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2021**

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March 12, 2021

MACROECONOMIC DEVELOPMENTS AND PROSPECTS IN LOW-INCOME COUNTRIES—2021

EXECUTIVE SUMMARY

The pandemic hit low-income countries (LICs)¹ hard. Notwithstanding significant challenges, LICs had been on a path of convergence with advanced economies in the decade up to 2019. But the impact of the pandemic on growth has been greater than that experienced during the Global Financial Crisis, with a large impact on already weak health systems. LICs' development is expected to be set back for several years and exacerbate divergence with advanced countries compared to the path expected before the crisis.

A lack of fiscal space, limited access to financing and little room for monetary policy support have significantly restricted the scope for policy responses. While access to financial market eased relatively rapidly for most country groupings, they remained generally constrained for LICs.

International efforts were deployed to help countries at this time of exceptional need. Significant emergency financing was made available, including from the IMF, while the G20-led Debt Service Suspension Initiative (DSSI) temporarily eased the financing constraints for many LICs.

Despite these efforts, LICs face the risk of "a Great Divergence". Low-income countries have had limited ability to secure significant doses, and rely almost entirely on the multilateral COVAX facility, which guarantees vaccine coverage for just 20 percent of the population. Resurgent waves and variants of the virus pose risks of renewed lockdowns, and countries may face a protracted period of start-stop activity until vaccines deliver herd immunity. The recovery will lag in LICs due to uneven access to vaccines, limited policy space, and preexisting vulnerabilities and structural rigidities. Income convergence to advanced economies is projected to fall, putting LICs on

¹ Unlike previous reports on the same topic (see IMF (2019a)), which focused on the group of "low-income developing countries" (LIDCs) (a group of 59 IMF member countries primarily defined by income per capita), this report focuses on the group of "low-income countries" (LICs), which is defined in this report as the countries eligible to PRGT facilities (69 countries). The two lists differ but are close. The change of perimeter for this report is grounded in the strong link between the findings of this report and the upcoming PRGT reforms (see Annex I for country groupings).

a lower convergence path than previously expected. There are signs of long-lasting economic scarring effects from a permanent lowering of actual and potential GDP levels, reversing gains made in poverty reduction, increasing inequality, and damaging human capital.

This paper estimates LICs’ financing needs up to 2025 to resume and accelerate their income convergence with advanced economies. It does this in two steps. First, the paper provides an estimate of additional financing that would enable LICs to step up spending response to COVID, including vaccination needs, while rebuilding or keeping external buffers to enhance resilience. The latter is important since, as Advanced Economies (AEs) recover from the pandemic and withdraw support measures, global financial conditions will tighten at a time when many LICs may still be in the clutches of the pandemic. As a second step, the paper then considers the financing needed to allow LICs to accelerate convergence with AEs. Emerging Markets (EMs) averages are used in the model as credible references for estimating both types of needs. The needs to step up spending response to COVID are estimated by using the expected EMs’ average response to the pandemic, while additional needs to accelerate convergence with AEs are based on what would be necessary and plausible for LICs to move closer by 2025 to levels that are observed in EMs. This paper does not provide an estimate of the needs to achieve the Sustainable Development Goals.

The analysis suggests an amount of around \$200bn is needed to step up the spending response to COVID (\$180bn) and rebuild or maintain external buffers (\$20 bn), while an additional \$250 bn in investment spending would accelerate convergence with AEs. Materialization of risks identified in an adverse scenario would add around \$100 bn to the needs. Only a portion of the needs could be financed through borrowing. Depending on the strength of spending multipliers, and the amount of spending deployed, LICs would converge back to their pre-COVID convergence path to advanced economies between 2023 and 2025. Reflecting the inherent uncertainties in modelling assumptions, the paper presents sensitivity analysis on all the assumptions.

Covering These Additional Financing Needs Necessitates a Multi-faceted Response:

Within LICs: An ambitious reform agenda is required to boost competitiveness and potential growth, in particular improving governance and the business climate to facilitate domestic private sector development, enhancing policy frameworks (particularly domestic revenue mobilization and administration), developing domestic financial markets (including increasing financial inclusion), and improving economic management.

From the international community: Supporting LICs through ensuring adequate worldwide vaccine production and universal distribution at affordable prices, and securing that LICs recover fully from the pandemic and accelerate income convergence (including by enhancing climate resilience and building digital infrastructure), will require significant financial support, including grants, from bilateral donors and creditors and international financial institutions.

From private financing: There is scope to step up private (external) financing in many LICs. In addition to domestic reforms, which will raise attractiveness for external investors, there is also an important role for MDBs to catalyze private financing.

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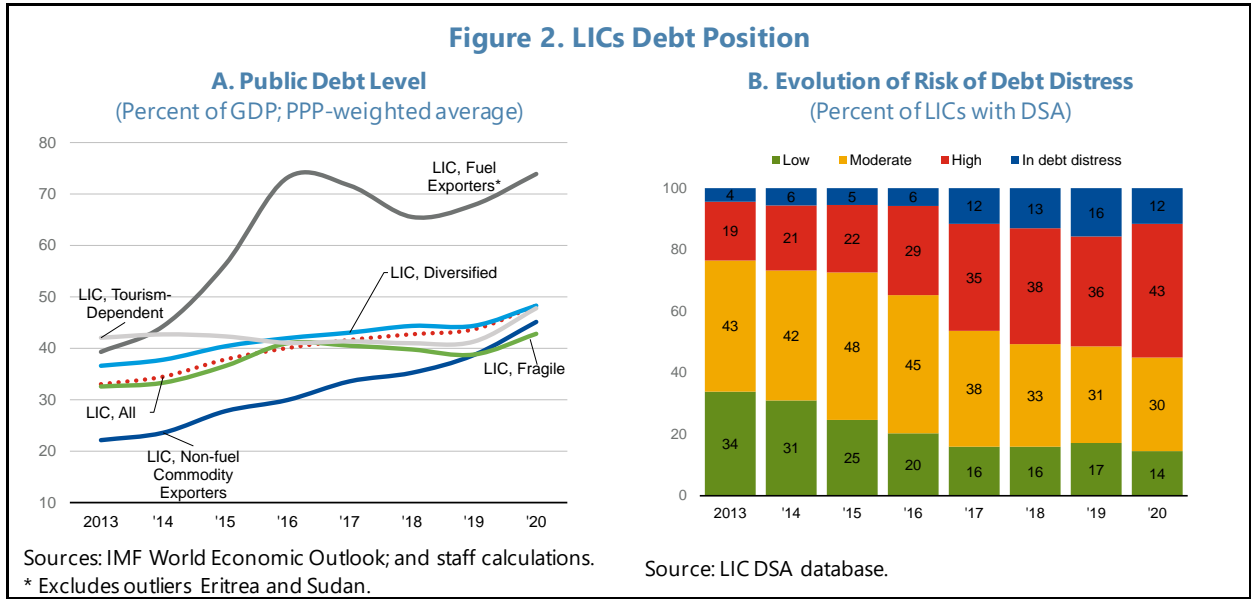
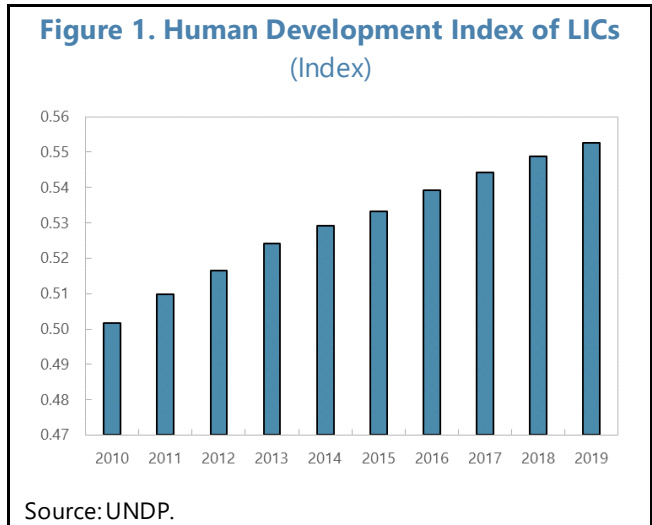
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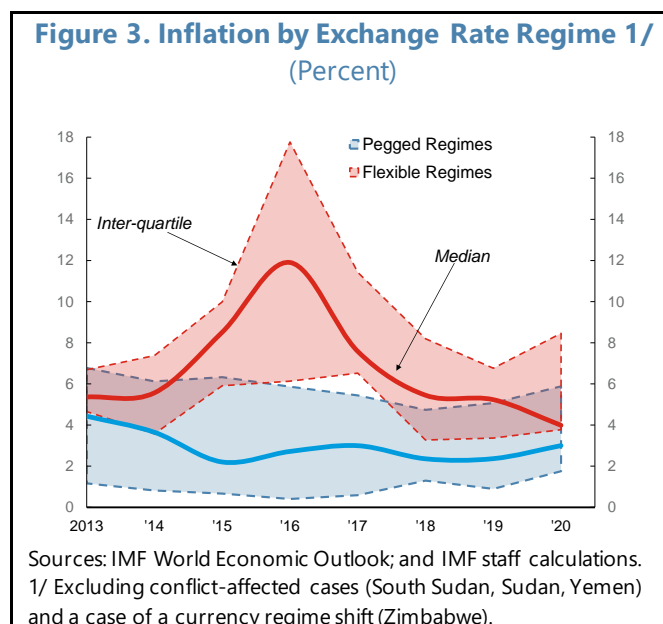
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THE IMPACT OF THE COVID PANDEMIC ON LICs' ECONOMIC PERFORMANCE

The Pandemic Hit LICs Hard, While They had Limited Capacity and Means to Respond

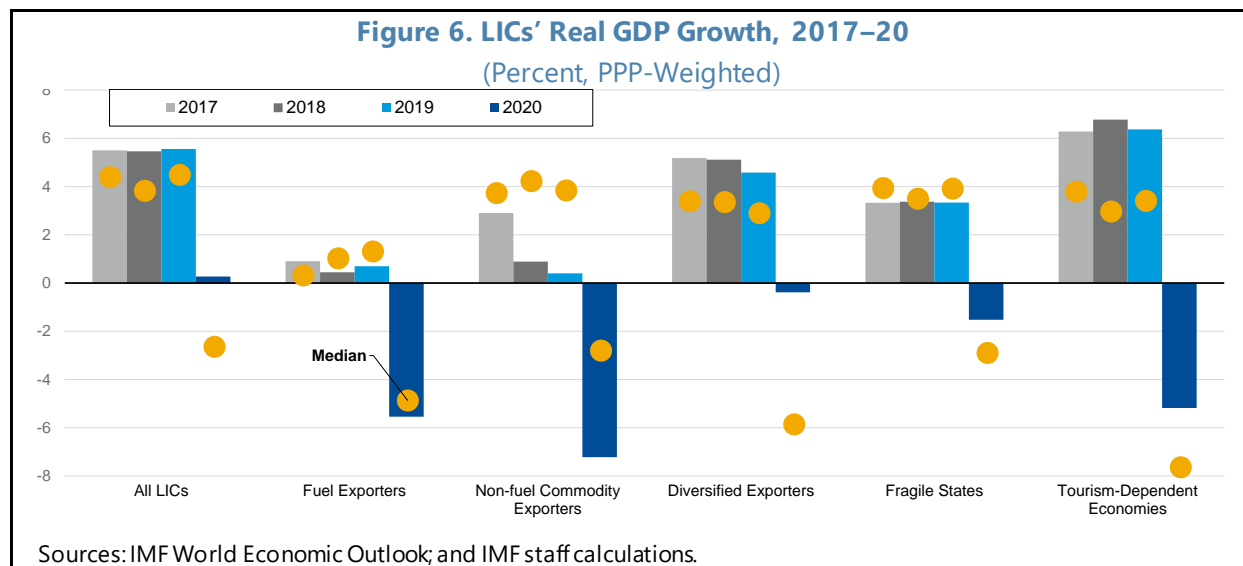
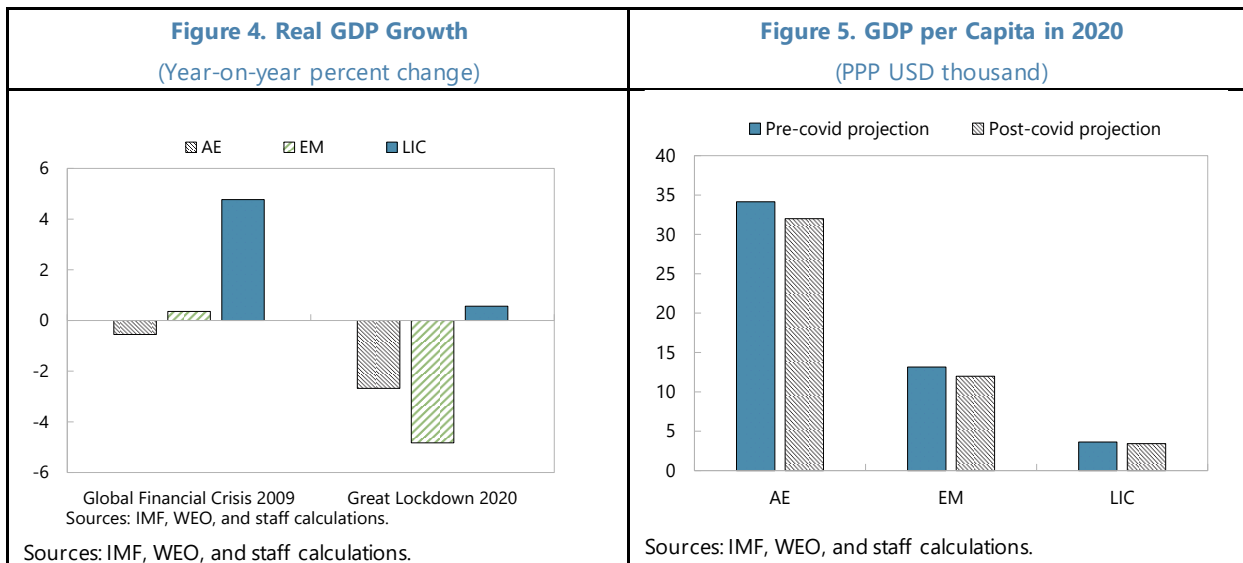
1. LICs had made significant progress in social and economic development. LICs had been on a path of convergence with advanced economies in the decade up to 2019. In line with the rest of the world they were steadily improving social and economic indicators (Figure 1). They had weathered the slowdown of global real GDP growth and were set to maintain a trajectory of sustained growth. Although public debt remained high, and the share of LICs at high risk of debt distress was much higher than at the beginning of the 2010s, the growth of public debt had slowed between 2017 and 2019, primarily driven by fuel exporters (Figure 2). Meanwhile, inflation went down from double digit numbers, helped by low growth in import prices in countries with pegged exchange rate regimes, and fading pass-through effects from prior exchange rate depreciation in countries with flexible exchange rates (Figure 3).





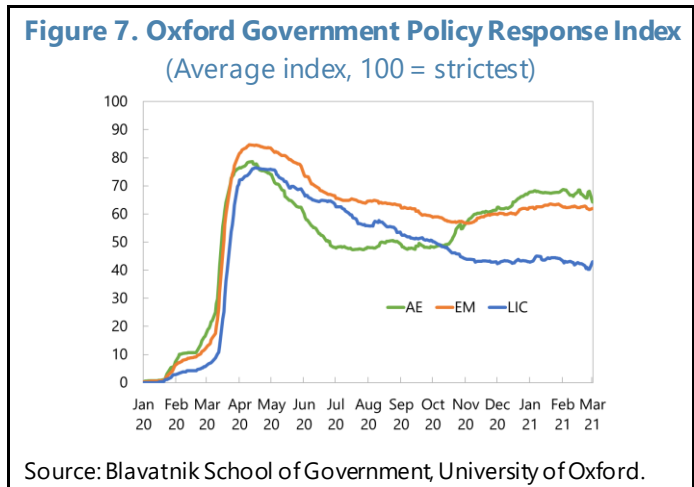
2. However, LICs entered the pandemic with significant challenges. Despite steady progress, LICs suffered structural issues that constrained their ability to achieve high enough growth. There were variations in performance and the 2019 LIDC report (see IMF 2019a) had identified weak, sometimes negative, total factor productivity performance in some LICs, which were lagging their fast-growing peers. The report had highlighted not only the need to invest more, but also to spend more efficiently notably by improving project selection and execution. Boosting private investment remained a challenge in many countries that lacked adequate business environments. Moreover, just as access to education and health services had improved, significant weaknesses remained in terms of the quality and equality of access to these services. In addition, commodity-dependent economies were facing difficulties adapting to lower commodity prices. PRGT-eligible fragile and conflict-affected states were experiencing severe economic distortions, along with low levels of private sector investment and destruction of productive assets.

3. The impact of the pandemic on growth has been greater than that experienced during the Global Financial Crisis (GFC). Countries across all income groups suffered a major economic setback in 2020 (Figure 4). In Sub-Saharan Africa, real GDP did not grow in LICs in 2020, compared to an average annual growth of 6.2 percent over the period 2010-2016 (IMF 2020a). Although the immediate impact of the pandemic on GDP per capita has been smaller in LICs compared with AEs and EMs, LICs started from a much weaker position (Figure 5, Deaton, 2021). There was considerable variation in real GDP growth outcomes across country groups in 2020. With the abrupt stop in international travel and drop in commodity prices, fuel exporters, non-fuel commodity exporters and tourism-dependent economies were the most affected on average, while frontier economies continued to grow (3.5 percent in 2020). However, there was also significant variation in performance within groups, especially among diversified exporters and non-fuel commodity exporters (Figure 6).

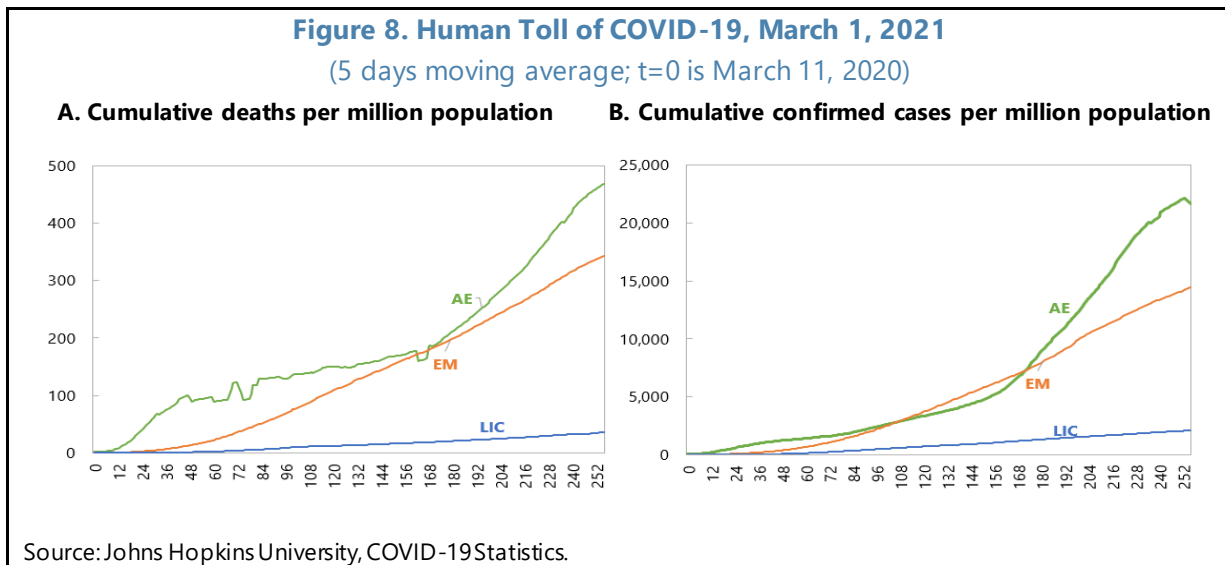


4. The health, social and economic impacts of the pandemic were varied. Lockdowns and containment measures tended to be relatively stringent in EMs and LICs at the beginning of the pandemic and remained more stringent than in AEs until fall 2020 (Figure 7).

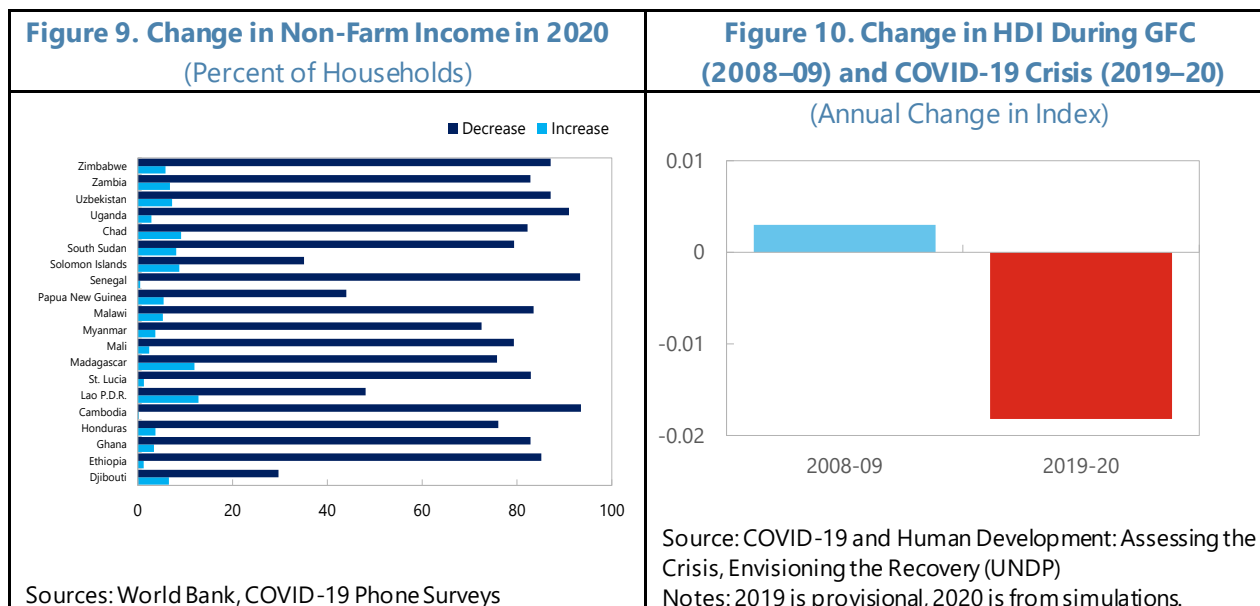
Despite lower numbers of reported COVID cases and deaths (Figure 8), the impact on already constrained health systems has been large and non COVID-related deaths may also have been on the rise as routine health care was disrupted. Lockdowns and containment measures had strong negative impacts on economic activity, at the peak of the lockdown in April, mobility related to retail activity was down by more than 40 percent (Gurara et al., 2020). They triggered a sharp drop in employment, especially in the informal sector (Figure 9).² ILO model estimates suggest LICs lost a total of 39 million full-time equivalent jobs in 2020. The impacts are expected to affect vulnerable groups disproportionately, including younger workers and women. And the UN projects a significant drop in the Human Development Index in 2020 (Figure 10), which is bound to affect LICs disproportionately. Meanwhile, inflationary pressures started to mount in several LICs, notably due to renewed food inflation, depreciation, and supply disruptions partly due to the pandemic as well as several natural disasters.



Lockdowns and containment measures had strong negative impacts on economic activity, at the peak of the lockdown in April, mobility related to retail activity was down by more than 40 percent (Gurara et al., 2020). They triggered a sharp drop in employment, especially in the informal sector (Figure 9).² ILO model estimates suggest LICs lost a total of 39 million full-time equivalent jobs in 2020. The impacts are expected to affect vulnerable groups disproportionately, including younger workers and women. And the UN projects a significant drop in the Human Development Index in 2020 (Figure 10), which is bound to affect LICs disproportionately. Meanwhile, inflationary pressures started to mount in several LICs, notably due to renewed food inflation, depreciation, and supply disruptions partly due to the pandemic as well as several natural disasters.

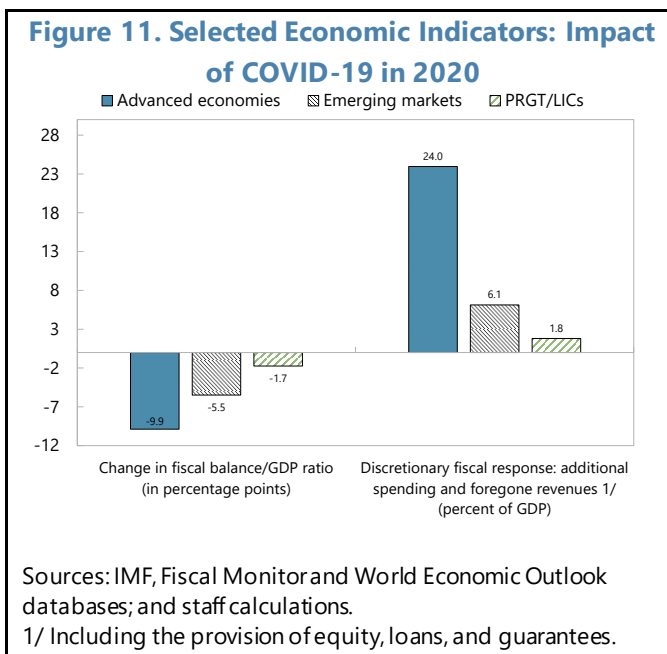


² For example, almost all households surveyed in Kenya said that their income decreased, and about half said that they are “cooking less frequently” and “altered their diet.” Household income was also significantly affected in Uganda, where about half of the households said that they cannot sustain their lifestyle even for 1 day of quarantine (IMF 2020a).



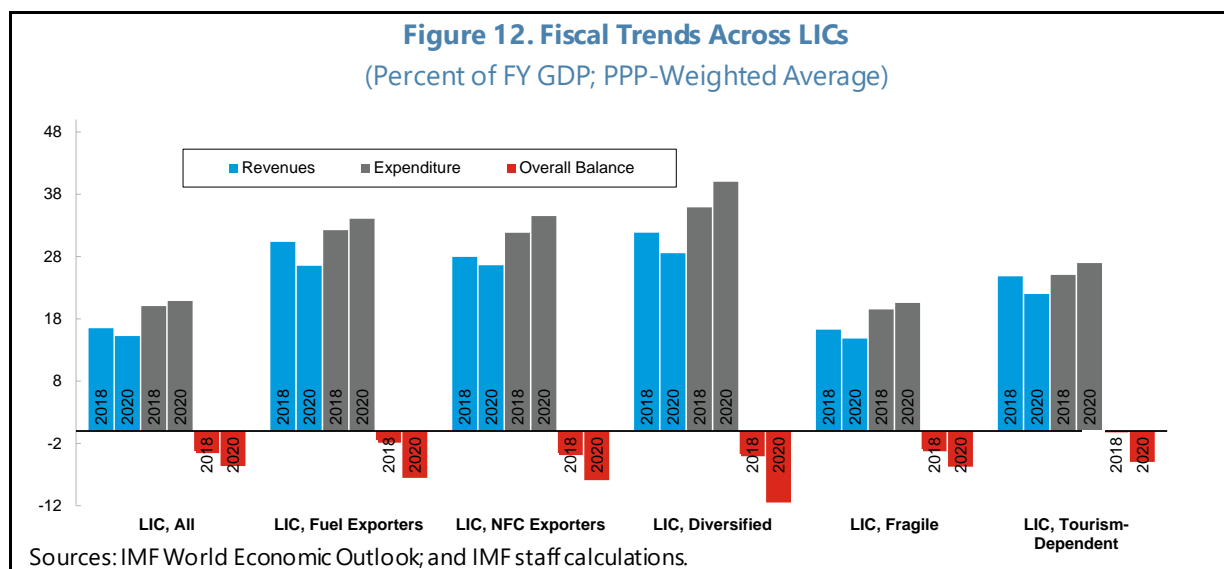
5. A lack of fiscal space and availability of concessional financing severely constrained LICs’ response to the pandemic.

Lockdowns reduced countries’ fiscal space by lowering tax revenue while necessitating increased fiscal spending. Fiscal balances worsened in all LIC sub-groups (Figure 12). Countries across the world launched unprecedented fiscal and monetary policy measures to support their economies, healthcare systems, and the vulnerable sections of their populations. However, limited access to financing and little space for monetary policy support significantly restricted the scope for policy responses in LICs, including discretionary fiscal measures (Figure 11). At the same time, financial regulators in many LICs provided temporary help to their banking systems by easing banks’ nonperforming loan classifications, their provisioning, and capital requirements, while also introducing loan moratoria and credit guarantees.

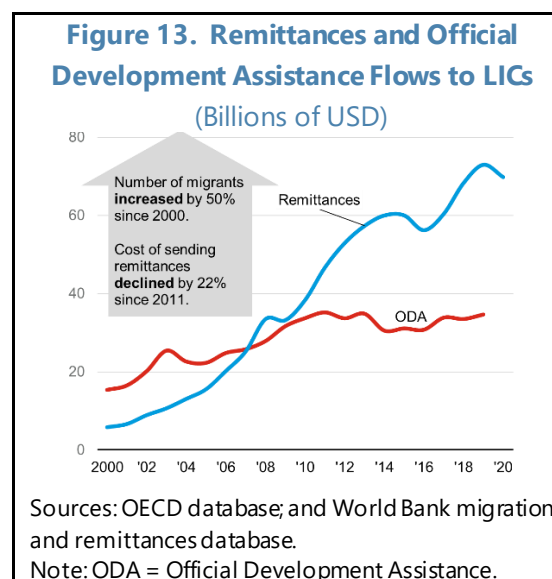


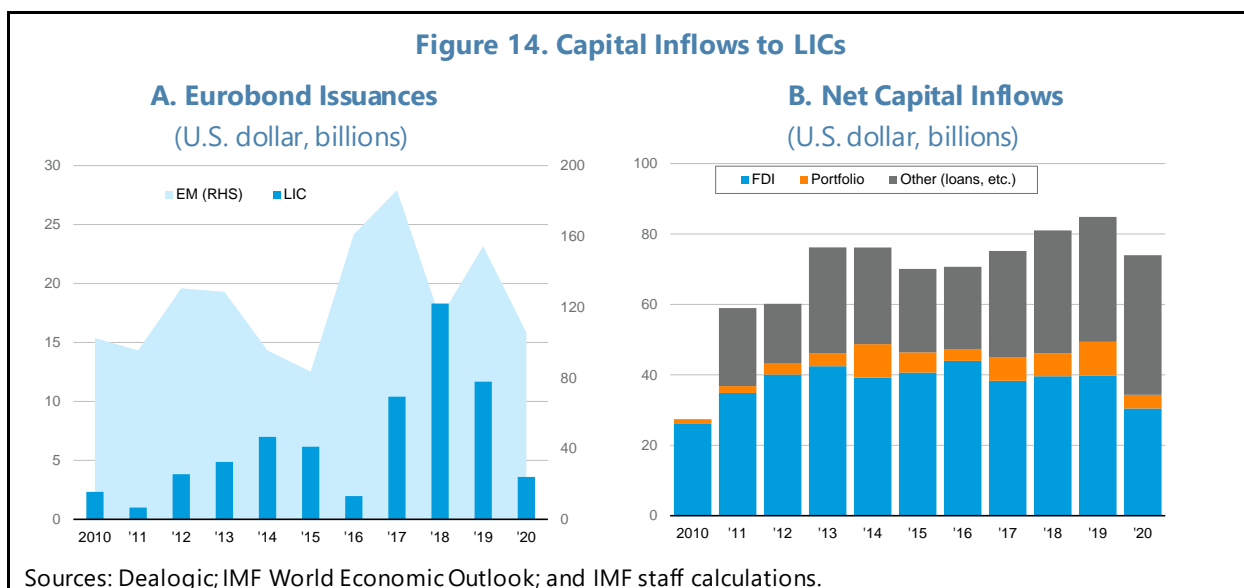
These measures were helpful in mitigating the immediate impact of the crisis and boosting the effectiveness of stimulus efforts. As such measures are lifted, bankruptcies and contingent liabilities are likely to arise. A careful balance between supporting activity over the near term and maintaining financial stability over the medium term is therefore essential. Many governments had to reprioritize

spending—for example, about half of LICs cut capital expenditures as a percent of GDP in 2020. Moreover, the largely informal nature of LICs' economies significantly complicated attempts to reach and compensate those affected by the economic crisis. Meanwhile, debt levels have started to rise significantly in all sub-groups; and over half of LICs are assessed to be at high risk of, or in debt distress in 2020 (Figure 2).



6. Financing remained constrained for LICs with weak fundamentals. Financial market conditions tightened globally in the beginning of the pandemic crisis before easing again relatively rapidly. However, financing conditions remained generally constrained for LICs, and market access will remain limited in the near term, especially for LICs with very elevated debt levels. While concessional financing was significantly stepped up, private financing flows to LICs declined in 2020. Remittances slightly dropped (Figure 13), by about 4 percent, while total capital inflows to LICs dropped by about 13 percent in 2020, reflecting a decrease in all types of financing. Finally, market issuances were negatively affected during 2020 to a greater extent in LICs than in EMs (Figure 14).





International Efforts were Deployed to Relieve Countries at this Time of Exceptional Need

7. The international community stepped up extraordinary financing for LICs and sought to ease the distribution of vaccines. IMF lending to LICs rose to around \$13.4 billion in 2020, in large part through emergency financing instruments, while MDBs collectively mobilized commitments of \$75 billion between April 2020 and mid-2021 to reduce the impact of the pandemic on the world's poorest countries. There have also been important efforts to help ensure vaccine availability in low-income countries. For example, the World Bank has supported multilateral efforts led by the WHO and COVAX and approved \$12 billion for developing countries to finance the purchase and distribution of Covid-19 vaccines, tests, and treatment.

8. The G20-led Debt Service Suspension Initiative (DSSI) and other initiatives were deployed to ease the financing constraints for several LICs.³ The DSSI initiative was introduced in March 2020 until the end of that year. In 2020, 43 countries who requested debt service suspension benefitted from an estimated \$5.7 billion (including the participation of China Development Bank) of debt service being deferred. G20 bilateral official creditors agreed to extend the initial debt service suspension by six months through end-June of 2021, which could provide up to \$7.3 billion of additional debt service suspension from the same group of creditors among 45 DSSI participants as of February 22, 2021. A further extension is under consideration. To apply for the DSSI, a country either needs to be in an IMF financing arrangement, or to have requested financing (including emergency financing) from the IMF since the onset of the pandemic. The IMF has also provided debt service relief through grants to the 29 poorest countries under the Catastrophe Containment and

³ In the DSSI, bilateral official creditors will, during a limited period, suspend debt service payments from the poorest countries (73 low- and lower middle-income countries) that request the suspension. It will free up scarce money that they can instead use to mitigate the human and economic impact of the COVID-19 crisis.

Relief Trust (CCRT).⁴ Looking ahead, IMF staff has called for certain reforms on the international debt architecture comprising sovereign debt contracts and policy frameworks that support orderly debt restructuring (IMF, 2020b).

9. Beyond the DSSI, the Common Framework for Debt Treatments will help countries address sovereign debt challenges. The Common Framework aims to address sovereign debt burdens and ensure broad participation of creditors with fair burden sharing. Importantly, it not only brings in official creditors that were previously not part of the established Paris Club process, but also requires that participating debtor countries seek treatment on comparable or better terms from other creditors, including the private sector, thereby enabling more comprehensive and timely debt resolutions. A debtor country must also have or be seeking a UCT-quality IMF program. In early 2021, Chad, Ethiopia, and Zambia have become the first countries to request a debt treatment under the Common Framework.

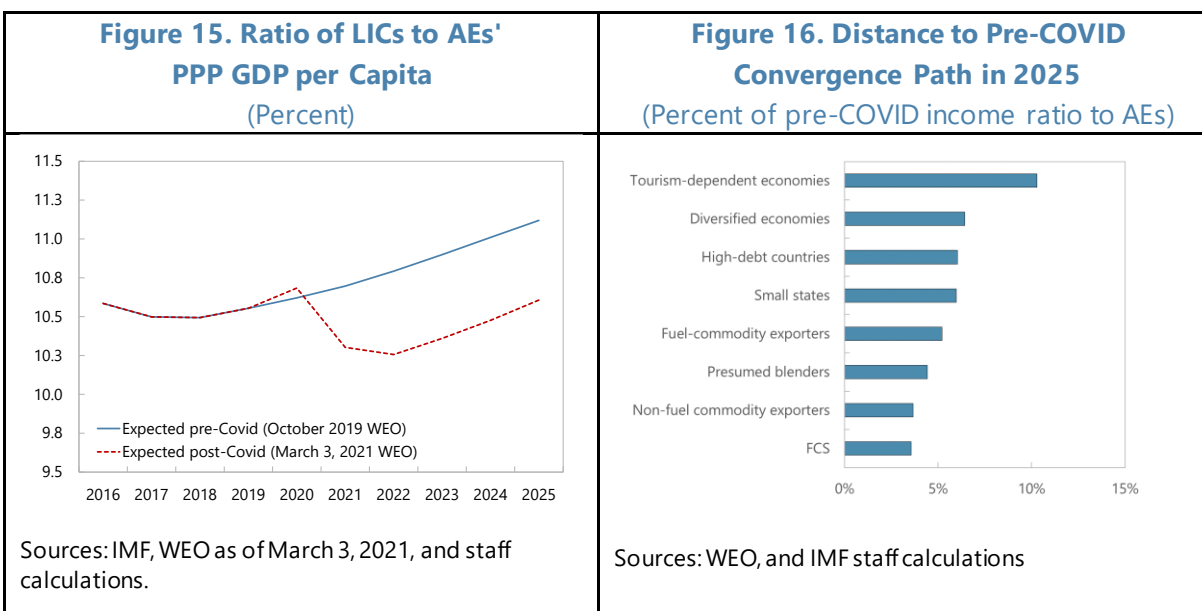
But the Current Response and Planned Spending will not be Enough to Reverse Long-term Scarring on LICs

10. As a result of constrained policy response, the pandemic is expected to leave long-lasting economic scarring effects. Educational achievement could be impaired and human capital depleted as children are kept out of school and many may drop out of formal education entirely. The pandemic could wipe out countries' progress in reducing within country inequality (IMF 2020c). The World Bank projects that some 70–100 million people could fall into extreme poverty, concentrated primarily in countries with pre-existing high incidences of poverty.⁵

11. The medium-term economic outlook is concerning, with income convergence to advanced economies set back significantly. There is great uncertainty over the pace of recovery from the pandemic. The distribution of vaccines has just started and under current conditions would remain insufficiently deployed at least until end-2022. In addition to limited vaccine availability, LICs face limited infrastructure and capacity to stock and distribute the vaccines. Together with the differential economic scarring effect of the pandemic across sectors and countries, these factors increase the likelihood of a great divergence (Gopinath, 2021). By 2025, LICs' PPP GDP per capita is expected to be 10.6 percent of that of AEs, compared to a pre-COVID projection of 11.1 percent (Figure 15). Most countries (57 out of 69 LICs) are not expected to reach their pre-COVID convergence path by 2025, with tourism-dependent economies suffering the largest setbacks (Figure 16).

⁴ Debt relief under the CCRT has so far been approved to cover debt service to the IMF falling due between April 2020 and April 2021. The total debt relief for these first two tranches amounts to almost US\$500 million.

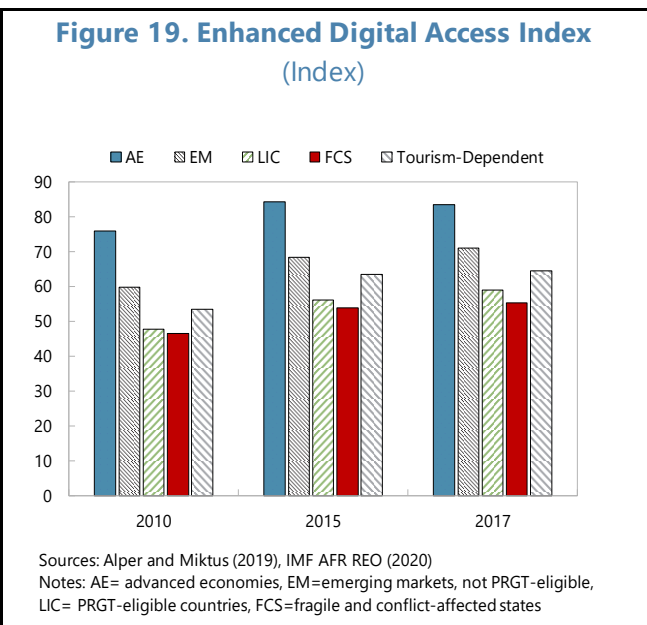
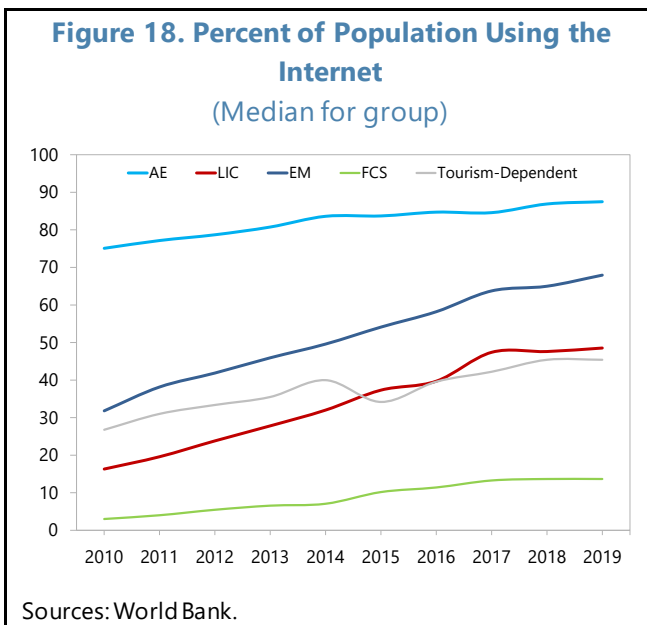
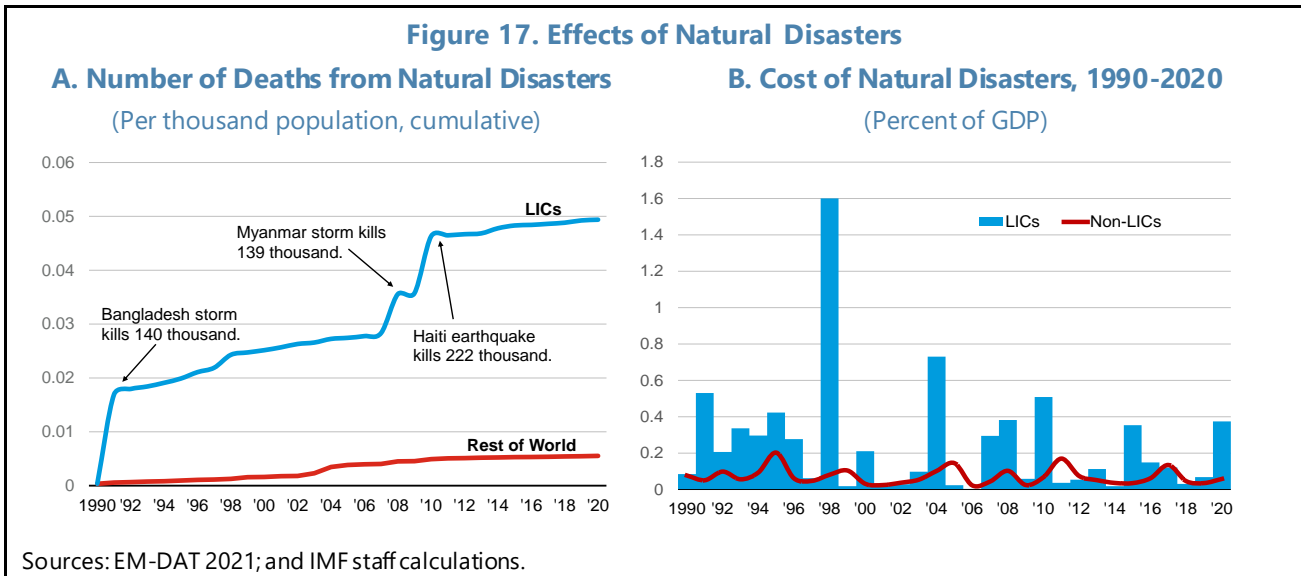
⁵ See Castaneda Aguilar et. al. (2020).



At the Same Time Pre-existing Challenges have been Compounded by the Pandemic

12. Amidst heightened challenges in the immediate post-COVID period, LICs will have to redouble efforts to overcome the fallout of the crisis and return to a desirable development path. The pandemic has highlighted LICs' vulnerabilities while worsening the pre-existing challenges in reaching their development goals and bridging the development gap. There is a recognition that significant efforts will need to be deployed by LICs themselves and the international community to address these challenges. An important priority remains to ensure that health care systems are adequately resourced everywhere to eradicate the pandemic globally. This means securing adequate funding for vaccine purchases and distribution, testing, therapies, personal protective equipment, and investment in health care facilities. Strong multilateral action is essential to significantly scale up vaccine production capacity and accelerate the rollout everywhere, including by bolstering financing and reallocating excess vaccines from surplus to deficit countries. Insuring vaccine producers against the downside risks of overproduction is an option worth considering boosting production. Spending needs are also expected to rise for safety nets, which will need to be adapted to reduce the negative impact of the pandemic on poverty and limit the associated suboptimal coping behaviors by households, such as withdrawing children from school or selling productive assets.

13. LICs need the space to leverage the global opportunities from digitalization, while also adapting to climate change. The diffusion of digital technologies and knowledge promises to create new opportunities for progress and inclusion through greater resilience and efficiency, more access to global markets, improved public service delivery, increased transparency and accountability, and the creation of new jobs (IMF 2020a, Figures 18 and 19). LICs need to ensure they have the necessary resources and strategies to embrace these opportunities and mitigate the risks. At the same time, many LICs are vulnerable to the negative impacts of climate change and natural disasters and will need to adapt and enhance their resilience (Figure 17).



These Challenges Necessitate an Urgent and Multi-faceted Response

14. This paper seeks to determine LICs’ immediate spending needs to accelerate their GDP per capita convergence towards Advanced Economies and return to the pre-pandemic projected level in the medium term. First, the paper provides an estimate of additional financing that would enable LICs to step up their spending response to COVID, thereby mitigating the immediate impact of the crisis and its scarring effects, and to rebuild or keep external buffers to enhance resilience. Second, the paper considers the spending needed to allow LICs to accelerate convergence with AEs. The paper focuses on the 2021-25 period, identifying needs that should be covered in the short to medium term to advance countries’ development agendas.

15. Achieving this expansion in spending and growth will require three approaches:

Within LICs: An ambitious reform agenda is required to boost competitiveness and potential growth, in particular, improvements will have to occur in governance and business climate to facilitate domestic private sector development, policy frameworks (particularly domestic revenue mobilization and administration), domestic financial markets (including increasing financial inclusion), and economic management (on debt management, for example).

From the international community: Supporting LICs through ensuring adequate worldwide vaccine production and universal distribution at affordable prices, and securing that LICs recover fully from the pandemic and accelerate income convergence (including by enhancing climate resilience and building digital infrastructure) will require significant financial support, including grants, from bilateral creditors and international financial institutions.

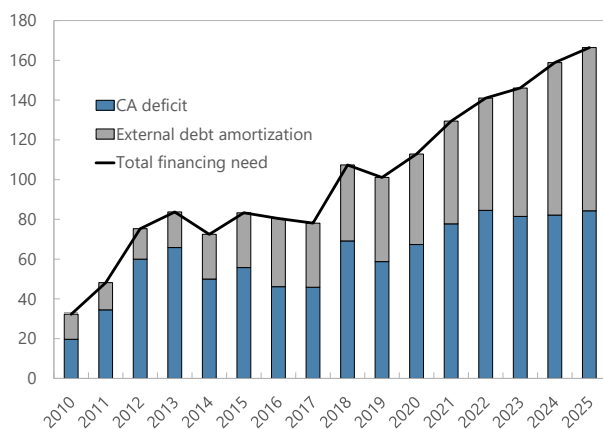
Private financing: There is scope to step up private (external) financing in many LICs. In addition to domestic reforms, which will raise attractiveness for external investors, there is a role for MDBs to catalyze private financing.

16. Before looking at the scope and feasibility of these reforms and financing options in section 3 below, section 2 will provide estimates of additional spending, and corresponding external financing needs that would be commensurate with this ambitious development path.

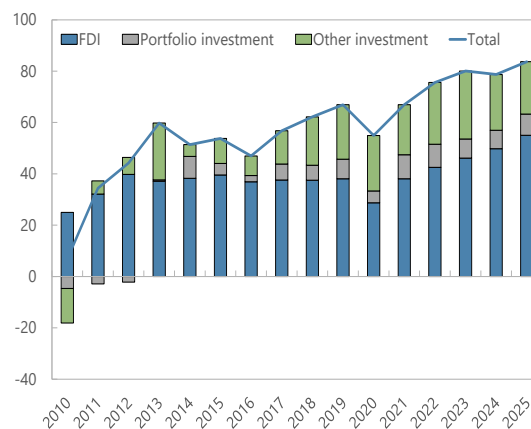
EXTERNAL FINANCING NEEDS

17. Under current IMF projections (WEO),⁶ LICs' gross external financing needs are projected to increase from \$101 bn in 2019 to over \$166 bn in 2025 (Figure 20). External financing needs are expected to increase on the back of higher current account deficits and mainly higher external debt amortization. The average annual amount of external debt service falling due in 2021-25 is more than twice as much as the pre-crisis average (2010-19). While these gross external financing needs are expected to be fully financed over the projection period (Figure 21)—through official lending and private financing—any further needs would have to be balanced by a combination of domestic reforms and stepped up involvement from the international community. Moreover, the pick-up in external financing that is expected in the WEO baseline could be undermined by a slower recovery from the pandemic and/or a tightening of financing conditions.

⁶ This section is based on the latest available WEO projections at the time of the publication of the report (March 3, 2021).

Figure 20. LICs' Gross External Financing Needs
(USD bn)


Source: WEO.

Figure 21. LICs' Net Financial Inflows
(USD bn)


Source: WEO.

18. Limited policy space and access to financing have constrained the LICs' response to COVID. LICs are not projected to increase their spending as a share of GDP in response to COVID over 2021-25, while EMs are expected to deploy on average an additional 1.4 percent of GDP per year over the same period, compared to what they intended before the pandemic. Moreover, due to a limited capacity to boost domestic revenue mobilization and obtain financing, LICs' spending to GDP ratio is expected to average 26.4 percent over 2021-25 (with a median of 24.8 percent), compared to 30.8 percent of GDP for EMs.⁷

19. LICs need to step up spending to cope with the immediate consequences of the crisis, intensify development efforts, and build adequate external buffers. Our estimates of additional "unconstrained" financing needs are rooted in these three imperatives (see Annex II for more details on the methodology). Specifically, we estimate additional financing needs that would enable LICs to:

- Spend more on pandemic containment measures, health systems and vaccine distribution, as well as support measures for households and viable businesses, thereby addressing the pandemic's medium-term scarring effects. This is proxied by matching the EM spending response to COVID in each year over 2021-25, subject to a minimum of the nominal spending level projected pre-COVID;⁸

⁷ These are simple averages excluding outliers.

⁸ The spending response to the pandemic is estimated as the difference between the spending ratio expected as of March 3rd for one particular year, and the spending ratio that was expected for the same year in the October 2019 WEO, i.e., pre-pandemic. The estimated additional COVID spending is subject to a minimum additional spending that would bring LICs' nominal spending back to their pre-COVID projected level between 2021-22. This minimum requirement is introduced because when looking at spending ratios to GDP additional COVID spending may end up being small for some countries that had a large drop in GDP.

- Build external buffers by ensuring all LICs' reserves are at least equal to a minimum reserve threshold, which would help them to improve their credit worthiness and market access, and more broadly secure a more resilient recovery.⁹
- Advance more quickly on development goals through higher investment. This is proxied by increasing the spending to GDP ratio in every year to get closer to the EM average by 2025.

20. LICs' absorption capacity constraints are taken into account when assessing the feasibility of scaling up investment spending. As it may not be feasible or desirable for countries to increase public spending by a large amount in a sustained manner in the upcoming years, increases in investment spending are limited to those observed for LICs in the past. Specifically, spending is capped so that annual and 5-year cumulative changes in spending to GDP ratios (including additional COVID spending and any annual change embedded in the WEO baseline) are not larger than 2.3 and 5.1 percent of GDP, respectively. These two thresholds correspond to the 80th percentile of the annual and 5-year cumulative changes in spending to GDP ratios observed for LICs in the last 20 years.

21. Moreover, considerable downside risks warrant the consideration of a second scenario of slower recovery relative to the WEO baseline. There are sizeable risks that the LICs could suffer from a slower than expected distribution of vaccines,¹⁰ and/or face repeated and significantly stronger COVID waves (linked to new and more contagious virus strains) against a backdrop of still-developing health systems, thereby leading to the reintroduction of containment measures. Such assumptions would lead to a slower recovery and lower private financial inflows relative to the baseline, which is based on WEO macroeconomic projections. Specifically, in an adverse scenario, we introduce shocks to current accounts, fiscal deficits, capital flows, and financial conditions, while assuming the same additional spending needs—for COVID, development efforts, and building external buffers—as in the baseline (see Annex II for details). The additional financing needs arising from the materialization of these macroeconomic risks could possibly be experienced by the private sector (not exclusively by the public sector).

⁹ The minimum reserve threshold is set at the 3-months of imports, which is the most commonly used benchmark for LICs.

¹⁰ Broad vaccine availability in advanced economies and some emerging market economies is expected for the summer of 2021 and in most countries by the second half of 2022. However, implementing and financing the logistics of actually vaccinating the population could prove to be challenging, with expected timelines suffering delays, especially in LICs.

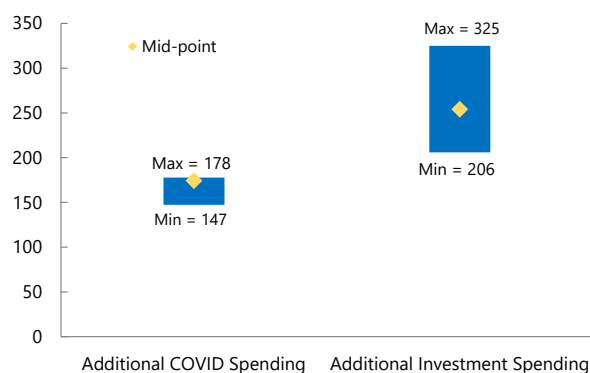
22. An amount of around \$200bn would help LICs better recover from the pandemic and build resilience under the baseline. Additional financing needs over 2021-25 would amount in the baseline scenario to about \$200 bn to rebuild or keep external buffers (about \$20 bn) and step up the spending response to COVID (about \$180 bn), which would include the estimated costs of vaccines and vaccines distribution (see Table 1).¹¹ An additional \$250 bn in investment spending would help LICs accelerate convergence with AEs. This total amount of about \$450 bn would increase to around \$550 bn under the adverse scenario. It should be noted that, reflecting their share in total LICs' GDP, five countries would account for 45 percent of the total additional financing needs.

Table 1. LICs' Additional Financing Needs Under Baseline and Adverse Scenario (USD bn)

	2021	2022	2023	2024	2025	Total
Additional spending needs:						
Covid spending	43	39	30	31	31	174
Reserves accumulation	4	4	4	4	3	18
Investment spending	7	41	60	68	79	254
Financing needs due to shocks:						
Current Account	6	9	10	11	11	48
Government Balance	3	5	5	6	6	25
Debt Amortization	10	8	6	3	0	27
Capital flows (FDI)	8	7	5	2	0	22
Total additional financing needs:						
Baseline	53	84	93	103	114	446
Adverse scenario (i.e., with shocks)	80	112	119	126	131	568

23. Alternative assumptions could be used to estimate additional COVID and investment spending. Several assumptions were tested and lead to a range which is consistent with the central estimate (Figure 22). The EMs' response to COVID and spending to GDP ratio are used as references because they represent amounts that can plausibly be attained by LICs. This does not however mean that EMs have had the most effective response to COVID. To provide an order of magnitude and evaluate the realism of the results, this paper looks at different assumptions or scenarios. It finds that additional COVID related spending would decrease to about \$150 bn if the average COVID response of presumed blenders¹² were used as the reference and increase slightly if high-income EMs were used. Assuming LICs restore their pre-COVID projected nominal spending path would lead to additional COVID spending of around \$160 bn. Changing the absorption capacity assumption, for example by capping annual

Figure 22. Range for Additional COVID and Investment Spending (Billions of U.S. dollars)



Sources: WEO, IMF staff calculations.

¹¹ The difference between vaccines and vaccination is crucial. The amounts needed for vaccination – mostly through national health systems – are significantly larger than those necessary for vaccines.

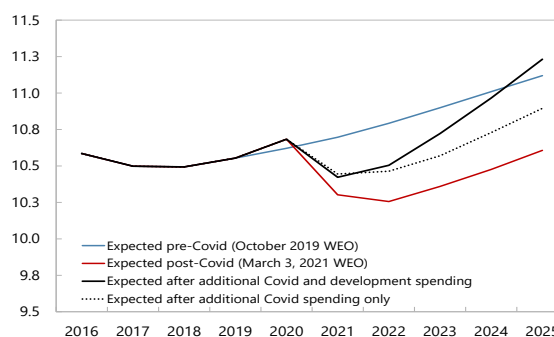
¹² Presumed blenders are PRGT-eligible countries that are required to blend General Resources Account (GRA) and PRGT resources when they seek PRGT support.

and 5-year cumulative increases in spending to GDP ratios at the 75th or 85th percentile of historical LICs' spending ratio increases would lead to additional investment spending needs of around \$210 bn and \$320bn, respectively (compared with \$250 bn when capped at the 80th percentile, which is our mid-point estimate).¹³ Finally, an across-the-board annual increase of 1 percent of GDP (respectively 2 percent of GDP) in spending to GDP ratios (subject to the same 80th percentile caps) would lead to additional investment spending needs of \$235 bn (respectively \$325 bn). In sum, estimates of additional COVID spending needs could range from around \$150 to \$180 bn, while estimates of additional investment spending needs could range from \$210 to \$325 bn.

Convergence Outcome

24. Financing the identified additional spending would resume and accelerate LICs' convergence with advanced economies. This paper uses cumulative spending multipliers simulated by Shen et al. (2018) to infer the effect of additional spending on GDP (see details in Annex II).¹⁴ Additional COVID spending is assumed to consist solely of public consumption, while additional spending beyond the COVID spending is only public investment.¹⁵ The pace of return to convergence depends on the multiplier chosen. With our chosen multiplier the additional spending of \$318 bn (assumed up to 2024) would be almost enough to get back in 2024 (see Figure 23).¹⁶ Meanwhile, with the highest multiplier we considered, additional

Figure 23. Ratio of LICs to AEs' PPP GDP per Capita 1/ (Percent)



Sources: IMF, WEO as of March 3, 2021, and staff calculations. 1/ COVID spending assumed to be public consumption, while additional spending beyond COVID is public investment.

¹³ The 75th percentile cap implies a threshold of 1.7 percent of GDP for annual increases in spending to GDP ratios and of 4.2 percent of GDP for 5-year cumulative increases, while the 85th percentile threshold implies a threshold of 3.0 percent of GDP for annual increases ratios and of 6.5 percent of GDP for 5-year cumulative increases.

¹⁴ Shen, W., S. Yang, and L. Zanna, 2018, "Government Spending Effects in Low-Income Countries," *Journal of Development Economics* 133, 201-19. While the 2018 paper provides only short- and long-term multipliers, the authors have provided staff with the estimated cumulative multipliers at various time horizons. The simulation in the paper accounts for most of the parameter uncertainties and hence the multipliers simulated form a distribution at each time point for each type of spending. As the model simulates cumulative multipliers for normal economic conditions (no recession), which often generates smaller multipliers than those simulated with a deep recession and accommodative monetary policy, this paper uses the 75th percentile multipliers so as to account for the deep recession experienced by LICs during the Covid crisis (as opposed to mean output multipliers).

¹⁵ This implicitly assumes that Covid spending is related more to current spending such as purchases of goods and services and compensation of employees, as opposed to investment spending such as the construction of schools, roads and hospitals, for example. Assuming that the total spending would be broken down into half public consumption and half public investment would barely change the results, with a convergence that would happen in the exact same year (using the same multipliers).

¹⁶ This factors in the effect of the additional Covid and investment spending assumed in this paper, not of any other domestic reforms such as the ones developed in paragraphs 25 and 26.

spending of \$218 bn (assumed up to 2023) would be almost enough to get back to convergence in 2023 (see Annex II for details). Additional COVID spending alone would not be able to bring LICs back to their pre-pandemic convergence path in 2025, but this objective could be reached in conjunction with additional investment spending. The positive impact of additional spending on (potential) growth is expected to spread beyond the projection period. These results are also validated using a dynamic general equilibrium macroeconomic model (see Box 1). Based on this model, the same spending path would almost lead to a convergence of LICs back to their pre-COVID convergence path to AEs in 2025.

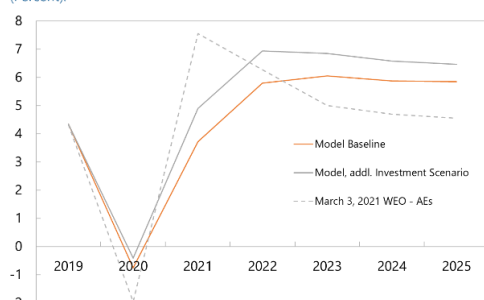
Box 1. Reaching the Pre-COVID Convergence Path Through the Lens of a Dynamic General Equilibrium Macroeconomic Model¹

As an alternative approach to validate the main estimates, a dynamic general equilibrium macroeconomic model is used to explore how additional spending can affect the convergence path of LICs. The DIGNAR-19 framework of Aligishiev, Melina and Zanna (2020)² is used. The model captures salient features of developing economies and allows scenario analysis under several variations of fiscal rules, indebtedness, and shocks.

The model economy represents an average or “representative” LIC. The baseline model scenario mimics the WEO projections for LICs made on March 3, 2021. In the active scenario, the path of additional spending is imposed. The additional spending path consists of \$428 bn spent over 2021-25 in the manner described in the main text. For simplicity, it is assumed that all the additional-spending takes the form of investment in public capital.³

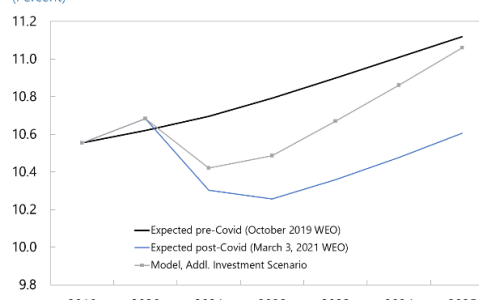
The figures below present the growth implications and convergence implications of the active scenario, under the assumption that AEs grow according to the WEO projections.

PPP GDP per capita Growth Path: LICs vs AEs
 (Percent)



Sources: IMF, WEO, and staff calculations.

Ratio of LICs to AEs' PPP GDP per capita
 (Percent)



Sources: IMF, WEO, and staff calculations.

The simulation of the general equilibrium economy for the average LIC thus suggests that the path of additional spending considered for 2021-25 will lead to an acceleration of growth, compared to the WEO baseline scenario. According to the model, this acceleration is sufficient to bring the average LIC back to a near vicinity of the pre-COVID convergence path by year 2025. This confirms the main estimates presented in the main text within a dynamic model featuring forward-looking and general equilibrium endogenous responses of consumption, saving, investment and fiscal levers to the considered spending path.

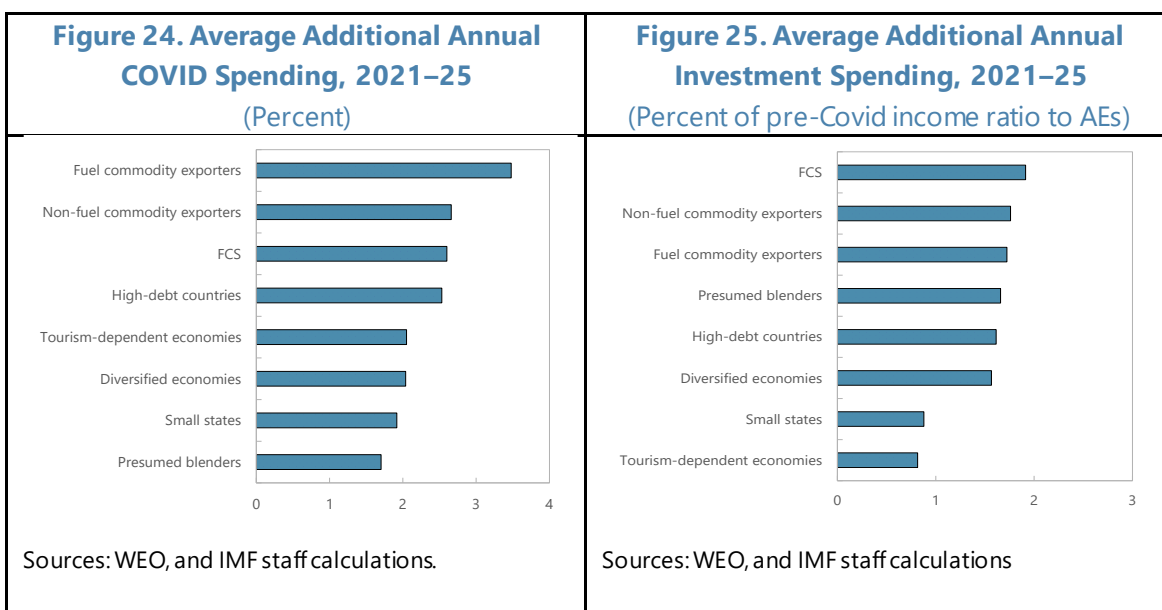
¹ This box was prepared by Alejandro Badel.

² Aligishiev, Z., G. Melina, and L. F. Zanna, “DIGNAR-19 toolkit manual”, IMF, Research Note, Special Series on COVID-19, Dec. 2020.

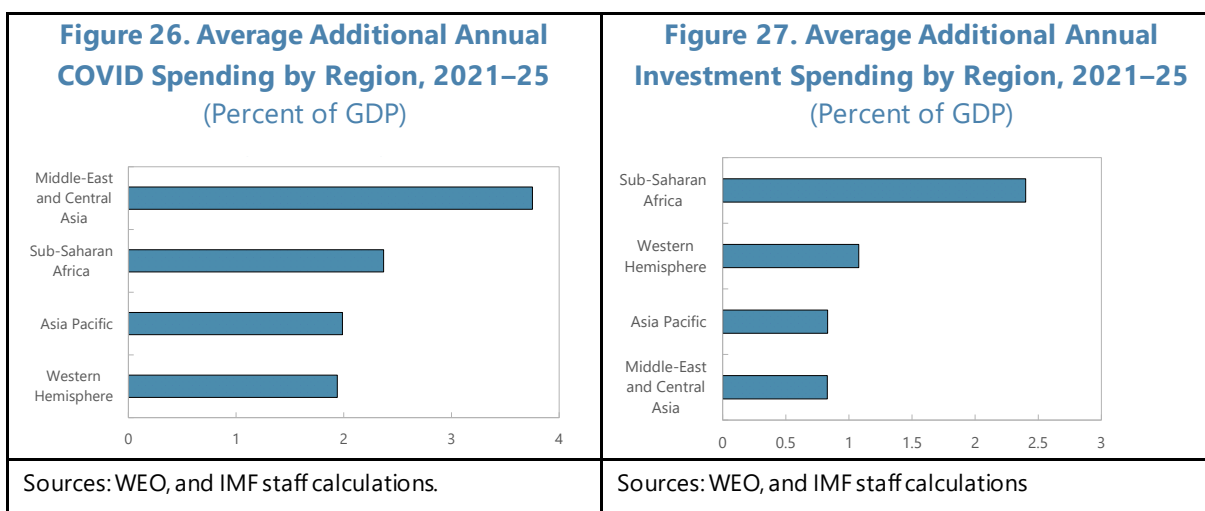
³ Assuming that all additional spending is through consumption would lead to a slightly smaller effect on GDP growth, as the absence of improvement in productivity induced by new infrastructure would be partially offset by the absence of inefficiencies due to capacity constraints.

Spending Needs and Initial Conditions

25. Additional spending needs would be unevenly distributed among LICs, depending on their starting point. On average, LICs would need to spend an additional 2.4 percent of GDP per year to step up their COVID crisis response, and another 1.7 percent of GDP per year to come closer towards meeting their development goals.¹⁷ Spending to GDP ratios would be on average 4.5 percent of GDP higher than under the WEO baseline by 2025. Commodity exporters, PRGT-eligible fragile and conflict-affected states, and high-debt countries would need the highest amount of additional COVID spending to match the EMs’ average response, while presumed blenders would need the least (Figure 24). PRGT-eligible fragile and conflict-affected economies as well as commodity exporters have the highest additional investment spending needs (Figure 25). Looking across regions, Middle East and Central Asian as well as Sub-Saharan African countries would need the highest amount of additional COVID spending (Figure 26), while Sub-Saharan African countries have the highest additional investment spending needs (Figure 27). Finally, about a third of LICs are projected to need additional financing to build up adequate reserves.



¹⁷ This paper does not provide an estimate of the needs to achieve the Sustainable Development Goals. Recent analyses here include the IMF Staff Discussion Note, 2019, “[Fiscal Policy and Development: Human, Social, and Physical Investments for the SDGs](#)”, which suggests additional spending in 2030 of US\$0.5 trillion for low-income developing countries and US\$2.1 trillion for emerging market economies is needed, and [The United Nations Secretary-General’s Roadmap for Financing the 2030 Agenda for Sustainable Development](#) which presented estimates of a financing gap of US\$ 2.5 – 3 trillion per year. The COVID pandemic has increased these estimates, and an updated analysis will be presented in a forthcoming IMF Staff Discussion Note, to be published in April 2021, and in Chapter 2 of the April 2021 Fiscal Monitor. In this context, the OECD’s 2021 [Global Outlook on Financing for Sustainable Development](#) suggests that the SDG financing gap for developing countries could increase by 70 percent. All these studies are for a larger group of countries than presented in this paper, and have different assumptions on constraints, such as absorption capacity.



Financing Envelope

26. Because of debt sustainability constraints, only about a third of spending needs could be financed through new borrowing. As discussed in section 1, LICs have seen their debt levels rising significantly in the years preceding the pandemic, and there is a limit to the amount of sustainable additional financing they can afford. To estimate the share of the financing needs that could be financed through additional borrowing, this paper uses two alternative methods, one using published external DSA ratings, the other based on three capacity to repay indicators (see Annex II). Accounting for debt sustainability *via* the above-mentioned methods suggests that around one third of the total financing needs could be financed through additional borrowing in both scenarios, while the rest would have to be financed through other sources (see Table 2).

	2021	2022	2023	2024	2025	Total
Alternative 1 - based on countries' DSA ratings						
Scenario 1 - Financing needs	53	84	93	103	114	446
Potentially covered by additional borrowing	16	28	32	34	37	148
To be financed by other sources	37	56	61	69	76	299
Scenario 2 - Financing needs	80	112	119	126	131	568
Potentially covered by additional borrowing	24	36	39	41	43	182
To be financed by other sources	57	76	80	85	88	386
Alternative 2 - based on countries' capacity-to-repay indicators						
Scenario 1 - Financing needs	53	84	93	103	114	446
Potentially covered by additional borrowing	29	44	48	43	29	193
To be financed by other sources	24	40	45	60	84	253
Scenario 2 - Financing needs	80	112	119	126	131	568
Potentially covered by additional borrowing	40	51	52	34	22	199
To be financed by other sources	41	61	67	92	108	369

27. In practice, LICs would not fully use this borrowing space. The estimate of the additional borrowing capacity is based on a theoretical assumption that all the borrowing capacity would be

used and that all the borrowing would be done on concessional terms. This is in practice neither realistic nor desirable. Countries would not use entirely their borrowing capacity, and the amount of borrowing would necessarily be lower if countries had recourse to non-concessional financing. That said, any domestic reform implemented beyond those assumed in the current baseline would increase the country's capacity to borrow, including by boosting growth and domestic revenues.¹⁸ Any future debt restructuring would also free up additional resources to cover spending needs.

SUSTAINABLE FINANCING OPTIONS

In light of the analysis above, and in the context of high and rising debt, a mix of financing will have to be considered, including concessional financing from the international financial institutions, grants and loans from bilateral donors, private financing and debt operations, but also domestic reforms within LICs themselves as a key component to foster growth, enhance private investment, raise public revenues, and increase efficiency of spending. This section sets out priorities in each of these areas.

LIC Reforms

28. LICs need to pursue an ambitious structural reform agenda to raise long-term growth.

IMF (2019b) estimated that comprehensive reforms in EMs and LICs might raise output by more than 7 percent over a six-year period on average, accelerating convergence with advanced economies. Private investment enhances labor productivity and wage growth, thereby contributing to lower poverty (IMF 2018a). It can also bring efficiency gains and enhance risk sharing between the public and private sectors. To foster such investment countries will need to implement reforms to improve the business climate. These reforms are long standing and it is crucial that progress be made to enhance competitiveness, remove infrastructure bottlenecks (such as unreliable electricity supply), level the playing field between public and private firms and between firms in the formal and informal sectors, reduce red tape, improve governance, and broaden financial inclusion, including through micro-financial services adapted to SMEs and entrepreneurs. PRGT-eligible fragile and conflict-affected states face the additional challenge of building strong institutions that will have the capacity to implement the needed reforms and economic policies. Countries that are overly dependent on a specific sector (for example commodity exporters, or tourism-dependent economies) will need to consider options for diversification, as their heightened vulnerability to shocks has been illustrated by the pandemic.

29. Domestic reforms will need to play a critical role in raising domestic revenues and increasing the efficiency of spending. Improving the tax structure and revenue administration go hand-in-hand to help mobilize domestic revenues. Revenue administration reforms require strong leadership and a major effort to improve compliance levels. Moreover, many LICs still have too many taxes, increasingly complicated design of core taxes, unclear tax laws and guidance, and large tax

¹⁸ If part of the spending needs was financed through higher revenue collection, it would affect the pace of convergence towards AEs.

expenditures. All of which make administering the tax system complicated and costly. At the same time, there is a need to improve spending efficiency. LICs still suffer from weak public financial and investment management. For example, LICs waste on average more than half of their infrastructure spending due to inefficiencies.¹⁹ In addition, the development of appropriate local financial services, including local currency bond markets and domestic capital markets more broadly, will help raise domestic financing. The IMF and other IFIs can support LICs in achieving their reform targets through technical assistance and programs.

IMF Financing and Policies

30. The IMF increased its access limits in response to funding needs during the pandemic.

First, limits on access to the IMF's emergency financing instruments were increased from 50/100 percent of quota (annual/cumulative) to 100/150 in April 2020 in both the GRA facility (the regular window under the Rapid Financing Instrument, RFI) and the corresponding PRGT facility (the exogenous shocks window of the Rapid Credit Facility, RCF). The new limits applied for six months and were later extended through April 6, 2021. *Second*, In July 2020, the limit on annual access to GRA resources without triggering application of the exceptional access (EA) framework was increased from 145 percent of quota to 245 percent through April 6, 2021; and the annual access limit in the PRGT was raised from 100 to 150 percent of quota (and the annual hard cap from 133 to 183 percent of quota). The higher access limits facilitated a surge in new IMF lending to LICs (through both PRGT and GRA facilities), which rose to around \$13.4 billion in 2020, with 50 LICs receiving financial support, in large part through the emergency financing instruments, to help them handle the initial shock of the pandemic.²⁰ To provide space for concessional lending to LICs currently near the PRGT access limits, the IMF is considering a temporary increase in PRGT access limits to 245 percent for annual and to 435 percent for cumulative access.

31. Additional IMF financing, including its catalytic role, will however be needed in the transition period ahead. Meeting the very sizable LICs' financing needs identified for the period 2021-25 will require substantial international support, including a significant increase in financing from the IMF. As countries seek to contain/exit the pandemic, support economic recovery, and resume interrupted development efforts, IMF financing via multi-year UCT-quality arrangements will be useful to provide assurances on the adequacy of economic policies to private and official creditors, to deliver a macroeconomic underpinning for debt restructuring discussions, and to close what may be large financing gaps. The IMF's catalytic role in mobilizing sources of financing will be important.²¹

¹⁹ <https://blogs.imf.org/2020/09/03/how-strong-infrastructure-governance-can-end-waste-in-public-investment>

²⁰ This compares against 2010-2019, when new IMF lending to LICs (including via GRA facilities) averaged some \$1.3 billion per annum, with net lending effectively zero in the later years. The numbers cited reflect disbursements (PRGT) and purchases (GRA), not loan commitments.

²¹ IMF programs are designed to play a catalytic role in attracting financing in PRGT programs, with outside official support typically larger than IMF support (IMF, 2018b).

32. The IMF is currently reviewing its lending framework to facilitate a significant increase in financing to LICs over the 2021-25 period, beyond the temporary increase in access limits.

Reform options could include: i) changes to key parameters in the PRGT lending framework; and ii) increased lending levels to meet a larger share of financing needs than has been the norm until now, while ensuring that IMF financing remains catalytic. Since an expansion of lending would add to the erosion of the PRGT's self-sustaining capacity, the IMF is exploring options to increase PRGT resources, which are needed to finance the interest subsidies on these loans.²²

33. An increase in overall access levels under the PRGT would help facilitate a transition from emergency lending to multi-year UCT arrangements with appropriate conditionality to aid the recovery from the pandemic.

In these new UCT arrangements, specific attention in terms of program conditionality should be given to growth-enhancing reforms, domestic revenue mobilization, as well as measures to prevent a new cycle of over-indebtedness in the future.

Debt Restructuring Initiatives and the Role of the IMF

34. Stronger action on debt should be part of a comprehensive package in support to LICs.

Overall, existing G20 agreements should be promptly implemented, including the DSSI and the Common Framework for countries that have made a request. Going forward, there is a clear case to extend the DSSI through the end of 2021 while the international community makes efforts to operationalize the Common Framework. The latter can also be applied for countries whose debt is sustainable, but for which a reprofiling would help manage financing needs remaining after drawing on Fund support and donor financing (thereby freeing fiscal space and boosting the recovery). Other innovative options for countries that have sustainable debts but high debt risks and no room for essential public investments could also be envisaged.²³

35. Appropriate conditionality in UCT IMF-supported programs will be important to ensure that debt relief operations help foster higher growth, as well as debt sustainability and improved public financial management.

Strong program conditionality would, typically, include a growth-friendly fiscal adjustment in light of the member's debt challenges, as well as structural reforms that enhance the member's growth potential sustainably.²⁴ Specific attention will have to be put on improving public financial management and debt management, as well as debt data accuracy and transparency.²⁵

²² In general, under the three-pillar strategy to make the PRGT funding model self-sustainable, any policy changes should preserve the self-sustained lending envelope.

²³ In particular, interest in debt swaps (e.g., debt-for-climate swaps), or other forms of debt relief conditioned on spending or policy commitments in debtor countries, has been recently increasing. In addition, state-contingent debt instruments (see [IMF, 2017](#)) could improve debt sustainability prospects in the face of natural disasters.

²⁴ If exchange rates are substantially misaligned and distorted, consideration could be given to accelerating exchange rate/market reforms to facilitate a country's medium-term adjustment.

²⁵ A key element of the new IMF Debt Limits Policy (DLP) is enhanced data disclosure requirement to the IMF, with an explicit expectation that critical debt data disclosure gaps should be addressed upfront in programs, leading to debt

(continued)

SDR Allocation and Use of SDRs to Benefit LICs

36. An SDR allocation served the world well in tackling the global financial crisis in 2009—it could do the same again now. Newly allocated SDRs would help meet a long-term need to supplement existing reserves, boost confidence, and provide liquidity to all IMF members without adding to their debt burden.

37. Staff also encourage the voluntary use of SDRs to benefit LICs. To date, 16 members have already provided or pledged new PRGT loan resources of about SDR 17 billion (about \$24 billion) – of which around two-thirds is from members using existing SDRs. If there is sufficient support for a new general allocation of SDRs, major economies could on-lend part of their SDRs on a voluntarily basis to further scale up concessional loan resources. It would also be possible for these countries to use their SDRs to support the subsidy account of the PRGT by funding an Investment/Deposit Agreement and granting the resulting interest income as subsidy contribution or by accepting a lower interest rate on loan contributions with the differential to the SDR interest rate generating an implicit subsidy for the benefit of the PRGT.

MDBs Financing

38. MDBs have a crucial role to play in supporting LICs as part of a coordinated approach. MDBs can provide a range of support, including grants and concessional loans, technical assistance and capacity building, and stronger and more broadly deployed risk mitigation instruments aimed at mobilizing private capital (e.g. [G20 Eminent Persons Group](#), 2018). The latter enables countries to lower their borrowing costs, while private investors receive a lower return consistent with their lower risks.²⁶ Moreover, political and regulatory risk guarantees from MDBs, such as MIGA's existing risk insurance capabilities, can help countries attract sizable FDI flows as well as equity and debt financing. Besides the MDBs direct financing and de-risking roles, MDBs will also continue to play an important role on capacity development to address critical constraints, including helping build ground-level technical and financial capacity to manage investment pipelines.²⁷

conditionality if deemed critical for program implementation. Relatedly, an important new policy safeguard to protect PRGT resources from the temporary increase in access limits is the added requirement that, for countries at high risk of/in debt distress, program objectives would include the achievement of a concrete reduction in debt vulnerabilities. The IMF has also introduced enhanced safeguards for countries with high combined credit exposure.

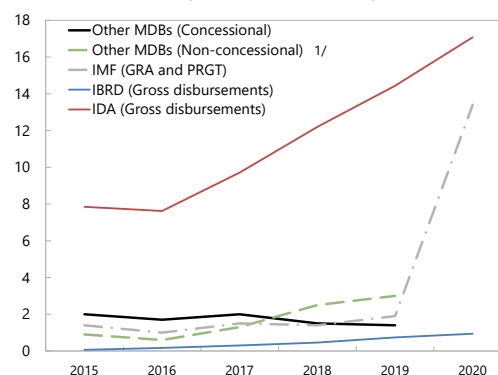
²⁶ Related, IMF research by [Gurara et al \(2018\)](#) has empirically shown that MDBs could crowd in private investment in developing countries through risk mitigation, as spreads are lower for riskier borrowers, and there is a higher willingness to finance high risk projects when MDBs participate.

²⁷ In addition, MDBs could take a more active role in facilitating green/ blue financing from advanced economies to LICs by channeling funds for carbon offsetting natural investments such as rainforests, mangroves, and biodiversity resources (e.g. corals).

39. Further scaling-up of MDBs' concessional financing and instruments to crowd-in private finance will be needed.

MDBs have already deployed extraordinary financing since the beginning of the COVID-19 crisis (Figure 28). According to the first joint report of financing the Sustainable Development Goals (2020), MDBs, together with the IMF, have collectively mobilized a global response package of \$230 billion commitment between April 2020 and mid-2021 to reduce the impact of the pandemic, of which \$75 billion will have been directed to the world's poorest countries in 2020. The World Bank (2020a) IDA arm is making available an overall financing capacity of over [\\$50 billion](#) of resources for the 15-month period from April 2020 through to June 2021 on grant and highly concessional terms for addressing the health, economic, and social shocks that countries are facing during the pandemic. This comprises US\$17.2 billion in FY20 Q4 (at the last quarter of IDA18) and IDA19's frontloading to US\$35 billion in FY21 (or almost 43 percent) of IDA19's [\\$82 billion](#) resources in financing for the 74 IDA countries (World Bank, 2020b).²⁸ Ongoing discussion of advancing IDA20 replenishment (from FY24-26 to FY23-25) to frontload FY23 resources to FY22, so that substantial financing increases in FY22 at the World Bank and other MDBs could lead to a significant increase in MDBs financing. The African Development Bank (AfDB, 2020) has set up a [\\$10 billion](#) COVID-19 Rapid Response Facility to provide flexible support to both sovereign and non-sovereign operations, while the Asian Development Bank and others have also increased financing.

Figure 28. MDBs' Financing to LICs
(in USD billions)



Sources: IMF FIN, WB - WDI

1/ The latest available data point for other MDBs is 2019.

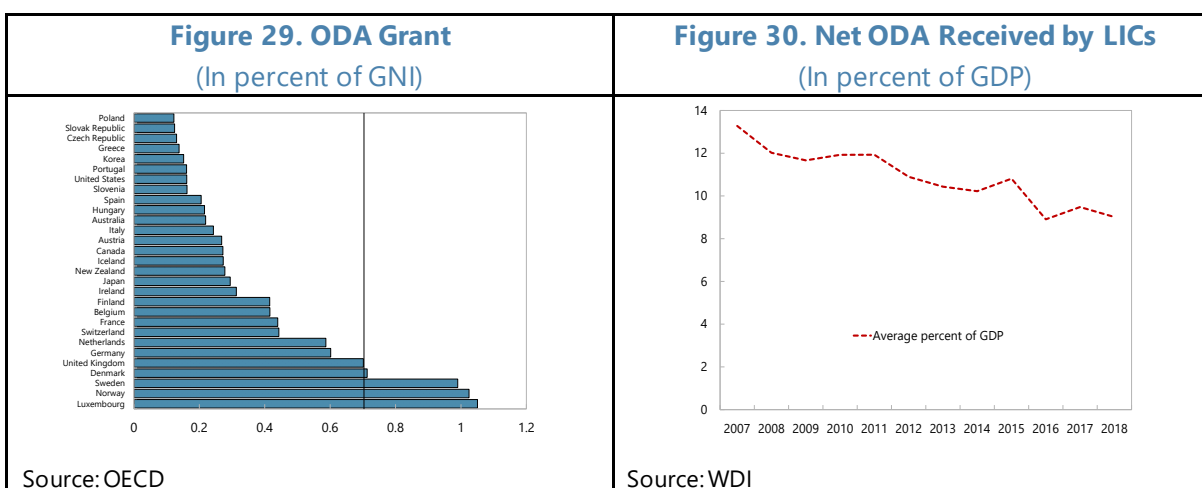
Grants and Concessional Bilateral Loans

40. Many LICs are already at high levels of debt, and grants and concessional bilateral loans will be necessary. Grants will have in particular an important role to play in the COVID-19 vaccine procurement and distribution for the poorest LICs. They will also be necessary to fill the needs of those LICs with unsustainable debt and contribute to the implementation of the Common Framework and IMF programs. Beyond grants, meeting the needs of LICs will also necessitate the mobilization of concessional bilateral loans.

41. While grants and concessional loans will be undoubtedly limited by fiscal constraints in donor countries, there would be scope to increase official development assistance (ODA) which remains far below the 0.7 percent of GNI ODA target. Fiscal deficits in donor countries

²⁸ Moreover, [\\$12 billion](#) of World Bank (2020c) funding, half of which will be financed under IDA, has been made available to help developing countries finance the purchase and distribution of COVID-19 vaccines. Related, the IFC is also investing in vaccine manufacturers through its \$4 billion Global Health Platform. Finally, MIGA (World Bank, 2020d) has launched a [\\$6.5 billion](#) facility to support private sector investors and lenders in tackling the pandemic via credit enhancements, de-risking solution and supporting trade finance.

have increased to unprecedented levels in 2020, with the pandemic leaving a permanent scarring effect on many donor countries. These developments have put severe constraints on available resources. That said, and according to the latest available OECD ODA data from 2019, even before the pandemic, almost all countries have been significantly and persistently well below the 0.7 percent of GNI ODA target (Figure 29) with an average of 0.38 percent in 2019.²⁹ While ODA flows to LIC have been increasing in recent years in absolute terms (Figure 13), ODA as a share of LIC GDP has steadily declined over time (Figure 30), with available 2019 data for a large subset of LIC confirming the downward trend. Besides, despite progress in recent years, several major emerging market economies could further increase significantly their support to LICs, including through multilateral schemes. Overall, strong continuing efforts by donor countries, whether in the form of budget support or specific project support, will be necessary to help LICs meet their needs after the pandemic.



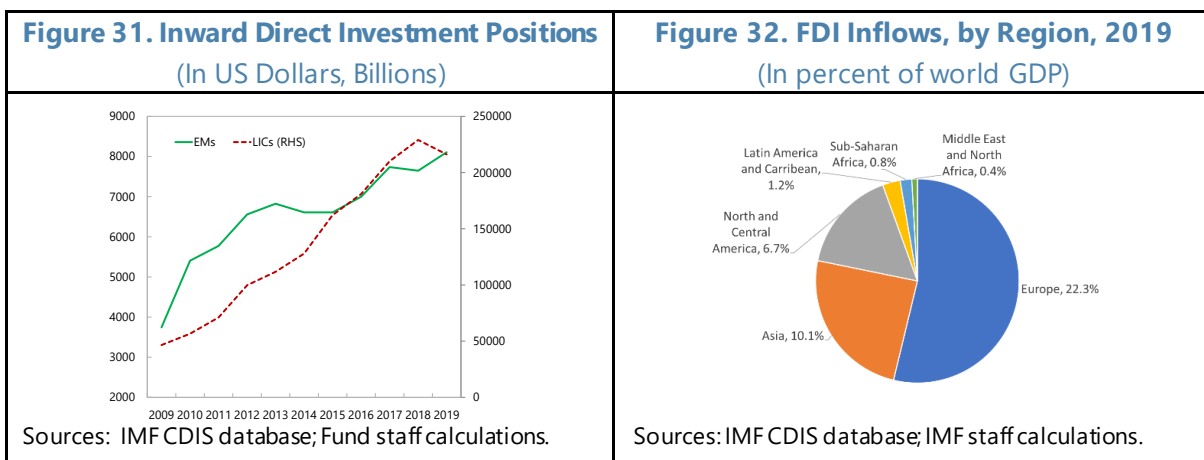
Private Sector Financing and Investment

42. Private sector financing will be an important part of any solution to cover financing needs, not all private sector financing being necessarily debt-increasing. Unlike publicly financed development projects which are financed directly by the government and impacting its balance sheet, private sector financial investors could lend to or take equity stakes in development projects that are not controlled by the government. In such a case, private finance flows will in general create private sector liabilities instead of increasing liabilities of the general government. Many financing schemes lie between pure public or pure private financing in the field of infrastructure financing. For instance, public-private partnerships (PPPs) and other forms of financial

²⁹ At the same time, ODA flows have slightly increased from 2018 to 2019. Overall, ODA from members of the OECD's Development Assistance Committee (DAC) amounted to around \$153 billion in 2019, a rise of 1.4 percent in real terms from 2018, while bilateral ODA to Africa and least-developed countries rose by 1.3 percent and 2.6 percent respectively.

collaborations between government and private entities could help finance large development projects, though they have to be prudently designed to avoid contingent liabilities and other risks.³⁰ There is also a role for stimulating the domestic private sector and its financing through domestic financial services (including SMEs and self-entrepreneurs). Developing domestic debt markets and new instruments, as well as addressing regulatory bottlenecks also play important roles to boost private financing (see Box 2).

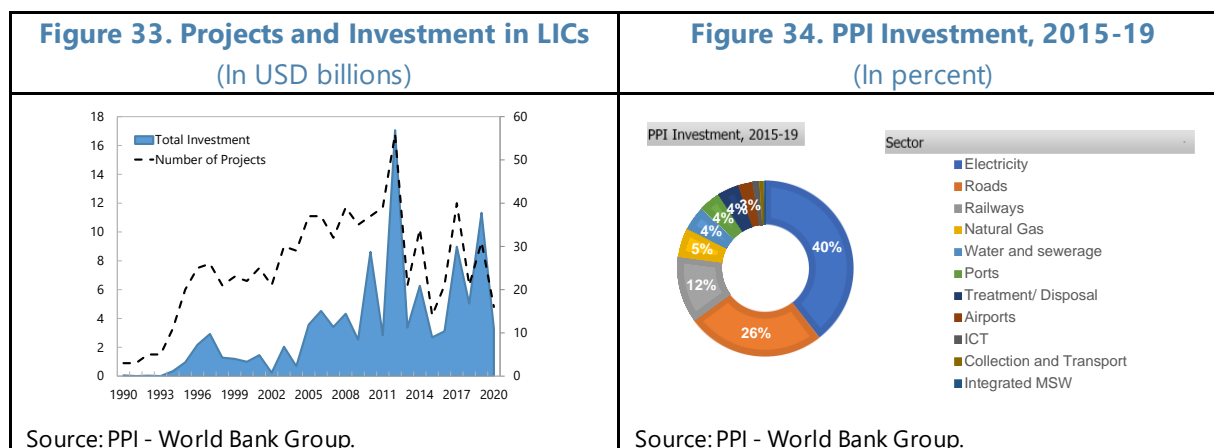
43. There is significant scope for increasing the contribution of private sector financing in LICs, particularly from international investors in infrastructure financing. Capital inflows to LICs have increased over the years. FDI inflows, as a major subset of private capital inflows, often represent longer-term investment to developing countries and can foster economic growth through positive productivity spillovers (Borensztein et al. (1998), Javorcik (2004)). FDI inflows to LICs increased steadily in the last decade, while there is still a large room to grow when compared with EMs (Figure 31). Moreover, compared with other regions, SSA and MENA received relatively low FDI inflows (0.8 percent and 0.4 percent of global GDP in 2019, respectively, Figure 32).³¹ Private participation in infrastructure (PPI) investments in LICs have increased since the 1990s (Figure 33), with international entities playing an important role in infrastructure investments across LICs and EMs (Figure 34). Many challenges remain in mobilizing private capital, as it remains limited in LICs, with bottlenecks to increase involvement of institutional investors.³²



³⁰ One of the most discussed proposals is the blending model, which uses concessional financing from donors and public commercial finance to mobilize private commercial finance (IMF, 2021). The use of the blending model is concentrated in EMs and remains limited in LICs. Expanding greatly the scale of the blending model will be challenging.

³¹ The largest FDI investors for LICs have come from emerging and advanced countries such as China, UK, Singapore, UAE, France, and US.

³² For instance, many SDG-related investments are not targeted by institutional investors due to the risk-return profile and illiquidity of infrastructure assets. The relative scarcity of financial products tailored to infrastructure finance in LICs, as well as prudential regulations that institutional investors need to follow, limit the ability of institutional investors to invest in LICs (IMF 2021).



44. Several priorities have been identified to help promote private sector financing for growth and sustainable development. These priorities include recognizing the primacy of country ownership; creating an investment-friendly environment; expanding and standardizing credit enhancement; prioritizing commercial financing; blending concessional resources and private capital; and reviewing incentives for crowding-in private sector resources.³³ In addition, macroeconomic stability, a conducive business environment and availability of financing have been all deemed critical for enhancing private and infrastructure investment in Africa in order to foster inclusive growth.³⁴ Moreover, governance and PFM measures to increase transparency, efficiency and accountability of the public sector could help unlock significant foreign and domestic private sector investment, with measures to broaden financial inclusion also seen as important (as discussed).³⁵ A crucial role is also played by public development banks financing small businesses, addressing their needs across the lifecycle from start-up phase to IPOs, with investment readiness measures, as well as policy dialogue and capacity building.³⁶

45. Risk mitigation has been repeatedly noted as one of the key reform areas to help mobilize private sector financing in LICs. De-risking instruments can help mobilize investors with a low-risk appetite by mitigating real or perceived risks associated with private investment. As noted above, bilateral and multilateral institutions could support de-risking initiatives by taking some of the risks to their own balance sheets or blending their assistance with private sector investment. Past de-risking initiatives have been found to have a positive impact on raising funds and creating jobs, and MDBs have a crucial role to play to facilitate and support private investments through their risk-

³³ [G20 Hamburg Principles on Crowding-in Private Sector Finance](#) (2017)

³⁴ [G20 Compact with Africa \(CWA\) Initiative](#) was launched by the G20, AfDB, IMF and the World Bank in 2017. The three areas of focus are the Macroeconomic Framework, the Business Framework, and the Financing Framework.

³⁵ [Mobilizing with Africa II Event](#) (in October 2020) by the IMF and the World Bank highlighted the role of private sector investments to help African countries achieve a sustained and inclusive recovery after the pandemic.

³⁶ [Finance in Common Summit](#) (in November 2020). The Summit also elaborated on sound corporate governance and business models and discussed adequate finance products and structures adapted to the rapidly growing and creative young entrepreneurs of Africa.

mitigation tools, as investment risk is often very high in LICs, with private funding unlikely to scale up on its own.

46. Potential risks and challenges associated with private financing, especially PPPs, need to be recognized in a timely and comprehensive way. PPPs may be used to bypass budgetary constraints and expose the government budget to risks. Importantly, PPPs can impose significant fiscal costs through the direct and contingent liabilities assumed by the government, including under the contractual terms. PPPs may reduce the government's ability to absorb fiscal shocks. It is important to identify, quantify, and disclose PPP risks and expected costs. Reforming budget and government accounting frameworks to capture all fiscal costs would be helpful. Strengthening laws and regulations associated with PPPs is desirable, since a clear legal and regulatory framework is important to achieving a sustainable solution (see [IMF \(2018c\)](#), [IMF and WB \(2019\)](#)).

Box 2. The Role of Domestic Debt Markets, Regulatory Framework and New Instruments

Policy actions could further increase the availability of private financing by facilitating the development of domestic debt markets (see [IMF, 2009](#); [IMF, 2019c](#); [IMF GFSR 2020](#); [G20 Compact with Africa, 2017](#)).

First, fostering a stable macroeconomic and financial environment is a prerequisite in developing deep domestic debt markets. Supportive fiscal policies should crowd in private investment, while monetary policy ought to decrease the volatility of short-term interest rates and stabilize inflation expectations. Sound macroeconomic policies will boost the confidence of market players. Second, the countries need to broaden and diversify the base of domestic institutional investors (pension funds, life insurance, etc.) and foreign investors. In this regard, establishing a clear legal and regulatory framework will enable LICs to expand the investor base. Introducing over-the-counter trading and strengthening custody and settlement mechanisms will also reduce market participants' risk of purchasing debt securities. Furthermore, a stronger commitment to trading and data transparency will reduce bond spreads. However, it should be noted that domestic market development is often costly in the short run but generate benefits only over the medium to long term. At the initial stages of market development, investors may require additional premia to compensate for various risks, thus, making domestic bond issuance more expensive than concessional financing. In the context of the pandemic (or its legacy), some countries may not be ready to undertake this initiative.

Besides domestic debt markets, LICs can broaden private finance by relaxing unnecessary restrictions and creating new instruments for institutional investors (see [G20 Compact with Africa 2017](#); [G20 2018](#), [IMF, 2021](#)). Domestic banks in LICs would need to enhance their expertise in risk assessment. In particular, developing expertise in structuring and leveraging different contractual forms is vital to decreasing the project's probability of default. One of the ways to tackle this challenge is by knowledge transfers from foreign banks to national development banks. However, LIC governments need to fix the current regulatory and institutional framework, which hampers the further development of project finance. In addition, LICs can mobilize additional private financing by focusing on new unlisted instruments such as projects bonds, infrastructure funds, and strategic investment funds. Furthermore, they need to review current financial sector regulations to remove barriers to investment in certain asset classes. For example, reforming pension funds to allow investment in infrastructure projects and private equity is a case in point. The G-20 Compact with Africa recommended African policymakers to revise their regulatory frameworks, so that it will support long-term investment, provide early access to retirement funds, and improve pension funds' solvency. On the other hand, advanced economies also need to review their pension funds' existing restrictions on the amount and composition of foreign investment. As such, international organizations and African countries could engage with G-20 countries to loosen up unnecessary limits to investment, while maintaining sound solvency standards.

Annex I. PRGT-Eligible LICs' Country Groups

PRGT-Eligible Low-Income Countries			
All (69)	Fuel commodity exporters (5)	Presumed blenders (18)*	Small states (19)
Afghanistan	Chad	Bangladesh	Bhutan
Bangladesh	Congo, Republic of	Benin	Cabo Verde
Benin	South Sudan	Bhutan	Comoros
Bhutan	Timor-Leste	Cambodia	Djibouti
Burkina Faso	Yemen	Comoros	Dominica
Burundi		Côte d'Ivoire	Grenada
Cabo Verde	Non-fuel commodity exporters (27)	Honduras	Kiribati
Cambodia	Afghanistan	Kyrgyz Republic	Maldives
Cameroon	Benin	Lesotho	Marshall Islands
Central African Republic	Burkina Faso	Moldova	Micronesia
Chad	Burundi	Myanmar	Samoa
Comoros	Central African Republic	Nicaragua	São Tomé and Príncipe
Congo, Dem. Rep. of the	Congo, Dem. Rep. of the	Senegal	Solomon Islands
Congo, Republic of	Côte d'Ivoire	Solomon Islands	St. Lucia
Côte d'Ivoire	Eritrea	Tanzania	St. Vincent and the Grenadines
Djibouti	Guinea	Timor-Leste	Timor-Leste
Dominica	Guinea-Bissau	Uzbekistan	Tonga
Eritrea	Kiribati	Vanuatu	Tuvalu
Ethiopia	Lao P.D.R.		Vanuatu
Gambia, The	Liberia	Fragile and Conflict-Affected States (36)	
Ghana	Malawi	Afghanistan	Tourism-dependent economies (10)
Grenada	Mali	Burundi	Cabo Verde
Guinea	Marshall Islands	Central African Republic	Cambodia
Guinea-Bissau	Mauritania	Chad	Dominica
Haiti	Papua New Guinea	Comoros	Grenada
Honduras	Sierra Leone	Congo, Dem. Rep. of the	Maldives
Kenya	Solomon Islands	Congo, Republic of	Samoa
Kiribati	Somalia	Côte d'Ivoire	São Tomé and Príncipe
Kyrgyz Republic	Sudan	Djibouti	St. Lucia
Lao P.D.R.	Tajikistan	Eritrea	St. Vincent and the Grenadines
Lesotho	Tuvalu	Gambia, The	Vanuatu
Liberia	Uzbekistan	Guinea	
Madagascar	Zambia	Guinea-Bissau	
Malawi	Zimbabwe	Haiti	
Maldives		Kiribati	
Mali		Liberia	
Marshall Islands		Madagascar	
Mauritania		Malawi	
Micronesia		Maldives	
Moldova		Mali	
Mozambique		Marshall Islands	
Myanmar		Micronesia	
Nepal		Myanmar	
Nicaragua		Papua New Guinea	
Niger		São Tomé and Príncipe	
Papua New Guinea		Sierra Leone	
Rwanda		Solomon Islands	
Samoa		Somalia	
São Tomé and Príncipe		South Sudan	
Senegal		Sudan	
Sierra Leone		Tajikistan	
Solomon Islands		Timor-Leste	
Somalia		Togo	
South Sudan		Tuvalu	
St. Lucia		Yemen	
St. Vincent and the Grenadines		Zimbabwe	
Sudan			
Tajikistan			
Tanzania			
Timor-Leste			
Togo			
Tonga			
Tuvalu			
Uganda			
Uzbekistan			
Vanuatu			
Yemen			
Zambia			
Zimbabwe			

*Eight additional countries would be presumed blenders if they were assessed as having prospective market access

Annex II. Methodological Note—LICs' Financing Needs Estimations

The LICs' financing needs exercise estimates additional financing needs for COVID spending, investment spending, and building up external buffers. Ultimately, the additional spending assumed in this exercise should be sufficient to accelerate LICs' income convergence relative to AEs. This methodological note explains in detail the definition of convergence and the estimation of each source of additional unconstrained financing needs in a scenario based on the WEO baseline and in an adverse scenario embedding lower private financing and other adverse shocks. It also describes the capping of these financing needs to account for absorption capacity, and the amount of additional financing that could come from additional borrowing, accounting for debt sustainability considerations.

A. Motivation: Accelerating LICs' Income Convergence

PPP GDP per capita is calculated for AEs and LICs by dividing the sum of country-level PPP GDP by the total population in each group. We observe convergence when the difference in PPP GDP per capita between the two groups declines (or when the ratio of LICs' to AEs' GDP per capita increases, see text chart). We calculate the convergence path with pre-COVID (Oct 2019 WEO) and post-COVID (WEO as of March 3, 2021) data.¹ The goal of the exercise is to make sure the identified additional financing is sufficient to accelerate LICs' income convergence. While convergence in 2020 has improved between the two WEO vintages (LICs' PPP GDP per capita increased to 10.7 percent of that of AEs, up from 10.6 percent pre-COVID), the convergence path has worsened significantly over the medium term (see Figure 15 in the main text). By 2025, LICs' PPP GDP per capita is expected to be 10.6 percent of that of AEs, compared to the pre-COVID projection that it would have reached 11.1 percent at that juncture. Most countries in the sample (57 out of 69 LICs) are not expected to reach their pre-COVID convergence path by 2025 in the WEO baseline. LICs' PPP GDP per capita would have to increase by about PPP USD 215 by 2025, so that the pre-COVID distance to AEs is restored. Aggregated over all LICs, this means an increase in LICs' total PPP GDP of USD 296 bn by 2025 relative to the WEO baseline.

B. Additional Financing Needs

Additional COVID Spending

We define COVID spending under the WEO baseline as the difference in general government spending to GDP ratios between the WEO (as of March 3, 2021) and the Oct. 2019 WEO vintages

¹ There are several data revisions between the Oct. 2019 and March 3, 2021 WEO vintages that make historical values differ. The most notable revisions are GDP rebasing, a different methodology for calculating the PPP exchange rate series, and different population estimates. To ensure comparability of historical series in the Oct 2019 vintage, we use PPP GDP series from the March 3, 2021 WEO series until 2019 and then extend the series using the growth rates of the PPP GDP series from the Oct 2019 vintage. Both PPP GDP per capita are calculated based on the latest population estimates.

over 2021-25 (see illustration in Table 2.1).² This assumes that most of the difference between the two WEO vintages is imputable to the country's response to the pandemic (including the need for reprioritization or reallocation of spending) and that the pandemic has a durable impact on the economy. On average, EMs are found to spend an additional 1.4 percent of GDP per year over 2021-2025, compared with 0 percent of GDP for all LICs and -1.7 percent of GDP for LICs which have spent less than the EM average. Out of 69 LICs, 34 countries have reduced their spending to GDP ratio between the two vintages, 11 have increased their spending to GDP ratio but to a lesser extent than EMs, and 24 have increased their spending to GDP ratio by more than EMs. Since looking at spending to GDP ratios penalizes countries with large GDP contractions, we subject the estimated additional COVID spending to a minimum additional spending that would bring LICs' nominal spending back to their pre-COVID projected level until 2022.

	2021	2022	2023	2024	2025
Gvt spending (2019 WEO)					
country A	24.1	23.8	25.6	25.7	25.9
country B	25.3	25.7	27.9	27.8	27.8
Gvt spending (2020 WEO)					
country A	25.5	25.2	26.0	26.0	26.0
country B	28.0	28.1	29.0	28.8	28.8
WEO implied COVID spending					
country A	1.4	1.4	0.4	0.3	0.1
country B	2.7	2.4	1.1	1.0	1.0
EM average	2.5	1.4	1.0	0.9	0.9
Additional spending needed to match EM average response					
country A	1.1	0.0	0.6	0.6	0.8
country B	0.0	0.0	0.0	0.0	0.0
Additional spending needed to restore pre-COVID nominal level of spending					
country A	0.8	0.2			
country B	0.4	0.0			
Additional COVID spending					
country A	1.1	0.2	0.6	0.6	0.8
country B	0.4	0.0	0.0	0.0	0.0

Source:

Each LIC is assumed to match the average EM spending response to COVID in each year between 2021 and 2025. If a LIC country has COVID spending in the baseline that is higher than the EM average, its COVID financing need is assumed to be zero, unless the amount needed to bring the LIC country to its pre-COVID nominal spending level in 2021 and 2022 is higher.

Financing needs from the COVID spending shock amounts to \$174 bn over 2021-25, roughly evenly distributed across the years. On average, countries would have financing needs arising from COVID spending of 2.4 percent of GDP per year. COVID spending is not assumed to be capped by absorption capacity constraints.

² As the 2019 October WEO vintage does not have projections for 2025, we assume COVID spending in 2025 is the same level as in 2024, in percent of GDP.

Assuming that LICs would seek to reach another benchmark, such as the average COVID spending by presumed blenders or high-income EMs, the COVID spending would go from \$174 bn to respectively \$147 bn and \$178 bn.³

Financing Needs to Ensure External Buffers

LICs that do not have adequate reserves are assumed to speed up the accumulation of reserves over 2021-25 to reach the threshold of 3 months of imports by 2025. In 2021, LICs accumulate one-fifth of the gap to reaching 3 months of 2022 imports. In 2022, the reserves accumulated in the previous year are added to those accumulated in the WEO baseline, and LICs further accumulate one-fourth of the remaining gap to the threshold, and so on for each year. In 2025, they close the rest of the gap to the threshold. The underlying idea is that reaching a minimum reserve threshold would enable LICs to build resilience, thereby increasing their ability to accommodate potential future shocks better. If a country's reserves are already above the 3 months of imports threshold, its financing needs for ensuring external buffers are zero. Out of the 69 PRGT-eligible countries, 25 are projected to need additional financing to build up reserves over 2021-2025. LICs would accumulate around \$3.5 bn in reserves per year up to 2025 in order to ensure adequate external buffers, leading to external financing needs of \$18 bn over 2021-25.

Additional Investment Spending

Alternative 1: Gradually increasing LICs' overall spending to GDP ratio to that of EMs by 2025

LICs are assumed to gradually increase their spending to GDP ratios to that of an average EM over 2021-25. On average, LICs' spending to GDP ratio is projected to be 26.4 percent of GDP in 2021-25, against 30.8 percent in EMs.⁴ In order to avoid double-counting, we add the identified additional COVID spending to the baseline before calculating the difference to the EM average in one particular year. In 2021, LICs are assumed to close one-fifth of the gap to reaching the same year EM average. In 2022, the increase in spending in the previous year is included in the financing need and LICs close one-fourth of the remaining gap in 2022, and so on each year. By 2025, the gap is completely closed. If a LIC's spending to GDP ratio is higher than the EM average (once the additional COVID related spending has been added to the baseline), the additional investment financing need is assumed to be zero.

To account for absorption capacity constraints, investment spending is capped so that annual and 5-year cumulative changes in spending to GDP ratios (including additional COVID spending and any annual increases embedded in the WEO baseline) are not larger than 2.3 and 5.1 percent of GDP, respectively. These two thresholds correspond to the 80th percentile of the annual and 5-year cumulative changes in spending to GDP ratios observed for LICs in the last 20 years.

³ Average COVID spending over 2021-25 is 0.9 percent of GDP for presumed blenders and 1.5 percent of GDP for high-income EMs. High-income EMs are defined as EMs which are above the median EM PPP GDP per capita in 2019 (\$15,775).

⁴ These are simple averages which exclude outliers. LICs' 25th percentile, median, and 75th percentile for spending to GDP ratio over 2021-25 are 19, 25, and 31 percent of GDP, respectively.

The idea is to assume an increase in spending that is both ambitious (to reflect the fact that we are increasing investment spending), but also consistent with the spending increases that LICs have been able to implement in the past.

The capped total investment financing needs sums up to \$254 bn over 2021-25, compared to a level of unconstrained investment financing needs of \$543 bn. On average, countries would have financing needs arising from additional investment spending of 1.7 percent of GDP per year. Taking into account additional COVID and investment spending, spending to GDP ratios would be on average 4.5 percent of GDP higher than under the WEO baseline by 2025.

Assuming that LICs would seek to reach another benchmark, such as the average spending level by presumed blenders or high-income EMs, the investment spending (once absorption capacity has been accounted for) would go from \$254 bn to respectively \$206 bn and \$325 bn.⁵

Alternative 2: An across-the-board annual increase in investment spending

An across-the-board annual increase of 1 percent of GDP (respectively 2 percent of GDP) in spending to GDP ratios (subject to the 80th percentile caps) would lead to additional investment spending needs of \$235 bn (respectively \$325 bn), but this would not take into account the heterogeneity across countries. In other words, as opposed to Alternative 1, where each country's additional spending is based on its own distance to the EM average (i.e., the worse-off are leveled up), Alternative 2 assumes that all countries will improve spending by the same amount, irrespective of their starting point.

⁵ Average spending to GDP ratios over 2021-25 is 26.2 percent of GDP for presumed blenders and 32.3 percent of GDP for high-income EMs. High-income EMs are defined as EMs which are above the median EM PPP GDP per capita in 2019 (\$15,775).

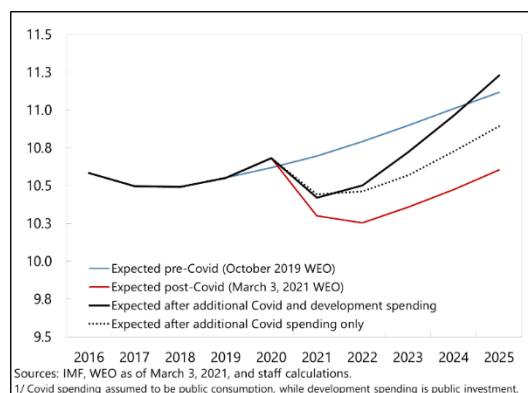
Annex Box 2.1. Is the Assumed Additional COVID and Investment Spending Enough to Accelerate LICs Income Convergence Towards AEs?

In order to calculate whether the additional COVID and investment spending identified in this exercise would be sufficient to restore the pre-COVID convergence path, this paper uses public consumption cumulative spending multipliers and public investment cumulative spending multipliers taken from the literature, and specific to low income countries.¹ In the underlying simulations, authors assume a relatively low public investment efficiency and a relatively high share of import content in public investment spending. Both factors contribute to smaller output multipliers for public investment in low income countries. Also, the model simulates multipliers from normal economic conditions (no recession, no effective lower bound), which typically generates smaller multipliers than those simulated with a deep recession and accommodative monetary policy.

The model simulations account for parameter uncertainties and hence the simulated multipliers form a distribution. To account for the fact that the deep recession experienced by LICs during the COVID crisis is likely to increase multipliers compared to normal times, this paper uses the 75th percentile cumulative multipliers, as opposed to mean output multipliers.

The 75th percentile 5-year cumulative multiplier is 0.43 for government consumption and 0.49 for public investment (as opposed to 0.34 and 0.43 respectively, if mean multipliers are considered, and 0.63 and 0.64 respectively, if 90th percentile multipliers are considered). It is assumed that COVID spending consists solely of public consumption, while the additional spending beyond the COVID spending consists of solely public investment.

Ratio of LICs to AEs' PPP GDP per Capita 1/
(Percent)



¹ Shen, W., S. Yang, and L. Zanna, 2018, "Government Spending Effects in Low-Income Countries," *Journal of Development Economics* 133, 201-19. While the 2018 paper provides only short- and long-term multipliers, the authors have provided staff with the estimated cumulative multipliers at various time horizons, from t to t+4.

Annex Box 2.1. Is the Assumed Additional COVID and Investment Spending Enough to Accelerate LICs Income Convergence Towards AEs? (concluded)

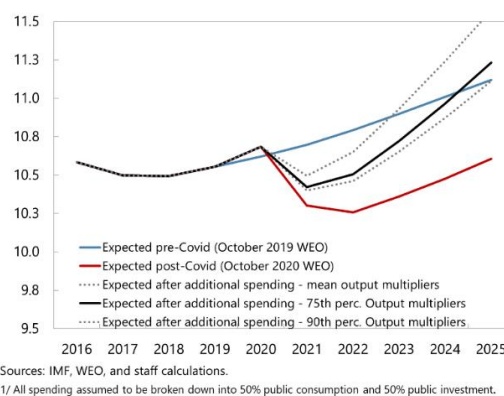
In order to calculate countries' new GDP level paths after the additional spending, the WEO GDP levels are used, and inflated by the cumulative effect of additional COVID and investment spending on GDP in each year, based on the cumulative multipliers cited above, country by country. These "post-spending" national GDP levels (that include the effect on output of the assumed additional spending) are then converted into PPP GDP levels, which are then aggregated to look at the ratio of LICs' PPP GDP per capita over AEs' PPP GDP per capita, after the additional spending has been implemented.

On aggregate, if LICs were to spend an additional \$428 bn (COVID and investment spending), this would lead them to converge back to their pre-COVID convergence path to AEs by 2025 (see text chart). Additional COVID spending alone would not be able to bring LICs back to their pre-pandemic convergence path in 2025, but this objective could be reached in conjunction with additional investment spending.

Considering lower (resp. higher) estimates of cumulative multipliers (the mean cumulative multipliers and the 90th percentile cumulative multipliers, respectively) would lead to a slower (resp. more rapid) convergence towards the pre-covid convergence path.

With mean multipliers, the additional spending of \$428 bn would allow to get back to the pre-COVID convergence path in 2025. With 75th percentile multipliers, the additional spending of \$318 bn (assumed up to 2024) would be almost enough to get back in 2024, while with the 90th percentile multipliers, the additional spending of \$218 bn (assumed up to 2023) would be almost enough to get back in 2023 (i.e., before the end of our time horizon). In other words, if there is a strong case to believe that multipliers are a bit higher in a period of crisis (75th percentile estimates), then the amount of additional spending needed to get back to the pre-covid convergence path by 2025 (not earlier) would be below \$318 bn.

Ratio of LICs to AEs' PPP GDP per Capita, Different Multipliers (Percent)



A Sensitivity Analysis: Additional Financing Needs Arising in an Adverse Scenario

Given the significant risks weighing on the WEO baseline (which underlies our baseline estimates), a second scenario is generated, trying to mimic the downside scenario of the latest WEO (March 3, 2021).⁶ The adverse scenario assumes a slower recovery, lower private financing flows, and lower debt rollover rates than the baseline (see Annex Table 2.2). This scenario could materialize if there

⁶ See page 28, <https://www.imf.org/en/Publications/WEO/Issues/2020/09/30/world-economic-outlook-october-2020>.

were further COVID waves and complications from new virus variants, and/or if the distribution of vaccines turned out to be slower than expected, for example.

However, since there is no direct link between GDP growth rates and external financing needs in our model, the WEO scenario cannot be mirrored exactly. Instead, the type of shocks (on current accounts, fiscal deficits, capital flows and financial conditions), as well as the shape of the growth deviation to the baseline over time, are replicated. The WEO downside scenario includes a GDP growth deviation from the baseline which peaks in 2021 for EMs, the shocks embedded in the alternative baseline will therefore have the same time varying pattern, under the assumption that financial conditions gradually return to baseline after 2022.

While the adverse scenario assumes macroeconomic shocks relative to our baseline (which relies on the WEO projections), it assumes the same COVID-spending response, investment needs and reserves accumulation shocks as our baseline.

	Adverse scenario				
	2021	2022	2023	2024	2025
Current account balance (if improvement in WEO baseline, share of annual improvement compared to WEO projections in USD) 1/	0.80	0.85	0.90	0.95	1.00
General government fiscal balance excl. resource revenues, assumed to be partially financed externally (if improvement in WEO baseline, share of annual improvement compared to WEO projections in USD) 2/ 3/	0.80	0.85	0.90	0.95	1.00
Rollover rate on projected external debt amortization due	0.80	0.85	0.90	0.95	1.00
Net FDI liability inflows (if net inflows, share of net inflows compared to WEO projections) 4/	0.80	0.85	0.90	0.95	1.00

1/ If deterioration in WEO baseline, opposite shock is applied (deterioration assumed to be more important than in the WEO baseline).
 2/ External financing is 100% for non-blender LICs, 75% for presumed and potential blenders.
 3/ If deterioration in WEO baseline, opposite shock is applied (deterioration assumed to be more important than in the WEO baseline).
 4/ Decline in net FDI liability inflows, ½ of which is assumed to be offset by an FDI-related import decline (net decline shown here). If net outflows, opposite shock applied (i.e. more outflows than in the WEO baseline).

Under the adverse scenario, assumptions are the following (see Annex Table 2.2):

- **Growth recovery is less rapid than in the WEO.** This translates into a deterioration of both current account and fiscal deficit compared to the baseline, because of lower domestic and global growth. More specifically, only 80% of the recovery in these variables materializes compared to what is assumed in the WEO baseline in 2021, while 120% of the deteriorations assumed in the baseline materialize in 2021. Moreover, it is assumed that for non-blender LICs, the entire additional fiscal gap has to be externally financed, while presumed and blender LICs would finance 25% of it domestically.
- **Financial conditions are tighter than in the WEO baseline.** This translates into net FDI flows that are only 80% of the net FDI flows assumed in the WEO baseline for 2021, when net flows

are positive. Opposite shock is applied in case of net FDI outflows, i.e. net outflows are assumed to equal 120% of the net outflows assumed in the baseline for 2021, and to lower external debt amortization rollover rates (around 90%), to reflect the acute difficulty to refinance maturing debt.

These assumptions result in additional financing needs of \$122 bn that could potentially add to the above-mentioned financing needs in a situation where macroeconomic risks to the WEO baseline would materialize. Overall, the analysis therefore suggests that additional external financing needs over 2021-25 to step up LICs' spending response to COVID while maintaining external buffers would range around \$200-300 bn (depending on the materialization of shocks to the baseline) and could increase to \$450-550 bn in a scenario of increased investment spending to accelerate convergence (see Table 1 in the main text).

C. LICs' Additional Financing Needs Possibly Covered By Additional Borrowing

This paper determines the share of the additional financing needs that can be financed by additional borrowing, including the Fund's share, and assumes that the remainder is financed by other sources (such as grants or revenue increase), while any debt restructuring could possibly open up room for additional borrowing.

Alternative 1: Method based on countries' external DSAs.

The first method is based on the countries' external debt ratings from their latest external Debt Sustainability Analysis (DSA), as of December 31, 2020. For the purpose of this exercise, it is assumed that countries in high risk of external debt distress or in external debt distress would not be able to borrow to cover their financing needs, that countries in a moderate risk of external debt distress would be able to cover one third of their financing needs through additional borrowing, and that countries in low risk of external debt distress could cover two thirds of their needs through additional borrowing.⁷ While this method takes advantage of the latest full debt sustainability analysis and allows to assume that high vulnerability countries cannot exacerbate the latter through additional borrowing, it is also based on a picture of vulnerabilities as they are in early 2021, and assumes that the same constant share of the financing needs will be covered by additional borrowing all the way through 2025, whatever the impact of the additional spending on debt vulnerabilities over that period.

⁷ Based on historical data of debt ratios and capacity to repay indicators (Alternative 2), the share of the financing needs financed through borrowing is found to be 26% for moderate risk countries and 72% for low risk countries. These shares were used to support the rule of thumb of one third and two thirds chosen for Alternative 1. In addition, it should be noted that the share of Fund financing alone has been historically around 30 percent.

Alternative 2: Method based on countries' historical debt ratios and capacity to repay indicators.

To address some caveats of Alternative 1, this method takes advantage of available data to derive the total amount of additional borrowing that LICs can afford without endangering their capacity to repay or debt sustainability. Various capacity to repay indicators are used to proxy debt sustainability, namely debt to GDP, multilateral debt to total debt, and total external debt to reserves. Additional borrowing is limited to the amount that ensures that none of the capacity to repay thresholds are breached over time.⁸ Each variable's threshold is computed as the 75th percentile of this variable whenever countries were under an IMF program, from 1999 to 2019 (when data are available).⁹ In particular, countries are assumed not to be able to borrow if their debt ratio increases above 73.2%, if their ratio of external debt over reserves increases above 705.6%, and if their ratio of multilateral debt over total public debt increase above 56.5% during the projection period, once the effect of the additional spending on these ratios is accounted for. The use of the 75th percentile serves as a signal that creditors are ready to take higher risks in the aggregate than before. The share of the total additional financing needs that cannot be financed *via* additional borrowing without endangering debt sustainability is assumed to be financed by other sources (such as grants or higher revenue collection). Under these assumptions, the two most constraining indicators are the debt to GDP ratio and the ratio of multilateral debt over total debt (constraining 37% and 48% of the time respectively, while the third indicator is constraining only around 14% of the time), i.e., most countries would hit the debt over GDP threshold or the multilateral debt over total debt threshold before they hit the threshold on external debt over reserves. This alternative allows the calculation of a borrowing headroom that evolves over time, and takes into account the impact on the debt ratio of the additional spending assumed.

All in all, accounting for debt sustainability *via* these methods suggest that around one third of the total financing needs (as described in the above section) could be financed through additional borrowing in both scenarios, while the rest would have to be financed through other sources (see Table 2 in the main text).

⁸ This exercise does not integrate the impact of spending on GDP when computing the projected debt ratios and assessing whether the thresholds are breached. This can be seen as conservative, as higher output would lead to lower debt ratios and therefore more headroom for borrowing.

⁹ This period is chosen so as not to integrate the pre-HIPC period where some LICs had unsustainable debt levels.

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