



What Policymakers Should Know About the Fiscal Impact of COVID-19 on Illinois

Economic and Fiscal Health Impact Group

April 9, 2020

At the request of President Tim Killeen, IGPA has assembled more than four dozen interdisciplinary faculty experts from all three System universities to assess COVID-19's effects on the state. Assessments focus on three impact groups: Economic and Fiscal Impact, Community and Family Resilience, and the Healthcare Workforce. Each group is collaborating on a series of economic modeling activities, data analyses, and syntheses of impact.

This report from the Economic and Fiscal Impact Group draws on the strength of 27 scholar-signatories.

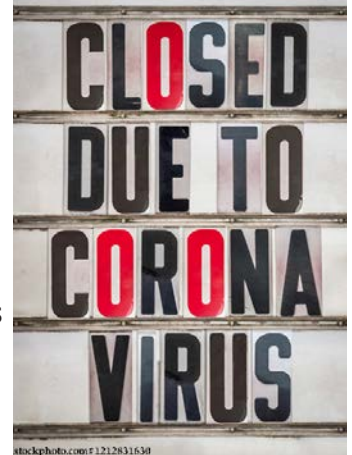
As of this writing, confirmed cases of COVID-19 and deaths continued to grow daily. Physical distancing efforts instituted by the governor of Illinois in March have been extended until the end of April.

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Executive Summary

The COVID-19 pandemic has caused upheaval in the U.S. economy but there is great uncertainty about the depth and duration of the disruption. This report forecasts that tax revenue will plummet. The size of the revenue loss depends on the severity and length of the pandemic and economic disruptions. The COVID-19 pandemic will increase the need for state expenditures to protect vulnerable populations from the health and economic consequences. The biggest impact will likely be in Medicaid expenditures. Illinois' five state pension systems' finances are likely to significantly deteriorate, based on Illinois' experience in the 2007-09 recession. Municipal governments will also be hit hard by the COVID-19 pandemic and are likely to experience shortfalls in both local tax collections and unrestricted state aid. To date, federal legislative efforts in response to the COVID-19 pandemic have been massive but are unlikely to fully insulate Illinois from the fiscal damage.

It is too early to precisely quantify the fiscal gap that is likely to be created by reductions in state revenue and increases in the cost of delivering state services but we believe that it will almost certainly cost billions of dollars and possibly cost tens of billions of dollars. In the coming weeks, we plan to release research reports that address fiscal and economic issues being created by the COVID-19 pandemic.

How Will the COVID-19 Pandemic Effect the Economy?

The COVID-19 crisis has disrupted the U.S. economy but there is great uncertainty about the disruption's depth and duration.

The combination of the significant public health threat and government-mandated reductions in activity are likely to have significant short- and long-term economic consequences. Because the national emergency precipitated by the coronavirus is virtually unprecedented, fluid, and dependent on many unknown factors—such as the severity of the virus, the success of measures like social distancing, and the mitigating effects of federal stimulus—there is great uncertainty about what economic effects it will have.

We describe two recently published estimates that we believe represent the broader range of views of the most prominent analysts. It is important to note that the situation is changing rapidly and there appears to be a wide diversity of views among leading experts.

On March 16, 2020, the noted forecaster Mark Zandi, working with Moody's Analytics, issued a report depicting three scenarios. The most optimistic scenario assumed "a global pandemic with 1 million to 2 million tested global infections," peaking in March and abating in June. Under this optimistic scenario, Zandi forecast U.S. gross domestic product (GDP) growth above 1% for 2020 and above 2% for 2021. Zandi also examined modest and severe pandemic scenarios. In the modest scenario, U.S. GDP growth falls to 0% in the 2nd and 3rd calendar quarters of 2020 but is fully recovered by mid 2021. In the severe pandemic scenario, U.S. GDP declines by 2% in the third quarter of 2020 but has fully recovered by the third quarter of 2021 when GDP growth of 3% is forecast.



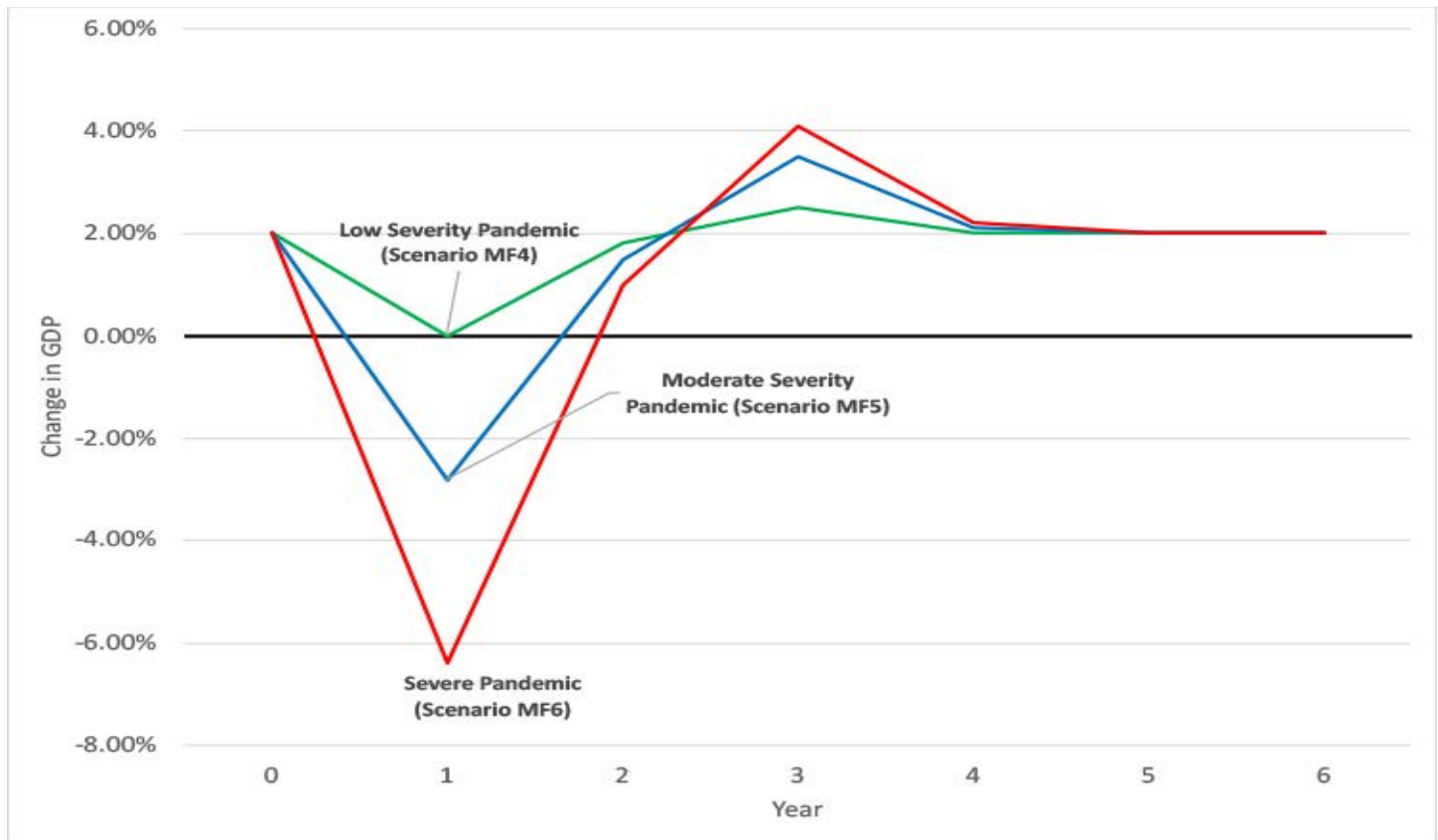
Two Australian economists (McKibbin and Fernando), who have been modeling the economic impact of pandemics for almost two decades, issued a March 2, 2020, analysis that considers seven scenarios, which vary by the severity and spread of the disease. Scenarios 1 to 3, which assume that epidemiological effects are confined to China, have been disproven by facts. Scenario 7 assumes the disease causes a mild pandemic recurring each year for the indefinite future, which we ignore for this analysis because it seems already evident that the current pandemic is not mild.

In our analysis below, we focus on scenarios 4-6 under which epidemiological shocks occur in all countries to differing degrees. Figure 1 shows the forecast path of GDP under scenarios 4-6, which differ by the pandemic's severity. Declines in U.S. GDP range from about 0% to about 6%. All of these scenarios show GDP making a relatively quick recovery and returning to trend growth of 2% per year by 2022. Our discussion of the revenue and spending effects of the crisis relies on these scenarios, which along with Illinois' historical experience in the 2007-09 recession, we view as the most credible current forecasts of the potential economic effects.

It is important to recognize the high level of uncertainty about the crisis' economic effects. The uncertainty stems from a lack of clarity about the epidemiological and health consequences of the virus, as well as from uncertainty about government monetary and fiscal policies to combat the economic consequences of the health crisis.

It is important to recognize the high level of uncertainty about the crisis' economic effects.

Figure 1. Economic Growth Scenarios



Source: McKibben and Fernando (2020)

Impact on State Revenue

The COVID-19 pandemic and resulting economic disruption will decrease tax revenues dramatically. The size of the loss depends on the severity and length of the pandemic and economic disruptions.

The state gets most of its tax revenue from three sources: Individual Income Tax, Corporate Income Tax, and Sales Tax. These “Big Three” taxes account for over three-fourths of total tax revenue and almost half of all state revenues. Understanding what might happen to these revenue sources helps gauge how state finances may be affected by a pronounced economic downturn created by the COVID-19 pandemic. During the 2001 recession and immediately thereafter, individual income taxes fell by more than 14% and corporate income taxes fell by almost 40%. By contrast, sales tax revenues fell less than 1%. During the 2007-09 recession, individual income taxes fell by more than 21% and corporate income taxes by 25%. Sales taxes fell more during this latter recession, by just over 12% (Figure 2, page 4).

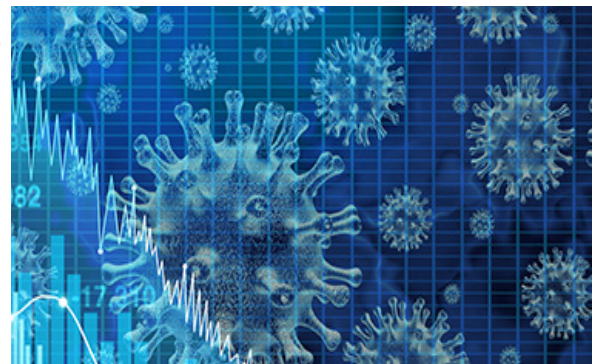
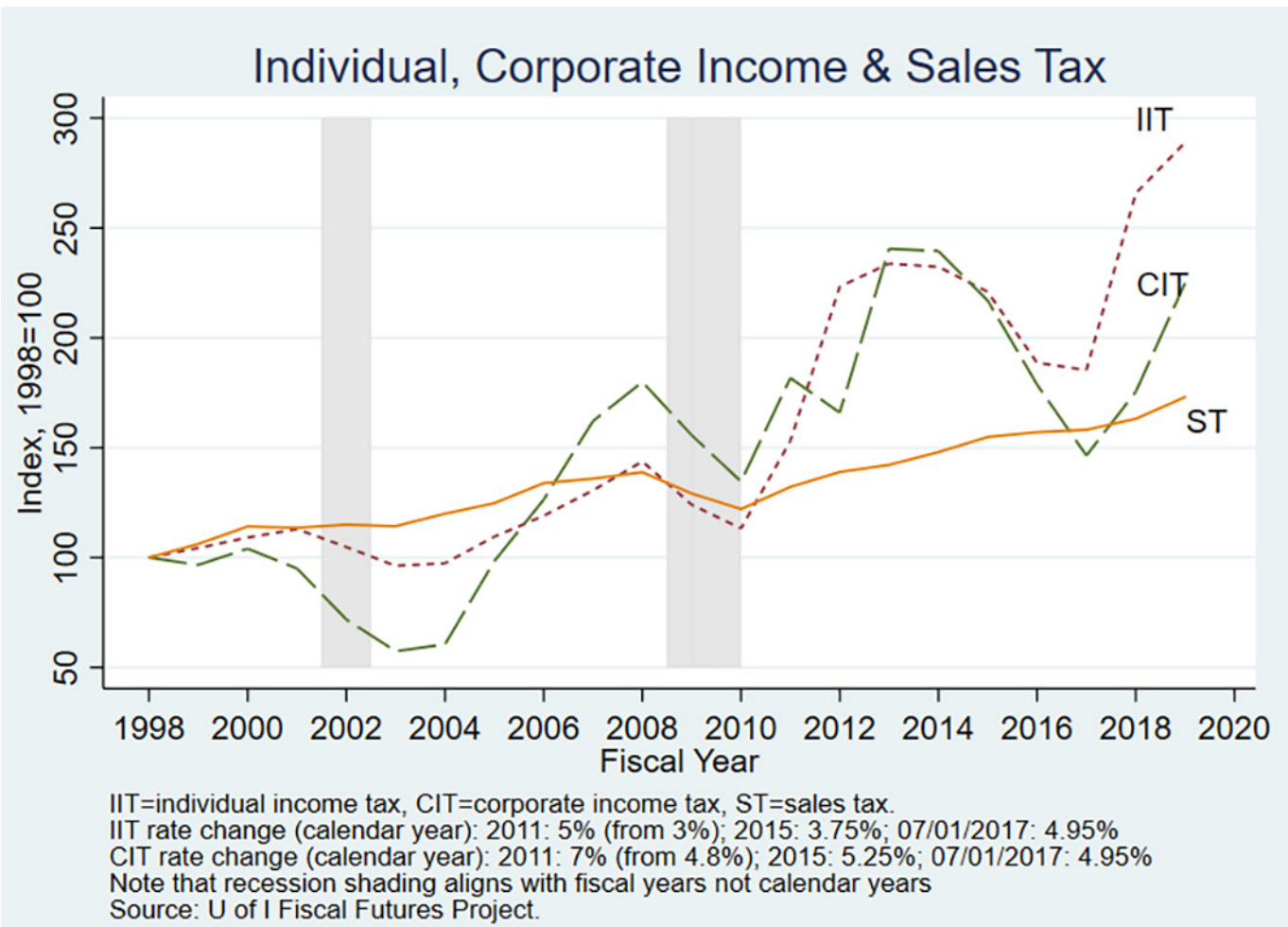


Figure 2: Growth in “Big Three” Revenue Sources, Fiscal Year 1998-2019



In order to estimate the effects of a recession on the largest revenue sources, we first developed a forecasting model that relates changes in national GDP to state revenues over the next four years. Then, we altered the assumptions for GDP given four different scenarios.

In our baseline model, scenario 1, we assume that real GDP will grow at 2% per year through the entire forecast period.¹ The second scenario is that the coming recession will play out in the same way as the 2007-09 recession did. The final three scenarios mirror the McKibbin and Fernando paper discussed above that predicted the macroeconomic effects of the COVID-19 virus. They correspond to a low-severity outbreak effect (see page 2) on labor supply and consumption (scenario 4 – we term this MF4), a moderate-severity outbreak (MF5), and a severe outbreak (MF6). The models we use are traditional time-series forecasting and policy analytic models. These models decompose the time path of state revenues and relate them to the time path of national GDP.²

Figure 3 (page 5) shows the results of our analysis for the total amount of Big Three revenue sources. If the COVID-19 recession is similar to the 2007-09 recession, revenues for these sources will fall in calendar year 2020 by around \$3.2 billion.³ In the low-severity scenario from McKibbin and Fernando (MF4), the revenue loss will be less, around \$1.9 billion. For the moderate-severity scenario (MF5), the revenue loss is estimated at \$3.9 billion in 2020. In the severe pandemic scenario (MF6), the revenue loss will be an estimated \$6.4 billion. The alternative scenarios all predict a recovery of revenues to more of a normal path after 2020, but the speed of recovery differs markedly.

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Figure 3: Revenue Forecasts from Different Scenarios, Total of Individual Income, Corporate Income and Sales Taxes

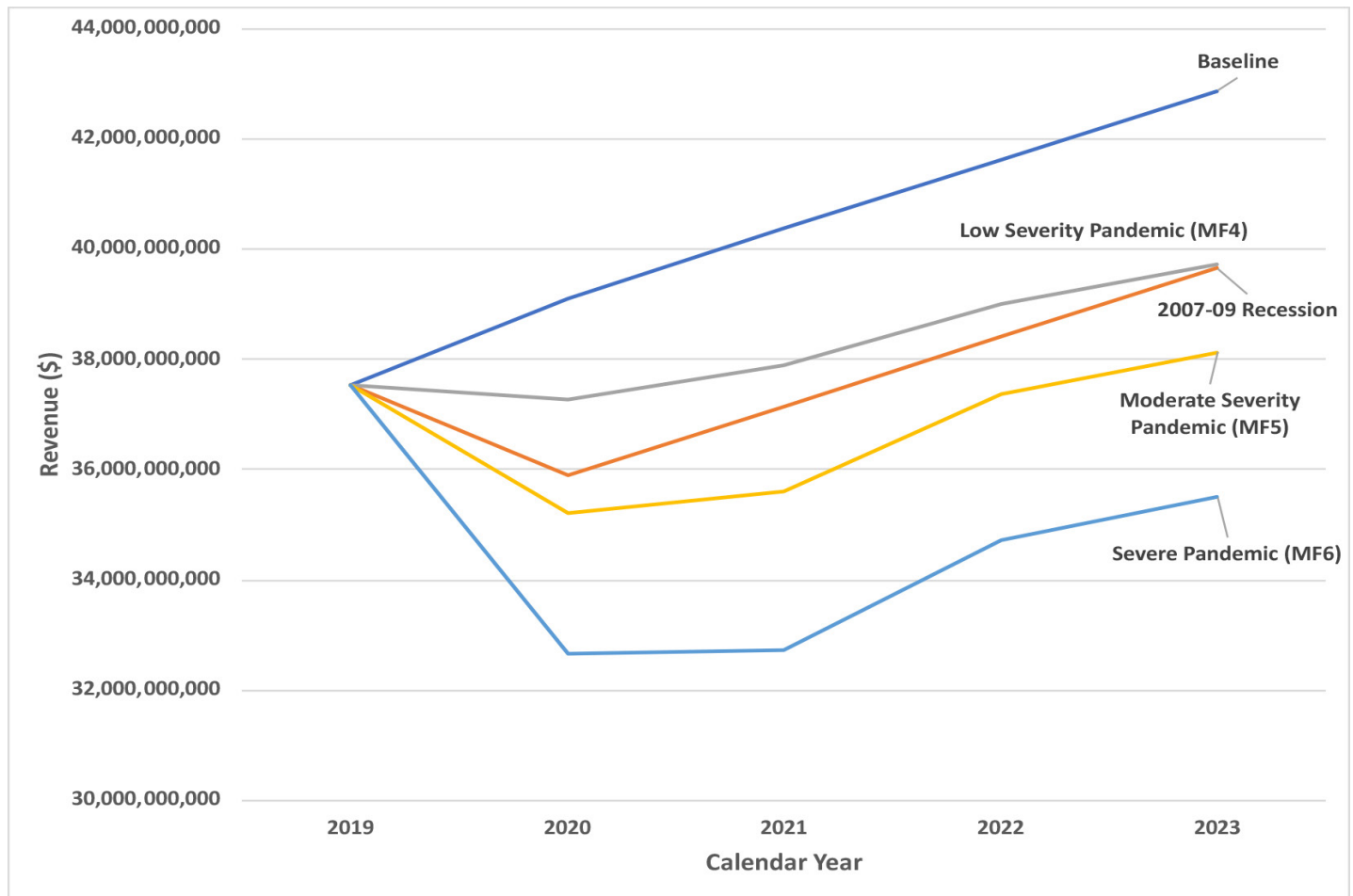


Table 1 recaps the total revenue loss over different periods that are projected by the model under each scenario. If the recession is short and recovery is strong and fast, the total revenue loss will be more like the middle column. But a protracted downturn or a downturn followed by a weak recovery will produce results more like the right column.⁴ In either case, the revenue loss for the individual and corporate income taxes and the state sales tax is likely to be substantial.

Table 1: Total Revenue Loss for Different Periods (calendar years) and Different Scenarios

Scenario/Period	2020-2021 (short downturn followed by strong and fast recovery)	2020-2023 (protracted downturn and/or weak recovery)
2007-09 Recession	(\$6.456 Billion)	(\$12.889 Billion)
Low Severity Pandemic (MF4)	(\$4.324 Billion)	(\$10.085 Billion)
Moderate Severity Pandemic (MF5)	(\$8.669 Billion)	(\$17.673 Billion)
Severe Pandemic (MF6)	(\$14.119 Billion)	(\$28.394 Billion)

Impact on State Expenditures

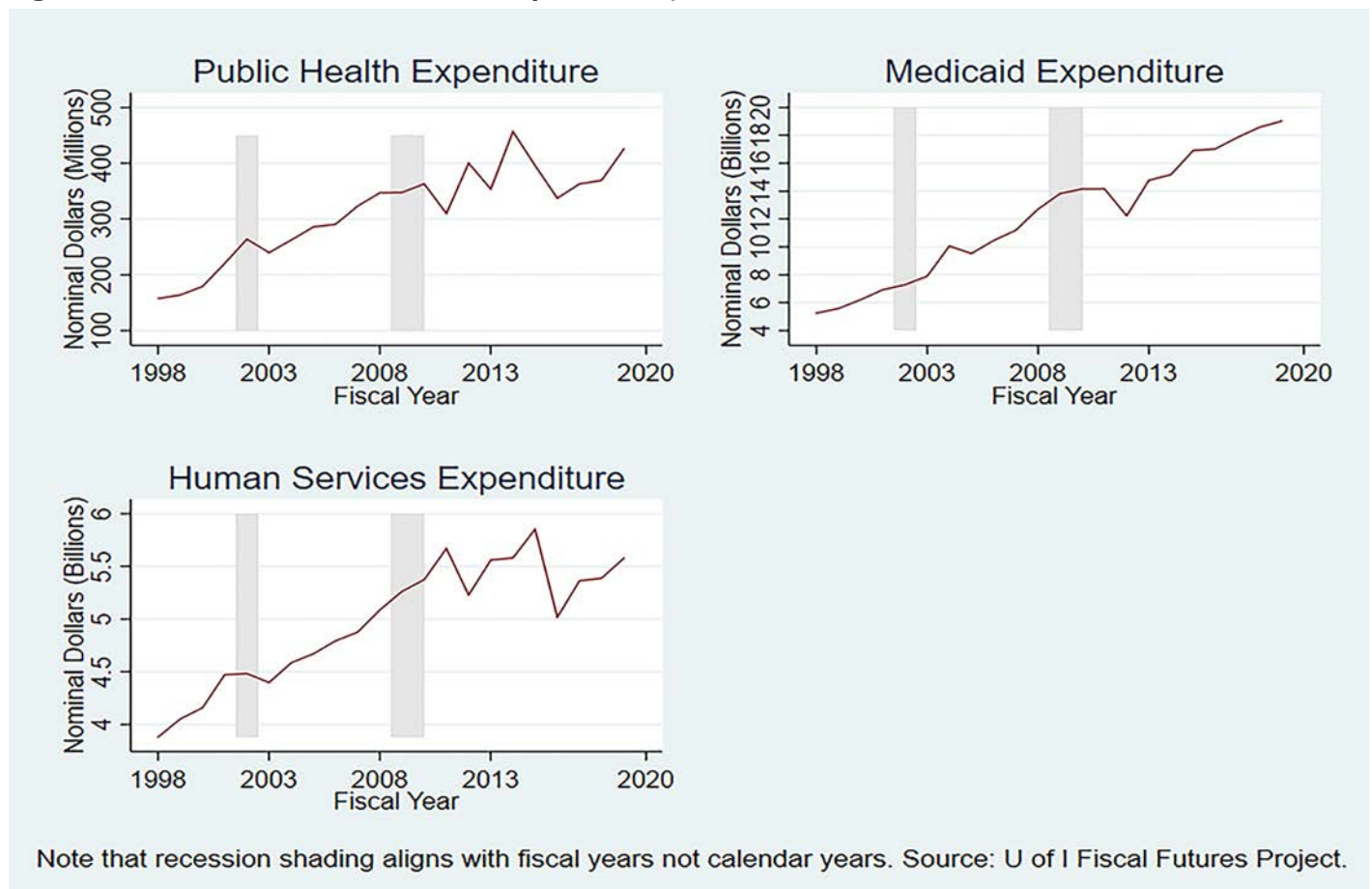
The COVID-19 emergency will increase the need for state expenditures to protect vulnerable populations from the health and economic consequences. The biggest impact will likely be in Medicaid expenditures.

We expect that the combined impact of the public health emergency, the economic disruption following the mandated social distancing, and the attendant reductions in economic activity are likely to have a substantial effect on state government expenditures. We focus on three categories of expenditures: public health, Medicaid, and human services.

The state has deployed public health personnel and equipment to inform people about the risks; to secure protective equipment for front-line public-sector workers; and to facilitate action by healthcare workers. Because much of this work has been completed thanks to the extraordinary efforts of existing state employees, budgetary implications are likely to be relatively modest.⁵

Figure 4 shows the path of state public health expenditures over the past two-plus decades with shaded areas representing recessions. Public health is a relatively small item in the state budget, representing about \$450 million dollars (or one-half of 1% of total spending) in recent years. The past two recessions did not generate large fluctuations in public health expenditures. There does, however, appear to be some post-recession decline in expenditures, probably as the result of fiscal austerity necessitated by the losses in revenue noted above.

Figure 4: Health and Human Services Expenditures, Fiscal Years 1998-2019



We expect to see a large jump in state public health expenditures in FY2020 and FY2021 due to COVID-19. Still, even a doubling or tripling of that budget would have modest impacts on the overall budgetary situation.

Figure 4 also shows the growth in state expenditures on Medicaid (in billions) over the same period. Medicaid expenditures are a much larger portion of the state budget—over 40 times as great as Illinois’ expenditures on public health. The timing of state Medicaid expenditures does not always track the delivery of Medicaid services because reimbursement often follows the service. Moreover, our data reflect the timing of provider reimbursements rather than the timing of service delivery. Nonetheless, our data and other ancillary data suggest significant increases in Medicaid expenditures as a result of recessions.⁶

In past recessions, increased Medicaid costs have resulted from poor economic conditions, which pushed some previously self-sufficient households to require public assistance. Generally, the surge in Medicaid claimants lags the economic downturn because households typically exhaust available resources before gaining access to government assistance.

The COVID-19 emergency is likely to be quite different from past recessions because we expect a substantial number of households with precarious economic circumstances to be pushed onto Medicaid as they become infected with coronavirus. This will be likely to compound the usual recession-induced influx of Medicaid eligible households, greatly amplifying the need for Medicaid expenditures. During the 2007-09 recession, Medicaid expenditures increased by \$2.5 billion (more than 20%). In FY2019, Medicaid expenditures crested \$19 billion. We expect that the COVID-19 emergency will result in even greater percentage increases in Medicaid expenditures, compounded by expenditures that in 2019 exceeded those in 2009. Over the next several years, annual Medicaid expenditures could easily increase by \$4 to \$5 billion (21% to 26%).



Another area where we might expect a substantial effect on state expenditures is human services, which include a wide array of services for needy, disabled, and vulnerable populations. Human services encompasses assistance with child care, employment, daily life, housing, and food. Federal funds support some of these activities, but state funds also play an important role.

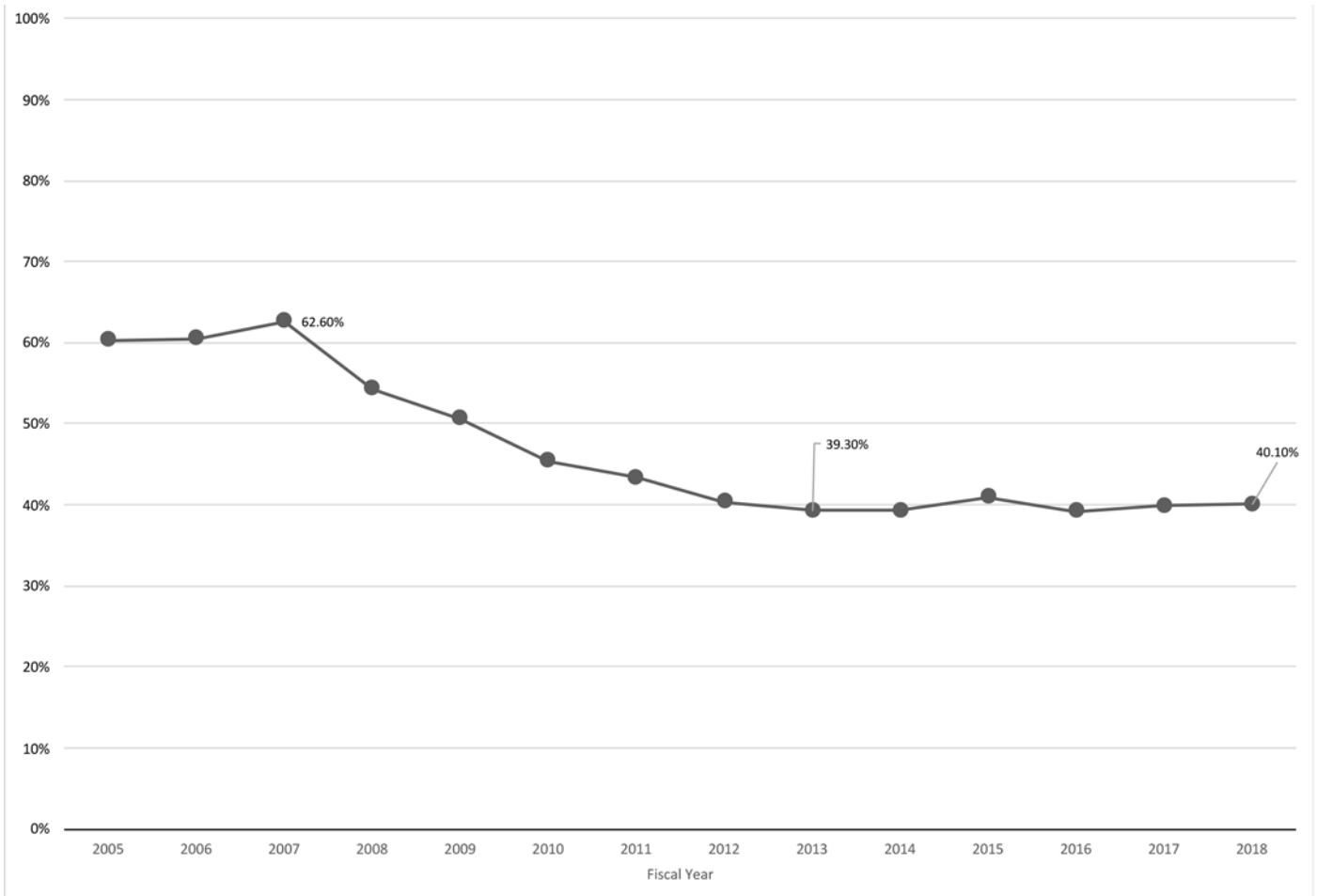
State spending on human services also increased substantially in the last recession but it is not clear how much the recessions induced an increase in the pre-existing expenditure trend. **We expect the COVID-19 pandemic to increase expenditures on human services as economic pressures require more vulnerable residents to rely on these services.**

Impact on Public Pension Systems

Illinois' five state pension systems long have been underfunded, and collectively had just 40 cents for every \$1 in pension benefit liabilities at the end of FY2018. The state pension systems' finances are likely to deteriorate. Experience in the 2007-09 recession provides insight into the possible magnitude of the deterioration.

In the wake of the last recession, Illinois' pension systems' aggregate funded ratio—which is the ratio of assets to liabilities—dropped from a high of 62.6% in FY2007 to a low of 39.3% in FY2013, a decline of 23 percentage points in a span of six years. Since FY2013, the funded ratio has hovered around 40% (Figure 5).

Figure 5: Illinois Pension Systems Funded Ratio, FY2005-FY2018⁷

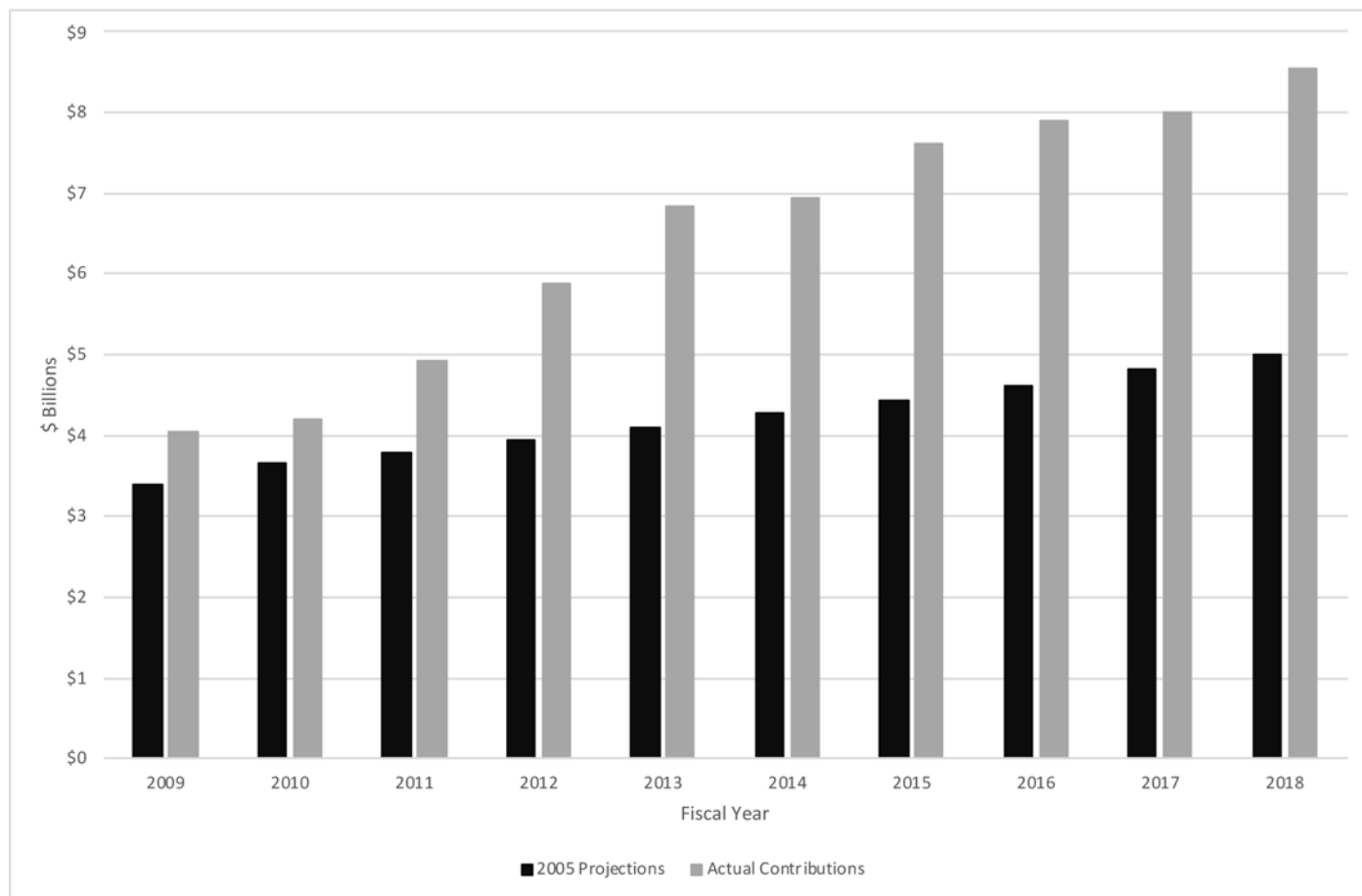


Recession-induced declines in asset values could result in a sharp and sudden increase in unfunded liabilities. Increases in unfunded liabilities will increase the state's future required contributions. This happened after the 2007-09 recession; however the impact was gradual because Illinois' pension systems adopted a new way of valuing assets in 2009. This method, referred to as "asset smoothing," spreads asset gains and losses that differ from the investment rate assumption over a 5-year span, rather than recognizing all investment gains or losses in the year they took place. The effect of this way of valuing assets is that volatility is spread out.

While the increases in required contributions were attributable to many factors—such as changes in actuarial experience and assumptions and ongoing contribution shortfalls—poor market performance tied to the 2007-09 recession was a major factor for the increases.

Increased pension contributions by the state are a potential future impact that should not be dismissed.

Figure 6: Comparison of State Pension Contributions: Estimated Pre-2008 Financial Crisis vs. Actual Contributions



While the finances of many pension systems have stabilized since the 2007-09 recession, the finances of the worst-funded ones, like Illinois', have continued to deteriorate. Because of this, the Illinois pension systems may be more vulnerable to the effects of the COVID-19 pandemic than those of other states. For plans that are already adequately funded, a large increase in unfunded liabilities and decreased funded ratio is not a debilitating event. But the effects could be devastating for plans with already impaired funding levels. Since Illinois' fiscal year ends June 30, it is likely that some portion of COVID-19 related investment losses will be reflected in the pension systems' FY2020 actuarial valuation and financial reports. Increases in the state's required pension contributions, however, are likely to lag these events because the FY2020 actuarial valuation will be used to set FY2022 contribution rates. As a consequence, contribution rates are less pressing now when compared to issues like declines in revenue collections and increased expenditures. Nonetheless, increased pension contributions by the state are a potential future impact that should not be dismissed.

Impact on Local Governments

Municipal governments will be hit hard and are likely to see revenue shortfalls in both local tax collections and the amount of unrestricted state aid.

The COVID-19 crisis is likely to have negative implications for the finances of all local governments: counties, municipalities, school districts, transit agencies, and special districts. How local governments are impacted will depend on what revenue sources they are reliant on, their financial condition prior to the COVID-19 emergency, and the amount of rainy day funds they had saved. Governments with a local sales tax are likely to see immediate revenue shortfalls resulting from the sharp COVID-19 related economic downturn. Increasing unemployment and business closures may result in decreased property tax collections, but these impacts would lag behind significantly. We focus here on the most direct and immediate consequences to municipal government revenues, namely the substantial revenue shortfalls due to declines in local tax collections and state aid.

The main revenue sources the State of Illinois shares with counties and municipalities are the individual income tax, corporate income tax, sales tax, and the personal property replacement tax. As previously discussed, the income and sales taxes are the three main revenue sources for the state and are likely to suffer significant revenue shortfalls due to the COVID-19 pandemic. Any shortfall in revenue from these taxes that the state experiences will also be felt by local governments. This is because unrestricted state aid is an especially important revenue source for municipal governments in Illinois. In aggregate, unrestricted state aid accounted for 18% of Illinois municipalities' total revenue in 2017.

Declines in state aid are especially concerning because municipalities in Illinois are more reliant on unrestricted state aid than municipalities in other states. Among the 50 states, the median amount of revenue that municipalities received from general state aid was 2%. Putting aside Illinois, in only seven other states does unrestricted state aid account for at least 10% of municipalities' revenue.

In addition to state sales tax revenue that is shared with local governments, many Illinois municipalities have a local sales tax. Revenue from the local general sales tax accounted for 12% of municipalities' total revenue in 2017. The figure rises to 17% when excise taxes for items like alcohol, gaming, motor-fuel, and tobacco are included. Together, gross sales taxes and unrestricted aid from the state account for more than one-third of municipal governments' revenue. As such, municipal governments are likely to suffer significant revenue shortfalls.

Federal Response

Federal legislative efforts to date in response to the COVID-19 pandemic have been massive but are unlikely to fully insulate Illinois from the fiscal damage.

As of the end of March 2020, the U.S. Congress has approved, and the president has signed, three pieces of legislation closely related to the COVID-19 pandemic. The provisions of this legislation with the most direct implications for the state fiscal situation include:

- Establishment of the coronavirus relief fund that will provide Illinois with \$4.9 billion of federal aid, of which at least \$2.7 billion must go to the state with the rest (potentially) going to local governments.⁸
- Various legislative provisions that will give Illinois about \$80 million of increased federal grants for emergency food assistance (about \$31 million), service to aging populations (about \$8 million), and administration of the unemployment insurance system (about \$40 million).⁹

- Legislation that “enhances” the rate at which the federal government will match Illinois’ Medicaid expenditures (FMAP) from 50.14% to 56.34% for calendar quarters in which the public health emergency is in effect.¹⁰ While helpful, the size of this increase in FMAP is below the increase during and after the 2007-2009 recession. Then, Illinois’ FMAP rose from 50% in 2008 to 61.88% in 2009 and 2010. If the enhanced coronavirus pandemic FMAPs are in effect for the six-month period from January 1 to June 30, 2020, and Illinois has \$12 billion of Medicaid expenditures matched at the 56.34% rate, the enhanced FMAP would bring the state approximately \$744 million in additional federal aid.



Federal legislation also provides increased resources for the unemployment insurance system. This system is technically self-sufficient since it is funded by employer premiums and is, in general, walled off from the state budget. However, when claims on the system exceed resources, the state is forced to raise premiums for employers. Much like a tax, increased premiums may discourage economic activity. COVID-19 related legislation provides federal funds to extend the period for which unemployment insurance can be received, to increase the maximum benefit for some laid off workers, and to make some previously ineligible workers eligible to receive unemployment insurance. Together, these additional federal funds help to shore up the financial stability of the system and reduce the need for future increases in premiums.¹¹

While these pieces of federal legislation are expected to cushion the State of Illinois’ fiscal burden as a result of the pandemic, our analyses suggest that the combined effect of the federal measures enacted to date are likely to be vastly inadequate. It is too early to precisely quantify the fiscal gap that is likely to be created by reductions in state revenue and increases in the cost of delivering state services, but we believe that it will almost certainly cost billions of dollars and possibly tens of billions of dollars.

Where To Go Next

The near-term fiscal situation of the State of Illinois and its local governments is challenging. An immediate task for state lawmakers will be crafting a budget for FY2021, which begins on July 1, 2020. Revenue will almost certainly fall substantially, and expenditures will grow. Pension systems’ funded ratios will decline and will trigger increases in required contributions. How can Illinois maintain essential public services and simultaneously minimize the economic damage from the COVID-19 pandemic?

Policymakers must grapple with this question. We expect that there will be no easy answers but suggest that their deliberations should focus on five basic principles: transparency, protection of the vulnerable, economic efficiency, minimizing borrowing for operating purposes, and flexibility.

The coming period is likely to require substantial sacrifice from many groups. The perceived legitimacy of public officials’ decisions will require a transparent account of the constraints and

reasons for the choices that are made. Because sacrifice is required, the most vulnerable segments of society (children, the poor, those in ill health) with the least capacity for sacrifice should be protected to the greatest extent possible. Efficiency—making necessary changes in the most cost effective manner—will minimize the sacrifice that is required.

Illinois should also minimize use of long-term debt to fund operating expenditures based on the concept of intergenerational equity, which posits that those who benefit from expenditures should bear the burden of financing them. The final principle is flexibility. The reason for this principle is the tremendous uncertainty inherent in the current fiscal climate. Policymakers should understand that the situation could improve but it may also deteriorate even further. To the greatest extent possible within the constraints of the principles discussed above, policymakers should preserve flexibility.

In the coming weeks, the Economic and Fiscal Impact Group plans to release a series of research reports that address aspects of the COVID-19 pandemic and suggest potential policy approaches for state and local governments.

Drawing on the work of IGPA-related scholars and other public finance experts throughout the U.S., we first plan to document what states did during the last recession to cope, and how those actions affected state finances and economic conditions. We will examine matters like tax and fee changes, the use of one-time funding sources, agency budget cuts, changes in capital programs, and the role of institutional provisions, like balanced budget requirements. We also plan to examine how the state has used transfers and loans from various state funds to provide resources required to pay bills in the past. We plan to use these evaluations of past experience relative to the principles discussed above as well as more current information about health, fiscal conditions and federal policy responses to develop specific policy alternatives to navigate the impending fiscal stress.

We are honored to have the opportunity to harness our collective research and experience to serve our neighbors and the citizens of Illinois at a time of great need.

Respectfully submitted,

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Audience: IGPA Impact Reports are intended to be useful to policymakers and stakeholders, including but not limited to University of Illinois System leaders, state legislators, Governor J.B. Pritzker's office, state agencies, news media, nonprofits, educators, volunteer organizations, and faith leaders.

Endnotes

1 Federal Reserve Bank of Philadelphia, 2020.

2 See for example, Harvey (1981) and Mills (1990). Model data, parameters, and results available from the faculty and staff leads.

3 The timing of the revenue decline over fiscal years depends on the timing of the GDP decrease.

4 With the exception of the MF6 scenario, the amounts reported here are similar to a recently released report from the Commission on Government Forecasting and Accountability (COGFA, 2020). This is because of the depth of the recession predicted under MF6 exceeds past experience used by COGFA to project revenue loss.

5 But see Leone, Hannah March 25, 2020 "Chicago Board of Education to vote on \$75 million response" Chicago Tribune p.9.

6 McGuire, Therese J and David Merriman (2006). "State Spending on Social Assistance Programs Over the Business Cycle," pp. 289-311 in *Working and Poor: How Economic and Policy Changes are Affecting Low-Wage Workers* edited by Rebecca Blank, Sheldon Danziger and Robert Schoeni. New York: Russell Sage Foundation, 2006.

7 Funded ratio for years 2005-2009 calculated using the market value of assets; the funded ratios for 2010-2018 were calculated using asset smoothing. Figures are from the Commission on Government Forecasting and Accountability's annual Financial Condition of the State Retirement Systems report.

8 Federal Funds Information for States (FFIS) March 26, 2020. "FMAP Update: Guidance on COVID-19 Increase; FY 2022 FMAP Projections", Washington, D.C., Federal Funds Information for States <https://perma.cc/CP4U-NQP3>

9 Federal Funds Information for States (FFIS) March 17, 2020. "Budget Brief 20-10," Washington, D.C., Federal Funds Information for States <https://perma.cc/CP4U-NQP3>

10 Federal Funds Information for States (FFIS) March 17, 2020. "Budget Brief 20-10," Washington, D.C., Federal Funds Information for States <https://perma.cc/CP4U-NQP3>.

11 National Employment Law Project March 2020. "Understanding the Unemployment Provisions of the Families First Coronavirus Response Act" Available at <https://perma.cc/388U-VTKE>.

Figures are the work of the authors. Photos: istockphoto.com. Pg. 1-#212831630-mrdoomits; Pg. 2-#1212761329-Jira Pliankharom; Pg. 7-# 1212213038-Julia Sudnitskaya; Pg. 11-#1214131149-nzphotonz.

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IGPA TASK FORCE ON THE IMPACT OF THE COVID-19 PANDEMIC
(AS OF APRIL 1, 2020)

Resources for All Groups

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Joseph K. Hoereth	Director, Institute for Policy and Civic Engagement	Chicago
Faye Jones	Director, Albert E. Jenner Law Library and Clinical Professor of Law	Urbana
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Kent Redfield	IGPA Scholar Emeritus; Professor Emeritus of Political Science	Springfield
Moira Zellner	Associate Professor, Urban Planning and Policy and Director, Urban Data Visualization Lab	Chicago

Fiscal & Economic Impact Group

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Patricia Byrnes	Associate Professor of Economics	Springfield
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Matthew W. Finkin	Maybelle Swanlund Endowed Chair, Center for Advanced Study Professor of Law, College of Law	Urbana
Don Fullerton	IGPA Senior Scholar; Gutgsell Professor of Finance	Urbana
J. Fred Giertz	Professor Emeritus of Economics; IGPA Scholar Emeritus	Urbana
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Kenneth Kriz	University Distinguished Professor of Public Administration; Director, Institute for Illinois Public Finance	Springfield
Arwi Kriz	Visiting Research Fellow, Institute for Illinois Public Finance	Springfield
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Community and Family Resilience Group

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Judith Cook	Director, Center on Mental Health Services Research and Policy	Chicago
Teresa Córdova	Professor of Urban Planning and Public Policy; Director, Great Cities Institute	Chicago
Barbara Fiese	Director, Family Resiliency Center	Urbana
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Richard Kaplan	Guy Raymond Jones Chair in Law, College of Law	Urbana
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Nikolas Theodore	Director, Center for Urban Economic Development	Chicago
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Stevan Weine	Director, Center for Global Health	Chicago

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Healthcare Work Force Impact Group

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Hugh Musick	Visiting Associate Director, Population Health Sciences Program	Chicago
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Stevan Weine	Director, Center for Global Health	Chicago