

May 2020

Tumbling Tax Revenues, Shrinking Reserves, Growing Budget Gaps:

New York City Faces Substantial Fiscal Challenges in the Weeks and Months Ahead

In the less than three months since the release of the Mayor's Preliminary Budget, New York City's fiscal situation has morphed from one of cautious optimism and relative stability to absolute gloom and uncertainty. The Covid-19 pandemic and the resulting lockdown of much of the U.S. and global economies has brought about nearly unprecedented economic distress for New York City and its residents. The de Blasio Administration's 2021 Executive Budget and Financial Plan for 2022 through 2024 exists in a moment with few historical precedents. The near cessation of much of the economic activity that propelled the city's economic engine for years has dashed the city's fiscal outlook in just a few months.

At both the national and local level, the economic damage is enormous, with unprecedented numbers of workers being laid off and furloughed, pushing the unemployment rate to 14.2 percent in April; real (inflation-adjusted) U.S. gross domestic product (GDP) is expected to fall by 30.2 percent in the April to June quarter leading to a decline of 5.8 percent for the calendar year as a whole. The U.S. economy is almost certainly already in recession—what is not certain is how long and severe it will be. Those questions will largely be determined by the course of the pandemic and how soon effective treatments and a vaccine become widely available, which we assume will not happen before mid-

Total Revenue and Expenditure Projections							
<i>Dollars in millions</i>							
	Actuals 2019	Plan					Average Change 2019-2024
		2020	2021	2022	2023	2024	
Total Revenue	\$92,436	\$97,031	\$89,484	\$94,296	\$97,639	\$100,109	1.6%
Total Taxes	61,312	61,461	59,523	63,715	66,661	69,119	2.4%
Total Expenditures	\$91,779	\$97,575	\$90,313	\$100,287	\$102,606	\$104,096	2.6%
IBO Surplus/(Gap) Projections		(\$544)	(\$830)	(\$5,991)	(\$4,966)	(\$3,986)	
Adjustments for Prepayments and Non-Recurring Expenses							
Net Prepayments	(\$355)	(\$66)	(\$4,155)	\$0	\$0	\$0	
Reserve Funds	0	20	100	1,250	1,250	1,250	
Other Adjustments	0	(400)	0	117	261	395	
Total Expenditures (net of adjustments)	\$92,786	\$98,021	\$94,368	\$98,920	\$101,095	\$102,451	2.0%
City-Funded Expenditures (net of adjustments)	\$68,633	\$69,386	\$69,612	\$73,509	\$75,273	\$76,616	2.2%

NOTES: IBO estimates that the current year budget is \$544 million out of balance. In order to balance the current year the city could reduce the prepayment of 2021 expenses, currently estimated at approximately \$4.2 billion. Reducing the prepayment would increase IBO's estimated gap in 2021 to nearly \$1.4 billion. Figures may not add due to rounding.

New York City Independent Budget Office



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2021. Our forecast of the U.S economy assumes that after a very sharp drop in activity and output this quarter there will be a modest recovery in employment later this year. After gradually accelerating through 2021, the economy is expected to rebound very strongly in 2022.

New York City has been an epicenter of the Covid-19 pandemic, and the economic effects will be felt longer here than in much of the country. IBO expects employment losses of 388,000 this quarter (April-June) and another 58,000 in the subsequent quarter, followed by diminished but continued job losses through the first quarter of calendar year 2021. Strong gains in employment and income in the city are not expected until calendar year 2022. Although the job losses are concentrated in retail trade, leisure and hospitality, and eating and drinking establishments, virtually every industry in the city will lose jobs, with employment not expected to recover its pre-Covid-19 levels before 2024.

The contraction of the city's economy will result in a sharp decline in anticipated tax revenues. IBO now expects 2020 tax revenues to be \$2.9 billion (4.6 percent) lower than we forecast in our February outlook and \$6.6 billion (9.9 percent) lower in 2021, a combined shortfall of \$9.5 billion over the two fiscal years; the de Blasio Administration estimates the shortfall will be \$7.4 billion. With New York State facing even larger revenue shortfalls of its own, state funding—which supports a large share of spending in many city agencies—is also in serious jeopardy.

Although the Executive Budget includes a number of actions, including drawing down reserves and a more aggressive set of savings initiatives intended to bring the 2020 and 2021 budgets into balance, IBO's estimates of revenues and expenditures under the contours of the Mayor's Executive Budget indicate that additional actions will be needed to achieve balance. IBO's projected budget gap for the current fiscal year is \$544 million, with an \$830 million shortfall expected for 2021.¹ The budgets for both of these years must be balanced before the new fiscal year begins in less than two months on July 1. IBO projects much larger budget gaps after 2021: \$6.0 billion, \$5.0 billion, and \$4.0 billion, in fiscal years 2022, 2023, and 2024, respectively.

As a result of the precipitous decline in revenues, the city's 2020 budgetary reserves, which had grown quite large in recent years have been depleted and may take many years to replenish. In order to present a balanced budget, as required by the City Charter and state law,

the de Blasio Administration accessed over \$4 billion of funds held in reserve and produced an additional \$2.7 billion in agency savings, which includes over \$500 million of service reductions and approximately \$300 million of savings from programs temporarily shut down due to the Covid-19 pandemic. Another component of the savings plan is a hiring freeze that eliminates 3,667 full-time equivalent positions across most city agencies, including 400 positions at the Department of Education. Highlights of the revenue components of the savings plan include the addition of a \$128 million previously discontinued rental payment from the New York City Water Board and an increase of \$250 million in payments from the Hudson Yards Infrastructure Corporation.

Adjusting for the prepayments of current year expenses with prior year revenues and other nonrecurring expenses, we project that the fiscal year 2020 budget will total \$98.0 billion (5.6 percent larger than the 2019 budget after similar adjustments) while the adjusted 2021 budget will be \$94.4 billion (a decrease of 3.7 percent from 2020). Based on IBO's re-estimates and adjustments, the total budget resumes growing in 2022, increasing to \$98.9 billion and reaching \$102.5 billion in 2024. Similarly, the city-funded portion of the budget, net of adjustments, grows each year from 2020 through 2024, at an annual average rate of 2.2 percent.

New York City's economic and fiscal outlook fundamentally depends on the course of the pandemic. But there are more questions than answers on how Covid-19 will impact the city: when can the city's shutdown begin to be relaxed; will there be a second wave of Covid-19 infections in the fall; how long before the virus no longer poses a significant threat to public health; and perhaps most important, when will individuals once again feel safe living in, working in, and visiting New York. Another crucial question is whether the federal government will adopt legislation to replace the tax revenues lost by states and localities as a result of the pandemic. At this time, there are no easy answers to any of these questions.

U.S. and Local Economic Outlook

U.S. Economy. Covid-19 pandemic and public health restrictions imposed to limit the spread of infections have plunged the U.S. economy into recession. The economic contraction that began in March has become even sharper in the second quarter of 2020. (In this section, years refer to calendar years unless otherwise noted.) Expansionary fiscal and monetary policies already enacted and those that might be added in the coming months are expected

IBO versus Mayor's Office of Management and Budget Economic Forecasts						
	2019	2020	2021	2022	2023	2024
National Economy						
Real GDP Growth						
IBO	2.3	-5.8	2.3	6.8	4.7	2.5
OMB	2.3	-5.4	6.3	4.0	1.6	1.3
Inflation Rate						
IBO	1.8	0.6	2.5	2.9	2.6	2.6
OMB	1.8	0.7	2.1	2.7	2.7	2.4
Personal Income Growth						
IBO	4.4	0.5	1.6	5.8	6.0	5.0
OMB	4.4	1.7	3.1	4.7	3.8	3.9
Unemployment Rate						
IBO	3.7	8.4	9.2	6.9	4.9	4.5
OMB	3.7	8.0	7.9	4.3	3.6	4.0
10-Year Treasury Note Rate						
IBO	2.1	0.8	1.3	2.2	3.0	3.7
OMB	2.1	0.8	1.0	1.3	1.6	1.8
Federal Funds Rate						
IBO	2.2	0.4	0.1	0.1	0.7	1.7
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)	83.3	-474.4	96.3	125.8	145.1	163.5
IBO (annual average)	100.1	-315.3	-87.0	127.1	136.6	157.3
OMB (annual average)	99.6	-350.4	213.3	130.3	72.9	55.4
Nonfarm Employment Growth						
IBO (Q4 to Q4)	1.8	-10.1	2.3	2.9	3.3	3.6
IBO (annual average)	2.2	-6.8	-2.0	3.0	3.1	3.5
OMB (annual average)	2.2	-7.5	5.0	2.9	1.6	1.2
Inflation Rate (CPI-U-NY)						
IBO	1.7	1.4	2.9	2.9	2.6	2.7
OMB	1.7	0.7	1.9	2.5	2.6	2.4
Personal Income (\$ billions)						
IBO	667.2	656.3	661.9	701.8	744.1	788.6
OMB	668.0	661.5	694.2	715.9	740.0	769.5
Personal Income Growth						
IBO	4.7	-1.6	0.9	6.0	6.0	6.0
OMB	3.6	-1.0	4.9	3.1	3.4	4.0
Manhattan Office Rents (\$/sq.ft)						
IBO	79.9	74.6	75.9	78.9	82.2	86.0
OMB	79.8	71.7	76.7	79.3	81.2	83.1
SOURCES: IBO; Mayor's Office of Management and Budget						
NOTES: Rates reflect year-over-year percentage changes except for unemployment, 10-Year Treasury Bond Rate, Federal Funds Rate, and Manhattan Office Rents. The local price index for urban consumers (CPI-U-NY) covers the New York/Northern New Jersey region. Personal income is nominal.						
<i>New York City Independent Budget Office</i>						

to prevent the economy from slipping into an extended contraction, and we anticipate a resumption of growth in the latter half of 2020. IBO now expects a 5.8 percent

decline in real (inflation-adjusted) gross domestic product (GDP) for the year as a whole. There will be no bounce back from the recession, however, until there is a vaccine or an

effective treatment that would greatly reduce or eliminate fear of contracting the virus. Our forecast assumes that the pandemic will be resolved sometime in 2021. Based on this assumption, IBO projects that growth will gradually accelerate in 2021, with real GDP rising 2.3 percent for the year as a whole, followed by much stronger growth of 6.8 percent in 2022.

One of the uncertainties accompanying every forecast is the possibility that an unforeseen shock will suddenly alter the economy's trajectory in a major way. The Covid-19 pandemic has been just such a shock to economies all over the world. Initial concerns about the virus's impact on the U.S. economy were focused on disruptions to international trade—particularly with China, one of our largest trading partners—and to the supply of intermediate goods needed by American businesses. However, the quickness with which infections spread beyond China and the acceleration of Covid-19-related illnesses and deaths led to fears that the nation's health care system would be overwhelmed. International travel was curtailed and measures were taken to impede transmission of the virus. Although the intensity of restrictions varied across the country, limits on public gatherings in theaters, sports arenas, houses of worship, workplaces, and retail establishments coupled with other public health measures such as mandatory quarantines of people suspected of infection have effectively shut down large parts of the economy, ending the nation's longest economic expansion.

March saw a steep decline in economic output. For the first quarter as a whole, real GDP decreased 4.8 percent on an annualized basis (Bureau of Economic Analysis, initial estimate), the largest quarterly decline since the beginning of the Great Recession in 2008. With many businesses no longer able to operate, IBO projects that real GDP will contract at an annual rate of 30.2 percent in the second quarter—over three and a half times greater than the largest decline since quarterly records began in 1948. In the eight weeks since the middle of March, 36.5 million Americans have filed claims for unemployment insurance; IBO estimates that the unemployment rate will jump from 3.8 percent in Q1 to 12.5 percent this quarter.

The recession has reduced employment and output in all major sectors of the U.S. economy except health care, though its impact varies by industry. Hardest hit are sectors most affected by the public health measures enacted to mitigate the pandemic. These include wholesale and retail trade; sports, arts, and other entertainment sectors; accommodations, transportation, restaurants, and other businesses highly dependent on tourist spending; and

manufacturing. In the energy sector a combination of declines in demand and competition between Saudi Arabia and Russia have sunk prices, leaving a large share of U.S. energy production unprofitable. The recession is hitting hardest in states where energy production, foreign trade, and tourism are concentrated, and where rates of Covid-19 infections are high.

We anticipate a return to economic growth in the third quarter of 2020, the result of a slower spread of Covid-19, the easing of public health constraints on business activity, and aggressive monetary and fiscal policies to stimulate the economy. The increase will be modest, however, and there will be little additional growth in the fourth quarter. By the end of 2020, only about a third of the economic output lost during the first half of the year will have been restored.

For 2020 as a whole, IBO forecasts a 5.8 percent decline in real GDP—an annual rate of contraction exceeded only in 1946, when the U.S. was winding down from World War II production levels and in the first three years of the 1930s Great Depression. Projected unemployment for the year is 8.4 percent, a measure that does not take into account individuals who leave the labor force.²

IBO's forecast is based on the assumption that expansionary monetary and fiscal policies will continue to be used as needed to prevent the economy from slipping into a long-term contraction. The Federal Reserve has announced its intention to provide whatever funding is necessary to keep credit flowing. It has 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 has set up a number lending facilities to support markets for commercial paper, money markets, assets backed by consumer debt, and other forms of credit. We expect the Fed will continue to pursue a highly expansionary monetary policy at least through 2021.

Congress has enacted four rounds of fiscal relief providing a total of \$3 trillion of funding, including loans and grants to businesses, checks to individual income tax filers, business tax cuts, expansion of unemployment insurance, support for hospitals and health care providers, and aid to states and municipalities. Congress is currently considering a fifth round of spending that could include additional funding for states and municipalities.

Even with the four rounds of fiscal relief and a highly

expansionary monetary policy, IBO expects that recovery will be slow, particularly in the near term. The speed with which Covid-19 spread and the severity of the economy's sudden decline has shaken the confidence of both consumers and businesses—and will continue to do so as long as the Covid-19 infection remains a health threat. IBO's economic outlook is predicated on a vaccine or effective treatment of Covid-19 becoming widely available in 2021. Our forecast of real GDP growth in 2021 is 2.3 percent, a mix of modest growth in the first half of the year followed by accelerating growth in the second half. Growth will entice some individuals to enter or re-enter the labor force to look for work, resulting in a rise of the unemployment rate from 8.2 percent in the third quarter of 2020 to a peak of 9.6 percent in 2021, Q2.

On the assumption that the pandemic will largely be resolved by 2022, IBO projects economic growth will surge, with real GDP rising 6.8 percent for the year—an extraordinary growth rate that would not be sustainable in the long run for a mature economy such as the U.S. Growth will moderate in the final two years of the forecast period, to 4.7 percent and 2.5 percent, in 2023 and 2024, respectively.

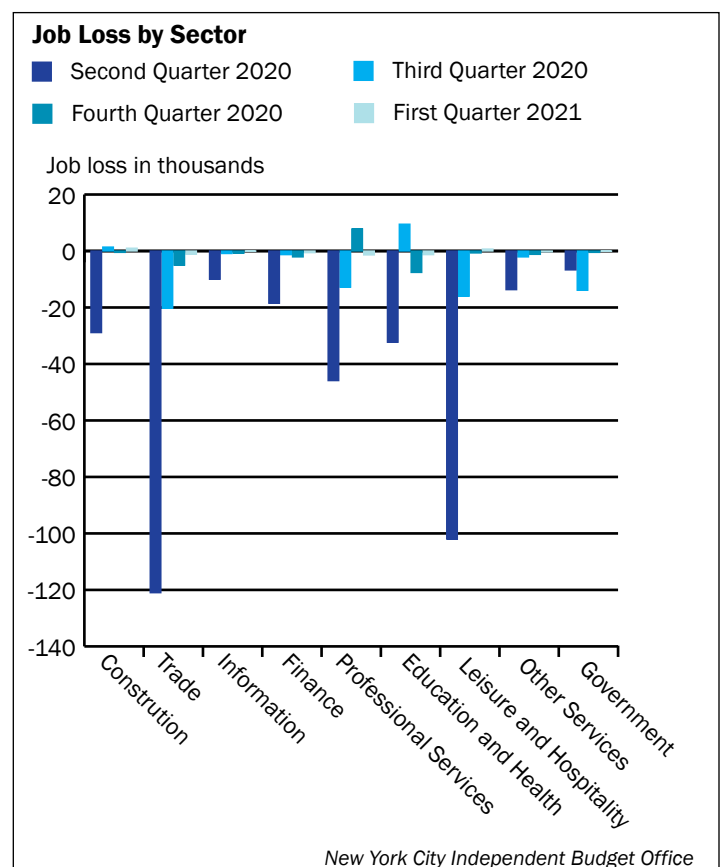
The future course of the U.S. economy is highly dependent on the course of the pandemic. The biggest downside risk to IBO's forecast is the possibility of a second wave of Covid-19 infections, perhaps the result of easing up of social distancing regulations too soon, a mutation of the virus, or a seasonality in the infection rate. A severe second wave, particularly during the next flu season, could disrupt the recovery. If a vaccine is developed and becomes widely available later this year rather than next year as we assume, economic growth in 2021 would likely be stronger than we expect. There is also the risk that the current levels of monetary and fiscal stimulus will be insufficient to offset the impacts of the pandemic.

In comparison with IBO's forecast, OMB's outlook for 2020 is slightly less pessimistic. OMB projects a 5.4 percent decline in real GDP and an 8.0 percent unemployment rate for the year, compared with a 5.8 percent decline in real GDP and 8.4 percent unemployment rate in the IBO forecast. The two forecasts substantially diverge in 2021, however. While IBO forecasts that real GDP will increase just 2.3 percent in 2021, OMB expects much more rapid growth, with real GDP rising 6.3 percent for the year as a whole. In IBO's forecast, a similarly fast pace of growth comes one year later, in 2022.

New York City Economy. These are untested times for the

economy, globally and nationally, yet the city's economy is especially at risk. Because of this, IBO forecasts a particularly slow local economic recovery, with sustained job losses spanning several quarters before improvement gradually sets in during calendar year 2021. Employment and wage losses are projected to continue into early next year, with the problems complicated by a population and labor force that were already shrinking and expected to decrease further. Annual unemployment is projected to peak in 2021 before beginning to recover, but will take through 2024 to approach its pre-crisis level.

Employment. IBO projects a slower recovery in employment for the city than we—and many others—forecast at the national level. In particular, we are not expecting a third-quarter rebound in employment, which has been a prominent feature in our forecast of the U.S. economy and many other employment forecasts. IBO projects that the city will lose 388,000 jobs across all sectors of the economy in the second quarter of 2020, followed by an additional loss of 58,000 jobs in the third quarter, distributed across all sectors except construction, education, and health. These losses will be followed by much smaller aggregate declines in both the fourth quarter of 2020 and first quarter of 2021, before modest employment growth returns in the second quarter of next year.



While some jobs will certainly come back once social distancing regulations are relaxed, it appears increasingly unlikely that local restrictions will ease appreciably until well into the third quarter, and possibly later. The Governor recently announced the potential for reduced restrictions in certain parts of the state starting in mid-May. Given the city's unfortunate status as the nation's epicenter for the virus, however, such measures are likely to reach the city last.

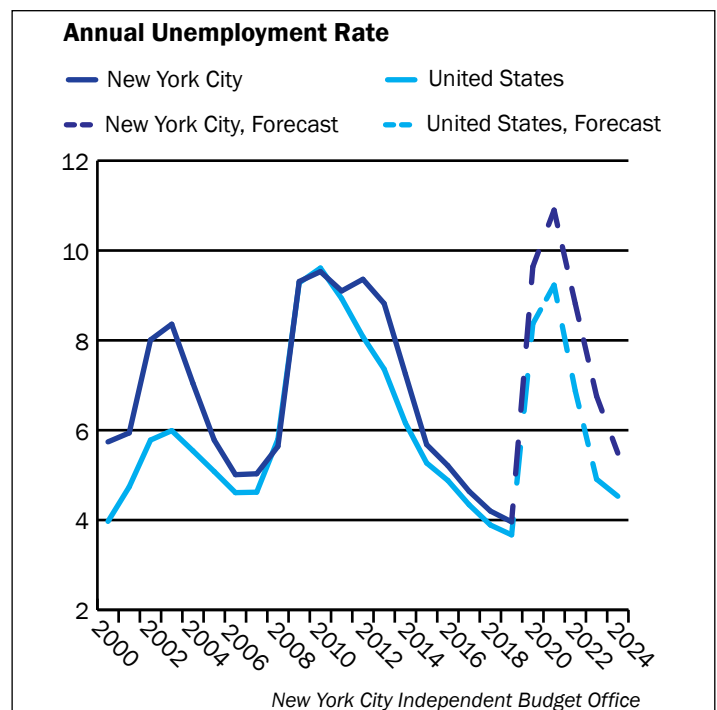
Several factors specific to the city suggest that any jobs regained as restrictions are relaxed will be offset by continued losses in key sectors. IBO expects that sectors with strong ties to tourism, such as retail trade and hospitality, will continue to lose jobs as domestic and foreign tourists remain reluctant to visit the city even as their own local conditions improve. Additionally, business travel to the city has all but evaporated and will be slow to recover to previous levels, if it ever does, given increased familiarity with videoconferencing technology such as Zoom. Hotel occupancy collapsed from an average of 87.5 percent in 2019 to a low of 15.2 percent in the last week of March. Although occupancy rates picked up to 44.9 percent by the week ending on May 2, this is largely due to the use of hotels to provide temporary housing for emergency medical workers. More generally, sustained weakness is expected across most city industries, as many New Yorkers have radically changed their routines and will likely take substantial time to readjust to post-virus life. Not least of the reasons is a heavy reliance on normally crowded public transit. Subway ridership has plummeted, and for the first time in the system's history (outside of temporary conditions), the system is now shutting down nightly from 1:00 a.m. to 5:00 a.m. to allow it to be cleaned and disinfected. IBO does not expect that ridership will rebound quickly. A general reluctance to use public transit to move about the city will be a continued drag on economic activity and continue to negatively affect employment in many sectors.

Income and Wages. Along with employment losses, total personal income (derived from all sources) in New York City is projected to contract by 1.6 percent (\$11.0 billion) in 2020 from its 2019 average of \$667 billion, with the biggest drop occurring in the current quarter. Although we expect very slow growth to resume this summer, it will take until 2022 to reach the same level as before the pandemic hit.

More specifically, we expect wages to decline throughout the first several quarters of the forecast period. Aggregate wages across all sectors are forecast to contract by 7.6

percent from their peak of \$449 billion in the fourth quarter of 2019 to a low of \$414 billion in the first quarter of 2021. Total wages will decline less steeply than total employment because many of the jobs lost are in lower-wage sectors. Three sectors are expected to see particularly sharp declines in aggregate wages. In the current quarter alone, IBO projects total wages in the construction industry to contract by 18.2 percent, trade wages by 17.7 percent, and leisure and hospitality wages by 15.7 percent. Of these, only construction is likely to have a modest bounce back in the third quarter, assuming more types of construction will be permitted this summer.

Population, Labor Force, and Unemployment. One particular area of concern for the city's economic recovery is weakness in the labor force. The city's population has been declining since the middle of 2016, which has translated into a shrinking labor force. As noted in past IBO reports, this change has been traced to an out-migration of New Yorkers that exceeds the still-positive inflow of domestic and international migrants. The current crisis has provided a negative shock to both sides of the equation. Many city residents who have the ability to do so have opted to leave the city and stay in locales with less severe infection rates until health risks abate. While many individuals are expected to return, not all will—a risk that increases the longer the pandemic persists and the costs of maintaining an unused city residence mount. Meanwhile, although detailed data are not yet available to track recent trends, we assume that in-migration has been drastically



reduced, if not effectively halted, and will presumably be slow to restart.

Although the available labor force is declining, the number of jobs located in New York City is falling much more rapidly, driving up the rate of unemployment. IBO projects that the unemployment rate will average 9.8 percent in 2020 and 10.9 percent in 2021, more than twice as high as the average rate of 4.0 percent in 2019. Despite the higher average annual rate in 2021, unemployment actually peaks in the second quarter of 2020 at 11.9 percent. (The annual rate for 2020 is lower than that of 2021 only because it includes the much lower figure for the first quarter, before the pandemic hit.) By 2024, the unemployment rate is projected to average 5.5 percent for the year, approaching but still not reaching, pre-pandemic levels. The combination of fewer jobs and fewer workers available to fill them sets the stage for a particularly difficult economic comeback, even after Covid-19 is contained.

Real Estate. Taxable real estate sales in New York City reached a peak of \$126.3 billion in 2015, not adjusting for inflation. Since then, year-over-year sales have declined every year except 2018, when there was a strong rebound in the commercial property sector. Before the Covid-19 crisis struck, IBO was projecting that real estate sales in 2020 would total just under \$100 billion, similar to the \$99.8 billion level of sales recorded in 2019. We now project that sales will be around \$65 billion, a decline of more than one-third with respect to the value previously forecast. IBO forecasts a recovery in sales beginning in 2021, but we do not expect sales to rise above the \$100 billion level again until 2024.

The Covid-19 pandemic has hit the New York City metropolitan area harder than any other part of the United States. In the wake of this crisis, the long-term attractiveness of New York City as a place to live and do business is very much an open question. At a minimum, prices of both commercial and residential property are likely to remain below the record-breaking levels of recent years for a considerable period.

Risks. There is more uncertainty surrounding this local economic forecast than any that IBO has ever put out. Previous local economic shocks, such as 9/11 and the full-blown financial crisis precipitated by the September 2008 collapse of Lehman Brothers ended up being relatively temporary shocks to the economy that could be systematically managed after the fact. Given the already sustained nature of economic interruption and continued

uncertainty about the future path of Covid-19, there are both considerable upside and downside risks that could substantially alter the outlook in either direction.

The discovery and widespread use of an effective vaccine, allowing much of the public to safely resume normal activities, could usher in a much faster recovery than our current projections. To a lesser degree, targeted fiscal stimulus for state and local governments that would allow the city to replace lost tax revenue while continuing to provide higher levels of spending on essential services would mitigate the economic risk.

Conversely, a resurgence of the virus—driven by relaxing social distancing restrictions prematurely or increasing spread of the disease during the flu season this fall—could be followed by another round of equal or even more intense containment measures. This would counteract any early recovery and could extend the negative economic impact well into 2021 and beyond compared with our current projections.

Even without such a resurgence in the disease, it is particularly uncertain how quickly the local economy can reshape itself after this widespread and extended shutdown in economic activity, the likes of which has not been experienced in modern memory. The shape of the recovery will depend upon a combination of local behavior and the resurgence of tourism, which is a pattern that is particularly difficult to predict. While a certain segment of the city's population might be willing to flood back into stores and theaters and restaurants as soon as possible, many establishments will have a very hard time resuming normal operations without a large influx of foreign and domestic visitors, who may be considerably slower to return.

Taxes and Other Revenues

In the face of the economic downturn triggered by the onset of the Covid-19 pandemic, IBO now expects the city's revenues to be much lower than we forecast in our report on the Preliminary Budget in early February, a few weeks before the first cases of the virus were reported in New York City. (For the balance of this report, years refer to city fiscal years unless otherwise noted.) The decrease is almost entirely the result of large downward revisions in our outlook for most of the city's major tax sources. IBO now expects tax revenues in 2020 to be \$2.9 billion lower (4.6 percent) than we projected in February, \$6.6 billion lower (9.9 percent) in 2021 and \$4.6 billion (6.8 percent) short of what we had forecast for 2022. Of the city's major tax sources only the property tax is not expected to

IBO Revenue Projections

Dollars in millions

	Actuals 2019	Plan					Average Change 2019-2024
		2020	2021	2022	2023	2024	
Tax Revenue							
Property	\$27,703	\$29,662	\$30,945	\$32,131	\$33,344	\$34,364	4.4%
Personal Income	13,344	13,179	11,841	13,144	13,862	14,555	1.8%
General Sales	7,810	6,787	6,673	7,289	7,960	8,317	1.3%
Corporation	4,200	4,137	3,086	3,706	3,741	3,873	-1.6%
Unincorporated Business	2,029	1,684	1,649	1,825	1,906	2,018	-0.1%
Real Property Transfer	1,547	1,215	976	1,284	1,413	1,489	-0.8%
Mortgage Recording	1,097	998	905	947	960	974	-2.3%
Utility	369	349	363	400	401	416	2.4%
Hotel Occupancy	625	479	448	510	547	577	-1.6%
Commercial Rent	907	875	856	901	947	960	1.1%
Cigarette	29	27	26	25	24	23	-4.8%
Other Taxes and Audits	1,651	2,070	1,754	1,554	1,554	1,554	-1.2%
Total Taxes	\$61,312	\$61,461	\$59,523	\$63,715	\$66,661	\$69,119	2.4%
Other Revenue							
STaR Reimbursement	\$181	\$165	\$167	\$165	\$163	\$161	-2.3%
Miscellaneous Revenue	8,220	7,552	6,901	6,854	6,839	6,841	-3.6%
Unrestricted Intergovernmental Aid	151	1,411	-	-	-	-	n/a
Disallowances	113	(15)	(15)	(15)	(15)	(15)	n/a
Total Other Revenue	\$8,664	\$9,113	\$7,053	\$7,004	\$6,987	\$6,987	-4.2%
Less: Intra-City Revenue	(\$2,222)	(\$2,178)	(\$1,848)	(\$1,834)	(\$1,831)	(\$1,831)	
TOTAL CITY-FUNDED REVENUE	\$67,754	\$68,397	\$64,728	\$68,885	\$71,817	\$74,274	1.9%
State Categorical Grants	\$14,970	\$15,943	\$15,503	\$16,345	\$16,801	\$16,850	2.4%
Federal Categorical Grants	7,719	10,908	7,626	7,451	7,406	7,371	-0.9%
Other Categorical Aid	1,340	1,111	952	941	940	938	-6.9%
Interfund Revenue	652	672	675	675	675	675	0.7%
TOTAL REVENUE	\$92,436	\$97,031	\$89,484	\$94,296	\$97,639	\$100,109	1.6%

NOTES: Remaining banking corporation tax revenue reported with general corporation tax. Figures may not add due to rounding.

New York City Independent Budget Office

experience a dramatic shortfall thanks to features in the city's property tax that prevent large year-to-year changes in assessed value.

With collections growing through the first half of 2020 before the economy screeched to a halt, tax revenues are now expected to total \$61.4 billion in 2020, a gain of only 0.2 percent from 2019. For 2021, IBO forecasts a 3.2 percent year-to-year decline in tax revenues to \$59.5 billion. With the economy expected to begin slowly recovering in calendar year 2021 with a stronger rebound in 2022, revenue growth resumes in fiscal year 2022, with tax collections expected to total \$63.7 billion, a gain of 7.0 percent. Revenue growth moderates in 2023 and 2024 to an average of 4.2 percent annually, with total tax revenue reaching \$69.1 billion in 2024—\$4.4 billion below IBO's February forecast.

OMB has also reduced its total tax revenue forecast from earlier in the year, although OMB's changes are smaller than IBO's for each year of the forecast. As a result, IBO now projects lower revenue than OMB each year from 2020 through 2023. Only in 2024 does IBO's forecast exceed OMB's and then only by a modest amount. The difference between the two forecasts is \$487 million in 2020, \$496 million in 2021, \$754 million in 2022, and \$451 million in 2023; in percentage terms these differences are very small, ranging from 0.7 percent to 1.2 percent. In 2024, IBO's forecast exceeds OMB's by \$720 million, a difference of only 1.1 percent, due primarily to differences in the outlook for property tax revenue.

Total revenues, including not only taxes, but also revenues from the city's fees, fines, and other miscellaneous

sources; state and federal grants and other categorical aid; and interfund revenues, are now forecast to total \$97.0 billion for the current year, \$1.3 billion more than projected in our Preliminary Budget outlook. The expected increase in total revenue for 2020—despite our lower forecast of tax revenues—is largely due to the city’s assumption that the Medicaid portion of the federal response to the Covid-19 emergency will result in almost \$1 billion in new federal aid and to the addition of \$1.2 billion of revenue from drawing down reserves from the Retiree Health Benefits Trust (see page X), which is shown as unrestricted intergovernmental aid for fiscal reporting purposes.

Changes for subsequent years were more modest, with the city waiting to see how much federal aid may be available and in what form it may arrive before counting it in the budget. With little to offset the projected tax revenue shortfalls after 2020, revenue from all sources is now expected to fall to \$89.5 billion in 2021, and then grow slowly at an annual average rate of 3.8 percent to reach \$100.1 billion in 2024.

Real Property Tax. At this point in the fiscal year, changes in the forecast of property tax revenue for the current year are the result of differences in the outlook for collections, rather than a revised assessment roll or levy. IBO now projects that property tax revenue for 2020 will total \$29.7 billion, a decrease of \$137 million since our February forecast, primarily due to projected increases in delinquencies and cancellations as the economic impact of the Covid-19 shutdown will begin to impede owners’ ability to pay their property tax and tenants’ ability to pay their rent.

IBO projects 2021 property tax revenue of \$30.9 billion, an increase of 4.3 percent from the current year. With the assessment roll for 2021 largely determined before the impact of Covid-19 was understood (it will become final by May 25th), the change in revenue from our February outlook is a relatively modest decrease of \$317.0 million and again largely reflects an assumption of greater delinquencies and cancellations. Our revenue forecast for 2021 through 2024 has been lowered due to our anticipation of more delinquencies and cancellations, along with slower assessment growth than we anticipated in our February report. After 2021, IBO projects that property tax revenue will grow at an average annual rate of 3.6 percent through 2024, when it is expected to reach \$34.4 billion. This represents a decrease of \$1.4 billion from our February forecast, primarily driven by a compounding decline in assessment growth starting in 2022.

The difference between IBO’s and OMB’s revenue forecasts is attributable to our higher levy forecast. While IBO is forecasting an average levy growth of 3.1 percent a year from 2021 through 2024, OMB is only forecasting levy growth of 2.3 percent. Both forecasts are much lower than actual growth in the recent past, which averaged 7.0 percent annually from 2017 through 2020.

The city’s property tax system includes features that minimize the effect of sudden changes in market values on taxable assessed values and property tax revenue. Assessment changes due to market conditions for most Tax Class 2 properties (rental apartment buildings and coops and condos) and Tax Class 4 properties (most nonresidential properties) take five years to be fully reflected on the tax roll. The market values of Tax Classes 2 and 4 have grown an average of 6.8 percent per year for the last five years and some of that assessment growth has not yet been added to the property tax rolls. Changes in market value of one-, two-, and three-family homes (Tax Class 1) are translated into assessed values by capping the assessment growth of these properties at 6.0 percent per year and 20.0 percent over five years.

Real Estate-Related Taxes. The city receives revenue from two taxes related to real estate purchases or financing, and from a tax on commercial leases. 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 some refinancing activity. Together these two taxes are referred to as the transfer taxes. A third real estate-related tax, the commercial rent tax (CRT), is levied on the value of certain commercial property leases in parts of Manhattan.

The economic crisis brought on by the Covid-19 pandemic has pushed down IBO’s forecast of transfer tax revenue for 2020 to just over \$2.2 billion compared with our February forecast of \$2.4 billion. The February forecast already predicted substantially weaker revenue than our December 2019 projections, a reflection of slower-than-expected growth in real estate sales and continued stagnation in mortgage activity in the current year and beyond. IBO’s forecast for 2021 is a little under \$1.9 billion, compared with our \$2.5 billion forecast published in February. We project a recovery beginning in 2022, with the sum of RPTT and MRT totaling slightly under \$2.5 billion by 2024—far less than the record high for transfer tax revenue of \$3.3 billion the city received in 2007.

CRT revenue typically increases every year, independent of the overall condition of the commercial real estate market.

From 2014 through 2019, CRT revenue increased an average of 5.0 percent annually. However, due to legislation that has reduced the scope of the tax, plus the impact of Covid-19, we expect CRT revenue to decline 3.5 percent, to \$875 million, in 2020, and another 2.2 percent, to \$856 million, in 2021. Revenue is projected to recover beginning in 2022, and reach \$960 million in 2024.

Real Property Transfer Tax. When IBO published its analysis of the Mayor’s Preliminary Budget in February 2020, there were already signs of a weakening real estate market. With the Covid-19 outbreak and the subsequent shutdown of much of the local and national economies, IBO projects a sharp drop in city RPTT revenue in both the current year and in 2021. (City RPTT excludes the portion dedicated to the Metropolitan Transportation Authority known as the “urban tax.”) Our RPTT forecast for 2020 is \$1.2 billion—21.5 percent (\$332 million) less than 2019 collections. We project an additional 19.7 percent (\$239 million) decrease in revenue in 2021. Projected collections for 2021 are \$976 million, the lowest level since 2012, when the city was still struggling to recover from the aftermath of the 2008-2009 financial crisis.

Year-to-year variations in RPTT revenue are driven primarily by trends in commercial property sales—especially office buildings, retail space, and rental apartment buildings. Residential sales tend to fluctuate less. Because the city taxes residential transactions at a lower rate than commercial sales, and because residential sales usually make up less than half of total real estate sales value, in most years the majority of city RPTT revenue comes from commercial sales. Federal tax changes implemented in calendar year 2018 reduced the tax advantages of home ownership, and thus reduced demand for residential properties.

IBO projects that while both commercial and residential real estate sales will fall in 2020 and 2021, the relative decline in commercial sales will be greater. However, we expect commercial sales to experience a faster recovery beginning in 2022.

Given the disruption caused by the Covid-19 pandemic, RPTT collections in March 2020 were surprisingly strong—\$118 million. However, this number reflects many transactions that had already entered into contract before March. Moreover, markets continued to function more or less normally during the first half of the month. During April 2020, however, real estate activity declined sharply, and RPTT revenue for the month was just \$43 million.

IBO forecasts a solid rebound in RPTT beginning in 2022, but at just under \$1.5 billion, 2024 revenue is still projected to be about \$58 million below the level of 2019.

IBO’s forecast of RPTT revenue is above those of OMB in every year except 2021, when it is 6.5 percent (\$68 million) lower. While IBO projects a stronger hit to real estate sales in 2021 than does OMB, we also project a stronger recovery in the following years. By 2024, IBO’s RPTT forecast is \$167 million (12.6 percent) above OMB’s.

Mortgage Recording Tax. IBO projects a decline in MRT in 2020 and again in 2021, but compared with our RPTT forecast, the drop in MRT is much less severe. IBO projects that MRT revenue in 2020 will be \$998 million, a decrease of 9.0 percent (\$99 million) compared with 2019. Revenue is forecast to drop another 9.3 percent (\$93 million) in 2021, and then begin a gradual recovery, reaching \$974 million in 2024.

MRT revenue does not follow the value of real estate sales as closely as does RPTT revenue because not all sales involve a mortgage, and for sales with a mortgage, only the fraction of the purchase price financed by the mortgage is taxed. In addition, mortgage refinancing, which may be subject in whole or in part to the MRT, is not connected to the sale of a property. Furthermore, loans to purchase coop apartments are not considered mortgages under New York State law, and are thus not subject to the MRT.

Changes in federal tax policy have reduced the number of households that can benefit from the deductibility of mortgage interest, and this factor by itself reduces the demand for residential mortgages.

While the demand for mortgages is partially a function of the mortgage rate, the strictness of lending standards also plays a role. The interplay of mortgage rates and lending standards also applies to mortgage refinancing. Refinancing becomes more attractive when interest rates drop below the level at which the original mortgage was issued. Demand for cash-out mortgage refinancing is expected to increase in times of economic crisis, but whether or not this demand is realized depends in part on the stringency of banks’ lending standards.

IBO anticipates that continued low interest rates, coupled with a rise in the number of existing homeowners facing financial difficulties, will increase the demand for mortgage refinancing during 2021, and partially counteract the decline in loan demand for purchases. This is the main reason why IBO is projecting MRT revenue for 2021 to

be 18.5 percent (\$141 million) above OMB's forecast. While our MRT forecasts for 2022, 2023, and 2024 are also above OMB's, the difference is much smaller: 8.0 percent (\$70 million) in 2022, 6.8 percent (\$61 million) in 2023, and 7.0 percent (\$64 million) in 2024. Though our MRT forecasts are higher than OMB's, they still represent a substantial decline from the more than \$1 billion in collections in each of the last five years.

Commercial Rent Tax. IBO's latest forecast of CRT revenue reflects the current turmoil in commercial real estate leasing. Compared with our February 2020 forecast, we have reduced our forecast for 2020, 2021, and 2022 by 0.8 percent, 6.2 percent, and 3.4 percent, respectively.

IBO now forecasts CRT revenue of \$875 million in 2020, 3.5 percent (\$32 million) less than 2019 collections, and \$856 million in 2021, 2.2 percent (\$19 million) below our 2020 forecast. These would be the first year-to-year declines in CRT revenue in more than 20 years. The decline in 2020 is due to legislative changes in the scope of the tax, as well as the Covid-19 crisis. The decline in 2021 reflects the further deterioration in economic conditions attributable to the pandemic.

OMB's CRT forecasts follow the same pattern of decline and recovery as IBO's, but our forecasts are slightly higher: a total of \$66 million (1.5 percent) over the entire 2020 through 2024 period.

Personal Income Tax. IBO forecasts personal income tax (PIT) revenue (net of refunds) will total \$13.2 billion in the current fiscal year, a 1.2 percent decline relative to last year. Given our expectation that major economic impacts from the Covid-19 pandemic will be felt next fiscal year, we project PIT revenue to decline by another 10.1 percent in 2021 as revenue falls to \$11.8 billion. With the pandemic's economic impacts forecast to diminish after 2021, we expect PIT receipts to grow strongly to \$13.1 billion in 2022, a gain of 11.0 percent. For the final two years of the forecast period, IBO projects average annual growth of 5.2 percent, as PIT reaches \$14.6 billion in 2024.

We have lowered our forecast of 2020 PIT revenue by \$587 million compared with our February estimate. This change is primarily rooted in a sharp decline in installment payments, which are made by self-employed taxpayers and those realizing capital gains. Both of these groups were immediately and markedly affected by the coronavirus outbreak in New York City. Based on our observation of total estimated payment collections in April (down by 98.2 percent compared with April of last year) and the sharp decline in

equity markets that occurred in March, we estimate that quarterly collections of installments for the April-June period will decline by about 42 percent. For the full fiscal year, we project total revenue from quarterly installment payments will decline by 9.4 percent; by way of comparison, in February IBO projected growth of 10.9 percent.

Withholdings, which account for about 75 percent of total PIT revenue, have not been affected by the pandemic as much as estimated payments have been: compared with the same months last year, March withholdings grew by 5.4 percent and April withholdings declined by only 3.2 percent. The April collection report does show that the number of withholding payments submitted by employers to the state dropped by 16.0 percent relative to April of last year. This decline is most likely related to businesses that had no activity in April due to the pandemic, and therefore withheld no tax from their employees. The fact that the decline in aggregate withholding (3.2 percent) was much smaller, however, implies that the closed businesses, as well as those that remained open but shed jobs, were mostly in lower-paying industries such as retail. Based on these observations, we expect withholding revenue in the final quarter of 2020 to decline by 5.0 percent relative to the comparable quarter in 2019. If so, withholding revenue would increase 4.0 percent in 2020—slower growth than the 6.1 percent IBO forecast before the coronavirus outbreak.

As a part of the response to the pandemic, the federal government extended the deadline for filing 2019 federal income tax returns from April 15 to July 15. New York State followed suit for state and city personal income taxes. These shifts will affect the timing of the PIT's different revenue components in various ways. Under the assumption that taxpayers who are owed refunds are not going to postpone filing their turns, IBO does not anticipate any significant delay on when refunds will be issued.

There will be a delay in when the city receives payments accompanying final returns, however. Some of the final returns revenue that would normally be received in April would now be received as late as July. Although the city's fiscal year ends on June 30th, final returns payments received in July and August accrue to the prior year for fiscal accounting purposes. Therefore, return payments made in accord with the new deadline would still count as 2020 revenue.

Since the new deadline gives taxpayers more time to file, we expect fewer requests for extensions, thereby reducing extension revenue in 2020. Conversely, some of the revenue

from quarterly installment payments, made by self-employed taxpayers and those realizing capital gains, will shift from 2020 to 2021. Most taxpayers making estimated payments make their first and second quarterly installment payments in April and June, but if some of those payments are made after June 30, they will be considered 2021 revenue. Unlike final return payments, estimated payments made in July and August are not accrued to the prior fiscal year.

Although there has been a very sharp decline in employment and wages since March, the effect on 2020 revenue is limited to the last quarter of the fiscal year. The impact of the pandemic on PIT collections will be greater and more sustained in 2021. IBO forecasts lingering declines or stagnation (depending on the industry) of both jobs and wages through much of the upcoming fiscal year. Given the impact of the pandemic, we have lowered our 2021 forecast by \$2.1 billion to \$11.8 billion, 10.1 percent below our forecast for 2020. An expected \$1.6 billion (10.2 percent) reduction in withholding revenue accounts for the lion's share of the 2021 PIT decline. IBO also projects a similar, 10.8 percent, decline in installment payments. Lower employment and personal income in 2021 will also result in less revenue from final returns, which we now expect to decline by 15.1 percent.

In addition to the expected declines in all components of gross PIT receipts, IBO forecasts a decrease in refunds paid in 2021, most of which will be issued in the first half of calendar year 2021 for over-payment of calendar year 2020 liability. With fewer people employed and withholding collections declining, we expect total over-payments to fall, with the city issuing \$121 million (9.2 percent) less in refunds in 2021 than in 2020. Overall, the sum of gross PIT receipts minus refunds result in a 10.2 percent decline in net PIT revenue in 2021.

Once the pandemic effects pass, IBO expects the economy to rebound in 2022, with a projected growth of 11.0 percent in PIT revenue. While this growth is relatively strong, PIT revenue in 2022 is expected to be \$1.2 billion below our February forecast. Steady growth in employment and wages, projected to start in the second quarter of calendar year 2021, will boost withholding revenue by approximately 12.0 percent.

IBO expects the long-term economic impacts of the pandemic will continue to affect PIT revenue through the remainder of the financial plan period. Following the rebound in 2022, we project PIT revenue to grow more slowly in 2023 and 2024, at an average annual rate of 5.2 percent,

generating \$13.9 billion and \$14.6 billion, respectively. These forecasts are below the levels IBO expected in February, by \$990 million in 2023 and \$825 million in 2024.

Our PIT revenue forecast exceeds that of OMB in all years but the current year. Our forecast for 2020 is \$75 million (0.6 percent) below OMB's. In contrast, our forecast is higher by \$170 million (1.5 percent) in 2021 and \$169 million (1.3 percent) in 2022. For the latter part of the financial plan period, our forecast exceeds OMB's by an average of \$209 million (1.5 percent) a year.

Business Income Taxes. The city's business income taxes, including the corporate taxes and the unincorporated business tax (UBT) are projected to take a sharp two-year hit in response to the economic downturn triggered by Covid-19. In total, IBO expects net revenue (gross receipts minus refunds) to contract by \$408 million (6.5 percent) in 2020 compared with 2019, and end the year at \$5.8 billion. In 2021 collections are expected to decline by an additional \$1.1 billion (18.6 percent), reaching a total of \$4.7 billion, which would be the lowest amount collected since 2010. The forecasts for both corporate taxes and the UBT in 2020 have been substantially reduced from IBO's previous estimates as April collections data became available, and are based on the assumption of particularly low collections in June, the final major collections month of the fiscal year. After this two-year decline, growth is projected to resume in 2022 with a \$795 million (16.8 percent) increase in net collections, followed by growth of \$117 million (2.1 percent) and \$243 million (4.3 percent) in 2023 and 2024, respectively. IBO expects collections in 2024 to total \$5.9 billion, which is 5.4 percent lower than the revenue collected in 2019.

Corporate Taxes. The city's corporate taxes include the business corporation tax on C-corporations, along with the general corporation tax and banking corporation tax on eligible S-Corporations. All corporate tax numbers in this report refer to the aggregate amount of revenue collected from all three taxes. Following a three-year slump, net collections grew by \$763 million (22.2 percent) in 2019 to reach a total of \$4.2 billion. IBO projects a \$63 million (1.5 percent) decline in revenue for this year, entirely attributed to weakened collections since the outset of the pandemic. The biggest impact comes in 2021, when we project revenue will decrease by an additional \$1.1 billion (25.4 percent), reaching a low of \$3.1 billion.

Following this contraction, IBO forecasts a notable recovery in 2022, with revenue increasing by \$619 million

(20.1 percent), bringing collections back up to \$3.7 billion. We project weaker growth of \$36 million (1.0 percent) in 2023, followed by somewhat stronger growth of \$131 million (3.5 percent) in 2024 when revenue is expected to total \$3.9 billion.

IBO's forecast is below OMB's throughout the entire forecast period. In 2020, when IBO predicts a small decline in corporate tax revenue, OMB projects modest revenue growth, leaving our forecast \$142 million (3.3 percent) lower. IBO and OMB each forecast revenue declines of over \$1.0 billion in 2021, but IBO's projected decline is slightly less than OMB's, so the difference between the two forecasts narrows. Revenue growth resumes in 2022 and 2023 in both of the forecasts. The difference between the forecasts narrows greatly in 2024 as OMB projects a 2.7 percent decline in corporate tax collections, while IBO expects continued growth.

Unincorporated Business Tax. The unincorporated business tax is imposed on businesses that are not organized as corporations, such as sole proprietorships, partnerships, and limited liability companies. In contrast to corporate tax collections, which see the biggest revenue decline in 2021, the projected impact on the UBT will be much more immediate. IBO forecasts a \$345 million (17.0 percent) decrease in UBT revenue this year, declining from \$2.0 billion to \$1.7 billion. We also project an additional decline of \$35 million (2.1 percent) in 2021. Growth resumes after that, with revenue projected to grow by \$176 million (10.7 percent) in 2022 and average annual growth of \$96 million (5.1 percent) in 2023 and 2024.

OMB projects a similar but slightly smaller decline in UBT revenue this year of \$310 million (15.3 percent). The two forecasts diverge further in 2021. OMB projects a modest return to growth of 3.7 percent in 2021 while IBO projects a second year of decline, leading to a difference of \$133 million (7.5 percent) between the two forecasts. IBO projects a more robust return growth in 2022, which brings the two forecasts more into alignment for the remainder of the forecast period. However, IBO's projected revenue remains below OMB's throughout.

Sales Tax. The public health shutdown of many businesses since mid-March has shrunk the sales tax and severely reduced sales tax receipts. For 2020, IBO forecasts \$6.8 billion in sales tax collections, \$1.0 billion (13.1 percent) less than in 2019. Although IBO assumes that Covid-19 will continue to depress local economic activity well into the next fiscal year, we expect a gradual economic recovery to

get underway early in the 2021 calendar year. With these cross-cutting winds, IBO projects a smaller \$113 million (1.7 percent) sales tax decline in 2021 than in 2020, as revenue falls to \$6.7 billion. IBO forecasts strong sales tax growth beginning in fiscal year 2022, averaging 7.6 percent annually through 2024, to reach \$8.3 billion in revenue.

The sales tax is normally one of the least volatile of the city's taxes from year to year other than years with a change in the tax rate. This year has been different. The Covid-19 pandemic and the measures taken to limit the spread of infections very quickly reduced business activity and sales in the city, leading 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 have been particularly hard hit by the public health orders to close or restrict operations: retail establishments other than grocery stores and pharmacies; and leisure and hospitality venues, which include hotels, restaurants, bars, theaters, sporting events, and cultural institutions. These sectors account for about half of the sales tax base. Businesses still in operation in many other industries, such as transportation, are also experiencing sharp declines in sales.

IBO's forecast of 2020 sales tax revenue, \$6.8 billion, is based on collections to date in the current fiscal year and projections of Covid-19's impacts on the operations and sales of different industries in the coming months. Through February 2020, collections were 6.9 percent greater than receipts in the comparable period a year before. But with the 12.2 percent fall-off of revenue in March compared with a year ago, plus our expectation of diminished revenue from most sectors for the remainder of the year, we are now forecasting a 13.1 percent (\$1.0 billion) drop in 2020 sales tax revenue compared with revenue in 2019. This year's decline in sales tax revenue is expected to dwarf other declines over the past 30 years.

IBO forecasts another decline in sales tax revenue in 2021, with collections totaling \$6.7 billion for the year, a relatively modest decrease of 1.7 percent. We expect that the sectors of the economy that are currently closed will reopen sometime in calendar year 2020. Recovery will be slow, however. Widespread unemployment and loss of income will limit consumer spending on a variety of goods and services. Many businesses will be unable to survive

the pandemic, and it will take time for new businesses to start up and begin operations. IBO does expect an upward trend in sales tax revenue during 2021, but collections for the year will still fall short of 2020 receipts, which include revenue from pre-pandemic months when collections were growing briskly.

Moreover, until there is a vaccine or some other resolution to Covid-19's public health threat, many potential customers will be reluctant to return to stores or attend events in public spaces. Restrictions on seating capacity in restaurants and theaters, and on attendance at cultural institutions and sporting events will prevent a return to pre-virus levels of business. Additionally, with densely populated New York having emerged as the nation's epicenter of the coronavirus, the number of tourists willing to visit the city is likely to recover only gradually. Business travel to the city is also projected to suffer as firms have gained experience using videoconferencing and other means of remote communication, which can be economical substitutes for in-person meetings and conferences.

IBO expects that by the end of calendar year 2021 there will be a resolution to the pandemic and a resumption of solid economic growth in both the nation and the city. We forecast three years of strong growth in sales tax, with collections reaching \$7.3 billion in 2022, \$8.0 billion in 2023, and \$8.3 billion in 2024—an average increase of 7.6 percent. Still, this growth does not make up for all the revenue the city expects to lose this year and next; our current forecast of total sales tax revenue over the five-year financial plan period is \$7.9 billion less than we projected in February.

Although OMB also expects a large decline in sales tax revenue in 2020 and only a small increase in 2021, IBO's sales tax forecast for the two years is far lower than OMB's, by \$426 million (5.9 percent) this year and \$591 million (8.1 percent) next year. Because OMB projects much stronger U.S. economic growth in calendar year 2021 than IBO, the difference between the two forecast grows to \$927 million (11.3 percent) for 2022. IBO's sales tax forecast remains below OMB's in 2023 and 2024, but the two forecasts begin to converge.

Hotel Occupancy Tax. The Covid-19 pandemic has devastated tourism and business travel in New York City. IBO forecasts \$479 million in hotel tax revenue this year, 23.5 percent (\$147 million) less than collections in 2019. Moreover, we expect lackluster U.S. economic growth and the continued threat of infection will lead to a second year of revenue decline in 2021. Even after the health

issues are resolved and U.S. economic growth rebounds, IBO expects the pandemic to have long-term negative effects on both leisure and business travel. Although IBO anticipates the return of strong growth in revenue from 2022 through 2024, our 2024 hotel tax forecast of \$577 million is less than collections in each of the three years preceding the outbreak.

One of the biggest economic impacts of the Covid-19 pandemic has been the abrupt cessation of travel. In response to the decline in demand for accommodations, both room rates and occupancy rates have plummeted. The average rate for a New York City hotel room in March of this year was nearly 70 percent lower than the average room rate in March 2019. Similarly, the occupancy rate of city hotel rooms dropped to 15.2 percent by the end of March, far lower than typical March occupancy rates of 80 percent to 90 percent. Occupancy rates have risen since March, but not all of the additional hotel stays increase tax revenue. Many hotels have donated rooms to provide temporary housing for health care workers and emergency responders, and the city has rented rooms to provide shelter for single adults that had been staying in homeless shelters.

IBO's forecast of \$479 million in hotel tax revenue this year reflects fiscal year-to-date collections and the expectation that the number of visitors to the city will not appreciably pick up by the end of June. This forecast is 23.5 percent (\$147 million) less than collections in 2019, the largest decline in percentage terms among the city's major tax sources. Through February, hotel tax receipts this year differed little from collections during the comparable period in 2019. Hotels usually make quarterly payments—typically in March, June, September, and December—for the hotel occupancy taxes they collect from visitors during the three previous months. Curiously, March 2020 receipts were about one-quarter below revenue in March 2019, even though hotel occupancy in December through February was barely affected by the pandemic. The effects of the pandemic may have altered taxpayers' normal payment behavior, with some hotels perhaps presumably missing their scheduled March payments.

With Covid-19 expected to remain a threat to health and U.S. economic growth forecast to be slow, IBO projects only a gradual increase in visitors to the city in calendar year 2021. Demand for hotel rooms is expected to remain weak and room rates depressed, even as some hotels go out of business, reducing the supply of rooms and putting upward pressure on prices. Our forecast of hotel tax revenue in 2021 is \$448 million, \$31 million (6.4 percent) less than

our estimate for the current year. Although IBO does expect an upward trend in quarterly hotel tax revenue during 2021, collections for the year will still fall short of receipts in 2020, which included considerable revenue received before the onset of the pandemic.

The biggest constraint on hotel tax revenue in 2021 is the pandemic's likely long-term effects on travel to New York City. With the city having emerged as the epicenter of Covid-19 infections and illness, in the coming years fewer tourists will favor the city as a vacation destination, even after there is a resolution to the pandemic. Moreover, we do not expect business travel to return to pre-pandemic levels; businesses have gained experience using telecommunications technology, improving their ability to operate remotely and reducing spending on travel.

IBO expects the resolution of the pandemic in calendar year 2021, coupled with a rebound in U.S. economic growth in calendar year 2022, to spur tourists to return and demand for hotel accommodations to rise. But we do not expect tourism or hotel tax collections to return to pre-Covid levels during the financial plan period. IBO forecasts a 13.9 percent increase in hotel tax collections for 2022, yielding \$510 million in revenue. In the last two years of the forecast period, we project hotel tax revenue will increase at an average annual rate of 6.3 percent, to \$547 million in 2023 and \$577 million in 2024. Despite the rapid growth in hotel tax collections after 2021, the total amount of revenue IBO forecasts for 2020 through 2024 is \$773 million less than we projected in February.

IBO's hotel tax forecast is lower than OMB's projections in all years of the forecast period. Our 2020 forecast is \$10 million (2.1 percent) lower than OMB's. With the de Blasio Administration expecting robust U.S. economic growth to return in the upcoming calendar year, one year earlier than forecast by IBO, OMB projects a 5.9 percent increase in hotel tax revenue in 2021 in contrast to IBO's forecast of a second year of revenue declines. As a result, the difference between the two forecasts grows to \$70 million (13.5 percent) in 2021. From 2022 through 2024, IBO's forecast is less than OMB's by an average of \$106 million (16.3 percent) each year.

Spending

IBO expects the city's all-funds 2021 expense budget will total \$90.3 billion, 7.4 percent lower than our estimate for the city's current year all-funds expenditures. Meanwhile, we expect city-funded expenditures to decrease by 4.9 percent between 2020 and 2021. After adjusting for

current-year expenses paid for with prior year resources, non-recurring expenses, and for expenses such as reserve funds that are not allocated to specific agencies or program areas, IBO estimates that city-funded spending in 2021 will be \$69.6 billion, \$226 million (0.3 percent) greater than in the adjusted current-year budget. Between 2019 and 2024, adjusted city-funds spending is expected to grow by \$8.0 billion, approximately 2.2 percent annually. IBO projects that the total budget (including all funding sources), when similarly adjusted, will be \$94.4 billion in 2021—\$3.7 billion less than the \$98.0 billion we estimate adjusted spending will total in the current year. Following the decline in 2021, we project that total adjusted spending will increase by 2.8 percent annually, on average, in 2021 through 2024, rising to \$102.5 billion in the final year.

Covid-19 Spending. The \$3.7 billion decline in the city's total budgeted spending from 2020 to 2021 is primarily due to the increase in planned expenditures in the current year for Covid-19 related expenses. IBO estimates that federally funded expenditures will exceed \$10.9 billion in 2020, over \$3.2 billion more than in 2019 and \$3.3 billion greater than the amount budgeted for 2021.

Beginning on March 10, 2020, city agencies began explicitly identifying budgeted expenditures attributable to the Covid-19 pandemic. These expenses are being coded and tracked to segregate them from other expenses so that they can be submitted to the Federal Emergency Management Agency (FEMA) for eventual reimbursement. The Executive Budget includes \$2.7 billion in current year planned spending for Covid-19 related expenditures, including \$1.4 billion for medical, surgical, and lab equipment and supplies; \$250 million for overtime costs; and nearly \$250 million for payments to the city's public hospital system. The city expects virtually all of these expenses, \$2.6 billion, to be funded by federal dollars through FEMA reimbursements.

As of mid-May 2020, the city had spent roughly \$1.5 billion on Covid-19 related items, over half of which was for health care, hospital and lab services, and equipment. City agencies have spent approximately \$110 million on cleaning and disinfecting supplies and services and slightly over \$50 million on information technology equipment and services.³ Nearly 55 percent of citywide Covid-19 spending has been by the Department of Citywide Administrative Services with another 18 percent by the Office of Emergency Management. Thirty-seven different city agencies have purchased goods and services classified as related to Covid-19.

IBO Expenditure Projections

Dollars in millions

	Actuals 2019	Plan					Average Change 2019-2024
		2020	2021	2022	2023	2024	
Agency Expenditures	\$66,769	\$71,477	\$66,328	\$67,912	\$68,629	\$68,550	0.5%
Fringe Benefits	10,212	10,267	9,992	12,269	12,859	13,489	5.7%
Labor Reserve	-	864	1,936	1,303	1,745	2,196	n/a
Total Agency Expenditures	\$76,981	\$82,608	\$78,256	\$81,484	\$83,233	\$84,235	1.8%
Other Expenditures							
Debt Service	\$6,373	\$6,973	\$3,151	\$8,027	\$8,732	\$9,166	7.5%
Pensions	9,941	9,819	9,927	10,502	10,434	10,106	0.3%
Judgments and Claims	706	733	727	742	758	775	1.9%
Subtotal Recurring Expenses	\$94,001	\$100,133	\$92,061	\$100,754	\$103,157	\$104,282	2.1%
General Reserve	-	\$20	\$100	\$1,000	\$1,000	\$1,000	n/a
Capital Stabilization Reserve	-	-	-	250	250	250	n/a
Other Adjustments	-	(400)	-	117	261	395	n/a
Subtotal Nonrecurring Expenses	-	(\$380)	\$100	\$1,367	\$1,511	\$1,645	n/a
Less: Intra-City Expenditures	(\$2,222)	(\$2,178)	(\$1,848)	(\$1,834)	(\$1,831)	(\$1,831)	n/a
TOTAL EXPENDITURES	\$91,779	\$97,575	\$90,313	\$100,287	\$102,837	\$104,096	2.6%

NOTES: Other nonrecurring 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, debt service would total \$6.84 billion in fiscal year 2020 and \$7.31 billion in fiscal year 2021. Figures may not add due to rounding.

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Sources of Spending Growth. Much of the growth in total spending over the next four years will result from increases in two areas: fringe benefits for city employees and debt service. Debt service and most fringe benefits are not carried within the budgets of city agencies. IBO estimates that from 2020 through 2024 city spending on debt service and fringe benefits will grow by an average of 7.1 percent annually. By way of comparison, after adjusting for nonrecurring expenses and prepayments, citywide agency spending is expected to grow at a much slower rate, averaging 0.5 percent annually from 2020 through 2024.

Fringe Benefits. IBO projects that citywide fringe benefit costs will total \$10.3 billion in 2020, 10.5 percent of total adjusted spending. Fringe benefit costs increase in each year of the plan period, reaching \$13.5 billion, or 13.2 percent of city expenditures, by 2024, an annual average growth rate of 7.1 percent. The single largest factor driving growth in fringe costs is health insurance. After adjusting for the use of funds in the Retiree Health Benefits Trust (RHBT) to pay for a portion of this year's and next year's health insurance costs, IBO estimates that these costs will increase by an average of 6.0 percent per year from 2020 through 2024.

Debt Service. After adjusting for the prepayment of current-year debt service costs with prior-year resources, IBO

estimates that the city's debt service expenditures will total \$7.0 billion in 2020 (7.2 percent of total city spending). We project that city debt service will reach \$7.3 billion in 2021, a 3.8 percent increase. By the end of the financial plan period, debt service costs will total \$9.2 billion (8.9 percent of total adjusted city expenditures), an increase averaging 7.5 percent a year from 2019 through 2024. In contrast, from 2014 through 2019, actual debt service costs increased an average of 3.2 percent annually.

The projected increase in debt service costs is almost entirely a product of OMB's estimate of new long-term bond issuance. Debt service on new long-term bonds issued during the plan period is expected to add a total of approximately \$2.0 billion to debt service costs by 2024, less any savings accrued from the retirement of older debt and refundings that may occur. OMB's debt service forecast assumes the issuance of \$7.6 billion of new debt in 2021, increasing to \$11.5 billion of new debt in 2024, for a total of \$39.1 billion of new long-term debt issued over the financial plan period.

Salaries. In 2019 the city spent roughly \$29.1 billion on employee wages and salaries. The 2019 expenditure was over 6 percent greater than in the preceding year, primarily because a number of wage agreements with municipal labor unions were finalized. Currently, approximately 80

percent of all city employees are working under labor agreements for the 2017-2021 round of bargaining. The Mayor's financial plan includes funding for the estimated cost of settlements of contracts that remain outstanding for the current round. These expenses are not specifically allocated to agency budgets, but rather are included in a centrally managed labor reserve fund. The Executive Budget includes \$863 million for the current year and \$1.9 billion for 2021 in the labor reserve. Nearly all of the labor reserve funding in 2021 (96 percent), is allocated for the costs associated with existing lump sum labor payments or settling the remaining labor contracts at the pattern set by the other contract agreements.

Pension Spending. There has been much critical discussion about the cost and viability of municipal pension funds. Over the past 10 years, New York City's contribution to its five pension systems has risen by over 55 percent, or an average of 4.5 percent annually, from \$6.4 billion in 2009 to \$9.9 billion in 2019. But the addition of a new pension tier and some actuarial changes has significantly slowed recent increases in city contributions. The current financial plan budgets \$9.8 billion for city pension costs in 2020. IBO estimates that increases in pension expenses across the plan period will average less than 1 percent a year, with expenditures rising to \$10.1 billion in 2024. Despite this relatively small percentage increase, in dollar terms the rising cost of the city's pension contributions remains one of the major drivers of increased city spending through 2024.

Spending Re-estimates. IBO projects that the Mayor's financial plan understates city-funded expenditures by \$57 million in 2020, \$358 million in 2021 and \$237 million in 2022. Our estimates of city-funded expenditures in 2023 are very similar to those presented by the Mayor, while for 2024 we expect that city-funded expenditures will be \$171 million less than planned. The agencies with the largest differences between IBO's estimates and the expenditure projections in the current financial plan include the Department of Homeless Services (DHS), Human Resources Administration, and the Department of Education.

While IBO's estimates of expenditures funded with other than city dollars do not directly affect the city's budget gaps, shortfalls in state and federal revenues, and other categorical aid can result in service reductions or a need for additional city spending.⁴ With 2020 nearly over, IBO projects that the financial plan underestimates state and federal funding by just \$79 million for the year. For 2021 through 2024, our estimate of the extent to which

the financial plan underestimates state and federal aid ranges from \$597 million in 2024 to \$628 million in 2022. OMB typically underestimates federal and state funding, particularly in the police and fire departments. IBO's estimates of state and federal funding within these agencies' budgets is based on our analysis of actual levels of federal and state allocations in recent years.

Areas where IBO projects less-than-budgeted spending:

Debt Service. After adjusting for prepayments, the Mayor's budget reduces planned debt service expenditures for this year by \$47 million, over \$5 million of which results from reducing the city's outstanding variable rate debt. Unlike in previous years though, the city has not reduced the assumed rate of interest on the city's variable rate bonds, leaving it at 2.8 percent for 2020, which is still above most interest rate projections for the year. Moreover, OMB's assumption for variable rate bond interest in 2021 remains at 4.25 percent. Using historical data and forecasts from financial institutions to project interest rates on variable rate bonds, IBO estimates that the city's debt service costs will be \$99 million less than forecast by OMB this year and \$84 million less in 2021. While most forecasters assume that the federal funds rate will dip to nearly zero in the coming year as the Federal Reserve continues its attempts to spur economic activity, municipal bond interest rates have remained higher than would be assumed in the current interest rate environment due to concerns about the financial strength of municipal bond issuers.

Health Care Costs. The Mayor's financial plan includes \$7.0 billion for the city's provision of health care for current and retired city employees in 2020, rising to \$9.5 billion in 2024. Based on historical increases in health care costs and federal forecasts, IBO's estimates of health care spending over the financial plan period are slightly lower than projected by OMB. While our estimate of the city's cost of providing health benefits in 2020 is very slightly higher than projected by the city, we expect the costs to be lower than assumed in the financial plan by \$23 million in 2021, \$234 million in 2022, \$451 million in 2023, and \$630 million in 2024.

Areas where IBO projects greater-than-budgeted spending:

Homeless Services. As in our analysis of prior plans, IBO's estimate of the cost of providing services for the homeless is the most notable difference between our forecast of expenditures and the Mayor's. IBO projects that the Department of Homeless Services will require an additional

Pricing Differences Between IBO and the de Blasio Administration

Items that Affect the Gap

Dollars in millions

	2020	2021	2022	2023	2024
Gaps as Estimated by the Mayor	-	-	(\$5,024)	(\$4,530)	(\$4,901)
Revenue					
Taxes					
Property	\$50	\$111	\$225	\$513	\$1,104
Personal Income	(74)	170	169	133	285
General Sales	(426)	(591)	(927)	(745)	(637)
Corporation	(142)	(75)	(144)	(328)	(87)
Unincorporated Business	(35)	(133)	(53)	(108)	(87)
Real Property Transfer	84	(68)	14	108	167
Mortgage Recording	56	141	70	61	64
Utility	-	-	-	-	-
Hotel Occupancy	(10)	(70)	(115)	(111)	(93)
Commercial Rent	11	18	8	24	5
Cigarette	-	-	-	-	-
Other Taxes and Audits	-	-	-	-	-
Total Taxes	(\$487)	(\$496)	(\$754)	(\$451)	\$720
STaR Reimbursement	-	-	-	-	-
Misc. Revenue	-	24	24	24	24
TOTAL REVENUE	(\$487)	(\$472)	(\$730)	(\$427)	\$744
Expenditures					
Debt Service	\$99	\$84	\$-	\$-	\$-
Fringe Benefits:					
Health Insurance-Education	(4)	11	89	173	244
Health Insurance-City University	-	-	4	7	10
Health Insurance-All Other Agencies	(6)	12	141	271	377
Public Assistance	-	(49)	(61)	(61)	(61)
Education	(10)	(50)	(23)	(46)	(46)
Fire	(25)	(50)	(50)	(50)	(50)
Police	(50)	(50)	(50)	(50)	(50)
Homeless Services	(60)	(187)	(188)	(188)	(188)
Small Business Services	-	(45)	(45)	(4)	(4)
Sanitation	-	-	(1)	(25)	(25)
Campaign Finance Board	-	-	(20)	(3)	(2)
Board of Elections	-	(25)	(25)	(25)	(25)
Parks and Recreation	-	(9)	(9)	(9)	(9)
TOTAL EXPENDITURES	(\$57)	(\$358)	(\$237)	(\$9)	\$171
TOTAL IBO PRICING DIFFERENCES	(\$544)	(\$830)	(\$967)	(\$436)	\$915
IBO SURPLUS/(GAP) PROJECTIONS	(\$544)	(\$830)	(\$5,991)	(\$4,966)	(\$3,986)

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

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\$60 million in city funds for the current year, rising to \$187 million in 2021 and \$188 million in each of the subsequent years in the financial plan period. IBO's forecast of greater-than-expected DHS expenditures is largely the product of

two factors. The first, and largest, factor in our estimate of an increased need for shelter funding is our assumption that the population of homeless single adults will continue to increase. The economic ramifications resulting from the

Covid-19 pandemic are expected to intensify this upward trend in single adult homelessness. Despite these trends, the financial plan for the current year is \$70 million lower than the amount spent last year on the provision of shelter for this population and even lower in the remaining years of the financial plan. IBO estimates that the increases in the single adult shelter population will cost the city an additional \$65 million in the current year and \$154 million in each subsequent year of the financial plan. The second factor in our estimate of an increased need for shelter funding is our assumption that the city is underfunding the provision of shelter for adult families. While the adult family shelter population has remained steady in recent months, the amount budgeted for the provision of shelter for this population is less than it was last year. As a result, we estimate an additional need of \$12 million of city funds in 2020 and \$37 million in each of the remaining years of the financial plan period. (Some other small adjustments reduce our estimate of the additional cost in each of the out-years to \$188 million.)

IBO's cost estimates use historical costs of providing shelter as a basis for projecting future costs. These estimates do not take into account any potential changes in city policy for sheltering the homeless. A recently introduced City Council bill would require DHS to provide all single adults with private hotel rooms during the Covid-19 pandemic. The de Blasio Administration estimates that this requirement could cost the city an additional \$82 million a month.

Public Assistance Spending. IBO expects that city-funded spending on cash assistance for the poor will be greater than projected in the current financial plan. The city's cost estimates for public assistance are based on caseload projections that are nearly a year old. Although caseloads have recently been declining, IBO expects the economic downturn caused by the Covid-19 pandemic to sharply increase the number of households on public assistance. For the current year, IBO assumes the city has enough cushion in its cost estimate to deal with the growing number of people in need of cash assistance without adding funding to the budget, but for the remainder of the financial plan period we anticipate more rapid growth in the public assistance caseload than accounted for in the current plan. IBO expects that the cost to the city of public assistance will be greater than OMB estimates by approximately \$49 million in 2021 and \$61 million in each year from 2022 through 2024. In addition, as a result of IBO's caseload estimate we project that state and federal funds for public assistance will be \$29 million greater than forecast by OMB in the current year and \$27 million greater

in each year of the remaining years of the financial plan.

Uniformed Overtime. We expect overtime costs for the police and fire departments will be higher than estimated in the Mayor's plan. Based on recent overtime usage in both departments, IBO anticipates that overtime costs for the police department will exceed the amount budgeted by \$50 million in each year of the financial plan. While the upward trend in overtime spending in the current year has moderated somewhat due to the cancellation of a number of special events that typically require large amounts of uniformed overtime, IBO still assumes, based on recent historical trends in overtime spending, that the current amount budgeted for overtime costs in the police department are understated. Similarly, we estimate that the city will spend an additional \$25 million in 2020 and \$50 million in each year from 2021 through 2024 on fire department overtime costs.

Department of Education. IBO estimates that the city will have to provide an additional \$10 million to the education department in 2020, \$50 million in 2021, \$23 million in 2022, and \$46 million in both 2023 and 2024 for costs related to the city's funding of charter schools and disallowances of expenses assumed to be funded by federal Medicaid reimbursements.

Estimates of charter school enrollment are the primary factor in IBO's higher charter school funding forecast. We project charter school enrollment to increase at a pace slightly greater than that estimated by OMB. While little enrollment growth is projected for the 2020-2021 school year, IBO expects increases to gradually accelerate in the following years. By 2024, we estimate that charter school enrollment will have grown by nearly 9 percent over current levels.

The education department expects to submit reimbursement claims for Medicaid transportation-related expenses, despite the fact that these expenses have not yet been approved by the state Department of Health as Medicaid-eligible. Based on our assumption that these expenses will not be reimbursed, IBO estimates that the city will have to provide an additional \$20 million each year to fund these expenses.

Small Business Services. The budget for the Department of Small Business Services (SBS) has routinely been underfunded in the out-years of the financial plan. IBO estimates that SBS's city-funds budget will be \$45 million more than budgeted in 2021 and 2022, and \$4 million more in 2023 and 2024. Our assumption of higher costs is primarily the result of the budget not accounting for funding

of the NYC Bus Program beyond the current year of the plan. The program, established in 2014, provides funds to reverse sharp cuts in wages for certain school bus drivers, attendants, dispatchers, and mechanics. Initially the grant was just for one year and capped at \$42 million, but funding has been allocated every year since its implementation. The April plan includes \$39 million in funding for the program in 2020 but none in the remaining years of the plan period. Given the de Blasio Administration's support for this program and our expectation that schools will be open this fall, IBO assumes it will continue through 2022 at a cost of \$41 million a year. We have not estimated this expenditure past 2022, as we do not know whether the new Mayor and City Council that take office in January 2022 will continue to support this expenditure.

Campaign Finance Board and Board of Elections. IBO projects that the Campaign Finance Board (CFB) will spend \$20 million more than budgeted for 2022 and an additional \$3 million and \$2 million in 2023 and 2024, respectively, to provide matching funds for candidates running for city offices. CFB's current plan includes minimal funding for the provision of matching funds to candidates for city office, despite the fact that the next citywide election cycle will include elections for a new Mayor, Comptroller, and approximately two-thirds of the City Council. Moreover, term limits will also mean open races for four of the city's five Borough Presidents. IBO expects that CFB spending for 2022 will generally be in line with expenditures in 2014, the last citywide election cycle without an incumbent Mayor running for re-election. Our estimate also takes into account recent legislation that raised public matching of campaign funds from 6:1 to 8:1.

Based on recent levels of spending and the citywide and national elections that will occur over the next year and a half, IBO estimates that the budget for the Board of Elections (BOE) will require an additional \$25 million in each year from 2021 through 2024.

Other Agencies. IBO projects that the Department of Sanitation will spend slightly more than planned in 2022 and considerably more than planned in the final two years of the financial plan period. This is mostly due to costs related to the closure of the Fresh Kills Landfill, which are typically under-budgeted in the out years of the plan. Based on historical spending patterns, we estimate that the sanitation department will spend \$1 million more than budgeted in 2022 and \$25 million more in both 2023 and 2024.

Certain areas within the Department of Parks and

Recreation's budget are typically underfunded or—in certain cases—not funded at all in the financial plan. Based on past expenditures, IBO estimates that the parks department will spend \$9 million more than budgeted in each year from 2021 through 2024. We re-estimate the planned expenditures primarily within such areas as auto maintenance, funding for the Wildlife Conservation Society, and human resources.

Citywide Savings Program. In its April financial plan, the de Blasio Administration has identified \$2.7 billion of savings or additional revenue for 2020 and 2021 through its Citywide Savings Program (CSP), more than double the combined amount identified in last fall's quarterly budget update and in the Preliminary Budget in January. Although the stated goal of the CSP process has been to reduce expenditures through more efficient uses of resources, IBO estimates only 11.3 percent (\$301 million) of the resources identified in the most recent CSP for 2020 and 2021 are the result of efficiency enhancements.

The majority of the efficiency enhancements in the CSP are the result of the city's hiring freeze and vacancy reduction program. The program will reduce the city's full-time-equivalent headcount by 1,130 and produce savings of \$28 million in the current year; for 2021 the program will reduce headcount by 3,667 (1.1 percent) from the previous financial plan, for a savings of \$127 million. This savings includes \$50 million from headcount reductions in the Department of Education achieved through a hiring freeze on titles which principals could only fill by selecting current education department employees who are in the Absent Teacher Reserve pool—excess tenured teachers currently not assigned to a school due to school reorganization or to disciplinary action. This action is expected to result in a headcount reduction of approximately 360 for the education department. A separate hiring freeze will prevent filling another 400 central and regional administrative positions, saving nearly \$47 million.

Unlike previous Citywide Savings Programs, the current savings plan includes a number of service reductions and eliminations. IBO estimates that nearly \$509 million (19 percent) of savings in 2020 and 2021 are the result of reductions or eliminations of agency services. Over \$215 million in savings for 2021 is the result of reductions in a variety of programs offered by the Department of Education, including Expanded Arts Instruction, Algebra for All, and Single Shepherd. The Department of Sanitation's savings plan includes over \$37 million of service reduction savings in 2020 and 2021, including the suspension of the

organics and e-waste collection programs.

IBO estimates that the single largest portion of the savings plan results from re-estimates of program costs, which yield over \$860 million in savings in 2020 and 2021 (32.3 percent of total savings over the two years). These savings are the result of more accurate estimates of program costs, rather than from agencies becoming more efficient or effective at providing services.

Approximately \$200 million of the total CSP for 2020 and 2021 is the result of new or enhanced revenue streams, primarily a \$128 million rental payment from the New York City Water Board to the city in 2020. The CSP also includes an additional \$210 million from funding swaps, which use noncity funds to pay for programs originally funded with city-generated revenue. These funding swaps are mostly attributable to prior year revenues accrued by the Department of Social Services, the Department of Health and Mental Hygiene, and the Administration for Children’s Services.

Over 18.1 percent (\$483 million) of the resources identified in the Executive Budget CSP for 2020 and 2021 are savings that will be realized as a direct result of the Covid-19 pandemic and the challenges of offering existing programs while also complying with social distancing rules. Most, if not all, of these savings would not have occurred in a typical year.⁵ Examples include: a \$100 million decrease in the Department of Education’s budget for the current fiscal year resulting from closing school buildings; a \$23.6 million reduction of the parks department’s budget in 2020 and 2021 as a result of the closure of the city’s pools and the suspension of many seasonal activities in the spring and summer; and \$183 million of savings from the one-year suspension of the city’s Summer Youth Employment

Program and other programs provided by the Department of Youth and Community Development.

Impact of Federal Coronavirus Aid. IBO estimates that roughly \$5 billion in aid from the federal government’s four coronavirus relief packages will flow to the city budget, largely in this fiscal year and next; that figure excludes city emergency expenditures expected to be fully reimbursed by the Federal Emergency Management Agency. Public agencies that are outside the city budget, yet provide essential city services, are also expected to receive federal aid, including \$3.8 billion for the Metropolitan Transit Agency (MTA), at least \$668 million for NYC Health + Hospitals, and \$199 million for the city’s public housing authority. These [projections](#) represent IBO’s best estimates based on the data available as of May 8th, as the details of many of the local funding formulas have not yet been published.

The majority of the aid that IBO projects the city will receive must be used to cover direct costs incurred by the city due to the Covid-19 pandemic or to fund programs that provide aid to city residents affected by the resulting downturn, for example increased funding for existing food and rental assistance programs. More than \$700 million in federal education aid that is included in this total is being used to replace state school aid cut by the Governor in the state’s recently enacted budget.

Pressure Points. While every financial plan has a number of uncertainties that could negatively affect the plan’s fiscal balance, it is possible that no city financial plan has ever been surrounded by as much uncertainty as the current plan. Underpinning all financial plans are models and assumptions that the economy and tax revenues will behave in a somewhat predictable manner. These assumptions

Citywide Savings Program, April 2020					
<i>Dollars in thousands</i>					
	2020	2021	2022	2023	2024
Accruals	(\$127,605)	(\$62,320)	(\$1,478)	\$0	\$0
Additional Revenue	(189,708)	(9,846)	(1,407)	(1,200)	(1,024)
Debt Service	(47,181)	(104,613)	(126,127)	(168,551)	(194,799)
Efficiency	(31,912)	(268,634)	(318,402)	(318,769)	(319,149)
Funding Swap	(157,034)	(52,557)	(45,178)	(42,855)	(42,855)
Re-estimates	(442,947)	(417,227)	(176,597)	(162,237)	(164,809)
Service Reduction	(14,411)	(494,287)	(94,864)	(95,252)	(96,119)
Underspending	(136,550)	(79,049)	(49,239)	(51,118)	(53,287)
Vacancies	(15,291)	(11,000)	0	0	0
TOTAL	(\$1,162,639)	(\$1,499,533)	(\$813,292)	(\$839,982)	(\$872,042)

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

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are grounded in experience and historical precedence, but they can be swept away when the magnitude of the shocks exceed the scale experienced in that accumulated history. The Covid-19 pandemic and the extraordinary response necessary to combat the virus' spread have created economic dislocations not seen since the Great Depression. With such great uncertainty about the likely course of the pandemic and its impact on the economy, there is a much higher probability that the financial plan's forecasts will prove either too optimistic or too pessimistic.

In addition to the risks posed by the uncertainty of the outlook for the Covid-19 pandemic are more explicit risks that have the potential to negatively affect the precarious balance of the financial plan and create even larger budget gaps than IBO has estimated. Primary among these uncertainties is the indefinite status of the state budget and the potential for large reductions in state aid for municipalities. Additional fiscal uncertainty arises from the status of the city's municipal labor contracts, many of which will begin to expire in 2021 and 2022. The persistent financial instability of the Metropolitan Transportation Authority and NYC Health + Hospitals (H+H) as well as the large-scale capital needs required by the New York City Housing Authority (NYCHA) continue to pose risks to the city's finances as each continues to require a sizeable city financial contribution.

State Budget. Prior to the onslaught of the Covid-19 pandemic, New York State was already facing a \$6 billion budget shortfall for its upcoming fiscal year. The state contended that nearly half of the gap was the result of rising costs in the state's Medicaid program. The Governor made a number of proposals to rein in the cost of the program, including capping the amount of funding provided to localities for annual cost increases. In addition, the Governor convened a task force that recommended \$2.5 billion in additional Medicaid savings. These changes would likely have reduced the state's contribution to the city's Medicaid expenditures, adding hundreds of millions of dollars of new expenses to the city's ledger.

But the shutdown of the state's economy in response to the pandemic has created potential gaps for the state budget that are double or even triple the estimates from just a few months ago. The recently adopted state budget includes a provision giving the Governor broad authority to make sweeping spending cuts at three points in this fiscal year (April 30, June 30, and December 31) if revenue collections are below projections or spending exceeds projected levels. The city's current financial plan includes \$15.4

billion in revenue from the state, including \$11.4 billion for the city's Department of Education, comprising nearly 41 percent of all education funding. The state's budget office has reported that at the first test date (April 30) there was already a shortfall large enough to trigger the budget cutting authority, although the authority has not yet been invoked. The Governor has indicated that balancing the state's budget would likely require deep cuts in education aid to municipalities, cuts as large as 20 percent. Such an action would reduce the city's education state aid by over \$2.3 billion, requiring huge reductions in expenditures or a reprioritizing of the city's own budget resources if current levels of education services are to be preserved. Without further direct assistance from the federal government, it is unlikely that the state can avoid making the threatened cuts to school aid and assistance to localities.

Labor Costs. Currently, approximately 80 percent of all city employees are working under the terms of labor agreements for the 2017-2021 round of bargaining, with the rest still being negotiated or in a formal arbitration process. The Mayor's financial plan includes funding for the estimated cost of settling the remaining outstanding labor contracts following the already-established civilian and uniformed patterns for the current round of collective bargaining. Funding for those remaining contracts is included in a centrally managed labor reserve fund; it is not allocated to the budgets of the affected agencies until contracts are signed. The April plan includes approximately \$864 million in the current year and \$1.9 billion in 2021 in the labor reserve, of which over 96 percent is expected to be used to pay for the cost of unsettled contracts in the current round of bargaining at the existing wage pattern plus lump sum payments owed under past contracts that remain to be paid out.

The current financial plan also includes funding sufficient to cover the cost of 1.0 percent annual salary increases in each year of the next contract cycle, which would begin in 2022. In past years most annual salary increases have exceeded 1.0 percent, but given the current economic uncertainty it is likely that the city will take a hard line on negotiating larger increases. Conversely, many unions will likely push for higher remuneration for their members, particularly in light of the grave sacrifices that many of their members are making on the frontlines of the battle against the Covid-19 pandemic.

Assuming the remaining outstanding contracts from the current round have been settled but no new contracts for the next round have been completed, IBO estimates that

by the end of 2021, nearly 37 percent of the city’s full-time workforce would be without a current labor contract. By the close of 2022, when a new mayoral administration will be in place, over 55 percent of the workforce would be working without a contract. We estimate that for new contracts signed in 2021, each additional percentage point increase above the currently budgeted annual raises of 1.0 percent would cost the city \$44 million, with subsequent years costing \$258.2 million, \$551.6 million, and \$869.3 million in 2022, 2023, and 2024 respectively.

Metropolitan Transportation Authority. When the Mayor’s Preliminary Budget was released in January, the MTA already faced substantial challenges in trying to fund its operating expenses and to finance and manage a rapidly expanding capital program. As the MTA’s financial condition deteriorated, both the city and state claimed that it was the other’s responsibility to handle more of the MTA’s financial needs.

The MTA’s most recent financial plan assumed that its operating shortfall would grow to \$1.9 billion in 2023, but these estimates were made prior to the Covid-19 outbreak and the cratering of mass transit ridership. The MTA estimates that even with an emergency grant of \$3.7 billion from the federal government, the agency now faces a nearly \$4.7 billion shortfall in the current year, with even larger gaps in subsequent years. Moreover, the MTA’s congestion pricing program, which was scheduled to commence in January of next year, has now been indefinitely delayed, placing further strain on the transportation authority’s finances.

In recent years, the city has been forced by the state to take on an increasing role in the funding of the MTA’s financial plan. Last year the city was compelled to provide \$400 million for the MTA’s “Action Plan” for emergency repairs to stabilize the subway system. This year, the MTA has requested \$3 billion from the city for the transportation authority’s new five-year capital plan, a request backed up by language in the state budget authorizing the state to intercept New York City sales tax revenue—collected by the state on the city’s behalf—and apply it to the \$3 billion obligation. The state also increased the city’s contribution towards operation of the MTA’s paratransit system by approximately \$100 million.

The effect of the Covid-19 pandemic on the finances of the city’s mass transit system is incalculable at this moment, although it is quite likely that the system that emerges from the pandemic will rely more heavily on city funding, while management of the MTA remains largely in the hands of the state and the Governor.

NYC Health + Hospitals. Prior to the Covid-19 pandemic, H+H had been making progress in controlling expenses and improving revenues. Earlier this year, H+H estimated it would end the current fiscal year with a cash balance of \$790 million. While the outlook was brighter, H+H faced new challenges, including fallout from the Trump Administration’s public charge rule, which gives the federal government authority to deport legal immigrants who use government benefits. H+H projects that the system will lose nearly 100,000 hospital patients, who are expected to withdraw from public insurance and/or use fewer preventative services rather than risk deportation.

The Covid-19 pandemic is straining the city’s entire health infrastructure, but none more so than the city’s public hospital system. Due to the Covid-19 pandemic, H+H has experienced an overwhelming stress on its hospital capacity. At the height of the pandemic’s surge, the city’s public hospitals were caring for more than 3,000 Covid-positive patients in intensive care beds, in a system that had a pre-pandemic intensive care capacity of roughly half that amount. The increased costs associated with fighting the pandemic, accompanied by an unprecedented reduction in nonessential and elective care procedures—a profit center for H+H—placed added stress on the hospital system’s financial stability. While direct federal funding of hospitals in the Covid-19 relief bills and FEMA reimbursements will provide some needed assistance, it remains to be seen whether the increased federal funding will be adequate to fully offset H+H’s increased expenses and lost revenue.

There is also considerable uncertainty related to the state’s budget. Prior to the pandemic, the Governor had pressed for numerous reductions in the state’s funding of the Medicaid program, which accounted for more than half of the state’s \$6 billion budget gap. The initiatives proposed by the Governor’s Medicaid Redesign Team II could further destabilize H+H’s financial status. Additional state budget cuts resulting from widening budget gaps would only exacerbate this issue. If state funding were to be reduced, additional city funding would likely be necessary to maintain the city’s public health system.

Housing Authority. In January 2019, NYCHA was compelled by the U.S. Department of Housing and Urban Development to accept a federal monitor, tasked to ensure that the housing authority develop and implement plans to address on-going repair and structural deficiencies in its buildings. In the 16 months since the agreement was signed, NYCHA has developed plans to address the inspections process, heat outages, elevator repairs, and mold and water leak

problems. The coronavirus has disrupted these plans. The speed at which repairs—particularly those inside occupied apartments—can be made is uncertain. Estimates for the cost of bringing the entire public housing system up to standards are enormous. NYCHA’s 2017 five-year capital needs assessment calls for \$32 billion of critical capital upgrades and a total capital need of \$45 billion to bring all NYCHA properties into a state of good repair over the next two decades.

While the majority of NYCHA’s capital funding has traditionally been an obligation of the federal government, in recent years the share of the agency’s capital plan funded by Washington has diminished. The city’s current capital commitment plan for 2020 through 2024 provides a total of \$2.8 billion, slightly under half of NYCHA’s \$6.4 billion capital plan for the four years; notably the housing authority’s capital plan covers only 20 percent of the \$32 billion the agency has identified as its critical capital needs over the next five years. The city will continue to face pressure to increase its capital contribution to NYCHA in order to prevent further deterioration of the city’s public housing stock.

Closing the Gap

In each preceding financial plan of his tenure, the Mayor has touted the record levels of reserves included in the budget. The 2021 Executive Budget marks the first time that the de Blasio Administration has drawn these reserves down. Compared with our January forecast, IBO expects the Covid-19 outbreak to reduce tax revenue for 2020 and 2021 by a total of \$9.5 billion; OMB projects a coronavirus revenue impact totaling \$7.4 billion over the same period. To help replace this lost revenue, the April plan uses \$1.0 billion of funds in the Retiree Health Benefits Trust, as well as \$280 million from funds allocated to the general reserve in 2020. To balance the 2021 budget, the city plans to draw down \$1.6 billion from the RHBT, \$900 million from the general reserve, and \$250 million from the capital stabilization reserve. The use of these funds would reduce the trust’s projected balance at the end of 2021 to just below \$2.1 billion, leave the general reserve with just \$20 million in the current year and \$100 million in 2021, and completely exhaust the 2021 capital stabilization reserve—leaving fewer resources available if the fiscal outlook deteriorates further.

The de Blasio Administration estimates that the city’s liability for retiree health benefits will total \$2.2 billion for 2020 and \$2.3 billion for 2021. Under the law establishing the RHBT, retiree benefits must be paid by the trust and assets in the

trust may only be used for that purpose. The current plan to access \$1.0 billion of RHBT assets in 2020 means that instead of making a payment of \$2.2 billion to the trust to cover the entire 2020 liability, the city will make a \$1.2 billion payment and use \$1.0 billion of assets already in the trust to cover the balance of the 2020 health benefit liability. For 2021, the city will pay \$656 million to the RHBT rather than \$2.3 billion, and draw down \$1.6 billion of fund assets to make the required benefit payments.

If needed, the city could generate additional budget relief, up to the total retiree health benefit liability each year. Thus, even with the use of RHBT assets contemplated in the Executive Budget, the city has an additional \$1.2 billion available in the current year and \$656 million available next year. If no additional RHBT assets are used, the remaining funds in the trust could be drawn down to reduce the 2022 budget gap, which IBO currently estimates at nearly \$6.0 billion. (For more details on the retiree health trust and other reserves, see this [report](#).)

Nearly Unprecedented Challenges

The last two months are unparalleled in the history of the nation and the city. The Covid-19 pandemic and the ensuing lockdown of economic activity brought about a level of economic and fiscal disruption not experienced since the Great Depression. In the few months since we issued our last economic forecast, IBO’s revenue and expenditure forecasts have morphed from cautious optimism to deep gloom. The Mayor’s Executive Budget assumes that the city will end 2020 with a surplus of nearly \$4.2 billion, which is allocated to the budget stabilization account to prepay 2021 expenses. Under IBO’s estimates, however, \$544 million of that surplus will be required to cover the additional budget need in 2020, leaving \$544 million less available to prepay 2021 expenses. Thus, by our estimates, the city will need to identify \$1.4 billion in additional resources in order to be able to adopt a balanced budget for 2021 as required under state law and the City Charter.

IBO projects that the budget gap will grow to nearly \$6 billion (8.0 percent of city-funded expenditures) by 2022. Even using all of the reserve funds budgeted for that year would only reduce the gap to \$4.7 billion. If the city were to also draw down the remaining \$2.1 billion available in the RHBT, we estimate that the gap remaining in 2022 would be \$2.6 billion (3.8 percent of city-funded expenditures). While we estimate smaller gaps in the last two years of the plan period, they are still larger in total and as a share of city-funded expenses than in any recent financial plan.

The nation's 11-year long economic expansion has come to a halt as the public health actions needed to limit the damage from the Covid-19 pandemic have shuttered economic activity across the globe. The U.S. has fallen into a deep recession whose course will largely be determined by the virus and efforts to develop treatments and a vaccine. Tens of millions of Americans have lost their jobs in the first half of calendar year 2020 and while IBO projects a return to job growth in the nation in the third quarter of this year and then gradual acceleration of economic growth through 2021, it is not until 2022, when we assume a vaccine is widely available, that the economy rebounds strongly.

The recession is hitting New York City and its economy harder than the nation as whole. In addition to being the epicenter of Covid-19 illnesses, the city's economy is highly dependent on industries and businesses severely affected by the recession: wholesale and retail trade; sports, arts, and other entertainment sectors; accommodations; transportation; restaurants; and other businesses highly dependent on visitor spending. While economic and revenue forecasts in the midst of a crisis are prone to even greater-than-usual uncertainty, IBO projects that after sharp employment declines this quarter and next, the city's economy will face continued, albeit smaller, job losses through the first quarter of calendar year 2021. With this blow to the economy, IBO estimates that the city's tax revenues will decline this fiscal year and next, leaving a \$1.4 billion hole in the 2021 budget that the city would have to fill by July 1, in order to comply with balanced budget requirements of state law and the City Charter.

While the de Blasio Administration anticipates a smaller tax revenue decline and somewhat less city-funded spending than does IBO, the Mayor's Executive Budget includes steps to avoid a fiscal disaster. The Citywide Savings Plan now includes \$2.7 billion in additional initiatives for savings and revenues in 2020 and 2021. Although the

Endnotes

¹The current year's budget includes funds in the budget stabilization account (current year resources used to prepay some future years' expenses) that could be used to cover the 2020 gap estimated by IBO. However, drawing on this account would only increase the size of the estimated gap to be closed in the 2021 budget from \$830 million to \$1.4 billion. The city would need to eliminate this gap before adopting the 2021 budget through the introduction of new revenues or further expense reductions.

²The labor force consists of individuals who are employed plus individuals who are unemployed but actively looking for work. The unemployment rate measures the share of the labor force that is not employed, so unemployed

savings plan is larger than in the past, the set of actions in the plan includes only \$301 million that IBO identifies as efficiencies. For the first time, the savings plan includes service cuts (a total of \$509 million) unrelated to efficiencies or re-estimates of program costs. There are also savings included in the total that stem from services that have been shut down due to Covid-19 restrictions; for example with government offices shut, there are savings on utility costs. The budget also uses about \$4.0 billion of the city's reserves over 2020 and 2021. While not exhausted, the cushion provided by the remaining reserves is much thinner than it was three months ago. If the fiscal situation deteriorates further, the challenge for the Mayor and City Council to manage the budget will be harder with a smaller safety net to rely on.

Finally, even more than usual, the city is beset by threats from Albany and Washington. Proposals to provide general budget relief to states and localities to make up for lost tax revenue have become mired in partisan fighting in Congress. Such aid has been provided as part of the response to recent downturns such as the post-9/11 recession and the 2008-2009 financial crisis. While the city has already received some aid from Washington and expects to get more, what has been made available so far is largely intended to cover the costs of providing extraordinary Covid-19 services rather than replacing lost revenue.

The state government in Albany is facing an even more dire fiscal situation than the city. Rather than providing assistance to the city, the state has looked to the city for fiscal relief. The state budget adopted last month includes hundreds of millions of dollars of cost shifts from the state to the city, including a direct raid on the city's sales tax revenues.

In short, New York City is facing nearly unprecedented challenges as it struggles to maintain budget balance, protect vital services, and provide a safe and healthy environment for individuals who want to live, work, or visit here.

individuals who are not looking for work are not counted.

³Information technology expenditures do not include approximately \$150 million of capital funds spent to purchase iPads and laptops for Department of Education students to allow them to participate in remote learning.

⁴IBO's noncity funded expenditure estimates do not include any additional revenues that the city may access through federal coronavirus stimulus packages.

⁵IBO's classification of savings related to Covid-19 is not mutually exclusive from other classifications. Each initiative is first given a primary classification (efficiency, funding swap, re-estimate, etc.) and then identified as Covid-19 related or not.

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