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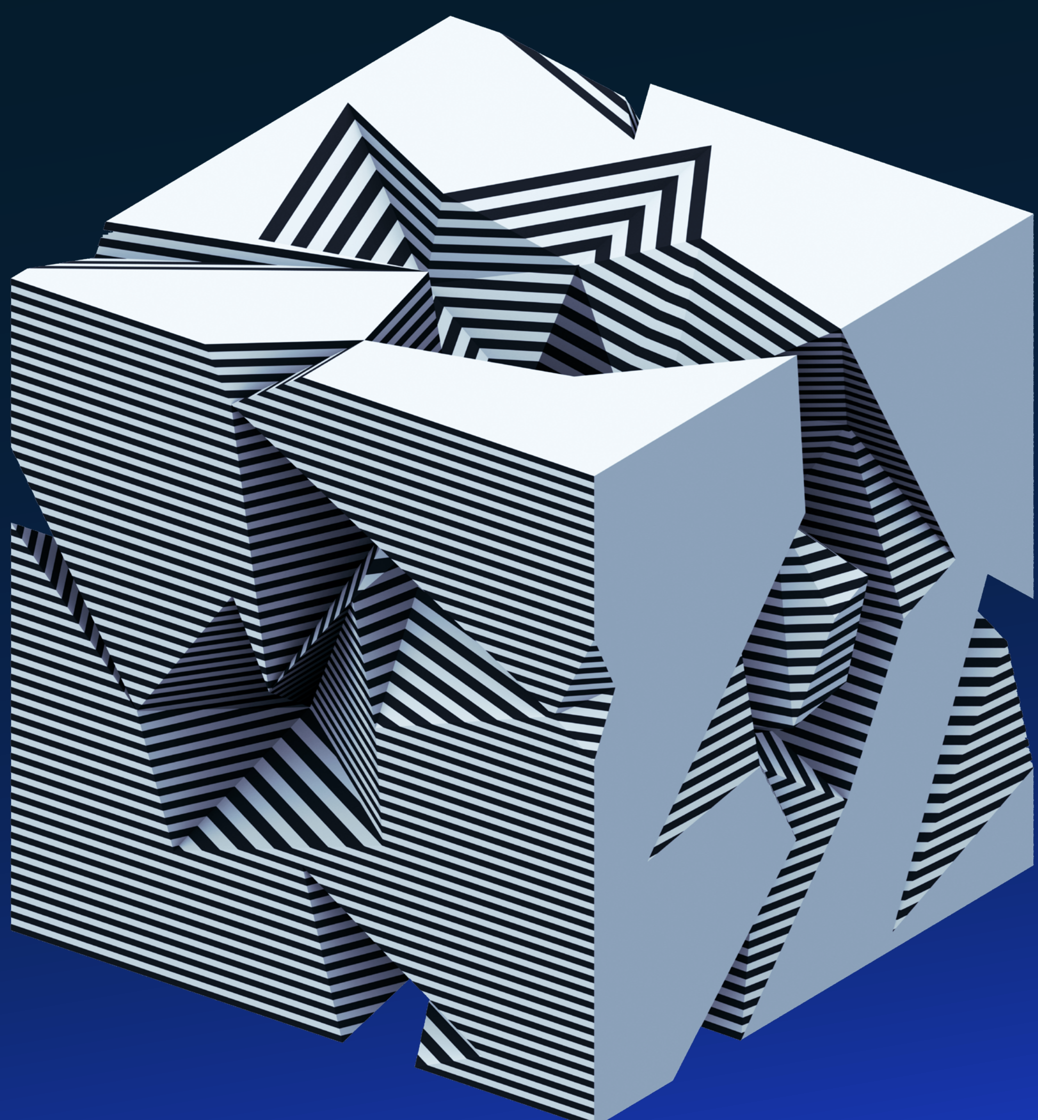
McKinsey on Government

Perspective on fiscal resilience



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Introduction

We are delighted to present the latest issue of *McKinsey on Government*, the compendium offering McKinsey's global perspective and strategic thinking on innovation in government productivity and performance. This compendium focuses on meeting the challenge of attaining fiscal resilience as we continue to grapple with the realities and consequences of the global pandemic. Indeed, the five articles that follow provide practical insights on and solutions to managing fiscal deficits and supporting economic recovery, from broadening governments' portfolios of financing interventions to repositioning tax authorities for the future.

The first article describes a balancing act: managing the $30 trillion deficit while restoring economic growth. We argue this is not an impossible task—but, of course, no two countries are the same, and the pathways they choose to create fiscal resilience will depend on a number of factors. In the second article, we discuss immediate steps all countries can take to develop a credible debt story to fund their deficits and the broad portfolio of interventions they can consider to ensure longer-term financial sustainability. One of these interventions focuses on an often-underappreciated public asset—government real estate holdings. The third article then highlights how, by managing and investing public real estate assets, governments can reimagine their finances and create some breathing room.

Tax authorities, in particular, are facing new challenges as they seek to support unprecedented levels of government spending as well as recovery from a deep, global recession. But there are also opportunities. The fourth article presents some possible measures tax authorities can take to harness the current moment of accelerated digitization and reposition themselves for the future—whatever it brings. And we close with an article in which we observe the seeds of a reimagining of not just tax authorities but government as a whole. As governments continue to face pressure to act quickly and at scale as a result of the COVID-19 pandemic, we highlight ten opportunities that can build more resilient governments and shape more resilient societies.

Wherever in the world this compendium finds you, we hope these articles are thought-provoking and support you in taking action to address the many challenges and opportunities governments face today.

Sincerely,

The MCG Board

The great balancing act: Managing the coming $30 trillion deficit while restoring economic growth

As they continue to grapple with a global pandemic, governments will need to manage deficits and debt-payment plans while finding the best ways to support economic recovery.

by Rima Assi, David Fine, and Kevin Sneader

© Vladimir Godnik/Getty Images

The dual imperative of our time is to save lives and safeguard livelihoods—and governments around the world are pulling out all the stops to do so. The resulting ramp-up of relief and stimulus spending to unprecedented levels has occurred just as tax revenues have slumped. As a result, government deficits worldwide could reach $9 trillion to $11 trillion in 2020, and a cumulative total of as much as $30 trillion by 2023.

Governments will need to find ways to manage these unprecedented deficits without crippling their economies. It is this challenge which creates the need for the great balancing act: managing the $30 trillion deficit while restoring economic growth. We believe that this can be done—but it will require governments and the private sector to work together like never before to lay the foundations for a new social contract and to begin shaping a postcrisis era of shared, sustainable prosperity.

There is already concern that many countries will struggle to meet their commitments to creditors, sparking a debt crisis that would compound the economic crisis unleashed by COVID-19.[1] Yet even if governments do avoid defaults, record public-sector debt levels could seriously dampen economic recovery if not managed effectively. Increased debt-servicing costs could crowd out vital investments in areas such as infrastructure and reskilling. Decisions to "print money" at scale could prompt a rise in inflation. And a big rise in taxation could hamper business innovation and growth and harm countries' competitiveness.

Any of these paths could lead to a vicious cycle in which both economic growth and public revenues are suppressed for years to come. But governments have more power than is commonly assumed to manage larger deficits and to ensure that they sustain sound public finances and economic competitiveness for their countries—and so foster a virtuous cycle instead. For example, there are opportunities to improve the effectiveness of tax collection, including the use of accelerated digitization. And careful spending reviews can reallocate budgets to the highest priorities while delivering savings through better procurement and fraud reduction.

Potentially an even greater opportunity, and one that remains largely untapped, lies in creating transparency into governments' entire balance sheets, including assets such as land and property and state-owned enterprises. There is considerable scope in many countries to manage and monetize such assets more effectively, both to strengthen fiscal sustainability and to support broad-based economic recovery.

There are also real opportunities to hone the design and the target of the massive relief and stimulus packages precipitated by the COVID-19 crisis. The measures announced to date amount to some $10 trillion worldwide, and this spending is likely to rise as governments move from immediate support to households and businesses toward fostering long-term economic recovery. Wisely structured stimulus measures—designed and implemented in partnership with the private sector—could help prepare workforces for a technology-driven future and improve the long-term competitiveness and resilience of key industries. Indeed, we believe the crisis presents a historic opportunity for government and business to forge a new social contract for inclusive, sustainable growth.

The world's $30 trillion public-finance challenge

Governments have announced more than $10 trillion in relief measures, primarily for households and businesses. Among the G-20 nations, the fiscal measures announced in the COVID-19 crisis to date amount to an average of 11 percent of GDP—three times that of the 2008–09 financial-crisis response. In some countries, stimulus packages have reached more than 30 percent of GDP.[2]

At the same time, the immediate shock of the crisis on companies and households, along with depressed GDP growth, is likely to reduce

[1] See, for example, *New Atlanticist*, "How to deal with the coming pandemic debt crisis?," blog entry by Hung Tran, May 11, 2020, atlanticcouncil.org.
[2] Ziyad Cassim, Borko Handjiski, Jörg Schubert, and Yassir Zouaoui, "The $10 trillion rescue: How governments can deliver impact," June 5, 2020, McKinsey.com.

government revenues significantly. Worldwide, our analysis suggests that fiscal revenues could fall by between $3 trillion and $4 trillion (as much as 15 percent) between 2019 and 2020. GDP growth, along with government revenues, could take two or three years to recover to precrisis levels.

Given the combination of record stimulus measures and steep reductions in revenues, governments are taking a range of steps to manage public finances, including budget reallocation. But the bulk of the gap is being closed through debt. Our analysis suggests that the world's governments will experience a record global fiscal deficit in 2020 of between $9 trillion and $11 trillion—at least triple precrisis levels and equivalent to 12 to 15 percent of global GDP. By 2023, the world's governments could face a cumulative fiscal deficit of between $25 trillion and $30 trillion (Exhibit 1).[3]

As a result, sovereign-debt levels are likely to increase significantly across the world. The International Monetary Fund expects that sovereign debt in advanced economies will increase to 122 percent of GDP in 2020, up from a precrisis forecast of 105 percent. In emerging and middle-income countries, it is forecast to increase to 62 percent of GDP, up from 53 percent.[4]

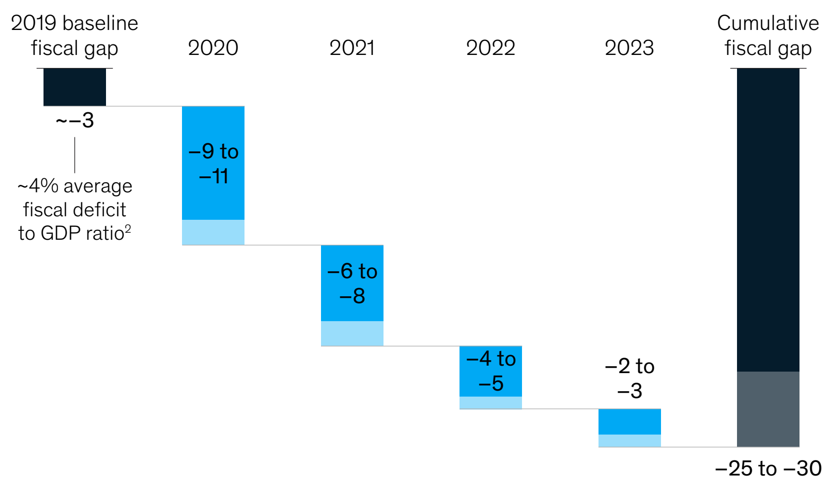
How to manage record debt levels without crippling the economy

Faced with sustained high levels of debt, governments will need to put a huge effort into

Exhibit 1

The COVID-19 crisis could translate into an unprecedented cumulative fiscal deficit of $25 trillion to $30 trillion—equivalent to 30 percent of global GDP.

Projected global cumulative fiscal gap, A1 scenario,[1] $ trillion



Note: Figures may not sum, because of rounding.
[1]Nonexhaustive, as of May 8, 2020.
[2]International Monetary Fund Fiscal Monitor estimate, April 2020.
Source: Center for Strategic and International Studies; International Monetary Fund Fiscal Monitor, chapter 1, April 2020; Organisation for Economic Co-operation and Development; World Bank; *World economic outlook, April 2020: The great lockdown*, International Monetary Fund, April 6, 2020, imf.org; McKinsey analysis

[3] These figures are based on McKinsey analysis, as of May 8, 2020, of the impact of a scenario ("A1") in which there is virus recurrence, slow long-term growth, and a muted world recovery—considered the most likely scenario in a recent McKinsey global executive survey. For further detail on our scenario analysis, see Sven Smit, Martin Hirt, Penny Dash, Audrey Lucas, Tom Latkovic, Matt Wilson, Ezra Greenberg, Kevin Buehler, and Klemens Hjartar, "Crushing coronavirus uncertainty: The big 'unlock' for our economies," May 13, 2020, McKinsey.com.
[4] *World economic outlook, April 2020: The great lockdown*, International Monetary Fund, April 6, 2020, imf.org.

managing deficits and debt-payment plans to maintain their creditworthiness and their ability to service their debt. Just as important, however, they will need to find the optimal ways to support economic recovery—at the national level, for individual companies, and for citizens.

It is likely that governments will need to keep the focus on both of these dual objectives in a continuous balancing act over the next few years. That will limit their use of some of the traditional budget-balancing tools. For instance, our analysis suggests that an attempt to use austerity to close crisis-era government deficits would entail reducing public spending by about 25 percent—clearly a measure that few governments can contemplate. Likewise, using tax increases to fund the deficit would result in tax burdens rising by some 50 percent, which would severely limit corporate investment and reduce country competitiveness.

As we will discuss in a forthcoming article, countries have quite different degrees of freedom in the approaches they can take to managing their fiscal challenges. While some might be cushioned from fiscal pressure in the short term, many will have to build excellence in debt issuance and management and rethink their fiscal programs in a comprehensive manner, leveraging both income and balance-sheet measures (Exhibit 2).

For a start, governments will need to adopt bold revenue-enhancement and cost-containment strategies. On the revenue side, they can use operational-performance levers to improve revenue collection. Previous McKinsey research

Exhibit 2

Given the scale of the fiscal challenge, governments can consider a broad portfolio of available levers.

	Build excellence in debt issuance and management	Unlock funding potential of balance-sheet assets	Optimize revenue streams	Contain expenditures
Objectives	Debt issuance and management capability improvement for best cost/risk portfolio	Nonstrategic sovereign assets leveraged to raise short-term capital	Operational-lever analysis to increase collection without hurting economic recovery efforts	Expenditure review to improve efficiency of spend in light of new COVID-19 realities
Levers	• Upgrade debt story and communication strategy • Optimize debt issuance with improved debt-management tools • Partner with Central Bank to monetize part of the debt	• Create transparency and improve accuracy of assets on balance sheet • Collateralize sovereign assets to raise more debt • Use lending solutions to finance capital-expenditure projects (eg, PPP[1]) • Sell nonstrategic assets • Privatize SOEs[2] • Leverage reserves	• Upgrade fraud deterrence and detection process • Improve revenue collection through better citizen service • Incentivize prepayment • Improve management of assets to increase their yield • Make policy changes on tax rates, brackets, and coverage	• Reallocate budget away from noncore categories • Optimize procurement • Use value engineering to streamline capital expenditure • Review staff utilization and increase productivity

Enablers of medium-term fiscal sustainability

[1]Public–private partnership.
[2]State-owned enterprises.

Without a new approach, closing the cumulative 2020–23 fiscal deficit worldwide would require a 50 percent increase in tax revenues, or a 25 percent reduction in public spending.

has highlighted major opportunities for countries to improve the efficiency and effectiveness of their tax systems, including the use of well-planned digitization efforts. For example, governments can harness new data sources and analytics tools to recover around $1 trillion a year in fiscal leakage—both unpaid revenues and unjustified outbound payments.[5]

Turning to cost containment, governments can use spending reviews to reallocate budgets to the highest priorities while delivering savings through better procurement and fraud reduction. These steps can form part of a broader drive to improve public-sector productivity, which could save the world's governments as much as $3.5 trillion a year, as our previous research has shown.[6]

Today, most governments change their spending allocations only marginally year over year, pointing to an opportunity to review and readjust spending much more decisively. Governments that have undertaken such reviews have often identified savings of around 10 percent or more of the target cost base, without sacrificing the scope or quality of services. At the same time, smarter procurement—via supply management, demand control, and processes such as e-tendering portals—can save governments around 15 percent of addressable spending while simultaneously boosting outcomes.[7]

An even greater opportunity, we believe, lies in partnering with the private sector to ensure that publicly owned assets—including land and property and state-owned enterprises—are valued properly, managed professionally, and securitized or monetized where appropriate. Armed with a new transparency on their balance sheets, governments can shape effective funding and asset-allocation strategies, and draw on the expertise of private-sector players such as the financial sector as they do so. These strategies could encompass a range of options, including using nonrecourse lending solutions such as public–private partnerships to finance capital-expenditure projects; selling nonstrategic assets, for example through land monetization; and leveraging existing reserves to manage the cost–risk ratio of government debt portfolios.

The use of balance-sheet levers could unlock considerable value for governments, with minimal procyclical effects.

Ensuring that fiscal stimulus drives rapid, inclusive recovery

Beyond the imperative of securing sustainable public finances, governments will need to ensure that fiscal stimulus measures focus on the segments that support the recovery the most. And they will also need to find smart ways to use the current and planned support to accelerate economic transformations that are ongoing, or embed new shifts that will be needed.

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[5] Susan Cunningham, Jonathan Davis, and Thomas Dohrmann, "The trillion-dollar prize: Plugging government revenue leaks with advanced analytics," January 2018, McKinsey.com.
[6] *Government productivity: Unlocking the $3.5 trillion opportunity*, McKinsey Center for Government, April 2017, McKinsey.com.
[7] Ibid.

Given that we are still in the early days of the COVID-19 crisis, it is understandable that the world's economic response to date has focused on relief; further interventions will likely be required to revive aggregate demand. In the United States, for example, the $3 trillion COVID-19 response has been allocated almost entirely to immediate relief measures. In contrast, the American Recovery and Reinvestment Act of 2009 allocated 55 percent of its total funding to stimulate industries and revive aggregate demand.[8]

Looking ahead, governments can work with the private sector to design stimulus measures that not only drive recovery but also support the long-term reimagination of economies and societies. For example, the COVID-19 crisis provides a prompt to accelerate government digitization and support companies to adopt new technologies—and thus strengthen productivity and citizen services. The shift to a contactless economy, driven by the pandemic, will contribute to this acceleration. Some countries have already seen individuals' preference for contactless operations increase by 20 percent or more during the crisis, with the industries affected spanning payments, retail, food, accommodation, education, and healthcare.[9]

Governments, the private sector, and educational institutions can also look to the crisis as a catalyst to reskill workforces at speed and scale, with stimulus packages incentivizing a shift to a more productive and equitable economy. In Germany, for example, the recent Qualification Opportunities Act provides for government subsidies of companies' employee-training programs; smaller businesses receive proportionally greater subsidies. Up to 100 percent of training costs for microbusinesses and up to 50 percent for small and medium-size enterprises are covered by the subsidies.[10] Governments can also achieve other objectives, such as increasing registration of informal businesses and improving female participation in the economy, in return for financial support.

There is also room for smart, trust-based collaboration between government and business to rebuild and reimagine key sectors of the economy. Sectors such as automotive manufacturing, construction, and transport have suffered significant disruption of demand and supply chains during the crisis and could require fundamental restructuring. Governments can work with industry associations and leading companies in such sectors to forge common strategic objectives and target joint investment to support reinvented business models, new agility, and greater competitiveness.

The COVID-19 pandemic has already triggered large-scale increases in public borrowing, severely hampered economic growth, and disrupted key industries—and the crisis is far from over. In the months ahead, governments and the private sector will need to work together as never before to ensure the success of an epic balancing act: managing record levels of public debt while fostering broad-based economic recovery. Success would result in a new social contract that shapes a postcrisis era of shared, sustainable prosperity. Failure could lead to a sustained period of depression and austerity on a scale not seen since the 1930s. The stakes are high, and the need for bold, visionary leadership in the public and private sector has never been greater.

[8] Ziyad Cassim, Borko Handjiski, Jörg Schubert, and Yassir Zouaoui, "The $10 trillion rescue: How governments can deliver impact," June 5, 2020, McKinsey.com.
[9] Ibid.
[10] David Fine, Julia Klier, Deepa Mahajan, Nico Raabe, Jörg Schubert, Navjot Singh, and Seckin Ungur, "How to rebuild and reimagine jobs amid the coronavirus crisis," April 2020, McKinsey.com.

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Closing the $30 trillion gap: Acting now to manage fiscal deficits during and beyond the COVID-19 crisis

Countries can not only take immediate steps to create a credible debt story for funding the deficit but also consider a portfolio of interventions to ensure their longer-term financial sustainability.

by Rima Assi, Mael de Calan, Akash Kaul, and Aurelien Vincent

In response to the COVID-19 crisis, governments around the world have ramped up their relief and stimulus spending[1] to unprecedented levels—just as tax revenues have slumped. The result could be a worldwide $10 trillion deficit in 2020 and a cumulative shortfall of up to $30 trillion by 2023.[2] As deficits mount, governments must consider a wide range of options. Some are, in effect, monetizing their debt through central banks. Others lean on additional borrowing or are considering ways to reduce deficits or sell off assets.

Whichever path governments choose, they face a great balancing act: managing record fiscal-deficit levels while restoring economic growth.[3] We estimate that they will seek to raise debt equivalent to an additional 20 to 25 percent of global GDP over today's level, as a direct result of the crisis. To start with, governments must make sure they can not only raise enough credit from debt capital markets (DCMs) and multilateral institutions but also optimize the cost-to-risk ratio of their debt portfolios. Yet for most countries, the greater challenge will be to ensure that increased debt-servicing costs do not crowd out vital investments or trigger big tax increases that would damage competitiveness and reduce aggregate demand at a time of crisis.

All this will not be easy. Our analysis suggests that higher levels of sovereign debt will add as much as $2.5 trillion a year to the debt-servicing[4] costs of governments over the next decade. They will need bold strategies that consider every available lever to master the great balancing act—and to avoid the worst-case scenario: a debt crisis compounding the economic one that COVID-19 has already unleashed. The timing of these strategies will be one of the most complex and instrumental success factors. To avoid disrupting the economic revival, fiscal measures should not come too early, but to avoid losing control of the fiscal trajectory, they should not come too late.

Governments can scale up their capabilities to optimize existing revenue streams and contain expenditures, focusing in each case on operational excellence while taking care not to hamper the economic recovery. In some countries, an even greater opportunity lies in making government balance sheets transparent, including assets such as land, property, and state-owned enterprises (SOEs).

Many countries have considerable scope to manage and generate income from the assets on their balance sheets more effectively. We estimate that, globally, balance-sheet measures could raise up to $3 trillion a year by 2024, enough to fund the entire incremental cost of crisis-related debt service, at least until 2032. This route could prove essential for governments that have limited or very costly access to DCMs—a group that includes about half of all countries—those rated as subinvestment grade (BB+ and below). But balance sheets could also provide powerful options for countries that can more easily access debt, and these include many of the world's largest economies.

The winning recipe in this unprecedented crisis will uniquely combine economic-development and public-finance strategies. Sustainable economic growth provides the foundation for building public wealth and raising tax monies in the future, but a disciplined and healthy fiscal trajectory is necessary to sustain economic prosperity in the medium to long term.

In this article, we focus on the fiscal response and build on the assumption that many governments

[1] Ziyad Cassim, Borko Handjiski, Jörg Schubert, and Yassir Zouaoui, "The $10 trillion rescue: How governments can deliver impact," June 2020, McKinsey.com.
[2] Rima Assi, David Fine, and Kevin Sneader, "The great balancing act: Managing the coming $30 trillion deficit while restoring economic growth," June 2020, McKinsey.com. These figures are based on a McKinsey analysis, as of May 8, 2020, of the impact of a scenario in which the virus recurs, long-term growth is slow, and the world recovery is muted. This is considered the most likely scenario in a recent McKinsey Global Executive Survey.
[3] Ibid.
[4] "Debt servicing" is defined as repayment of interest and principal.

The winning recipe in this unprecedented crisis will uniquely combine economic-development and public-finance strategies.

feel the growing constraint of fiscal deficits. We also shine a spotlight on both the immediate steps countries can take to develop a credible debt story to fund their deficits and the broad portfolio of fiscal and financing interventions they can consider to ensure longer-term financial sustainability. Although governments typically consider policy changes—in taxation, for example—the article also focuses on operational levers. We suggest an approach that countries can use to pinpoint, prioritize, and sequence their options so that they can design and implement measures to achieve or maintain fiscal sustainability over the next two to three years. Last but not least, we consider how governments can build or strengthen their nerve centers for managing the fiscal crisis, so that they can shape and execute their rescue plans.

To ensure fiscal sustainability in and beyond the crisis, consider every lever

To address the immediate priority of funding larger fiscal deficits, governments must raise more debt, either through DCMs or multilateral institutions. To do so, they will need to pull a number of debt-management levers to improve their debt-issuance and -management capabilities—and to optimize the cost-to-risk trade-offs of their debt portfolios.

Just as important, the government of each country will need a credible debt story to demonstrate its medium-term fiscal sustainability and its capacity to generate sustainable economic growth—for example, by financing growth-oriented capital expenditures. That kind of a narrative can reassure investors and ultimately lower the cost of debt for sovereign issuers. In the context of the COVID-19 crisis and its impact on public finances, most countries will have to consider a broad portfolio of solutions in their fiscal plans—both levers for implementation after the crisis passes and levers that can be pulled quickly if the amount of debt raised doesn't bridge their deficits (Exhibit 1).

Most governments can push to optimize revenue streams and contain some public spending, but the great balancing act will limit their scope to use these traditional budget-balancing tools. Our analysis suggests, for example, that attempts to close crisis-era government deficits through fiscal austerity would require cutting public expenditures by about 25 percent—which no government would contemplate. Likewise, using only tax increases to fund the deficit would raise taxation by 50 percent, which would hurt taxpayers, limit corporate investment, and reduce national competitiveness. That's why governments have to consider unlocking the funding potential of balance-sheet assets.

A thoughtful approach to all three nonsovereign-debt levers—balance-sheet funding, revenue-stream optimization, and the containment of spending—can give governments medium- to long-term support to help them fund the additional debt burden accumulated during the crisis. We estimate

Exhibit 1

Given the scale of the fiscal challenge, governments can consider a broad portfolio of available levers.

	Build excellence in debt issuance and management	Unlock funding potential of balance-sheet assets	Optimize revenue streams	Contain expenditures
Objectives	Debt issuance and management capability improvement for best cost/risk portfolio	Nonstrategic sovereign assets leveraged to raise short-term capital	Operational-lever analysis to increase collection without hurting economic recovery efforts	Expenditure review to improve efficiency of spend in light of new COVID-19 realities
Levers	● Upgrade debt story and communication strategy ● Optimize debt issuance with improved debt-management tools ● Partner with Central Bank to monetize part of the debt	● Create transparency and improve accuracy of assets on balance sheet ● Collateralize sovereign assets to raise more debt ● Use lending solutions to finance capital-expenditure projects (eg, PPP[1]) ● Sell nonstrategic assets ● Privatize SOEs[2] ● Leverage reserves	● Upgrade fraud deterrence and detection process ● Improve revenue collection through better citizen service ● Incentivize prepayment ● Improve management of assets to increase their yield	● Reallocate budget away from noncore categories ● Optimize procurement ● Use value engineering to streamline capital expenditure ● Review staff utilization and increase productivity ● Optimize social-welfare policies
		Enablers of medium-term fiscal sustainability		

[1]Public–private partnership.
[2]State-owned enterprises.

that nonsovereign-debt levers could finance all annual repayments, from 2024 to 2032, of the debt raised to fund the recovery from 2020 to 2023.

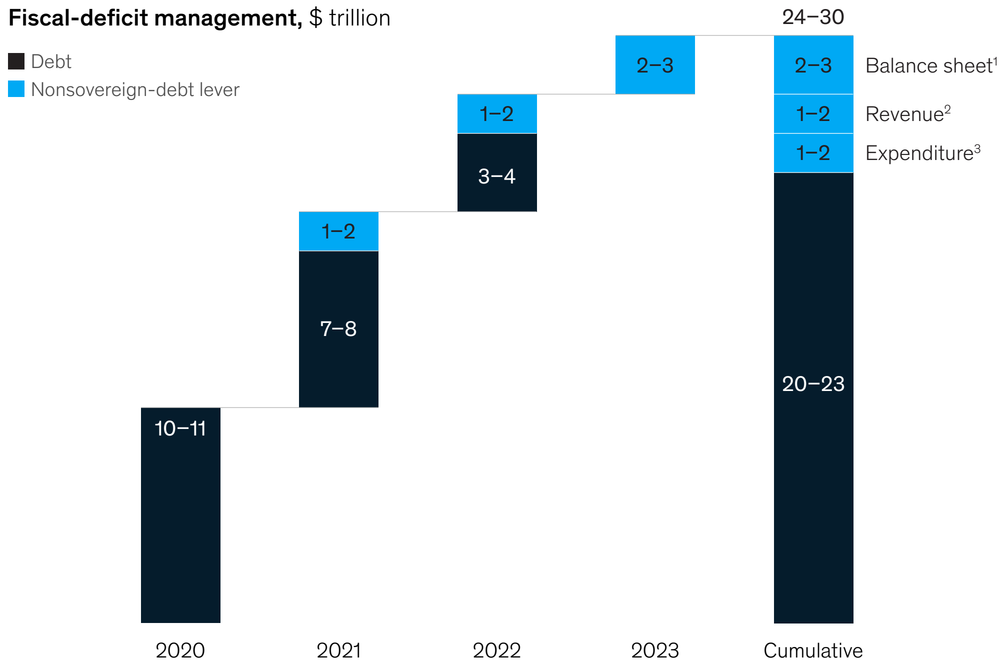
Our analysis suggests that nonsovereign-debt levers will ramp up over time to cover $4 trillion to $6 trillion of the cumulative deficit by 2023 if governments leverage their sovereign assets and increase their discipline and efficiency in collecting and spending revenue—assuming no major changes in fiscal policy. Governments would therefore finance 80 to 90 percent of their cumulative fiscal gap through conventional debt (Exhibit 2). In the advanced economies, which will account for the majority of the new debt issuance, debt-to-GDP ratios would probably rise from an average of 105 percent before the crisis to approximately 125 percent by 2023.

Revamp debt strategies and build credible debt stories

Countries raised $2.1 trillion in debt in the first half of 2020. Since the start of the COVID-19 crisis, the issuance of sovereign bonds has increased by about 25 percent compared with the same period in 2019. Governments have focused on short-term

Exhibit 2

Ramp up debt and nondebt levers to bridge the fiscal gap.



[1]Monetized assets to amount to recurring value of 3–5% of GDP.
[2]Revenues optimization to amount to 2–4% of total revenues through improved collection, resulting in 1–2% of GDP impact.
[3]Expenditure-review savings to amount to 4–5% of addressable spend (expected to be 50% for Organisation for Economic Co-operation and Development countries), resulting in 1–2% of GDP impact.
Source: Center for Strategic and International Studies; International Monetary Fund (IMF) 2020 Fiscal Monitor, Chapter 1; IMF World Economic Outlook; Organisation for Economic Co-operation and Development; World Bank; McKinsey analysis

debt to manage their liquidity needs. Sovereign-bond issuance with tenors greater than one year fell by about 10 percent during the same period. Investment-grade countries—just over half the total—are leading the way, with about 90 percent of the debt raised in 2020 (Exhibit 3).

As the supply of sovereign debt increases, countries can create effective strategies to issue and manage debt and therefore attract investment. We estimate that they will raise an additional 20 to 25 percent of global GDP in debt over today's level as a result of the COVID-19 crisis.

A government-debt strategy must have a clearly articulated debt story mapping the path to long-term fiscal sustainability. A critical success factor for such a debt story is transparency and proactive communication: governments will need an up-to-date economic-development strategy and fiscal plan, with key economic metrics, including tax revenues, capital expenditures, and trade and GDP projections, as well as a solid approach to market communications. Other critical elements of the debt strategy include a fully operational debt-management office (DMO) and a clear internal institutional framework that identifies

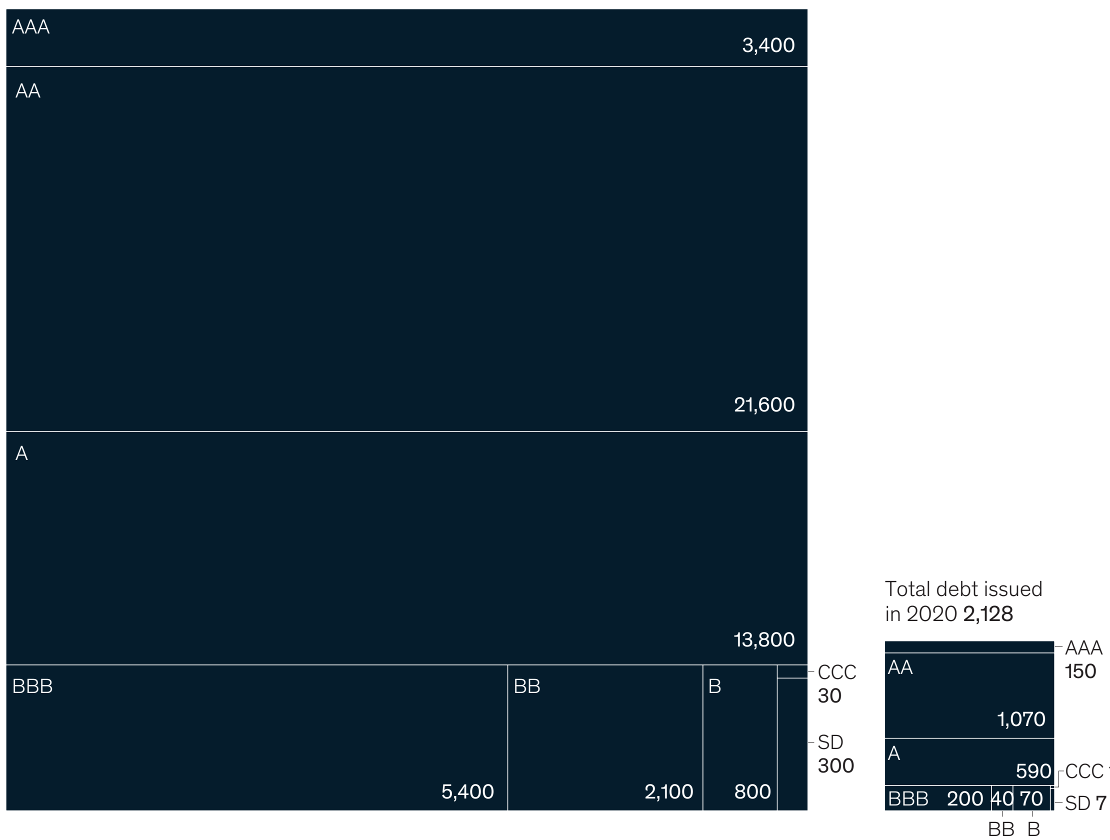
Exhibit 3

Bridging the fiscal gap will require access to funding—which for many countries is not available at a reasonable cost.

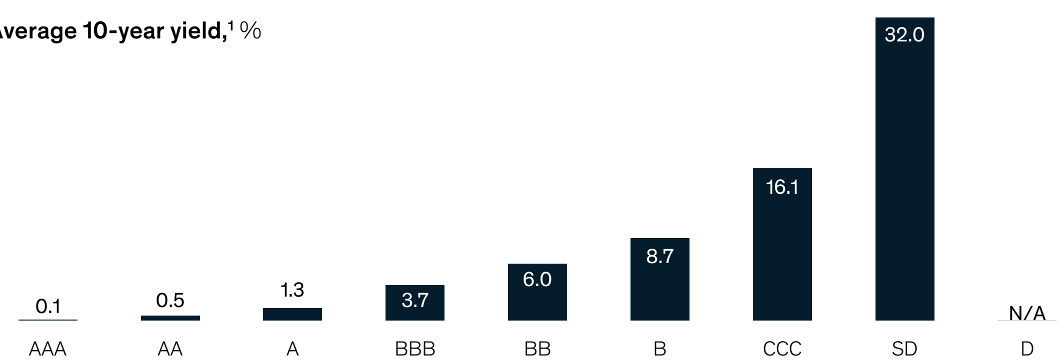
S&P Global Ratings, number of countries

Debt issued, by rating, $ billion

Total debt issued **47,430**



Average 10-year yield,[1] %



[1]Calculated in May 2020, used as a proxy for cost of borrowing.
Source: Bloomberg; International Monetary Fund DataMapper; S&P Global Ratings

As the supply of sovereign debt increases, countries can create effective strategies to issue and manage debt and therefore attract investment.

budget and nonbudget entities and the rules for sovereign guarantees.

Indonesia's DMO, for instance, has issued bonds to fund the country's response to the COVID-19 crisis and its economic recovery. Its first "pandemic bond" raised $4.3 billion. Thanks to sound fiscal discipline in the preceding years—a deficit of less than 3 percent and a debt-to-GDP ratio of about 30 percent—Indonesia has the credibility to explore global bonds. It has issued an estimated $34 billion in net debt in 2020 and plans to sell a further $27 billion in pandemic bonds to cover additional spending.[5]

To unlock additional value, manage the balance sheet as an investor

Traditional funding sources are unlikely to plug the fiscal gap for most countries. Governments must also consider alternative solutions that leverage their assets and the depth of their balance sheets. Creating transparency, estimating the value of assets on the state's balance sheet more accurately, and unlocking that value through monetization strategies will be important to generate revenue that complements debt as a source of financing.

Transparency is important to attract both financiers and potential investors. We estimate that governments could raise 2 to 3 percent of GDP a year by monetizing the assets on their balance sheets. Global public assets are worth more than 200 percent of global GDP, around half of it in real estate—a tremendous untapped opportunity to raise additional cash resources.

To capture it, governments should manage their assets as investors: they will need to review the value and returns of their real-estate holdings, SOE investments, and other assets. Start by identifying high-potential assets and prioritizing opportunities to optimize them. First, government agencies should determine which assets to consider. Top-value assets can be identified and categorized with the help of a scan of inventories provided by agencies and other inputs from them and from experts. The assets in question might include downtown buildings, surplus land in high-value areas, and assets identified through the hypotheses of agencies or experts.

The next step is to size the opportunities after an initial opportunity assessment that considers the value-creation levers that will have the greatest impact, comparative assets, case examples, and the capital base. These opportunities include high-value property for sale or lease, buildings in relatively low-density areas that can be developed more intensively, and select businesses and infrastructure that can be divested or optimized.

Governments can further filter such a list of sized opportunities through a qualitative feasibility assessment that draws on the views of agencies to arrive at a short list of the top five to ten opportunities. Each of them can then undergo a deep-dive analysis to evaluate nuanced legal considerations and assess sources of additional value. These vetted opportunities may then move forward.

Governments can provide seed equity to create an infrastructure fund as a special-purpose vehicle (SPV) to monetize the public real-estate portfolio by raising debt against it. Previously unrecognized or

[5] Announcement by the government of Indonesia, April 6, 2020.

undervalued real-estate assets can be transferred to the fund at market value and then used as collateral to finance development. A review of existing assets conducted in a US state, for example, revealed an estimated $600 million to $1.1 billion in potential untapped annual recurring value. Real estate accounted for about 70 percent of the value of the reviewed assets, infrastructure and operating businesses (such as transportation companies) for 15 and 10 percent, respectively.

In Singapore, the creation of an active holding company to maximize the ROE of national commercial assets contributed about $3 billion to the country's budget.[6] New Zealand was the first country (in 1991) to adopt a transparent balance sheet applying international accounting standards. It has since tracked the evolution of its net worth (assets less liabilities), which has now reached 45 percent of GDP. As a result, the country raised its credit rating to AA+ and reduced the cost of servicing its debt.

This kind of review allows governments not only to increase the potential value of such holdings but also to enable alternative funding solutions: they can collateralize sovereign assets to raise more debt, use nonrecourse lending solutions (such as public–private partnerships) to finance capital expenditures, and exploit or sell nonstrategic assets (for example, by raising revenue from land).

To increase revenues, make the most of collection levers

In an environment of decreasing revenue pools, governments must not only rethink the way they collect revenues but also ensure that they collect everything to which they are entitled. Revenue-collection agencies, such as tax and customs authorities, can strengthen their collection capabilities. More efficient collection, inspection, and compliance could increase fiscal revenues by 3 to 5 percent, which would compensate for 15 to 20 percent of the global drop in fiscal revenues expected as a result of the slowdown. The use of advanced analytics to improve the selection of audited taxpayers, for example, enabled one Organisation for Economic Co-operation and Development country to generate $400 million in additional revenues.

Such a transformation requires strong leadership and disciplined execution, with three distinct components (Exhibit 4):

[6] Dag Detter et al., "Putting public assets to work," Citi Perspectives, 2019.

Exhibit 4

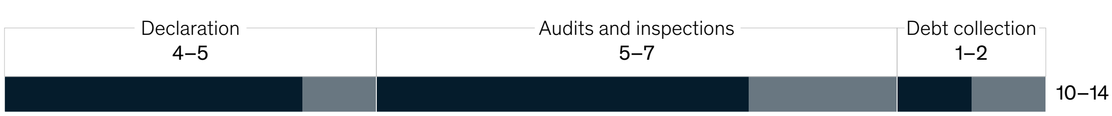
There is a significant revenue-acceleration opportunity from operational levers.

Core levers in tax and customs value chain

● Near term ○ Longer-term or policy-related potential

Registration	Declaration	Payments	Audits and inspections	Debt collection
○ Formalize establishments	● Improve declaration-verification intelligence ○ Revise current tax/tariff regime (eg, structure, levels)	○ Reduce payment delays	● Improve field-inspections operations and auditing	● Accelerate undisputed debt collection ● Enhance disputed debt-collection operations

2- to 3-year potential out of addressable baseline, by value-chain segment, %



— *Improving the tax system to strengthen long-term sustainability.* One key move is to simplify and improve corporate tax and VAT regimes—for example, by launching electronic-invoice programs. The necessary steps include designing specific tax regimes for microactivity and informal businesses and redesigning exemption regimes and incentives to ensure that they actually do promote investment and economic development.

— *Reforming tax and customs administration to improve enforcement and collections.* The key steps here include ramping up the processes and capabilities for inspections and audits—for example, by using advanced-analytics techniques and third-party data from banks, utilities, retailers, and other sources. Governments and tax authorities must also have the ability to make debt-collection processes more stringent and to move more quickly against defaulters.

— *Improving compliance.* The levers available include launching or strengthening initiatives to register businesses and individuals. Governments can also reduce barriers to compliance—for example, by increasing the use of remote payments and prefiling and, where appropriate, giving defaulting taxpayers a clean start. Longer-term levers include launching or strengthening taxpayer-education programs through mass-communication media.

Achieve material savings without hurting the economic recovery

New COVID-19 realities, such as the increased adoption of digital technologies and greater demand for healthcare, give governments a unique opportunity to revisit their planned expenditures and, in many cases, to enhance the delivery of services. To make good on this new reality, governments should enable the norms it requires, such as physical distancing, sanitization, and remote working. Each of them has budgetary implications.

Governments will also have to consider the trade-offs between achievable fiscal savings and their effects on the economy and explore anything that helps them to do more with less. In the short term, they may well have to deprioritize all expenditures that aren't urgent. To achieve material savings, governments must consider four levers:

1. accelerating efficiency through best-practice procurement measures,[7] such as centralized spending on common categories and enforcing reference prices by developing a price index

2. reducing the wage bill without reducing headcounts; one tried-and-tested method is to optimize the use of labor and to eliminate "ghost workers" (salaries paid for nonexistent roles)

3. reviewing subsidies and their application, with a focus on transparency and using digital tools to spot leakages while streamlining eligibility processes and delivering benefits[8] more efficiently

[7] See Tera Allas, Diego Barillà, Simon Kennedy, and Aly Spencer, "How smarter purchasing can improve public-sector performance," March 2018, McKinsey.com.

[8] See Melanie Brown, Damien Bruce, and Mike McCarthy, "Social spending: Managing a $5 trillion challenge," August 2019, McKinsey.com.

In an environment of decreasing revenue pools, governments must not only rethink the way they collect revenues but also ensure that they collect everything to which they are entitled.

4. making infrastructure and capital deployment more effective through value engineering to streamline capital expenditures, among other things; governments can also improve the delivery of initiatives by monitoring contractors more effectively

Value engineering includes the implementation of design-to-value and lean-execution techniques to standardize designs. It can, for example, be used to reduce hospital construction costs by streamlining design standards for recurrent platforms (such as the rooms of patients) and by optimizing specifications. Typically, value engineering can save up to 20 percent of the total construction cost of a hospital project and about 10 to 15 percent of the capital cost of roads, housing, and schools.

Develop a fiscal-sustainability plan now

Countries have different degrees of freedom to act, and these differences will influence the levers each country uses in its fiscal-sustainability plan, which will depend on its starting fiscal position and ability to unlock short-term funding. The resilience of its midterm approach to economic and fiscal issues will be important as well.

What countries do with each lever and the timing of its implementation will vary (Exhibit 5):

— Investment-grade countries with broad access to DCMs can prioritize increasing their access to debt markets by updating their debt stories and strategies. They can then plan their fiscal consolidation after the economic recovery.

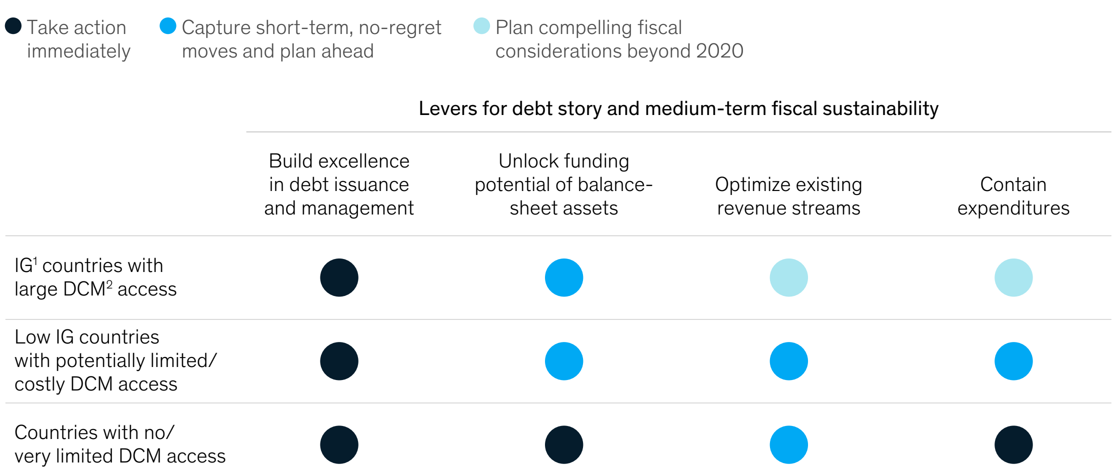
— Countries with potentially limited or costly access to DCMs may need to emphasize making their assets more transparent (and therefore improve their debt story) and use alternative funding solutions. They will also have to plan for fiscal consolidation in the shorter run and communicate their medium-term fiscal plans, including the actual levers used quickly to achieve fiscal sustainability.

— Countries with no or limited access to DCMs will need to pull all available levers to develop a comprehensive, sustainable plan that allows them both to cover their short-term expenditures and to maximize their medium-term access to finance.

Exhibit 5

Depending on archetype, countries have several courses of action.

Action timeline, by country archetype



[1]Investment grade.
[2]Debt capital market.

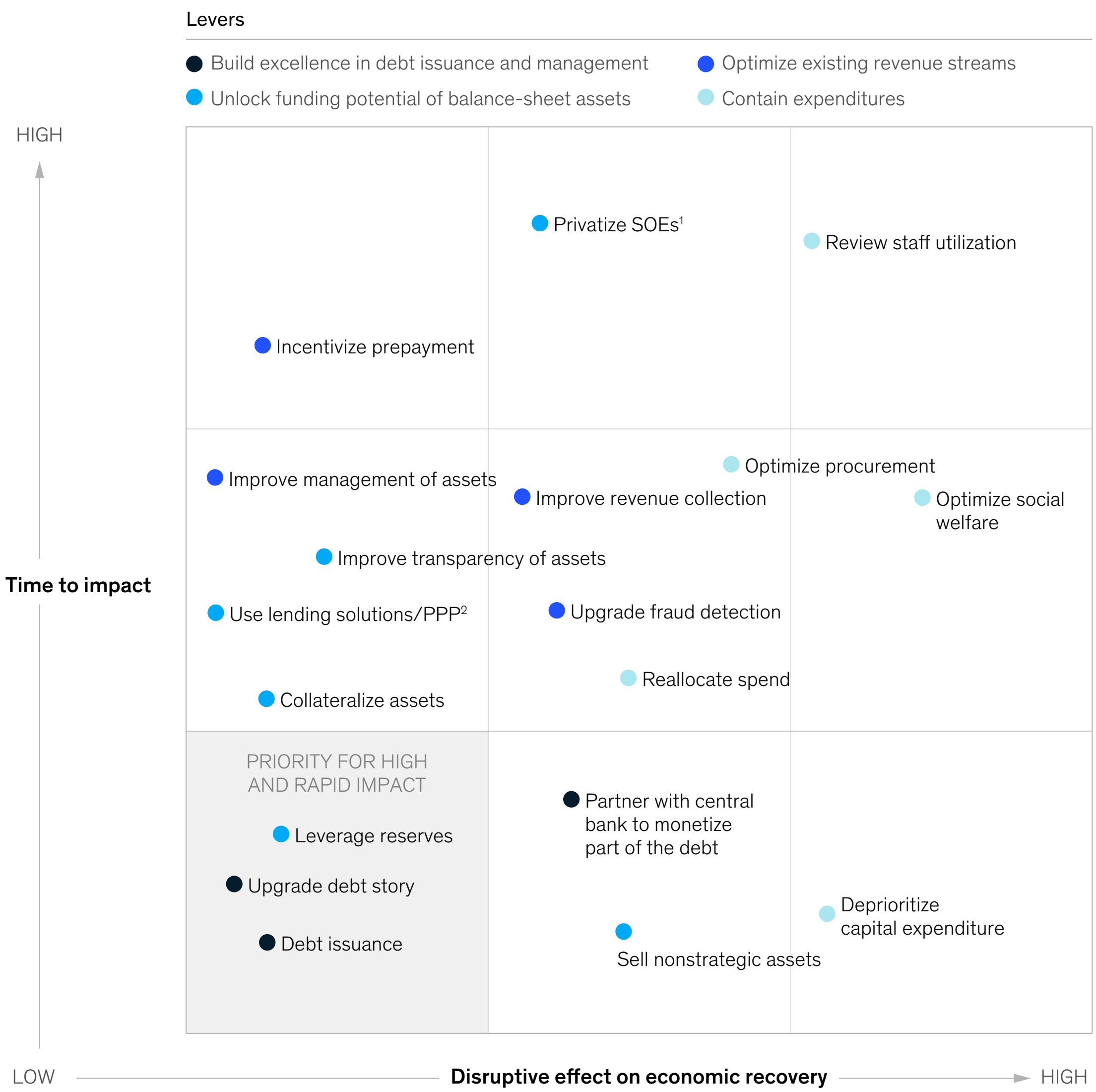
As each country builds its fiscal-sustainability plan, governments can prioritize easily implemented levers that will work quickly and will not hamper the economic recovery in the short term. Improving the debt story, leveraging reserves, and reallocating expenditures, for example, are all likely to achieve short-term results without significantly disrupting the economic recovery. However, the impact of these levers will vary from country to country (Exhibit 6).

Governments will also need to utilize other levers, but their timing will be specific to each country. Those with easier access to the DCM are likely

Exhibit 6

A detailed fiscal plan will require prioritization of sublevers based on time to impact and disruption to economic recovery.

Prioritization matrix



[1]State-owned enterprises.
[2]Public–private partnership.

to give the economy more time to recover by scheduling other, more disruptive levers for the medium to long term. Countries with no or limited access to the DCM will probably need to pull these disruptive levers in the short term, since they must struggle to finance their immediate fiscal deficits.

Last but not least, governments will need to upgrade their ability to shape and execute their fiscal plans through a fiscal nerve center, which can improve and speed up responses to disruptions and optimize the fiscal impact of government policy during the rapidly evolving crisis. Such a nerve center can also help finance ministries use real-time economic and fiscal dashboards to make fiscal decisions, develop new initiatives, accelerate existing ones, and coordinate key budget entities.

With the nerve center established, governments can act on three immediate needs. First, they can build fiscal scenarios and project cash flows to comfort their constituents and investors by creating transparency. Second, they can simultaneously develop robust fiscal-sustainability plans, implement prioritized levers, and monitor progress. Third, they can act immediately to strengthen the future fiscal sustainability of their countries by implementing structural levers while remaining mindful of the potential impact on the country's economic recovery. Then they can use their performance on key outcome and practice metrics to identify which levers to prioritize in the fiscal-rescue plan. Benchmarking performance against similar countries will help highlight the levers that can have the greatest impact and guide the plan's development.

COVID-19 has created a perfect storm for public finance: sharply increasing expenditures, declining revenues, and therefore unprecedented and enduring fiscal deficits. In this environment, governments cannot rely on business as usual to finance their deficits and ensure their fiscal sustainability.

Instead, they should act quickly to create a credible debt story and consider the full portfolio of levers available to them given their fiscal starting position, their ability to raise short-term debt, and the resilience of their medium-term fiscal plans. That approach will not only help them develop and implement robust fiscal-rescue plans for 2020 but also ensure they put their countries on a path to fiscal sustainability.

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Using public real estate to fuel a postpandemic recovery

As deficits mount, governments can use their real estate holdings to create breathing room.

by Dag Detter, Ali Abid Hussain, and Jonathan Woetzel

The public sector has responded to the COVID-19 crisis with staggering outlays, in some cases up to 40 percent of GDP, to save lives and livelihoods. On balance, the spending seems likely to serve its purpose—by keeping economies going until a vaccine and therapeutics can be developed and distributed. But it will also likely produce a $30 trillion deficit by 2023, which will put pressure on operational budgets and result in service cuts. In the United States, for example, 66 percent of counties have cut or delayed infrastructure maintenance and 54 percent have cut or delayed new infrastructure projects.[1] Many states are facing a future in which spending on important everyday services—mass transit, adult and elderly care, mental health support, substance-abuse programs, school programs like special education, children's health insurance, and more—will become more difficult.

Governments are borrowing to plug the gaps. Public debt is set to expand dramatically this year, by 16 percent in advanced economies, and 17 percent in emerging middle-income countries.[2] The new obligations come at a time when public-debt levels in many nations are already at their historical peak. A high debt burden limits a government's ability to raise the financing required to fund growth; many have debt thresholds they cannot breach. Today, many governments are unable to raise more debt. Further, such a burden makes default more likely if operating cashflows shrink. Three countries have already defaulted in 2020, and more are likely.[3]

How will governments maneuver between the rock of service requirements and the hard place of financial default? One possible passageway is through financing mechanisms that remain largely untapped. Governments have an opportunity to reimagine their finances by focusing on one of the most underappreciated public assets—their real estate holdings and operations. In this article, we will outline the possibilities and discuss three structures that allow governments to manage and invest their real estate assets. Each of these have proved effective in different settings around the world. They are not, however, recommendations, as every public context has its own requirements. Moreover real estate is only one aspect of the broader question of public wealth, which we will address in upcoming research.

The opportunity of public real estate

Government is a huge holder of real estate, as well as a tenant. For example, the US federal government owns about 885 million square feet of building space, and it leases another 254 million square feet.[4] For cities, some estimates suggest that the entire public portfolio of real estate within a city has the same value as the city's GDP and could represent a quarter of the total market value of real estate.[5]

Governments can realize the value of public real estate in two ways—earning their passage through a modern-day version of the Greek legend of Scylla and Charybdis. First and most important, they can increase the value of the asset through better management or rethinking its use. For example, in Rio de Janeiro, Brazil, Escola Municipal Doutor Cícero Penna is an ordinary public school in an extraordinary setting. It's located on Avenida Atlântica, the famous stretch facing Copacabana Beach, surrounded by luxury high-rises on perhaps the most expensive land in the country. Education is of course vital, but it could be conducted a couple of blocks away on much cheaper land, in an environment that might also be more conducive to students' learning. The city could realize the highest value of the beachfront property, while still retaining ownership. It could build an equivalent or better school with part of the revenue from developing the more valuable property; the remainder would flow into the general account. Cities around the world have thousands of similarly overlooked opportunities.

1 *Comprehensive analysis of COVID-19's impact on county finances and implications for the U.S. economy*, National Association of Counties, July 2020, naco.org.
2 *World economic outlook update, June 2020: A crisis like no other, an uncertain recovery*, International Monetary Fund, June 2020, imf.org.
3 "Sovereign defaults set to hit record in 2020," Fitch Ratings, May 12, 2020, fitchratings.com.
4 Federal Real Property Profile Summary Report Library, US General Services Administration, October 4, 2019, gsa.gov.
5 Dag Detter and Stefan Fölster, "Unlocking public wealth: Governments could do a better job managing their assets," *Finance and Development*, March 2018, Volume 55, Number 1, pp. 44–7, imf.org.

Despite the benefits, governments have not been able to tap into the hidden goldmine of their real estate portfolios for several reasons.

A second kind of fiscal space is created if governments are able to issue debt secured by their real estate portfolios and held in special-purpose vehicles (SPVs), which may be more appetizing to investors than sovereign debt or general-obligation bonds, as well as to governments, as both of these can affect a government's credit rating. For example, assume that an issuer can raise 30 percent of the portfolio's value in debt, as is typical for investment-grade bonds in the United States. If the portfolio is equivalent to about 50 percent of a city's GDP, and provided they can create sufficient SPVs as discussed below, cities can raise additional debt of about 15 percent of GDP. Both levers create additional cashflow that in turn could pay for the services that governments must continue to provide.

Why this hasn't happened so far

Despite the benefits, governments have not been able to tap into the hidden goldmine of their real estate portfolios for several reasons. First, there are the technical problems of accountancy. Many national governments don't produce true financial statements that would recognize assets or amortize investments, among other features. Instead they rely on annual budgets and the deficits and surpluses they produce. That kind of short-term thinking hampers the development of debt policy or a true capital investment program.

City and state governments do produce financial statements, but they have their own accounting problems. In the United States, subnational governments follow Governmental Accounting Standards Board (GASB) guidelines in preparing their financial statements. The guidelines hold vast sway, since creditworthy debt cannot be issued without financial statements that adhere to them. GASB guidelines presume that the main purpose of government assets is to provide services as opposed to generating cashflow. This approach overlooks the ways that service needs change over time, and it does not recognize the value of the asset based on its potential to generate cash. Most cities record real estate at its book value rather than at market value. The difference can be enormous: in the city of Boston, indicative market value was shown to be almost 40 times[6] book value and in Pittsburgh, 70 times.[7]

A second problem is multiple and overlapping layers of government. Real estate assets are governed and managed by hundreds or even thousands of discrete agencies and authorities. Many local governments do not have a consolidated list of their assets. It's no accident that Singapore is so often cited for its sound public-sector management. The absence of multiple layers of government along with its geographic concentration result in unitary management, which alone would allow for much stronger financial thinking.

[6] *World Bank Blogs*, "Paying for development—Governments are sitting on a 'goldmine,'" blog entry by Dag Detter and Marco Scuriatti, April 10, 2019, blogs. worldbank.org.
[7] Hanan Amin-Salem, Ian Ball, Dag Detter, and David Walker, "How smart public assets management can drive the post-COVID-19 recovery," Citi, October 15, 2020, publicwealth.se.

Two other challenges stand out in some parts of the world. Unlike Singapore—where an apolitical, professional cadre of civil servants is considered a norm and highly valued—other countries suffer from a politicization of government that deprives them of access to the best minds. Historical norms around government compensation and incentivization may also make it difficult to recruit and retain financial talent. Finally, privatization, though it provides that access, must bear in mind the crucial differences between public and private context. Defining and maintaining the mandate to provide public goods is a critical challenge that when ignored has left citizens justly suspicious of privatization efforts.

Three structures to realize public real estate value

Creating dedicated organizations that will professionalize the management of governments' real estate assets will create value and fiscal space. Three distinct structures—a centralized government unit, an SPV governed by a public entity, and an arm's-length institution—offer one or more of three benefits (exhibit).

The three structures represent a progression in the rewards from and potential impact of public real estate. Each also incurs setup costs including the need for talent, market-based information, and regulatory change.

The centralized unit offers the promise of enhanced accountability for operating assets, which could be sufficient for property management. The SPV adds the benefit of an independent balance sheet—which may be needed to raise new debt that sits on a separate balance sheet, thus minimizing the impact on the government's credit rating and enhancing its debt-raising capacity. An SPV also has potential to attract top talent through performance-linked incentives and agility in procurement of subdevelopers and contractors. Finally, the arm's-length institution provides both accountability and an independent balance sheet, as well as the third benefit of creating a truly sustainable and

Exhibit

Governments can choose among three institutional options.

	Centralized government unit	Special-purpose vehicle	Arm's-length institution
Relevant use	Property management	Land development	Financing and development of real estate and infrastructure
Benefits			
Enhanced accountability	●	●	●
Independent balance sheet		●	●
Autonomous governance			●
Implementation requirements	Access to top talent; empowered mandate; budgetary support	Access to top talent; ownership of income-generating assets; independent accounting (financial statements)	Access to top talent; independent board; access to capital markets for funding; independent accounting (financial statements)

autonomous model for real estate asset management. Private-capital mobilization may even require arm's-length institutions to assure private markets that project selection is done on a commercial basis and is not subject to political influence.

Centralized government unit

Centralizing management of the government property portfolio in a single unit can unlock value by reducing the misuse of real estate assets, such as schools on beachfront property.

The centralized unit needs adequate authority to influence the ministries that own real estate and other government entities that use public property. That authority can be derived either from direct sponsorship by the highest political office or through ownership of the property titles in the unit-managed portfolio.

In 2011, New Zealand centralized public property management in the newly created Government Property Group (GPG), which covers property owned or leased by 62 government agencies, including all office accommodation and public-facing areas. Between 2011 and 2017, GPG saved $275 million in rental and facilities management. Some was hard savings, and some was cost avoidance achieved by reducing the size of the government's office requirements by 207,121 square meters, which is equivalent to 30 football fields. The unit also lowered the average rental cost per employee to $5,066, versus a comparable private-sector average of $7,328.

GPG strives to achieve efficiency in property management, typically by promoting collaboration between agencies and thus a more effective public service. Co-locations are one way agencies can share resources, work more closely together, and deliver more cohesive public services. In 2020, GPG opened four new office buildings in Christchurch; three have several agencies co-located in them. These modern buildings are showing other agencies how they can share facilities, help reinvigorate the central city, and provide seamless services to the public.

Many countries have succeeded with centralized government property-management units. Australia's Property and Construction Division (PCD), part of the department of finance, manages the nondefense portfolio of government properties, including commercial office buildings, law courts and other special-purpose properties, public-interest properties, heritage buildings, residential properties, and vacant land. In 2008, Dubai established wasl as part of the government's Dubai Real Estate Corporation (DREC) to manage and expand its real estate portfolio. The unit's main objective is to establish Dubai's position as a premier location to live and work and an attractive destination for tourists.

The special-purpose vehicle

Federal, state, and local governments can set up corporatized entities—with their own balance sheets, profit and loss, transparency, and professional management—to develop real estate, manage assets, and raise financing. The corporate entity can then use its property assets, booked at market value, as collateral to raise debt. The proceeds can be used to provide services, invest in new infrastructure development, or for other suitable ventures. By placing some or all of its real estate portfolio in an SPV under a publicly owned and professionally managed entity, the government can raise capital and also create visibility into its real estate assets and the value those assets can create.

Many governments have set up SPVs over the years. For example, the city of Copenhagen was able to monetize some unused land at Ørestad by transferring it to the Copenhagen (CPH) City & Port Development Corporation (the Corporation). Following the transfer, the local government rezoned the land for residential and commercial use. By borrowing against the value of this newly acquired land, the Corporation was able to make a one-time payment of $2 billion to Metro Construction Company to fund the expansion of a transport system.[8]

Today, the Corporation continues to use funds borrowed at low cost against its balance sheet of

[8] Bruce Katz and Luise Noring, *The Copenhagen City and Port Development Corporation: A model for regenerating cities*, The Brookings Institution, June 2017, brookings.edu.

assets and enabled by the city's AAA credit rating and a central bank guarantee to achieve greater leverage than comparable private-sector entities. In its 2019 annual report, the Corporation reported debt of $2.3 billion against a total asset base of $2.4 billion (a 95 percent debt-to-asset ratio; most investment-grade companies' leverage is less than 50 percent[9]). However, because the Corporation's financing is guaranteed by the central bank, it still burdens the government with higher costs and potentially affects the sovereign credit rating, which would not be the case if the guarantees were issued by an arm's-length financial institution. Moreover, while its corporate status allows it to make decisions independent of electoral and political concerns, the Corporation is still subject to state oversight.

The arm's-length financial institution

Governments can finance development of new real estate assets and associated infrastructure through an autonomous financing institution that unlocks private-sector financing by either finding ways to share risks with private investors, such as guarantees, or cofinancing along with the private sector. Some of the new assets in which the arm's-length institution invests may be built on land the government owns and sells to the institution, creating fiscal space for the government. Such an institution requires the highest level of accountability and talent but also promises the greatest return for governments.

To ensure that financing decisions are based on a robust appraisal of the project and assessment of its risks, rather than political considerations, three critical success factors need to be in place:

— *A clear mandate.* Institutions need to have a clearly defined mandate to be able to balance often-competing objectives (for example, creating "additionality" [that is, incremental financing that does not simply crowd out the private sector] versus maximizing financial return).

— *Operational autonomy.* The institution needs an independent board that appoints professional managers.

— *Talent attraction.* The institution must offer a compelling proposition to top talent. The ability to structure commercially viable deals and underwrite credit risk is a key differentiator between high-performing institutions and others.

The Canada Infrastructure Bank (CIB) was set up in 2017 as a Crown corporation with an independent and professional board that reports to the parliament through the minister of infrastructure and communities. Its mandate is infrastructure, not real estate. The ownership structure and governance of the CIB was designed to ensure the three critical success factors above. As of March 2020, the CIB is participating in nine transformational projects that are in the public interest, linked to national economic priorities, and delivered in partnership with public-sector sponsors and private and institutional investors. All projects will generate revenue, and all are commercially viable, having satisfied commercial due diligence requirements including private-sector investment.

In the wake of the COVID-19-induced shortfall, governments need to create fiscal space in coming years. Public real estate is a notable opportunity to meet this requirement and to enhance accountability and fiscal performance of the public sector.

[9] Richard Cantor and Albert Metz, *Moody's Special Comment: The distribution of common financial ratios by rating and industry for North American non-financial corporations: July 2006*, Report Number 98551, Moody's Investors Service, August 2006, moodys.com.

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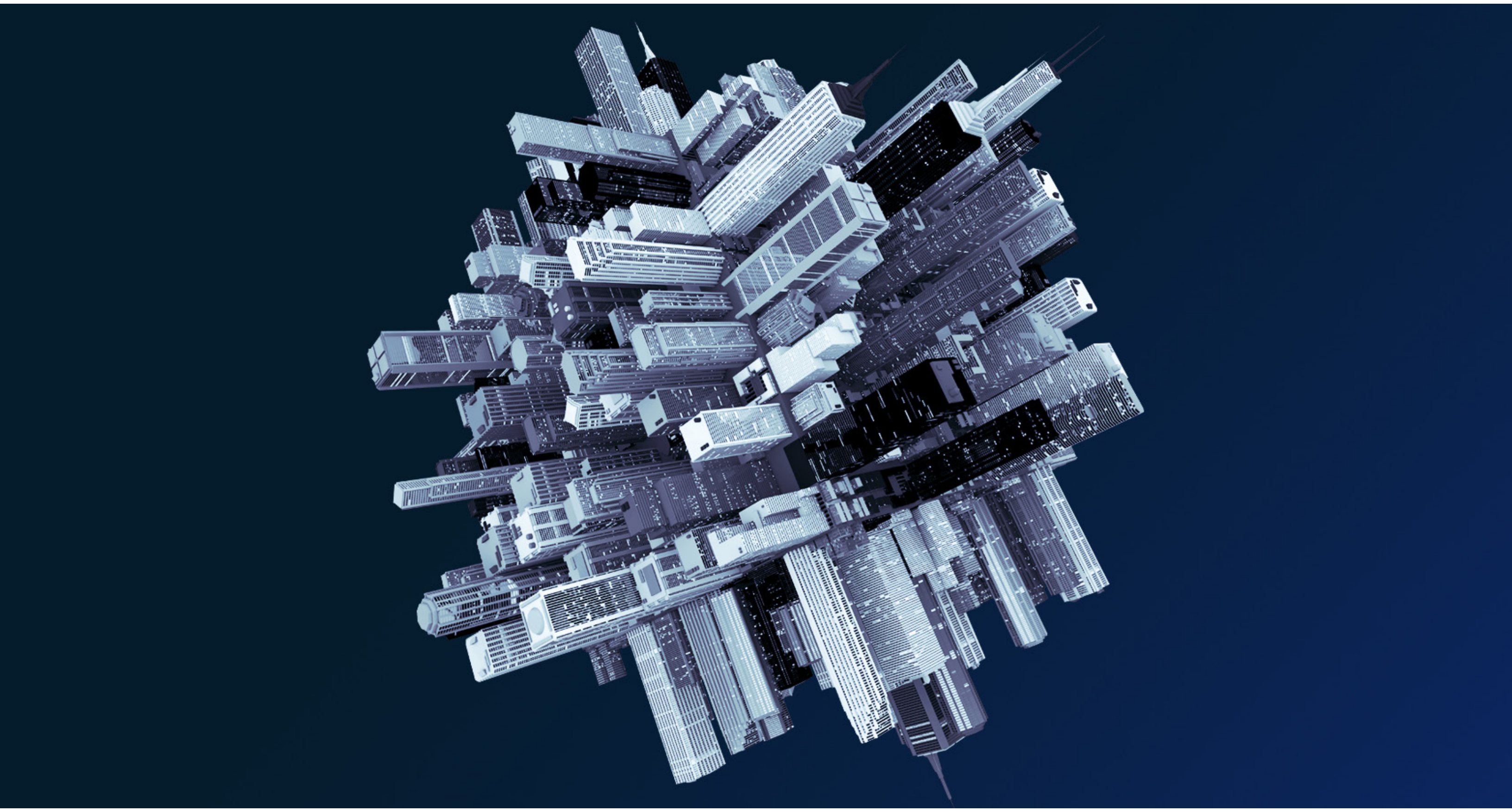
Reimagining tax authorities for the future

The COVID-19 crisis is creating new challenges for tax authorities—but this moment isn't only about responding to the impact of a global pandemic. Tax authorities can reimagine themselves to be better prepared for the future.

This article was a collaboration by the global Public and Social Sector Practice, including Brendan Bertagnoll, Jonathan Davis, Jonathan Dimson, Sid Kamath, and Juan Rebolledo Marquez.



The COVID-19 crisis has devastated lives and livelihoods around the globe. Just as businesses have had to transform operations and individuals have had to rethink every aspect of daily life as they respond to the crisis, governments also have had to reinvent how they operate. This is especially true for tax authorities, which face new challenges as they seek to support unprecedented levels of government spending[1] as well as a recovery from the deepest global recession since the end of World War II.[2]

Tax authorities are figuring out how to operate with remote workforces and rebuild audit strategies that are sensitive to current economic conditions. They are deploying new tools to support collections efforts as large-scale debt moratoriums, filing postponements, payment extensions, and widespread bankruptcies introduce noise into the traditional analytics used to segment taxpayers. Tax authorities are learning to do all of this while facing enormous pressure to collect tax revenue while also being considerate of the taxpayers trying to recover from the crisis.

Many tax authorities were facing challenges even before the COVID-19 crisis. For example, in 2017, the European Union's value-added-tax (VAT) gap alone was approximately €137 billion. For context, that's equivalent to nearly 20 percent of the European Union's historic Next Generation EU fund that was recently agreed to as a way to help countries recover from the pandemic-related recession.

And the COVID-19 crisis has exacerbated these challenges. For example, for the fiscal year through July 15, 2020, the South African Revenue Service reported an underrecovery of $4.8 billion—more than the combined amount that South Africa borrowed from the International Monetary Fund and the African Development Bank to combat the crisis-related effects.[3] Brazil's federal tax collection in June 2020 fell to a 16-year low for the month.[4] In Texas, state tax collections have decreased by approximately $5.7 billion from March through June 2020, compared with the same period in 2019.[5]

Tax authorities are well aware of the immediate headwinds they face from the COVID-19 crisis, and many are already mobilizing to respond. As they begin this transformation journey, it's helpful to reflect on how the changes they lock in today could help not only to mitigate the risks of the COVID-19 crisis but also—if done correctly—to better prepare themselves for the future. Failure to consider this could cause tax authorities to face even larger future tax gaps than they are currently experiencing.

Reimagining what the future could look like

How can tax authorities position themselves for success over the next several decades, even as they are working tirelessly to address today's challenges? It starts by having a vision for what the future could look like and how tax authorities could thrive within it.

In one provocative vision for the future, for example, the tax authority becomes entirely invisible. This is one possible scenario that could evolve from today's landscape—of cashless payments, cash registers and digital-invoicing tools that are connected directly to accounting software, and digital tax

[1] Governments have responded to the COVID-19 crisis with unprecedented, large-scale fiscal stimuli (representing around 10 percent of GDP) to stimulate economies and blunt the crisis's impact on people's livelihoods. In the first two months of the crisis response, governments announced stimulus packages totaling $10 trillion, which is three times more than the response to the 2008–09 financial crisis. "As the economy recovers fiscal policy has to shift," *Economist*, July 11, 2020, economist.com.
[2] In 2020, the world economy is expected to experience the deepest global recession since the end of World War II, shrinking by more than 5 percent.
[3] Prinesha Naidoo, "South African lockdown tax loss exceeds value of two virus loans," Bloomberg, August 1, 2020, bloomberg.com.
[4] Jamie McGeever and Gabriel Ponte, "Brazil tax revenue falls to lowest for June in 16 years," Reuters, July 23, 2020, reuters.com.
[5] Tony Romm, "Texas sees sharp decline in tax revenue as coronavirus surge unleashes more budget uncertainty," *Washington Post*, July 7, 2020, washingtonpost.com.

Tax authorities are figuring out how to operate with remote workforces and rebuild audit strategies that are sensitive to current economic conditions.

registries—that is firmly established and maturing in many countries. To understand what this would mean, let us follow the journey of an imaginary taxpayer—a baker we will call Maria.

Today, when Maria shops for raw materials for her business, she pays a VAT in most OECD countries.[6] When she sells a loaf of bread, she collects a VAT from the customer. Maria must keep meticulous records of every transaction, and—during each VAT filing period—calculate thousands of these transactions in order to reconcile her net VAT obligation. This is in addition to tracking business expenses and other corporate income tax deductions, employee payroll withholding, and other tax records to ensure that she is fully tax compliant. Under this system, tax compliance is time consuming and costly. And in many cases, it reduces cash flow to small businesses, which must wait to receive VAT and income-tax refunds.

An invisible tax authority could change all of this.[7] In such a system, when Maria buys her raw materials, she doesn't pay any tax. Instead, the cashier terminal simply sends real-time information to the tax authority, creating a digital record of the purchase.

When Maria sells a loaf of bread, her customer pays a tax that reflects the value added throughout the entire value chain (think of this as a "virtual VAT" or an "auditable retail sales tax" system), and again, real-time information is sent to the tax authority. This system creates an auditable trail through the real-time digital records of transactions—not through counterparties reporting pairs of input VAT and output VAT—enabling the tax authority to levy a net tax at only the end of the value chain because it already has visibility into every previous transaction.

The data sent to the tax authority are used to calculate Maria's corporate income tax obligation generated from each transaction in real time, and estimates of her business revenue and costs and other deductions are made (and refined over time with machine learning). VAT collected by Maria and her per-transaction corporate income tax obligation are immediately deposited with the tax authority as part of each transaction.[8] Once a quarter, Maria receives a digital tax statement showing her total liability and what's already been paid automatically. Her remaining net tax obligation or refund, if any, is automatically processed, according to the preferences Maria has set on her account.

[6] OECD: Organisation for Economic Co-operation and Development. While a sales tax (such as the one in the United States) achieves the same policy goal of a VAT without the added burden on taxpayers, it faces several compliance challenges—particularly because there is no cross-reporting. With a sales tax, a government has no record of the retail transaction, and taxpayers have fewer incentives for compliance. In countries with a VAT, the additional burden of tax compliance is generally understood as a necessary trade-off to combat the challenges inherent in a sales tax.

[7] An invisible tax authority is most likely to be plausible when an economy is virtually cashless and the ability to conduct business in the informal sector has been substantially diminished.

[8] While some businesses (such as retailers and small professional-service organizations) could opt in to a real-time corporate income tax system, more complex businesses (such as those with significant intangibles) could find it unrealistic to estimate corporate income tax obligations in real time or on a per-transaction basis.

In such a future, an invisible tax authority increases a business owner's compliance while reducing the associated burden and cost. This is only one possible future. Rapidly transforming economies and new sources of data, digital tools, and advanced analytics will offer tax authorities many additional ways to improve the citizen experience while increasing compliance and operational efficiency. Consider some other scenarios that tax authorities could face in the future:

— *The economy goes cashless.* In an economy in which virtually all transactions are conducted with noncash payments, the volume of digital-payment data available would increase, and new transactional patterns would emerge. Advanced analytics and machine-learning capabilities would become much more critical to compliance activities.

— *Businesses—especially small and medium-size enterprises—replace accountants with cloud-based accounting software.* As the global cloud-accounting software market grows (and becomes cheaper and more reliable), small and medium-size enterprises may increasingly file their taxes through software-as-a-service accounting providers, which would transform how this critical group of taxpayers interacts with the tax authority.

— *Gig-economy income becomes a major share of tax liabilities.* As the gig economy grows, tax obligations from the income earned in such platforms could become an increasingly large share of what's owed to tax authorities. This could create a challenge: tax authorities would be facing large aggregate volumes of individuals (each with small-value individual tax obligations) from a sector of the economy that traditionally has faced problems with lack of information reporting and nonfiling.

— *Governments enact multiple new types of taxes.* As public and political sentiments shift—especially across the OECD countries—governments may enact new taxes, such as technology taxes, data taxes, carbon taxes, and net-worth taxes.[9] Each new tax would require tax authorities to integrate new data streams and analytics to assess value, ensure compliance, and administer it effectively.

In many countries, the future is closer than tax authorities think—and the COVID-19 crisis has accelerated it

The possible futures we've described aren't far-off visions. They are scenarios that could play out in the very near term, driven by the key global trends that are shaping how businesses operate, how people live, and how technology is integrated into the economy. These trends have been maturing for a long time, and the COVID-19 crisis has accelerated them.

Long before the global health pandemic, the rates of data creation and technology adoption were rapidly accelerating. The global public cloud services market grew 15 percent annually over the past ten years, and as of 2019, 89 percent of small and medium-size businesses around the world were using a cloud service.[10]

At the same time, economies have been rapidly digitizing. The rise of fintech has increased the sophistication of the payment industry and consumer

[9] Consider, for example, the US Internal Revenue Service's guidance about cryptocurrency and virtual-game currency.
[10] "Small and medium-sized business cloud strategy worldwide in 2018 and 2019, by cloud type," Statista, January 2019, statista.com.

acceptance of real-time account-to-account payments and digital transactions (even eliminating the manual payment step completely in some cases, such as in Amazon Go stores). And economies have been heading toward a virtually cashless future. In 2016, the Bank of Korea announced plans to move to a cashless society by 2020, and Denmark, the Netherlands, and the United Kingdom have been on track to see fewer than five cash transactions per person per month by 2030.[11]

In addition, the nature of work itself has been shifting. As of 2016, there were more than 162 million independent workers in the EU-15 and the United States, and global revenues from the gig economy are expected to double between 2018 and 2023.[12]

Recent data show that the response to the COVID-19 crisis has only accelerated these trends; consumer and business digital adoption vaulted five years forward in just one period of about eight weeks.[13] With more than 1.5 billion people around the world confined to their homes at the peak of the COVID-19 pandemic, businesses from grocery stores to healthcare-delivery companies to educational institutes expanded to digital platforms, joining other services (such as meal-delivery, e-commerce, transportation, and financial services) that were already on them.[14]

In response to the crisis, many countries have explicitly encouraged the use of mobile money—and many mobile-money platforms have decreased or eliminated transaction fees. In India, ATM usage fell by 47 percent in April 2020, and spending via Unified Payments Interface—the nation's local real-time payment system—increased by roughly 70 percent over the first seven months of 2020. The United Kingdom experienced a 46 percent decline in ATM usage per month on average from March to July 2020, and the average daily value of transactions processed by the United Kingdom's Faster Payments service rose by more than 10 percent from the fourth quarter of 2019 to the end of March 2020. By the end of 2020, we expect a shift of four to five percentage points in the share of global payment transactions executed via cash—equivalent to four to five times the annual decrease in cash usage observed over the past few years.

Tax authorities can evaluate these trends within their own countries to anticipate what their futures will look like and determine what specific steps they can take to adapt in the most advantageous way possible. By developing new tools and new ways of operating in an increasingly digital economy, tax authorities can ensure that they both maintain visibility into the market as new kinds of digital transactions emerge and have the ability to monitor an increasing amount of data for compliance.

[11] Kang Buseong and Bryan Harris, "South Korea to kill the coin in path towards 'cashless society'," *Financial Times*, December 1, 2016, ft.com; Global Payments Map by McKinsey.
[12] Silvio Piserchia, "The global gig economy: Capitalizing on a ~$500B opportunity," Mastercard, May 13, 2019, newsroom.mastercard.com; "Independent work: Choice, necessity, and the gig economy," McKinsey Global Institute, October 10, 2016, McKinsey.com.
[13] Global Surveys of Consumer Sentiment During the Coronavirus Crisis, 2020, McKinsey.com.
[14] Businesses that had digital offerings before the COVID-19 crisis have seen demand for these services increase due to the pandemic. In financial services, for example, an increased shift from physical to virtual banking resulted in the top four banks in Australia removing 2,150 ATM terminals and closing 175 bank branches since June 2020.

As tax authorities respond to the challenges of COVID-19, they also have an opportunity to build a new foundation to thrive as economies and citizens cross the digital Rubicon.

The process of reinventing a tax authority can start immediately with three key shifts

As tax authorities reinvent their organizations to respond to the challenges of the COVID-19 pandemic, they also have an opportunity to build a new foundation that will enable them to thrive as economies and citizens cross the digital Rubicon. At a recent conference of around 25 tax authorities hosted by the OECD, tax leaders from around the globe discussed how reimagining three key aspects of their organizations—operating model, workforce, and relationships with citizens—could help tax authorities adapt to global trends while unlocking benefits for their customers and better equipping their organizations to reduce voluntary and involuntary noncompliance in the economy of the future.

Transforming the operating model to look more like a consumer-facing technology company

Most tax authorities' traditional organizational structures won't be able to support the levels of data integration that will be required in the near future. Data-driven decision making will need to be built into every part of tax authorities' operations, integrating new types of data from new sources.

Technology will no longer be able to be isolated within a silo or used only as a backward-looking analytics tool—say goodbye to analytics departments. Advanced analytics, machine learning, and artificial intelligence will need to be embedded throughout all operations. And as data evolve constantly and rapidly, tax authorities will need to become agile at updating their approaches, deploying new technology faster than ever before.

Placing technology at the core of operations will also present tax authorities with important questions to resolve. They will need to make critical choices about the level of human involvement in decision making: which decisions should be made by advanced analytics with only occasional human intervention and which should be informed by data but still made by humans.

In addition, tax authorities that see a future in which their economies are fully digitized will need to start considering how they integrate themselves into the network of transactions and payments. There are two main approaches they can take. Tax authorities can either be directly integrated into—and central to—the network of transactions and payments, or they can establish connections through third-party private- or public-sector intermediaries. This complex decision will require governments to consider many factors, including the maturity of the local digital-payment and -transaction infrastructure, readiness of the local ecosystem of digital-payment and -tax providers, and level of trust in the government's handling of personal data.

A tax authority directly integrated into—and central to—the network

A tax authority directly integrated into—and central to—the network of transactions and payments would be a truly invisible tax authority. Every transaction would create a digital record that would be sent to the tax authority in real time. The applicable tax payments (with adjustments where necessary) would be remitted to the tax authority seamlessly and automatically in the background.

This approach would require tax authorities to have vast and ever-expanding amounts of taxpayer data and sophisticated data capabilities. It would require a largely cashless economy and high levels of trust in the government and its ability to handle data safely.

A tax authority connected through third-party private- or public-sector intermediaries

A tax authority connected to the network of transactions and payments through third-party private- or public-sector intermediaries would enable taxpayers to have more control over their data and interactions with the tax authority. Taxpayers could contract with third-party platforms that would integrate all of their transactional and payment data—including from credit-card and other digital-payment platforms, employer and business accounting software, and bank accounts—and aggregate it for filing with the tax authority. The third-party platforms would have direct connections to the tax authority and could prompt users to approve automatic filings and payments.

In this approach, taxpayers could elect either to have their submissions include all supporting documentation and metadata or to withhold supporting documentation unless it was requested by the tax authority during an audit. This scenario creates the possibility for automatic compliance while leaving taxpayers with a choice of how to integrate into the system.

Attracting and retaining a new type of tax workforce

Tax authorities will need to integrate technologists into each of their departments and teams. In the future, data and analysis experts could make up more than 50 percent of the typical tax-authority workforce. This will require a significant redesign of tax authorities' talent strategies.

Instead of sourcing talent from accounting companies and tax advisories, tax authorities will have to compete with big-tech companies (such as Google and Facebook) and the fintech start-ups of the world for digital specialists. Instead of relying on the appeal of long-term stability, attractive healthcare benefits, and generous government pensions, tax authorities will have to figure out how to attract a group of people who prioritize workplace culture, meaningful work, and flexibility.

It's critical that tax authorities begin rethinking their talent strategies immediately. The public sector is already having a hard time attracting digital talent. For example, only 44 percent of US government employees in 2019 believed that their organizations could recruit people with the right skills.[15]

And at the same time that tax authorities are making this talent shift—if not before—the private sector and other public-sector organizations will also be making it. Tax authorities will be competing not just with Google and Facebook but also with multinational insurance companies, global manufacturers, and large agricultural processors, among others, in the race for digital talent.

Adopting a relentless focus on building positive relationships with citizens

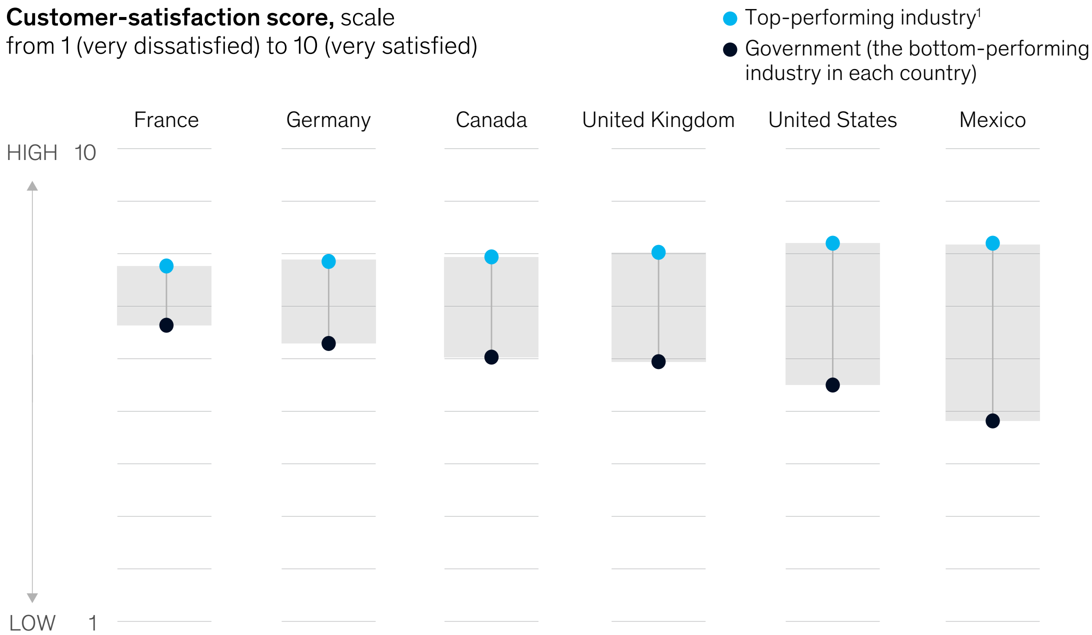
Tax authorities will need to become more citizen-centric and start building a foundation of transparency, accountability, and trust to enable their digital futures. Today, governments are some of the worst performers in many countries—behind utilities, credit-card companies, and cable companies, among others—when it comes to customer service (Exhibit 1).[16] As digital integration becomes the norm in society and consumer expectations for omnichannel experiences continue to increase, tax authorities will need to embrace citizen-centric, digital technologies that can improve taxpayers' customer experiences and help reduce the gap between consumer expectations and the customer-service levels provided by tax authorities.

Expectations of transparency and data protection are also increasing dramatically among consumers. As technology becomes more integrated into tax authorities, and data—most of them sensitive and personally identifiable—are increasingly driving decision making and being exchanged among tax authority and third parties, tax authorities

[15] US Federal Employee Viewpoint Survey, 2019.
[16] McKinsey Public Sector Journey Benchmark Survey, 2018.

Exhibit 1

Governments in countries surveyed lag behind the private sector in customer satisfaction.



[1]Top-performing industry in Canada, Mexico, and the United Kingdom = supermarkets; in France and Germany = e-commerce sites; and in the United States = credit-card providers.
Source: 2018 Public Sector Journey Benchmark Survey

will have to think seriously about data protection and cybersecurity and about building trust and confidence with the public.

This presents a challenge for many tax authorities in countries where citizens have traditionally been more wary of allowing the government to hold vast amounts of personal data.

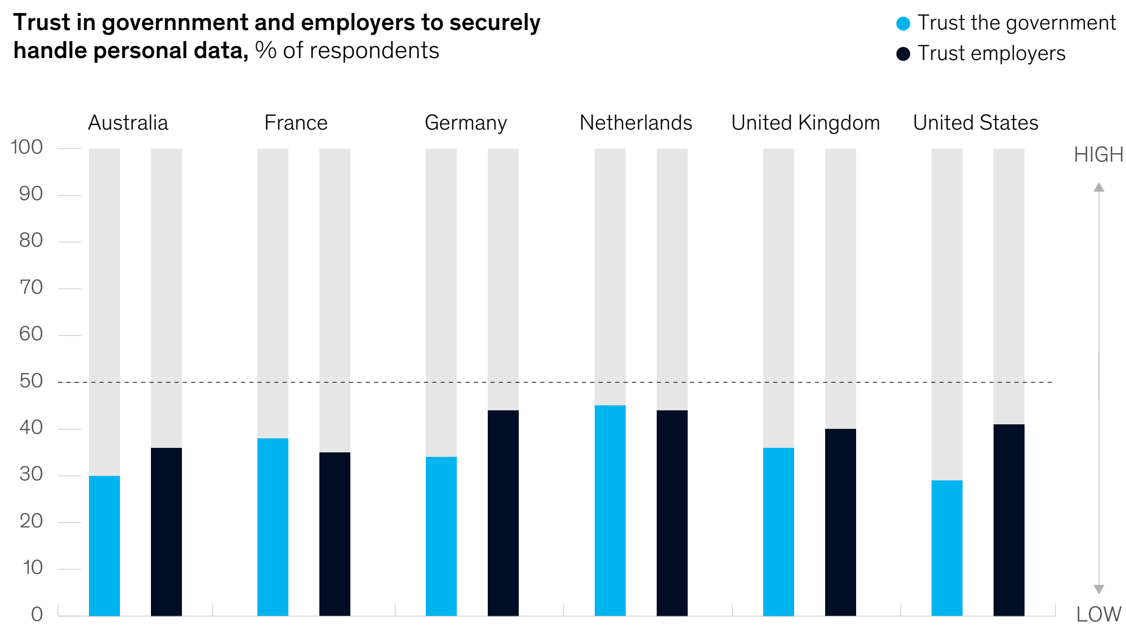
Even as it becomes more common for data to be seamlessly integrated into every aspect of an individual's life, these attitudes toward governments are likely to persist. A recent survey of consumers in six countries showed that more than half the populations surveyed have limited to no trust in their governments to handle their personal data (Exhibit 2). And it's still too early to tell how the COVID-19 crisis—and the increased sharing of personal data with the government to support contact tracing and other public-health measures—has affected such sentiments.

In many cases, such mistrust is not tied to a single data breach or abuse but rather linked to overall government mistrust. For this reason, it likely won't be sufficient for tax authorities to roll out new data-governance protocols and controls as they transform. Instead, they will need to start building trust with their customers today through transparency, accountability, and reliability. This transformation can't happen overnight, and tax authorities that wait to begin this effort will find that they have greater

Exhibit 2

Less than half of surveyed populations trust their governments or their employers to handle their personal data.

Trust in governnment and employers to securely handle personal data, % of respondents



Source: *The cost of privacy: Reporting on the state of digital identity in 2020,* Okta, okta.com

difficulty in building citizen buy-in down the road, when they begin to transform more fundamentally the ways they operate in a digital economy.

The time to act is now

Leading private-sector companies are focused on anticipating the future and transforming their organizations today to adapt to it. During the COVID-19 crisis, they have accelerated the scope and scale of innovation while using technology and data in new ways, accomplishing difficult tasks and achieving positive results in record time. Faced with increasing tax gaps and rapidly accelerating global trends, tax authorities need to transform just as quickly to keep pace with the changing economy. Yet it isn't clear that the majority of tax authorities are taking similar steps or moving quickly enough.

Transforming a tax authority's operations will take time. Large legacy organizations in the private sector typically take at least three to five years to complete a transformation of such magnitude. And when considering this, it is clear that many tax authorities are at risk of moving too slow and thinking too small about the future—especially as the COVID-19 pandemic has amplified focus on short-term strategies to recover from the immediate crisis.

If tax authorities don't use this moment to prepare for the future, they will likely be forced to undergo two separate once-in-a-generation transformations in rapid succession: rebuilding in response to the COVID-19 crisis and adapting to the digital economy. And more critically, they will risk not being prepared as their economies transform around them.

But if tax authorities fully embrace this moment, improved customer experience, increased compliance, and more efficient operations may only be the beginning of what's possible. With the help of advanced analytics, tax authorities could create accurate and precise views of microsegmented, noncompliant people and companies, allowing tax authorities to give personalized nudges to self-correctors while deploying auditing teams for high-risk cases—including those at risk of insolvency and those who may be engaging in illegal activity. New technologies could enable tax authorities to reduce tax gaps to zero and completely eliminate no-change audits.[17] And transaction-level data could provide real-time economic insights by neighborhood, allowing governments to monitor the health of their economies better and policy makers to target interventions and other policy programs better.

Tax authorities must think big when it comes to what the future could look like. And they must start this process now. They must focus not just on building solutions to the immediate challenges posed by the COVID-19 crisis but also on embracing the future and positioning themselves to reach new levels of success by adapting to it. Creating the tax authority of tomorrow can start today.

[17] A no-change audit occurs when a tax authority, after completing an audit on a selected taxpayer, determines that no change is necessary to the taxpayer's tax filing.

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Rethinking resilience: Ten priorities for governments

Due to the pandemic, governments are under increased pressure to act quickly and at scale. By reimagining how they work, they can create resilient societies and public services for the next normal.

by Rima Assi, Hana Dib, David Fine, and Tom Isherwood

The COVID-19 crisis has increased the pressure on governments to serve citizens at a speed and scale not seen in peacetime. Public services and agencies are mobilizing and collaborating across agency mandates to contain the spread of the virus and save lives. Core public services are rapidly accelerating digitization. Governments are distributing record sums of money to households and businesses to safeguard livelihoods and greatly increasing deficits to fund relief and stimulus efforts.

In this massive mobilization, we observe the seeds of a wholesale reimagining of governments and their role in society. As one senior government leader told us, "We've gotten ten years of reform done in ten weeks." In many countries, yearslong efforts to digitize education delivery and medical consultations have been realized in a matter of weeks. And public–private collaboration has increased in everything from the search for a COVID-19 vaccine to the use of mobile money to distribute crisis relief to households. Public servants worldwide have adapted and innovated to respond to this unprecedented crisis.

How can government leaders ensure that their organizations translate the positive shifts prompted by the crisis into enduring reforms that result in governments better serving citizens long after the crisis is over? And how can they play a leading role in shaping more resilient societies and public services? The crisis has highlighted the intersection between public- and private-sector roles in advancing a better society; there is increasing convergence between corporate purpose and governments' socioeconomic agendas.

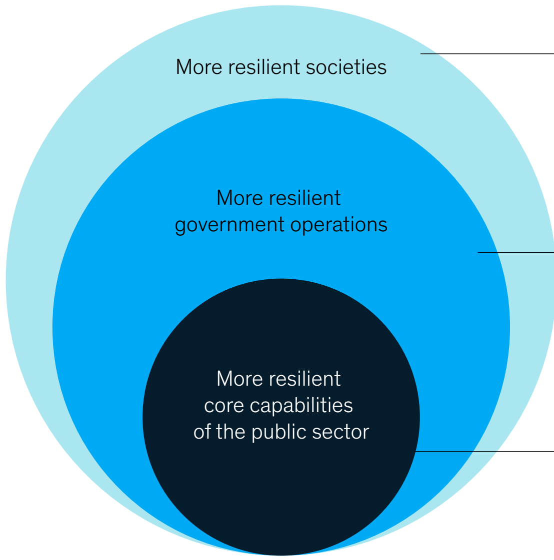
In this article, we highlight ten priorities to shape more resilient societies and build more resilient governments, supported by key enablers to revitalize the core capabilities of the public sector and how it works. Within each of these opportunities, we highlight best practices that have emerged or accelerated in the crisis. We also suggest several transformational next practices that leaders can embrace to reimagine government for the long term—showing how the disruptions and innovations of the crisis have made these longer-term reforms both more urgent and more attainable (Exhibit 1).

The ideas we present here are drawn from dozens of interviews with government leaders around the world, all of whom are closely involved in the crisis response. We also draw on McKinsey's global research across multiple sectors, reflecting on how this might be applied to government transformation.

Governments are distributing record sums of money to households and businesses to safeguard livelihoods and greatly increasing deficits to fund relief and stimulus efforts.

Exhibit 1

Governments can build resilience by focusing on ten priorities.



More resilient societies

1. Hone virus control and reimagine healthcare
2. Unleash a learning revolution
3. Shape resilient trade and supply chains
4. Distribute effective stimulus measures

More resilient government operations

5. Deliver contactless government
6. Manage sovereign balance sheets with an investor mindset
7. Institutionalize best-practice crisis response to prepare for the next crisis

More resilient core capabilities of the public sector

8. Make faster, better decisions using data and analytics
9. Cultivate smarter, more productive ways for public servants to work
10. Foster new forms of partnership with the private sector

Help shape more resilient societies

Area	Best practice	Next practice
1. Hone virus control and reimagine healthcare	Digital usage to support containment; preparedness to accelerate supply and capacity; and recovery	Encouraging telehealth as the default initial treatment option; licensing requirements to enable innovation; flexible funding and resources models that pay for health instead of treatment
2. Unleash a learning revolution	Hybrid learning; short, modular, skill-based learning experiences; crowdsourcing to generate content; financial stimulus to encourage digital learning and support the unemployed and businesses	Holistic focus on mental health; micro-credentialing for lifelong learning; an active role for corporates in learning for their employees
3. Shape resilient trade and supply chains	Protection of own essential supplies; support for local content	Reassessment of planning and supplier network, transportation and logistics, and services complexity
4. Distribute effective stimulus measures	Quick-acting and innovative delivery mechanisms to support household welfare and help companies survive	Green energy; government digitization and support for companies adopting new technologies; shaping the workforce of the future

Exhibit 1 (continued)

Governments can build resilience by focusing on ten priorities.

Build more resilient governments		
Area	**Best practice**	**Next practice**
5. Deliver contactless government	Development of digital channels and digital services	End-to-end customer journey in services; driving adoption of cross-cutting enablers like digital IDs
6. Manage sovereign balance sheets with an investor mindset	Traditional debt issuance, revenue optimization and expenditure control	Excellence in debt issuance and management; unlocking funding potential of balance-sheet assets and enabling alternative funding solutions; optimizing revenue streams; containing expenditure
7. Institutionalize best-practice crisis response to prepare for the next crisis	Establishment of a crisis nerve center; creation of a plan-ahead crisis unit—a cross-functional team to look at simulations of various scenarios	Investments to build resilience and preparedness for future potential crises

Revitalize the core capabilities of the public sector		
Area	**Best practice**	**Next practice**
8. Make faster, better decisions using data and analytics	Deployment of real-time public dashboards	Advanced use cases using high-frequency data for policy and decision making
9. Cultivate smarter, more productive ways for public servants to work	Redeployment of staff; automation of back-office functions	Agile-at-scale operating model with cross-departmental teams; reskilling public servants for citizen-facing roles
10. Foster new forms of partnership with the private sector	Mandated public requests to private sector (eg, requiring manufacturers to shift to producing ventilators)	Innovative public–private partnerships to improve service delivery and more broadly address and enhance social contract

Shaping more resilient societies

Four key actions can help governments shape more resilient societies:

1. Honing virus control and reimagining healthcare
2. Unleashing a learning revolution
3. Shaping resilient trade and supply chains
4. Distributing effective stimulus measures

In each of these areas, we highlight the disruptions of unparalleled scale that governments are facing during the COVID-19 crisis. We shine the spotlight on the best practices that have emerged around the world as governments address the immediate crisis and seek to strengthen the resilience of systems and societies. And we suggest the next practices that decision makers could embrace as they reimagine government and society for the post-pandemic new normal.

1. Hone virus control and reimagine healthcare

The scale of the COVID-19 pandemic—measured by the number of cases and deaths, transmission rates, and geographic spread—has demanded an unprecedented response from governments. As of September 2020, the COVID-19 pandemic has infected more than 30 million people worldwide. The pandemic has affected all stakeholders in the healthcare ecosystem: emergency healthcare providers, non-acute-disease healthcare providers, patients, the insurance industry, and healthcare start-ups. The crisis has shocked health systems' operations and income statements. Healthcare workers on the front lines have shouldered tremendous burdens and are facing difficult ethical choices—such as how to allocate ventilators to patients when demand exceeds supply—as well as shortages of diagnostic supplies, personal protective equipment (PPE), and staff as demand for care has overwhelmed their hospitals.[1]

We have observed several effective crisis responses, such as using digital technology to support containment, preparation to accelerate supply of PPE and healthcare capacity to meet the surge in demand, and navigating the road to recovery.

China mobilized tens of thousands of doctors and added tens of thousands of hospital beds within weeks to assist Wuhan.[2]

An effective testing strategy reduces the uncertainties about a nation's infection rate and is likely to be important in the new normal. Both the United Arab Emirates and Denmark have achieved very high testing per capita.[3]

In the United States, the use of telehealth has more than quadrupled during the pandemic—from 11 to 46 percent, with as much as 76 percent of consumers indicating they are interested in using telehealth going forward (Exhibit 2).[4]

New York City, for instance, used telehealth and communications campaigns to reduce the number of low-acuity patients visiting health facilities. Its NYC Health + Hospitals healthcare system also increased its ICU beds from 300 to more than 1,000 by converting flexible space such as operating rooms to add ICU

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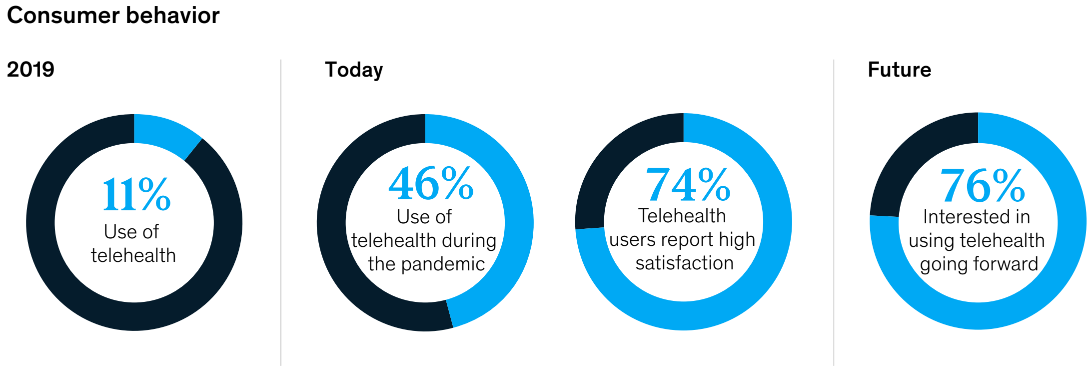
[1] Mohammad Behnam, Arnav Dey, Tony Gambell, and Vaibhav Talwar, "COVID-19: Overcoming supply shortages for diagnostic testing," July 15, 2020, McKinsey.com; Patricia Nicholson, "Coronavirus weekly: As global cases pass one million, health-care workers take the strain," April 6, 2020, theconversation.com.
[2] Oliver Tonby and Jonathan Woetzel, "Could the next normal emerge from Asia?," April 8, 2020, McKinsey.com.
[3] "Total COVID-19 tests per 1,000 people," Our World In Data, accessed October 14, 2020, ourworldindata.org.
[4] Oleg Bestsennyy, Greg Gilbert, Alex Harris, and Jennifer Rost, "Telehealth: A quarter-trillion-dollar post-COVID-19 reality?," May 29, 2020, McKinsey.com.

Exhibit 2

How has COVID-19 changed the outlook for telehealth?



Source: Oleg Bestsennyy, Greg Gilbert, Alex Harris, and Jennifer Rost, "Telehealth: A quarter-trillion-dollar post-COVID-19 reality?," May 2020, McKinsey.com.

capacity.[5] A possible next practice could be making telehealth the default first step for patients seeking medical assistance, with costlier in-person follow-ups being conducted only if patients have a referral from an initial virtual consultation. To help telehealth develop, governments can consider changes to licensing requirements to enable innovation and unlock potential and make virtual care services globally accessible. These offerings also require new professions and skills to access global talent pools virtually.

In addition, financial incentives in healthcare are still tied to activity and driving access to treatment rather than keeping populations healthy. There are opportunities to design funding models that pay for health rather than treatment and that shift resources from acute care to prevention and well-being, a strategy that has a much higher return on investment. For example, Discovery Health's Vitality program in New Zealand has been influencing healthy client behavior for decades and could serve as a model for a broader reimagination of the healthcare sector.

2. Unleash a learning revolution

Governments across the globe have closed schools and higher-education institutions to contain the spread of COVID-19. In April 2020, 1.5 billion children and youth—from pre-primary to university level—were affected by closures in 194 countries.[6]

To mitigate the effects of closures on US institutions of higher education, the US Congress passed an emergency coronavirus bill, which provides approximately $14 billion to help colleges and universities weather shutdowns and move to distance learning—but this sum might not be enough to sustain them through the crisis, given the closure of student housing and the need to invest in new technologies for remote learning.[7]

The COVID-19 pandemic has also had devastating effects on employment. In the United States, for example, as many as 57 million jobs—representing about one-third of the entire US workforce—are vulnerable to

[5] Christopher Cheney, "Coronavirus: How New York City's public healthcare system managed epic patient surge," HealthLeaders, June 11, 2020, healthleadersmedia.com.

[6] "1.3 billion learners are still affected by school or university closures, as educational institutions start reopening around the world, says UNESCO," UNESCO, April 29, 2020, en.unesco.org.

[7] Erica L. Green, "Colleges get billions in coronavirus relief, but say deal falls short of needs," *New York Times,* April 15, 2020, nytimes.com.

reduced income, furloughs, and layoffs.[8] Some of these jobs, especially in the hospitality sector, will be slow to return, while others may be lost for good.

Governments have been forced to rethink learning and education systems and to combat the effects of closures and unemployment. In the United States, more than 4,200 higher-education institutions have taken decisions in response to new requirements as a result of COVID-19.[9] Based on our observations, some best practices to address these challenges include adopting hybrid learning models and creating short, skills-based learning modules.[10] Such approaches have the potential to disrupt traditional business models in higher education and improve cost-effectiveness.

In Europe, the French government partnered with the Orange Foundation to promote remote learning by providing tablets and computers to disadvantaged students. In the Middle East, the Ministry of Education in the United Arab Emirates deployed specialized training to upskill teachers and school leaders in remote teaching and learning and the use of technology in education. And the United Kingdom has set up a centralized remote-learning infrastructure that schools can opt into, and it provided an innovative backstop measure to parents and students in the form of the Oak National Academy online classroom and resource hub. Similarly, China's Ministry of Education deployed a national cloud-based classroom to support the simultaneous remote learning of 50 million students.[11]

How might the next practice take hybrid learning beyond a stopgap and reveal new quality levels or a broader reshaping of the curriculum? A new approach might, for example, include using remote learning to make the world's top teachers accessible to students anywhere. By making some lessons accessible through tablets and laptops, in-person time could be focused more on projects, collaboration, and other exercises that enable a holistic education. Key innovations to support this in instruction might include expanding access through technology, pursuing mastery-based learning, and focusing on future-of-work skills. Meanwhile, governments might develop more-robust teacher-preparation and -development programs that use technology and coaching—in person and remotely—to augment teacher skills; in the long term, schools might consider unbundling the role of the teacher to give instructors differentiated roles related to their skills and preferences.[12]

Some governments are already moving to a next practice with a holistic focus on mental health in schools. In the United States, federal agencies are providing resources that could allow parents to assess their children's socioemotional well-being as well as their own. Singapore has appointed designated teachers responsible for calling students for a mental-health assessment and support.

Further next-practice interventions could include micro-credentialing to enable the accumulation of accredited qualifications through lifelong learning and corporations playing an active role in curriculum development to customize learning to meet their skills and knowledge requirements for employees. Governments might consider how they define standards for these learning credentials—nationally and globally—and how they would certify an individual's achievement and knowledge. To foster effective reskilling ecosystems, governments can establish end-to-end reskilling bootcamps, equip job centers to support job seekers in transition or looking to change careers, and provide a one-stop shop for information

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[8] André Dua, Kweilin Ellingrud, Bryan Hancock, Susan Lund, and James Manyika, "Lives and livelihoods: Assessing the near-term impact of COVID-19 on US workers," April 2, 2020, McKinsey.com.
[9] "COVID-19 Higher Education Tracker," Entangled Solutions, accessed October 15, 2020, entangledsolutions.com.
[10] Sean Gallagher, "COVID-19 is accelerating the digital blending of working and learning," June 19, 2020, EdSurge, edsurge.com.
[11] Hong Yaobin, "China launches national cloud learning platform as teaching goes online amid epidemic," CGTN, February 21, 2020, news.cgtn.com.
[12] Jake Bryant, Emma Dorn, Stephen Hall, and Frédéric Panier, "Reimagining a more equitable and resilient K–12 education system," September 8, 2020, McKinsey.com.

on reskilling—including skills and occupations needed in the future, a list of providers that help employees reskill, and the providers' outcomes such as job-placement rate. Governments can also support and incentivize small and medium-size enterprises (SMEs) that lack the HR capability to assess their skills gaps and undertake large-scale training.

Prior to COVID-19, freelancers, those employed by part-time staffing agencies, and gig-economy workers accounted for 20 to 30 percent of all jobs in Europe.[13] As companies are forced to adapt rapidly to the constraints imposed by the pandemic and government lockdown measures—such as remote working and furloughing nonessential workers—organizations see clearly the difference between the jobs and skills that are part of their fixed overheads and the jobs and skills that are linked to volume. We are likely to see an acceleration toward sourcing high-value skills as needed. This new way of working will demand different kinds of skills.

3. Shape resilient trade and supply chains

Even before the pandemic, goods-producing value chains were becoming less trade-intensive. While output and trade both continue to grow in absolute terms, a smaller share is now traded across borders; thus, exports declined between 2007 and 2017—from 28.1 to 22.5 percent of gross output in goods-producing value chains.[14]

While gross trade in services in 2017 was significantly lower than global trade in goods—$5.1 trillion compared with $17.3 trillion—it has grown more than 60 percent faster over the past decade.[15] This trend is likely to accelerate as a result of remote working and the fast-tracking of digital transformation.

Whereas the largest quarterly decline in trade volumes during the global financial crisis of 2008 was approximately 5 percent, our recent study estimated that global, unconstrained trade demand could drop between 13 and 22 percent in the second and third quarters of 2020.[16] Value chains with the highest trade intensity—those highly traded relative to their output—are the most exposed to disruption.[17]

Countries have responded to COVID-19 disruptions to trade and supply chains by acting to protect their own supplies by, for example, restricting the export of essential goods and agricultural and food products, as well as supporting local products. More than 90 countries currently have restricted exports of this kind.[18] For

Businesses are also focusing more on nearshoring to simplify supply chains and decentralizing their manufacturing capacity by moving it closer to the markets where products will be sold.

[13] For more, see "The future of work in Europe," McKinsey Global Institute, McKinsey & Company, June 10, 2020, McKinsey.com.
[14] For more, see "Globalization in transition: The future of trade and value chains," McKinsey Global Institute, January 16, 2019, on McKinsey.com.
[15] *ibid.*
[16] Jeff Condon, Sven Gailus, Florian Neuhaus, and Maite Peña-Alcaraz, "Global freight flows after COVID-19: What's next?," July 2, 2020, McKinsey.com.
[17] For more, see "Risk, resilience, and rebalancing in value chains," McKinsey Global Institute, August 6, 2020, McKinsey.com.
[18] "COVID-19 Temporary Trade Measures: Market Access Map," International Trade Commission, accessed October 15, 2020, macmap.org.

example, China stopped exporting masks and imported 56 million masks in the first week of January due to high demand.[19]

Businesses are also focusing more on nearshoring to simplify supply chains and decentralizing their manufacturing capacity by moving it closer to the markets where products will be sold.[20] Governments are also supporting this process. France, for example, has announced a program to relocate strategic industries back home to build up domestic value chains for critical products and industries like food and pharmaceuticals.[21]

Companies and countries that want to take supply-chain resilience to the next-practice level will need to balance the demand for resilient supply chains with the inevitable cost that comes from duplication— "just in time" versus "just in case."

In a May 2020 McKinsey survey, as many as 93 percent of supply-chain executives indicated that they plan to take steps to make their supply chains more resilient. Interventions they are considering include building in redundancy across suppliers, nearshoring, reducing the number of unique parts, and regionalizing their supply chains (Exhibit 3).[22]

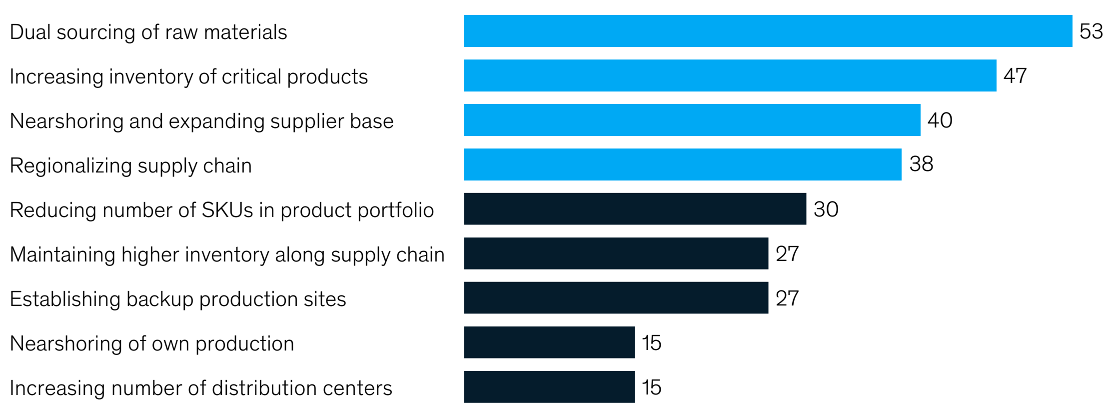
Exhibit 3

Surveyed business leaders are increasing resilience in supply chains and production through multiple strategies.

93% of global supply-chain leaders are planning to increase resilience[1]

44% would increase resilience even at expense of short-term savings[2]

Planned actions to build resilience, % of respondents[1]



[1]McKinsey survey of global supply-chain leaders, May 2020.
[2]McKinsey survey of business executives, May 2020.
Source: McKinsey survey of business executives, May 2020 (n = 605); McKinsey survey of global supply-chain leaders, May 2020 (n = 60); McKinsey Global Institute Analysis

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19 Sangam Prasain and Prithvi Man Shrestha, "India halts all rice exports but Nepal will be fine, say officials," *Kathmandu Post,* April 8, 2020, kathmandupost.com; "COVID-19 and international trade: Issues and actions," Organisation for Economic Co-operation and Development (OECD), June 12, 2020, oecd.org.
20 Christian Lanng and Jesse Lin, "Here's how global supply chains will change after COVID-19," World Economic Forum, May 6, 2020, weforum.org.
21 Sapana Agrawal, Aaron De Smet, Sébastien Lacroix, and Angelika Reich, "To emerge stronger from the COVID-19 crisis, companies should start reskilling their workforces now," May 7, 2020, McKinsey.com.
22 For more, see "Risk, resilience, and rebalancing in global value chains," McKinsey Global Institute, August 6, 2020, McKinsey.com.

Besides safeguarding public health and ensuring food security, governments have already begun to intervene in high-value and strategic sectors, such as global innovation. But how might they develop a broader approach that enables and incentivizes businesses—particularly those at the top of the value chain—to strengthen supply-chain risk management and improve end-to-end management, minimize exposure to shocks, and respond quickly to shocks when they occur? Revisiting regional free-trade agreements could strengthen resilience through regionalization—for example, leveraging Asia's Regional Comprehensive Economic Partnership and the African Continental Free Trade Area.[23]

In addition, as the freelance economy grows and people with in-demand skills and services are increasingly accessible through technology, governments will need to consider what opportunities exist—and what policies are required—to attract and retain these individuals.

4. Distribute effective stimulus measures

The COVID-19 crisis saw governments implement unprecedented economic responses, allocating $10 trillion through April 2020—three times more money than the response to the 2008–09 financial crisis. Western European countries alone have allocated close to $4 trillion, an amount 30 times larger than the value of the Marshall Plan in today's dollars. These government stimulus packages take different forms, including guarantees, loans, value transfers to companies and individuals, deferrals, and equity investments (Exhibit 4).[24]

Governments around the world have used quick-acting stimulus mechanisms, delivered in an innovative way, to support household welfare and help businesses survive the crisis. Malaysia, for instance, discounted monthly electricity bills for hotel operators, travel agencies, local airline offices, shopping malls, and convention centers and theme parks by 15 percent; France suspended water, gas, electricity, and rent bills, as well as tax and social contribution payments for small businesses heavily affected by the crisis. Indonesia deferred import taxes, relaxed the rules on value-added-tax refunds, and reduced corporate taxes by 30 percent for approved companies in 19 manufacturing sectors, and South Africa accelerated its reimbursements for employment tax incentives from biannually to monthly.

We've also observed examples of innovative delivery mechanisms across the globe. An increasing number of financial service providers in Peru are conducting government-to-person payments. In Kenya, the GiveDirectly online platform is providing digital cash transfers to low-income individuals, using geographical data to identify vulnerable groups. India has combined the use of a national online ID system, mobile-phone numbers, and certain types of financial accounts to establish a digital pipeline for transferring benefits to beneficiaries. And Germany created an online portal that allows employers to fill out detailed end-of-month time sheets to apply for short-term work compensation from the Federal Employment Agency.

However, the increase in fiscal measures has come with an increase in fraud, demanding a response from governments and multinational institutions. The Organisation for Economic Co-operation and Development (OECD), for example, has published policy guidelines with examples of imminent fraud threats and principles for effective fraud control, with a particular emphasis on low-burden controls.[25]

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[23] For more, see "Asia's future is now," McKinsey Global Institute, July 14, 2019, on McKinsey.com; Kartik Jayaram, Kevin Leiby, Acha Leke, Amandla Ooko-Ombaka, and Ying Sunny Sun, "Reopening and reimagining Africa," May 29, 2020, on McKinsey.com.

[24] Ziyad Cassim, Borko Handjiski, Jörg Schubert, and Yassir Zouaoui, "The $10 trillion rescue: How governments can deliver impact," June 5, 2020, McKinsey.com.

[25] Safeguarding COVID-19 social benefit programmes from fraud and error, Organisation for Economic Co-operation and Development (OECD), June 15, 2020, oecd.org.

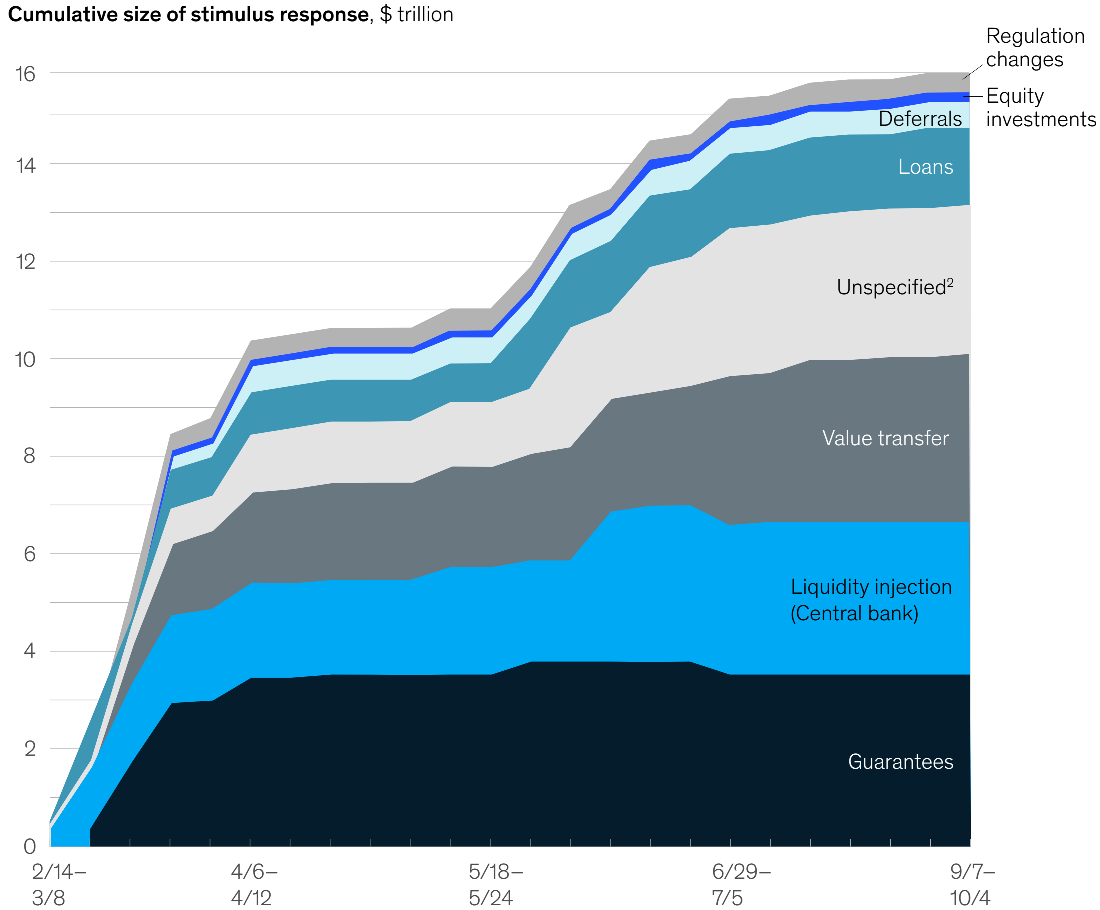
Over the medium to longer term, governments can focus on several next practices to increase resilience post-pandemic, including directing stimulus to areas that achieve the broader objectives of a more resilient society—such as investing in green energy and incentivizing companies to improve energy efficiency, which can produce significant economic and environmental benefits.[26] Other areas to focus on include accelerating government digitization and supporting companies to adopt or develop new technologies and shaping the workforce of the future, which requires upskilling the labor force to increase resilience in the face of rising automation.

Exhibit 4

Global government response to the COVID-19 crisis is in excess of $15 trillion.

Split in size of stimulus measures in countries studied, 2020, weekly[1]

Cumulative size of stimulus response, $ trillion



[1]Total number made public, collected, and analyzed, to date (across 54 countries for which information on package sizes is studied).
[2]Difference between package sizes announced and the sum of measures for which exact size is available or can be estimated.
Source: McKinsey analysis

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[26] Sophie Bertreau, Peter Cooper, Hauke Engel, David Fine, Alastair Hamilton, Solveigh Hieronimus, Sebastien Leger, Tomas Nauclér, Dickon Pinner, and Matt Rogers, "How a post-pandemic stimulus can both create jobs and help the climate," May 27, 2020, McKinsey.com.

Building more resilient governments

Three key opportunities could make government operations more resilient:

5. Delivering contactless government services
6. Managing sovereign balance sheets with an investor mindset
7. Institutionalizing best-practice crisis response to prepare for the next crisis

5. Deliver contactless government services

The COVID-19 pandemic has made digital channels more important as consumers increasingly prefer them—which means digital transformation is a particular priority for governments. In development of digital channels and services, several examples stand out. In one North African country, the government made use of digital tools when building an ambitious response plan to the crisis. It automated the daily data collection from key operators, generating a dashboard on a digital platform to closely monitor critical food items at risk of running out and to support leaders' decision making to ensure food security.

Germany has been using "express digitization," which is a digital form of emergency response to create citizen-friendly and pragmatic digital services within a few weeks. This approach has helped the government cope with the substantial spike in demand, such as the increase in claims for a quarantine-compensation grant which increased a hundredfold by June 2020, compared with previous years.

Governments now have a significant opportunity to accelerate digitization and support companies in adopting new technologies. By 2030, adoption of digital technology will likely increase from 37 percent to 66 percent across all sectors.[27] These increases are based on the anticipated shift to a contactless economy. Already, consumers report a 20 percent increase in preference for contactless operations in the United States; as a result, services and sectors such as payment, retail, food, accommodation, education, and health have had to adapt quickly.[28]

How can governments put themselves on the path to a next practice of building services that not only anticipate the needs of citizens but also respect data-privacy requirements? Countries can start by making use of technology-enabled change initiatives to create outcomes that respond to the priorities of citizens faster and at a lower cost than in-person services. This approach requires a focus on the citizen experience to understand the end-to-end customer journey in services, spanning both public- and private-sector touchpoints.[29] Governments can also play an important role in enabling contactless transactions beyond public services by driving adoption of cross-cutting enablers such as digital identities. For example, by investing in a nationwide digital database, governments can accelerate fully digitized transactions in sectors such as financial services and support know-your-customer requirements in other sectors.

6. Manage sovereign balance sheets with an investor mindset

Global government deficits could reach $9 trillion to $11 trillion in 2020 and as much as $30 trillion by 2023. This is a result of the massive increases in relief and stimulus spending—which is up to three times greater than after the 2008–09 financial crisis—and reductions in tax revenues of $3 trillion to $4 trillion between 2019 and 2020 alone.[30]

[27] Cassim, Handjiski, Schubert, and Zouaoui, "The $10 trillion rescue."
[28] Rachel Diebner, Elizabeth Silliman, Kelly Ungerman, and Maxence Vancauwenberghe, "Adapting customer experience in the time of coronavirus," April 2, 2020, McKinsey.com.
[29] Matthias Daub, Tony D'Emidio, Zaana Howard, and Seckin Ungur, "Automation in government: Harnessing technology to transform customer experience," September 28, 2020, McKinsey.com.
[30] Rima Assi, David Fine, and Kevin Sneader, "The great balancing act: Managing the coming $30 trillion deficit while restoring economic growth," June 16, 2020, McKinsey.com.

Raising more debt is the first port of call to fund these rising deficits, and many countries have applied traditional debt issuance, revenue optimization, and expenditure control.

However, rising debt levels could make governments less resilient. Over the medium term, governments will need to demonstrate their fiscal sustainability and capacity to generate sustainable economic growth with a credible debt story, as well as achieve excellence in debt issuance by building capabilities and optimizing the cost-to-risk ratios of their debt portfolios.[31] They can also optimize revenue streams—including, for example, accelerating digitization of tax collection—and contain expenditure by reallocating budgets to the highest priorities, improving procurement, and reducing fraud.

Meanwhile, making governments' balance sheets transparent can unlock the value of their assets and represents a largely untapped and potentially greater opportunity. We estimate that worldwide public assets are worth more than 200 percent of global GDP—with real estate alone valued at about 100 percent—and by adopting an investor mindset, partnering with the private sector to unlock value, and monetizing the assets on their balance sheets, governments could raise 2 to 3 percent of GDP annually to raise additional cash resources. This strategy requires governments to capture value by reviewing the value and returns of their real estate holdings, state-owned enterprise (SOE) investments, and other assets (Exhibit 5).[32]

In addition to increasing the potential value of government holdings, reviewing their value and returns also enables alternative funding solutions, such as collateralizing sovereign assets to raise more debt, using nonrecourse lending solutions like public–private partnerships to finance capital expenditure, and exploiting or selling nonstrategic assets.

New Zealand raised its credit rating to AA+ and reduced the cost of servicing its debt by adopting a transparent balance sheet, which has now reached a net value of 45 percent of GDP. Similarly, Singapore created an active holding company to maximize the return on equity of national commercial assets, which contributed about $3 billion to the country's annual budget.

7. Institutionalize best-practice crisis response to prepare for the next crisis

The COVID-19 crisis has enabled many countries—notably, some in Africa and other emerging-market regions—to identify and start creating the elements of effective local outbreak responses. Governments and regional institutions can prepare for future outbreaks by institutionalizing emergency operation centers, lab networks, disease-surveillance systems, and emergency supply chains.[33] Denmark is establishing a new government agency under the Ministry of Justice to prepare for future epidemics or another wave of the coronavirus. The agency will be responsible for testing and testing facilities, epidemic-related infrastructure, cooperation between private and public sectors, and the supply and storage of sufficient protective equipment.[34] A number of governments have demonstrated best practices by establishing crisis nerve centers—highly agile, coordinated bodies that bring together crucial organizational skills and capabilities. Such centers coordinate multiple fast-moving and interconnected work streams across existing crisis-response structures in government and across society. The COVID-19 crisis has exhibited all three characteristics that make a nerve center an appropriate intervention: the crisis has dramatically disrupted regular activities and overwhelmed, or threatened to overwhelm, existing resources; it is unlike

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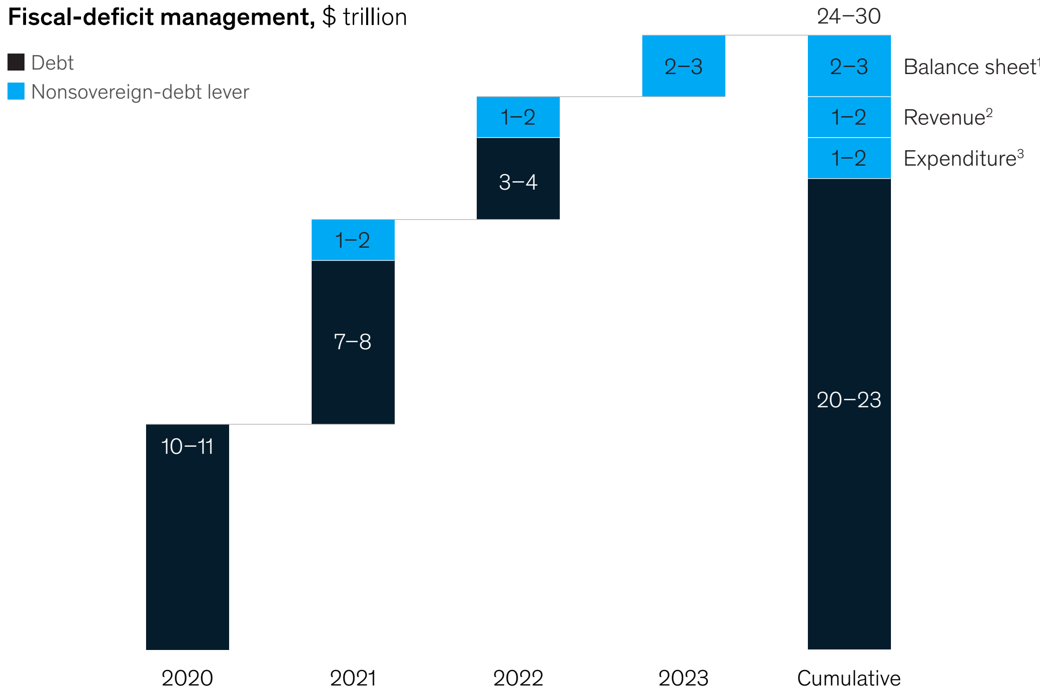
[31] Rima Assi, Mael de Calan, Akash Kaul, and Aurelien Vincent, "Closing the $30 trillion gap: Acting now to manage fiscal deficits during and beyond the COVID-19 crisis," July 16, 2020, McKinsey.com.
[32] *ibid.*
[33] Jayaram, Leiby, Leke, Ooko-Ombaka, and Sun, "Reopening and reimagining Africa."
[34] Jessie Yeung and Adam Renton, "Denmark is creating a new agency to handle future outbreaks," May 12, 2020, CNN, cnn.com.

Exhibit 5

Governments can ramp up debt and nondebt levers to bridge the fiscal gap.

Fiscal-deficit management, $ trillion



[1]Monetized assets to amount to recurring value of 3–5% of GDP.
[2]Revenues optimization to amount to 2–4% of total revenues through improved collection, resulting in 1–2% of GDP impact.
[3]Expenditure-review savings to amount to 4–5% of addressable spend (expected to be 50% for Organisation for Economic Co-operation and Development countries), resulting in 1–2% of GDP impact.
Source: Center for Strategic and International Studies; International Monetary Fund (IMF) 2020 Fiscal Monitor, Chapter 1; IMF World Economic Outlook; Organisation for Economic Co-operation and Development; World Bank; McKinsey analysis

anything current governments have faced before, making pattern recognition extremely difficult; and it has manifested extremely quickly, leaving organizations with insufficient time to understand and interpret the threats using traditional approaches.[35]

Nerve centers can increase response efficacy by coordinating and adjusting activities based on real capabilities—as opposed to formal roles and responsibilities—and providing a mechanism to balance important and urgent tasks. They can also increase the quality of information flow by coordinating multiple efforts through a central source of data collection and analysis and help rapidly assemble cross-functional teams for greater agility in responses.

A key best practice in crisis management is to establish a plan-ahead crisis unit—a cross-functional team that is freed up from day-to-day crisis management to look ahead and consider simulations of various scenarios. This strategic forecasting can strengthen governments' analyses of options to optimize the impact of their crisis response. Next practices require thinking ahead and making investments to build resilience and preparedness to respond rapidly to future potential crises. This includes expanding the role of chief scientist across the government.

[35] Adi Kumar, Leah Pollack, Navjot Singh, and Catharina Wrede Braden, "Crisis nerve centers: Supporting governments' responses to coronavirus," March 25, 2020, McKinsey.com.

Revitalizing the core capabilities of the public sector

Three key opportunities can reinvigorate the core capabilities of the public sector and the way it works:

8. Faster, better decision making using data and analytics
9. Cultivating smarter, more productive ways for public servants to work
10. Fostering new forms of partnership with the private sector

8. Make faster, better decisions using data and analytics

Governments have acted with exceptional speed to respond to the COVID-19 crisis, with both the implementation of lockdowns and measures to save lives and the approval of fiscal relief measures. More than 100 countries worldwide had instituted either a full or partial lockdown by the end of March 2020, affecting billions of people.[36]

Historically, countries have used ex post facto analysis of macroeconomic indicators to analyze trends and inform decisions complemented by surveys and polling to test reactions to policies. But, in 2020, governments were forced to make a series of decisions in a short period of time—with limited information—compared with prior crises. Several countries have quickly deployed dashboards that are constantly updated with the latest data. These dashboards visually render data to easily disseminate statistics. They also provide more in-depth data to give citizens a fuller view into government efforts and responses to the crisis.

For example, the Centers for Disease Control and Prevention (CDC) in the United States created a dashboard that offers an "at a glance" summary of COVID-19 infection rates and state testing, as well as links to other helpful pages. Hong Kong's dashboard provides in-depth Hong Kong-specific information, such as where patients live and the number of people hospitalized. The dashboard created by the UK government offers heat maps of cases and an overview of essential data, while presenting in-depth statistics—updated daily—in graphs.

Prior to the crisis, our research showed that organizations scaling artificial intelligence (AI) more broadly and realizing higher returns from it were much more likely than others to convene cross-functional teams to solve business problems—62 percent compared with 23 percent.[37] During the crisis, however, we observed many organizations—regardless of analytics maturity—automatically forming cross-functional crisis-response teams to develop analytics solutions for faster responses.

Governments have acted faster than ever before to respond to the COVID-19 crisis, both with the implementation of lockdowns and measures to save lives and the approval of fiscal relief measures.

[36] "Coronavirus: The world in lockdown in maps and charts," April 6, 2020, BBC, bbc.com.
[37] Nicolaus Henke, Ankur Puri, and Tamim Saleh, "Accelerating analytics to navigate COVID-19 and the next normal," May 21, 2020, McKinsey.com.

Next practices for decision making might include applying advanced use cases in data and analytics to policy making. For example, building the public sector's capabilities to use nowcasting—applying high-frequency data to forecast the very near future, present, and even the recent past, and act proactively in the pandemic response—is a critical next step in strengthening decision making. In particular, building the capabilities in public health and centers for disease control to process and analyze high-frequency data could further enable governments to act proactively in real time. By identifying the inflection in a region's infection curve, for example, public health officials can anticipate the peak and make a call on whether to scale up or scale back surge capacity in an area.

9. Cultivate smarter, more productive ways for public servants to work

The COVID-19 crisis has forced governments to deal with fighting the spread of the virus while simultaneously managing the socioeconomic fallout that accompanied it—a situation that requires public servants to improvise and adapt to rapidly evolving situations.[38]

The crisis has provided governments with a series of enforced "natural experiments," which have reset ideas about what is essential and what is possible. Adopting agile processes is a key enabler to combine organizational stability with dynamism, by merging clarity of purpose and a standardized way of working with flexible resource allocation and increased information transparency.[39] Some governments have applied this philosophy to the reallocation of resources to meet new demands—from Australia's tax authority to its benefits agency, and from the Abu Dhabi airport call center to the health call center.

Automation could present an important opportunity to strengthen the productivity of public services and move significant numbers of public servants who currently perform back-office administrative tasks into more valuable and meaningful citizen-facing roles. A 2017 McKinsey Global Institute study found that as many as 39 percent of administrative jobs could potentially be automated, including many public-administration roles.[40]

To seize the opportunities and establish more-productive ways of working, governments could implement an agile-at-scale operating model with interdepartmental teams collaborating to provide shared value to citizens. Implementing automation requires a focus on the citizen experience to understand the end-to-end customer journey in services in addition to what matters most to customers—simplicity, reliability, and consistency—as well as an early and deep investment in change management.[41] Key considerations include the types of skills available to governments among their public servants and which skills will need to be developed to move people out of the back office and into citizen-facing roles.

10. Foster new forms of partnership with the private sector

Relief and stimulus-package spending is likely to rise as governments move from providing immediate support to households and businesses toward fostering long-term economic recovery. Stimulus measures that are well structured and designed and implemented in collaboration with the private sector could help brace workforces for a technology-driven future and improve key industries' long-term competitiveness and resilience.[42]

The crisis, and governments' responses to it, are challenging economic orthodoxies, as much of the unprecedented stimulus packages are aimed at guaranteeing the survival of businesses, and some

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[38] John-Mary Kauzya and Elizabeth Niland, "UN/DESA Policy Brief #79: The role of public service and public servants during the COVID-19 pandemic," Department of Economic and Social Affairs, United Nations, June 11, 2020, un.org.
[39] Allas, Checinski, Dillon, Dobbs, Hieronimus, and Singh, "Delivering for citizens."
[40] For more, see "A future that works: Automation, employment, and productivity," McKinsey Global Institute, January 2017, on McKinsey.com.
[41] Daub, D'Emidio, Howard, and Ungur, "Automation in government."
[42] Assi, Fine, and Sneader, "The great balancing act."

Automation could present an important opportunity to strengthen the productivity of public services and move significant numbers of public servants who currently perform back-office administrative tasks into more valuable and meaningful citizen-facing roles.

government leaders and citizens consider the idea of universal basic income (UBI) more seriously than before. Unique government measures that are testing capitalist orthodoxies fulfill one of three functions: maintain household economies, help firms survive the crisis, or maintain financial stability.

Best practices in the current crisis have largely been limited to mandated public requests made to the private sector. For example, the Defense Production Act gave the US government the power to require manufacturers to shift to producing ventilators, masks, and other PPE. The law allows the government to make guaranteed loans to help companies develop new production capabilities for goods that are relevant to a crisis. In addition, the government can acquire and install equipment in factories, including privately owned ones.[43]

In a more proactive partnership, African pharmaceutical and manufacturing companies have produced critical supplies and drugs in the midst of global shortages, disrupted supply chains, and export bans.[44]

African banks and telecom companies have also been critical partners in the massive scaling up in distribution of social protection. In South Africa, banks are the primary enabler of a $30 billion stimulus-package injection into the economy, including a $12 billion SME lending program. In Nigeria, banks established a $2.5 billion lending program to support local manufacturing and other key sectors.[45]

Joint efforts between the public and private sectors have also played an important role in China—for example, Tencent's WeChat and Alibaba's Alipay supported the Shanghai government's launch of the Suishenma health QR code to help contain the spread of the virus.[46]

Collaboration has also occurred across the private sector, with companies taking greater responsibility for keeping people employed or for redeploying labor where possible. In Australia, for example, Woolworths coordinated its supply-chain efforts—with the blessing of competition authorities—with its biggest rivals, Coles and Aldi, to ensure all Australian consumers had fair access to groceries and other essentials. The

[43] Charlie Savage, "How the Defense Production Act could yield more masks, ventilators and tests," *New York Times*, March 20, 2020, updated July 22, 2020, nytimes.com.
[44] Jayaram, Leiby, Leke, Ooko-Ombaka, and Sun, "Reopening and reimagining Africa."
[45] François Jurd de Girancourt, Mayowa Kuyoro, Lorris Nazon, Youness Raounak, and Dina Tagemouati, "African banking after the crisis," June 29, 2020, McKinsey.com.
[46] Nick Leung, Joe Ngai, Jeongmin Seong, and Jonathan Woetzel, "Fast-forward China: How COVID-19 is accelerating five key trends shaping the Chinese economy," May 6, 2020, McKinsey.com.

grocer also announced that, as part of its initiative to hire about 20,000 casual or part-time staff, it would offer up to 5,000 short-term roles to Qantas Group employees taking leave without pay.[47]

Multinational institutions have also become involved in partnerships, together with nongovernmental organizations. For example, COVAX is a joint initiative among governments, global health organizations, scientists, and the private sector, as well as civil society and philanthropic organizations, to share procurement risk and ensure the equitable distribution of vaccines once they become available.[48] Such innovative public partnerships elevate collaborations with the private sector to enhance service delivery. Governments will need to decide which role they will play—regulator, funder, or active partner—to advance their social agendas. For example, the pharmaceutical industry has reduced its investment in vaccines and antibiotics over the past decade because of limited short-term returns. Critically, governments could also incentivize a longer-term view to ensure sufficient investment in research and development for the public good.

There is a natural convergence of corporate purpose and the role of governments to advance an inclusive socioeconomic agenda: ensuring long-term sustainability and profitability through a focus on people, the planet, and profits.

The COVID-19 crisis has forced governments and firms to act quickly and decisively to find new ways of working and mitigate the risks to lives and livelihoods. This shift has prompted greater collaboration with established partners and the forging of new partnerships, especially between governments and the private sector.

Within these responses to the crisis, we have seen best practices—along with the signs and seeds of next practices—on display across a range of sectors and geographies. Governments have proved to themselves and to others that they can adapt and innovate to address a major crisis.

Now is the time to shape more resilient societies and build more resilient governments, supported by the revitalization of core capabilities of the public sector. Seizing this opportunity requires fundamentally rethinking how governments work, which involves three elements:

- **New processes**, skill sets, and ways of managing and delivering work
- **New technology and analytics**—all the innovations we've seen have been enabled by new technology or new approaches to data
- **New ways of thinking** about the broader ecosystem and stakeholders in and around governments—partnering and collaborating with the private and nongovernmental sectors to jointly solve societal problems

There is a historic opportunity to build on the progress made in the short period of dealing with the pandemic—and to deepen the convergence of corporate purpose and the public sector's focus on broader societal wellbeing.

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47 Tonby and Woetzel, "Could the next normal emerge from Asia?"
48 "What is COVAX?," Gavi, accessed October 15, 2020, gavi.org.

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