



FINANCE AND DEVELOPMENT

MARCH 2022

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debt becomes
unsafe** P.8

**Understanding the
social state** P.23

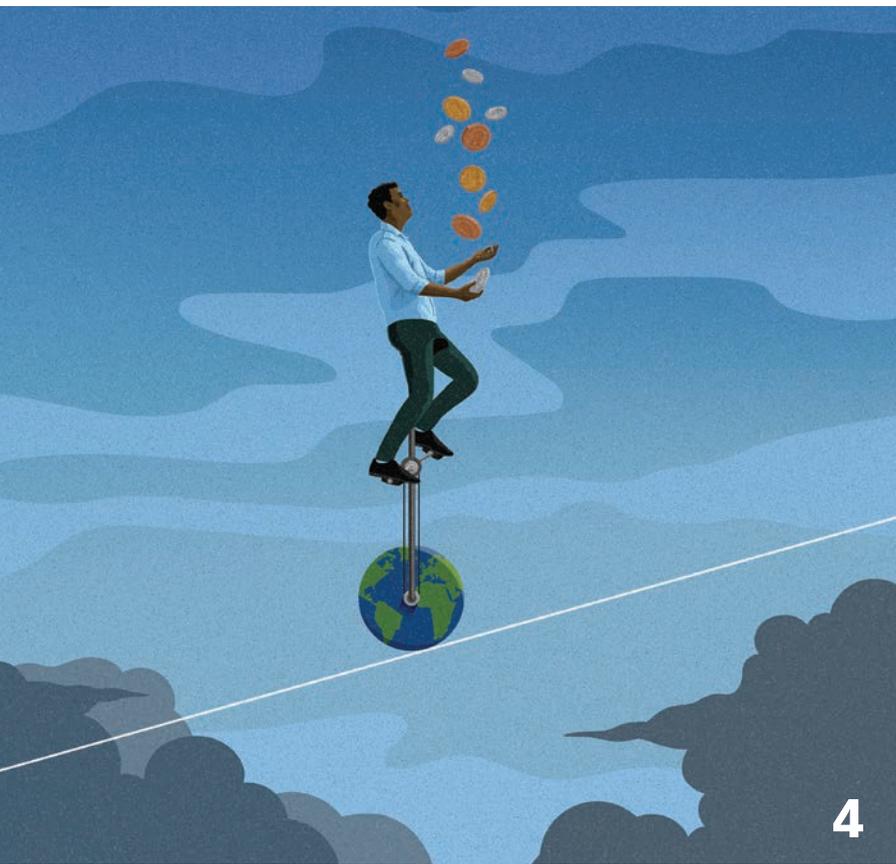
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A stylized illustration of a woman with dark hair in a ponytail, wearing a light blue dress and dark shoes, sitting on a thick, brown tree branch. The tree is large and has many branches, with numerous green banknotes falling from it like leaves. The background is a dark blue sky with dark, stylized clouds. The ground is a green hill.

Rethinking Fiscal

Public Finance and Fairness
in a Changed World

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Rethinking Fiscal

NEARLY A CENTURY AGO, Joseph Schumpeter wrote, “The spirit of a people, its cultural level, its social structure...all this and more is written in its fiscal history.... The public finances are one of the best starting points for an investigation of society.”

The innovative fiscal responses to the pandemic’s economic fallout bear him out. The power and agility of fiscal policy were far beyond what was previously thought possible. Governments channeled cash directly to households and businesses to save jobs and livelihoods. As the IMF’s Vitor Gaspar notes, these actions demonstrated government’s “special role in protecting the vulnerable when things go wrong.” But now the bill is coming due. Governments face the tricky task of reducing unprecedented debts to more sustainable levels while maintaining support for health systems and the most vulnerable.

In this issue of F&D, contributors examine how fiscal policy can be retooled for the post-pandemic world to deliver public value and a balanced economy for all.

Several authors offer perspectives on debt. Olivier Blanchard rejects simple fiscal rules and says policymakers must ask themselves tough questions on the interplay of such variables as interest rates, economic growth, and political stability. Ceyla Pazarbasioglu and Carmen Reinhart urge emerging market and developing economies to completely account for hidden debts to sustain growth and avoid the risk of default. Ricardo Reis concludes that price stability matters now more than ever.

Social questions matter, too. Emmanuel Saez defends the need for an expansive welfare state. Paolo Mauro argues that policymakers can muster broader support if they consider the full range of moral perspectives on public finance. Other contributors reflect on fiscal balancing acts to address inequality and support the green transition.

Policymakers face myriad uncertainties and difficult trade-offs. They must prepare to adjust priorities to create economies that are fairer, more inclusive, and sustainable. For in the end, how a society manages its fiscal affairs decides the fate of the nation and the well-being of its people. **FD**

GITA BHATT, editor-in-chief



ON THE COVER

The pandemic has spurred a paradigm shift in fiscal policy—a theme our March 2022 issue examines in detail. Illustrator Peter Reynolds’ cover art features a money tree losing leaves as a storm approaches, symbolizing the need for government spending in times of crisis.

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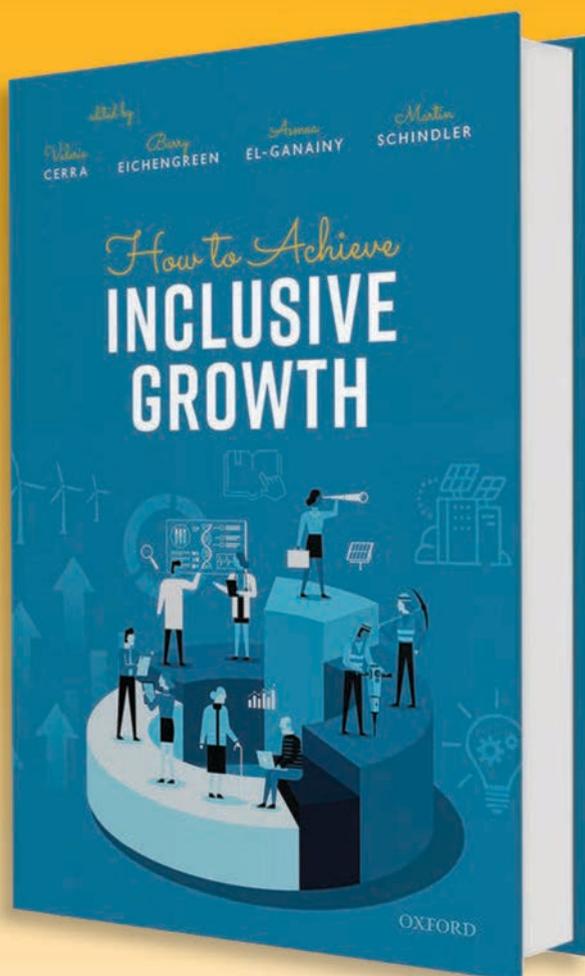
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How to Achieve Inclusive Growth

Valerie Cerra, Barry Eichengreen, Asmaa El-Ganainy, and Martin Schindler



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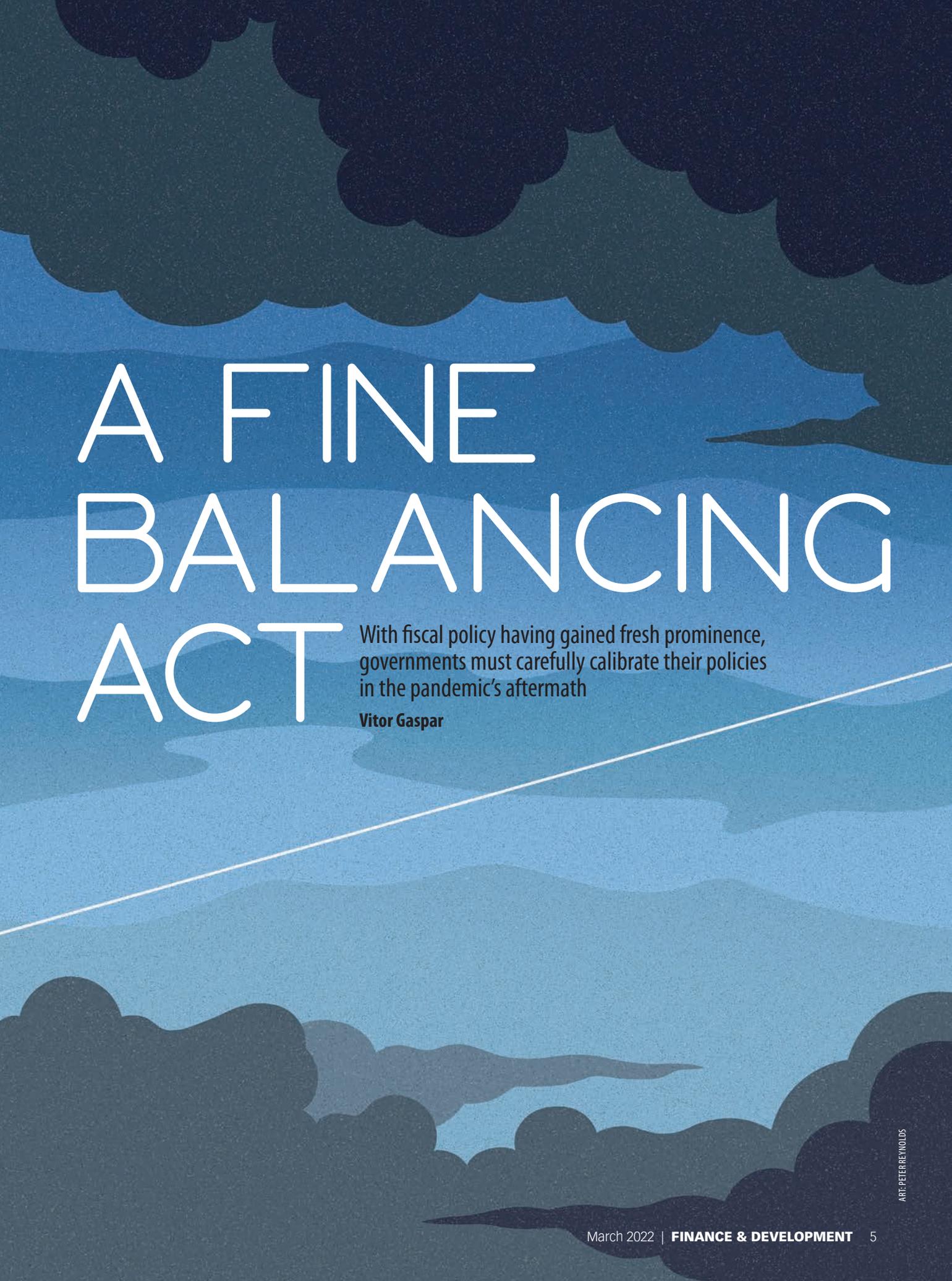
"This collection of essays by leading academics and practitioners explains why and provides guidelines for how we can tackle labor market, technology, financial market, and international challenges to make growth more inclusive. Anybody who wants to tackle the problem of inequality and poverty today will find this collection to be an invaluable guide."

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A FINE BALANCING ACT

With fiscal policy having gained fresh prominence, governments must carefully calibrate their policies in the pandemic's aftermath

Vitor Gaspar

Before the global financial crisis of 2008, the general consensus was that the most important contribution fiscal policy could make to macroeconomic policy was to avoid becoming a source of instability. That is, while sound public tax and spending policies were considered fundamental to financial stability, it was monetary policy, with its focus on price stability, that would deliver the optimal level of output and employment. A contribution from fiscal policy to stabilizing the economy was not only unnecessary, it was also undesirable, because changes in fiscal policy act with such long lags, and politics can produce unsound policies.

Fiscal institutions, rules, and procedures that kept spending and taxing in sync were considered the key ingredients to ensuring sound public finances. Fiscal policy's main role was not price stability or output stabilization but *long-term* sustainable and inclusive growth. Government taxes and spending were largely looked at for their effects on the allocation and distribution of resources. The bottom line: despite its limited contribution to stabilization, fiscal policy was central to macroeconomic priorities that determine the relative prosperity of nations and the well-being and capacities of successive generations.

But in 2020, in response to the COVID-19 pandemic, fiscal policy took on a crucial role in macroeconomic stabilization. As prices and demand plummeted and central banks in many advanced economies were hamstrung by interest rates that could go no lower, fiscal policy took on new importance—extending lifelines to vulnerable households and firms and limiting the impact of business shutdowns on economic activity and employment. Fiscal actions were implemented decisively and rapidly.

Massive increases in spending

Fighting the effects of the pandemic, however, required a massive increase in spending that led to large budget deficits and unprecedented levels of government debt. It is remarkable that historically high levels of public debt have been accompanied by historically low interest rates and, for advanced economies, low interest cost of servicing public debt. But now, with inflation and interest rates on

the rise, the issue is becoming how, and how fast, those deficits and debt levels will be reduced. There is reason to fear that the burden of policies aimed at reducing deficits and debt, such as spending cuts and tax increases, will fall predominantly on people already hit hardest by the pandemic—such as caregivers, low-wage earners, and less-qualified workers. Moreover, in many countries, there is also concern that premature austerity could jeopardize economic recovery.

The United States provides an important example of the beneficial power of an activist fiscal policy. US poverty actually fell in 2020, the first year of the COVID-19 pandemic, because of a massive widening of the social safety net. The US Census Bureau's Supplemental Poverty Measure rate—which, in contrast to the official poverty rate, takes into account government assistance to families and individuals—was 9.1 percent of the population in 2020, 2.6 percentage points lower than in 2019. This is all the more remarkable because the official poverty rate increased 1.0 percentage point to 11.4 percent (an increase of 3.3 million people). The expansion of the US social safety net (which includes support checks and increased unemployment benefits) more than compensated for wages and jobs lost during the first year of the pandemic. The government has a special role in protecting the vulnerable when things go wrong, and 2020 demonstrated its power to do so. The United States is not the only case: poverty also fell in 2020 in other countries, such as Brazil. Poverty and inequality are fundamentally influenced by political choices.

In times of crisis, fiscal politics dominates the public sphere, as it has during the pandemic. But another important phenomenon during the COVID-19 emergency is the interaction of monetary and fiscal policies when monetary policy is constrained by an effective lower bound on nominal interest rates. Manipulating interest rates is the primary way monetary policy operates. In the United States, the euro area, and Japan, estimates of the neutral real interest rate—the rate that supports the economy at full potential while keeping inflation in check—have been declining significantly in recent decades. A falling neutral rate implies that

The power of fiscal policy is greatest when it is needed the most.

the effective lower bound will increasingly constrain central banks' ability to lower interest rates to offset falling demand, which leads to declines in both economic activity and employment and to an inflation rate that is below target.

Interest rates at zero

In 2020 interest rates fell to near zero, but they could not revive an economy in free fall during the pandemic. That resulted in monetary policy ramping up the use of unorthodox techniques such as forward guidance—committing to low interest rates for a long period—and asset purchases to prop up demand and prices. But even as monetary policy's ability to influence the economy was constrained, fiscal policy space increased. Governments cut taxes and directed resources to households and businesses to offset the effects of the pandemic—which included lockdowns, massive job losses, and a decline in demand that threatened severe disinflation. Fiscal policy became instrumental in stabilizing expectations and supported monetary policy's aim of delivering price stability in a timely way. The power of fiscal policy is greatest when it is needed the most.

In 1923 John Maynard Keynes—the progenitor of the eponymous Keynesian economics, which spawned monetary and fiscal policies—warned in *A Tract on Monetary Reform* that “what Government spends the public pays for. There is no such a thing as an uncovered deficit.” This observation reflects the inescapable reality of governments' budget constraints. An important activity of the IMF, enshrined in its Articles of Agreement, is to make resources available to member countries to

facilitate their ability to correct imbalances—such as a sudden stop in external financing, unsustainable public finances, or a banking crisis—without resorting to drastic measures that destroy national and international prosperity. The availability of IMF resources is meant to build confidence during crises—when countries have lost, or are at risk of losing, their ability to borrow in open markets. Still, under these circumstances, budgetary adjustment is unavoidable and must be compatible with available financing, which is typically scarcest when and where it is most needed.

During 2020, advanced economies and China contributed more than 90 percent to the accumulation of public and nonfinancial private debt. The remaining countries accounted for only about 7 percent. The advanced economies and China are projected to return to the pre-COVID growth path over the next one to three years. In contrast, developing economies are expected to fall below the growth prospects projected before the pandemic, because they were severely constrained in their ability to respond. Reduced growth prospects and persistent declines in tax revenues are major concerns for the eradication of poverty and, more generally, for the attainment of the Sustainable Development Goals (SDGs) agreed to by 190 countries in 2015. Those 17 goals aim to result in a world in which extreme poverty is eliminated and opportunities and capacities expand for all. Financing and revenue mobilization are key enablers of the SDGs. The international community provided critical support in 2020 and 2021. But more is urgently needed. **FD**

VITOR GASP is director of the IMF's Fiscal Affairs Department.



PERSPECTIVES ON DEBT

Deciding When Debt Becomes Unsafe

Don't expect easy answers or simple rules. Projecting growth, deficits, and interest rates is just the beginning

Olivier Blanchard

When does the level of debt become unsafe?

To answer this question, we need a definition of “unsafe.” I propose the following: Debt becomes unsafe when there is a non-negligible risk that, under existing and likely future policies, the ratio of debt to GDP will steadily increase, leading to default at some point.

The natural way to proceed is then straightforward.

The dynamics of the debt ratio depend on the evolution of three variables: primary budget balances (that is, spending net of interest payments minus revenues); the real interest rate (the nominal rate minus the rate of inflation); and the real rate of economic growth.

A two-step approach

The first step must be to form forecasts of those three variables under existing policies and work out the implications for the dynamics of the debt-to-GDP ratio. Forecasts of these levels for the next decade or so are likely to be available. But such forecasts are not enough; we need to assess the uncertainty associated with those forecasts, which means coming up with a range of possible outcomes for each variable.

That is much harder, and it involves answering some tricky questions. For example, what is the risk of a recession and its likely magnitude? What is the risk that real interest rates will rise? If they do, how does the maturity of the debt affect interest payments?

If debt is partly in foreign currency—often the case for emerging market economies—what is the likely distribution of the exchange rate? What is the probability that some of the implicit liabilities transform themselves into actual liabilities; that, for example, the social security system runs a large deficit which must be financed by a transfer from the government? What is the distribution of the underlying potential growth rate?

Going through this step delivers a distribution of the debt ratio, say, a decade from now. If the probability that the ratio steadily increases at the end of the horizon is small enough, we can conclude that the debt is safe. If not, we must move to the second step and answer the next set of questions: Will the government do something about it? And if the government announces new

policies or commitments, what is the probability that it will deliver on those?

This second step is even harder than the first. The answers depend on the nature of the government: a coalition government may be less likely to take tough measures than one with a large legislative majority. The outcome depends not just on the current government, but on those in the future, and thus the results of future elections. It depends on the reputation of the country, and on whether, when, and why it has defaulted in the past.

If all this sounds difficult, that's because it is. If it sounds like it depends on many assumptions that can be challenged, that's because it does. This is not a defect of the approach but a reflection of the complexity of the world. But the exercise must be done. Indeed, it is what credit-rating agencies do, whether they use the same terms to describe the process, and whether or not their criterion for a less than perfect rating depends on the same definition as mine. With a lower rating comes the effective punishment; namely, a government will have to compensate investors for taking on the higher risk of default by paying a higher rate of interest.

The problem with rules

Now let me go back to the original question. When does the level of debt become unsafe?

The process I have described makes it obvious that the answer is not going to be some universal magic number. Nor will there be a combination of two magic numbers, one for debt and one for the deficit.

This is particularly obvious if we think of changes in the underlying interest rates. Suppose, as has been the case in the United States since the early 1990s, that the real interest rate falls by 4 percentage points. That implies a decrease in the real cost of servicing the debt of 4 percent of the debt ratio; so if debt is 100 percent of GDP, debt service falls by 4 percent of GDP. Quite obviously, lower rates imply much more favorable debt dynamics. A debt ratio that may have been unsafe in the early 1990s is much less likely to be unsafe now. We might conclude from this that the magic variable therefore should not be the ratio of debt to GDP, but rather the ratio of debt service to GDP. This would indeed be an improvement, but it comes with its own problems: the variability of debt-service costs

depends on the variability of real interest rates, which can be substantial. An increase in the real rate from 1 percent to 2 percent will double the debt-service cost. The cost may be low but it is also uncertain, and the uncertainty will affect whether the debt is safe or not.

The long decrease in real interest rates is in part what has triggered the current discussion on the appropriateness of magic numbers and the reforms of EU budget rules. But the point is much broader: take two countries with the same high debt ratio but with different types of governments, or debt denominated in different currencies. One's debt might be safe, while the other's might not.

The answer is not going to be some universal magic number.

So my answer to the question is, I do not know what level of debt, in general, is safe. Give me a specific country and a specific time, and I will use the approach above to give you my answer. Then we can discuss whether my assumptions are reasonable.

But don't ask me for a simple rule. Any simple rule will be too simple. For sure, Maastricht criteria or so-called Black Zero (balanced budget) rules will, if they are respected, ensure sustainability. But they will do so at the cost of constraining fiscal policy when it should not be constrained. Most observers agree for example that fiscal consolidation in the European Union in the wake of the global financial crisis, a consolidation triggered by the rules, was too strong and delayed the EU recovery.

And do not ask me for a complex rule. It will never be complex enough. The history of the EU rules, and the addition of more and more conditions to the point where the rules have become incomprehensible but are still considered inadequate, proves the point. **FD**

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PERSPECTIVES ON DEBT

Shining a Light on Debt

For economic recovery and crisis prevention, hidden liabilities and their terms must be revealed

Ceyla Pazarbasioglu and Carmen M. Reinhart

As the COVID-19 crisis lingers, emerging market and developing economies are entering perilous waters that evoke memories of past debt defaults. Although all countries amassed debt to fight the pandemic, the economic recovery in these economies substantially lags their advanced economy counterparts. Tighter monetary policies in advanced economies are poised to push up international interest rates, which tends to put pressure on currencies and heighten the odds of default. To complicate matters, the extent of many emerging market and developing economy liabilities and their terms aren't fully known. If they are to foster a sustained recovery and limit the risk of a crisis, they must make a full accounting of hidden debts, both public and private.

Emerging market and developing economies are facing complex challenges, with weaker growth prospects, limited fiscal space, and higher refinancing risks due to the shorter maturity of public debt, according to the IMF's October 2021 *Fiscal Monitor*. Many are debt intolerant because, among other factors, of their credit history and greater macroeconomic volatility. Many have encountered crises at lower debt levels (Chart 1) than those prevailing in 2021 (Reinhart, Rogoff, and Savastano 2003).

A common feature of debt crises has been a sudden jump in debt levels, often driven by large exchange

rate depreciations in countries with foreign currency debt, and governments' assumption of so-called contingent liabilities amassed by state-owned enterprises, subnational governments, banks, or corporations. Because these crises are associated with lower growth, higher inflation, and setbacks in the fight against poverty and other development goals, protracted defaults are damaging to the economic and social fabric of the debtor country.

Public sector foreign currency debt remains a vulnerability (though perhaps less so than in the past). Sustained exchange rate depreciation could pressure governments to rescue private entities that have large foreign currency liabilities. Such rescues could trigger a sudden rise in public borrowing needs, as happened in numerous earlier crises in both advanced and emerging market and developing economies.

Emerging market sovereign spreads are, on average, close to their pre-pandemic levels even as public debt levels have risen and sovereign credit ratings have been marked down. However, despite the low global interest rates of the past decade, emerging markets' external debt-servicing burden has been steadily climbing (Chart 2), with a sharp rise in 2020, as exports slumped, debt spiked, and borrowing terms deteriorated for many of these economies.

Global financial conditions are set to deteriorate as central banks in advanced economies tighten policy to fight unexpectedly persistent inflation pressure. Declining overseas lending by China is poised to reinforce this trend as China deals with its own property sector bankruptcies and the souring of many of its loans to emerging market and developing economies.

Furthermore, the share of sovereign domestic debt in these economies has increased sharply in the past two decades (IMF 2021). Governments turned to the domestic banking system to meet their financing needs as overseas investors withdrew during the pandemic. The increase in government debt held by emerging market domestic banks implies that sovereign debt distress could spread to banks, pension funds, households, and other parts of the domestic economy.

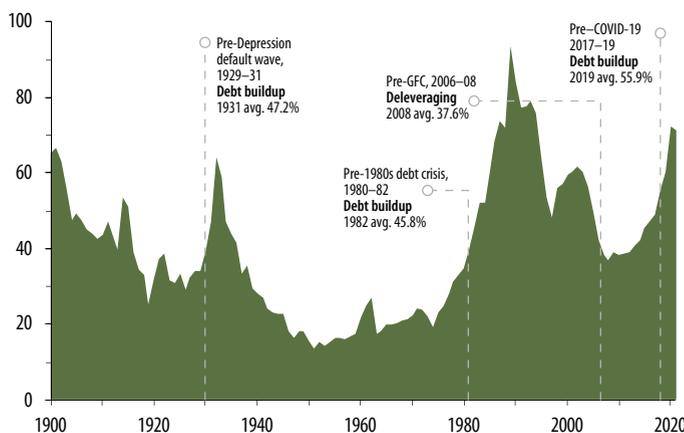
Debt risks are high and are likely to remain so for several years, as the pandemic has increased the gross financing needs of the public sector on a sustained basis among emerging market and

Chart 1

Breaking point

Many emerging market and developing economies have encountered crises at lower debt levels than those prevailing in 2021.

(public debt as a percentage of GDP, 1900–2021, unweighted average, 46 EMDEs)



Sources: IMF, *World Economic Outlook*; and Reinhart and Rogoff (2009).

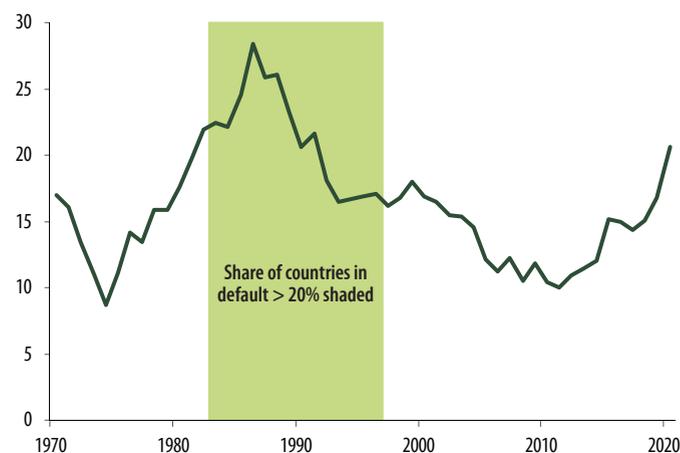
Note: Dotted lines cover four crisis episodes: 1929–31 and 1980–82, the onset of major debt crises in EMDEs; 2006–08, the onset of the GFC, primarily affecting advanced economies; and 2017–19, the pre-COVID-19 debt buildup in EMDEs. EMDEs = emerging market and developing economies; GFC = global financial crisis.

Chart 2

Up and away

Despite the low global interest rates of the past decade, the external debt-servicing burden of EMDEs has been steadily climbing, with a sharp rise in 2020.

(average total external debt service, EMDEs, as a percent of goods, services, and primary income)



Sources: World Bank, *International Debt Statistics*; and Reinhart and Rogoff (2009).

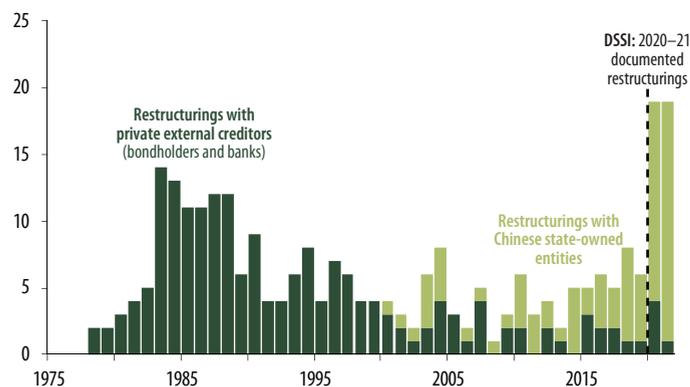
Note: Default shares are based on all countries (193 as of 2020). Debt servicing is an average for 123 EMDEs. EMDEs = emerging market and developing economies.

Chart 3

Off the radar

The boom in hidden debts has given way to a rise in the number of unrecorded debt restructurings.

(number of external sovereign debt restructurings)



Source: Horn, Reinhart, and Trebesch (forthcoming).

Note: This chart combines data on distressed debt restructurings of private external creditors (bondholders and banks) with those on Chinese creditors. The Chinese cases include 33 debt reschedulings with countries at high risk of or in debt distress in the wake of the 2020–21 Debt Service Suspension Initiative (DSSI). To avoid bias, 149 “symbolic” restructurings of minor, zero-interest loans are excluded.

developing economies. Many have run down domestic sources of financing. And their ability to borrow from domestic central banks—which some countries have done extensively since early 2020—will be more limited if inflation pressure persists. These developments may make emerging market and developing economies more dependent on external financing and expose them to greater risks of a sudden stop in external financing. Last, but not least, financing needs—and debt—have a habit of coming in higher than expected.

Opaque balance sheets

Many debtor governments, seeking to avoid a disorderly and protracted default, face a major obstacle: the true extent of their liabilities or terms is often not fully known to many of their creditors or the international financial institutions that support them. During the period of high global commodity prices and relative prosperity that lasted until about 2014, many emerging market and developing economies looked beyond the Paris Club of official creditors and borrowed heavily from other governments, particularly China. A substantial share of these debts went unrecorded in major databases

and remained off the radar of credit-rating firms. External borrowing by state-owned or guaranteed enterprises, which have uneven reporting standards, also escalated. The boom in hidden debts has given way to a rise in unrecorded debt restructuring (Chart 3) and hidden defaults (Horn, Reinhart, and Trebesch, forthcoming). Comparatively little is known about the terms of these debts or their restructuring terms. Historically, opacity derails crisis resolution or, at a minimum, delays it.

The lack of balance sheet transparency extends beyond the public sector. As the 2022 *World Development Report* highlights, many countries introduced accounting and regulatory forbearance and guarantees to mitigate the impact of the pandemic on the economy. The unintended consequence of these measures is the potential for an increase in nonperforming loans that are not yet reflected on banks’ balance sheets. The rise in hidden nonperforming loans, together with increased sovereign debt holdings, has reinforced the so-called sovereign-bank nexus, in which the financial soundness of banks has become increasingly intertwined with that of governments. Banking and sovereign debt crises have often erupted in close succession (Reinhart and Rogoff 2011). The pandemic has strengthened this “doom loop” while increasing the opacity of private and public balance sheets.

Detection, transparency, and resolution

An encompassing strategy to increase the transparency of the public, financial, and corporate sectors and assess and address identified balance sheet risks is a first step in both supporting economic recovery in emerging market and developing economies and resolving sovereign debt problems in countries already in distress. More than a year has passed since the Group of Twenty introduced the Common Framework for Debt Treatments to deal with sovereigns facing sustained debt problems; to date, not a single country restructuring has been achieved. As in earlier episodes, the nature of delays is varied and traces to both creditors and debtors, and urgent action is needed by all relevant stakeholders to ensure that the Common Framework delivers. That includes clarifying steps and timelines on the Common Framework process and suspending debt-service payments until negotiations are completed.

Debt contracts are a critical area that needs more transparency. Beyond the usual terms (maturity, interest rates, currency), key features (collateral, cross-default, secrecy clauses, and so on) of many emerging market debt contracts are often undisclosed. Collateralized external public debt has risen in recent years, but accurate measures of its prevalence are limited. Reliance on collateralized syndicated bonds and loans from private creditors is concentrated in a few countries, including opaque contracts with oil traders. There is also some evidence to suggest that many of China's bilateral infrastructure loans are collateralized (Gelpern and others 2021).

As we have argued elsewhere, transparency cannot overcome all the challenges, but it can go a long way toward increasing the odds of faster and orderly debt restructuring by building trust among creditor groups, which at present is rather low. Disclosure must come from all creditors and debtors—multilaterals continue to expand their coverage of data gaps in existing databases, while building new ones that are more all-encompassing, and revise their lending policies to enhance disclosure requirements.

Fiscal, monetary, and financial sector policies have supported financial stability during the pandemic. The eventual withdrawal of these measures may uncover vulnerabilities that could lead to banking sector stress. Timely action is critical and will require improving the transparency of banks' asset quality, including exposures to the sovereign and contingent liabilities, through asset quality reviews as well as stress testing exercises to prepare contingency plans. An accurate diagnosis of risks is a first step toward problem resolution and asset restructuring where needed.

Muddling through by evergreening—renewing loans indefinitely—which has been replayed many times before, is a recipe for delayed recovery. When the assessments call for credible recapitalization plans or restructuring of liabilities, these should be carried out swiftly in ways that do not markedly worsen sovereign debt burdens. Conditions in some countries may require government intervention, including targeted programs to alleviate debt overhangs in the household and commercial real estate sectors. Importantly, to avoid “zombification,” asset restructuring must be driven by market forces, supported by tighter regulations—including in the areas of loan-loss classification, provisioning, and disclosure—and enhanced supervision.

The IMF and the World Bank will continue to support the transparency agenda through data dissemination, capacity building, and lending policies to assist with sovereign debt restructuring. In an ongoing review of IMF policies for lending to countries in arrears or undergoing restructuring, the staff is proposing a new policy under which the IMF can lend only if countries share comprehensive information about their debt stock and debt terms (in the aggregate) with all creditors. Such information sharing would be expected regardless of whether countries are already in arrears or seeking to avoid arrears.

Debt coverage in the World Bank's *International Debt Statistics* has increased substantially in the most recent year. The latest edition identified and added almost \$200 billion in previously unreported loans to past statistics, the single largest increase in debt coverage in the 50-year history of the World Bank's debt report publications (Horn, Mihalyi, and Nickol 2022). About 60 percent of low-income countries are now at high risk of or already in debt distress, compared with fewer than 30 percent in 2015. While the transparency gaps are particularly acute in these countries, these challenges are also widespread among emerging market and developing economies. The risks of not addressing these gaps promptly are both significant and rising rapidly. **FD**

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PERSPECTIVES ON DEBT

A Call for New Fiscal Rules

Advanced and emerging market economies alike need new criteria for debt sustainability

Arminio Fraga

On Christmas Day 2021 Italian Prime Minister Mario Draghi and French President Emmanuel Macron published an op-ed in the *Financial Times* on the need to reform the EU's fiscal rules. Their tone was upbeat: the pandemic was well managed (from a macroeconomic standpoint) and debt-to-GDP ratios were no longer growing. At the same time, they made the case that large-scale investment, some of it public, must be mobilized to face existential challenges, such as climate change and pandemics. It is hard not to agree with that. Moreover, government indebtedness must be brought down—but not through higher taxes, cuts in social spending, or fiscal adjustment. They singled out growth-enhancing structural reforms as a solution, as well as new and better fiscal rules, that would not stand in the way of investment. Well, it does not seem to add up.

The old Maastricht rules were deemed obscure and complex. Now pause here. As far as I can remember, these rules, long abandoned, for the most part just demanded a debt-to-GDP ratio below 60 percent and a nominal public deficit of no more than 3 percent of GDP. At the time, the idea was that countries would stay below these limits, so they would have some room to maneuver should the need arise. It was not to be. By 2019 France's debt ratio was 98 percent, and Italy's was 135 percent. Post-pandemic, they are now about 20 percentage points higher. The 3 percent ceiling for budget deficits was, for the most part, treated as a floor.

Narrow spreads

What made all this possible? Santa Claus stopped by 30 years ago when Maastricht was signed and dropped through the chimney the most amazing run of declining interest rates: 10-year Bund yields were then above 6 percent; now they are near zero. Spreads on Italian bonds versus Bunds have acted up here and there but are now at 136 basis points (a neighborhood effect, no doubt). France's spreads to Germany remain very low, despite a debt ratio 43 percentage points higher. The old fiscal rules have long been dead. We might as well design new ones.

In the meantime, while emerging market economies have benefited from abundant global liquidity, or should have, their overall experience has not been quite as good. Not having access to as much financing even in domestic currency (a welcome change relative to the 1980s), they have piled up less debt than their advanced counterparts. The most recent

IMF *Fiscal Monitor* tells us that general government debt in emerging market economies now averages 64 percent of GDP, just over half the 122 percent level of advanced economies.

Even the more stable emerging market economies display bond yields much higher than the advanced economies. At one point in recent years this group included Brazil, as well as India, Indonesia, Mexico, Russia, and South Africa—all with 10-year local currency bond yields of about 7 percent. Russia is now at 8 percent; the others are at or below 7 percent but still higher than advanced economies.

Fiscal slippage

Brazil is on the high end of the emerging market debt ratio range at 83 percent. Fiscal slippage began in the late '00s. The overall swing in the primary balance from surplus to deficit reached nearly 6 percentage points of GDP after the massive fiscal collapse of 2014. Since 2015 Brazil has run primary deficits. Unlike in advanced economies, where interest rates have been in negative territory in real terms for over a decade, in Brazil 10-year inflation-linked government bonds yield over 5 percent (a 6 percent difference over US Treasury Inflation-Protected Securities). Nominal 10-year paper yields more than 10 percent, an even wider spread versus Treasuries. Combined with very low per capita growth, this makes for ominous debt dynamics. From a low of 53 percent in 2014, the debt ratio peaked at 89 percent in 2020. It is now at 83 percent, thanks to recession-driven low interest rates and unexpectedly high inflation. Now interest rates are back up, and the debt ratio will resume its upward and unsustainable climb.

The recent fiscal history of Brazil is worth reviewing. After major reforms in the 1990s, including a restructuring of state finances and a then widely admired fiscal responsibility law enacted in 2000, Brazil's finances seemed healthy and sustainable (though the government spending ratio kept on growing). Success did not last long. A postmortem of the fiscal responsibility law's demise is yet to be written, but the fact is, it no longer bites. Since then, a freeze on government expenditures in real terms was added to the constitution, but that too is now full of holes. Confidence in the fiscal regime is all but gone, and Brazil too is badly in need of a new one.

Four pillars

The IMF's most recent *Fiscal Monitor* presents three desirable features for a fiscal framework: "(1)

sustainability of public finances; (2) stabilization of the economy through countercyclical fiscal policy, when appropriate; and (3) for fiscal rules in particular, simplicity." It also mentions resilience, which I would upgrade to number four on the list of priorities.

In a recent op-ed, I proposed the following pillars for a new fiscal regime for Brazil:

1. Public debt should be sized to allow for access to financing (usually under stress), at a reasonable cost, in case a fiscal expansion is needed.
2. The primary balance should be set so that, in normal times, the debt-to-GDP ratio remains stable.
3. If for whatever reason the debt ratio deviates from its target level, the primary balance should be adjusted to gradually bring the debt ratio back to the target.
4. The average debt maturity should be long, with limited concentration at the short end. This would match the long-term horizons governments ought to have. It would also lower the risk of run-like financial or currency crises, driven by sudden stops in financing.

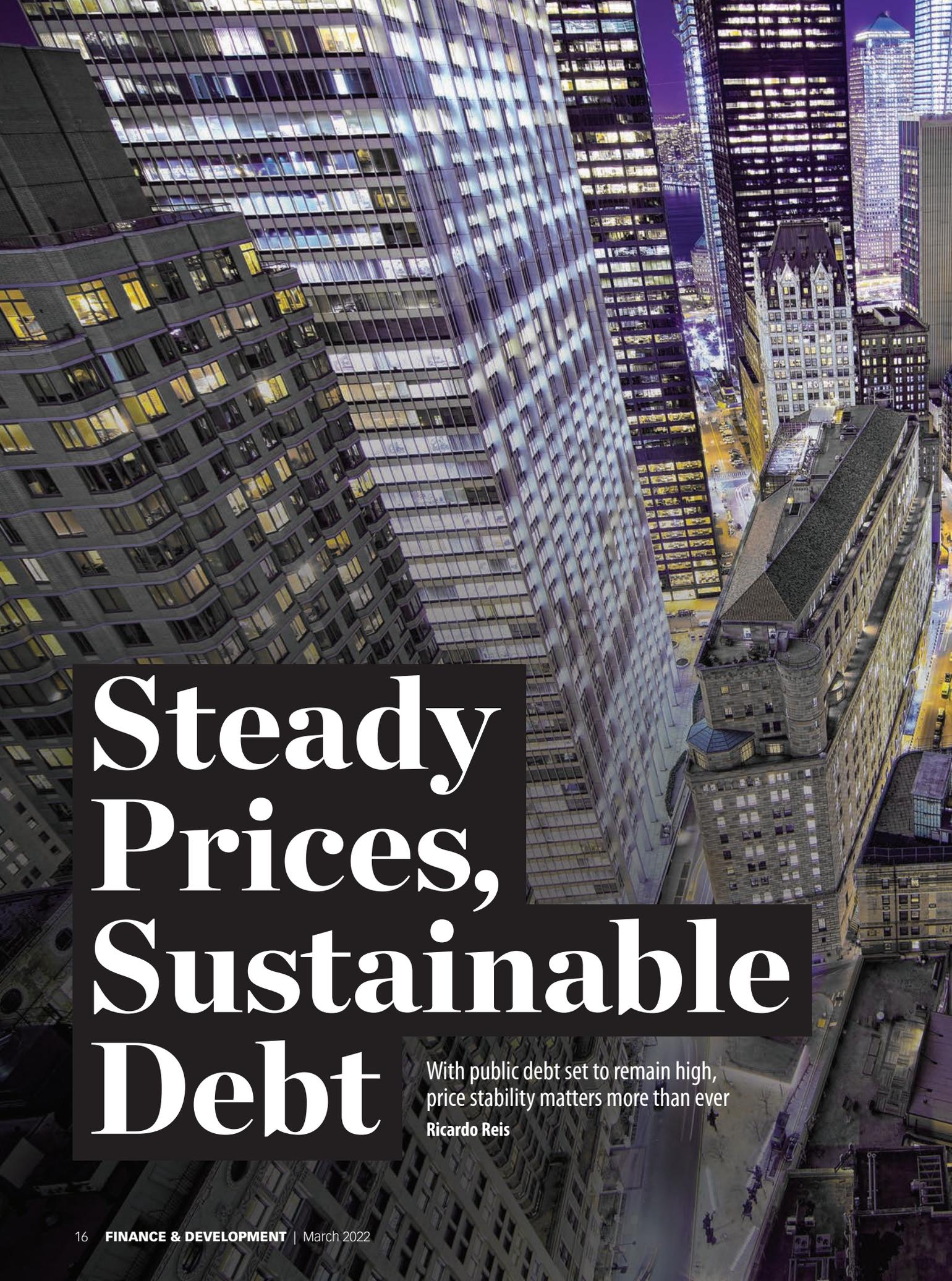
These pillars would deliver the four features recommended by the IMF. As it happens, they would serve the advanced economies as well. The key parameters, such as debt spreads and growth, differ across nations, but the same logic applies to all.

The debt-ratio target of pillar 1 is quite subjective. It depends on several economic, political, institutional, and historical factors. Therefore, targets in pillars 1 and 2 should be periodically revised, but not too frequently and at preannounced dates, in order to minimize short-term political temptations.

The success or failure of a country's macroeconomic regime can be reasonably measured by the cost of funding its long-term debt. However, even when interest rates are low, one must not forget that markets are prone to booms and busts. As Benjamin Graham (Warren Buffett's mentor) famously said, "Mr. Market is a manic-depressive," so blind faith in it is poor risk management. Thus, current ultra-low interest rates in the advanced economies ought not to be taken as permanent. In this context, I believe the adaptive reaction function of pillar 3 is the most important of the four.

A fiscal regime like the one sketched here would, if properly managed, provide a resilient and possibly durable anchor for both advanced and emerging market economies. **FD**

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Steady Prices, Sustainable Debt

With public debt set to remain high,
price stability matters more than ever

Ricardo Reis



This century, public debt has soared to record highs. Across advanced and emerging market economies and most individual countries the story is the same: a steady rise in debt since 2000 followed by a sudden spike after the financial crisis in 2008 and an even larger one during the beginning of the pandemic in 2020. The origins of this global increase in public indebtedness predate the novel coronavirus and extra public spending to support households and businesses. In the United States, the federal government has not run a fiscal surplus since 2001. Its public debt now stands at a towering \$30 trillion, equivalent to about 130 percent of GDP, the highest since records began in 1791. Even countries that borrowed large sums in the past to make it through wars, natural disasters, and sovereign debt crises are today borrowing more than ever relative to the size of their economies.

It does not seem a coincidence that these past 20 years have also been a time of great success for central banks in controlling inflation. Since 2000, prices in many countries have grown at steady rates that are close to official targets. This golden age of monetary policy had three features: an institutional arrangement that kept central banks independent of finance ministries (and monetary policy thus separated from fiscal policy); a clear inflation-targeting mandate for monetary policy; and an operational strategy with monetary policy focused on interest rates at different tenors using multiple tools. With low inflation came low and stable interest rates on public debt. As a result, interest payments remained steady as a share of government budgets even as the debt itself continued to grow.

Yet as prices rise more rapidly around the world—and annual inflation in the United States accelerates at the fastest pace since the early 1980s—is this golden age about to end? With interest rates rising already in many emerging markets, will we see a run of sovereign debt crises? Will governments seek to restore fiscal rectitude and rein in their debt even at the risk of sparking social unrest? With public debt so high is the fiscal impact of monetary policy now so large that central bank independence is no longer sustainable? Must monetary and fiscal policy now be coordinated by a single agency? Few questions in macroeconomic policy today are as pressing as these.

The 'specialness' of public debt

There are two ways for governments to sustain public debt. The first is to run primary surpluses in the future by collecting more in tax revenues than is spent on transfers and purchases. Throughout the 19th and 20th centuries, actual and expected surpluses sustained public debt; after wars or natural disasters, governments would tighten the strings of the public purse. In the 21st century, however, surpluses are small or nonexistent in almost all advanced economies. Forecasts for the United States point to large deficits for at least the next 30 years. In most European countries, the ability to raise taxes or cut spending on public services seems limited. It is hard to argue that the increase in public debt in the past 20 years has come with a commensurate increase in future taxes or cuts in spending.

Instead, the recent rise in public debt has been sustained in another way. Governments have been able to borrow from investors at a lower rate than those same investors use to discount the future. That discount is the rate of return the investors would get by investing in the private economy. The gap between the two returns means that the government collects a form of *debt revenue*. In other words, if the government used the amount it borrowed to invest in the private capital stock, this revenue would be the profit from doing so. Even if the government did not do so directly, the gap in returns represents an opportunity cost for the lender, and so a gain for the government that borrows, which it collects by rolling over the debt at this low rate. The debt will be sustainable as long as it keeps its special ability to attract investors in search of the safety, liquidity, or whatever other advantage the debt provides. It is this "specialness" of public debt that allows it to pay such a low interest rate.

The debt of some governments is more special than that of others. Governments in advanced economies (especially the United States) are able to pay much less than those in emerging market economies. Countries that through their strong reputation and institutions have been able to maximize this debt revenue have been able to sustain a larger increase in debt, both before and during the pandemic. Common to all countries, however, is their interest rate ties to the global equilibrium interest rate, sometimes called the "r-star," at which the world demand for and supply of savings are the same. The r-star has been falling



When inflation comes as a surprise to bondholders, it transfers wealth from their pockets to those of the government.



for at least two decades as a demographic transition to older populations has led more people to save for retirement, a productivity slowdown has curtailed the demand for capital, and higher inequality and financial risk have made households want to save more and firms to invest less.

Both advanced and emerging market economies have to different degrees benefited from these secular changes to sustain their debt. Moreover, these trends are not expected to change suddenly in the next few years. And even if they were to do so, they would not affect government debt alone. A sudden boom in productivity would, for instance, raise the interest rate on the debt. But it would also raise the marginal product of capital and the government's tax revenues—making debt easier to sustain.

Monetary policy also affects debt revenue, but in other ways. Because many governments today borrow mostly in their own currencies, the cost of public borrowing also depends on the value of the currency when they pay back. Moreover, when a sovereign state borrows, it cannot strictly be forced to repay (unlike a private individual or company), so there is a voluntary side to honoring the debt. Inflation and sovereign default are the two risks a holder of public debt must bear and that undermine the attractiveness of the debt and so decrease the debt revenue for the government. Monetary policy has contributed to keeping debt revenues high in the past two decades through at least five channels. Whether these channels continue to keep debt revenues high is crucial to determining debt sustainability in the future.

Five sustainability channels

First, there is a temptation to use inflation to lower the real value of the payments the government must make. Related to this is monetization of debt—the printing of currency to make debt payments—which leads to inflation as well. Central bank independence has taken these off the table in the past two decades for many countries. It has made public debt safe from inflation risk, especially for foreign investors for whom even the anticipation of inflation comes with losses through a depreciating currency. Could this change? The history of central banking shows that after national emergencies, such as the pandemic,

finance ministries often do take over the functions of the central bank.

Second, central banks earned inattention capital. Year after year, they delivered steady inflation of about 2 percent. Households and firms got used to not paying any attention to movements in prices, since even through financial crises, electoral cycles, and commodity and oil price shocks, the central bank would deliver inflation near the target. This expectation of low and stable inflation meant that the nominal interest rates the government was charged followed the downward trend of the r -star. This may also change. The inflation spike of 2021–22 was a shock to this inattention. In the United States, there were already clear signs during the summer of 2021 that households had started expecting higher future inflation. If this persists, it will translate into higher interest rates on government debt, as lenders will ask to be compensated for the loss of value in the currency in which they will be paid.

Third (and relatedly), bondholders typically respond to high inflation by seeking more compensation to cover the risk that inflation will fluctuate further. The price stability of the past two decades maximized the debt revenue for the government both by delivering low inflation and removing this inflation risk. Further, as inflation and government interest rates fluctuate, so will the interest expenses of the Treasury. In the absence of fiscal buffers, this would make it more likely that finance ministries will raise taxes, possibly in ways that are distortionary, thus increasing the overall risk to investments in the economy.

Since the financial crisis, central banks have contributed in a fourth way to raising debt revenue. An implication of their macroprudential policies is that they have required financial institutions to hold safer and more liquid assets, while at the same time making it more costly for financial institutions to hold risky private assets. The demand for government bonds rose owing to their ability to serve as collateral and satisfy regulators. And by making the prospect of another financial crisis less likely, central banks have lowered the expectation that fiscally costly bailouts will be needed in the future. Altogether, macroprudential policy has contributed to making

higher public debt sustainable, even if this was not the main goal. Again, however, there is a risk that things could change. In the (unlikely but possible) scenario where the main risk may not be a financial crisis but a fiscal crisis, the macroprudential arithmetic becomes unpleasant. The market for government bonds provides the foundation of collateral for the whole system. When this market becomes the main source of financial instability, the line that separates macroprudential policy from financial repression is thin. The central bank may use its powers to raise the demand for government bonds to prevent a crisis in government debt. But a Treasury that is unable or unwilling to service the debt will take advantage of this and run larger and larger deficits. At some point, the market will collapse.

There is a fifth link between monetary policy and the ability to sustain high debt through debt revenue. Over the past decade, quantitative easing policies have led central banks to take long-term government bonds from private hands and replace them with overnight bank deposits at the central bank. Interest rates were low and not so different at shorter or longer terms, so this came with little cost to the resources of the central bank because the interest it collected on the government bonds was slightly higher than what it paid to the banks. But central banks have traditionally responded to a spike in inflation by raising short-term interest rates well above their long-term value. If this were to happen today, the central bank would experience losses: it would have to pay depositors more than the interest it collects on the government bonds it bought in the past that still pay a low interest rate. The losses could be offset by printing currency and collecting seigniorage—a sure way to generate high inflation. Alternatively, the losses could be passed on to the Treasury by asking it to recapitalize the central bank. This would add to the government's deficit. Either way, the maturity of the public liabilities held by the private sector has become shorter as a result of quantitative easing. A sudden change to this situation would require a sell-off of public bonds that could itself trigger a crisis. Countries are therefore stuck in a situation where short-term interest rates may have to rise quickly, which means the state as a whole would face tighter budgetary constraints.

The case for price stability

There is one way to ensure that central banks continue to contribute to sustainable public debt through

these five channels: commit to price stability. Price stability protects the public debt from inflation risk, anchors inflation expectations, eliminates risk premiums associated with inflation, reaffirms the focus on inflation for macroprudential policy, and guides the balance sheet policy of the central bank and the extent to which the government fiscally backs it. Price stability maximizes debt revenue and contributes to sustaining the public debt.

The case for price stability may seem surprising since it goes against a common instinct: when the public debt is high, as it is today, wouldn't some inflation help? The inflation tax that comes at the expense of bondholders complements the taxes collected from other forms of distortionary taxation in a second-best world where the debt must be paid in one distortionary way or another. Moreover, higher inflation at some point in the future may seem a price worth paying if the central bank keeps interest rates low and so avoids an immediate debt crisis. In short, isn't keeping a high public debt sustainable in conflict with price stability?

The answer is “no” because these supposed benefits of inflation happen only if inflation is unexpected. When inflation comes as a surprise to bondholders, it transfers wealth from their pockets to those of the government, just as it did in the United States in 2020. As long as the central bank can keep policy rates low and increase the size of its balance sheet without undermining the credibility of the inflation mandate, the longer-term real interest rates on government bonds remain low and the debt revenue high. But actual inflation can deviate from expected inflation only for so long. Once investors in government bonds start expecting or fearing inflation, the five arguments laid out above call for monetary policy to privilege price stability. Public debt sustainability that relies on surprising bondholders with inflation for just the right amount of time is risky and unsound policy.

Governments can avoid sovereign debt crises without sharp turns to austerity as long as public debt is seen as special and its associated debt revenues are high. This requires central banks to be more independent, not less so. It requires an even stronger commitment to an inflation target by governments and central banks alike. Unexpected inflation cannot last long. Sustaining today's high public debt, however, is a job for many years to come. **FD**

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Fiscal Institutions and the Pandemic

Chile's experience shows the value of building the right framework for fiscal policy

Felipe Larraín Bascuñan

Fiscal institutions are crucial for every country, but especially for those that are resource-intensive. And they become particularly important in pandemic times. Let us see why.

In individual countries' responses to the COVID-19 pandemic, diversity in fiscal policy frameworks was a differentiating element. Richer countries or those that pursued responsible fiscal conduct in the years before the arrival of the virus were better able to strengthen health systems and deliver fiscal transfers, subsidies, and guarantees. This allowed faster recovery from the shock.

Aggressive fiscal responses to the pandemic had positive effects on stock markets, currencies,

industrial production, employment, confidence, and sovereign risk premiums in the countries that implemented them (Deb and others 2021). There is also evidence that the effects were greater in advanced economies and in those with lower public debt. Most countries that had fiscal space or sovereign wealth funds were able to use these to deal with the economic and social effects of the pandemic.

In contrast, the poorest countries in Africa, the Americas, and Asia had limited leeway to respond, bolstering spending or forgoing revenue by less than 2.5 percent of GDP. Thus it will take years for them to recover from the economic and social effects of the pandemic, with significant negative impacts on output and income distribution.

The difference in many cases reflects the presence or absence of an institutional framework for fiscal policy. Chile, with the world's 43rd largest economy and with a sound fiscal policy framework, was able to respond to the pandemic on roughly the same scale as some of the world's richest nations—Germany, Japan, the United Kingdom, and the United States—increasing outlays or forgoing revenue by more than 10 percent of GDP.

How could this be? Quite simply, without an institutional framework for fiscal policy, government spending is bound by the amount of public resources available in a given year—reflecting mainly tax revenue—and a limited capacity to borrow. The problem with this mechanism is that fiscal revenues tend to be procyclical, and a spending policy financed with current revenues and constrained credit only exacerbates—rather than mitigating—the economic cycle. This generates pernicious macroeconomic effects on the volatility of key variables such as the exchange rate, inflation, and interest rates, with repercussions on investment, economic growth, and employment. It also puts at risk the long-term sustainability of financing required for more permanent policies such as public health, education, housing, and pensions.

This problem is even more pronounced for countries like Chile that are natural-resource-intensive, where commodity exports typically account for over 60 percent—and in some cases more than 90 percent—of total exports. In these cases, fiscal revenues depend not only on GDP but also on the prices of the goods the country produces and exports. In such economies it is even more important to establish an institutional framework to guide fiscal policy decisions.

Such a framework should be composed of at least three elements: a fiscal rule with a medium- to long-term perspective, sovereign wealth funds, and an independent fiscal institution such as an advisory fiscal council.

Beyond the sustainable financing of social policies, an institutional framework allows for a longer-term orientation for fiscal policy, which otherwise would be implemented with a time horizon in line with government terms. Thus, an appropriate fiscal framework highlights the existence of an intertemporal budget constraint that contemplates very long time horizons. This is crucial for responding to a shock such as the COVID-19 pandemic, both when resources need to be used and when it is necessary to carry out a

fiscal consolidation to ensure the long-term sustainability of public finances.

It is essential that countries—especially emerging market and resource-intensive nations—have a fiscal framework with the three pillars.

Fiscal rule: A long-term vision that isolates public spending from the cyclical fluctuations of the economy must be set out. This can be achieved, for example, through annual fiscal balance targets based on the country's capacity to generate long-term or structural revenues rather than on current revenues. When actual income is higher than long-term levels because the country is experiencing a boom, part or all of the extra funds should be saved for the next down cycle, when tax revenues will inevitably fall.

Fiscal rules must be flexible so that governments can deal with unexpected shocks.

Sovereign wealth fund: This is where the country saves the extra revenues from, say, a boom in the prices of the natural resources it produces and exports. These funds should be invested in a diversified, highly liquid portfolio of assets, normally in international markets, and should be available for use based on objective criteria when the nation faces an economic crisis.

Independent fiscal institutions: Building a framework for fiscal policy usually takes more than a single government term, so it is increasingly important to establish and strengthen autonomous fiscal councils. Such institutions advise governments and legislatures on fiscal issues. They must make technical recommendations, macro-fiscal projections, and assessments of fiscal sustainability. Most important, they should contribute to the public debate on fiscal policy, sounding the alarm about the fiscal risks of economic and political decisions that put the sustainability of public finances at risk.

Some countries prefer fiscal rules that establish limits for spending, public debt, or the fiscal deficit. However, these do not set a long-term vision, which makes them less appropriate for commodity-exporting emerging market economies. Such mechanisms can be used as a complement to a cyclically adjusted revenue rule if an additional constraint is needed, especially for countries whose debt is high or those that are rapidly accumulating liabilities.

Together with Chile's Ministry of Finance, the IMF (Larraín, Ricci, and Schmidt-Hebbel 2019) analyzed

the Chilean fiscal framework and international experience and found increased adoption of fiscal rules by emerging market and developed economies. The findings stressed that fiscal discipline is necessary because governments are subject to an intertemporal budget constraint, and fiscal rules reinforce that discipline. The paper notes that fiscal rules are potentially efficient tools that can contribute to fiscal sustainability, solvency, and economic performance. It shows that there is growing empirical evidence that fiscal rules tend to improve fiscal performance. However, the efficacy of fiscal rules can be affected by their complexity or by noncompliance—something observed in several Latin American countries—so the authors recommend flexibility, simplicity, transparency, and achievement of a fiscal objective.

Fiscal rules must be flexible so that governments can deal with unexpected shocks, but there should be clear boundaries set by an escape clause. Such a clause ideally contains not only a quantitative definition of failure to meet fiscal targets but also describes the mechanisms and deadlines for a return to a sustainable fiscal path.

Once this pandemic is over, governments will carry more debt; sovereign funds will be smaller, and in many cases fiscal adjustments will be necessary to ensure the sustainability of fiscal accounts. In this context, the strengthening of fiscal institutions should be an economic policy priority to help ensure that the process is carried out in an organized and transparent way, according to technical standards, and with the least possible social impact. **FD**

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Understanding THE SOCIAL STATE

Its growth is a puzzle for modern economics
but has deep evolutionary roots

Emmanuel Saez

The scope and size of government in economic life are at the center of the public policy debate. The most striking evolution has been the enormous growth of government in advanced economies over the 20th century: the size of the government, measured by the proportion of tax revenue to national income, had increased from less than 10 percent at the beginning of the 20th century to levels between 30 percent and 50 percent by 1980. In France, Sweden, the United Kingdom, and the United States, the

tax ratio was below 10 percent until World War I, increased until about the late 1970s, and remained largely stable thereafter (Chart 1). The timing and the final levels differ across countries, with France and Sweden stabilizing around 50 percent, the United States around 30 percent, and the United Kingdom around 40 percent.

What are governments doing with so much tax revenue that they did not do before? Until the early 20th century, the bulk of government spending in Europe was devoted to so-called regalian public



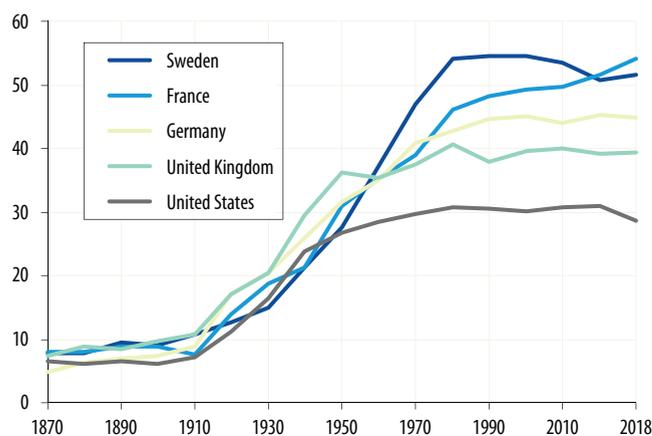


Chart 1

Bulking up

The ratio of tax revenue to GDP rose steadily from the end of World War I until the late 1970s before leveling off.

(tax revenue/national income, percent)



Source: Piketty (2020), Figure 10.14. The last point is updated to 2018.

Note: Taxes at all levels of government are included.

goods such as law and order, national defense, administration, and basic infrastructure. In contrast, the growth of government over the 20th century in advanced economies was almost entirely due to growth in the social state, which provides education and childcare support for the young, health care for the sick, and retirement benefits for the old, as well as an array of income support programs for the disabled, the unemployed, and the poor (Chart 2). Essentially, the social state provides support for those who cannot provide for themselves.

A social species

The social state raises a puzzle for the standard economic model based on rational and self-interested individuals who interact through markets. In such a model, rational individuals in a market economy with functioning credit markets should be able to manage largely on their own. The young (or their parents) can borrow to pay for their education if this is a worthy investment. Health care is largely a private good for which people can buy insurance. Workers can save for retirement, anticipating that their work ability will decline with age. Finally, people can dip into their savings whenever they face a temporary income loss such as unemployment.

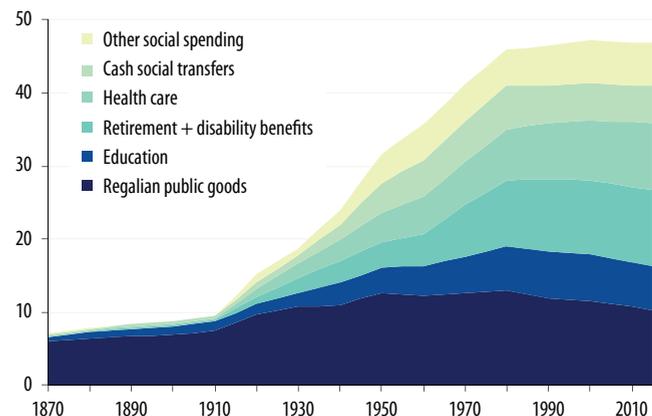
This economic dream has never been a reality for anyone except the wealthy elite, who could afford to pay for private teachers to educate their children and private doctors for their health care, and who could use their fortune to cover their needs in old age. The vast majority of the population could not afford quality education or health care and had to keep working in old age or rely on their children for support. Therefore, the modern social state extends to the full population quality education, health, and retirement support that previously only the elite could afford. Broadly speaking, it is as if people in modern societies had chosen to socialize childcare and education of the young, health care for the sick, and economic support for the old and other groups unable to work, such as the disabled and the unemployed. Why is it so, and where does such socialization come from?

Notwithstanding the standard economic model, it is obvious that humans are social beings. We act together within groups such as families, workplaces, communities, and nations, and we care

Chart 2

From guns to butter

(composition of government spending by decade: average for France, Germany, Sweden, and the United Kingdom as a percent of national income)



Source: Piketty (2020), Figure 10.15.

Note: Regalian public goods include defense, law and order, administration, and infrastructure. Cash social transfers include unemployment benefits, family benefits, and means-tested benefits. Other social spending includes in-kind spending, such as for public housing.

The evidence shows that success requires a social solution through the social state.

about inequality. Such social interactions have deep evolutionary roots and are not mediated through markets. Humans evolved as a social species with extraordinary ability to work and cooperate in groups and correspondingly great sensitivity to how the fruits of joint work are distributed. At a high level, if modern social states take care of the young, the sick, and the elderly, it is because early hunter-gatherer human societies already took care of them through community support.

Reducing poverty

Does the modern social state work? Historically, mass education has always been state-driven and was actually the first pillar of the social state to develop, as early as the 19th century in Prussia and the United States. And virtually everybody agrees that an educated workforce is a requisite for long-term economic development. Mass education is achieved through a combination of compulsory schooling and government funding. Government funding is needed because low- and moderate-income families are unable to afford the high cost of a quality education. This in turn provides opportunities for economic success to children from disadvantaged backgrounds. The experience of unbearable student loans and predatory for-profit schools in the United States shows that markets and the profit motive work much worse.

Modern health care is even more expensive than education in advanced economies. Absent government funding, only the well-off would be able to afford health care. This is why universal health insurance largely funded by government has so far been the only successful way to provide quality care to all, a goal that is enormously popular and has contributed to continuously rising longevity in richer countries.

A large body of work shows that individuals are not good at saving on their own for retirement or even at accumulating a modest nest egg to weather a temporary loss of income. The social state organizes

such saving through taxes and corresponding retirement or unemployment benefits. This social solution undoubtedly reduces enormously poverty in old age or during unemployment, and it also receives broad popular support.

Backward logic

What does this mean for economic policy advice? Economics assumes that humans are good at solving the problems of education, retirement, and health insurance as *individuals*, but the evidence shows that success requires a *social solution* through the social state. Standard economics gets its logic backward: it worries about the growth effects of large social states, whereas their rise in the middle of the 20th century came with extraordinary and equitable growth in Western countries (Piketty 2020). It worries about the social state reducing individual incentives to work, whereas societies voluntarily decided to reduce work for the young and the old through mass education and retirement benefits and for the overworked through labor regulations.

Fast-developing economies today, such as China and India, have also experienced growth in the size of their governments relative to GDP, but it has not been nearly as large as in advanced economies (Chancel and others 2022). If the points made here are correct, this implies that large segments of the populations in these countries will remain excluded from high-quality education, health care, and old-age support, hampering broad-based economic growth and widely shared economic well-being. [FD](#)

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The Education Pandemic

Learning losses from COVID-19 will cost us our future, unless we spend on education

Yamini Aiyar



PHOTO: COURTESY OF THE CENTER FOR POLICY RESEARCH

MY CHILDREN LAST entered their school gates on March 10, 2020, weeks before India's national lockdown was announced. Two years on, schools in much of the country remain closed. Some states went against the tide and reopened in 2021—but only partially, limiting attendance to higher grades and only half the student body on a given day. Each time cases surged, schools were the first to close and only restarted in person months after every other economic activity had resumed.

The physical classroom has been replaced by the Zoom room, where my children wave to their

friends and talk to their teachers through a little box. The emotional, developmental, and learning costs of this transition from the classroom to the Zoom room are visible every day.

Digital divide

But my children are among the privileged few. For most of India, even the Zoom room is a luxury. In September 2021, a survey of 1,400 schoolchildren from disadvantaged homes across 15 states (Bakhla and others 2021) found that just 8 percent of children in rural areas and 24 percent in urban areas had access to regular online education. In effect, the bulk of India's children have had no regular schooling for two years.

India is not alone. School closures affected 1.6 billion children across the globe. However, lower- and middle-income countries have closed schools for far longer than most higher-income countries. In parts of South Asia, Latin America, and Africa, schools have been fully closed for over 80 weeks. Uganda, which reopened schools in January 2022, topped the charts with 82 weeks of partial or full closure.

Countries with the lowest digital access have also had the longest closures. A 2021 study by the Asian Development Bank (ADB) estimates that only 41 percent of lower- and middle-income households in Asia have internet access.

In West and Central Africa, broadcast media substituted for school classrooms because of limited internet access. However, only 26 percent of households in rural areas owned a television (World Bank, UNESCO, and UNICEF 2021).

In India, remote learning takes place primarily through mobile phones, but a 2021 survey by nongovernmental organization Pratham, the Annual Status of Education Report (ASER), shows that only 68 percent of households with primary-school-age children in rural India owned smartphones. And of those, only a quarter of students had access to these phones; they therefore had no schooling for nearly two years.

Educational value

Regardless of digital access, the quality of learning has been poor. For India, the ASER survey offers the only comparative assessment of learning levels before and during the pandemic in selected rural areas. In the State of Chhattisgarh, which reopened schools in August 2021, the survey found that the ability of Standards 3 and 5 students to read a basic Standard 2 textbook had declined by over 15 percentage points. In rural Karnataka, 19.2 percent of students in Standard 3 were at grade level in 2018 (that is, they could read a Standard 2 textbook). This dropped to 9.8 percent in 2020. There are similar losses in basic arithmetic. Just 17.3 percent of students could do simple subtraction in 2020, compared with 26.3 percent in 2018.

India is not unique. The ADB estimated that in April 2021, students in South Asia, where schools have been closed the longest, lost about 0.55 learning-adjusted years of schooling. Compare this with the Asia-Pacific region, where schools mostly stayed open, and children lost just 0.08 learning-adjusted years.

The costs of learning losses to lifetime productivity are significant. Andrabi, Daniels, and Das (2020) studied the impact on Pakistani students of 14 weeks of lost schooling after the 2005 earthquake. They estimate that learning deficits among these children may result in lifetime earnings losses of 15 percent. Consider now what nearly two years of school closures and limited remote learning will do. According to the ADB, losses to future productivity and lifetime earnings for affected students could be \$1.25 trillion for developing Asia, equivalent to 5.4 percent of the region's 2020 GDP.

Learning investment

Now, two years into the pandemic, as the third wave recedes, even recalcitrant countries such as India are taking steps to reopen schools. But schools are not opening to business as usual. This reopening affords an opportunity to bridge the learning losses of these two years and repair long-term damage. This will require significant financial resources to provide for physical classrooms, teaching materials, and—crucially—teachers.

Bridging learning deficits will require much more. Classrooms in many parts of the world have long

been victim to a pedagogy that focuses on syllabus completion and curriculum standards, rather than on what children know. Two years of school closure have rendered the curriculum, in its present form, irrelevant. To remedy learning losses, school systems need to go back to basics (foundational literacy and numeracy) and allow children to reconnect and catch up. This means investing in measuring learning losses and providing students with remedial teaching before they progress to the next grade and reenter the race to complete the syllabus.

Lower and middle-income countries have closed schools for far longer than most higher-income countries.

All this will require financial resources. But spending demands are becoming critical at a time when countries are looking to scale down pandemic-induced expenditure stimulus and reimpose fiscal discipline. India, which announced its annual budget for 2022–23 on February 1, for instance, intends to cut public expenditure by 2.5 percent of GDP, from 2020–21, in the new fiscal year. Education budgets, slashed at the peak of the pandemic, fell victim to fiscal deficit targets and have not been increased. Given the long-term economic costs of school closures, this reluctance to spend on education is shortsighted. The need to invest in education is urgent. Otherwise, the costs of COVID-19 will be felt long into the future. **FD**

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Aerial view of Kwame Nkrumah interchange in Accra, Ghana.

Responsive SPENDING

African nations need to democratize management of public finances or risk electoral backlash

Ken Opalo

Wweak systems of public finance management are a significant impediment to economic growth and development in African states. On the revenue side, many African countries underperform on tax collection. In 2018, average tax collection as a share of gross domestic production in Africa was 16.5 percent—varying from 6.3 percent in Nigeria to 32.4 percent in Seychelles. On the spending side, weak legislative oversight means that budget appropriations, implementation, and oversight often reflect the priorities of the executive branch. The result: only some of the revenue collected in African states actually reaches the public in the form of public goods and services. Much gets lost to spending on poorly

planned white elephant projects, corruption, and general waste. As for borrowing, recent increases in public debt in a number of African countries have raised concerns about a lack of transparency and accountability.

Addressing these problems will require more than technical fixes to the operations in African treasuries. This is because at their core, public finance management systems reflect societies' implied fiscal pacts. Thus, reforms should reflect the emerging electoral fiscal pact in African states. An important feature of this fiscal pact is the expectation that to legitimately stay in power or win elections, politicians must invest in visible and attributable public goods and services. In African democracies and nondemocracies (electoral autocracies) alike,

To improve public confidence, taxation must be linked to the provision of public goods and services.

electoral competition (however imperfect) has created increased demand for roads, electricity, public schools, accessible health care, agricultural subsidies and extension services, social protection, and other public goods and services. The experiences of many African countries over the past two decades have strengthened this implied fiscal pact. For example, the region's successes with universal primary education under the UN Millennium Development Goals have led to enormous public demand for secondary and tertiary education.

Power to the people

How will African countries sustainably finance the increasing demands of their citizens? Ignoring the public is not an option, so Africa's public finance management systems can no longer focus solely on macroeconomics or insulate taxation and public spending from popular politics. Instead, political bargains—within the guardrails of constitutional order—must drive public finance management systems. To improve public confidence, taxation must be linked to the provision of public goods and services. In the same vein, to ensure that public spending reflects taxpayers' priorities, legislators at national and subnational levels must play a leading role in budget appropriations and oversight. Finally, the policymaking process must be participatory and sensitive to country-specific political realities.

Exposing public finance management systems to full democratic expression will undoubtedly generate significant “inefficiencies.” However, these inefficiencies should be seen as features, and not bugs, of democratic public finance management. It is only through practice that African legislatures and other institutions will establish the institutional habits and norms needed to fully democratize tax administration, public spending, and oversight. The corollary is that circumventing legislative input into budget processes will stunt the institutional development of public finance management systems in the region—with an enormous cost in the long run, given the emerging public demand for goods and services. The demographic and political trends in African states suggest that unresponsive governments will increasingly come under populist pressure, and

if they fail to respond they will risk popular revolt and removal through coups or mass uprisings.

Multilateral institutions such as the IMF have a significant role to play in fostering the democratization of Africa's public finance management systems. As a starting point, these institutions need a healthy appreciation for the pressures facing Africa's politicians. Being in the business of winning and retaining power through popular elections, politicians (in both democracies and electoral autocracies) have every incentive to support and fund easily visible projects, such as roads, schools, and hospitals. To put it simply, ribbon-cutting is the main currency of electoral politics. Therefore, technical assistance from the IMF must strive to be compatible with the perspectives and incentives of pivotal political figures. It is not enough to offer orthodox reforms born of ignorance of local contexts, watch them fail, and blame “a lack of political will.” Taking politicians' incentives seriously must be a core part of technical engagement.

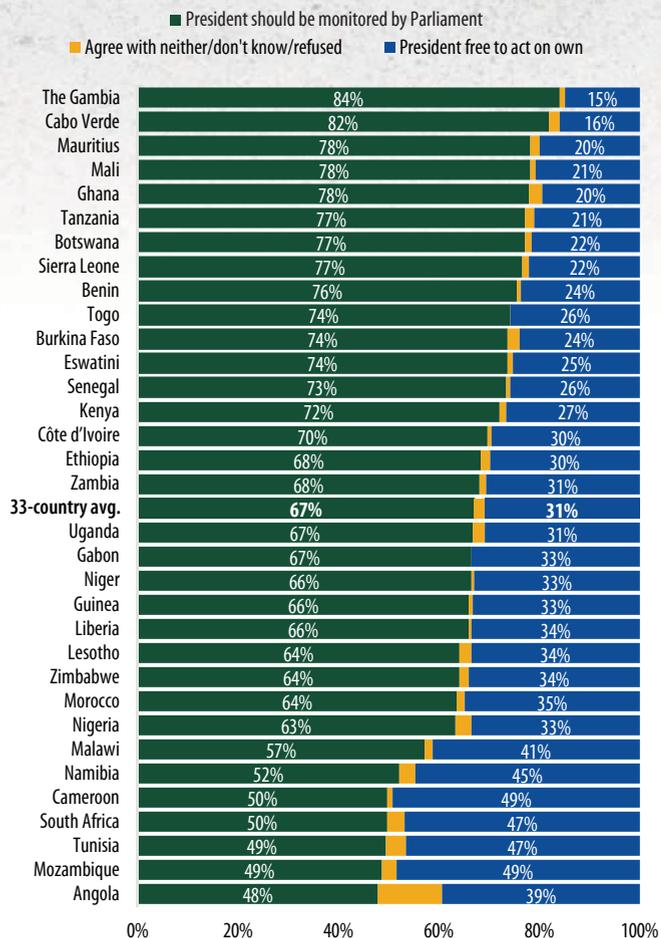
And country engagement must not begin and end with the executive branch. In addition to interfacing with treasuries and central banks, multilateral institutions should meet regularly with legislatures and other relevant players in African states. Many African countries have laws mandating legislative input in taxation, budget appropriations, debt procurement, and other public finance management system functions. The IMF and other multilateral institutions should leverage these statutory requirements to build strong, meaningful relationships with legislators. During country visits, it's not enough to meet only with the speaker of the legislature. The relationships must be broader and deeper, including with members of committees in charge of taxation, appropriations, and core spending sectors such as agriculture, education, health care, and infrastructure. Regular meetings with legislators will help officials at multilateral institutions better understand local political dynamics, thereby increasing the odds that technical assistance programs and proposed reforms are politically feasible.

Changing perceptions

Perceptions and ideas also matter. Most citizens of African countries view operations of public

Keeping an eye on government

A large majority of people surveyed in sub-Saharan African nations agree that legislators should exert some oversight over public spending.



Source: Afrobarometer Data, Round 8, 2019–20, available at <http://www.afrobarometer.org>.

Note: Respondents were asked: Which of the following statements is closest to your view? Statement 1: Parliament should ensure that the president explains to it on a regular basis how his government spends taxpayers' money. Statement 2: The president should be able to devote his full attention to developing the country rather than wasting time justifying his actions. (% who "agree" or "agree very strongly" with each statement).

finance management systems as either opaque, corrupt, or both. For example, in Round 7 of the Afrobarometer survey (2016–18) of 34 countries, only 36.1 percent of respondents approved of government performance on corruption. In a similar survey, a clear majority of respondents agreed that the president should be monitored by the legislature (see chart). Addressing these matters will require more than general anti-corruption efforts. Instead, reforms must target public perceptions and

understanding of the core drivers of corruption—including low budget absorption capacity, political cronyism, and the essential features of the electoral exchange between politicians and voters. Instead of treating corruption as a moral or legal problem, reformers should recognize the relationship between certain kinds of corruption and distributive politics. This means understanding the relationships between public sector corruption and private sector lobbying, campaign finance, constituent service, and intra-elite political payments that are critical for state stability. Doing so would enable reformers to separate “transaction costs” corruption, which can be legitimized through legislation and regulation (as is the case in many consolidated democracies), from run-of-the-mill theft of public resources.

Idea-driven engagement is sorely needed in policy analysis and development. Public spending in many African countries often faces popular pressure from disparate geographically concentrated ethnic and regional interests with varied (and often conflicting) ideas about what it means to invest in “development.” This calls for investments in local policy think tanks, especially on the most productive ways of spending scarce resources. The advantage of generating policy ideas locally is that such policies are more likely to be tailored to—and representative of—local demands. Multilateral institutions can then build relationships with these embedded think tanks as a way of maximizing their policy influence.

Given Africa’s demographic and political trajectories, the challenges confronting its public finance management systems will only get tougher. Growing populations, rapid urbanization, and increasing electoral competition will exert enormous pressure on governments to increase spending on public goods and services. Cognizant of the need to maintain macroeconomic stability, it will be tempting to insulate the region’s public finance management systems from political demands. Yet for all the reasons articulated above, that approach is likely to result in failure. It is only through a tight embrace of politics and institutional processes that African countries will succeed in building strong democratic public finance management systems that are responsive to the needs of their respective populations. **FD**

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Taxing for a New Social Contract

The pandemic has exposed the costs of tax injustice—now is the time to make it right

Alex Cobham



PHOTO: COURTESY OF THE TAX JUSTICE NETWORK

WE CANNOT AFFORD to rethink fiscal policy only in the context of the pandemic. The climate and biodiversity crises are upon us too, and both are ultimately crises of social justice.

Immediate responses to the pandemic showed the great power of states to act for the public good. But many states appeared indifferent to the brutal inequalities observed, both within and between countries. The dramatic shift necessary to respond to these crises calls for nothing less than the renewal of the social contract. That means putting the “four Rs of tax” at the heart of our analysis and policy, to fix our broken tax rules and rebuild the accountability of governments.

Empowered by tax

Effective taxation most obviously provides *revenue* and *redistribution*, ensuring states can deliver quality public services and infrastructure while curbing inequalities. But tax also allows the *repricing* of public goods and public “bads” (such as the

wider public health costs of individual tobacco consumption). Any climate response that requires changing the price of carbon or other emissions will depend on this.

But most important of all is the fourth R of tax: *representation*. Paying tax is the glue in the social contract. When people pay tax, they are empowered to hold their governments to account for how their money is spent. That’s why the share of tax revenues in government spending is one of the very few variables that are consistently associated with improvements in the quality and integrity of government, with the reduction of corruption.

Tax not only provides states with the means for the progressive achievement of human rights, it also strengthens the motivation of states to deliver on that promise, by bolstering the effectiveness of political representation. And it is direct tax—on income and profits, say, rather than on consumption—that is most important to the relationship.

Paradoxically, however, lower-income people and households are almost always the most heavily taxed, as a share of their gross income, but are also actively disempowered in the process.

This result stems from the fact that the great majority of tax paid by lower-income households is in the form of indirect taxes. Consumption necessarily accounts for a greater share of income for these households, and so consumption taxes fall more heavily—indeed, regressively—on them. But these taxes do not drive the sense of tax citizenship nearly as powerfully as direct taxes on personal incomes or wealth. Since value-added and similar taxes are typically less salient, those paying them are less aware, and so their role is also weaker in strengthening political representation and supporting accountability and the social contract.

And of course, the households with lower incomes disproportionately include people already struggling for representation. They are, for example, more likely to be headed by women and to include people living with disabilities, racialized

A silver lining to the pandemic is that people have clearly seen the power of states to act to protect public health but also the deep inequalities in who has benefited.

and marginalized ethnolinguistic groups, and LGBTIQ people.

These same groups are also disproportionately likely to fall outside of formal government systems and are therefore often excluded from public services and fiscal transfers. That is, people in these groups are most likely to go uncounted. They will miss out systematically on the benefits of public spending, while at the same time contributing disproportionately through indirect taxes.

Where tax systems fail to deliver on the fourth R—representation—they compound this problem and deepen political inequalities as well as economic ones, weakening the social contract of the already marginalized.

National obstacles, international failures

At the national level, political incentives are completely misaligned. Short-term popularity is prioritized for electoral success, which encourages lower taxes and less salient, indirect taxes that will annoy voters less. But strengthening the social contract over the medium and longer term requires more salient, direct taxes that lead people to demand accountability.

A silver lining to the pandemic is that people have clearly seen the power of states to act to protect public health but also the deep inequalities in who has benefited. Public demand for truly universal public services and social security confirms the need for longer-term tax measures. And there is no doubt who should meet new tax responsibilities—extreme wealth inequalities have flourished during the pandemic.

Even with domestic political commitment, however, direct taxes are too often stymied by the weaknesses of international tax rules. These rules, and the Organisation for Economic Co-operation and Development's (OECD's) latest proposals, still do not require the taxation of multinational companies where their economic activity takes place. They still do not prevent the anonymous ownership of assets and income streams—central to every case

of individual tax abuse and, more widely, to almost every corruption case and every illicit financial flow.

Since the Tax Justice Network was established in 2003, we have sought global delivery of the “ABC of tax transparency.” A is for the automatic exchange of financial information, to ensure that people's home tax authorities are aware of their overseas bank accounts. B is for beneficial ownership transparency, through public registers for companies, trusts, partnerships, and other legal vehicles, so these cannot be used for hidden abuses. And C is for country-by-country reporting, a simple measure to ensure accountability for multinationals if there is a divergence between where they do business and where they declare profits and pay tax.

There has been substantial progress. All these ideas were originally written off as entirely unrealistic and utopian, but just 10 years later the Group of Eight confirmed support for automatic exchange arrangements and for country-by-country reporting to be introduced, and then the Group of Twenty adopted all three in principle. But delivery remains patchy even now, and the OECD mechanisms for international exchange both of financial information and of privately held country-by-country reporting systematically exclude lower-income countries from the benefits of cooperation.

Global inequalities

These international failures result in stark inequality in the global distribution of taxing rights. Specifically, lower-income countries are denied the right to tax effectively the proceeds of economic activity and wealth accrued in their jurisdictions—and with direct human consequences.

The State of Tax Justice 2021, published jointly by the Global Alliance for Tax Justice, Public Services International, and the Tax Justice Network, estimates that the combined global revenue losses from cross-border tax abuse by people with undeclared offshore assets and of multinational companies amount to some \$483 billion a year—or enough to vaccinate everyone in the world three times over.

The greatest losses in absolute terms are suffered by the member countries of the OECD, which presides over the tax rules—many of them former imperial powers. But by far the greatest losses as a share of their tax revenues, or of their public health budgets for example, are the lower-income countries—many of them former colonies. The losses translate directly into forgone public services and in turn forgone human development—including many thousands of needless deaths.

At the same time, some of the richest countries—OECD member states and their dependent territories—are responsible for the great majority of the tax losses suffered by others. To deliver on the four Rs requires us to confront the underlying inequalities.

Imagine a Venn diagram with four circles. One contains countries made wealthy by imperial conquest. A second contains countries with greatest historical responsibility for the climate crisis. A third circle contains the countries that benefit most from the unfair distribution of global taxing rights. And a fourth contains countries that have hoarded COVID-19 vaccines and the intellectual property rights to produce them.

We don't need to imagine that the four circles are perfectly overlapping to understand two things. First, the countries inside most of the circles seem to make the same choices, over and again—to prioritize their own immediate, perceived needs above all else. And second, we're unlikely to make major progress without changing the fundamental dynamic that underpins the picture.

Rethinking fiscal policy

In the shadow of the pandemic, there may be political space for the first time in decades for significant tax policy changes to fight inequality.

There is remarkable, perhaps unprecedented, consensus between groups ranging from tax justice activists to the World Economic Forum's Global Future Council on the New Agenda for Fiscal and Monetary Policy on the need for measures including wealth taxes, such as that adopted by Argentina, and excess profit taxes on companies like Amazon that collected huge unearned revenue from pandemic lockdown measures.

At the global level, the final report of the high-level UN Financial Accountability, Transparency and Integrity (FACTI) panel recommended a range of measures. These include a UN tax convention

to ensure consistent transparency and to create a globally inclusive intergovernmental body to set tax rules, long supported by the Group of 77. The FACTI panel also adopted our proposal for a Centre for Monitoring Taxing Rights to provide consistent data and analysis on the tax abuse suffered by, and facilitated by, each country. For the countries most responsible for global harm simply to allow the damage they do to be seen would represent an important step toward accountability—and toward reestablishing their own social contract with the world.

Policymakers need to combine new progressive tax policies with domestic and international transparency measures. This will strengthen the four Rs of tax and—crucially—make possible a meaningful renewal of the social contract within countries at all levels of per capita income. Without such measures, we may see neither the necessary responses to the pandemic nor to the climate crisis, nor the curtailment of the unnecessary inequalities that scar our world. [FD](#)

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INEQUITY DETECTIVE

Prakash Loungani profiles Chicago's Marianne Bertrand, an advocate for inclusive growth

Last December, there were news reports that a Black woman, Tenisha Tate-Austin, had the appraised value of her home raised by half a million dollars by having a white friend pretend to own it. When I mentioned this to an economist friend, he shrugged and simply said, “Bertrand and Mullainathan.”

He didn't need to say more: he was citing one of the most famous papers in economics of the past two decades, a 2004 study by Marianne Bertrand and Sendhil Mullainathan, both currently professors at the University of Chicago's Booth School of Business. They sent nearly 5,000 fictitious resumes in response to job ads in Boston and Chicago and found that Black-sounding names, such as Lakisha, were 50 percent less likely to get a callback than white-sounding names, such as Emily, even though the resumes had been rigged to be alike in qualifications. It was difficult to attribute the result to anything other than explicit prejudice or unconscious bias.

It's one of several papers that have cemented Bertrand's reputation for documenting why so many, such as women and minorities, do not do as well as they deserve, while some, such as top CEOs, are paid a lot more than they deserve. “Marianne indeed comes up with clever ways of detecting inequity,” says her PhD dissertation advisor and mentor Lawrence Katz, a noted professor of labor economics at Harvard, “but she also works very hard and very well with others. This combination of talents makes her unique,” Katz—who has been on the dissertation committees of over 200 students at Harvard over the years—told F&D.

The profession has showered Bertrand with awards and accolades, including a prize in 2004 for “outstanding contributions by young women”

in economics and another in 2012 for “outstanding contributions to the field of labor economics.” And in 2020 she was picked to give the prestigious Ely Lecture at the annual meetings of the American Economic Association (AEA); the person making the choice was Janet Yellen, currently the US treasury secretary, who said she felt Bertrand was “the economist that I would most like to hear and the economist that others would most like to hear.”

Brussels to Booth

It was not the career Bertrand envisaged. She grew up in Belgium, helping her parents sell fish and poultry in their small shop, an experience that taught her “what hard work is really about,” she said in a Bloomberg interview. She enrolled at the Université Libre de Bruxelles intending to become a journalist, and took some economics courses thinking they would come in handy in her career.

But she soon switched majors on the advice of an economics professor, who also encouraged her to pursue a PhD and recommended her to Harvard, from which she received her doctorate in 1998. Bertrand started her academic career at Princeton, but moved in 2000 to Chicago's Booth School of Business, where—unusually in a profession known for peripatetic top scholars—she has remained.

Bertrand recalls that initial reactions at Chicago to her work, particularly on the pervasiveness of racial discrimination, were somewhat tepid. “At Chicago, you have to show that you can take it,” she told F&D, referring to its reputation for hard-nosed debate. She persisted and has thrived. Booth has given her a place where she can work on both labor economics and corporate finance, her two main fields of research. She also likes the interdisciplinary



and “big-tent” features of the school. “It’s a place where I can work with psychologists. And it’s where you have [Nobel Prize winners] Gene Fama and Dick Thaler in the same building,” she says—Fama is noted for work on the efficiency of financial markets and Thaler for work on their anomalies.

Messy motherhood

While her work on racial inequity was the source of her initial fame, Bertrand has become well known for her work on gender inequity. She says the two forms of discrimination are different. It’s difficult to deny the “central role of prejudice” in explaining racial discrimination; in contrast, she has written that “sexism in the workplace is not the leading explanation” for why women’s careers do not match those of their husbands in earnings and in reaching the top rungs of their professions. She does not deny that sexism exists, including in her own profession—as she documented in a survey conducted for the AEA in 2019.

Bertrand has argued, however, that there is a more potent yet prosaic explanation for gender gaps: childbearing and childcare. Her careful work has documented that the careers of college-educated women essentially track those of their husbands until the birth of the first child. “Mothers take a massive earnings hit right after that first birth, and their income never recovers.” This seems to occur even among women with advanced professional degrees: in work with Katz and Claudia Goldin (see F&D profile of Goldin), Bertrand showed that women graduates of top MBA programs also tend to cut back hours and interrupt their careers on becoming mothers. Women have a harder time dealing with the inflexible schedules and longer daily time commitment required in higher-paying occupations, such as those in the financial industry, says Bertrand, “because they remain disproportionately responsible for everything to do with the home, including raising children.”

It’s a finding that resonates with Ratna Sahay, senior advisor on gender to the IMF’s managing director, whose research has shown that women are underrepresented worldwide “at all levels of the global financial system, from depositors and borrowers to bank board members and regulators.” In work with the IMF’s Martin Čihák and others, Sahay found that women accounted for fewer than 5 percent of CEOs at financial institutions and made up less than 25 percent of the representation

on bank boards. “This is the case,” says Sahay, “even though banks with higher shares of women board members were managed better.”

There is a great loss to society from this “misallocation of human capital,” says Bertrand. “Women are not born with a comparative advantage in changing diapers, so it follows that we must be leaving some money on the table by having only 5 percent of Fortune 500 companies run by women.”

Pace of progress

Bertrand is quick to recognize that progress has been made in reducing gender gaps. Her Ely Lecture stressed the “good news” that across the world, and particularly in the developed world, gender gaps in education and labor force participation are on the decline.

Bertrand says the pace of progress would be faster were it not for “slowly changing norms.” One norm she has studied is that men should earn more than their wives. She and her co-authors found that there is a sharp drop-off in the percentage of US households where the wife earns more. Remarkably, this drop-off occurs just past the point where the woman makes over half the family income, suggesting that couples seem very much influenced by the norm that the man should earn more. Digging deeper, they found that in households where the woman makes more, there is “compensating behavior” by the wife to take on more of the household chores. Despite this—or perhaps because of it—households where the women earned more were more prone to marital strife and divorce.

As the mother of two daughters, Bertrand hopes that things will continue to improve for women. Still, in giving the commencement address at the University of Chicago, she told the young women in the audience that they would have to keep fighting to change norms: “if you want to have it all, make sure to check your date’s willingness for diaper duty and to let you shine as the brightest star at work.”

Starring or skimming?

CEOs are the stars of the corporate world. In the United States today, the average CEO makes 350 times the average worker, a huge increase from the 20-to-1 ratio that prevailed in 1965. At the time that Bertrand was in graduate school in the 1990s, the dominant theory to explain rising levels of CEO pay was that the company’s shareholders were designing the pay package in order to increase

the CEO's incentive to work hard and maximize the company's value.

Bertrand's paper with Mullainathan, then a fellow graduate student at Harvard, showed, however, that many CEOs were paid not for hard work but for luck. In the oil industry, for instance, they found that CEO compensation went up when oil prices went up, even though global oil prices are set in a world market over which no CEO has any control. Likewise, CEOs in companies whose products were internationally traded saw compensation increases when exchange rates moved in their favor. In an oft-cited quote from the paper, they concluded that "CEO pay is as sensitive to a lucky dollar as to a general dollar."

Bertrand remembers presenting the paper at the National Bureau of Economic Research Summer Institute, a prestigious venue to debut new work. In the 1990s, the notion that CEO pay could be excessive was much less accepted in corporate finance circles, "and I must say that the first reaction we got on that paper was not great." Since then, however, many others have found evidence in favor of what Bertrand and Mullainathan called the "skimming" view of CEO compensation: when corporate governance is weak, CEOs are able to set their own pay with little oversight from shareholders. There is also support for their finding that such skimming is less prevalent in better-governed firms, such as those with a large shareholder present on the board who can limit the CEO's ability to capture the pay process.

The work of Bertrand and her colleagues has fostered a dialogue on the role of corporations in society, exemplified in a letter by Larry Fink, CEO of investment management firm BlackRock. Fink wrote that companies needed "a sense of [social] purpose," a far cry from the view attributed to Chicago economist Milton Friedman that the sole purpose of a company was to maximize shareholder value. Bertrand says that "training workers and thinking about the community are often good for the value of the firm in the long run, and I don't think that's something that Friedman would have at all disagreed with." She adds that "a lot of short-termism among corporations" happens because of how CEOs are compensated.

She admits that there can often be a "trade-off between financial return and social impact," but notes that increasingly "some people out there are really willing to leave money on the table if they think they can have a [social] impact."

Imperial to inclusive

Bertrand's work showcases the changing face of economics. In 1984, economics Nobel laureate George Stigler, from the University of Chicago, called economics "an imperial science," with "economist-missionaries" colonizing other social sciences "often against apprehensive and hostile natives." Four decades later, Bertrand says, the tables have been turned: "to put it humbly, economists have realized their mistakes and now embrace, rather than dismiss, the other social sciences."

Another profound change is in the attention being given in economics to issues of equity. Robert Lucas, another Chicago Nobel laureate, famously warned his colleagues that "of the tendencies that are harmful to sound economics, the most seductive, and in my opinion the most poisonous, is to focus on questions of distribution." Bertrand says that attention to inequality does not require "diminishing the focus on efficiency [because] inequality also hurts efficiency." She cites the work of her Booth colleague Chang-Tai Hsieh, who found that the lowering of barriers to entry for women and African Americans accounted for a quarter of the growth experienced by the United States.

Bertrand has also argued that the impacts of economic policies should be looked at through a more holistic lens. A particular trade policy, for instance, might pass the overall cost-benefit test, but if it means shutting down 80 percent of the manufacturing plants in some communities, the inequity of such concentrated losses needs to be taken into account: "you have to find a way to balance those considerations," she notes. As challenging as this is, Bertrand is optimistic: She told F&D she is pleased to see international financial institutions like the IMF embrace the turn to balancing efficiency and equity: "it's a no-brainer, really."

It's a sentiment echoed by Valerie Cerra, who headed a division at the IMF on Inclusive Growth and Structural Policies that put together a comprehensive book on how—along the full spectrum of policies on which the IMF gives advice—countries can better balance efficiency and equity. Bertrand adds that "as countries get richer, they have more time and resources to devote to considerations of equity. We can afford an inclusive world." **FD**

PRAKASH LOUNGANI is assistant director of the IMF's Independent Evaluation Office.

The Great Blue Hole in Belize is a giant underwater sinkhole.

Meeting the Future

Three countries—Belize, Colombia, and Ghana—highlight the potential of technology and innovation to strengthen public finances

Analisa R. Bala, Adam Behsudi, and Nicholas Owen

Across the world, countries are coming up with innovative solutions to strengthen public finances, improve accountability and transparency in the public sector, and even generate cash for conservation. Three case studies highlight these novel policy approaches, which could hold lessons for other countries.

In **Belize**, a debt-for-nature swap has cut the Caribbean country's stock of external debt by a striking 10 percent of GDP and is generating cash for conservation to protect the longest coral reef in the Western Hemisphere. There is scope for similar swaps to fund conservation or climate work in other countries with expensive debt on their books.

Transparency organizations, meanwhile, are using open-source technologies to publicize undeclared conflicts of interest by public officials in **Colombia**. This data can be used by Colombia's watchdog, the Office of the Comptroller General, to investigate corruption, and by companies that want to avoid reputational risk.

And in West Africa, **Ghana** is turning to technology to improve access to public services and expand its revenue base. The authorities are consolidating a database of taxpayers, establishing a digital address system, and tapping a fast-growing mobile money system to bring more people into the tax system. So far 15.5 million people have signed up for an official digital ID, and most of the adult population could be covered by the end of this year.

Belize: Swapping debt for nature

Belize's barrier reef is a marvel of biodiversity. Stretching 170 miles through the warm waters of the Caribbean and around atolls, cays, and coastal lagoons, the Western Hemisphere's longest reef is home to some 1,400 species, from endangered hawksbill turtles and manatees to several threatened types of sharks. But climate change and warming oceans, excessive fishing and mangrove felling, and unchecked coastal development all pose risks to the fragile ecosystem.

PHOTO: ISTOCK / MICHAEL CONLIN

The reef's chances of survival received a vital boost last year. On November 5, Belize signed a debt-for-nature swap with The Nature Conservancy (TNC), an environmental organization, which reduced the country's external debt by a striking 10 percent of GDP. Perhaps more significantly, it greatly improved the prospects for marine protection. Belize's prime minister, John Briceño, said the deal would protect the country's oceans and pave the way to strong, long-lasting growth.

Under the agreement, a TNC subsidiary lent funds to Belize to buy back a \$553 million "superbond"—the government's entire stock of external commercial debt, equivalent to 30 percent of GDP—at a discounted price of 55 cents per dollar. It financed this by issuing \$364 million in "blue bonds" in a sale arranged and underwritten by Credit Suisse, a bank. The US government's development bank, the International Development Finance Corporation (DFC), provided insurance. This allowed the loan to have a low interest rate, a 10-year grace period during which no principal is paid, and a long maturity of 19 years.

In return, Belize agreed to spend about \$4 million a year on marine conservation until 2041. It will double its marine-protection parks—spanning coral reefs, mangroves, and the sea grasses where fish spawn—from 15.9 percent of its oceans to 30 percent by 2026. An endowment fund of \$23.5 million will finance conservation after 2040.

Jaime Guajardo, the IMF's mission chief for Belize, said the deal is of tremendous benefit to the country and contributes to the authorities' objectives of restoring debt sustainability, promoting sustainable development, and enhancing resilience to natural disasters and climate change.

Debt-for-nature swaps are not new. They have existed, in one form or another, since the late 1980s. But these early deals typically involved creditor governments writing off debt bilaterally so long as the savings were channeled into conservation: they were, in effect, grants. Two things stand out about the Belize deal. First, the bond market itself provided the "grant" in the form of a discount price. And second, the deal involved debt owed to private creditors and was, in the end, financed by a different class of private investors. It showed the potential for deals with countries that are experiencing economic difficulties and have expensive debt on their books.

Kevin Bender, sustainable debt director at TNC, says Belize itself needed little convincing to press

There is scope for more swaps with countries whose debt is trading at a discount or incurring high rates of interest.

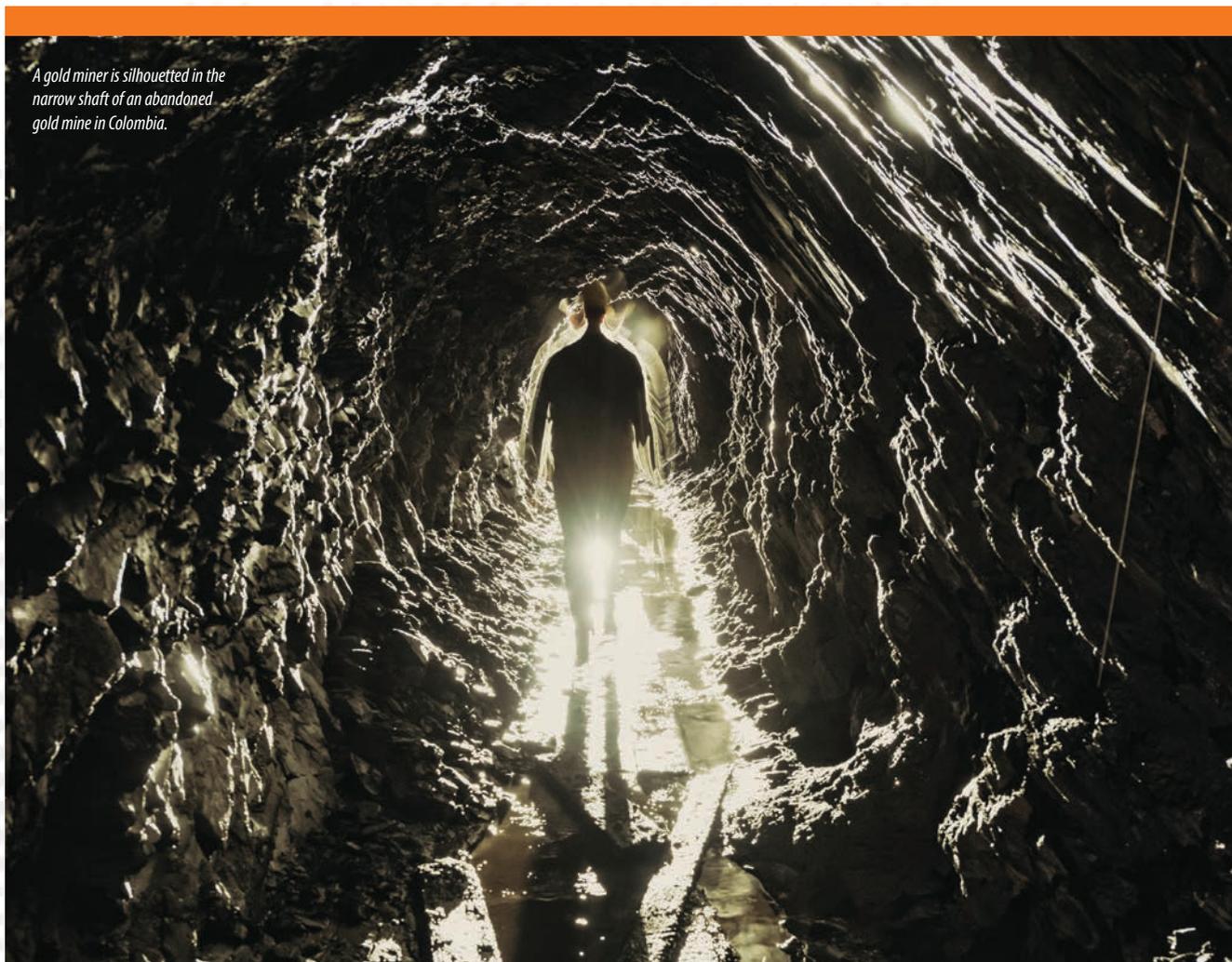
ahead. The government soon recognized the savings and the cash they could generate for conservation. Private investors, however, were cautious about putting money into the blue bonds. After all, a debt swap of this sort is complicated and had not been done before. Investors were also leery of lending to a country with a history of defaults. But momentum built as the DFC, Credit Suisse, and other large institutions signed on.

The US development bank's involvement was crucial. The DFC's insurance meant the blue bonds received a strong investment-grade credit rating (Moody's rated them Aa2), and so even risk-averse investors such as pension funds could be confident they would be repaid. "If we didn't have the insurance, no one was looking to lend to Belize," says Bender.

Investor interest in environmental, social, and governance considerations played a part in marketing the complex product. In Belize's case, TNC's three-decade history running conservation programs in the country meant that investors could be sure that the promised marine protection would actually take place. They would not, in other words, face charges of "bluwashing."

There is scope for more swaps with countries whose debt is trading at a discount or incurring high rates of interest. TNC, which also helped Seychelles—off Africa's eastern coast—restructure its Paris Club debt to official creditors and channel the savings into ocean conservation back in

A gold miner is silhouetted in the narrow shaft of an abandoned gold mine in Colombia.



2016, is exploring similar arrangements in seven other countries.

Not all debt-for-nature swaps will have the same impact as the one in Belize, at least not on the debt side. The small Caribbean economy owed creditors a lot of money relative to its GDP. This meant that the impact of the deal on its overall debt-to-GDP ratio was significant. Moreover, its debt was trading at an especially deep discount.

All the same, future debt swaps could still mean cash for conservation or climate projects and some savings. “Some countries have debt on their books that is outrageously expensive,” says Bender. “Why on earth wouldn’t you let us give you the money to pay that off?” Hopefully many more countries with natural wonders like Belize’s barrier reef will take up his offer.

Colombia: Connecting the dots

The Pandora Papers shone a light on the hidden operations of the offshore entities wealthy elites use to avoid taxes and hide their identities and assets. Through the use of trusts, offshore accounts, or

multiple layers of anonymous shell companies, the leak revealed how these privileged people stash their wealth in jurisdictions with low tax rates and a veil of financial secrecy. Such entities may be legal, but the secrecy they provide can give cover to illicit money flows, enabling corruption.

Publicizing information on who owns what can make for change. Using tax microdata from Colombia, for example, Juliana Londoño-Vélez and Javier Avila-Mahecha, from the University of California, Los Angeles, found that the disclosure of hidden wealth by Colombian elites increased sixfold after the Panama Papers leak in 2016. Taxes paid by those listed in the leak more than doubled.

But it shouldn’t require a leak. This kind of information should be available to everyone. More than 160 countries have financial disclosure systems in place requiring public officials to declare their assets, incomes, and interests; in 80 of them that information must be made public. Nearly 90 have passed recent legislation establishing “beneficial ownership” registries—information about who really owns or controls a company. “It kind of stops there

though,” says Andres Knobel, a lead researcher on beneficial ownership at the Tax Justice Network. “There’s this trend to have a beneficial ownership register, but often there’s no public access, except mostly in European countries. Giving public access is the best way to improve verification.”

The not-for-profit organization Global Witness combed through the data of more than 4 million companies when the UK government published its beneficial ownership registry, exposing potential loopholes and signs of money laundering and financial crime.

Global Witness is not the only nonprofit using big data. With seed funding from the IMF’s Anti-Corruption Challenge, Directorio Legislativo and the Extractive Industries Transparency Initiative (EITI) recently created a tool, Joining the Dots, that identifies and publicizes public officials’ potential undeclared conflicts of interest. Using open-source technologies, the tool combines public officials’ financial disclosures with beneficial ownership data to generate red flags, signaling potential conflicts of interest or corruption.

The project was piloted in Colombia after a law was passed in December 2019 mandating publication of public officials’ financial disclosure forms. “We wanted to test the law—we were the first to get access to that information,” says Noel Alonso Murray, executive director of Directorio Legislativo. Colombia is also the only country in Latin America to meet all the requirements of the EITI standard by making data on extractive companies, including their licenses and contracts, widely available. And it is one of 10 countries in the region that require the declaration of beneficial ownership by law.

The law was amended recently to create a beneficial ownership registry, but only government agencies can access it. “It’s a step forward, but not a determinative one really,” notes Alonso Murray. “If you want to fight corruption, you need that registry to be open.”

Knobel agrees. “At least 10 countries in Latin America have a beneficial ownership registry, which is more advanced than most other regions. But there’s only one country, Ecuador, with public access. That’s the main problem—lack of transparency. It impacts verification.”

Without access to beneficial ownership information, EITI and Directorio Legislativo worked with proxies: Colombia’s *compra eficiente*, an open database on procurement, and the EITI portal,

“If you want to fight corruption, you need that registry to be open.”

which publishes extractive sector data, such as company payments and licensing.

Sifting through the data, the team found a total of 20,969 red flags, involving 19,814 politically exposed persons. More than 20 percent were high- and middle-ranking officials, meaning 2 out of 10 prominent politicians in Colombia showed inconsistency in their disclosures. “Not all of those red flags finish in some sort of conflict of interest or personal enrichment,” adds Alonso Murray. “But they could. You have a much more concrete universe to work from. Especially for agencies that are under-resourced.”

Colombia’s Office of the Comptroller General, the country’s fiscal watchdog, is the agency most likely to use the data, which is now publicly available. But governments typically use this sort of data only when undertaking an investigation. “The real value,” says Knobel, “is being able to do these checks in advance—using it as a more preventive measure.” Journalists and transparency organizations usually take on this role. But businesses have an interest as well. “Investors and companies want to know who they’re doing business with. Banks want to know their clients. It really enables business to prosper, the right business,” says Knobel.

The team is now trying to implement a similar project in Nigeria, though the tool will need adjusting. Fortunately, it’s flexible. If financial disclosure forms are public, and there is at least one data set on procurement or beneficial ownership to cross-check, it can work. Even in countries with limited information, proxies can be used, as was done for Colombia, though the quality of the data will vary. “It is a lot of work to clean the data,” adds Alonso Murray.

Sorting through unwieldy and badly formatted data is time-consuming and difficult. But it’s manageable. The “real challenge,” says Alonso Murray, “is getting governments on board to open their registries.”

A customer presents a national identification card for a mobile money transaction in Accra, Ghana.



Ghana: Digital transformation

How do you tax a person you have no record of? Or a property you never knew existed? In Ghana, the government is using digitalization to overcome these challenges and grow its revenue and economy.

The West African country is working to consolidate a database of taxpayers, establish a digital address system, and harness a burgeoning mobile money system. The goal: increase tax revenue, improve transparency, and ensure compliance.

“It is possible to be born in Ghana, to live a full life, to die and be buried, and there will be no trace of you on any documentation,” Vice President Mahamudu Bawumia said in a recent speech.

One of the main pillars of Ghana’s initiative is simple—establish a reliable record of its population of roughly 31 million. Through its Ghana Card initiative, the government has so far been able to enroll 15.5 million people with the goal of covering most of its adult population by the end of this year.

Behind every card is a unique national identification number, biometrically enabled through

fingerprints, that will be the entry point for everything, including filing taxes, opening a bank account, registering a SIM card, obtaining a driver’s license, or renewing a passport.

Most important, the identification number doubles as a tax ID, allowing the government to widen the tax net among economically active adults. This is critical in a country where the revenue-to-GDP ratio has lagged others in the region.

The more numbers that are issued, the wider the tax net grows. Under the old system of tax identification numbers, only 3 million had been registered, said Maxwell Opoku-Afari, first deputy governor of the Bank of Ghana, the country’s central bank.

The same effort has gone into documenting properties in a new national digital address database. Using GPS, Ghana’s Land Use and Special Planning Authority has identified 7.5 million properties that can now be added to tax rolls.

The Ghana Revenue Authority is bolstering collection of taxes and fees by conditioning renewal of driver’s licenses and professional licenses on

tax payment. A new government portal, Ghana.gov.gh, provides a one-stop shop for a range of government services that can be handled online and can prevent losses to corruption. Ghana's Revenue Assurance and Compliance Unit is also stepping up audits of large companies, especially those involved in the country's sizable mining and resource extraction industry.

The electronic collection of fees and taxes and other tax measures introduced in the 2022 budget should help the country significantly increase its tax-to-GDP ratio, which is currently 12 percent, to about 16 percent at the end of 2022, said Opoku-Afari, who also sits on the board of the Ghana Revenue Authority.

"We are coming at it from all fronts—digitalization, compliance, enforcement, and cleaning up loopholes—to be able to raise our tax-to-GDP ratio over the medium term to a 20 percent target," he said.

This comprehensive digitalization initiative is bringing progress, albeit gradual, in revenue collection. Any future success, however, could get a boost from the country's robust and unique mobile money system.

Ghana has one of the most active and fastest-growing mobile money markets on the continent. It was also the first country to create a system that is completely interoperable between the country's three mobile networks and with bank accounts. For example, a person using a mobile money account provided by mobile phone service MTN can make a payment to someone who uses Vodafone. Funds can also be transferred from a mobile wallet to a traditional bank account.

Unlike in other mobile money systems, the Bank of Ghana oversees all transactions through its subsidiary, Ghana Interbank Payment and Settlement Systems. There are roughly 19 million active mobile money accounts.

This system forms another pillar of the government's digitalization agenda. It has also introduced a powerful tool of financial inclusion the government is seeking to leverage.

As part of the 2022 budget, Ghanaian legislators are considering a so-called e-levy on electronic transactions, which would apply to mobile money payments, bank transfers, and merchant payments. The 1.75 percent tax would apply to transactions beyond the first 100 Ghanaian cedis (\$16) a day and provide a new source of revenue.

Ghana has one of the most active and fastest-growing mobile money markets on the continent.

The government sees the e-levy as an opportunity to bring a growing portion of economic activity, much of it covering the informal economy, into the tax net. However, some argue that taxing mobile money transactions could send people back to cash and reverse a positive trend.

"The e-levy is a way of extending these services in terms of a social contract and everyone participating in the payment of tax," said Opoku-Afari. "The question is more about creating a careful balance between financial inclusion and revenue generation."

The Bank of Ghana is also working to launch a pilot of a new central bank digital currency, the e-cedi, later this year that could further widen the availability of financial services.

"The next challenge is to equip the tax administrator with the capacity and technology to leverage big data. That's where there's still some work to do," said Albert Touna-Mama, the IMF's resident representative in Ghana.

The private sector, which has already been involved in several initiatives, is looking to harness government data to add value for users.

"The government's work is putting the foundation and making it easy for the private sector to put the building blocks on top," said Patrick Quantson, chief transformational officer for DreamOval Limited, a Ghanaian fintech company. "I think, fundamentally, the work the government needs to do for this digital investment is to open it up from day one." **FD**

ANALISA R. BALA, ADAM BEHSUDI, and NICHOLAS OWEN are on the staff of Finance & Development.

COURTESY OF TOGO'S MINISTRY OF DIGITAL ECONOMY AND TRANSFORMATION



Technology-Driven Development

Togo's Cina Lawson views digitalization as key to her country's growth and development

THE WEST AFRICAN NATION of Togo has drawn global attention through its innovative digital payment initiative Novissi (which means “solidarity” in the Ewe language), which has provided financial assistance to its people during the pandemic.

Cina Lawson, Togo’s minister of digital economy and transformation, has been at the forefront of harnessing technology to deliver fiscal policy and help achieve the country’s development goals. In this interview with F&D’s Adam Behsudi, Lawson describes how Togo is breaking new ground on digitalization.

F&D: Can you explain Togo’s Novissi payment program and describe its effects two years into the pandemic?

CINA LAWSON: While many countries found it difficult to identify, register, and pay millions in need due to social distancing measures, Togo managed to distribute \$34 million to more than 920,000 vulnerable people—which amounts to about one-fourth of the adult population—by

leveraging mobile technologies, nontraditional data sources, and machine learning.

The Novissi program came out of the urgent need not to leave anyone behind as restrictive measures were put in place to fight the spread of the virus. In Togo, more than 50 percent of the population still lives in extreme poverty, and about 80 percent works in the informal sector living on day-to-day jobs that cannot be done from home. It was imperative to support these individuals and their families and prevent a rise in the national poverty rate.

F&D: What makes Novissi unique?

CL: First, it was the speed of the rollout. The program was launched April 8, 2020, only eight days after the health emergency was declared by the president. The Novissi platform was fully developed in-house, and the system was up and running in a mere 10 days. It is a 100 percent digital cash transfer program with no face-to-face contact from registration to assessment of eligibility and cash payment. Leveraging digital means throughout the process has enabled a quick rollout of social assistance during the crisis.

Second, the cash payouts were nearly instantaneous. People received cash transfers on their mobile money accounts in less than two minutes once declared eligible. Within one week after its launch, Novissi was able to disburse social assistance to about 450,000 people. This would have been difficult to achieve with traditional methods.

Third, it functions without internet. The cash transfer platform does not require an internet connection for users to enroll and receive payment. It uses low-tech mobile technologies such as USSD [unstructured supplementary service data]. So people living in an area with no internet coverage and with basic 2G telephones could register by simply dialling the USSD shortcode *855# on their mobile phone to access a special menu.

Fourth, it leverages artificial intelligence (AI), satellite imagery, cell phone metadata, and machine learning to improve the targeting of beneficiaries. This is a potential game changer for the delivery of social protection programs in countries that have limited social registries. The AI targeting approach was led by the government of Togo, with the technical support of Innovations for Poverty Action and Center for Effective Global Action researchers, and a \$10 million grant from GiveDirectly to support 140,000 people.

Finally, the program is also gender sensitive, with women receiving about 15 percent more cash than men, as they are the primary keepers of households.

F&D: Togo appears to be leapfrogging even advanced economies when it comes to digitalization of government services. What makes this possible?

CL: Leapfrogging is the only way to provide African solutions to African problems. In Togo, for instance, we have created Agence Togo Digital, an agency to recruit the required skills and capabilities to lead the digital transformation of Togo, ensure that government systems are interoperable, and enhance the value of data.

With the pandemic, digital technologies are no longer perceived as an optional luxury but rather an essential element that enables people, organizations, and states to remain relevant, competitive, and efficient.

The world is now moving toward a technology-driven era. Various sources of nontraditional data are being digitally collected and used to provide insights.

This is already a reality in the private sector, where data is being used to generate consumer insights and drive growth by providing tailored customer experience and services.

For governments to follow the same path and reach the same level of sophistication in using data to drive insights and inform policies, countries should build digital public infrastructure at the national level that is inclusive, transparent, secure from cyberattack, and aligned with the regulatory frameworks in terms of data privacy.

F&D: Access to the internet and mobile services is still a challenge in many countries in the region. What is Togo doing to ensure a widespread and inclusive digital infrastructure?

CL: Africa is not on the sidelines of the global digital transformation. The continent is undergoing a boom in digital development, especially with regard to mobile penetration rates, access to the internet, and acceptance of mobile payments. Togolese citizens increasingly have access to high-speed internet, thanks to the rapid expansion of 3G and 4G networks across the country. Togo's mobile internet penetration rate reached 63 percent in 2020, compared to barely 13 percent five or six years ago.

Connectivity prices have also fallen over the same period as we continue to extend high-speed fixed and

mobile internet across the country. Consequently, more of our population can now reap the benefits of the digital economy, including better communications, improved access to information online, and novel opportunities for business, including e-commerce.

F&D: What is the next big initiative for Togo digitalization? Where do you want the country to be in 10–20 years?

CL: Togo aims to become a logistics and services hub for the western region of Africa. Hence, the country has engaged in a process of profoundly transforming its economy and has placed digital technologies at the heart of its development strategy.

As a matter of fact, three-fourths of our Togolese development road map projects for 2025 have a digital component. These projects have been integrated into a national strategy—*Togo Digital 2025*—which aims to

- Provide all citizens and residents above age five with a biometric ID and easy and cost-effective access to high-speed internet and mobile devices.
- Digitalize public and social services, as well as all government-to-citizen and citizen-to-government payments, to bring citizens closer to the public administration.
- Accelerate the transformation of the economy and make Togo a digital hub with an ecosystem of innovation and start-ups.

F&D: How important is digitalization to the UN Sustainable Development Goals?

CL: The Sustainable Development Goals cannot be achieved without digitalization.

According to the World Bank, about 690 million people live on less than \$1.90 a day. And more than 50 percent of the world's most vulnerable people live in sub-Saharan Africa.

COVID-19, climate change—as well as the rising number of conflicts and natural disasters—pose a threat and have reversed progress in worldwide poverty alleviation.

From Togo's Novissi experience, I strongly believe that mobile technologies, big data, machine learning, and the promotion of digital public infrastructures would enable digital aid to be rolled out in a timely and effective manner. It is our responsibility as policymakers to adopt robust ways of addressing global issues. **FD**

This interview has been edited for length and clarity.



ADDING ETHICS TO PUBLIC FINANCE

Evolutionary moral psychologists point the way to garnering broader support for fiscal policies

Paolo Mauro

Policy decisions on taxation and public expenditures intrinsically reflect moral choices. How much of your hard-earned money is it fair for the state to collect through taxes? Should the rich pay more? Should the state provide basic public services such as education and health care for free to all citizens? And so on.

Economists and public finance practitioners have traditionally focused on economic efficiency. When considering distributional issues, they have generally steered clear of moral considerations, perhaps fearing these could be seen as subjective. However, recent work by evolutionary moral psychologists suggests that policies can be better designed and muster broader support if policymakers consider the full range of moral perspectives on public finance. A few pioneering empirical applications of this approach in the field of economics have shown promise.

The golden rule

For the most part, economists have customarily analyzed redistribution in a way that requires users to provide their own preferences with regard to inequality: Tell economists how much you care about inequality, and they can tell you how much redistribution is appropriate through the tax and benefit system. People (or families or households) have usually been considered as individuals, and the

only relevant characteristics for these exercises have been their incomes, wealth, or spending potential.

There are two—understandable but not fully satisfactory—reasons for this approach. First, economists often wish to be viewed as objective social scientists. Second, most public finance scholars have been educated in a tradition steeped in values of societies that are WEIRD (Western, Educated, Industrialized, Rich, and Democratic). In this context, individuals are at the center of the analysis, and morality is fundamentally about the golden rule—treat other people the way that you would want them to treat you, regardless of who those people are. These are crucial but ultimately insufficient perspectives on how humans make moral choices.

Evolutionary moral psychologists during the past couple of decades have shown that, faced with a moral dilemma, humans decide quickly what seems right or wrong based on instinct and later justify their decision through more deliberate reasoning. Based on evidence presented by these researchers, our instincts in the moral domain evolved as a way of fostering cooperation within a group, to help ensure survival (Greene 2013). This modern perspective harks back to two moral philosophers of the Scottish Enlightenment—David Hume and Adam Smith—who noted that sentiments are integral to people's views on right and wrong. But



most later philosophers in the Western tradition sought to base morality on reason alone.

Moral psychologists have recently shown that many people draw on moral perspectives that go well beyond the golden rule. Community, authority, divinity, purity, loyalty, and sanctity are important considerations not only in many non-Western countries, but also among politically influential segments of the population in advanced economies, as emphasized by proponents of moral foundations theory (see box, next page).

Regardless of whether one agrees with those broader moral perspectives, familiarity with them makes it easier to understand the underlying motivations for various groups' positions in debates on public policies. Such understanding may help in the design of policies that can muster support from a wide range of groups with differing moral values.



Two debates

To be fair, in recent years economists have begun to pay more attention to communities and cultural identities. Consider, for example, two of the most heated and familiar debates in public policy today. The first is the policy response to job losses from automation and globalization. Until recently, economic analyses of long-term unemployment emphasized the need to liberalize markets for labor and housing. If a region lost jobs, economists recommended removing obstacles to moving to locations where new jobs were emerging. This emphasis on individuals' ability to move paid scant attention to the role of communities in people's lives. Helping individuals, however, may not be enough if they identify with, and care for, a community that is no longer thriving. In response to pushback against policies that failed to support localities that lost jobs, policymakers are increasingly seeking to support communities left behind.

The second contentious public policy issue concerns immigration, including the extent to which immigrants should have access to publicly funded services. Economists usually analyzed the costs and benefits to citizens or residents while eschewing considerations regarding the preservation of cultural identity for both native and immigrant communities. But to many people, cultural identities are relevant, and the social sciences are paying increasing attention to them.

More generally, the distinction between globalists (or universalists) and nationalists (or communitarians) has become commonplace in public discourse. (Universalists display altruism or trust in others that is unaffected by social distance in terms of links by family, nationality, religion, and so on. Conversely, communitarians' altruism and trust in others decline with social distance.)

A few pioneering analyses have begun exploring the relationship between people's moral views and their preferences for policies, including fiscal policies. For example, Enke, Rodríguez-Padilla, and Zimmermann (2020) suggest that the traditional left-right divide—with the left favoring more foreign aid, affirmative action, environmental protection, welfare benefits, and universal health care and the right supporting spending on the military, police and law enforcement, and border controls—is common across several Western countries and ultimately explained by whether individuals' moral values are primarily universalist or communitarian. Later applications of moral foundations theory have found that communitarians' opposition to progressive taxation declined among individuals directly hurt by the pandemic through job loss or illness (Klemm and Mauro 2021).

The importance of moral perspectives in shaping people's views on public policies cannot be overstated. For example, using surveys of individuals in the

Moral Foundations Theory

According to Haidt (2012), six moral foundations have emerged as evolutionary responses:

- (1) Care/harm:** We as humans are sensitive to suffering and disposed to care for those in need. These feelings evolved in response to the need to care for children.
- (2) Fairness/cheating:** We value and reward collaboration and reciprocal altruism, whereas we want to shun or punish cheaters. Cooperation increases the chances of survival.
- (3) Loyalty/betrayal:** We reward team players and punish those who betray our group. This is similar to fairness/cheating but focused on group membership rather than humanity as a whole.
- (4) Authority/subversion:** We respect rank and status and are sensitive to signs that other people are (or are not) behaving properly, given their position. This evolved in response to the adaptive challenge of living within social hierarchies.
- (5) Sanctity/degradation:** We experience disgust when observing something that looks polluted (whether physically or figuratively). We long for purity in nature, feelings, and relationships; we sometimes consider objects, places, people, and principles as sacred, especially in the context of religion. This likely originated from the need to avoid pathogens.
- (6) Liberty/oppression:** Humans often cooperate in hierarchical arrangements but band together to rebel against leaders who behave as tyrants. On the left, the urge to oppose oppression and replace it with equality is employed against capitalism and corporations. On the right, such opposition is aimed at government regulations and international treaties.

Whereas the first two foundations are commonplace in the WEIRD tradition and fully consistent with the golden rule, the other four may lead to treating others differently depending on whether they belong to one's group, community, and so on.



United States, Stantcheva (2021) shows that notions of fairness are more important than views regarding efficiency in shaping people's attitudes toward progressivity in the taxation of income or inherited wealth.

Further applications of more specific moral foundations could be explored. The purity foundation, for example, applies to preserving nature against local pollution (clean rivers, smog-free air) as well as global pollution (oceans, climate change). A carbon tax could be presented as a way to safeguard the purity of the earth, leveraging sentiments not unlike those elicited by other "sin" taxes such as those on alcohol or cigarettes. People holding communitarian views might be more receptive to arguments that emphasize the purity of their local environment rather than climate change. The purity foundation might even underlie the desire to balance the country's budget, as expressed in different contexts ranging from the US Tea Party movement to the support for the schwarze Null ("black zero," or zero deficit) in Germany in recent years. The often-used analogy that compares balancing the budget with putting one's house in order—making responsible family budget decisions—evokes notions of purity.

Likewise, the loyalty foundation could be leveraged to promote the country's competitiveness in science, technology, or productivity. Policymakers would be able to draw on the same patriotic spirit that motivates people to root for national sports teams. The authority foundation could be used even in modern democracies, although the choice of figures deserving of respect—police, military, teachers, doctors, the elderly, religious leaders—will of course depend on context, audience, and traditions. A message in favor of, say, additional health spending, might be more persuasive for a conservative audience if delivered by a military doctor in uniform.

The role of information

Policies can be designed and presented more attractively by considering how they would be perceived by people with different moral perspectives. But persuasion also presupposes a certain degree of information, or at least openness to considering information, on the part of the audience.

Extreme positions on policy matters may reflect lack of information, as shown by experiments conducted by psychologists (Greene 2013). These researchers asked individuals to consider controversial policy proposals, such as a single-payer health care system or cap and trade for reducing

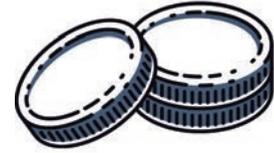
carbon emissions, and recorded their views. They then asked respondents to explain how these policies would work. Later, the researchers again asked respondents for their views on the policies. Confronted with their lack of understanding, respondents adopted more moderate positions. Thus, rather than asking people why they support a certain policy, a better conversation starter may be to ask them factual questions about how that policy would work. In a similar vein, recent survey-based studies in economics (for example, Stantcheva 2021) ask people for their opinions, then provide them with additional factual information and ask their opinions again to measure how having the facts can reshape attitudes vis-à-vis policies. The results suggest that providing information may in some cases be the beginning of persuasion.

Policy choices in public finance affect the distribution of income, wealth, and opportunities across various groups defined by income; geography; and ethnic, linguistic, and religious characteristics. When considering tax or spending policies, most people focus on their implications for fairness. The analysis may thus be enriched by considering a broader palette of moral perspectives, which may ultimately help policymakers design measures that have a greater chance of mustering consensus. Large-scale empirical studies building on these insights have only recently begun to yield results. Even so, considering how a certain policy may be designed to be more acceptable—and presented in a more appealing way to citizens with different moral perspectives—can be a helpful starting point. **FD**

PAOLO MAURO is deputy director of the IMF's Fiscal Affairs Department. This article draws on his 2021 IMF Working Paper, "The State and Your Hard-Earned Money: A Survey on Moral Perspectives in Public Finance."

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€2.7 million

GLOBAL INEQUALITIES

The big picture on wealth, income, ecological, and gender inequality looks bad.

GLOBAL INEQUALITIES ARE in bad shape and mostly do not appear to be getting better. Disparities today are about the same as they were in the early 20th century, and the pandemic continues to make things worse.

The recently released *World Inequality Report 2022* sheds light on this problem. With two traditional measures and two new ones, the study adds much to our knowledge of inequality.

The first two measures are of wealth and income. As the chart below shows, current disparities are extreme. The poorest half of the global population owns just €2,900 (in purchasing power parity) per adult, while the top 10 percent owns roughly 190 times as much. Income inequalities are not much better. The richest 10 percent today snap up 52 percent of all income. The poorest half get just 8.5 percent.

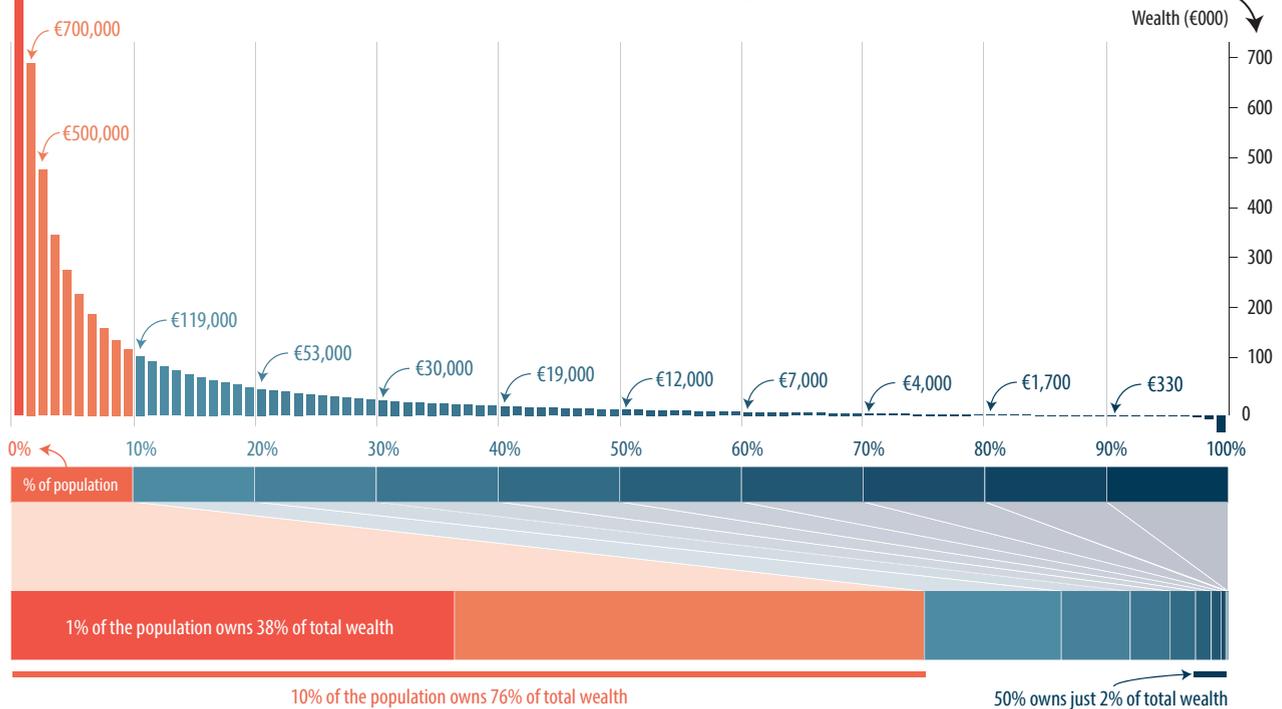
The two new measures in the report look at ecological and gender inequality. The first is reported through carbon dioxide emissions by income category. This is not just a matter of rich versus poor nations; there are large disparities within all countries between the most well-off and the rest. The report looks at gender inequality through a breakdown of labor incomes. Over the past 30 years women's share of income has only slightly improved.

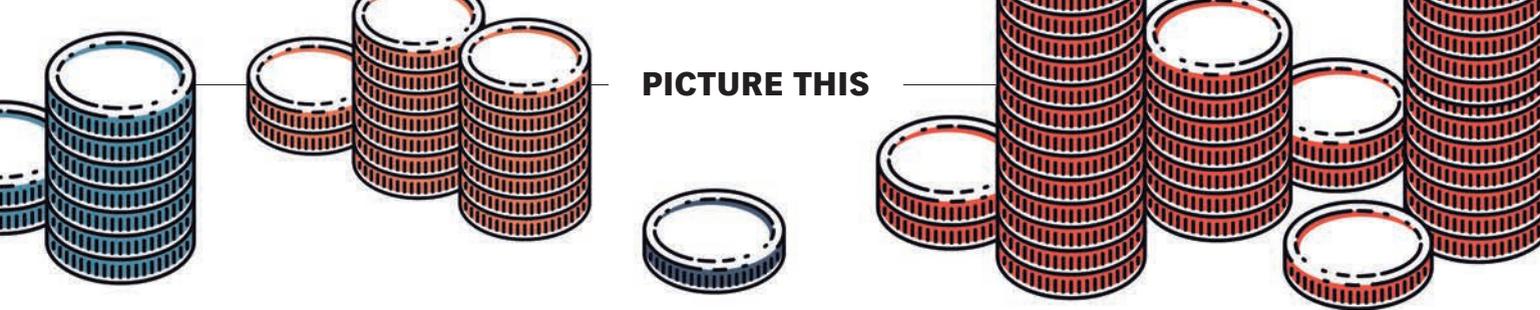
The authors make it clear that much can be done about inequality and that it is always a political choice, with better policy design inevitably leading to fairer development pathways. **FD**

Prepared by F&D's **ANDREW STANLEY** based on the *World Inequality Report 2022* from the World Inequality Lab.

Off the chart

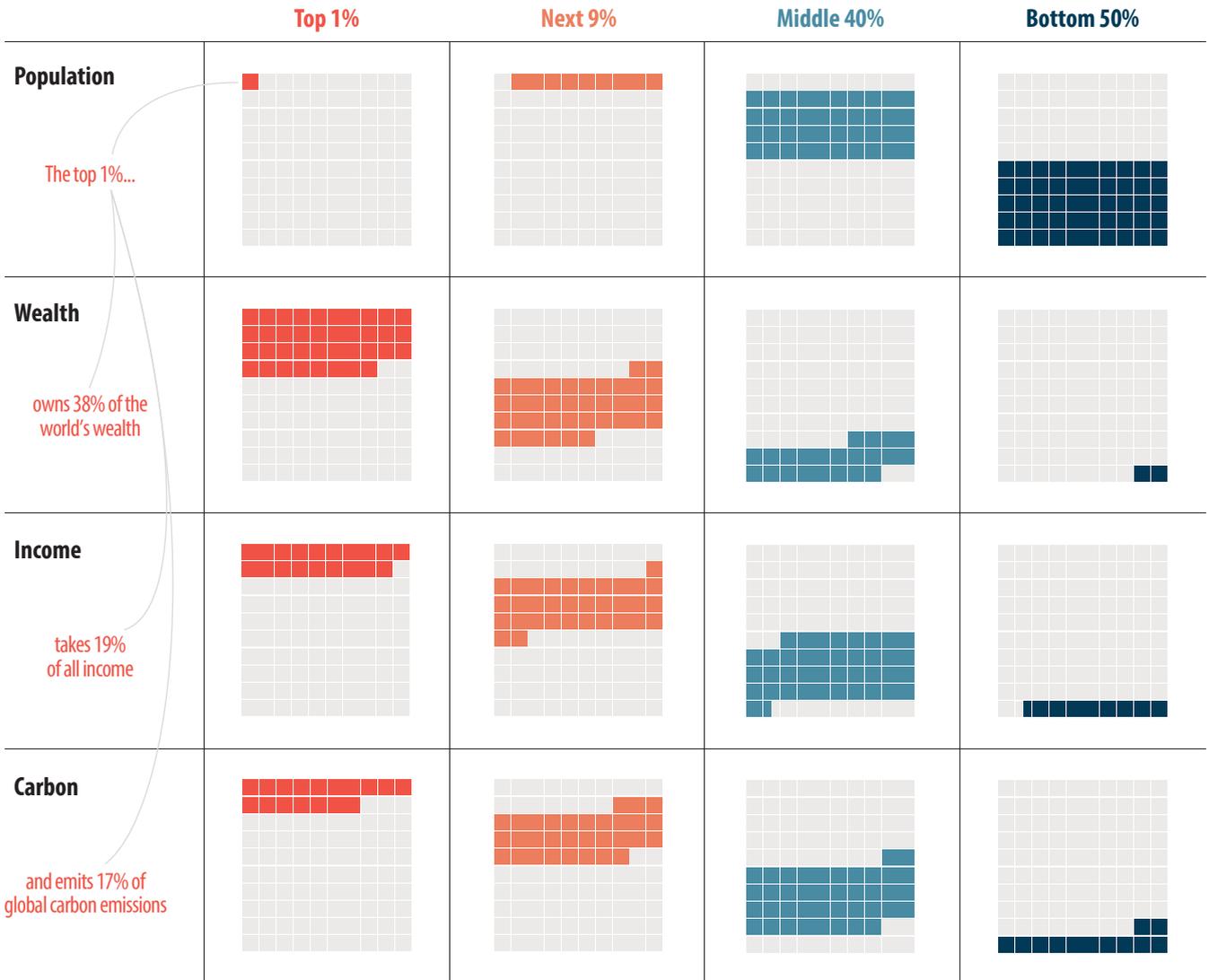
The top 1 percent of the world's population is so much wealthier than the bottom 50 percent that this chart runs off the top of this article.



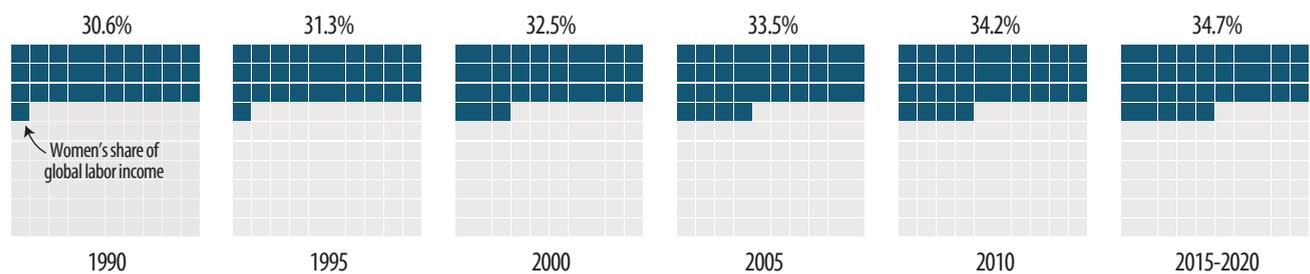


A lopsided world

Some 10 percent of the world's population owns 76 percent of the wealth, takes in 52 percent of income, and accounts for 48 percent of global carbon emissions.



Progress in reducing gender inequality has been slow, with women still accounting for only 35 percent of global labor income.



Value-Added Tax Continues to Expand

More countries are adopting the VAT, and its contribution to global revenue is rising

Ruud de Mooij and Artur Swistak



TWO THOUSAND YEARS AGO when the emperors of China began building a great wall to defend their domain from fearsome warriors from the steppes, they paid for it in part through a tax on salt. The Chinese salt tax, which dates back to the third century BC, is one of the world's earliest examples of a tax on a consumer good.

These taxes trace their often turbulent history through excises on tea and tobacco to the more widely applied turnover taxes of the 20th century. Today's modern equivalent is the value-added tax, or VAT. It has become a major source of revenue for the more than 160 countries that impose it, raising, on average, over 30 percent of their total tax take. (A notable exception is the United States, which doesn't have a VAT.) As a share of GDP, it brings in between 4 percent in low-income developing countries and more than 7 percent in advanced economies. As such a visible source of revenue, VAT has attracted all sorts of criticism, sometimes fair, sometimes not, as it is often poorly understood.

How it works

Whenever we buy something in a store, we can see on the receipt that VAT is added to the net sale price. However, VAT is not levied only on sales to final consumers: it also applies to all preceding transactions in the supply chain between businesses, reminiscent of a turnover tax. Without adjustment, this would cause cascading of taxes (payment of tax on tax), which creates major economic distortions.

To avoid this, VAT uses a crediting mechanism, whereby businesses have the right to credit VAT paid on their business inputs (input VAT) against the VAT collected on their sales (output VAT). VAT thus sticks only with final consumers.

Let's consider a 20 percent VAT and the example of the local grocery store selling a yogurt at a price of \$1.50, inclusive of VAT. The price net of VAT is \$1.25, and the grocery store charges \$0.25 VAT (20 percent of \$1.25). The store might have bought the yogurt from a factory at, say, a net price of \$1.00. It then pays \$1.20 to the factory, including \$0.20 VAT.

When the store remits the VAT collected from us to the local tax authority, it can use the \$0.20 input VAT—as shown in its purchase invoice—as a credit. This leaves the store with an obligation to remit only \$0.05 to the tax authority. The factory will, in turn, remit \$0.20 in VAT, unless it purchased milk from a farmer that charged VAT on its sale, which could then similarly be credited.

This principle of charging and crediting stretches along the entire supply chain. Ultimately, the state receives \$0.25 from the yogurt sale, but a small portion of this amount is remitted sequentially at each stage of the supply chain. All businesses thus act as collection agents for the state.

This may seem cumbersome, but collecting tax along the supply chain is the key attraction of the VAT: it fosters voluntary compliance as each business has an incentive to receive an invoice from a seller so that it can claim the VAT credit on its purchases. This built-in self-enforcement mechanism reduces the risk of tax evasion.

Overall, VAT has withstood globalization, and its revenue share has risen in recent decades.

VAT is imposed on a destination basis—that is, where the consumer resides. This is done by using a border adjustment mechanism that includes imports but excludes exports from the VAT base (by applying a zero rate on export sales). This ensures that all and only domestic consumption is taxed, regardless of whether goods and services are purchased in the domestic market or abroad.

The VAT's credit-invoice mechanism does, however, create a need for tax administrations to provide refunds, especially to exporting businesses, which have significant input tax credits. These refunds are often difficult to manage in developing economies. However, not paying them can create cash flow problems for businesses and deter investment.

Ideal and real VATs

The ideal VAT system has a broad base comprising all final consumption and a single rate of tax, usually between 15 and 20 percent. This means consumers have no incentive to shift consumption to more lightly taxed goods and services that would be less enjoyable to them. The only distortion is between goods and services purchased on the formal market and informal home-produced goods and services. Yet there is little that redesign of VAT can do to mitigate this.

Objectives other than raising revenue are ill-served by VAT concessions. For example, seeking to support poor households by exempting food from VAT can cost significant revenue. After all, the rich also purchase food—and often much more of it. The poor could be supported more efficiently by a combination of progressive income taxes and cash transfers. Similarly, regulating behavior such as drinking, smoking, and polluting is not well achieved by differentiating VAT rates; it is better to use dedicated excises applied to alcohol, tobacco, and emissions.

Most VATs are far from the textbook design. Countries often employ a variety of reduced

rates, exemptions, and special programs. Some are intended to make it simpler to administer the tax. For example, many countries use a minimum registration threshold based on turnover to exempt micro businesses from VAT and its associated cost of compliance and administration. Most exemptions and reduced rates are adopted to improve the distributional impact of VAT, but they undermine the core objective of raising revenue, both directly and indirectly, by increasing the cost of collection and often facilitating fraud. Reforms to eliminate these VAT concessions have often met with fierce resistance from powerful lobby groups with vested interests.

The next VAT

Countries have on the whole coped well with emerging VAT challenges. For instance, to deal with growing cross-border e-commerce, simplified forms of VAT registration have been introduced for non-resident vendors. To tax the supply of digital services, online platforms have become VAT collectors. New digital technologies may also bring opportunities. For example, blockchain and digital money may in the future provide tax administrations with information about transactions along the full supply chain, so that multistage VATs are no longer needed. And if these transactions can be linked to information about individuals, consumption taxes could be personalized and compete with personal income tax as an efficient redistributive instrument.

Overall, VAT has withstood globalization, and its revenue share has risen in recent decades. Recent adopters include Angola, Bahrain, Bangladesh, Oman, Saudi Arabia, Suriname, and the United Arab Emirates; Bhutan, Kuwait, Liberia, Qatar, and Timor-Leste are planning to introduce it soon. Whether in current or revised form, VAT's future as an important revenue-raising instrument is assured. **FD**

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TACKLING INEQUALITY ON ALL FRONTS

A comprehensive mix of fiscal policies can curb inequalities
at every stage where they emerge

David Amaglobeli and Celine Thevenot



The COVID-19 pandemic appears likely to worsen inequalities in an enduring way, further widening the gap between haves and have-nots in advanced economies and reversing progress in developing economies. Many low-skilled workers, young people, and women have lost income and job opportunities. The pandemic has also accelerated long-term trends, such as automation and digitalization, that could soon make many jobs obsolete. Massive disruptions in learning threaten to leave long-lasting scars on opportunities for today's youth. Unequal access to vaccines and lagging recoveries put low-income countries further behind.

Various aspects of inequality—in income, wealth, educational attainment, gender, health, opportunities—are closely related and mutually reinforcing. For instance, education and gender inequalities combine to weaken women's ties to the labor market, which can lead to a lifetime of precarious employment or lower earnings. Similarly, inequalities in income can be perpetuated through lower intergenerational mobility. Given its complexities, a single policy tool cannot address inequality. A comprehensive policy approach is needed.

More than redistribution

To tackle inequality, policies need to focus both on market income—income before taxes and transfer payments, or *predistribution*—and disposable income after *redistribution* through taxes and transfers. Predistributive public policies aimed at narrowing differences in market incomes at their source, such as through public education, help ensure an equal playing field. While necessary, such policies are not sufficient to limit inequalities. Public

intervention through social transfers and taxes is needed to help people cope with various life events related to unemployment, aging, family, disability, or sickness.

Effectively tackling inequality requires a mix of policy instruments aimed at leveling the playing field before people enter the labor market, ensuring that labor market conditions remain fair and socially acceptable, and bringing the necessary corrections to inequalities through redistribution (see Chart 1). Countries that spend more on social sectors (including education, health, and social protection) and have more redistributive tax systems tend to be more successful on average in reducing inequality (see Chart 2). In this respect, fiscal policy is the most agile and effective tool to curb inequalities at each stage of their emergence.

Opportunities and incentives

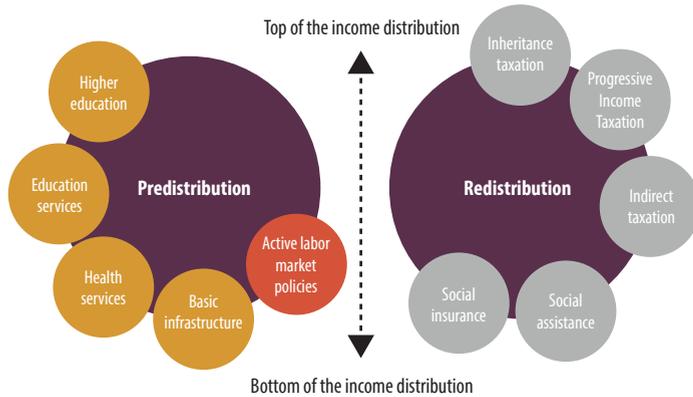
Fiscal policies can create opportunities for those who would otherwise be disadvantaged. In many economies, advanced and emerging alike, large disparities exist between higher- and lower-income households in terms of access to quality education, health care, and digital technologies. These disparities put children in unequal starting positions.

Public spending can, in part, compensate for the gap between rich and poor in private spending on children and help reduce the importance of parental background and other circumstances that are beyond an individual's control. This is achieved through efforts to ensure access to basic public infrastructure, such as clean water and sanitation; basic health services; and social investments—for instance, in education. These policies can increase intergenerational mobility and also, by facilitating

Chart 1

Upstream and downstream

Fiscal policy tools can affect inequality before and after it develops. Some have a greater impact on people on the higher rungs of the income distribution, while others benefit those on the lower rungs more.



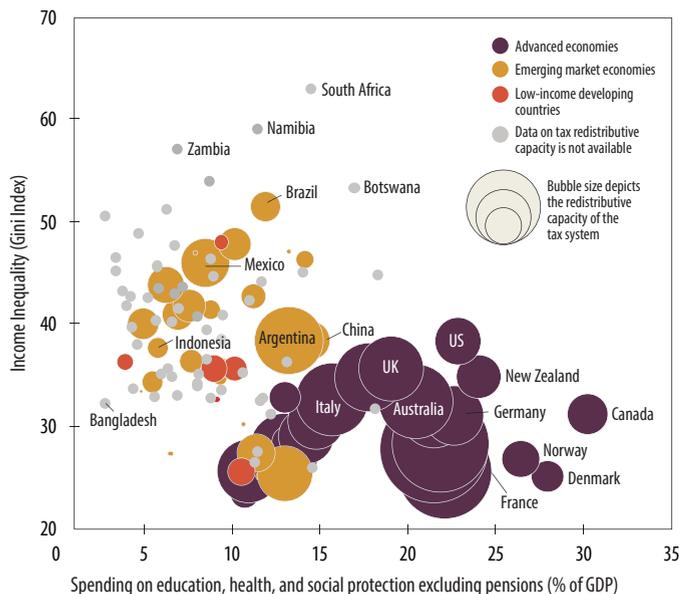
Source: IMF staff.

Note: The spheres represent different fiscal policy tools for reducing inequality. Those on the left help correct inequality primarily at the predistribution stage, those on the right at the redistribution stage. The vertical position of the tools shows where they have the most impact on the income distribution scale. Yellow = basic public services; gray = transfers or taxes; red = labor market policies.

Chart 2

Social expenditure, taxation, and inequality

Countries with higher social spending and more redistributive tax systems tend to have less inequality—though inequality is complex, and other factors are at play. (income inequality, Gini Index)



Sources: IMF FAD Expenditure Assessment Tool; IMF FAD Income Inequality Dataset (Gini); IMF Government Finance Statistics; and IMF Working Paper 21/252, "Measuring the Redistributive Capacity of Tax Policies."

Note: The Gini index measures the extent to which the distribution of a variable, such as income or wealth, among individuals or households within an economy deviates from a perfectly equal distribution. A Gini coefficient of 0 represents perfect equality, while a coefficient of 1 implies perfect inequality.

human capital formation, can enhance long-term growth, particularly by increasing education levels among children from disadvantaged backgrounds. Public spending on basic services can be a priority where access gaps are large. However, the type of spending needs to be carefully assessed given country-specific circumstances. For instance, spending on higher education might benefit mostly richer households.

Fiscal policies can also influence inequality by providing incentives for labor market participation or children's education. For example, labor supply and employment can be affected by labor tax wedges, the difference between a worker's take-home pay and the corresponding total labor cost for the employer, and by participation tax rates, the difference between replacement income received by an unemployed person and his or her expected earnings. This is especially true for second earners. Refundable tax credits for low-income families, individualization of personal income tax filing, and more widely available and affordable childcare could reduce gender bias and encourage labor force participation. Conditional cash transfers, in addition to reducing poverty, can provide incentives for school attendance or regular health checkups.

Active labor market policies can support efficient functioning of labor markets, for instance through public employment services that assist the unemployed in finding suitable jobs or government-sponsored vocational training for those most excluded from the labor market. On the demand side, worker retention programs, which have been developed massively in advanced economies throughout the recent crisis, have helped governments invest in maintaining employment linkages. This has contributed to smoother recoveries and helped avoid massive job losses and business failures that would have fed inequality.

Redistribution

Redistributive policies can curb labor income inequalities. Direct taxes and transfers jointly reduce income inequality by more than one-third in advanced economies. However, in emerging market economies the extent of redistribution is much smaller. Overall redistribution accounts for 85 percent of the disposable income inequality between advanced and emerging market and developing economies. Social transfers help reduce inequality mostly at the bottom, and taxation at the top.

Fiscal policies can create opportunities for those who would otherwise be disadvantaged.

Importantly, most of the redistribution is achieved through social transfers—social assistance, unemployment insurance, or pensions. The coverage of the most vulnerable groups and adequacy of the benefits rather than the aggregate level of spending determine the effectiveness of social transfers in terms of reducing poverty and inequality. As is often the case in policymaking, the design is crucial. Well-targeted transfers can help support vulnerable groups while keeping costs manageable. In this respect, the leap in digitalization is a new opportunity for governments. For example, it makes the identification of households and verification of eligibility easier and quicker. As a result, governments can improve coverage and targeting and reduce leakages through fraud, corruption, or errors. More progressive taxation, along with mobilizing revenues to finance social spending, has a large potential to reduce inequality, especially in countries where taxation is relatively low in terms of its overall burden and in its progressivity. Countries can achieve more redistributive tax systems through higher top marginal income tax rates, (in-work) tax credits for low-income households, and limiting loopholes in the taxation of capital income (dividends, interest, and capital gains).

Tax policy and administration reforms are also crucial for raising additional revenues, especially in countries with weak tax capacity, to provide financing for social spending. Indirect taxes, such as value-added tax and excises, are major revenue sources for most governments, and they are relatively easy to enforce and collect. While consumption taxes could be regressive, they can support equity objectives if they are used to finance basic public services, such as health care, education, and infrastructure. This is because poor households benefit more from these services than rich households, in proportion to their incomes.

Significantly raising revenues from direct taxes requires strong governance reforms and making use of opportunities from digitalization. Among these are real-time data on household expenditures, which can facilitate progressive taxation of consumption. International registers for asset ownership and greater transparency

create additional revenue opportunities. Tax administration reforms can generate resources for higher spending on health, education, and social protection.

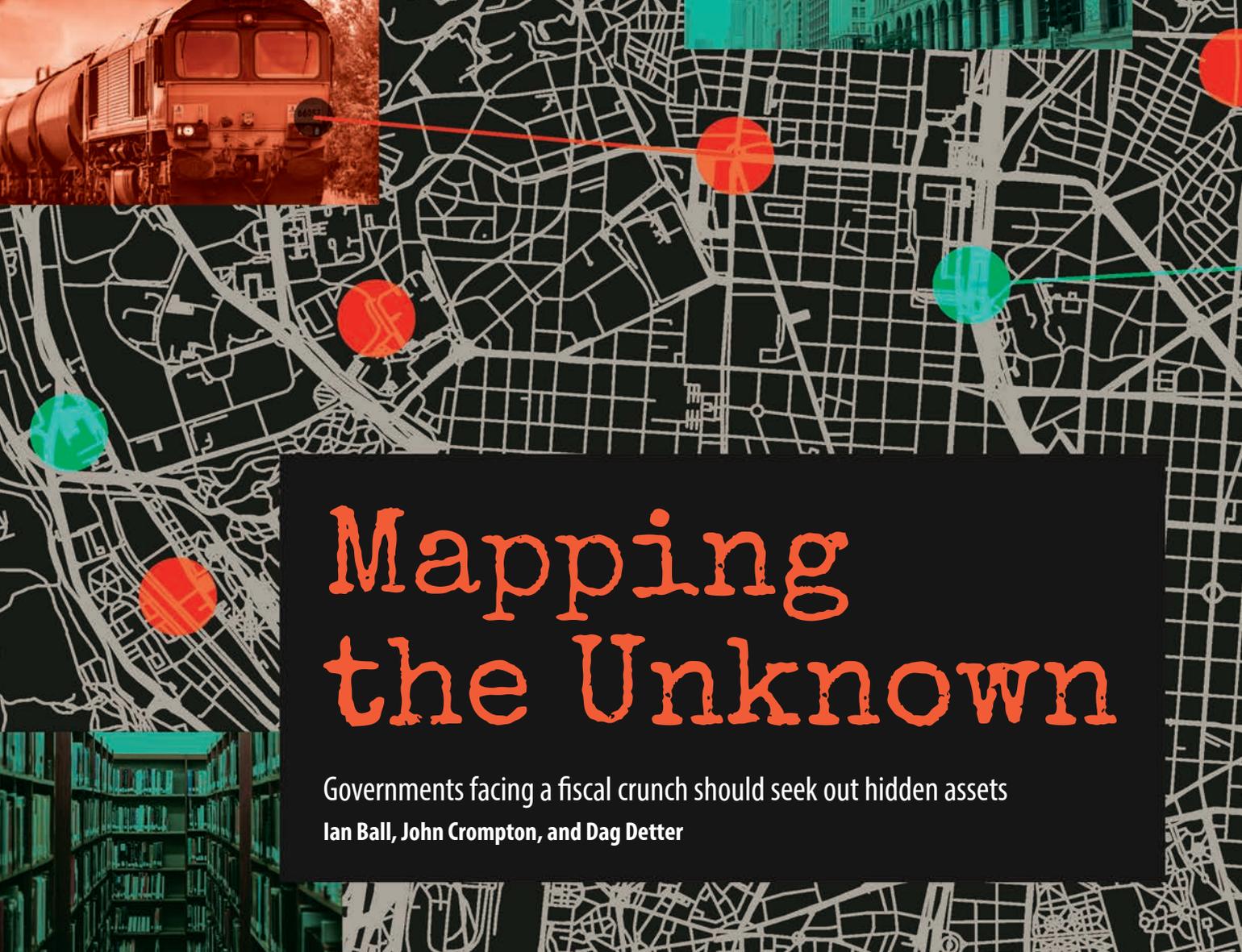
Navigating conflicting tensions

Fiscal policy often implies trade-offs. Governments have to prioritize under tight budget constraints. The current crisis has heightened these trade-offs. While fiscal policy has helped maintain livelihoods and contributed to the swift recovery, it came at a cost of unprecedentedly high debt levels in advanced economies. Many low-income developing countries face high risks of debt distress. Given the debt vulnerabilities, many countries will need to implement policies over the medium term to bring deficits sustainably down.

This fiscal adjustment will take place in a more challenging environment amid rising spending pressures from population aging, climate change, and acceleration of digitalization. Many countries will need to maintain higher health care spending and increase education spending.

Governments can navigate these heightened trade-offs—on the one hand, the need to reduce fiscal vulnerabilities and on the other hand, to support inclusive recovery—through appropriate policy design anchored in credible medium-term fiscal strategies. Experience with IMF-supported programs shows that it is possible to implement fiscal adjustment while mitigating the negative impact on vulnerable groups. These medium-term policies would need to take into account country-specific circumstances. Countries facing significant fiscal pressures from aging populations should adopt structural pension and health care reforms. Others could focus on eliminating wasteful subsidies and on improving efficiency of spending on public investments and goods and services. Many countries can boost revenues by broadening their tax bases and strengthening administrative capacities. [FD](#)

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Mapping the Unknown

Governments facing a fiscal crunch should seek out hidden assets

Ian Ball, John Crompton, and Dag Detter

Almost a thousand years ago, in 1085, William the Conqueror commissioned a survey of his kingdom of England, acquired 19 years earlier. The goal: inventory all the assets and understand what revenue they should generate, and hence what was due to the Crown in rent or taxes.

In the vernacular of the time, because of its scale, finality, and authority, this work was called the *Domesday Book*. Today, we might call it an asset map. Importantly, even with 11th century technology, the *Domesday Book* took only a year to complete!

Today's governments have largely forgotten the importance of an accurate inventory of their assets. This problem, rooted in government accounting systems, impedes valuation and efficient asset management. A quick, low-cost solution is to find the hidden assets by doing an asset map and to manage them through a public wealth fund.

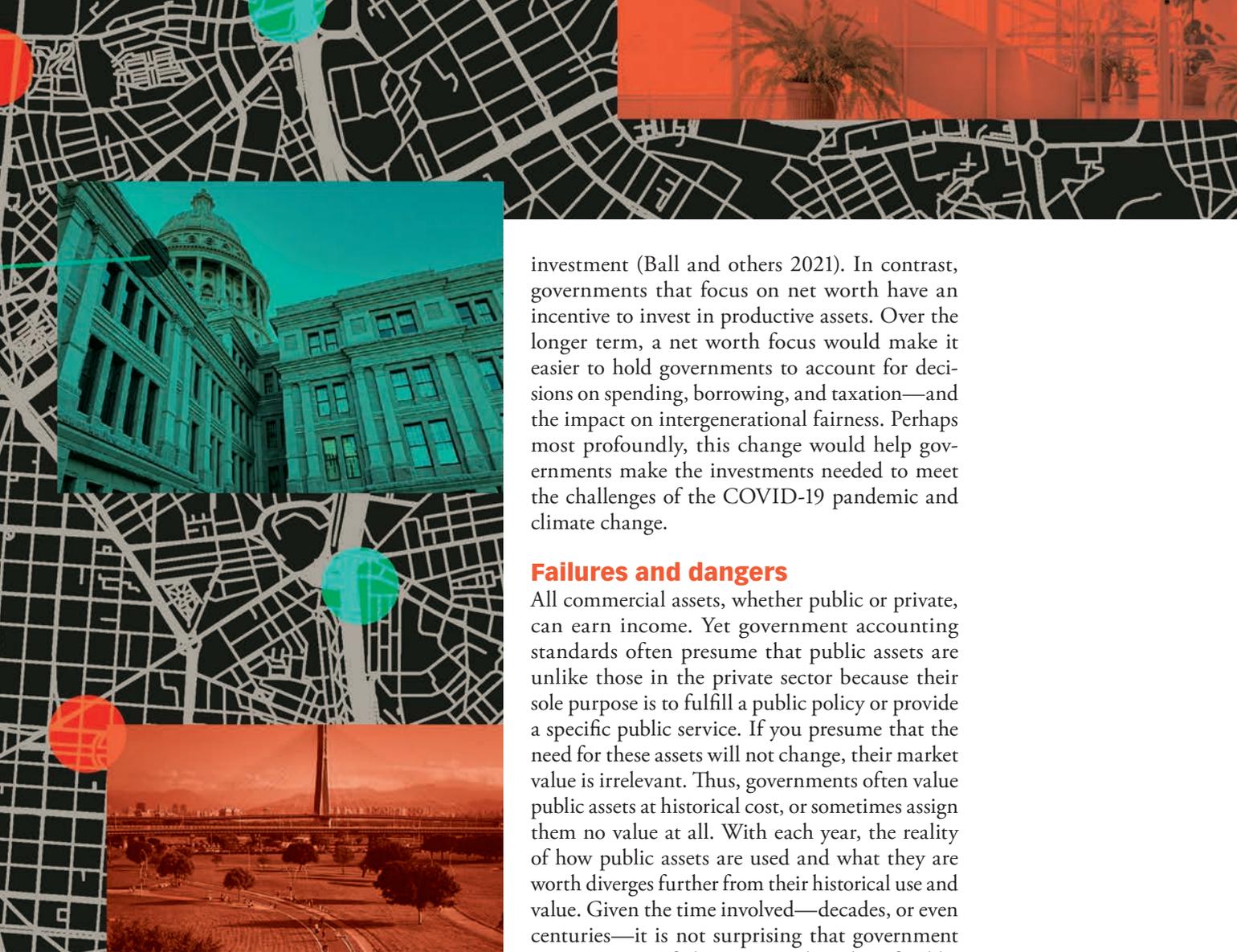
Valuation unknown

Public commercial assets—defined as any assets able to generate income if professionally

managed—include operational assets (such as utilities) and transportation assets (such as airports, ports, and subway systems) as well as real estate. They are perhaps the largest wealth segment in the world—and among the least well understood.

At more than \$90 trillion, the value of the world's publicly listed companies is roughly equal to that of global GDP. Governance is a huge industry with a vast array of agents—corporate managers and boards, accounting firms, stock exchanges, securities regulators, investment banks, investment managers—focused on efficiently managing these firms and allocating capital to them. Media channels constantly report how these businesses are performing.

Public commercial assets receive far less attention, yet the IMF has estimated global public assets at twice the value of global GDP. While these assets are owned in the public interest, even the most open and democratic governments offer little formal governance, oversight, or accountability. Indeed, few governments make any serious effort to record and value all their commercial assets, and those



that do apparently omit large swaths of holdings, so the true value is probably much higher than the IMF's assessment, which relies on government data.

Costly consequences

The dearth of information about public commercial assets promotes inefficiency, and an IMF study estimates a cost to this—about 1.5 percent of the total value of assets per year, equivalent to about 3 percent of global GDP. These inefficiencies include lower yield or the absence of yield from public commercial assets, due to poor accounting, mismanagement, waste, and corruption.

There also are important macroeconomic consequences, including government balance sheets that appear weaker than they should. IMF work published in August 2019 (Yousefi 2019) and in May 2021 (Koshima and others 2021) makes it clear that governments with stronger net worth (assets minus liabilities) recover faster from recessions and have lower borrowing costs.

Ignoring net worth is misleading, mismeasures debt sustainability, and creates a bias against

investment (Ball and others 2021). In contrast, governments that focus on net worth have an incentive to invest in productive assets. Over the longer term, a net worth focus would make it easier to hold governments to account for decisions on spending, borrowing, and taxation—and the impact on intergenerational fairness. Perhaps most profoundly, this change would help governments make the investments needed to meet the challenges of the COVID-19 pandemic and climate change.

Failures and dangers

All commercial assets, whether public or private, can earn income. Yet government accounting standards often presume that public assets are unlike those in the private sector because their sole purpose is to fulfill a public policy or provide a specific public service. If you presume that the need for these assets will not change, their market value is irrelevant. Thus, governments often value public assets at historical cost, or sometimes assign them no value at all. With each year, the reality of how public assets are used and what they are worth diverges further from their historical use and value. Given the time involved—decades, or even centuries—it is not surprising that government accounting can fail to capture the value of public real estate and other assets.

Governments are without exception the biggest landowners in every country, yet they pay scant attention to the value of their holdings or to managing them to best deliver value to taxpayers. These failures carry real costs. It is difficult for anyone in government, opposition political parties, or the electorate to hold anyone accountable for the management of these “invisible” assets or ask whether they are still needed at all. As a result, cash-strapped public bodies avoid decisions they would face in the private sector—for instance, about whether they can meet their needs through better use or sale of existing assets.

Why is there so little appetite to challenge government over its asset management? Perhaps political leaders simply have enough on their plates handling known problems and resources. There might also be perverse incentives: what government department will look for invisible assets if it fears that finding them will create demands to spend more or be a mandate to sell them or manage them better? And perhaps the task is too big, or



too protracted, to appeal to elected officials with shorter-term horizons.

Solutions at hand

Moving government accounting from a cash to an accrual basis, in line with private sector norms and International Public Sector Accounting Standards, offers a solution to this problem—provided it also becomes the basis of government financial management. This means governments should show assets, especially property, at their fair market value, rather than historical or zero cost. It also means at least annual assessments of public net worth, a powerful measure of whether government is building or destroying its financial position—and hence, whether future generations are being treated fairly.

It can be done. Almost two decades ago, the IMF shifted its *Government Finance Statistics Manual* from a cash to an accrual basis, and more than three decades ago, New Zealand introduced accrual-based accounting and a government financial management framework driven by that accounting method. In doing so, New Zealand moved from two decades of government deficits and declining net worth to 30 years of value creation with very few deficit years.

Many countries claim to be following suit, and industry bodies predict that in a few years, almost half the world's governments will adopt accrual-based accounting (IFAC and CIPFA 2021). Far fewer, however, are putting accrual information at the heart of their financial management and budget systems. For example, the UK's Whole of Government Accounts, which reports its public sector real estate assets, does not have a mandate to assign a fair market value to the assets, and its financial management framework pays very little attention to net worth creation. It will take consistent pressure from the IMF and others interested in efficient financial management for accounting reform to yield better financial management.

Driving development

There is a way to expedite the process: transfer public commercial assets to public wealth funds that in effect bring the same governance, management, accounting, and accountability to specific asset pools as in the private sector. With public wealth funds, the benefits of efficient management can be realized quickly, within a year or two, in

contrast to the time it would take to implement accrual-based public sector accounting and effectively use the information it generates.

Asia offers examples of how public wealth funds can transform—or transcend—government finances and drive economic development. Singapore's onshore public wealth fund, Temasek, was founded in 1974 to manage key government holdings, including in financial services, transport, telecom, and industrials. Capital Land, Temasek's flagship real estate company, has become one of Asia's largest real estate companies. Singapore's success as an investor has gone hand in hand with its development as one of the most livable cities in the world. And in Hong Kong SAR, the transit company MTR built a subway system the size of New York City's solely through internally generated resources—particularly through capturing the value generated by developing the properties adjacent to its stations (Leong 2016).

In Europe, Sweden was the first to introduce active management of public assets with a clear financial purpose. Over a designated three-year period, from 1998 to 2001, Sweden managed its public portfolio as if it were owned by corporate shareholders, introducing an equity culture and private sector discipline. It turned around its telecom, electricity, railway, and postal service monopolies within the three-year timetable, improving vital services, generating a substantial financial dividend, and boosting economic growth. Real estate played an important role, as Sweden's vast portfolio of properties helped support the turnaround without injecting external capital. Finland followed in 2008, launching a public wealth fund that has generated a solid return since inception and a separate public wealth fund for real estate owned by the national government.

At a local level, Hamburg and Copenhagen used their respective urban wealth funds to modernize outdated ports and build new residential housing, workspaces, schools, parks, and retail and cultural facilities. With the financial surplus from its operations, Copenhagen was able to fund part of the extension of the local metro system. Similarly, London and Continental Railways, in the UK, and Jernhusen, in Sweden, have successfully developed areas around city train stations without using taxes.

Creating public wealth funds offers the benefits of private sector finance, for example, through



direct access to debt and equity markets, engagement with specialist equity funds, or corporate partnerships. This can take place at the public wealth fund (holding company) level or at the level of individual assets. Of course, such efforts must deliver value to voters and taxpayers, the ultimate beneficiaries of public wealth funds. But funds that have strong governance and make decisions for commercial, rather than ideological or purely political, reasons can deliver such value, as the previous examples demonstrate.

Domesday Book revisited?

When William the Conqueror dispatched clerks in 1085 to record his kingdom's assets, he was interested primarily in land holdings. Even today, property remains the largest single asset class, with extensive government holdings. In most developed economies, land registries, relatively transparent transaction information, and web-based survey techniques make it quite straightforward to construct an asset map identifying and valuing government property holdings within any given locale—in effect, to generate a local *Domesday Book* without the Domesday pain.

The US city of Pittsburgh offers an interesting case study. Before mapping its assets, Pittsburgh's mayor thought the city had some 400 public properties, valued in the city's accounts at about \$57 million. Pittsburgh employed a specialist firm to conduct a simple asset mapping exercise, which took two weeks to complete and cost about \$20,000. It demonstrated that the actual number of city-owned properties was closer to 11,000, most of which were not needed to deliver public services. Pittsburgh's real estate portfolio was valued at \$3.9 billion—70 times its book value. If professionally managed, these holdings could generate additional income well beyond what the city currently raises in taxes. Alternatively, assets not needed to deliver public services could be sold and proceeds used to finance new investment—without increasing taxes or borrowing—see “Unlocking Public Wealth” in the March 2018 issue of *Finance & Development*.

In less developed economies and political systems, there might be a different set of challenges. For example, the quality of information about property ownership varies widely between countries, and any steps taken must be geared toward promoting transparency and accountability. On the

other hand, as the Asian examples demonstrate, in less developed economies effective use of state assets, especially property, can be an important driver of economic and institutional development.

Creating public wealth funds offers the benefits of private sector finance.

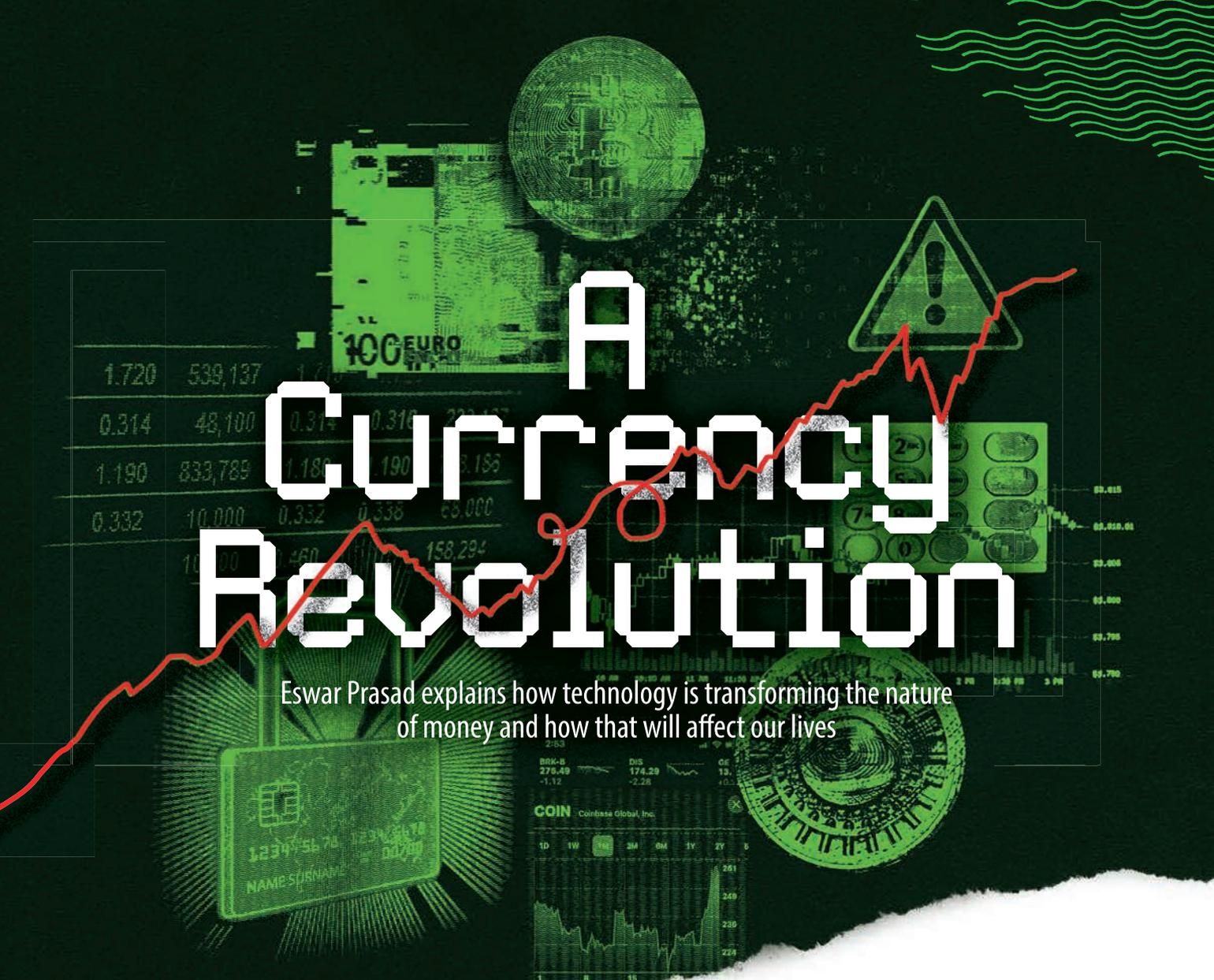
Avoiding austerity

For too long, many countries have ignored asset valuation and management, and the resulting impact of this neglect. The need to address both the COVID-19 pandemic and climate change, which together will strain public finances for at least a generation, demands radical action. Given that the alternative in many countries could be a prolonged period of austerity, rethinking how governments view public assets is now a moral as much as an economic goal. Making this change will be difficult, but the evidence is clear: identifying public commercial assets—especially real estate—and sustainably managing them through public wealth funds can deliver enormous windfalls to governments as they seek to meet today's challenges to benefit both current and future generations. **FD**

IAN BALL was a principal architect of the New Zealand government's financial management reforms. **JOHN CROMPTON** is an investment banker and a former HM Treasury official. **DAG DETTER** is a principal of Detter & Co.

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A Currency Revolution

Eswar Prasad explains how technology is transforming the nature of money and how that will affect our lives

In his latest book, *The Future of Money*, Eswar Prasad describes how digital currencies and other financial technologies are reshaping everything from consumer banking to monetary policy and international payments. In a conversation with F&D's Chris Wellisz, the Cornell University professor lays out the advantages and perils of the new forms of money.

F&D: Is cash destined to wither away?

ESWAR PRASAD: The convenience of digital payments to both consumers and businesses makes it highly unlikely that cash will survive much longer. In China there are two private payment providers, Alipay and WeChat Pay, that have blanketed the entire Chinese economy with very

low-cost digital payments. You can use those for something as simple as buying, say, a piece of fruit or a couple of dumplings from a street vendor. In advanced economies like Sweden, the private sector is doing an equally good job of providing very low-cost digital payments.

F&D: Is it likely that cryptocurrencies like Bitcoin will be used to buy a cup of coffee or pay the rent?

EP: Bitcoin has not worked very well as a medium of exchange that can be used for day-to-day transactions. One main reason is that Bitcoin has very unstable value. It's as though you took a bitcoin in with you to a coffee shop, and one day you could buy a whole meal with it and on another day just get a small cup of coffee. In addition, Bitcoin is somewhat slow and cumbersome to use.

F&D: Is there a solution to the problem of volatility?

EP: There are new cryptocurrencies called "stablecoins" that get their stable value essentially by being



backed up by stores of fiat currency, such as US dollars or euros. They basically become linked to the value of those currencies, and they can then be used to make both domestic payments and payments across national borders more effectively and efficiently.

F&D: You explain in your book how stablecoins may not be as stable as they seem. What risks do they pose?

EP: A stablecoin issuer might say that they are going to hold stocks of liquid securities, but who is going to make sure that they do in fact hold the securities? Even if they did hold the securities, it's possible that if a lot of people try to redeem those stablecoins and convert them back into fiat currencies at the same time, many of the securities that are supposed to back up the stablecoins might not be as liquid—that is, as easy to convert into fiat currencies—as one might expect.

F&D: Are there other risks?

EP: There are concerns that stablecoins, unless they are closely regulated, might become conduits for illicit financing of various sorts of activities, both within and across national borders. And the additional difficulty, of course, is that cryptocurrencies, including Bitcoin, know no borders. For a country by itself to effectively regulate these cryptocurrencies is going to be hard. We'll have to undertake some sort of global coordination in terms of these regulatory policies.

F&D: Some countries are considering the adoption of a so-called central bank digital currency (CBDC). What is the rationale?

EP: For some developing countries, the objective is that of broadening financial inclusion. There are many people in those countries who don't have access to digital payments. They don't have access to basic banking products and services. In countries like Sweden, where most people do have access to bank accounts, the imperative is a little different. The Swedish central bank, the Riksbank, envisions the e-krona, or the digital krona, as essentially a backstop to the private payment infrastructure.

F&D: How about China?

EP: The Chinese government is very concerned about two payment providers that have come to dominate the payment system and are blocking effectively the entry of new competitors who could

provide innovations. The Chinese central bank views a digital yuan as essentially a complement to the existing payment systems, but one that could in principle increase the amount of competition.

F&D: How does a digital currency affect the ability of a central bank to control inflation and ensure full employment?

EP: Let's say all American citizens had, in effect, an account with the Federal Reserve, then it would be a lot easier for the Fed to undertake certain operations such as stimulus payments. When the pandemic hit, the initial coronavirus stimulus bill involved a large amount of money being transferred to American households. Many households that had direct deposit information on file with the Internal Revenue Service were able to get direct deposits to their bank accounts, but households that did not have that information on file with the IRS ended up getting prepaid debit cards or checks, many of which were lost in the mail, and some of which were misappropriated or mutilated.

F&D: Could central bank digital currencies be used to fight tax evasion and other crimes?

EP: If you cannot use cash to pay your gardener or babysitter, it's much more likely that those payments will get reported to the government. And especially for large-value transactions, that will certainly make a difference in terms of tax revenues. Having digital money also reduces the use of cash for illicit transactions, say for drug trafficking or money laundering.

F&D: Are there risks for private sector banks and payment providers?

EP: If the government is in effect providing a very low-cost digital payment system, that might make it very difficult for private payment providers to continue their services because after all, what private corporation can compete with the deep pockets of the government? There is another risk, which is that commercial banks, which are very important in modern economies in terms of providing credit that fuels economic activity, might find that their deposits are being swept away into central bank accounts. In troubled times depositors might feel that ultimately their deposits are going to be safer with the central bank or other government institution compared to a commercial bank, even if the commercial bank deposits are insured.



F&D: Is there a solution to that problem?

EP: The experiments with CBDCs that are underway in China and Sweden are suggesting that what might work more efficiently is a dual-tier system of CBDCs. The central bank would provide the underlying payment infrastructure and provide the CBDC essentially in the form of digital tokens, but the actual digital wallets in which those CBDCs are held would be maintained by the commercial banks.

F&D: What are the challenges facing emerging market and developing economies, which depend heavily on cross-border trade and investment?

EP: Friction-free international payments could certainly benefit importers and exporters. It could make it easier for them to conduct international trade transactions. But there are some risks as well. The more conduits you have for the international flow of capital, the harder it will be to manage those capital flows.

And that could lead not just to more capital flow volatility, but also to more exchange rate volatility. For small economies and developing economies in particular, capital flow volatility and exchange rate volatility can make the management of domestic economic policies that much more challenging.

F&D: What are the challenges for central banks in emerging markets?

EP: We are soon going to be moving to a world where we will have global access to digital versions of the dollar or the Chinese renminbi and many of the other major currencies. It is also likely that many megacorporations with worldwide reach, such as Amazon, could start issuing their own stablecoins.

So if you think about small economies, or economies that have central banks or currencies that are not very credible, one can easily see those currencies being swept away by other currencies, either official or private, that citizens of these countries trust a lot more than their own currencies.

F&D: Do you see a digital yuan threatening the dollar's dominant position as a global currency by virtue of China's status as a fast-growing world economy?

EP: It's not just the economic size or the size of the financial markets of a country issuing a particular currency, but also the institutional framework in that country that maintains the trust of foreign investors. And these elements of trust include the rule of law, an independent central bank, and an institutionalized system of checks and balances. In all these dimensions, I think the US still retains a dominance relative to much of the rest of the world.

F&D: The Federal Reserve has a cautious attitude toward CBDCs. Why?

EP: One needs to think about what the user case really is for the CBDC in each country, and in the US certainly we have issues with our payment systems. A lot of payments are intermediated through credit cards, which are actually quite expensive for merchants to use because of the very high interchange fees. And many of those costs are passed on to consumers. About 5 percent of households in the US are still unbanked or underbanked. So you and I can use Apple Pay, but to use Apple Pay, we need to have that linked to a bank account or a credit card, and many households simply don't have access to that. So a CBDC might at the margin increase financial inclusion, but the Fed already has a major project underway called "FedNow" to increase the efficiency of both retail payments as well as wholesale payments; that is, payments among businesses and financial institutions.

F&D: Do official digital currencies pose broader dangers for society?

EP: You could see an authoritarian government using a digital version of its central bank money essentially to surveil its population. And even a benevolent government might decide that it wants to make sure that the money its central bank issues not only is not used for illicit purposes, but is also not used for purposes it might regard as not necessarily socially beneficial. You might well start seeing money being used as an instrument not just of economic policy, but potentially even social policy. That would be dangerous for the credibility of central bank money and for central banks themselves. **FD**

This interview has been edited for length and clarity.

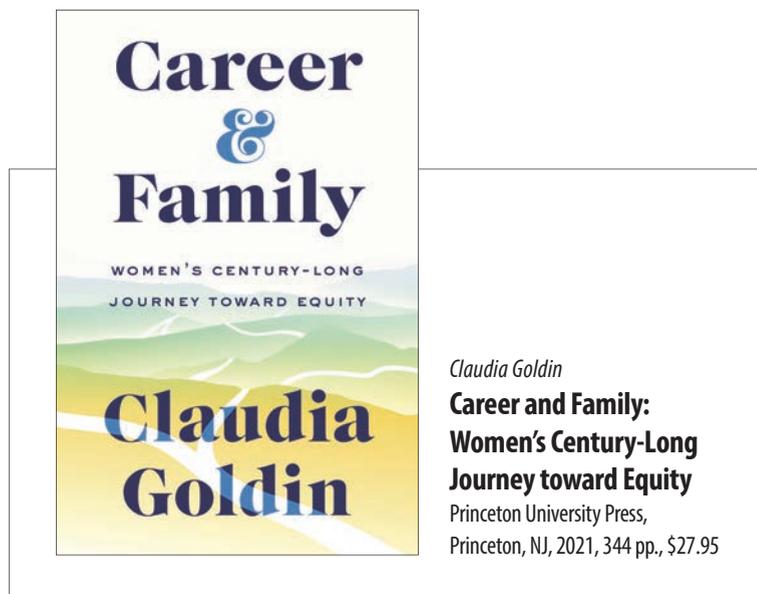
Greedy Work

OVER THE PAST CENTURY, women in the United States have made extraordinary gains in the world of work, argues Harvard economist Claudia Goldin in *Career & Family*. Most no longer need choose between having a child or a job. Women's college enrollment and graduation rates outstrip men's. And slowly but surely, opportunities have expanded enough to give many women the possibility of not just a job, but a career.

Goldin painstakingly maps female college graduates' approach to work and family over the 20th century, given each decade's constraints. A woman graduating in 1910 had to choose between a family and a career. In the 1920s and 1930s, by contrast, many women worked for pay before going on to have children. The trend flipped in the 1950s as the marriage age dropped and women began their families earlier, only to pick up a job—if they were able to—later on. The broad adoption of the birth control pill changed everything, so that by the 1970s, many women opted for a career first, sometimes at the expense of family. But by the 1980s and 1990s, women were pursuing career and family at the same time.

Don't be fooled, though: the advancements don't mean we're anywhere close to economic parity or gender equality. Take the yawning gender pay gap—and I mean yawning in every sense of the word. Women's earnings in the United States have been stuck somewhere between 77 cents and 82 cents for every dollar a man earns for 25 years. (And that figure masks how much worse it is for women of color.) To pin the pay gap just on gender bias or sexism or women's apparently below-par negotiation skills—or their apparent predilection for lower-paying roles—misses the point entirely, suggests Goldin. That's because it's the very structure of work that's at the heart of the problem.

Work, Goldin says, is greedy. It demands time from employees, and the more time they have to give, the more they will be rewarded. In a supply and demand world, companies pay more for staffers who are willing and able to put in endless hours and who will drop everything for a deadline. But time, as we know, is finite. And nothing illustrates that quite as powerfully as when a child enters



Claudia Goldin
**Career and Family:
 Women's Century-Long
 Journey toward Equity**
 Princeton University Press,
 Princeton, NJ, 2021, 344 pp., \$27.95

the picture. Suddenly there's another pull on an employee's time that cannot be ignored. (You try ignoring a call from the school nurse and see where that gets you.)

Companies pay more for staffers who are willing and able to put in endless hours.

So, what is to be done? One solution is to look at industries in which professionals can easily sub for one another. Here, Goldin points to pharmacists, who have figured out that consumers don't need their prescriptions filled by the same person each month. But pharmacists are an exception; other white-collar professions like law or banking are not there yet. Clients still expect to have "their guy" pick up the phone when they call.

The progress we have made is being stymied by greed, argues Goldin. Too bad the thing we're most greedy for is the one thing we can't make more of: time. **FD**

FRANCESCA DONNER, an executive editor at *Quartz* focusing on the future of work, women, and gender

The Dollar's Primacy

WHEN THE COVID-19 PANDEMIC triggered a “risk-off” flight of capital in the spring of 2020, private investors and financial institutions turned to US Treasury bonds as the alternative “safe asset.” The retreat from financial markets was soon reversed, in part because of the Federal Reserve’s formidable response to the threat of a global financial collapse.

largest economy after World War II. US financial markets are unequaled in terms of breadth and liquidity, which reinforces the use of the dollar in financial transactions. The widespread usage of the dollar provides an incentive—the network effect—for new users also to adopt it.

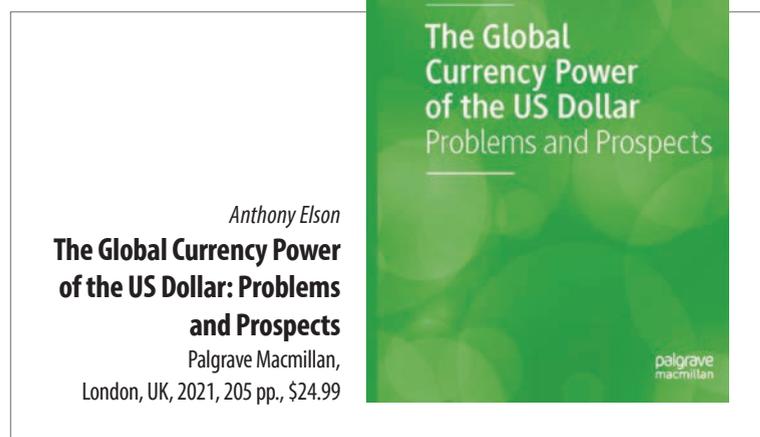
Elson methodically lays out the benefits and defects of a dollar-based system. US international traders and investors avoid the cost of foreign exchange transactions and exchange rate risk. The US government can continue to run fiscal deficits with low interest rates because of the demand for US securities. In addition, the cutoff of access to the dollar-based global banking network through sanctions serves as a valuable foreign policy tool.

The vulnerabilities of the system include the dependence on fiscal deficits to supply safe assets to the world. This “new Triffin dilemma” raises the question of whether there is a threshold of debt that would trigger concerns about the sustainability of the US debt. These concerns may become manifest if interest rates rise in 2022 as the Federal Reserve responds to inflation. Moreover, any increases in US interest rates will raise the cost to foreign governments of refinancing their external debt.

What is a feasible alternative to the central role of the dollar? Elson points out that a multiple reserve currency system including the euro and the Chinese yuan could have advantages over the existing dollar-based system. But a number of conditions must be met before those currencies gain more acceptance, and Elson foresees the pace of adaptation and change will be slow. Similarly, the expanded use of the IMF’s Special Drawing Rights depends on reforms in the IMF’s operations and its voting structure, which must be negotiated.

The most interesting alternative to the dollar’s primacy may not be other national currencies but digital currencies. Central banks are actively exploring the use of these electronic means of payment. If a system of payments for international transactions emerges that is seen as safe, stable, and not dependent on any one country, then the dollar’s central role may be replaced by a different form of money altogether. **FD**

JOSEPH P. JOYCE, professor of economics, Wellesley College



Anthony Elson
**The Global Currency Power
of the US Dollar: Problems
and Prospects**
Palgrave Macmillan,
London, UK, 2021, 205 pp., \$24.99

Fifty years after President Richard Nixon cut the link between gold and the dollar reserves held by foreign central banks, the US dollar continues to play a predominant role in the global financial system, with enormous spillover effects for US monetary policy.

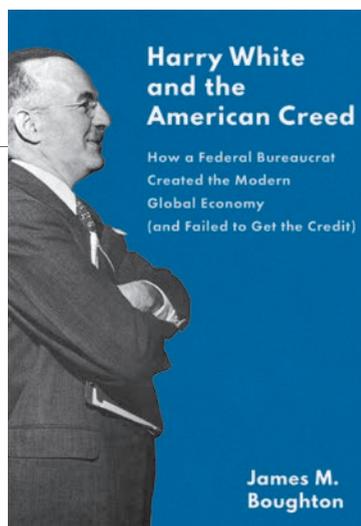
Anthony Elson, a former IMF staff economist, explores the reasons for this phenomenon and the prospects for the future in *The Global Currency Power of the US Dollar: Problems and Prospects*. He traces the historical roots of the widespread use of the dollar for trade and financial flows to the emergence of the United States as the world’s

Overshadowed Founder

STANDING ON PEDESTALS in the anteroom of the IMF's Executive Board are two bronze busts: one of John Maynard Keynes, the other of Harry Dexter White. While innumerable books and biographies have been written about the former, much less is known about the latter. Former IMF Historian James Boughton redresses this imbalance in his superb biography—*Harry White and the American Creed*.

In the first part of the book, we learn about White's early years, including his humble origins; White started his higher education only in his late 20s, after serving in World War I. He attended Columbia, Stanford, and Harvard, where he was awarded the prize for the best PhD dissertation in 1932. Despite his academic pedigree, during the Great Depression jobs were hard to come by, and White ended up teaching at a small college in Wisconsin. He got his big break when famed economist Jacob Viner invited him to intern at the US Treasury for three months in the summer of 1934. It is a testament to White's intelligence, drive, and ambition that, during his internship, he produced a 400-page report on what monetary system the United States should have.

The internship was the entrée to White's signature achievement: his contribution to shaping the postwar international monetary order decided at the Bretton Woods Conference. A doggerel found among White's papers ran, "In Washington Lord Halifax once whispered to Lord Keynes, 'it's true they have the money bags, but we have all the brains!'" Boughton sets out to debunk this claim, crediting White with four main insights: that the postwar system needed to be designed while war was still being waged; that it would need to be designed by all the allied nations, and not just presented as a *fait accompli* negotiated between Britain and the United States; that it should promote multilateral trade and payments; and that it should be based on the US dollar, rather than some new, artificial international currency. While



James M. Boughton

Harry White and the American Creed: How a Federal Bureaucrat Created the Modern Global Economy (and Failed to Get the Credit)

Yale University Press,
New Haven, CT, 2021, 464 pp., \$40

one might question the wisdom of basing the international monetary system on the currency of a single country (even one as powerful as the United States), White's instinct that Congress would otherwise never ratify the IMF's Articles of Agreement was probably correct.

Boughton's book is a fine piece of scholarship that reads like a thriller.

The book also addresses the charges at the end of White's life—and that likely ended his life—of being a Soviet agent. Here Boughton does a meticulous job of documenting every charge and insinuation to show how flimsy (and often ridiculous) they were. As Boughton concludes, "if White was a spy, he was very bad at it...for a man who was so good at everything he applied himself to doing, to accuse him of such an agency would be the unkindest charge of all."

Boughton's book is a fine piece of scholarship that reads like a thriller. And whatever else one takes away from it, one conclusion is clear: it is quite right to honor White alongside Keynes. **FD**

ATISH REX GHOSH, IMF historian

Where Monarchs Reign Supreme

Mexico's banknotes feature migratory butterflies and an influential poet

Melinda Weir

WHILE DIGITAL CURRENCY may be capturing the headlines these days, it's worth noting that physical currency—cold, hard cash—is also undergoing sophisticated technological advancements in many countries, often highlighting messages that help tell unique stories of their cultures or environment.

Take Mexico's newly redesigned 100-peso banknote, for example. No stern founding fathers or stately monuments are depicted on this colorful bill. Instead, migratory butterflies, a temperate forest ecosystem, and a groundbreaking 17th century female poet.

A few years back, the Bank of Mexico had decided to reimagine the designs of its already colorful paper currency, along with its coins. The bank wanted to feature a more design-forward nod to Mexico's cultural and natural heritage,

telling more inclusive stories of the country while incorporating the latest technology. The vibrant red and yellow, vertically oriented polymer 100-peso banknote debuted in November 2020 as part of a newly designed series, and last year was chosen "Bank Note of the Year" by the International Bank Note Society (IBNS), a first for the country. "Mexico's award-winning entry may provide a template as other countries reconsider how they design and promote new banknotes," according to an IBNS statement.

The 100-peso bill is Mexico's first vertical polymer banknote, and has anti-counterfeiting and accessibility features including

- color-shifting ink with a sliding bar movement effect and color change from gold to green;
- a clear window with embossed security features and metallic iridescent ink;
- a design revealed by fluorescent ink under ultraviolet light; and
- raised ink.

A literary founding mother

The front of Mexico's 100-peso banknote pays tribute to one of Latin America's most important early female writers, Sor Juana Inés de la Cruz (1648–1695), a prolific poet, playwright, philosopher, and nun, who wrote in Spanish, Latin, and Nahuatl. Known as a defender of enlightenment thinking and indigenous culture, Sor Juana ("Sister Juana") is sometimes referred to as the "Founding Mother of Mexican literature" and considered "the most important poet and writer of New Spain's literature," according to the Bank of Mexico.

The bank's director of currency issuance, Alejandro Alegre, says that Sor Juana is depicted as "a learned and determined woman, who fought against the conventions of her time that limited women's access to culture and freedom of thought, in order to become the greatest figure of the Hispanic American letters of the 17th century." She was previously featured on Mexico's 200-peso note.



COURTESY OF THE BANK OF MEXICO

Mexico's new 100-peso banknote features one of Latin America's most celebrated writers, Sor Juana Inés de la Cruz (1648–1695), and the Monarch Butterfly Biosphere Reserve, a UNESCO World Heritage Site.



The banknote also depicts the arches of the colonial-era Antiguo Colegio de San Ildefonso in Mexico City's historic center. The 18th century baroque building, a onetime Jesuit seminary and now a museum, was the birthplace of the country's 20th century muralism movement. Artists including José Clemente Orozco and Diego Rivera painted some of their first murals on the building's courtyard walls.

Mighty, mystical mariposas

Mexico's 100-peso notes also pay tribute to a remarkable creature and one of the world's most fascinating annual migrations. Every autumn in the forests of Michoacán and the State of Mexico, the Monarch Butterfly Biosphere Reserve—a protected UNESCO World Heritage site depicted on the back of the banknote—welcomes millions of the migratory orange-and-black monarch butterflies (*mariposas monarcas*), the ethereal, photogenic, and at-risk insects revered by climate scientists as a marker of climate health, and celebrated in music, poetry, and Mexican folklore as bringing good luck or even representing the souls of the dead. The Bank of Mexico's Alegre notes that the monarch butterfly has “an important symbolism for Mexicans, as important spiritual and cultural values have been attributed to it.”

The monarchs fly thousands of miles from the northern United States and parts of Canada to hibernate in the oyamel fir trees of central Mexico,

The series combines design-forward nods to Mexico's cultural and natural heritage with modern anti-counterfeiting and accessibility technology.

9,000 feet above sea level. This is the largest monarch butterfly colony in the world, and their long-distance trips count as the world's “most highly evolved [migration] of any known species of their kind,” according to the World Wildlife Federation (WWF). The monarch butterflies' numbers are declining drastically, according to the WWF, due to climate change, deforestation, and the conversion to farmland, along with increased use of pesticides in their US breeding grounds and disappearing milkweed, the exclusive food of monarch caterpillars.

As the world pays increasing attention to climate change and biodiversity, the tiny but mighty monarch butterfly gracing Mexican banknotes is a powerful reminder of the importance of a flourishing environment. As Cambridge economist Sir Partha Dasgupta put it in a recent *Finance & Development* article, “A thriving natural environment, underpinned by abundant biodiversity, is our ultimate safety net.” In other words, what is good for the butterflies is good for us all. **FD**



MELINDA WEIR is on the staff of *Finance & Development*.

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