Nearly 73 percent of the state funding the city expects this year is allocated to expenses of the city's Department of Education, comprising nearly 40 percent of the department's funding. Any significant curtailment of state funding to the city would have dire impacts on the city's financial plan, requiring the city to choose between radically reducing services that are funded by the state or shifting already-scarce city resources from other areas to make up for the loss of state funding. Reductions in state funding would affect programs that provide services for many of the city's neediest residents.

The remarkable number of risks present in the city's financial plan have been concerning enough to lead to recent downward modifications in the city's bond ratings. On balance, the downside risks out-weigh those on the upside, leaving the city in a position requiring heightened caution and careful attention to rapidly changing economic, demographic, and fiscal conditions in order to be able to move quickly if the budget outlook deteriorates.