

SIERRA LEONE 2021 ECONOMIC UPDATE



Welfare and Poverty
Effects of the
COVID-19 Pandemic



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ACRONYMS

BLS	Bank of Sierra Leone
CAD	Current Account Deficit
CFD	Case Fatality Rate
DSA	Debt Sustainability Analysis
ECOWAS	Economic Community of West African States
EMDEs	Emerging Markets and Developing Economies
FDI	Foreign Direct Investment
Forex	Foreign Exchange
GDP	Gross Domestic Product
ICT	Information and Communications Technology
IFIs	International Financial Institutions
MDAs	Ministries, Departments, and Agencies
MPR	Monetary Policy Rate
NaCOVERC	National COVID-19 Emergency Response Center
NASSIT	National Social Security Insurance Trust
NBO	Net Operating Balance
NDA	Net Domestic Assets
NFA	Net Foreign Assets
NPLs	Nonperforming Loans
PFM	Public Financial Management
pp	Percentage Point
PPG	Public and Publicly Guaranteed

PV	Present Value
QAERP	Quick Action Economic Response Program
SSA	Sub-Saharan Africa
TSA	Treasury Single Account
TFP	Total Factor Productivity
WAEMU	West African Economic and Monetary Union

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EXECUTIVE SUMMARY

Part I: Recent Developments, Prospects, and Policies

After a historic contraction in 2020, the global economy is set to rebound this year, but recoveries are diverging by country. The global economy is projected to grow 6 percent in 2021, stronger than had previously been expected, reflecting fiscal support in advanced economies, especially the US, and faster rollout of vaccines than anticipated. However, amid COVID-related uncertainty, recoveries are varying within as well as between countries. Growth is projected to vary substantially depending on the policy space available, and how much a country relies on tourism and commodity exports. While advanced economies as a group are now projected to grow by 5.1 percent in 2021, growth in Sub-Saharan Africa (SSA) will rebound by only 3.4 percent.

Despite uncertainty about the path of the pandemic, the global outlook will continue to improve gradually. For 2022, at 4.4 percent global growth is projected to be stronger than previously forecast. The upgrade in global growth for next year reflects the improved outlook in advanced economies, particularly the United States. Global growth is expected to moderate gradually over the medium term, averaging 3.4 percent for 2023–26. Emerging markets and developing economies (EMDEs) are projected to average faster growth, followed by countries in the West African Economic and Monetary Union (WAEMU) and SSA. The slowing of global growth can be attributed to pre-pandemic structural impediments to growth, such as aging populations in advanced economies and low capital accumulation and minimal productivity growth in developing countries. The global outlook is dimmed by COVID-related uncertainty, especially the rollout of vaccines and the policy space available to support recovery.

With a push from domestic demand, Sierra Leone's economy is projected to recover from the COVID-19 contraction but grow more slowly than before COVID-19. Real GDP is expected to rebound by 3.0 percent in 2021, an upward revision of 0.8 percentage point (pp) relative of the 2020 Spring forecast. This growth upgrade reflects the easing of COVID-related restrictions and the government fiscal response to the pandemic. With external demand subdued, aggregate growth primarily reflects stronger domestic demand. This year, growth will be driven by domestic demand, with private consumption and investment contributing the most. On the supply side, there are substantial cross-sectoral differences despite aggregate production growth. For 2021, real GDP at factor cost is also projected to grow by 3 percent, mainly as a result of faster agricultural production. However, Sierra Leone's potential growth is being slowed by weakening total factor productivity (TFP).

Despite rebounding growth, the losses in output and income per capita have been substantial. With gaps of –4 percent of potential output in 2020 and 1.7 percent in 2021, Sierra Leone's economy is operating far below capacity. The cumulative output lost in 2020–21 amounts to Le 1.5 trillion (US\$146.5 million). The output lost is approximated by the difference in real GDP at factor cost between World Bank projections between the 2019 Annual Meetings and the 2021 Spring Meetings. The economic contraction was particularly large in services, with containment measures severely affecting contact-intensive activities. Relative to the pre-COVID forecast, the average annual loss in per capita GDP for 2020–21 is projected at 5.3 percent. While real GDP is expected to return to its pre-pandemic level this year, real GDP per capita will only do so in 2023.

After the severe deterioration of last year, Sierra Leone's fiscal position is projected to improve this year on the back of expenditure rationalization and higher tax collections. The fiscal balance is projected to improve by 1.2 pp to –4.2 percent of GDP in 2021. Interest payments are set to increase by 0.5 pp, reaching 4.5 percent of GDP in 2021. As a result, the primary balance is expected to be –8.8 percent of GDP this year. The ratio

of the primary balance to GDP is 0.7 pp this year higher than last year. The improved fiscal performance was due to collection of more revenue and better control of expenditures. The revenue-to-GDP ratio will increase from 21.4 percent in 2020 to 22.3 percent in 2021. Despite COVID-related spending pressures, the ratio of total spending to GDP is expected to decline from 26.9 to 26.5 percent in 2021. The economic cycle has also been a driver of the primary deficit. The cyclically adjusted primary balance will be in surplus by 0.5 percent of GDP in 2021.

The improved fiscal position will be supported by fiscal adjustment efforts, including resumption of the pre-COVID fiscal reforms. Both the fiscal stance and the fiscal impulse turn from negative values in 2020 to positive values in 2021, suggesting less expansionary fiscal policy. The fiscal stance is the result of both revenue and expenditure measures. On the revenue side, the expected resumption of the tax administration and other revenue reforms initiated in 2018 and put on hold by the pandemic will further improve mobilization of domestic revenue. On the expenditure side, the relative decrease in total spending will result from the government's effort to rationalize and reprioritize expenditures, as it did in the July 2020 Supplementary Budget. Further efforts are also being deployed to ensure that public spending becomes more efficient.

The improved primary balance will help reduce the public debt-to-GDP ratio this year, but Sierra Leone is still at high risk of debt distress. The ratio of government debt to GDP is projected to have declined from 72.0 to 71.6 percent in 2020, primarily because of the improved primary balance. However, Sierra Leone's public and publicly guaranteed (PPG) external debt is relatively high. The external share of debt is expected to increase from 71.5 percent in 2020 to 74.3 percent, reflecting more recourse to multilateral debt as the country faces high borrowing costs domestically. The latest IMF-World Bank Debt Sustainability Analysis (DSA), conducted in March 2021, found that while debt is sustainable on a forward-looking basis, risks of external and overall debt distress are still high, and COVID-19 has intensified the risks. Furthermore, the country's public debt portfolio is exposed to severe refinancing risks, reflecting the maturity structure of domestic debt. Reducing Sierra Leone's risk of debt distress will require sustained fiscal consolidation, sound management of public finances, and careful prioritization of infrastructure projects.

The external sector remained resilient supported by increased official transfers to help the country respond to the pandemic and relative stability of the exchange rate reflecting the authorities' intervention to facilitate importation of essential items. The current deficit narrowed to 15.0 percent of GDP from 22.3 percent of GDP in 2019 helped by an improvement in the trade deficit and current transfers. The reduction in merchandise imports counterbalanced the decline in exports causing the trade deficit to narrow by 2.6 percentage points of GDP while increased support by development partners (including IMF and World Bank) increased official transfers by 2.8 percentage points to 8.4 percent of GDP (US\$353.4 million). The net inflow to the capital and financial account helped finance the current account deficit although it fell by 5.9 percentage point to 9.1 percent of GDP (US\$384.5 million) in 2020 due mainly to adverse impact of the COVID-19 pandemic on the mining sector, made worse by the arbitration between Government and SL Mining Company Limited. Gross international reserves increased from 3.8 months of import (US\$507 million) in 2019 to 4.7 months of imports (US\$677 million) reflecting increased budgetary and balance of payment support from development partners. The Leone was relatively stable against the US dollar, depreciating by 4.4 percent (year-on-year(yoy)) in 2020 compared to 15.3 percent in the previous year. Exchange rate stability was supported by the central bank's intervention to facilitate the importation of essential commodities (food and fuel) as well as administrative measures to limit uncertainty and prevent speculative pressures from destabilizing the already thin market. However, the IMF (2020) estimates the Sierra Leone's real effective exchange rate to be overvalued by around 20–30 percent consistent with historic high current account deficits and reflecting the considerable appreciation of the Leone to the US dollar in real terms in recent years.

Although monetary policy was accommodative to cushion the effect of the COVID-19 pandemic, inflation declined driven mainly by a sharp fall in nonfood items. The BSL reduced its monetary policy rate (MPR) by 100 basis points to 14.0 percent in December 2020 to support the slight pickup of economic activities that had begun in the second half of 2020, representing the second time it lowered the policy rate during 2020. The

Bank cut the MPR by 150 basis points to 15 percent to soften the impact of the COVID-19 shock on the economy. The interbank rate and average yield on treasury securities declined as monetary conditions eased, but the savings and lending rate increased indicative of banks' continued perception of high lending risks. Average inflation fell to 13.5 percent from 14.8 percent in 2019 while end-period period (year-on-year (yoy)) declined to 10.5 percent (the lowest level since 2016) from 13.9 percent. Core inflation, which excludes highly volatile food and energy prices, also declined from 24.3 in December 2019 to 9.6 percent in December 2020, suggesting that the underlying inflationary trend is falling. Contrary to the trend observe in 2020, nonfood inflation was mainly responsible for the drop in headline inflation, due mainly to lower demand for major nonfood items such as health, transportation, hotels and restaurants, and alcoholic beverages, among others. However, food inflation increased sharply reflecting food supply constraints precipitated by the disruption in global supply chains and domestic restrictions to mitigate the impact of the pandemic. High food inflation is likely to have adverse distributional consequences and possibly contribute to reversing recent progress in poverty reduction. Food items have a large share in the consumption basket of poor households and food poverty contributes the most to overall poverty. Inflation pressures continued to moderate in the first quarter of 2021 (2021Q1) as the rate of increase in food and nonfood prices slowed. Headline inflation fell to single digits (8.9 percent) in March 2021 for the first time since 2016 reflecting relatively lower demand for nonfood items and the easing of food supply constraints.

Key monetary aggregates expanded rapidly reflecting the accommodative policy stance of the Bank of Sierra Leone (BSL). Broad money (M3) grew rapidly driven mainly by sharp increases in net domestic assets (NDA) and net foreign assets (NFA) reflecting increased government borrowing and budgetary and balance of payment support by development partners, respectively. Credit to the private sector grew by 4.9 percent (down from 22.9 percent in 2019) helped by the creation of Le500 billion special credit facility by the BSL to cushion the effect of the contraction of real sector activities especially commerce and trade. Commerce/retail trade and construction sectors account for the largest share of credit to the private sector. The financial system remained relatively stable in 2020 as key financial soundness remained healthy. The ratio of nonperforming loans (NPLs) to gross loans ratio improved to 12.6 in 2020 from 16.8 percent in the previous year driven mainly by government's pay down of domestic arrears owed to contractors and refinancing of existing credit facilities by customers wanting to access the BSL's special credit facility at relatively lower interest rates. The capital adequacy ratio (regulatory capital to risk weighted assets) remained strong (at 40.1 percent), well above the 15.0 percent statutory minimum. All banks recorded pre-tax profits with both return on assets (ROA) and return on equity (ROE) ratio remaining healthy, above the averages for sub-Saharan African (SSA).

Economic growth is projected to rebound over the medium-term supported by recovery of agriculture and services underpinned by increased consumption and investment demand. Real growth is expected average 3.6 percent of the medium-term (2021–23), driven mainly by the uptick in both domestic and external demand as the pandemic recedes. The agriculture sector will contribute to about half of all real sector growth (1.8 percent points) while industry is expected to contribute only about 0.6 percentage points to medium-term growth supported mainly by the recovery of mining especially iron ore production. The service sector is expected to contribute about one-third (1.2 percentage points) of economic growth driven mainly by a recovery of trade and tourism. On the demand side, economic growth is expected to be driven final consumption expenditure (as agriculture rebounds and inflation moderates) and gross investments reflecting anticipated private investment in mining and agriculture as well as the resumption of public investment project and private consumption. Inflation is expected to continue to moderate and decline to single digits over the medium-term driven by strong domestic food production and prudent monetary policy. Fiscal deficit is expected to decline gradually to 2.4 percent of GDP by 2023 as COVID-19 related spending is reduced while revenue mobilization improves on the back of the expected economic recovery. Strong expenditure controls and sound public financial management (PFM) supported by the resumption of the IMF Extended Credit Facility (ECF) are expected to keeping government spending within budgets. Revenue mobilization is expected to improve over the medium-term supported by the projected economic recovery and the resumption of tax reforms. The current account deficit will remain large, at 13.6 percent of GDP, over the medium-term, financed by inflows to the financial account, especially foreign direct investment (FDI) in mining and agriculture.

Risks to the medium-term outlook are tilted to the downside which can be categorized as both domestic and external. The main domestic macroeconomic risks relate to the continued existence of high payment arrears, slower than expected revenues including pandemic related spending pressures, rapid growth in monetary aggregates and associated inflationary risks and financial sector weaknesses as well as slow rollout of COVID-19 vaccines. The main external risks relate to the course of the COVID-19 pandemic and access to vaccines, lower than anticipated FDI and donor inflows and weaker than expected exports. Overall, the new COVID-19 strains have caused a resurgence of the pandemic (second wave and third waves in many countries), which could hinder recovery of external demand and prolong the disruptions in supply chains, slowing down the pace of recovery especially for services.

The immediate and medium-term policy priorities should focus on strengthening the response to the COVID-19 pandemic by rolling out a strong vaccination program and implementing broad-based macroeconomic reforms to support a quick economic recovery. First, to prevent a severe second wave from disruption economic recovery over the medium-term, the authorities should develop and implement a robust vaccination program that targets inoculation of population 'at risk' (health workers, persons aged 70 years and those with comorbidities) and all adults. Sierra Leone's access to vaccines could depend on its strategic relationship with key development partners and vaccine-producing nations. The country should strengthen alliances with development partners and support multilateral-led approaches by the African Union to increase its access to vaccines. Second, addressing existing macroeconomic weaknesses and implementing reforms to mitigate the existing risks to medium-term recovery will be critical for a sustained inclusive economic recovery that supports poverty reduction.

Fiscal measures implemented to address the crisis must be gradually phased out including unplanned health spending and the adoption of a stimulus packages targeting private sector and households. The government provided tax relief to businesses by suspending taxes on essential goods and services due the pandemic but now needs to indicate a clear timeline to reinstating the taxes and other discretionary revenue measures. Post-COVID-19 the authorities also need to focus on expanding the tax base especially for excise duties and GST through modernization and automation such as electronic cash registers and an integrated of the tax administration system. However, fiscal consolidation must be balanced with the need to safeguard social spending to protect livelihoods and support a quick recovery. Fiscal adjustments should be consistent with medium-term economic recovery objectives, allowing for adequate spending on social and priority sectors. The BSL should aim at tightening monetary policy holdback the expansion in money aggregates by targeting a low and stable growth of money in line with its price stability objectives. The authorities should focus of deepening financial reforms to spur growth and safeguard financial stability through introduction of digital payment systems and allowing for seamless interoperability between various payment platforms including mobile money and revising the payment system laws. The agenda for inclusive economic growth must be revisited in the post-pandemic era. The government needs to prioritize structural reforms for diversifying the economy such as measures to: improve the business environment, digitalization of the economy, strengthen governance and institutions, expand agricultural productivity base and encourage agribusiness; promote value addition to promote manufacturing and improve human capital.

Fiscal Policy can also be useful in ensuring that the economic recovery is pro-poor and inclusive. For the recovery to be pro-poor and pro-welfare, fiscal policy should balance the risks from growing debt with those from premature consolidation. Given the limited fiscal space, policy support should focus on expenditure reprioritization toward social sectors to ensure wider access to basic public services, especially vaccinations. This reprioritization effort should be grounded on credible medium-term fiscal frameworks. Both pre-distributive (policies that affect the distribution of market income) and redistributive (after-market) are needed to tackle poverty and inequality over the recovery period. Pre-distributive policies include measures to enhance access to basic services. Redistributive policies include tax and transfer policies designed to reallocate income from the top to the bottom of the income scale.

Part 2: Welfare and Poverty Effects of the COVID-19 Pandemic

The direct health impact of the pandemic in Sierra Leone has been limited according to official data, with only about 4000 cases and 79 fatalities reported as of May 2021. The Government of Sierra Leone is experienced in dealing with highly contagious and fatal diseases given the Ebola outbreak of 2014-2016. As the global pandemic unfolded, the government put in place various containment measures, including closing schools and international borders, suspending weekly regional wholesale markets, and introducing an overnight curfew and tight restrictions on inter-district travel even before the first case in Sierra Leone was detected on 31 March 2021.

The restrictions put in place to contain the spread of the disease, as well as the downturn in the global economy have led to a small increase in poverty, reversing the previous trend of poverty reduction. Using data from a large household survey conducted by the World Food Program in November/December 2020, and a model of household welfare constructed using the 2018 Sierra Leone Integrated Household Survey, poverty is imputed to have increased from 56.8 percent in 2018 to 58.9 percent in 2020. Although this increase is not actually statistically significant, in the absence of COVID19, poverty was expected to continue to decline. Estimates of the change in poverty based solely on GDP growth projections predict an even smaller increase in poverty, to 57.7 percent.

Urban areas, particularly the capital city, Freetown, have seen the largest increase in poverty. Poverty in Freetown is estimated to have increased from 17.7 percent in 2018 to 29.1 percent in 2020. In other urban areas, the increase was much smaller, from 45.2 percent to 46.3 percent, and in rural areas there was essentially no change, poverty is estimated to have declined from 71.5 percent to 71.0 percent. By province, the increase in poverty was largest in Western Area (which is dominated by Freetown and the surrounding urban area), followed by the Northwest where poverty increased from 62.3 percent to 67.1 percent. This province includes the area around the international airport, the main overland trade route to Conakry, and the location of the iron mine closed by the dispute with SL Mining.

The decreases in welfare have been greatest for those in the top third of the distribution, resulting in an overall decrease in inequality. Household consumption for the top 30 percent is estimated to have declined at 5.0 percent per year, compared to 1.3 percent for the bottom 70 percent. Across many dimensions – household size, access to agricultural land, education level, share of economically active adults – the types households that were less poor before the pandemic have seen the largest increase in poverty.

Direct reports from households confirm that households have seen a decrease in incomes, particularly from self-employment and jobs in the private sector. As part of the World Bank's global program of phone surveys monitoring the impact of COVID19 on households, over 5000 households in Sierra Leone were interviewed by phone in July 2020, and then again in November/December 2020. Households were asked about up to three main sources, and 86 percent of these saw a decline between March and July 2020. Incomes from self-employment (mainly small trading activities) were the hardest hit, followed by formal jobs in the private sector (largest sectors are construction and transport). Household with income from formal jobs in the public sector (public admin and education), however, were actually more likely to experience an increase than a decrease in income from that source. A significant number of households saw incomes go back up between July and November/December, but overall, incomes remained lower than they had been in March 2020. For households with income from agricultural activities, more households saw an increase than a decrease in their incomes comparing November 2020 to November 2021. Incomes from staple crops (rice and cassava) and vegetables (grown for own consumption or sale in the domestic market) did well, compared to income from cash crops (cocoa, coffee etc. grown for export). **There was little change in employment activities during the pandemic, most people continued working in the same activities, for the same number of hours.**

Although schools were closed for one term, almost all students are continuing their education, although a higher than usual number are repeating a class. Schools closed on 31 March 2020 (usually

the school year goes through June or early July), but reopened in July for students sitting external examinations. The new school year then opened for all students in early October. When the second round of the CIMS was conducted, some students were still waiting for examination results to progress from junior to senior secondary school, but of the other students, 98 percent report returning to school. Twenty-eight percent of these students are repeating a class, however, compared to only 8 percent for the 2017-2018 school year as measured by the 2018 SLIHS. Widespread fears about increased pregnancy in girls during school closures do not seem to have been realized.

The COVID19 pandemic has disrupted health care services, with a decrease in service utilization of 5-15 percent. Both reports from households via the CIMS and facility level data analyzed by the health sector found modest decreases in usage of health services such as childhood vaccinations, antenatal care, assisted delivery and treatment for sick children. These disruptions were greatest early in the pandemic, and then decreased, although there may have been further disruptions due to the spike in cases in the Western Area early in 2021.

Food security has declined, with households feeling the high food price inflation. The decrease in food security appears to be largest in urban areas, which have also suffered the greatest decreases in consumption and cannot fall back on own-produced food. In July 2020, almost a quarter of households reported being unable to buy rice (the main staple) due to either an increase in price or a decrease in household income.

While the impacts of the pandemic in Sierra Leone have been much less than in other countries, they have set back a country which was already very poor with fragile health and education systems, and poor food security. The households in rural areas are not worse off, but over 70 percent of them remain poor. Vulnerable households in urban areas have seen their incomes decrease and their food security suffer as a result, and households who thought they had made it with a well-paying job in the private sector have seen their incomes disappear. Students who already had some of the poorest learning outcomes, and were behind in terms of class for age, in part due to Ebola, have lost more months of schooling, and a good number have fallen another class behind. Crucial health services were disrupted in a country with high childhood and maternal mortality.

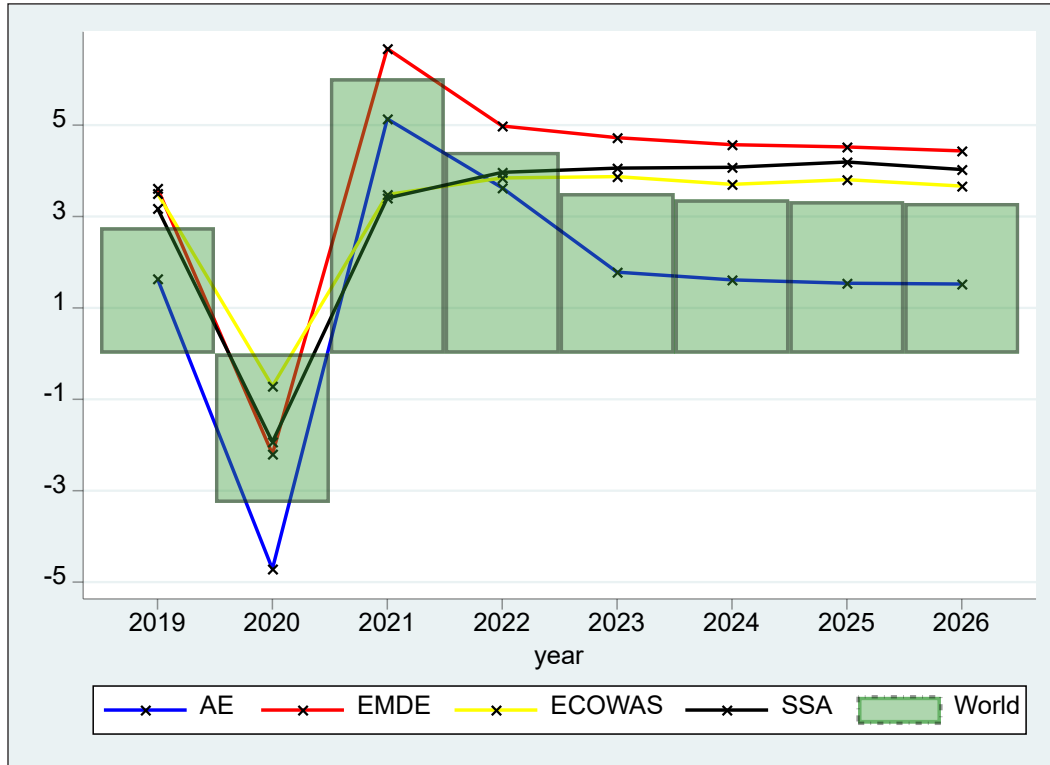
PART 1: RECENT DEVELOPMENTS, PROSPECTS, AND POLICIES

1.1. Global and Regional Trends

After a historic contraction in 2020, the global economy is expected to rebound this year, with growth in 2021 projected at 6 percent, a stronger-than-expected recovery (Figure 1). The recovery follows on an unprecedented contraction of 3.3 percent of global output. The unexpectedly strong rebound mainly reflects fiscal support in advanced economies, especially the US, and speedy rollout of vaccines.

However, recoveries are varying both between and within countries because of COVID-related uncertainty. Growth rates are projected to diverge substantially by country depending on the policy space available and the degree of reliance on tourism and commodity exports. Although advanced economies as a group are expected to achieve growth of 5.1 percent in 2021, the projection for Sub-Saharan Africa (SSA) is just 3.4 percent.

Figure 1: Global and Regional Growth, 2019–26f



Sources: April 2021 WEO database. AE: advanced economies, EMDE: emerging markets and developing economies, SSA: Sub-Saharan Africa, ECOWAS: Economic Community of West African States. e=estimates, f=forecast. Growth rates for country groups are calculated as weighted averages using GDP shares consistent with purchasing power parity as weights.

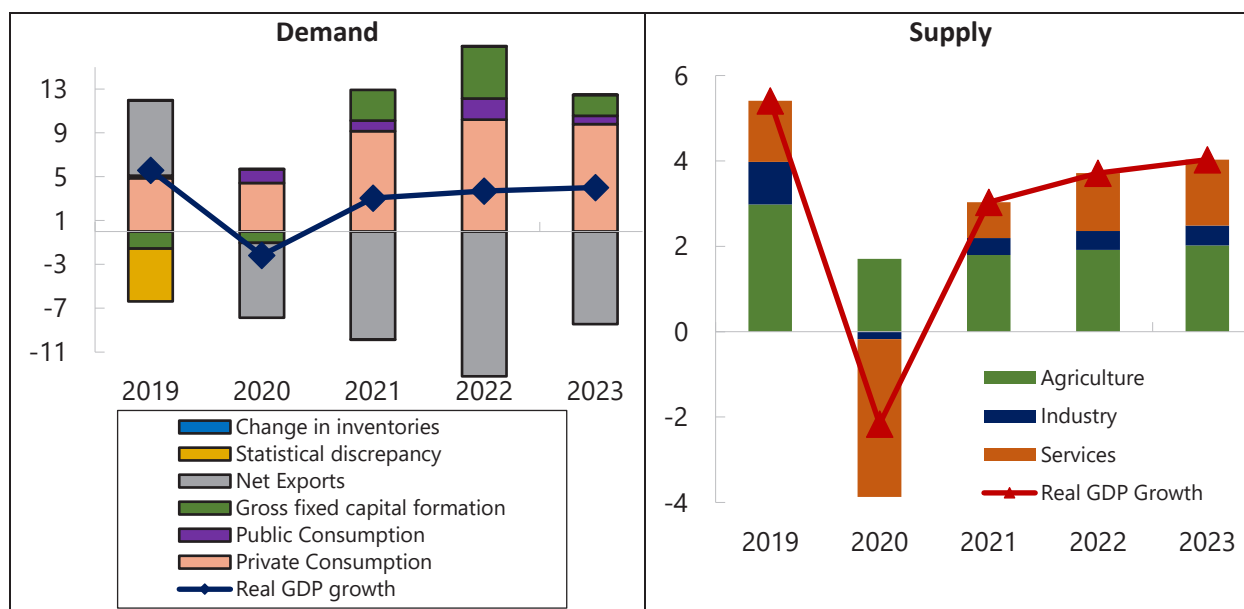
Within SSA, at 3.5 percent, growth in the West African Economic and Monetary Union (WAEMU) will be slightly ahead of the SSA average. Compared to other regions in SSA, West Africa has had lower COVID infection and death rates. The emerging markets and developing economies (EMDEs) group, led by China, will grow by 6.7 percent this year. Such divergences in recovery paths may exacerbate income inequality between countries.

Despite uncertainty about the path of the pandemic, the global outlook will continue to improve, though gradually. For 2022, at 4.4 percent global growth is projected to be stronger than previously forecast. The upgrade for next year reflects the improved outlook in advanced economies, particularly in the United States. Global growth is expected to moderate gradually over the medium term, averaging 3.4 percent for 2023–26. On average, EMDEs are projected to grow faster, followed by the WAEMU, and then SSA. The slower global growth is associated with pre-pandemic structural impediments to growth, such as aging populations in advanced economies and low capital accumulation and productivity growth in developing countries. The global outlook is fogged by COVID-related uncertainty. Faster rollout of vaccines could improve the outlook, but a prolongation of the pandemic and new virus variants could substantially depress global growth. Furthermore, the effectiveness of policy support will also be a major factor in recovery, as will the availability of fiscal space: for low-income countries with no fiscal space and no access to international financial markets, multilateral concessional financing could certainly improve the outlook. For resource-rich countries, global demand and commodity prices will be among the factors determining the recovery path.

1.2. Recent Developments in Sierra Leone: Growth

Sierra Leone's economy is projected to recover from the COVID-19 contraction, but growth will be slower than it was before COVID-19. Real GDP is expected to rebound by 3.0 percent in 2021, an upward revision of 0.8 pp relative to the 2020 Spring forecast. The growth upgrade reflects the easing of COVID-related restrictions and launch of the Quick Action Economic Response Program (QAERP). However, Sierra Leone's 2021 growth is slightly below the expected averages for SSA (3.4 percent) and WAEMU (3.5 percent).

Figure 2: Economic Growth in Sierra Leone, 2019–23f



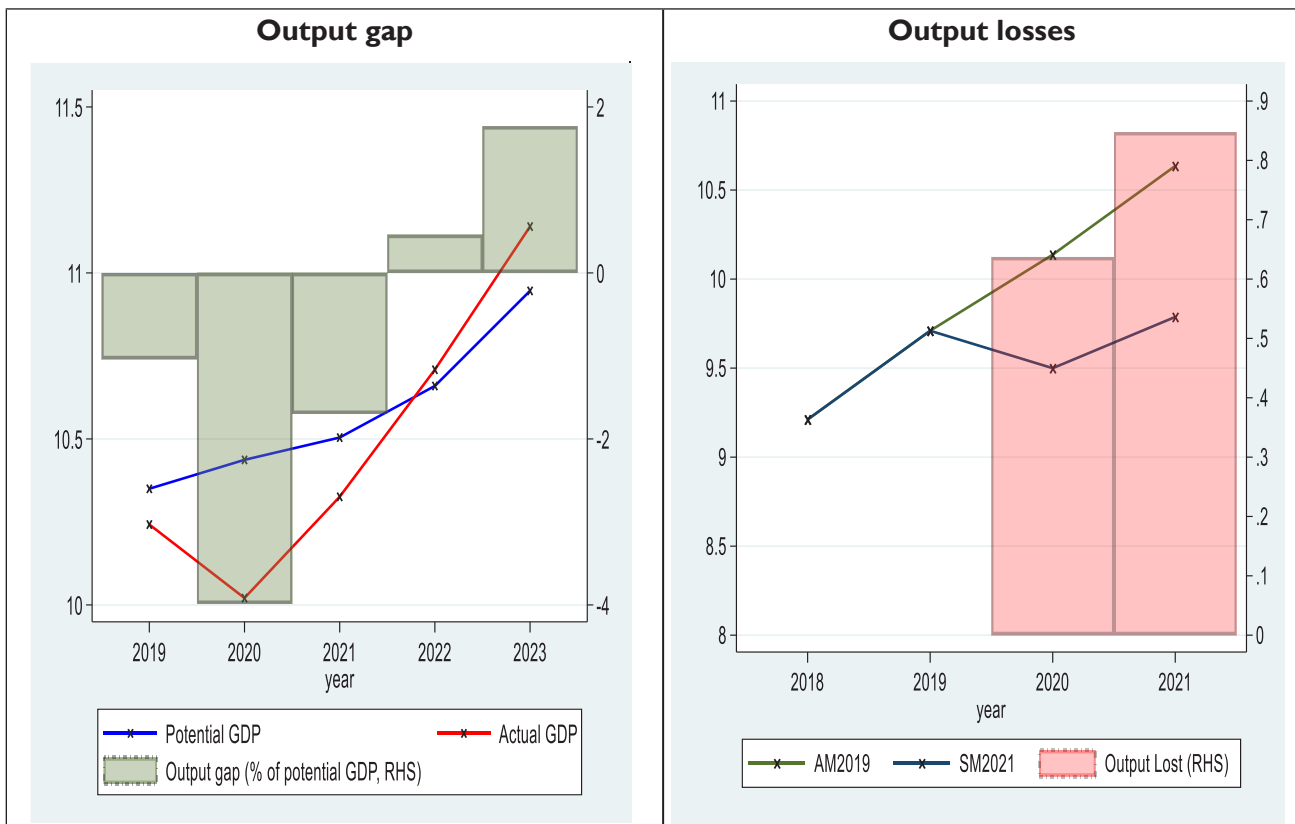
Source: MFMod

1.3. Sources of Sierra Leone's Aggregate Growth

With external demand subdued, aggregate growth is primarily the result of stronger domestic demand. This year, growth will be driven by domestic demand, with private consumption (9.2 percent) and investment (2.8 percent) contributing the most. Between 2020 and 2021, private consumption rose by 5.5 pp of GDP and investment by 2.4 pp. The lifting of COVID-related contingent measures in the second half of 2020, the fiscal response to the pandemic, the easing of inflationary pressures, and the resumption of pre-COVID reform agenda have all stimulated private consumption and investment. Sustained investment growth would raise Sierra Leone's potential output and improve the prospects for the post-pandemic recovery. Public consumption (0.9 percent) will contribute only marginally to aggregate growth. Unlike domestic demand, external demand is likely to be a drag on growth: The growth contribution of net exports is projected to be negative, at -9.9 percent. After collapsing last year by -3 percent, this year imports will surge by 13.9 percent of GDP, more than compensating for the 5.3 percent increase in exports.

On the supply side, despite aggregate growth, there are substantial differences by sector. For 2021, real GDP at factor cost is also projected to grow by 3 percent, mainly because of faster agricultural production growth. Between 2020 and 2021, agricultural production will grow by 3.2 percent, contributing about 2 pp to aggregate growth. Agricultural production, in turn, will be primarily driven by domestically oriented crops—rice, cassava, and maize—and to some extent by export-oriented commodities like palm oil. Agriculture will continue to be supported by recent reforms to increase its productivity through private sector participation and increased transformation of local production. For instance, the previous World Bank DPO series supported structural reforms

Figure 3: Output Gap and Cumulative Losses



Source: MfMod and World Bank staff estimates.

in agriculture to increase productivity, among them the Seed Certification Agency Act, the National Fertilizer Act, and the Fisheries Act. As COVID-related restrictions ease, services should recover briskly from last year's collapse, contributing about 1 pp to aggregate growth. Nevertheless, services production in 2021 will be 7.8 percent below its pre-pandemic level, because the sector is so contact-intensive. Prospects for services will depend heavily on the rollout and distribution of vaccines. Meanwhile, despite a projected resumption of mining production, industry will contribute only 0.4 pp to aggregate growth.

However, Sierra Leone's growth potential is being slowed by the erosion in total factor productivity (TFP). Low productivity is not a new problem for the country. TFP has long been declining and the COVID-19 pandemic has speeded up the slide. Since 2015, Sierra Leone's TFP has fallen by 1.6 percent annually. As a result, the labor share of output has also been on the decline. Pandemic-related restrictions also slowed labor force participation. During the recovery, structural reforms to raise the country's productive capacity and improve cross-sector resource allocation will be critical to reverse this downward trend in TFP. As detailed in Box 1, Sierra Leone faces other structural challenges including the narrow production base, the large infrastructure gap, and the poor business climate.

Despite the growth rebound, output losses have been substantial. As Figure 3 shows, with output gaps of -4 percent of potential output in 2020 and -1.7 percent of potential output in 2021, Sierra Leone's economy is operating far below capacity. The cumulative output loss in 2020-21 amounts to Le 1.5 trillion (US\$146.5 million). This lost output is approximately the difference in real GDP at factor cost between World Bank projections at the 2019 Annual Meetings and the 2021 Spring Meetings. The economic contraction was particularly large in the services sector, with containment measures severely affecting contact-intensive activities (informal activities, travel, and tourism). Relative to the pre-COVID forecast, the average annual loss in per capita GDP in 2020-21, is

Table 1: Sierra Leone: Economic Indicators, 2017-23f, Percent)

	2017	2018	2019	2020e	2021f	2022f	2023f
Real GDP growth, at constant market prices (%) ^a	3.8	3.4	5.6	-2.2	3.0	3.7	4.0
Private Consumption (contribution, %)	13.3	4.9	4.4	9.2	10.2	9.8	13.3
Government Consumption (contribution, %)	-0.1	0.2	1.3	0.9	1.9	0.7	-0.1
Gross Fixed Capital Investment (contribution, %)	-4.2	-1.6	-1.0	2.8	4.8	1.9	-4.2
Net Exports (contribution, %)	3.8	-6.3	6.9	-6.8	-9.9	-13.2	-8.5
Real GDP growth, at constant factor prices (%)	3.8	3.3	5.4	-2.2	3.0	3.7	4.0
Agriculture (contribution, %)	2.2	2.0	2.8	1.6	1.7	1.8	1.9
Industry (contribution, %)	-0.5	-0.2	0.9	-0.2	0.4	0.4	0.4
Services (contribution, %)	1.9	1.4	1.4	-3.5	0.8	1.3	1.5
Output gap (% of potential GDP)	-6.7	-5.3	-1.0	-4.0	-1.7	0.5	1.8
Real GDP per capita (USD)	626.1	634.0	655.5	628.2	634.2	644.7	657.5
Real GDP per capita growth (%)	1.6	1.3	3.4	-4.2	1.0	1.6	2.0
Net operating balance (% of GDP)	-8.7	-5.6	-3.1	-5.5	-4.3	-2.8	-2.4
Primary operating balance (% of GDP)	-6.5	-4.5	-7.3	-9.5	-8.8	-7.0	-6.1
Cyclically adjusted primary balance (% of potential GDP) ^b	-5.4	-3.5	1.2	-0.8	0.5	1.4	1.1
Fiscal stance (% of potential GDP)	5.4	3.5	-1.2	0.8	-0.5	-1.4	-1.1
Fiscal impulse (% of potential GDP)	-1.9	1.9	4.7	2.0	-1.3	-0.8	0.3
Government Debt (% of GDP)	57.6	69.0	70.0	72.0	71.6	70.6	69.0

Sources: MFMod and MPO data, World Bank staff calculations.

Notes: ^a The contributions of change in inventories and statistical discrepancy were not reported, because they are quantitatively negligible. ^b The output elasticity of revenue used to adjust the primary balance was calculated as the coefficient of a simple log-log regression of income on output based on historical data (2010-18). e = estimate, f = forecast.

projected to be 5.3 percent. While real GDP is expected to return to its pre-pandemic level this year, real GDP per capita will not do so until 2023 (Table 1). These income effects of the pandemic are likely to exacerbate disparities in living standards between population groups in Sierra Leone.¹

COVID-induced output losses have had modest implications for the poor and most vulnerable groups of the population. The containment measures and global slowdown have generated income and job losses, especially for those working in the services sector and other contact-intensive activities. Job losses have

Box 1: Sierra Leone Structural Challenges

Sierra Leone benefits from both advantageous geography and abundant natural resources. Located on the southwest coast of West Africa and bordered by Liberia to the southeast and Guinea to the northeast, the country is one of the largest producers of such minerals as iron ore, diamonds, titanium, bauxite, and gold. It also has one of the world's largest deposits of rutile and the third-largest natural harbor in the world. The Freetown peninsula was a British Crown Colony from 1808 to 1961; the rest of the country was a British protectorate, established in 1896, but with relatively little British presence. The country's history since has been marked by periods of political turbulence, especially the 1991–2002 civil war.

With a population estimated at 7.8 million in 2019, Sierra Leone, a Muslim-majority country, has 16 major ethnic groups. The population is young and very dynamic: For the last decade, annual population growth has averaged 2.3 percent. In 2018, at 76 percent the age-dependency ratio—youth as a percentage of the working-age population—was above the 72 percent average for fragile and conflict-affected countries. In 2017, the working-age population grew at 2.8 percent and total population grew by just 2.2 percent, creating a pressing need for more formal and better-paying new jobs.

Despite a decade of 5 percent average annual economic growth, Sierra Leone's economy has recently been one of the most volatile in the world. From 2008 to 2017, the standard deviation of the growth rate of its real GDP was 10.6 percent—meaning that in that period, on average the growth rate of Sierra Leone's economy deviated by 10.6 percent from its 5 percent mean. The high volatility of GDP growth is mainly explained by the fact that the economy is driven by agriculture and mineral production, two sectors where prices are externally determined and thus highly unpredictable. Furthermore, serious internal and external imbalances exacerbate macroeconomic instability: In 2018, inflation averaged 17 percent and exchange rate depreciation 12 percent. The budget deficit of the general government was 5.7 percent of GDP and the current account deficit was 14 percent.

With population growth at 2.2 percent, in 2017 real income per capita grew by only 1.6 percent. Indeed, Sierra Leone's real income per capita, an estimated US\$469.80 in 2018, is still far below its pre-Ebola level of US\$562.80. Access to health services, and access to and the quality of education, are still low. In 2018, Sierra Leone's rating on the Human Capital Index (HCI) was 0.4, among the lowest in the world; and its poverty rate was among the highest: In 2018, more than half the population lived on less than \$1.90 per day. And with its Gini index at 34, income inequality is quite high.

Sierra Leone's economy has seen very little structural change. The country suffers from a crucial lack of access to basic infrastructure, especially energy. Rural access to infrastructure is among the worst in Africa. Sierra Leone also has only 1.7 agricultural tractors per 100 square kilometers of arable land; the average for Sub-Saharan Africa (SSA) is 27.5. Only 8 percent of the country's roads are paved; the SSA average is more than 12 percent. Access to fresh water, energy, and agricultural inputs is still low: Sierra Leone withdraws only 0.1 percent of its internal resources of fresh water annually. While the yearly quantity of rice seed is 740,215 metric tons in Africa, it is only 60,392 metric tons in Sierra Leone. Only 23.4 percent of the population have access to electricity, and in rural areas the rate is just 5.4 percent. Access to improved sanitation facilities is 23 percent in urban areas but only 6 percent in rural areas. In general, too, rural markets are not integrated because geographical connectivity is very low.

Source: Sierra Leone Economic Diversification Study, 2020 – (PI62720)

¹ The special topic in the second part of this report, on the welfare implications of COVID-19, will address this issue in detail.

particularly been reported by household with self-employment and jobs in the private sector. As a result, the pre-COVID downward trend in poverty has been reverse. However, as shown in the second part of this report, the direct poverty impact of the pandemic has been limited thanks to the limited spread of the virus in the country. Sierra Leone was one of the last countries in the region to be affected by COVID-19. It has also been among the least affected countries. Depending on the methodology used, the poverty rate appears to have increased between 0.9 and 2.1 percentage points. But this limited aggregate change in poverty hides substantial differences across geographic locations and population groups. Urban areas, particularly the capital city, Freetown, have been more affected than rural areas. In addition, the welfare effect of the pandemic has also been more pronounced for those in the top third of the distribution, resulting in an overall decrease in inequality.

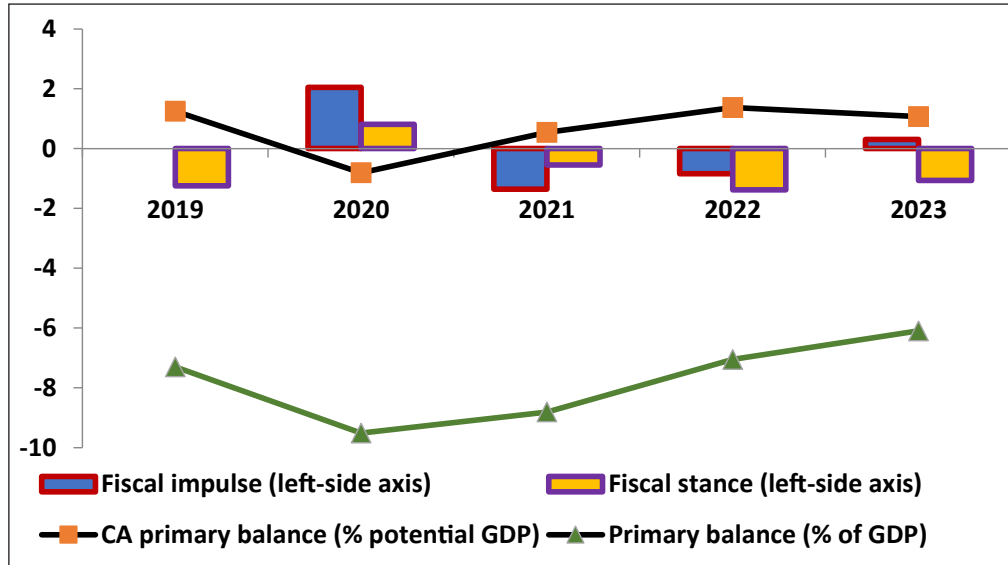
COVID-19 has also affected other aspects of household welfare such as education, access to health services and food security. While schools were closed for only one term, almost all students are continuing their education. But the pandemic has resulted in a higher than usual number of students repeating a class. Twenty-eight percent of students returning to school are repeating a class, compared to only 8 percent for the 2017-2018 school year. The pandemic has reduced access to health care services, with service utilization declining by around 10 percent. Affected health services include childhood vaccinations, antenatal care, assisted delivery and treatment for sick children. As a result of COVID-induced food price inflation and income losses, food security has declined. In July 2020 for instance, almost a quarter of households reported being unable to buy rice (the main staple) due to either an increase in price or a decrease in household income. The increased food insecurity has been largest in urban areas, which have also suffered the greatest decreases in consumption and cannot fall back on own-produced food.

1.4. Fiscal Policy and Public Debt Dynamics

After the severe deterioration of last year, Sierra Leone's fiscal position is projected to improve this year as expenditures are rationalized and tax collections rise. In 2021 the fiscal balance is projected to increase by 1.2 pp to -4.2 percent of GDP. Interest payments will increase by 0.5 pp, reaching 4.5 percent of GDP. Adjusting for the interest payments, the primary balance is expected to reach -8.8 percent of GDP this year. The ratio of the primary balance to GDP is 0.7 pp higher this year than last. The improved fiscal performance was due to higher revenue collection (tax revenue in particular), and better expenditure controls. The ratio of revenue to GDP will increase from 21.4 percent in 2020 to 22.3 percent in 2021. Tax revenues, especially direct taxes, were the major driver of this improved revenue performance. Despite COVID-related spending pressures, the ratio of total spending to GDP is expected to decline from last year's 26.9 percent to 26.5 percent in 2021. The economic cycle has also been a driver of the primary deficit. Accounting for the effect of the cycle, in 2021 the cyclically adjusted primary balance will be in surplus by 0.5 percent of GDP.

Due to limited fiscal space, the government's response to the pandemic has been neither strong nor targeted as desired. The fiscal response to the pandemic has mainly been through the July 2020 supplementary budget, entitled "Saving Lives and Livelihoods". This supplementary budget revised expenditure up by 2.8 percent of GDP. The increased government spending reflects, among others, the Quick Action Economic Recovery Programme (US\$136 million), the comprehensive COVID-19 Health Sector Response Plan (US\$34 million) and the urgent need to increase health spending as quickly as possible. Despite substantial support from Development Partners, the fiscal response has been limited in size. While efforts have been made to reprioritize spending to the priority areas such as health care, education, and expenditure, the fiscal support has not been explicitly targeted.

The improved fiscal position will be supported by fiscal adjustment efforts, including resumption of the pre-COVID fiscal reforms. Both the fiscal stance and the fiscal impulse turn from negative values in 2020 to positive values in 2021, suggesting less expansionary fiscal policy (Figure 4). This fiscal stance is the result of both revenue and expenditure measures. On the revenue side, the expected resumption of tax administration and other revenue reforms since 2018 and put on hold by the pandemic will further improve domestic revenue mobilization in Sierra Leone. Reforms to mobilize more domestic revenue include the establishment of a Treasury Single Account (TSA) and reduction of tax evasion and exemptions. On the spending side, a relative decrease in

Figure 4: Fiscal Balances, Stance, and Impulse, 2019-23

Source: MFMod database.

total spending will result from the government's efforts to rationalize and reprioritize expenditure, as was done for the July 2020 Supplementary Budget. Efforts are also being deployed to make public spending more efficient. Recent reforms to rationalize and control public spending include (1) a freeze on recruitments to public jobs; (2) a reduction of leave and severance benefits and strict enforcement of the official retirement age of 60 years; (3) reinforcing management of public investment; (4) comprehensive audit of arrears to domestic suppliers and contractors; (5) an extension of the TSA, which has been critical in bringing the revenues of some Ministries, departments, and agencies (MDA) on budget and supporting better cash planning.

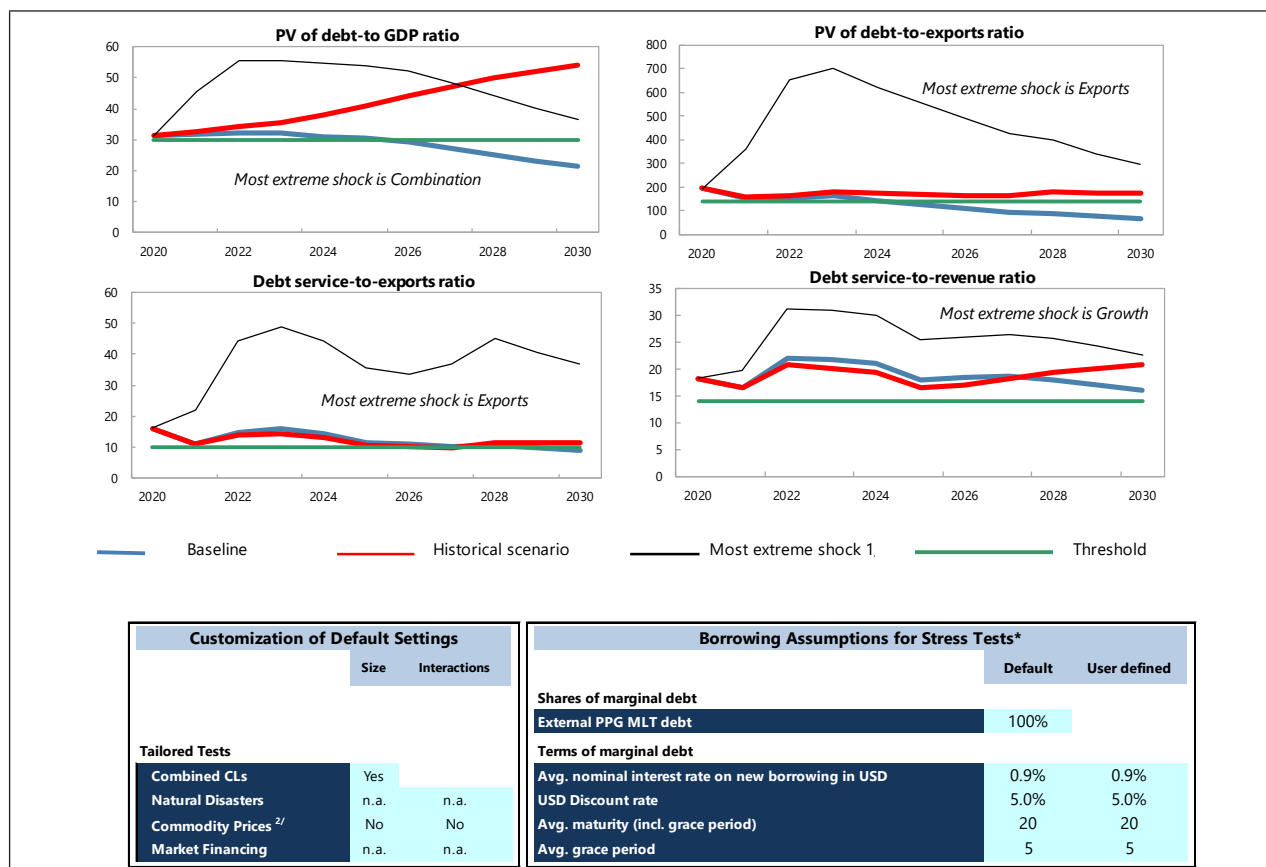
The improved primary balance will help reduce the public debt-to-GDP ratio this year, but Sierra Leone is still at high risk of debt distress. The ratio of government debt-to-GDP is projected to decline from 72.0 to 71.6 percent in 2021, primarily because the primary balance has improved. However, Sierra Leone's public and publicly guaranteed (PPG) external debt remains relatively high. The external share of debt is expected to increase from 71.5 percent in 2020 to 74.3 percent, as the country turns to multilateral debt because domestic borrowing costs have become quite high. The latest IMF-World Bank Debt Sustainability Analysis (DSA), conducted in March 2021, found that while debt is sustainable for now, risks of external and overall debt distress are high and have been heightened by COVID-19. In the baseline, the present value of PPG external debt-to-GDP ratio and the present value of PPG external debt-to-exports ratio breach their thresholds over the medium term before returning to them in about 2024–25 (Figure 5). This protracted deviation from the threshold is mainly due to the downgrade of the country's debt-carrying capacity from "medium" in the previous DSA to "weak" in the latest, which gave Sierra Leone a score of debt-carrying capacity of 2.693.² The ratio of PPG external debt service-to-exports also stays slightly above the threshold over the medium term and the ratio of PPG external debt service-to-revenue remains above its threshold for the next 10 years. Stress tests indicate that external debt indicators are sensitive to growth and exports, and their combination. In the stress scenarios, all external debt indicators remain considerably above the thresholds for the next 10 years. Since the PPG external debt indicators breach their

² The score reflects the impact of several factors on the quality of Sierra Leone's institutions and policies through a weighted average of its CPIA score, real GDP growth, remittances, international reserves, and world growth. The contribution of these components to the variation of the score was 46 percent for the CPIA score, 31 percent for the import coverage of reserves, 18 percent for global economic growth, 4 percent for domestic economic growth, and 1 percent for remittances.

thresholds in the baseline, Sierra Leone is assessed to be at high risk of external debt distress, as in the previous DSA. However, since all the external debt indicators are projected to decline over the medium to long term, PPG external debt considered to be sustainable on a forward-looking basis. Sierra Leone’s risk of debt distress can be reduced by sustained fiscal consolidation, sound public financial management (PFM), and prioritization of infrastructure projects.

Sierra Leone’s public debt portfolio is exposed to severe refinancing risks because of the term structure of its domestic debt. Despite the country’s reliance on multilateral and long-term debt, the average maturity has been decreasing since 2015. The average time to maturity (ATM) for the entire debt portfolio is projected to reach 9.1 years in 2021. With 84 percent of debt consisting of T-bills, the ATM is very short for domestic debt. As a result, about 69 percent of domestic debt will have to be rolled over in the next two years. This, along with external debt that matured in 2018, accounted for 14 percent of non-iron ore GDP. A large portion of central government debt was subject to principal repayments in the first year; it is very important to stretch out domestic debt maturities to smooth the repayment profile.

Figure 5: PPG External Debt in Alternative Scenarios, 2020–30



Sources: Sierra Leonean authorities; and IMF staff estimates and projections.

Notes:¹ The most extreme stress test is the test that yields the highest ratio in or before 2030. Stress tests with one-off breaches are also presented (in any), while these are one-breaches are deemed away for mechanical signals. When a stress test with a one-off breach happens to be the most extreme shock even after disregarding the one-off breach, only that stress test (with a one-off breach) would be presented.

² The magnitude of shocks used for the commodity price shock stress test is based on the commodity prices outlook prepared by the IMF research department.

1.5. External Sector and Exchange Rate Dynamics

Sierra Leone’s external sector performance improved as imports declined and official transfers increased. The current deficit narrowed to 15.0 percent of GDP from 22.3 percent in 2019, supported by improvement in the trade deficit and higher official transfers to help citizens respond to the pandemic. In 2020 the merchandise trade deficit narrowed by 2.6 pp, to 14.9 percent of GDP, as fewer merchandise imports more than offset the fall in exports. Official transfers increased by 2.8 pp, to 8.4 percent of GDP (US\$353.4 million), reflecting more support from development partners, including the IMF and the World Bank, to help the country respond to pandemic. Net services payments fell to 6.9 percent of GDP from 8.7 percent as the pandemic pushed down service-related imports. Net income payment remained unchanged at –1.7 percent of GDP as external debt service payments were subdued by the debt service suspension initiative.

Merchandise exports declined by 2.1 pp, to 14.2 percent of GDP (US\$596.5 million), as demand for mineral exports plummeted due to the pandemic and iron ore production failed to resume as anticipated. Along with global demand, mineral exports fell by 0.9 pp, to 9.8 percent of GDP (US\$415 million), and the international arbitration between the government and Sierra Leone Mining Company Limited (SL Mining) relating to mining of iron ore remained unresolved. Agricultural exports improved by 0.2 pp to 1.6 percent of GDP (US\$70.5 million), as production of palm oil, coffee, and cocoa was heightened, supported by new investments and more support for farmers.

Merchandise imports fell by 4.7 pp, to 29.1 percent of GDP (US\$1,221.5 million). Petroleum imports increased by 0.3 pp to 4.3 percent of GDP (US\$185.6 million), supported by favorable global crude oil prices. But other imports, especially manufactured goods and transportation equipment, dropped considerably because of the general contraction in economic activities during the pandemic. Food imports went up by 0.2 pp to 5.9 percent of GDP (US\$251.1 million), driven mainly by special credit to businesses to facilitate imports to build up food buffers and prevent scarcity in local markets.

Figure 6: Selected Merchandise Exports, 2016–20

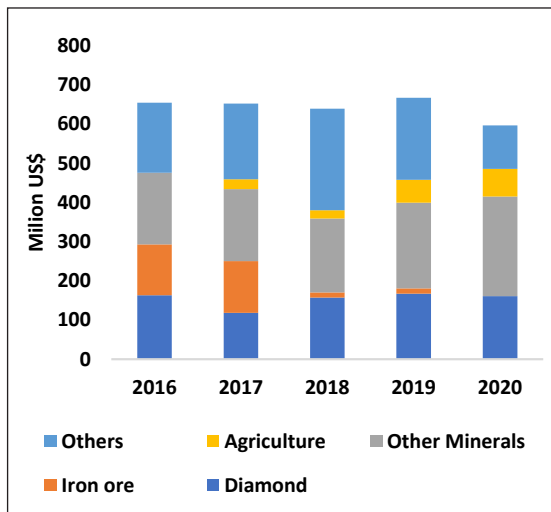
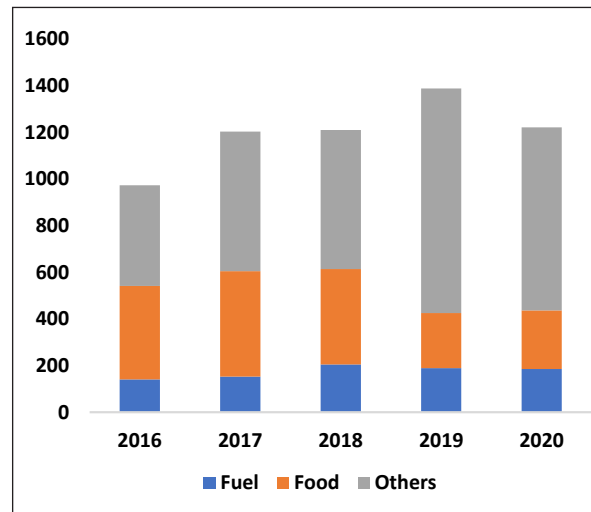
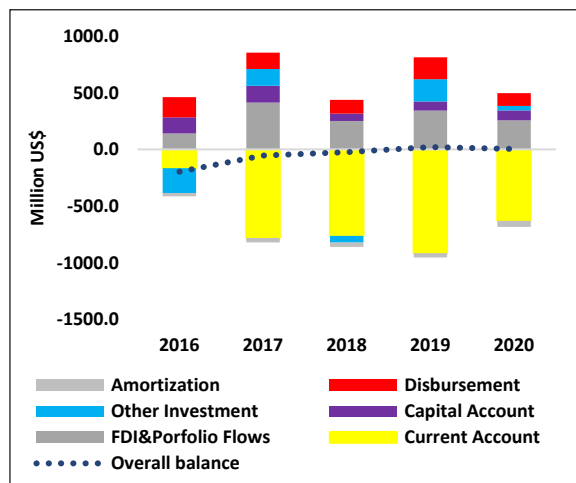
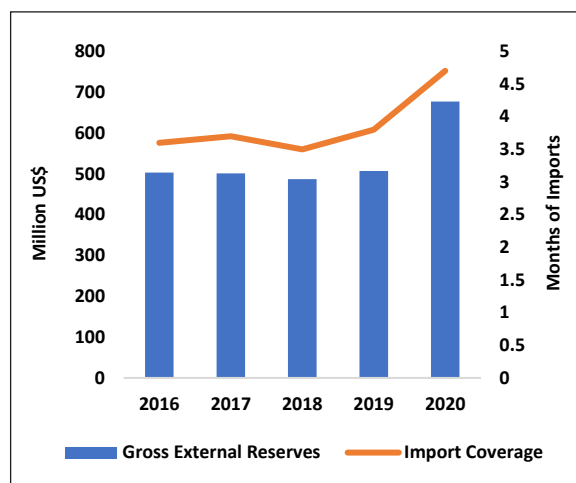


Figure 7: Selected Merchandise Imports, 2016–20



Source: Sierra Leone authorities, IMF and World Bank staff estimates.

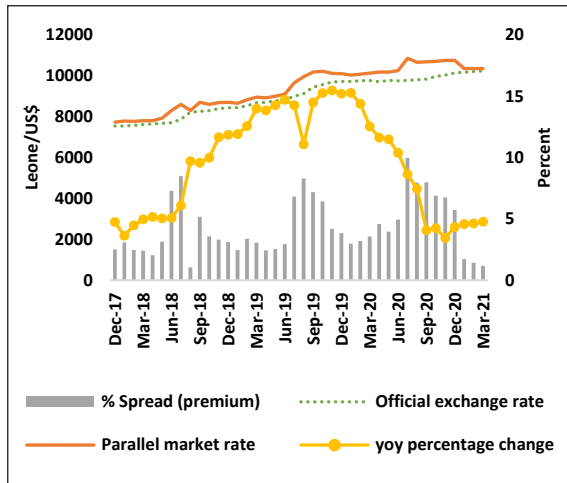
Figure 8: Current Account and Sources of Financing, 2016–20**Figure 9:** Reserve Coverage, 2016–20

Source: Sierra Leone authorities, IMF and World Bank staff estimates.

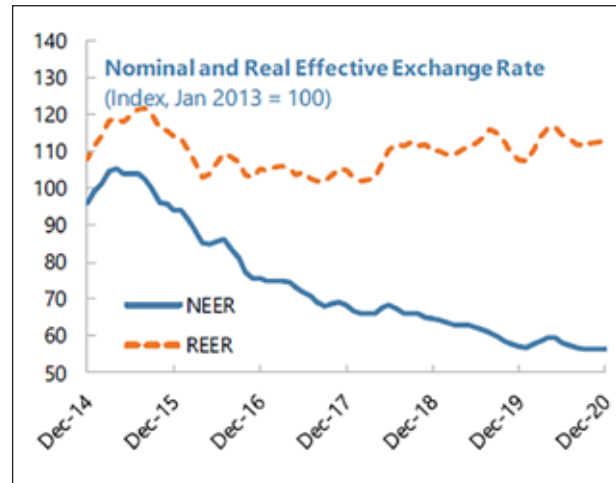
The net inflow to the capital and financial account helped finance the current account deficit (CAD) in 2020, although it fell by 5.9 percent to 9.1 percent of GDP (US\$384.5 million). Foreign direct investment (FDI) and portfolio inflows declined by 2.2 pp to 6.1 percent of GDP (US\$256.9 million) due to the adverse impact of the pandemic on the mining sector, aggravated by the continuing arbitration between Government and SL Mining. However, as project grants went up, capital transfers increased by 0.2 pp to 2.1 percent of GDP (US\$87.5 million). Gross international reserves rose from US\$507 million in 2019 (3.8 months of imports) to US\$677 million (4.7 months of imports) thanks to increased budgetary and balance of payments support from development partners.

The leone in 2020 was relatively stable against the US dollar, depreciating by 4.4 percent (year-on-year [yoy]) compared to 15.3 percent in 2019 (Figure 10). Compared to 2017–19, exchange rate depreciation moderated considerably, supported by lower import demand, Bank of Sierra Leone (BSL) interventions to facilitate the import of essential commodities (food and fuel), and administrative measures to limit uncertainty and prevent market pressures from destabilizing the already-thin market. A relatively stable exchange rate has been crucial in moderating inflation, which otherwise would likely have been higher and had an even larger negative impact on the welfare of households. The premium between the official and parallel market exchange rates from 3.8 percent in December 2019 widened to 5.7 percent (yoy) as restrictions imposed by the BSL in 2019/20 pushed foreign exchange (forex) transactions to the parallel market, reflecting difficulty in obtaining forex from official channels (banks and forex bureaus). Responding to parallel market pressures on the exchange rate, the BSL banned street trading of forex, with stiff penalties for violations of the ban. The ban followed two directives in March 2020, one restricting offshore trading of forex by nongovernmental organizations, and the other prohibiting both foreign currency-denominated contracts and transfers between foreign currency accounts. The BSL also capped forex accounts at US\$10,000; the cap was lifted in December 2020 when banks experienced cash shortages due to unexpected demand. BSL suspected that high parallel market premiums could be diverting transactions to the parallel market and starving the banking system of needed cash. However, between December 2019 and December 2020 the yoy cash holdings of banks remained stable (Table 2), which suggests that the cash shortage in December 2020 was a cyclical event.

The exchange rate was relatively stable in the first quarter (Q1) of 2021, depreciating by 4.8 percent (yoy) in March 2021 as imports remained subdued. The premium between official and parallel market exchange rates narrowed

Figure 10: Exchange Rate Developments, 2017–21

Source: BSL data; World Bank staff estimates

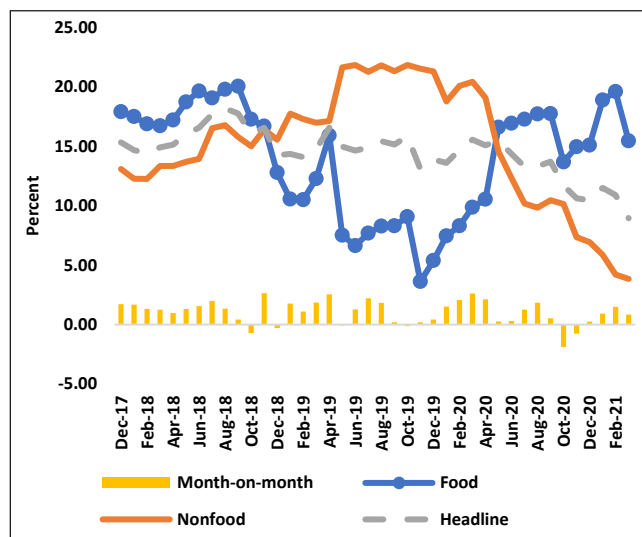
Figure 11: Nominal and Real Effective Exchange Rates, 2014–20

Source: IMF staff report No. 21/58 (2021).

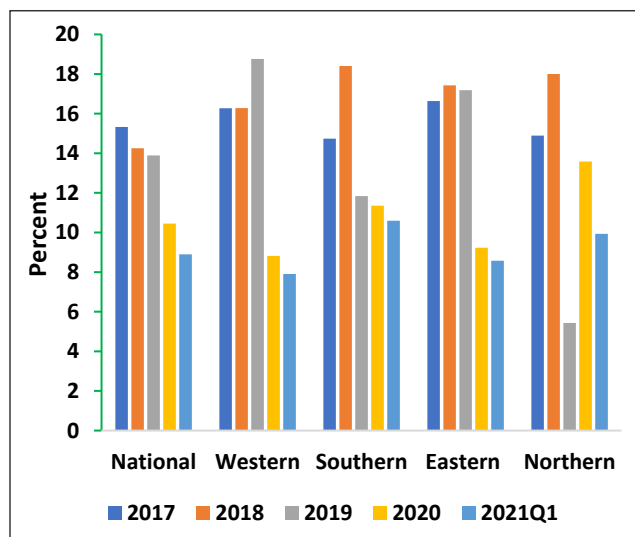
to 1.2 percent as bank forex transactions increased after the BSL removed some restrictions. Sierra Leone's real effective exchange rate (REER) has appreciated in recent years as high inflation outpaced nominal depreciation (Figure 6). The nominal effective exchange rate has depreciated in recent years but was relatively stable during 2020. The IMF (2020) estimates that the country's REER is overvalued by 20–30 percent under certain assumptions, such as interest differentials between external assets and liabilities, the exchange rate adjustment affecting both net exports and the net international investment position, and comparing debt discounted for the future compared to its level today. The overvaluation is consistent with historic high CADs and reflects the considerable appreciation of the leone to the US dollar in real terms in recent years, as inflation outpaced nominal depreciation. To reduce the REER overvaluation and improve competitiveness, the country should undertake a robust mix of structural reforms focused on identifying new export markets, improving the business environment, increasing productivity, and boosting competitiveness.

1.6. Monetary Policy and Financial Sector Developments

Inflationary pressures eased considerably in 2020 mainly because nonfood inflation was slashed by lower demand for nonfood items during the pandemic. Average inflation fell from 14.8 percent in 2019 to 13.5 percent while end-period inflation (yoy) declined from 13.9 to 10.5 percent, the lowest level since 2016. Average month-on-month inflation also fell from 1.3 percent in 2019 to 0.8 percent, indicating a slowdown in the rate of price increases. Unlike the trend observed in 2020, nonfood inflation was principally responsible for the drop in headline inflation, which went from a peak of 21.3 percent in December 2019 down to 6.9 percent in December 2020 as demand fell for such major nonfood items as health, transportation, hotels and restaurants, and alcoholic beverages. After holding at 19.8 percent in 2020 Q1, nonfood inflation fell continuously from April through December because uncertainty about the course of the pandemic subdued demand (Figure 12). Food inflation, which had reached a four-year low of 5.4 percent in December 2019, had by December 2020 surged to 18.9 percent as food supply constraints precipitated disruptions in global supply chains and the government imposed domestic restrictions to mitigate the impact of the pandemic, among them lockdowns, closing of land borders, and suspension of *lumas* (weekly open-air markets in rural areas). This high food price inflation was keenly felt by households. Both the first and the second rounds of the World Bank's COVID-19 Impact Monitoring Survey (July 2020 and November/December) found that main concern of households was the increase in prices.

Figure 12: Consumer Price Inflation, 2017–21

Source: Statistics Sierra Leone data, World Bank staff estimates.

Figure 13: Regional Inflation Rates, 2017–21

There is wide disparity in inflation rates throughout the country (Figure 13). Inflation declined in all regions except in the Northern province, where mainly because of food price pressures it jumped from 5.4 percent in 2019 to 13.6 percent. The national inflation rate fell below the estimates for the Southern and Northern provinces, where prices were higher, but was above the rates for the West and East, where inflation fell by almost 50 percent due mainly to lower nonfood costs.

Core inflation, which excludes highly volatile food and energy prices, also declined from 24.3 percent in December 2019 to 9.6 percent in December 2020, suggesting that inflation is now trending down. The plunge in core inflation was driven mainly by lower prices for alcoholic beverages, health, transport, and hostels and restaurants; domestic public health measures to prevent the spread of the pandemic weakened demand (Figure 14). By December 2020 inflation rates for alcoholic beverages, health, transport, and hotels and restaurants had fallen below the core rate. The fact that core inflation had gone down to single digits, below the food and headline rates, indicated that inflationary pressure had softened during 2020. Energy prices had also become deflationary by December 2020, mainly because of the contraction of economic activities and relatively low global crude oil prices.

Inflation pressures continued to moderate in Q1 of 2021 as the rate of increase in food and nonfood prices slowed. Headline inflation fell to single digits, 8.9 percent, in March 2021 for the first time since 2016, as demand for nonfood items fell and food supply constraints eased. Food inflation fell from 18.9 percent in December 2020 to 15.5 percent in March thanks to increased supplies of rice, maize, fish, fruit, and vegetables in local markets. To support imports of essential commodities, the authorities set up a US\$500 million special credit facility for businesses which seems to have helped both to increase supplies and lower food price pressures. However, food inflation is still far above where it was in March 2020 (9.8 percent); the impact of COVID-19 on food prices may still be playing out. This is likely to have adverse distributional consequences and possibly contribute to reversing recent progress in poverty reduction, because food items have a large share in the consumption basket of poor households and food poverty is the major factor in overall poverty. The 2018 household survey estimated a national poverty rate of 56.8 percent mainly because of a food poverty rate of 54.5 percent, which is how much of the household budget must go to buy a sufficient amount of the foods that make up the local diet). Nonfood inflation also fell to 3.8 percent, far below its pre-COVID level of 20.4 percent.

Figure 14: Consumer Prices, Selected Consumption Purposes, 2018–21

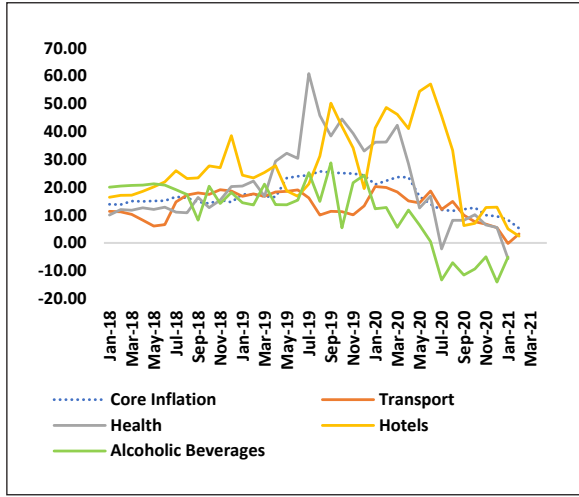
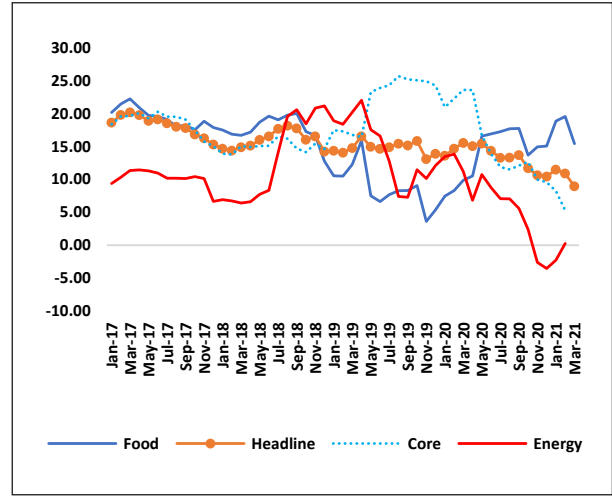


Figure 15: Core Inflation Compared to Food, Energy and Headline Inflation, 2017–21



Source: Statistics Sierra Leone data, World Bank staff estimates

The continued downward pressure on nonfood prices in spite of higher fuel and transport prices in 2021 Q1 indicates that recovery from the pandemic is barely beginning as demand remains subdued—another indicator that household disposable incomes are stretched). Core inflation held at single digits in Q1 even as transport and energy prices started rising along with global crude oil prices. In Q1 inflation fell in all regions except the Western area (Figure 10). Estimates for the Northern and Southern regions were above the national estimate, and those for the East and West were below.

Figure 16: Interest Rate Trends, 2017–21, Percent

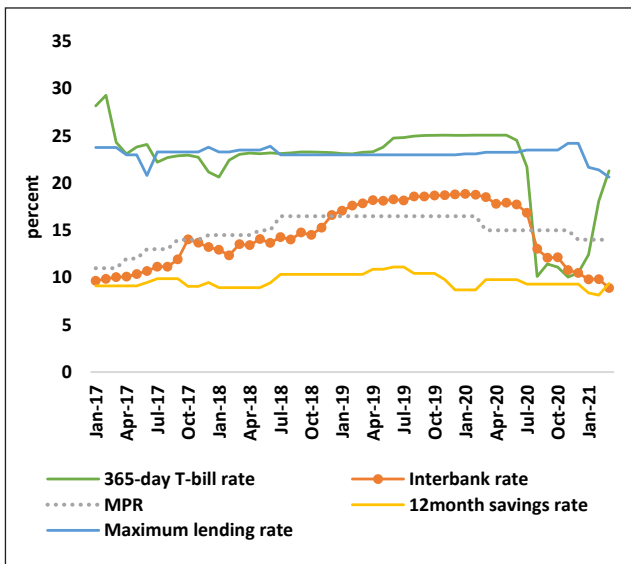
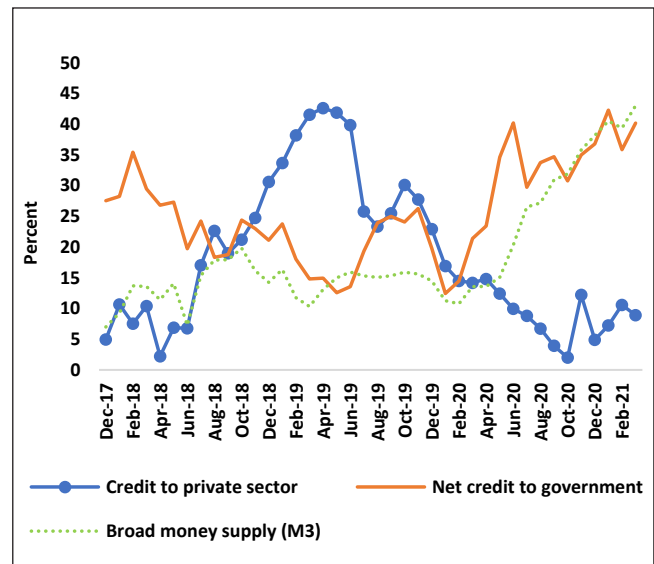


Figure 17: Key Monetary Aggregates, 2017–21, Percent



Source: BSL data, World Bank staff estimates.

As inflation moderated in 2020, the BSL gradually eased its policy stance. It reduced its monetary policy rate (MPR) by 100 basis points to 14.0 percent in December 2020 to support the slight pickup of economic activities that had begun in the second half of 2020, representing the second time it lowered the rate in 2020. In March 2018, it had cut the MPR by 150 basis points to 15 percent to soften the impact of the COVID-19 shock on the economy. The BSL also sliced the Standing Lending Facility rate from 19.0 percent in March 2020 to 17.0 percent in December and cut the Standing Deposit Facility rate from 10.0 percent to 8.0 percent. Some key money market interest rates declined as monetary conditions eased, but the savings and lending rates increased. Interest rates on treasury securities also moved down, with the 365-day T-bill rate down from 25.1 percent a year earlier to 10.5 percent in December 2020 as increased donor inflows eased the government's borrowing needs (Figure 17). The interbank rate also fell from 18.8 to 10.5 percent, falling below the MPR for the first time since January 2019 as banking system liquidity improved considerably. However, the 12-month saving rate increased from 8.7 to 9.3 percent and the maximum lending rate went up from 22.9 to 24.0 percent, the wide interest rate spread apparently an expression of continued bank perceptions of high lending risks.

The loose policy stance of the BSL has resulted in rapid expansion of key monetary aggregates (Figure 12). Broad money (M3) grew by 38.2 percent (yoy) compared to 14.5 percent in 2019, based on sharp increases in net foreign assets (NFA) and net domestic assets (NDA). NFA expanded by 49.4 percent in 2020 from 10.0 percent due mainly to the accumulation of gross external reserves as budgetary and balance of payment support from development partners rose. NDA increased from 16.1 to 34.4 percent driven by net credit to both the government and the private sector. Despite exceptional budgetary support from development partners to help the country respond to the pandemic, net credit to government grew from 19.8 percent in 2019 to 36.8 percent because of additional borrowing to close the financing gap. Credit to the private sector grew by 4.9 percent (down from 22.9 percent in 2019) helped by BSL creation of a Le500 billion special credit facility to cushion the effect of the contraction of real sector activities, especially commerce and trade. The increased share of credit to government and high lending rates worsens the pre-pandemic crowding out of credit to the private sector. On the liabilities side, reserve money grew by 54.8 percent in December 2020 yoy (up from 12.4 percent in 2019) driven mainly by a 46 percent increase in currency in circulation. Despite the increase in currency, in December some banks had difficulty meeting unexpected demand for cash in December.

Figure 18: Composition of Private Credit, 2017–20, Leones

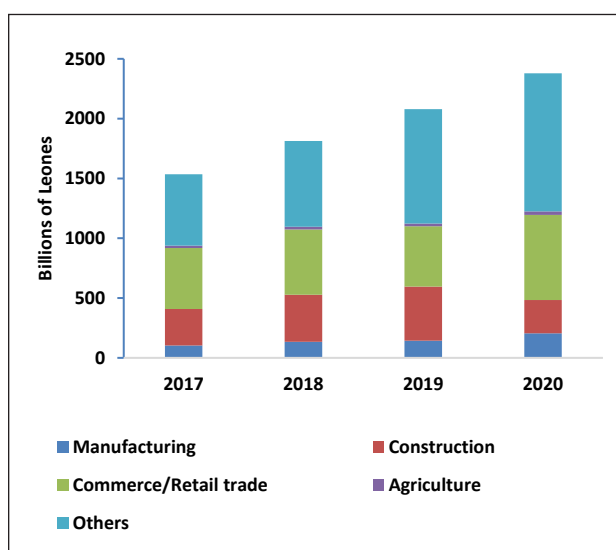
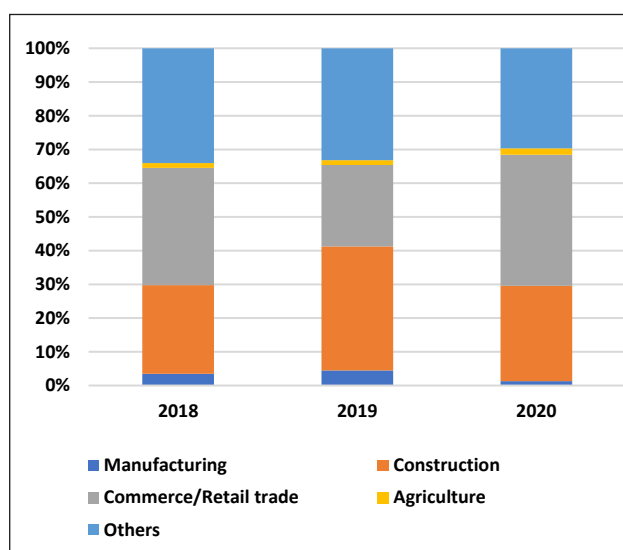


Figure 19: Sectoral Distribution of NPLs, 2018–20, Percent



Source: BSL data, World Bank staff estimates.

Considering the projections of a solid global economic recovery and the domestic fall in food and nonfood prices in 2021 Q1, the BSL kept the MPR at 14.0 percent at its quarterly meeting on March 25, 2021. Both the interbank rate and the maximum lending rate went down in Q1 consistent with the lowered MPR and a more liquid money market. However, the spread between lending and savings remained very wide, stressing the need for continuation of macrofinancial reforms to reduce risk to financial systems and improve financial intermediation. The 1-year T-bill rate started upward in Q1 as government borrowing from money markets surged, which could reverse the recent downward trend of key interest rates. As T-bill issues continue to rise, their rate may continue to diverge from the MPR path. Other things being equal, higher T-bill yields would increase demand from banks, crowd-out private investment and thus offset the effect of monetary easing.

Sierra Leone's financial system was relatively steady in 2020 (Table 2). The capital adequacy ratio (regulatory capital-to-risk-weighted assets), which shows the loss absorption capacity of banks, declined by 1.6 pp (yoy) to 40.1 percent in 2020 but is still far above the 15.0 percent statutory minimum. The decline in the capital adequacy ratio in 2020 was a response to the increase of assets relative to equity. The ratio of nonperforming loans (NPLs) to gross loans improved from 16.9 to 12.6 percent in 2020 as the government paid down domestic arrears to contractors and the refinancing of existing credit facilities by customers wanting to access the BSL's special credit facility where interest rates were relatively low.³ However, NPLs increased in the commerce/retail trade sector, which had been deeply affected by the pandemic (Figure 19). All banks recorded pre-tax profits both return on assets (3 percent) and return on equity (15 percent) above the averages for SSA, despite slight declines. The liquid to total assets ratio increased by 5.0 pp to 73.4 percent because commercial banks prefer short-term securities, such as T-bills, over long-term investments which have higher lending risks. The ratio of foreign currency to total deposits fell by 5.9 pp to 31.1 percent in 2020 mainly because of the BSL forex restrictions imposed to cushion the exchange rate. The aggregate net foreign currency open position to capital increased to -12.8 percent in 2020, driven by forex pressures. The total loans to deposits ratio went down 3.9 pp to 21.1 percent as bank deposits increased, a sign of general improvement in banking system liquidity. As indicated above, gross loans and advances increased by 4.9 percent in 2020 partly because of the BSL's US\$50 million Special Credit Facility. Commerce/retail trade and construction account for the largest share of credit to the private sector (Figure 18). However, the share of credit to construction dropped almost 40 percent during 2020 and largely explains the slowdown in private credit growth as economic activities contracted. Despite growing by 25.1 percent (year), agriculture received the least credit to a proportion of gross loans and advances (1.2 percent in 2020), having increased by only 0.1 pp (Figure 13). Credit to manufacturing and commerce improved in 2020 thanks to the BSL support.

1.7. Evolution of COVID-19 in Sierra Leone

Sierra Leone recorded its first case of COVID-19 on March 30, 2020. Having learned from its experience during the Ebola epidemic, the country swiftly activated the Public Health National Emergency Operation Center at level 2 and declared a state of public emergency on March 24, 2020. The government, in consultation with development partners, drew up a COVID-19 Preparedness and Response Plan even before the first case was reported. It also drafted a Quick Action Economic Response Plan (QAERP) to continue to respond to the impact of the COVID-19 pandemic on the economy and livelihoods, especially the hardest-hit sectors and the most vulnerable groups. The legislature approved a supplementary budget in July 2020 followed by the 2021 budget in November 2020 to add spending on the health sector and provide support to vulnerable households in line with the QAERP objectives. A high-level governance structure, the National COVID-19 Emergency Response Center (NaCOVERC), was established to provide strategic leadership for responding to the pandemic. National and District Emergency Operation Centers were reactivated to monitor the epidemiology and contain the spread of

³ The NPL ratio, had been on a declining trend between 2017 and 2019, but climbed to 18.5 percent in September (from 16.8 percent in December 2019) driven by COVID-19-related disruptions to activity in the hotels, transport, education and commerce sectors in the economy (IMF, 2021).

Table 2: Selected Financial Soundness Indicators, 2017–20, Percent unless Otherwise Stated

	2017	2018	2019	2020
Capital adequacy¹	34.2	38.4	41.7	40.1
Asset quality				
Nonperforming loans to total gross loans	14.6	12.7	16.8	12.7
Nonperforming loans (net of provisions) to capital	12.1	9.9	7.2	4.3
Earnings and profitability				
Return on assets	5.3	6.1	6.1	6.1
Return on equity	25.6	27.3	26.1	25.7
Liquidity				
Net loans to total deposits	19.2	27.2	25.0	21.1
Liquid assets to total assets	66.9	67.9	68.4	73.4
Share of foreign exchange deposits in total deposits	37.1	38.3	37.0	31.1
Net open position in foreign exchange to capital	-14.4	-12.8	-1.8	-12.2
Memo: Leone Billion				
Total assets	7,433	8,549	9,498	13,076
Cash	408	482	433	433
Total deposit	5,275	6,111	6,759	8,984
Gross loans	1,497	1,773	2,055	2,379

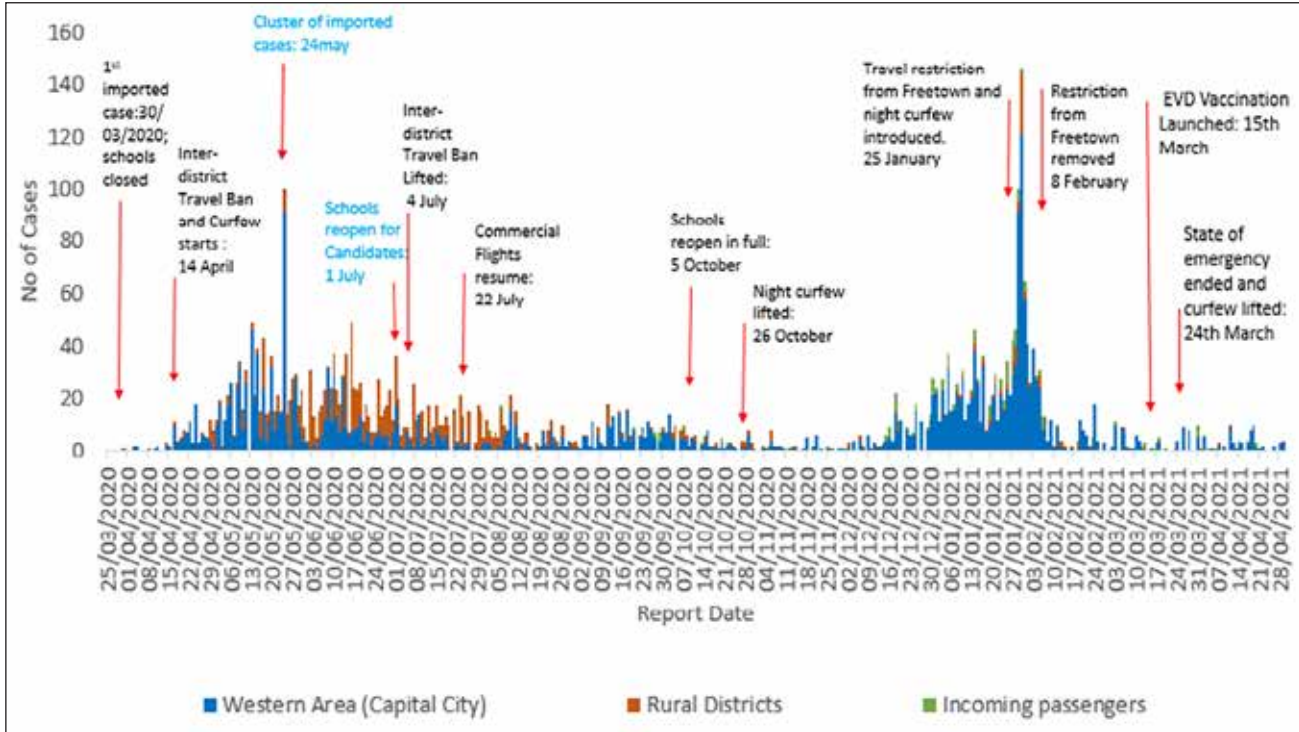
Source: Bank of Sierra Leone data, World Bank staff estimates.

Note: ¹ Capital requirement over risk-weighted assets (solvency ratio)

the pandemic. Recognizing the urgent need for deployment and equitable distribution of a COVID-19 vaccine, the authorities drew up a comprehensive National COVID-19 Vaccine Deployment Plan.

As of April 29, 2021, Sierra Leone had reported 4,053 COVID-19 cases. With 154,419 tests conducted, the test positivity rate was 20.14 per 1,000 population. The 79 deaths bring the case fatality rate (CFR) to 1.9 percent (excluding community deaths). More males (59 percent) have been infected than females (41 percent). While the median age of all positive cases is 35, those above 45 are disproportionately affected; they constitute 71 percent of all the cases. The average age of those who died was 61.5 and at 12.4 percent the CFR of those older than 60 is much higher than for other age groups. Health workers account for 6.2 percent of confirmed cases (250), making it the profession most affected by the pandemic. Among health workers who tested positive, more women (154) were infected than men (96). From December 2020 to February 2021, Sierra Leone experienced an exponential rise in confirmed COVID-19 cases wherein positive cases from routine testing and outbound passengers accounted for more than 95 percent of confirmed positive cases; this indicated active community transmission and the second wave. From mid-February 2021 on, the incidence of COVID-19 dropped dramatically (Figure 20). To date, there is no COVID-19 variants reported in Sierra Leone.

Through NaCOVERC, the authorities have put in place the necessary political and technical structures to carry out the COVID-19 vaccination successfully through the coordination mechanism for COVID-19 emergency response. A COVID-19 Vaccine Technical Working Group (COVID-19 Vac TWG) has been created to provide technical support and enable expeditious decision-making for all aspects of the COVID-19 vaccine rollout. The COVID-19 Vac TWG is expected to leverage for strategic guidance such governance mechanisms as the Immunization Inter-agency Coordination Committee, the National Immunization Technical Advisory Group, and the Technical Coordination Committee. The country received its first batch of AstraZeneca vaccines from the COVAX Facility on March 8, 2021 and launched its vaccination program on March 15. It has been rolling out nationwide since March 22. As of April 30, 55,083 people had received their first dose and 6,024 their

Figure 20: Daily COVID-19 cases, March 2020 to April 2021

Source: MoHS. COVID-19 SitRep No. 395. April 29, 2021 edition

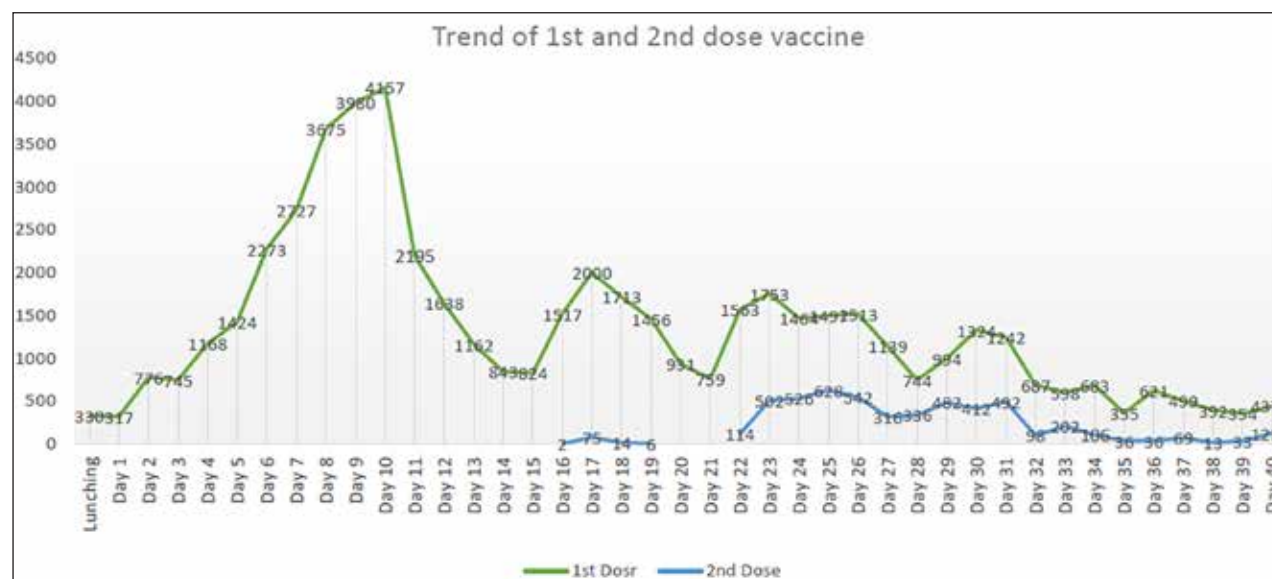
Note: Rural districts refer to the 14 districts other than the Western Urban and Rural Areas.

second. Among those vaccinated, 51 percent are males and 49 percent are females. Figure 16 shows vaccination progress. There was not much progress during the Easter holiday (Days 11–14) and progress since has been slow due to lack of funding for COVID-19 vaccination.

1.8. Medium-term Economic Outlook

After contracting by 2.2 percent last year due to the COVID-19 pandemic, the economy is expected to rebound over the medium term; economic growth is projected to reach 4.0 percent by 2023. Economic growth is expected to average 3.6 percent for 2021–23, with upticks in both domestic and external demand as the pandemic recedes (Table 1). On the demand side, economic growth is expected to be driven by investments, especially in mining and agriculture, and private consumption; it is expected that supply-side growth will be the result of recovery in agriculture, industry, and services. The outlook assumes that iron ore production will resume in 2021 and there will be large-scale investments in agriculture as a result of the new government policy of promoting private sector participation. However, new COVID-19 strains have caused a resurgence of the pandemic (second and third waves in many countries), which could deter recovery of external demand and prolong disruptions in supply chains, slowing the pace of recovery especially for services. The projected economic outlook for Sierra Leone is therefore subject to uncertainty about the course of the pandemic.

Agriculture will contribute about half of all real sector growth over the medium term. On average, the sector is expected to contribute 1.8 pp (50 percent) to medium-term economic growth because of a shift in government policy to promote private sector participation in agriculture and to increase investments in cash crops. Also, recent fisheries reforms—a new law and regulations and fisheries management plans—are expected

Figure 21: Progress on COVID-19 Vaccination Through May 1, 2021.

Source: MoHS. COVID-19 Vaccination Situation Report. Day 40: May 1, 2021 edition

to boost fish production especially by artisanal fishers. The service sector is expected to contribute about one-third (1.2 pp) to medium-term economic growth once helped by a recovery of trade and tourism from the COVID-19 pandemic. Trade, tourism, transport, and communication are expected to improve significantly over the medium term as the COVID-19 pandemic recedes and domestic restrictions are lifted. The government's post-pandemic recovery measures, especially in health and education, are expected to boost public services. Industry is expected to contribute 0.4 pp to medium-term growth as mining recovers with the resumption of iron ore production. Construction is also expected improve gradually as public investment picks up and domestically funded infrastructure projects resume.

On the demand side, it is expected that medium-term economic growth will be driven mainly by final consumption (private and public) and gross investment. Final consumption is expected to contribute 5.5 pp to medium-term growth, with private consumption recovering steadily as agriculture and imports rebound and households increase their spending on essential goods. Public consumption is also expected to improve over the medium-term as the government engages in post-pandemic recovery efforts. Gross investment is expected to contribute 3.2 pp to medium-term growth based on expected private investment in mining and agriculture and the resumption of public projects. The contribution of net exports to growth is expected to be negative through 2023, subtracting -10.5 percent from growth, due mainly to heavy import demand as the global economy recovers.

Inflationary pressure is expected to moderate over the medium term, with average inflation projected to decline to single digits. Ramped-up domestic food production through 2023 as agriculture rebounds is expected to help dampen domestic inflationary pressures and keep headline inflation on a downward path. Stable exchange rates in combination with prudent monetary policy are also expected to ease inflationary pressures over the medium term.

By 2023 the fiscal deficit should have declined gradually to 2.4 percent of GDP as COVID-19-related spending is reduced and more revenue is collected as the economy recovers. Careful control of spending, sound public financial management (PFM), and resumption of the IMF Extended Credit Facility (ECF) are expected to keep government spending within budget. Also, the continuation of public sector payroll reforms

like biometric registration and data-matching and verification is expected to help contain the wage bill and reduce spending pressures. In addition, more attention to state-owned enterprises is expected to both curtail unnecessary spending and lower fiscal risks. Revenue is expected to improve over the medium term as the economy recovers and reforms. The authorities plan to move expeditiously on such revenue mobilization reforms as integration of customs and tax processes, introduction of electronic cash registers, and reinforcing tax assessments and audits to limit tax arrears.

Public debt is expected to decline gradually over the medium term as the fiscal deficit narrows in line with the commitment of the authorities to resume fiscal consolidation efforts. Raising domestic revenues to pre-COVID levels would help to reduce the government's borrowing needs, free up credit to the private sector, and slow the buildup of public debt. Robust economic growth, sound PFM, and prudent domestic and external borrowing policies will be critical to effective debt management and to lowering the risk of debt distress from the current "high" to "moderate."

External sector performance is expected to remain unimpressive due mainly to sluggish recovery of exports. Exports are likely to improve only gradually; mineral exports, which comprise about 70 percent of the country's total export, will contribute more as the global economy recovers and demand for commodities improves. However, import growth is projected to outpace exports as aggregate demand rebounds, keeping the trade and current accounts in deficit. As a result, over the medium term the CAD will continue to be substantial at 13.6 percent of GDP. The deficit is expected to be financed over the medium-term by inflows to the financial account, especially FDI in mining, which will help stabilize the exchange rate and maintain reserve coverage of over 3 months of imports.

1.9 Risks to the outlook

Downside risks to the outlook can be categorized in two parts: COVID-19 related risks and domestic and external macroeconomic risks. COVID-19 risks reflect limited access to vaccines including slow pace of the government's vaccination program and a resurgence of the pandemic causing second and third waves in many parts of the world. The main domestic macroeconomic risks are continued high domestic payment arrears, slower than expected revenues, and rapid growth in monetary aggregates, including the associated inflationary risks and financial sector weaknesses. The main external risks relate to the course lower than expected FDI and donor inflows, and weaker than expected exports.

COVID-19 infection rates have declined significantly but risks remain high. The country is not out of the woods yet and infections could recur as domestic restrictions are progressively lifted. The new virus strains could spillover from the rest of the world and cause a second wave of infections, which could be amplified by difficulties in rolling out vaccine, dampening the medium-term economic outlook. A sustained rise in new COVID-19 infections and imposition of stricter containment measures would hold back the recovery of domestic demand. Limited access to vaccines and slow pace of the government's vaccination program could limit the extent to which restrictions are lifted, slowing the pace of the recovery.

Although the government adopted a comprehensive arrears clearance strategy in July 2020 and made payments on the existing stock of about 1.5 percent of GDP, domestic payment arrears are still estimated at Le2.6 trillion, 6.5 percent of GDP. With fiscal space already constrained by the pandemic, clearing the large stock of arrears weighs heavily on public finances and could impede post-COVID fiscal consolidation efforts. Execution of the national budget could be challenged by pressures to clear arrears, resulting in fiscal slippage. At the same time, persistent arrears to private contractors could also have a dampening effect on economic activity

If revenue reforms lag and tax relief measures continue while spending pressures persist, the result could be fiscal slippages. The baseline assumption is that as the pandemic recedes the government will resume

fiscal consolidation. However, deficits could widen if fiscal consolidation stalls and revenues remain depressed. The resulting expansion of government borrowing could crowd out credit to the private sector with adverse consequences for domestic investment and growth. In addition, with the country at high risk of debt distress, higher future debt service payments could depress growth if revenues disappoint. Moreover, debt servicing capacity pressures might arise from shocks to exports and growth, as well as from depreciation of the leone since so much public debt is external.

In the financial sector, NPLs are still above the 10 percent prudential limit despite declining in 2020.

Over the medium term, high NPLs—in a risky lending environment featuring macroeconomic imbalances and huge arrears—could be a drag on growth. In addition, high lending rates and slow growth of credit to the private sector, including crowding out of private credit could negatively impact financial sector stability and economic growth. Although rapid expansion of monetary aggregates has not yet translated into inflationary pressures, it remains a significant risk of inflation.

On the external front, demand could disappoint, slowing exports and growth and widening the already large CAD.

In addition, the country's economy is vulnerable to the volatility of international commodity prices due to its dependence on fuel and food imports and on mineral exports. On the other hand, lower FDI inflows could also limit CAD financing, requiring a drawdown of reserves, thus adding pressure on the exchange rate. Also, the unexpectedly high increase in imports of food and essential goods and a projected decrease in development partner support could result in a balance of payments financing gap. Further nominal exchange rate depreciation could complicate the authorities' efforts at disinflation and poverty reduction and real exchange overvaluation could undermine competitiveness and slow medium-term growth.

1.10. Policy Priorities

The COVID-19 pandemic has worsened Sierra Leone's longstanding social and economic challenges.

Economic growth and incomes fell in 2020 following disruptions in supply chains, travel restrictions, border closures, and lower demand in advanced economies and emerging markets; the result was that gains in poverty reduction were reversed. Immediate and medium-term policy priorities should therefore focus on building up the response to the COVID-19 pandemic by rolling out a strong vaccination program and carrying out broad-based macroeconomic reforms to support a quick economic recovery.

The projected economic recovery can be pro-poor, especially if expenditure can be further reprioritized toward the most vulnerable groups of the population.

Cross-country evidence suggests that economic growth is good for the poor (Dollar and Kraay, 2002). In particular, past episodes of rapid growth in Sub-Saharan Africa led to noticeable improvements in household welfare (Moser and Ichida, 2001). For instance, a 10 percent increase in per capita GDP is associated with a 1 percent increase in life expectancy, a 3-4 percent decline in infant mortality rates, and a 3-4 percent increase in the rate of gross primary school enrollment. The main channel through which economic growth reduces poverty and improves household welfare is access to basic public services, such as education, health care and social safety nets. For the case of Sierra Leone, the post-Ebola recovery has been accompanied by one of the strongest reductions in poverty in Sierra Leone's history. Between 2011 and 2018, the national poverty rate declined by 5.6 percentage points to 56.8 percent. For the recovery to be pro-poor and pro-welfare, fiscal policy should balance the risks from growing debt with those from premature consolidation. Given the limited fiscal space, policy support should focus on expenditure reprioritization toward social sectors to ensure wider access to basic public services, especially vaccinations. This reprioritization effort should be grounded on credible medium-term fiscal frameworks.

To prevent a severe second wave from disrupting economic recovery over the medium term, the authorities should launch a robust vaccination program that targets first inoculation of those most at risk (health workers, persons aged 70 and over, and those with comorbidities) and then all adults.

The authorities have developed a National Vaccine Development Plan, but it targets only 20 percent of adults (health care workers, persons aged 70 years and those aged between 40 and 70). For a robust program, the country needs to extend vaccine coverage to 55 percent by year end-2023 to treat everyone 18 and older. GAVI AstraZeneca doses for the first 4 percent of the population have been received and vaccination has commenced. The country also has 200,000 doses of SinoPharm vaccines, which are being used to vaccinate security personnel and other government officials. However, it is not clear when the vaccines for other 16% of the population for whom the Plan targets coverage will be delivered given the relative scarcity of vaccine as richer nations scramble for supplies. Sierra Leone's access could depend on its strategic relationship with key development partners and vaccine-producing nations. The country should strengthen alliances with development partners and support multilateral-led approaches by the African Union to increase its access to vaccines. Rather than create a parallel structure, to roll out a vaccine program quickly the authorities should rely on such existing structures for immunization such as the Vaccine Technical Working Group and District Health Information System.⁴

Addressing macroeconomic weaknesses and implementing reforms to mitigate their risks to growth will be critical for a sustained inclusive economic recovery that supports poverty reduction. These are recommendations for macroeconomic stabilization and a quick recovery:

- **The authorities should ensure timely return to fiscal consolidation and reaffirm the fiscal anchor by phasing out COVID-19 support measures.** Fiscal measures adopted to address the pandemic must be gradually phased out, including unplanned health spending and stimulus packages targeting the private sector and households. The government provided tax relief to businesses by suspending taxes on essential goods and services due the pandemic but now needs to set a clear timeline for reinstating the taxes and other discretionary revenue measures. To strengthen fiscal sustainability, the authorities should quickly draw up a roadmap for fiscal consolidation, anchored by robust revenue mobilization and expenditure rationalization reforms, to return to the pre-pandemic (2018/19) fiscal path.
- **The authorities should balance fiscal consolidation with the need to safeguard expenditures that help to strengthen the health and education sectors and sustain the COVID-19 health response, protect livelihoods and support the post-pandemic economic recovery.** Health spending should focus on implementing a strong rollout of vaccines and investments to strengthen the resilience of the health. The authorities should invest in water and sanitation facilities including other measures to prevent COVID-19 transmission in schools and ensure that students continue to attend classes. Ongoing investments to improve teacher management and increase pupil enrollment must be sustained. We commend the government's recent efforts to expand the coverage of the social safety net scheme to cover 70,000 households. The social safety nets program should be strengthened through better targeting of beneficiaries and linkage to productive activities and social programs. Support to small and medium-sized enterprises through small grants for working capital and production will be critical for safeguarding jobs and supporting economic recovery.
- **On the revenue front, there is now an urgent need to broaden the tax base, rationalize tax administration, and streamline duty and tax waivers to loosen the already tight fiscal space that has been seriously strained by the pandemic.** The World Bank's 2020 Tax System Review estimated the country's tax gap at 4.5 percent of GDP, caused mainly by weaknesses in taxpayer registration; compliance management, especially audits; and arrears management. This calls for urgently for building the capacity of the National Revenue Authority by revising the NRA Act to create a modern institution that is mandated to administer new taxes transparently, effectively, and efficiently. The authorities also need to focus on expanding the tax base especially for excise duties and goods and services tax through modernization and automation, such as e electronic cash registers, and an integrated of the tax administration system. To reduce excessive duty

⁴To link all real-time COVID-19 related vaccine data collection reporting as well as vaccine safety monitoring systems

waivers and exemptions, the authorities should put in place a transparent policy for dealing with exemptions, and tax exemptions should be consolidated in the Revenue Code and thus be subject to legislative review and phasing out of discretionary exemptions. There should be an established process for assessing fiscal implication of tax exemptions and tax expenditure reports should be made public.

- **Expenditure rationalization should focus on balancing priority spending on health, food security, and labor-intensive public works (in line with COVID-19 response objectives) with fiscal and debt sustainability objectives.** The authorities focus should be on keeping expenditures within budgets by reducing nonessential expenditure by strengthening ongoing payroll and public investment management reforms. Government should continue to audit payroll through data-matching with MDAs and compulsory biometric registration to eliminate ghost workers. The authorities should make workforce planning for all agencies to prevent overstaff. Public investment management efficiency should be improved through strong project appraisal and selection and sound procurement and contract management to improve value for money and prevent cost overruns.
- **Keeping debt sustainable will require sustained fiscal adjustment over the medium term, underpinned by tighter management of public finances, prioritizing expenditures effectively, and redoubling revenue mobilization efforts.** However, the pace of fiscal adjustments should be consistent with medium-term economic recovery, allowing for adequate social and priority spending to support the country's development objectives. Rebalancing expensive and short-maturity domestic debt is critical for reducing the fiscal pressures associated with debt service obligations. To improve debt management and strengthen fiscal sustainability the authorities are implementing the three (3) performance policy actions (PPAs) under the World Bank's sustainable development financing framework (SDFP).⁵ In particular, the authorities maintained a zero ceiling on nonconcessional borrowing throughout 2020 to help reduce debt vulnerabilities.
- **Government should ensure full implementation of its arrear's clearance strategy adopted in July 2020.** The strategy aims to clear arrears based on the following key principles: transparency and equity, sustainability, macro-financial stability, and preventing further arrears accumulation. It focuses on net present value (NPV) reductions on the order of 35-40 percent of the total stock of arrears. Unanticipated financial support especially from development partners helped to pay down about 2 percent of GDP of domestic arrears in 2020, consistent with the government's COVID-19 response measures aimed at supporting businesses. The authorities should continue to ensure that financing from development partners is used in ways that minimize the risks to public finances. To avoid future buildup of arrears, the government should adhere strictly to its PFM regulations and strategies, such as basing quarterly budget allocations on revenue performance; improving fiduciary management in MDAs by deploying budget officers and internal audit staff; using IFMIS to reinforce commitment controls and improve cash and debt management; and enhancing oversight of SOEs and local councils to minimize contingent liabilities.
- **The BSL should tighten monetary policy as the recovery ensues to hold back the expansion in money aggregates.** It should target low and stable growth of money guided by price stability objectives. Monetary policy should ensure that exchange rates continue to be market-determined so that the economy

⁵ PPA1: To improve debt sustainability, the Government will not enter into any contractual obligations for new external public and publicly guaranteed (PPG) non-concessional debt in FY21, except if the non-concessional debt limit is adjusted by the World Bank to a) reflect any material change of circumstances or b) in coordination with the IMF, in particular in line with adjustments in the IMF Debt Limit Policy.

PPA2: To improve debt transparency and reporting, the Government will disclose all guarantees and borrowing of the three largest State-owned Enterprises (SOEs).

PPA3: To reduce public payment arrears, the government has adopted a cash management plan to build local capacity in cash flow forecasting, as mandated by a cabinet decision.

can adjust to external shocks and maintain export competitiveness. BSL interventions in the foreign exchange market should be limited to smoothing excessive volatility and discouraging speculative activities. Developing money markets, including interbank foreign exchange markets, should be a priority to allow for efficient price discovery and the efficacy of monetary policy.

- **The authorities should concentrate on deepening financial reforms to spur growth and safeguard financial stability.** The strategy should be to expand financial inclusion by modernizing digital payment systems and revising the payment system laws to allow for seamless interoperability between pay platforms, including mobile money. The capacity of bank examiners must be built up so they can enhance surveillance through risk-based approaches to reducing financial risks. The BSL should continue to progressively improve credit information systems and allow for private credit reference bureaus to increase the coverage of creditor information and consequently lower lending risks.
- **Post-pandemic, the agenda for inclusive economic growth must be revisited. The government needs to prioritize structural reforms for diversifying the economy.** The reforms should focus on creating an enabling environment for the private sector to support long-term economic growth, which will in turn support determined domestic revenue mobilization. The structural reform agenda should include measures to improve the business environment; digitalize the economy; strengthen governance and institutions; expand agricultural productivity and encourage agribusiness; promote value addition in manufacturing; and improve human capital to make the country attractive to both domestic and foreign investors (Sierra Leone Economic Diversification Study, World Bank 2019).

PART 2: WELFARE AND POVERTY EFFECTS OF THE COVID-19 PANDEMIC

2.1. Introduction

This Special Section of the Economic Update discusses how the pandemic has affected the population's welfare in Sierra Leone, where possible disaggregated by urban/rural, district and/or income groups. Though a seemingly simple topic, it is not easy to answer due to the many ways that changes in mobility, reduced availability of public services, market restrictions, and the virus itself have affected people's behavior and wellbeing. This section will draw upon data from the last 12 months to increase our understanding of how Sierra Leoneans have been affected by COVID-19.

This section covers the following topics: (i) approach, data and methodology employed to estimate the welfare changes during the pandemic, (ii) changes in poverty, (iii) changes in income and employment, (iv) changes in public services, and (v) food security and the government's fiscal response. This information can be useful to the Government, NGOs, donor community and civil society at large to understand how and to what extent the pandemic has disrupted lives. Although Sierra Leone has been spared the worst impacts of COVID-19, the pandemic is not over and has set back efforts to grow the economy and reduce poverty. This analysis will help inform programs in a range of sectors, such as health, education and social protection. It could also inform how the Government might respond to any future crises, or a third wave of COVID-19 infections in Sierra Leone.

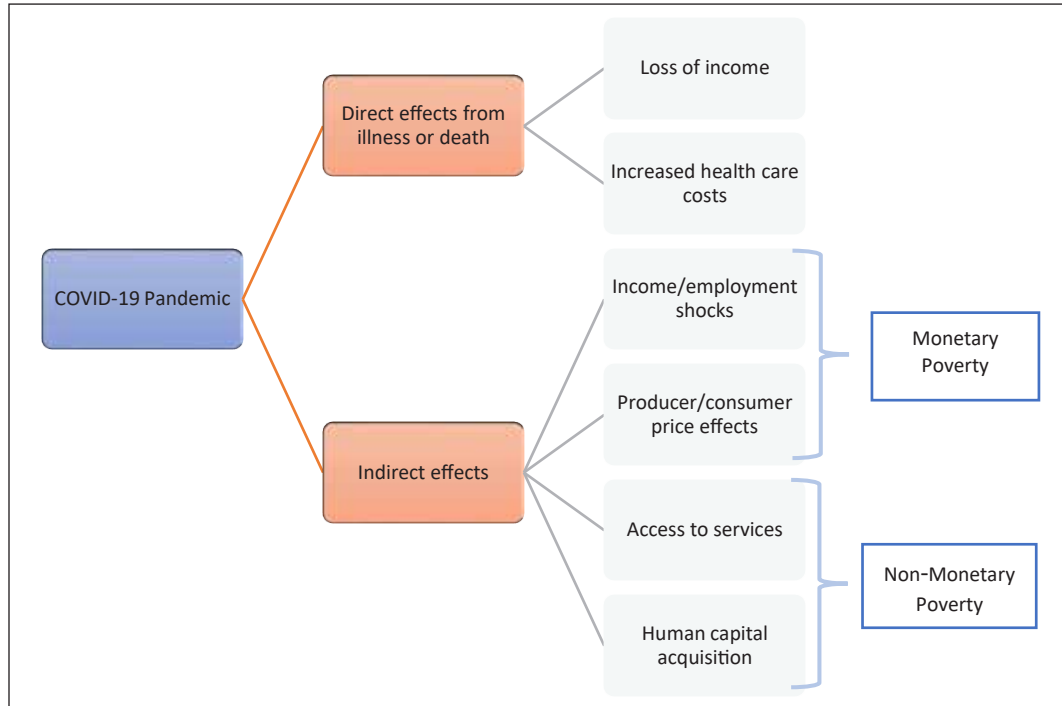
2.2. Approach, Data and Methodology

The COVID-19 pandemic can affect households in multiple ways, both economic and non-economic. Though this section focusses primarily on economic effects, non-economic effects can be as or even more important consequences of the pandemic. Examples of these types of effects are a deterioration in mental and physical health, an increased sense of isolation from friends and community, a greater feeling of insecurity and stress, and an increase in gender-based violence—to name just a few. However, these important topics are beyond the scope of this section and would require more targeted surveys to capture such sensitive information.

The approach adopted in this section categorizes the economic effects into direct and indirect ones. Direct economic effects refer to the consequences from a household member falling ill and/or dying. In Figure 2 below, direct economic effects include the associated loss of income from the sick/deceased household member (and/or caretakers) and the increase in out-of-pocket health care and/or burial costs. Fortunately, in Sierra Leone, these have been very limited. Indirect economic effects refer to those events that result from government control policies or the general impact of many people in a society falling ill and/or dying. These can result from the macro-economic climate such as the fall in GDP (especially in the service sector) and increased food price inflation documented in the first part of this report. They can also result from a change in access to public services, particularly as these impacts human capital formation.

The data requirements to capture the economic effects of COVID-19 on households are considerable. The data used in this section are derived from either nationally representative surveys or comprehensive datasets (such as a census or geospatial data) to be able to reflect the experience of households in Sierra Leone. A variety

Figure 2: A model to capture the economic effects of COVID-19 on households



Source: World Bank staff.

of datasets are used to understand a broad range of welfare effects of the pandemic on the population. This section is written using multiple datasets as follows:

- The *Comprehensive Food Security and Vulnerability Analysis survey (CFSVA)* by the World Food Programme. The face-to-face survey of about 32,500 households was implemented by the Ministry of Agriculture and Forestry with support from Ministry of Health and Sanitation as well as Statistics Sierra Leone (Stats SL) in November/December 2020. The data are representative at the national, rural/urban, and district levels.
- *COVID-19 Impact Monitoring Survey (CIMS)*, rounds 1 and 2, by the World Bank. This phone survey collected data from about 7,500 households and was implemented by Stats SL in June-August 2020 and November/December 2020. The data are representative at the national, rural/urban, and district levels.
- *Sierra Leone Integrated Household Survey (SLIHS)* by Stats SL with support from the World Bank. This face-to-face household survey was conducted from January – December 2018 and collected data from 6,840 households. The data are representative at the national, rural/urban, and district levels.

The impact of the pandemic can only be estimated against a baseline. There are a number of different ways this can be approached. For the CIMS, respondents are asked directly to compare their current situation to that of March 2020, before the pandemic started affecting life in Sierra Leone. In other cases, there is no direct data on what is being measured – a comprehensive consumption module to allow for the calculation of household welfare and poverty – either immediately before the pandemic or at the current point in time. In this case, current welfare is estimated using the data was collected in the most recent survey, and then compared to either the baseline for which comprehensive data exists (the 2018 household survey) or additional estimates constructed of the situation immediately prior to the pandemic.

2.3. How did the pandemic effect poverty in Sierra Leone?

This section quantifies the impact of the pandemic on households. The analysis draws upon SLIHS 2018 and CFSVA 2020 to describe how the population's welfare has been impacted by COVID-19 related events. The section begins with highlights of poverty levels and trends up to 2018, i.e., before the COVID-19 outbreak. The remainder of the section presents the imputed poverty estimates and links the changes in household welfare to the pandemic and related economic slow-down.

Poverty before COVID-19

The most recent official estimate of poverty is 56.8 percent from 2018—meaning that over half of the population lived below the national poverty line. This estimate was based on the SLIHS 2018 which was the last nationally representative household survey with a comprehensive consumption module. Poverty in Sierra Leone is largely a rural phenomenon: the incidence of poverty in rural areas is twice as high as in urban areas, 74 percent versus 35 percent, respectively. The districts in the North, that mostly rely on subsistence farming, are among the poorest in the country. In Tonkolili, Pujehun and Falaba regions more than 8 out of 10 individuals are poor. With the exception of Freetown, Western Rural Area and Kambia, in every other district more than half of population is poor. Similar to other countries of Sub-Saharan Africa, poverty in Sierra Leone is associated with geographic location, access to markets and opportunities of livelihoods (e.g., on-farm versus off-farm employment).

Between 2011 and 2018, the poverty rates in Sierra Leone modestly declined by 5.6 percentage points.

This was mostly driven by the reduction in urban poverty, which declined by 6.2 percentage points, while rural poverty largely stagnated. Growth incidence analysis for the period of 2011-2018 indicates that population at the top of the income distribution witnessed higher income growth as compared to the remainder of the population. This led to rising inequality as measured by the Gini coefficient, which increased from 31.7 to 35.7 (based on per adult equivalent consumption expenditures). However, the evolution of non-monetary indicators of living conditions during 2011-2018 showed a mixed picture. While the rural population experienced improvements in housing conditions, education and health indicators, access to some infrastructural amenities, such as roads, electricity, and markets has been lagging.

Impact of COVID-19 on the population's welfare

Globally the outbreak of COVID-19 has been associated with declining economic activity and falling household welfare. In Sierra Leone, vulnerable households in urban areas tend to rely on casual daily labor or self-employment, such as trading and private service provision. This along with lack of savings and diversified sources of income put low-income households at a greater risk of falling into poverty. Evaluation of new poverty levels and who is the most affected by crises are important inputs to effective policymaking to design welfare enhancing strategies. The preferred method of estimating poverty is to collect data using a nationally representative household survey with an extensive module on consumption and expenditures. In the absence of such a survey, one alternative method is to use imputations (see Box 1 for a description of the methodology). This section describes the results of welfare and poverty imputations using the most recent and relevant household survey, that is, CFSVA 2020.

The incidence of poverty in Sierra Leone is estimated to have increased from 56.8 to 58.9 in 2018-2020.

This modest increase (computed using imputation) indicates a deterioration in welfare though it is not statistically significant.⁶ This is a reversal of the previous trend between 2011-2018 when poverty declined by around 1 percentage

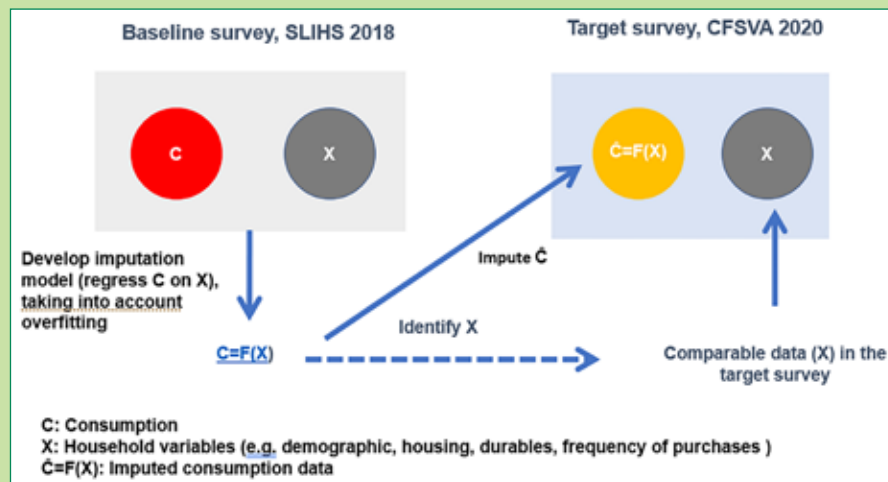
⁶ This is a gross estimate of the COVID-crisis's impact. Ideally, to calculate the net impact, the data for pre-COVID and post-COVID periods would be required. CFSVA survey was collected right after the first peak of COVID outbreak and contains relatively few indicators for pre-COVID period. Still, the model with few pre-COVID variables was tested, along with Macro Poverty Outlook approach to projections and nowcasting poverty for the period preceding COVID pandemic. The findings indicate that poverty have likely declined from 56.9 percent in 2018 to around 52.5 percent by 2019, which would point to higher impact of COVID-crises of around 6.2 p.p. However, due to low power of pre-COVID model, it was decided to refrain from using the pre-COVID estimates as a baseline.

Box I: Estimating Poverty During a Pandemic

The Government of Sierra Leone estimates poverty using nationally representative household surveys. Stats SL follows international best practice in estimating monetary poverty using living standard measurement surveys. These surveys collect detailed data on household consumption to understand the level of household welfare. The use of consumption to estimate poverty is commonly used in countries with high levels of subsistence farming and informal employment. Households find it difficult to accurately estimate their income from small scale self-employment activities and consumption modules do a better job at capturing information on own-produced food consumed by the household.

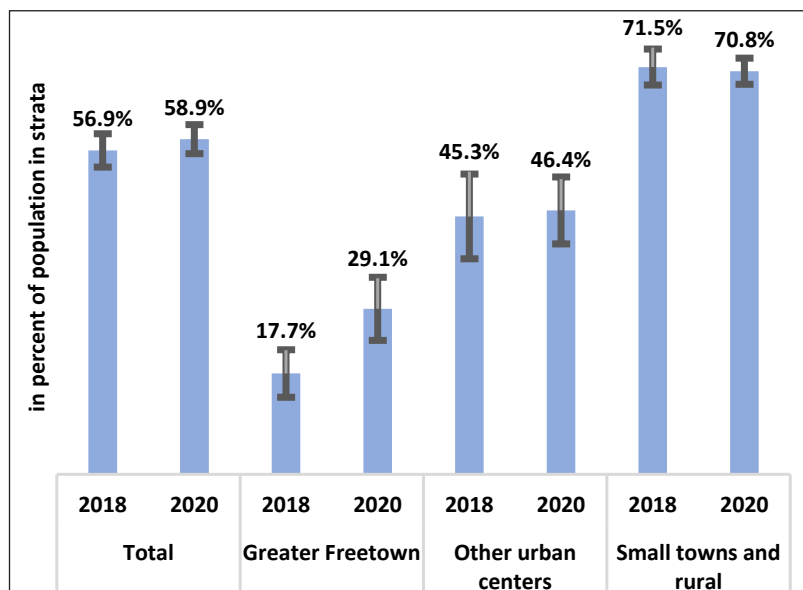
When consumption data are unavailable, poverty can be approximated by imputing consumption. This technique involves development of a model in the baseline household survey and then imputing the consumption to another target survey, which lacks the consumption data. The latest nationally representative household survey in Sierra Leone is the CFSVA 2020, which did not collect detailed household consumption data. However, given the overlap of the important variables across SLIHS 2018 and CFSVA 2020, it is possible to specify a parametric model, which robustly links household consumption and its correlates. The key variables reflect household's non-monetary characteristics, such as demographic composition, housing conditions, ownership of durables, purchase frequency of food and non-food items. (See Annex for full specification of the baseline model).

Figure A: Illustration of survey-to-survey imputation methodology



Source: World Bank staff.

The key assumption for survey-to-survey imputation is that the relationship between welfare and its correlates is linear and relatively stable. The model includes both parameters that change only slowly over time or in response to large shocks (household demographics, housing conditions, ownership of durable goods) and those which change quickly in response to even small changes in welfare (purchase of various food and non-food items, use of coping strategies). The model is likely to be stable when the interval between the baseline and the target is fairly short (only two years in this case) and when there has been no large structural change to the economy. Although COVID-19 has severely disrupted some economies/societies, the impacts in Sierra Leone have been more muted, and there has not been a structural change (see Annex I for more discussion). To account for uncertainty, the residuals are also included in the model. Based on the model, the survey-to-survey imputations technique draws target values (consumption expenditures) from the posterior predictive distribution 20 times. The parameters of multiple imputations are combined based on the certain rules (so called "Rubin's rule"). Multiple imputations algorithm ensures proper aggregation of the parameters, resulting in consistent imputations and confidence intervals that account for uncertainty due to missing data.

Figure 3: Poverty Rates in 2018 and 2020, in percent

Source: World Bank staff calculations based on SLIHS (2018) and CFSVA (2020).

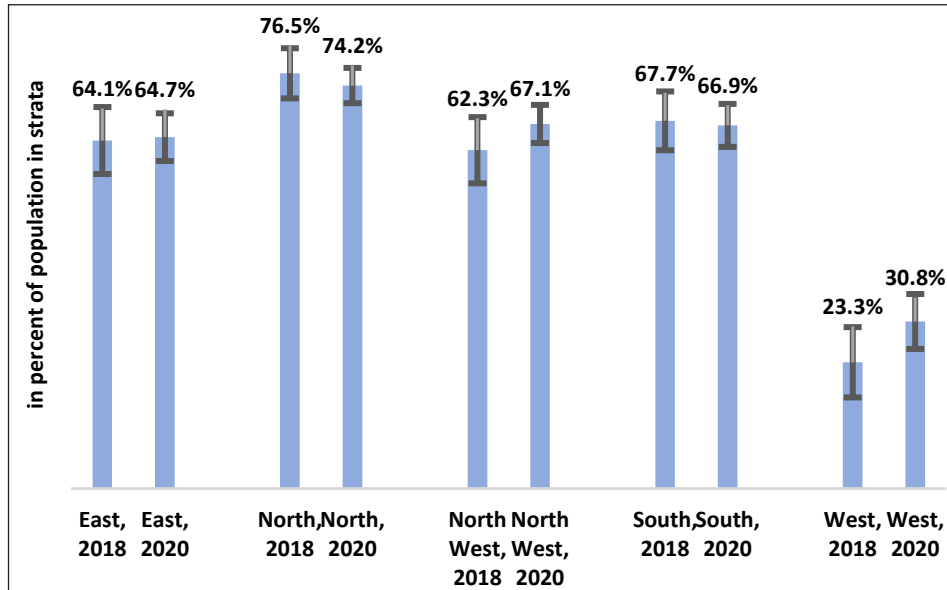
point per year. An alternative way of evaluating the impact of COVID-19 is to predict the household welfare according to GDP growth projections (i.e., shifting the curve but preserving the shape of income distribution). This type of simulation, based on projected negative growth of GDP by 4.3 percent, predicts a poverty rate of 57.7 percent in 2020. While this approach is simple, its main disadvantage is in distributional neutrality. Thus, given the heterogeneity of households' livelihood patterns and the importance of the distributional dimension of the COVID-19 impact, the better strategy is to impute the household welfare using model and survey-to-survey technique as outlined in the box above. In the rest of the section, the poverty estimates are based on survey-to-survey imputations.

Geographically, the most affected area is the capital city – greater Freetown, where the poverty increased by more than 11 percentage points from 17.7 percent in 2018 to 29.1 percent in 2020. Modest increase was imputed for other urban areas (excluding Freetown), specifically, poverty incidence increased from 45.2 in 2018 to 46.3 percent by 2020. In rural areas, poverty remained the same or may even have marginally declined – from 71.5 percent to 71.0 percent. It appears that the impact of mobility restrictions was felt more in the urban areas, especially in greater Freetown area, supporting the presumption that casual non-farming employment was affected most. Markets closures and travel restrictions affected households whose income was reliant on trade and travel (or mobility).

Some parts of the country were more affected than others by the economic consequences of the pandemic. Though the COVID-19 economic fall-out has a significant geographic dimension, the welfare ranking of provinces changed only marginally. The North province witnessed a reduction of poverty levels by about 2 percentage points but remains the poorest region in the country; the South province, which used to be the second poorest, has seen largely unchanged poverty levels; in the North-West province, the poverty incidence increased by 4 percentage points from 2018 and by 2020 it is now the second poorest region⁷; in the East province the poverty levels has been stagnating; and in the West, the poverty levels increased most, by 6 percentage points. This pattern

⁷ This province includes the area around the international airport serving Freetown and the main overland trade route to Conakry, Guinea, both of which would have been strongly impacted by movement restrictions. It also contains the iron ore mine that was closed due to the (non-COVID-19 related) dispute with SL Mining.

Figure 4: Poverty incidence by province, 2018 and 2020, in percent

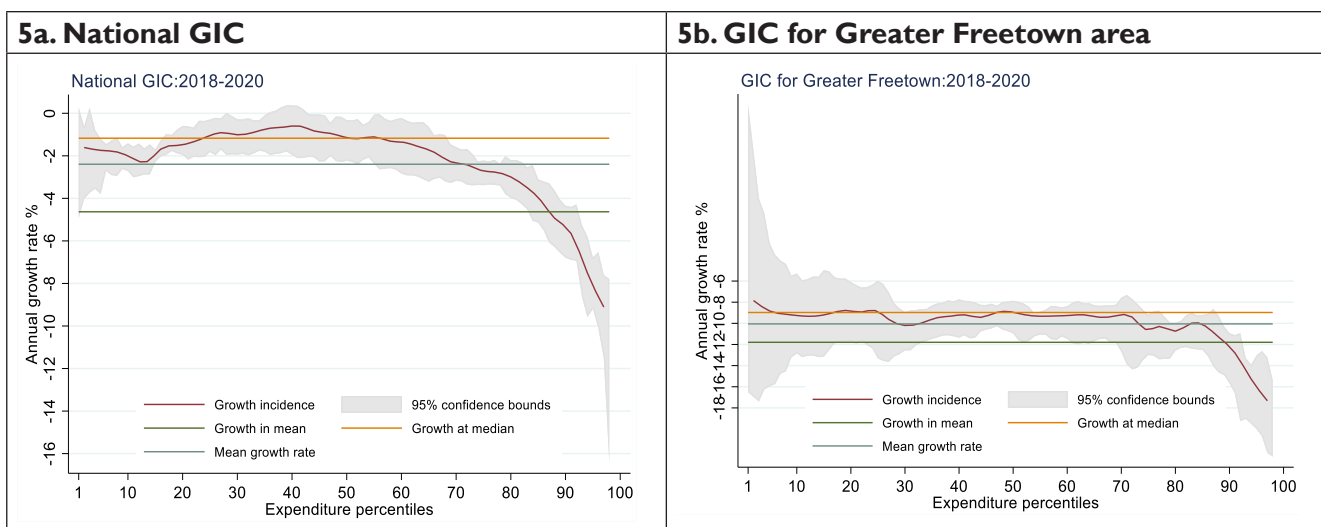


Source: World Bank calculations based on SLIHS 2018 and CFSVA 2020.

is consistent with hypothesis that one of the most important confounding factors behind the impact of COVID-19 on welfare is urbanity/ location of households.

The pandemic has disproportionately hurt the population in the upper-third of the income distribution. In the figure below, the Growth Incidence Curve (GIC) captures graphically the annualized growth rate of per capita income for every percentile of the income distribution between 2018 and 2020. Across all income percentiles, income fell on average by 3 percent per annum. However, the population in the top 30 percent

Figures 5a and 5b: Growth Incidence Curve, 2018-2020



Source: SLIHS 2018 and CFSVA 2020.

of the income distribution has experienced negative growth between 3 percent and 10 percent per annum. Given that the most affected are households in the top of the distribution, it makes sense to observe only modest increase in poverty. In other words, it appears that COVID-19 impact has affected most who are far above poverty line – upper middle class. In the Greater Freetown area, where the poverty rates have been traditionally lowest, the expenditures declined by 10 percent almost uniformly across all income groups.

Changes in the poverty profile

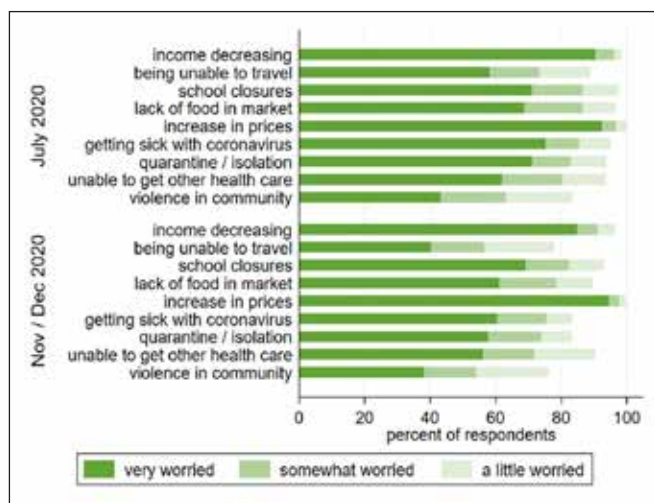
The types of households that had lower levels of poverty pre-COVID-19 were the hardest hit, especially as measured by household size and access to agriculture land. Households with few members and/or no agriculture land were the hardest hit by the pandemic. COVID-19 impact has a distinct distributional aspect. The poverty profile has not radically changed, but certain groups have been more affected by the crisis. For example, similar to pre-COVID period, the larger households are more likely to be considered poor, but poverty for the group of households consisting of 3-4 persons increased by 20 percentage points, while for households with 7-10 persons the increase was in the range of 2-3 percentage points. Population living in the households who have no access to land witnessed 15 percentage points rise in poverty, while those with agricultural land observed only 2 percentage points increase.

2.4. Changes in Incomes and Employment

The decreases in household welfare are directly linked to decreases in household income from various sources. This section uses data from the two rounds of the CIMS to see how incomes from various kinds of sources have evolved over the pandemic: which have been hardest hit, and which have proved most resilient? Have incomes been steadily declining over the pandemic, or did they rebound after the strictest restrictions of the first few months were lifted? This section also looks at individual level employment, and how that has responded to the pandemic, with people leaving the workforce, changing employment or working fewer hours.

Income

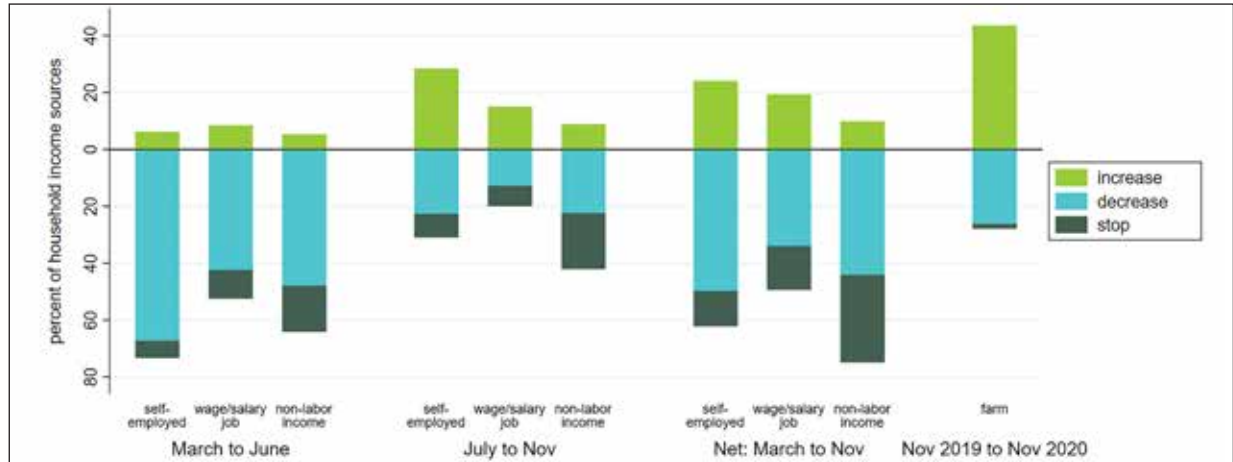
Figure 12: Levels of concern about potential COVID-19 impacts



Source: World Bank calculations based on CIMS.

The economic impacts of COVID-19, due both to disruptions in the global economy and restrictions on movement within the country, have been those most felt by households. In both the first and second round of the CIMS, decreases in income and increases in prices have been the top two concerns of households. Even though overall inflation was lower in 2020 than in 2021 (13.5% compared to 14.8%), it still remained in the double digits, and food price inflation increased dramatically reaching 19.8% in December 2020.

The majority of household income sources saw a decrease in income between March and June 2020. The CIMS asked about up to three sources of income for each household, and, as of June 2020, 86 percent of these sources had seen a decline compared to March. Income from self-employment (which is mainly in trading) was the hardest hit. From July to November 2020, fewer households saw declines in income, and about a quarter of households in self-employment saw an improvement, but incomes overall still remained lower

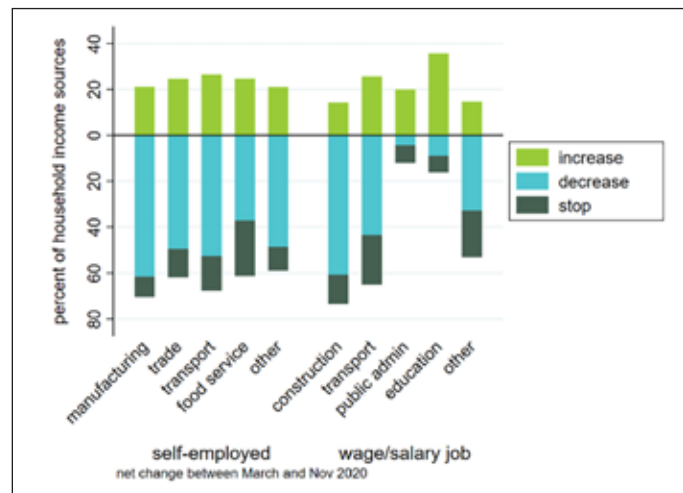
Figure 13: Changes in household income, March to November 2020 by source

Note: "Stop" refers to income from a particular source has completely stopped.

Source: World Bank calculations based on CIMS.

than they had been in March 2020.⁸ Incomes from agricultural sources (compared November 2019 to November 2020) have actually increased on average, with more households seeing an increase in income from these sources. This will be explored in more detail in the next section.

Jobs in the public sector have proven the most constant sources of household income during the pandemic. Almost three quarters of self-employment income streams are from trade, followed by much smaller shares from small-scale manufacturing, transport and food service. All of these sectors have been fairly equally hit. Looking by sector for income from wage and salary jobs, we see that among those employed in public administration and education (most teachers are on the government payroll), few have seen decreases in income and a significant number have seen an increase. Although the size of the government payroll (41 percent of public expenditures in 2019) is often seen as a problem for Sierra Leone, it does provide a very stable source of income for a significant number of households even during a major economic crisis. (Public sector wages have remained stable throughout the pandemic and have not been reduced as they were in some countries.) Jobs in the private sector, where salaries tend to be higher,

Figure 14: Changes in household income by sector of employment

Source: World Bank calculations based on CIMS.

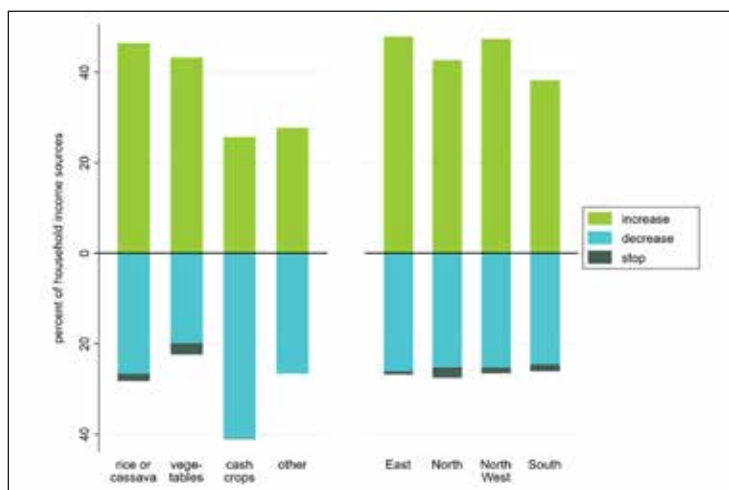
⁸ The CFSVA does not ask about changes in income for each source, but rather about changes in total income for the household over the past year. The results are broadly consistent: households whose main source of income is agriculture are the most likely to have seen an increase in income over the past year, and those whose main source of income is self-employment are most likely to have seen a decrease. The CFSVA does find that non-labor source of income (for example, remittances, aid, gifts) are quite stable in comparison to the CIMS.

have been much harder hit, explaining why households at the top of the income distribution have seen the largest declines in (imputed) consumption. Looking at income sources from jobs in the private sector (proxied by excluding those working in public administration, education and health), an estimated 44 percent and 19 percent of households relying on private sector earnings experienced either a decrease in income or a cessation of income altogether, suggesting that either hours or pay were reduced or the person lost their job.

Agriculture

Despite early fears that the economic downturn and movement restrictions during the rice planting season would greatly reduce rice production this year, income from farming and staple crops seems to have increased on average compared to the previous year. Results from the first round of the CIMS on

Figure 15: Changes in income from agriculture (November 2019 to November 2020)



Source: World Bank calculations based on CIMS.

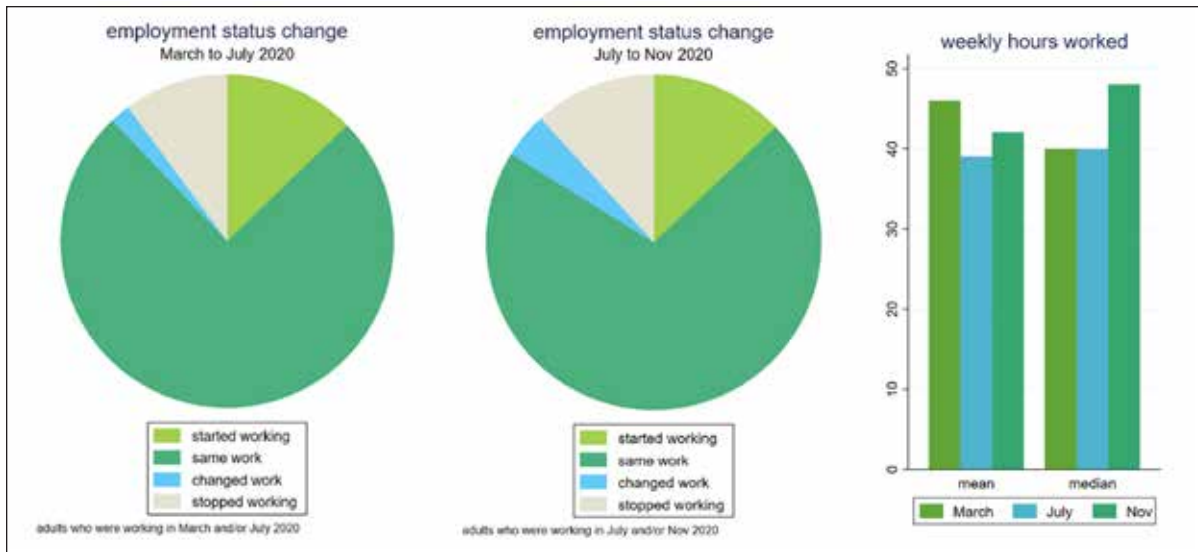
higher in 2020 than in 2019. Incomes from vegetables were also higher than the previous year on average. Incomes from cash crops have suffered on average, although households report that prices for cash crops were mostly the same (50 percent) or even higher (37 percent) than the previous year. Many households did report that it was more difficult or more expensive to transport crops to market (41 percent and 35 percent) or that the usual crop buyers came less frequently (37 percent). Overall, the changes in agricultural income are similar across the four provinces of Sierra Leone outside of the Western Area. The government did allocate substantial additional funding to agriculture in the supplementary budget passed in July 2020 in response to the pandemic, focusing on providing inputs such as agricultural chemicals and seedlings, and improving access to mechanization and extension services. Another large portion of the supplementary budget went to labor-intensive public works projects mainly in roads.

⁹ Data was collected mostly in July 2020. Most rice is planted in May and June. When the same question was asked (of a different set of households) in round 2, only 38 percent reported planting less rice, and 28 percent reported planting more. The results from the first round may have been an anomaly, or it is possible that households planted additional rice late in the season (July/August).

¹⁰ Note that the rice harvest usually spans October to December, so it was probably not entirely completed when data for both the CIMS and the CSFVA was collected in November and early December.

¹¹ According to the FAO's FPMA tool, local rice prices (outside of Freetown) were 6.7 percent higher in November 2020 than in November 2019.

agriculture were concerning, with two-thirds of the households reporting planting less rice for the 2020 growing season than in 2019.⁹ The most common reason given was lack of money to buy seeds, unsurprising as most households saw a decrease in income sources between March and July. However, the results of the second round reported that incomes from rice and cassava in November 2020 were higher than in November 2019. This is perhaps explained in part by the CFVSA (also conducted in November and early December 2020¹⁰) which showed a small increase in the area planted with rice (6 percent) but a significant increase in the production of rice in kilograms (25 percent). This may reflect additional effort put into farm activities, as other employment opportunities were less profitable or ceased altogether, as well as the potential labor of children during school closures. Combined with slightly higher rice prices¹¹, this means that income per hectare planted was significantly

Figure 16: Employment status and hours worked, March – November 2020

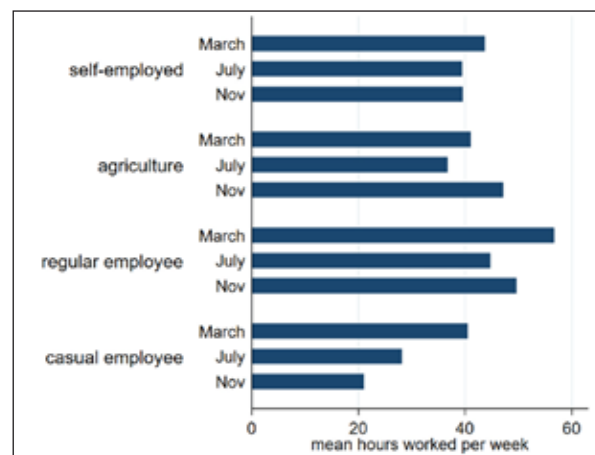
Source: World Bank calculations based on CIMS.

Although the impacts of this undertaking are not seen in the employment results (next section), the poor road network is often cited as a major constraint on productivity and profitability in the agriculture sector.

Employment

Most working adults remained in the same employment from March through November 2020, working similar numbers of hours. Comparing March to July and July to November, in both cases about three-quarters of adults remained in the same employment, and the number who started work was approximately equal to the number who stopped working. The total number of hours worked has also remained fairly constant, with perhaps a slight dip in July and a rebound by November. Sierra Leoneans mostly continued the same kind of work and put in the same number of hours throughout this period, although we see that the income generated by this work fell in the majority cases. The lack of disturbance in the labor market does mean that incomes should rebound (as was seen to a limited extent even by November) as the general economic situation improves.

This pattern of a slight decrease in the number of hours worked is driven mainly by agriculture and those working as regular employees. Hours for self-employed persons have stayed lower than in March, and hours for casual / seasonal workers or trainees have fallen to almost half their level prior to the pandemic.

Figure 17: Changes in hours worked by employment status

Source: World Bank calculations based on CIMS.

Hours worked for women fell more between March and July, and rebounded less between July and November, but all the differences are quite small. Those working as casual or seasonal employees have seen a significant decline in their hours which has only continued through November, reflecting a reduced demand for labor.

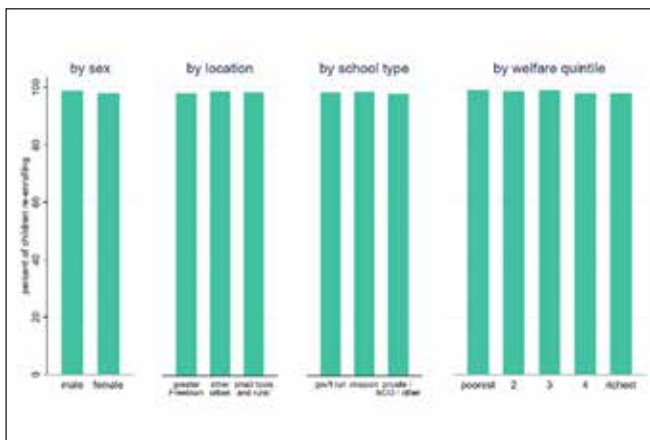
2.5. Access to Basic Services

The pandemic has not only affected the population’s monetary welfare, but also their access to critical public services: mainly education and health. This section draws upon two rounds of high-frequency household survey data, the CIMS, to capture changes in service access during the pandemic in household welfare. As in most countries around the world, schools have been closed and routine health services disrupted because of the pandemic, potentially leading a generation of children getting less education and increased mortality as key preventative health services such as childhood vaccinations and antenatal care are missed. This section studies the extent of disruptions in education and health, and their impacts so far. It also looks to see if there has been any impact on water or sanitation services during the pandemic.

Education

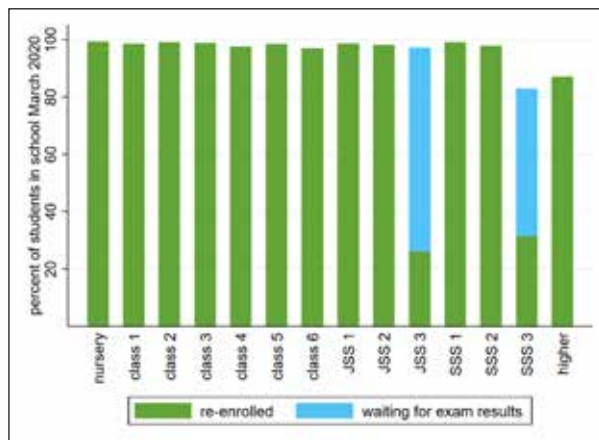
One of the biggest impacts of the pandemic in Sierra Leone was the closure of schools. Even before the first case was confirmed in Sierra Leone, it was announced that schools would close on 31 March 2020, and the national examinations usually held in May and June would be rescheduled. Schools reopened on 1 July 2020 for students who were sitting these exams, and then for all students for the new school year on 4 October 2020. This was the second such interruption to the education of many students as schools were also closed for about 9 months during the Ebola epidemic in 2014 to 2015. Although this might compound the losses for students, it meant the government was well prepared and quickly rolled a radio education program and campaigns to prevent pregnancy among school girls and to promote inclusion of the most disadvantaged children (pregnant girls, children with disabilities, girls from rural areas), learning from experiences during the Ebola epidemic.

Figure 18: Share of students returning to school by sex, location, school type and welfare (in percent)



Source: World Bank calculations based on CIMS.

Figure 19: Share of students returning to school by class (in percent)



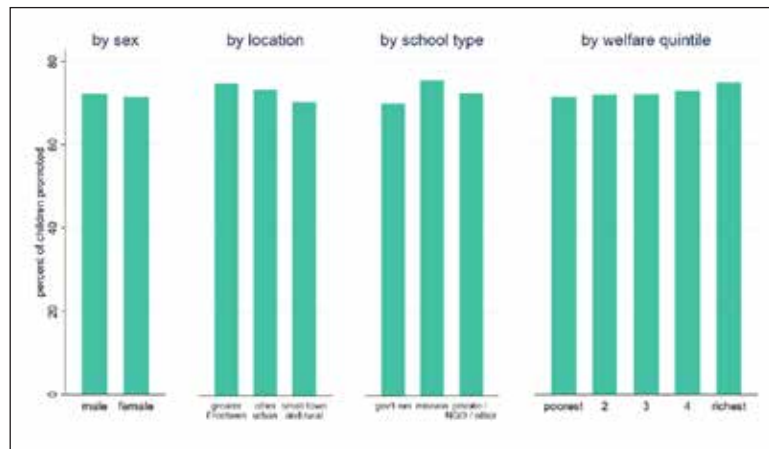
Source: World Bank calculations based on CIMS.

Almost all children report returning to school after the school closures. As of November- December 2020 when the second round of the CIMS was conducted, students who had sat the exams at the end of the junior secondary school and senior secondary school had mostly not yet received their results and thus had not yet been able to enroll in school (advance to senior secondary school or continue with higher education respectively). For students in other classes, between 97 percent to 99 percent are reported to have returned to school. There is no significant difference in the percent of students re-enrolling by gender, location (Freetown vs. other urban vs. small towns and rural), type of school (public vs. private) or welfare quintile of the household. These very high rates of return to school are confirmed by the CFSVA which finds that 97 percent of boys and 99 percent of girls have returned to school. In other countries, higher rates of children dropping out of school have been attributed to income losses. By the time the school year started in October, incomes for many households had started increasing again, and the Free Quality School Education Program has reduced households' out-of-pocket expenditure on education.

Despite widespread concern about girls becoming pregnant during school closures there is little evidence that this happened on a significant/increased scale. This concern has been widespread in the media and development partner / advocacy community and is shared by the general public: 73 percent of respondents from the CIMS believed girls are more at risk for pregnancy / early marriage due to the school closures. The vast majority of girls returned to school, however, and even of those who did not, pregnancy was only cited as the reason in about 10 percent of cases. (Results from 2018 SLIHS on reasons why children/young adults drop out before finishing secondary school find that marriage¹² or pregnancy was the most common reason for girls at 36 percent.)

Although almost all students have returned to school, about a quarter of students are repeating a grade and rates are higher in rural areas and for poorer households. Overall, 28 percent of students are repeating a class for the 2020-2021 school year (excluding students in JSS3 and SSS3 who were still waiting for exam results at the time the data was collected). This seems to be higher than usual, the 2018 SLIHS found that only 8 percent of students (again excluding JSS3 and SSS3) repeated a class for the 2017-2018 school year. There is no significant difference in promotion rates by gender, but rates are higher for students in urban areas (particularly Freetown) and for wealthier students, although these differences are not large; the promotion rate is 72 percent for students in the poorest quintile and 75 percent for students in the richest quintile. This is concerning a context where students are usually significantly behind in terms of class for age (about half of students of JSS age, 12 to 14, are still in primary school) and learning outcomes are poor (the human capital index finds that harmonized test scores for Sierra Leone are among the lowest in the world).

Figure 20: Promotion to next class for 2020-2021 academic year



Source: World Bank calculations based on CIMS.

¹² The CIMS did not have a code for marriage as a reason that girls did not return to school. A code was provided for "other" which was used for a significant number of cases, but never mentioned marriage.

Figure 21: Use of antenatal care and childhood vaccination

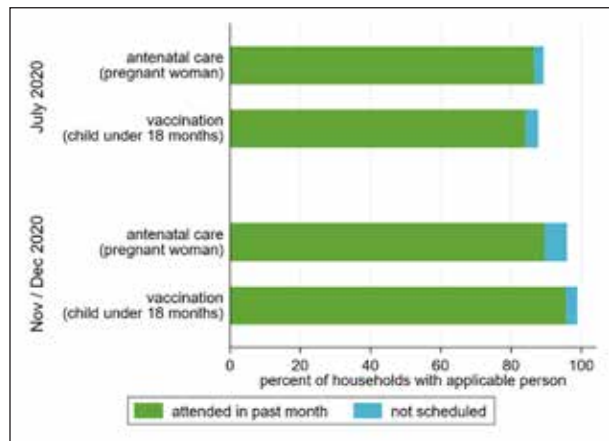
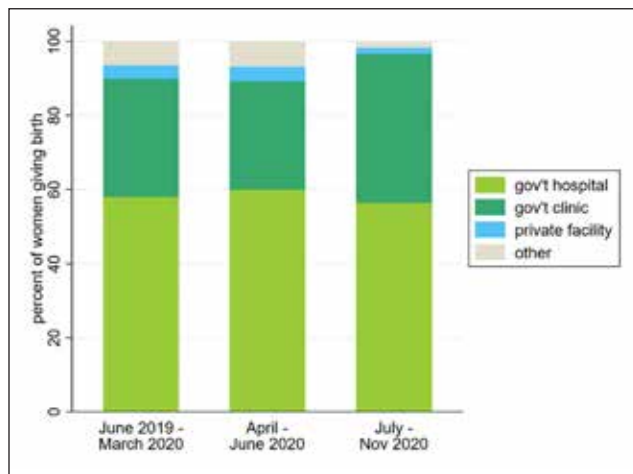


Figure 22: Place of delivery



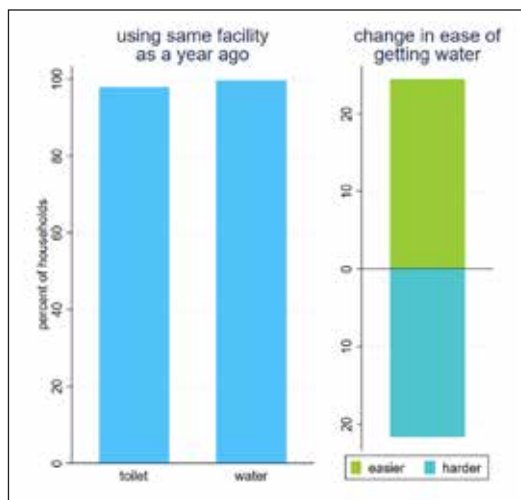
Source: World Bank calculations based on CIMS.

Health

Although the COVID-19 pandemic has dramatically interrupted health care services in some cases, these interruptions overall have been scattered and limited, and the reduction in services during the worst months only 10 to 15 percent. The second reported case of COVID-19 in Sierra Leone was in a doctor who was working in the main government children’s hospital in Freetown. As a result, most of the staff were quarantined and the entire facility shut down for 6 weeks. Clusters of infections among health workers and quarantine requirements have continued to shut down health facilities intermittently, especially in Freetown. Despite this, disruptions to the use of key preventative health services (antenatal care and vaccinations for children under 18 months) have been modest and were mainly limited to the early months of the pandemic. Data from the first two rounds of the CIMS finds that 11 percent of pregnant women skipped scheduled ANC visits in July 2020, but this number decreased to 4 percent by November/December 2020. (Unfortunately, we have no pre-COVID-19

baseline for these numbers, but this provides an upper bound on the disruptions due to COVID as attendance was likely less than 100 percent before COVID.) For childhood vaccination appointments, the numbers are 12 percent in July 2020 and 1 percent in November/December 2020. Data from the CIMS (asking about place of delivery for any birth in the year previous) finds essentially no change in the place of delivery due to the pandemic.

Figure 23: Changes to water and sanitation facilities



Source: World Bank calculations based on CIMS.

These results are mostly confirmed by analysis of facility-level data. Data from the district health management information system has been analyzed by the Global Financing Facility of the World Bank. This analysis on the provision of different preventative health care services over the period March to July 2020 found reductions in antenatal care of 7 to 13 percent and in vaccinations of 5 to 18 percent, with the worst disruptions in March to May 2020. Analysis of facility level data on delivery services did find a reduction of 5 to 11 percent for the period March to May 2020, which does not come out in the data from the CIMS.

Water and Sanitation

There is no evidence that use of water and sanitation facilities have been disrupted by the pandemic.

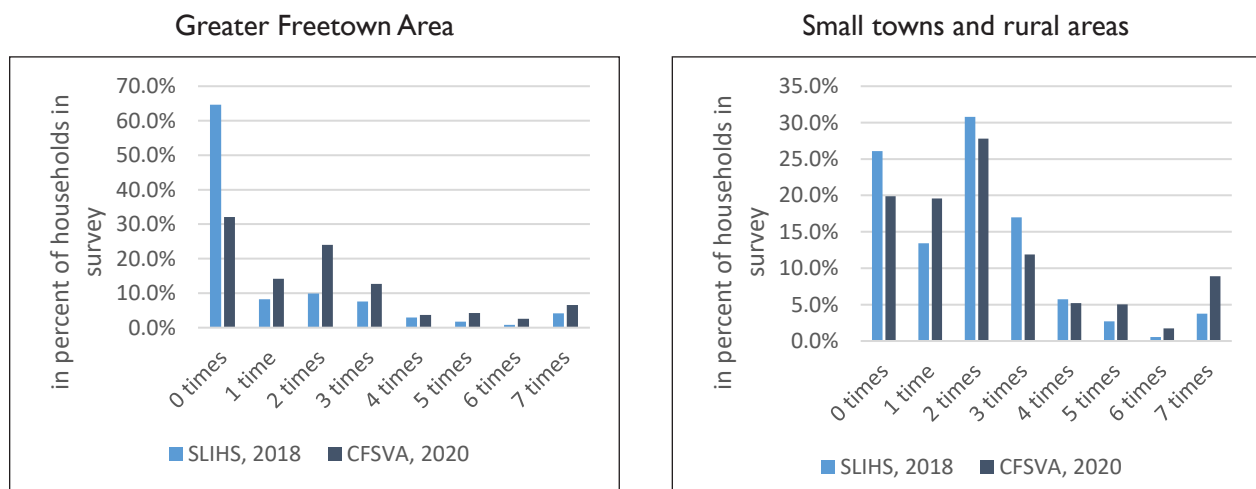
Two thirds of Sierra Leoneans do not have a water source within their compound, and over half share a toilet facility. Use of communal water and toilet facilities provides an opportunity for infection, and people might alter their use of these facilities, switching to low quality, less crowded ones in response to COVID-19. There is no evidence this happened, however. In July 2020, over 95 percent of households report using the same water and toilet facility as in July 2019. There has been no systematic change in how difficult it is to get water from the source, with roughly half of households reporting no change, a quarter reporting it is more difficult and a quarter reporting it is less difficult. Sierra Leone did have two 3-day complete lockdowns when individuals were forbidden to leave their house, even to get water. In some cases, soldiers forcibly dispersed crowds waiting to get water from public taps in Freetown. But overall, only 11 percent of households reported not having enough water to drink or wash during these lockdowns.

2.6. Food Insecurity

Food security in Sierra Leone has deteriorated during the pandemic. This conclusion comes through from both the CIMS data as well as household responses in the CFSVA survey. However, concerns over availability and access to sufficient food existed long before the COVID-19 outbreak. As indicated in the Poverty Profile for Sierra Leone (2019), more than 72 percent of population resorted to using some sort of coping strategy as related to the lack of food. Higher prevalence of food insecure was observed in the rural areas among farming households. Clearly, the COVID-19 pandemic and associated restrictions on markets and movements of goods have direct implications for food prices and declining real incomes. In addition, it has indirect and long-term adverse consequences for welfare and human capital acquisition (i.e., stunting and cognitive development). Moreover, at the onset of the outbreak, there were concerns of deepening of food insecurity among most vulnerable population in rural areas.

Evidence support that impact of COVID-19 on food insecurity was negative, but contrary to expectations, rural households have been relatively less affected by the crises. In the greater Freetown area, the share of households who do not rely on less-preferred/expensive food has drastically declined from 65

Figures 24a and 24b: Number of times in the last 7 days that household relied on less preferred/expensive foods



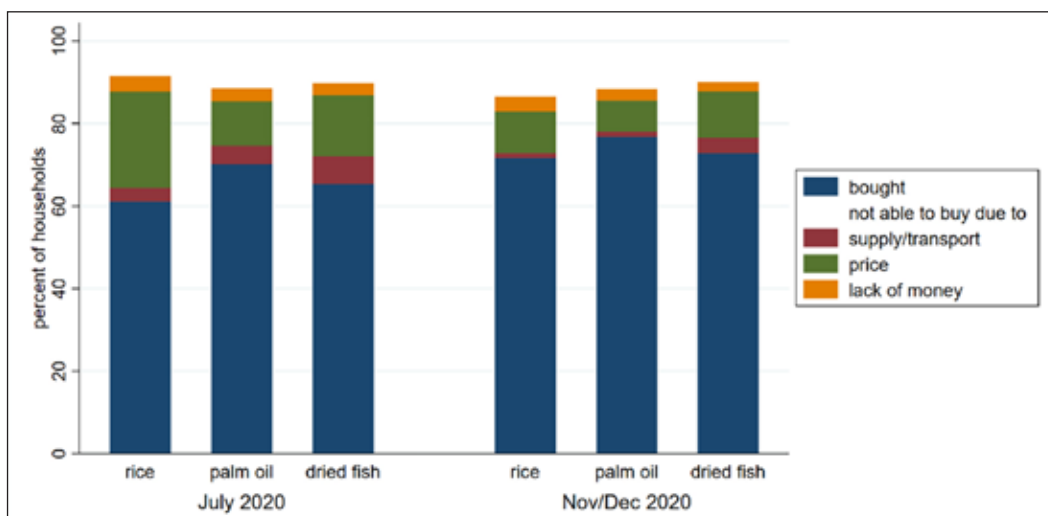
Source: World Bank calculations based on SLIHS 2018 and CFSVA 2020

to 32 percent, while the share of households who employ this strategy at least two times a week has increased from 10 to 24 percent. This robustly points to deteriorating welfare conditions for households in greater Freetown area. In contrast, in rural areas, the share who do not rely on less preferred/expensive food declined by less: from 26 to 20 percent, but importantly the share who follow that strategy at least 2 or 3 times also declined. Additional evidence is needed to explain the relatively muted impact of COVID-19 lockdowns in rural areas. Partially, this could be connected to the fact that rural areas are dominated by small-holding farmers with higher share of food consumption coming from own/self-grown crops. The extent of welfare reduction differs between regions, groups of households and is in line with overall trends in poverty.

High and increasing food price inflation has been the main channel impacting food insecurity. It has been reported that global food prices have risen by 38 percent since January of 2020¹³. The price surge is likely not driven by the shortage of food, but rather by disruptions in the supply chains, related to market and border closures. Overall, inflation in Sierra Leone was lower in 2020 than in 2019, but, reversing the trend of previous years, food price inflation was higher than non-food price inflation and higher than in 2019. These food price increases were keenly felt by households. In July 2020, almost a quarter of households report being unable to buy rice due to an increase in prices. (This was most severe in small town/rural areas at 28 percent of households compared to 16-18 percent in more urban areas.) While this number has slightly declined by December 2020, the share of households who are unable to buy staple foods remains significant, pointing to continued constraints to accessing the food. As of December, the difference between rural and urban areas has disappeared.

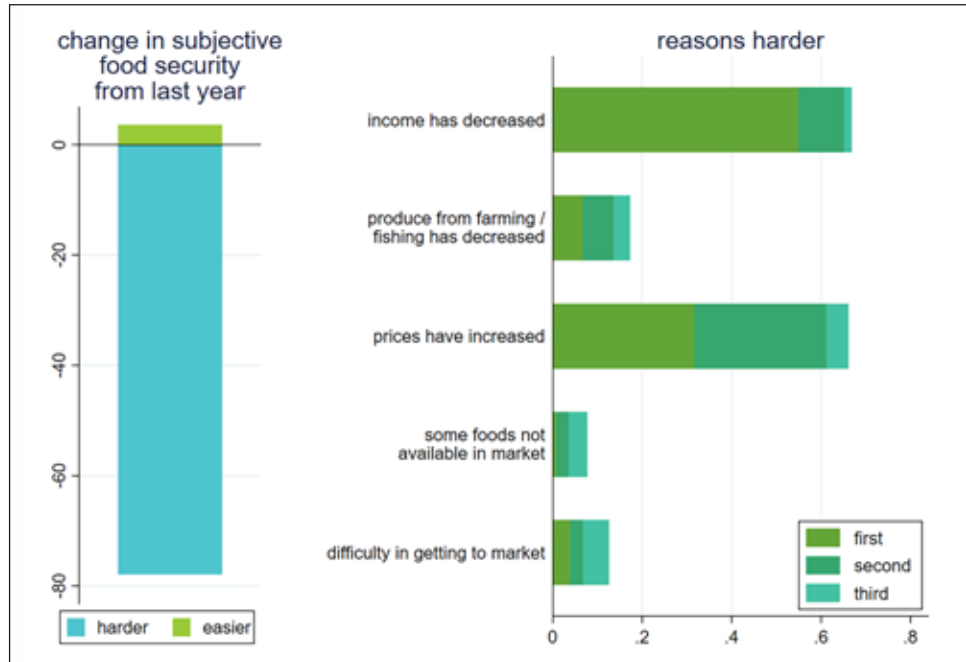
According to latest CIMS data, households in Sierra Leone appear to be caught in a double trap of high/rising food prices and declining income, which have implications for poverty and food security going forward. In July 2020, households were asked whether, compared to a year ago, it was easier or harder to obtain enough good food for their household to eat. Almost 80 percent responded that it was harder, citing the twin concern of decreasing incomes and increasing prices. Food share in total household budget in Sierra Leone is around 60 percent and is higher for households in the bottom of the income distribution. As prices rise and income declines, vulnerable households have no other choice than to switch to cheaper food or even skip meals

Figure 25: Access to staple foods



Source: World Bank calculations based on CIMS.

¹³ <https://www.worldbank.org/en/topic/agriculture/brief/food-security-and-covid-19>

Figure 26: Subjective food security

Source: World Bank calculations based on CIMS.

altogether. Furthermore, as imported food becomes less accessible, household may turn to domestically grown food increasing demand of farmers' produce. However, unless the productivity and structure of the domestic small-scale agriculture production increases, the prices of domestic food will remain high, leading to chronic food insecurity and poverty.

2.7 Fiscal Response and Impact

In July 2020, the Government of Sierra Leone passed a supplementary budget of USD 138 M (equivalent to about 3.3% of GDP) to support the health sector and socio-economic response to the COVID19 pandemic. About a third of this went directly to the health sector, and another third to various public works projects, especially those designed to be labor intensive and create employment. Smaller shares were spent on investments in the agriculture sector and social protection (many supports to the aviation and tourism sectors). This supplementary budget was complemented by funding from development partners, particularly for health and social protection.

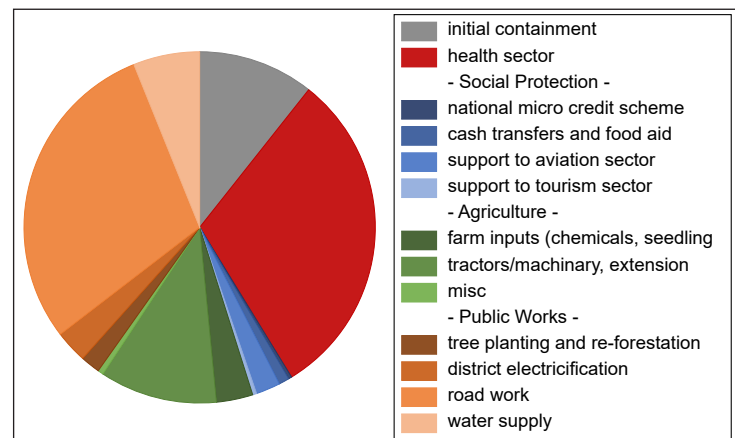
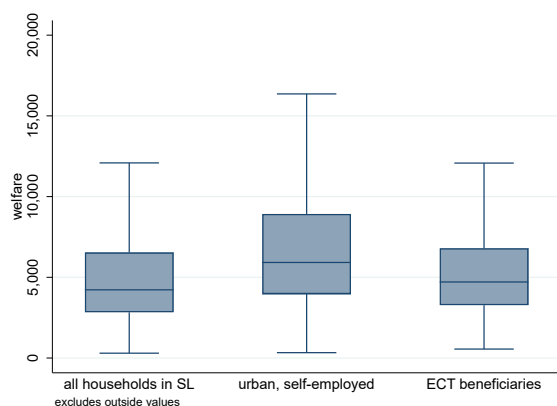
Figure 27: Breakdown of July 2020 Supplementary Budget

Figure 28: Estimated Welfare of ECT Beneficiaries Compared to Urban, Self-Employed Households and All Households



One of the most high-profile responses to the covid19 crisis in Sierra Leone has been the Emergency Cash Transfer program targeting self-employed persons in urban areas. This program was administered by the National Commission for Social Action (NaCSA), using a contingency fund of USD 4 M that was built into existing IDA financing agreement for the Social Safety Nets Project. The program targeted informal sector workers (mainly traders) in Freetown and 4 other major cities, distributing one-time payments of USD 135 to 29,000 beneficiaries in July and August 2020. Potential beneficiaries were compiled from a variety of sources, such as existing registers of market traders, and then a 10 proxy means test was applied to select the most vulnerable. These payments were made

as restrictions on movement were being lifted, with the intent to allow traders and other self-employed persons to re-invest in their businesses. In general, the targeting of this program is perfectly aligned with the group most impacted by the covid19 pandemic as determined by both welfare imputations using the CFSVA and direct reports of income changes from CIMS: self-employed workers in urban areas.

This program successfully targeted poorer households, within the group most affected by the pandemic: informal sector workers in urban areas. About 800 of these beneficiaries were interviewed as a supplementary sample to the first round of the CIMS.¹⁴ This allows us to assess not only the general targeting strategy, but also effectiveness of the targeting strategy (targeting Freetown plus 4 major cities, using administrative lists plus PMT to select beneficiaries) in identifying the most vulnerable among these households. Comparing households on imputed pre-covid19 welfare¹⁵, urban households engaged in self-employment have higher welfare than the general population, but those households selected as beneficiaries for the ECT program have lower welfare on average than all households in urban areas engaged in self-employment. It is important to note that going forward, the Social Safety Nets Project will return to its focus on extremely poor households in rural areas (doubling the number of households receiving regularly quarterly payments to 70,000 and expanding to cover all districts) as rural areas remain much poorer than urban ones.

2.8 Conclusions

The pandemic has affected the population of Sierra Leone, sometimes in surprising though not unexpected ways. The analysis indicates that in the last nine months of 2020, the downward poverty trend has reversed and the share of the population living below the poverty line has increased. The urban poor, especially those engaged in self-employment, have been the hardest hit and experienced the largest increase in poverty. Yet,

¹⁴ These households are excluded from analysis of the CIMS data as the very specific nature of the sample and complex targeting process made it hard to construct suitable weights to incorporate them into a nationally representative sample.

¹⁵ A model of household welfare using determinants that change only slowly over time (education of adults in the household, household size, ownership of durable goods, characteristics of dwelling) was developed using the 2018 SLIHS and the relevant questions added to the CIMS questionnaire. This allows us to estimate the welfare of households prior to the COVID19 outbreak. In contrast, the model developed and used to impute welfare from the CFSVA deliberately uses variables that react quickly to changes in welfare (spending on various items, use of coping strategies) to model how welfare changed in response to the pandemic.

it is the upper middle class that has seen the largest decrease in monetary welfare, most likely those with jobs in the private sector. Public sector employment and subsistence agriculture have provided the most stable incomes for households, though poverty is high in the latter group.

Disruptions to health and education services have been modest, but the sectors remain fragile. The pandemic led to schools being closed and health services being cut back. However, once the spread of the virus appeared to be under control, schools were re-opened. Also, the fear of backsliding in terms of teenage pregnancy and early marriage did not materialize. Yet, even though the worst fortunately did not occur, children in Sierra Leone did lose several months from their education and most likely missed key vaccinations. In a country with high child and maternal mortality rates, even relatively small lapses can have serious consequences.

The first year of the pandemic has shown that the Government has an important role to play in preventing widespread welfare losses. Lessons learned from this pandemic are as follows:

- a. *Restrictions on mobility disrupt supply chains with significant consequences for the incomes of those working in the sector and food insecurity generally.* Restrictions on movement, whether inter-district or international, should be seen as a last resort, rather than an early preventative measure. Disruptions to supply chains affected the incomes of a significant segment of the population self-employed in trading, and also led to very high food price inflation which contributed to increased food insecurity. If restrictions on movement are deemed necessary, every effort should be made to keep supply chains moving and to allow small-scale traders to continue to function by not making the systems dependent on technology not universally accessible.
- b. *Restrictions combined with targeted mitigation efforts lead to better outcomes in dire situations.* The Government's adoption of a small grant program to the urban self-employed is a good example of targeted assistance to a group in need. This approach shows that mitigation measures are essential to ensure continuation of economic activity and peoples' livelihoods.
- c. *The disruption in service delivery, especially in education and health care services, means that children have experienced a setback in human capital acquisition.* Though most children have returned to school, there are likely to be adverse consequences stemming from the long break on their preparedness to pick-up where they left off. (For example, school feeding programs in impoverished rural areas were disrupted during this period and children are likely to have undergone a period of poor nutrition.) It will be important to ensure that students catch up. Though the problem is not insurmountable, it does require prioritization to avoid problems from emerging.
- d. *The civil service and subsistence farming form an automatic de facto safety net, efforts to reform these sectors should ensure this function is replaced by an actual safety net.* Efforts to reduce the public sector wage bill and the commercialize agriculture are probably necessary for the long-term economic development of Sierra Leone. However, as this happens, important mechanisms that provide economic stability to households, even in the midst of a global pandemic will be reduced. In response, the social safety net system should be strengthened and expanded so that it can respond automatically and at a suitable scale in response to shocks to the economy.

Annex: Methodology of Survey to Survey imputation of poverty rates¹⁶

For poverty imputation, a statistical model was developed from the latest nationally representative household survey, which has comprehensive consumption module for direct estimation of poverty rates and a set of variables that are correlated with household welfare. Such a survey serves as a baseline dataset for imputation of household expenditures into the target survey, which lacks consumption module, but collects data on poverty correlates. Equation (1) presents the general form of a model imputing household welfare based on its correlates:

$$\begin{aligned} \ln y_{hs} &= x_{hs}'\beta_s + u_{hs} \\ u_{hs} &\sim N(0, \hat{\sigma}_{t0}) \\ \beta_s &\sim N(\hat{\beta}_{t0}, \hat{\sigma}_{\beta t0}) \end{aligned} \quad (1)$$

- $\ln y_{hs}$ refers to a natural logarithm of household expenditures to be imputed in the target survey
- x_{hs} is a $(k \times 1)$ vector of poverty correlates of household h in a target survey
- β_s is a $(k \times 1)$ vector of coefficients of poverty correlates drawn randomly from a multivariate normal distribution of $N(\hat{\beta}_{t0}, \hat{\sigma}_{\beta t0})$ where k is a number of variables. Both means ($\hat{\beta}_{t0}$) and the variance-covariance matrix ($\hat{\sigma}_{\beta t0}$) are estimated in the baseline model
- u_{hs} is a residual in the target survey drawn from a normal distribution ($N(0, \hat{\sigma}_{t0})$) estimated in the baseline model.

Specifically, multiple imputation (MI) estimation algorithm is employed to impute the household expenditure from the baseline model into the target survey. MI was developed by Rubin (1987) and Schafer (1999) and procedure employs Stata's *mi* command. Under the MI, $\hat{\beta}_{t0}$ is a vector of estimated coefficients and $\hat{\sigma}_{t0}^2$ is an OLS estimator of variance of residuals. MI draws a random value χ from chi distribution with a degree of freedom, $(N - k)$, where N refers to the total sample size and k is the number of variables selected by the stepwise regression procedure, and also calculates $\tilde{\sigma}_s = \hat{\sigma}_{t0}(N - k)/\chi$. MI then draws $\tilde{\beta}_s$ from a normal distribution of $(\hat{\beta}_{t0}, \tilde{\sigma}_{t0}(X_{t0}'X_{t0})^{-1})$ where X_{t0} is a $(N \times k)$ matrix $(x_1, \dots, x_h, \dots, x_N)'$ of (of poverty proxies in the baseline dataset. Finally, MI draws a natural logarithm of household expenditure in target survey, $\ln \tilde{y}_{hs}$, from a normal distribution of $(x_{hs}'\tilde{\beta}_s, \tilde{\sigma}_s)$. This imputation process is typically repeated twenty times. A poverty headcount rate is calculated by comparing the imputed household expenditure with a poverty line for each of the twenty iterations. The average poverty rates across all imputations is used as a poverty estimate. MSE is calculated in the baseline data by taking the average of the sum of squared differences between y_{ht0} and $\hat{y}_{ht0} = x'_{ht0} * \hat{\beta}_{t0}$.

The variance of the poverty estimate is calculated using the following formula (Rubin, 1987 and Schafer, 1999):

$$V(H^*) = \left(1 + \frac{1}{m}\right) \left[\left(\frac{1}{m-1}\right) \left(\sum_{l=1}^m (H^l - H^*)^2\right)\right] + \left[\frac{1}{m} \sum_{l=1}^m V(H^l)\right] \quad (2)$$

where m refers to the number of simulations, H^l refers to the poverty estimate in round l of the simulation, H^* refers to a mean of $\{H^l\}$ and the final estimate of the poverty headcount rate, m refers to the total number of simulations, and $V(H^l)$ is an estimate of the variance of the poverty estimate in round l of simulation. The first bracket reflects the between simulation variance, while the second squared bracket shows the within simulation variance. Consequently, the variance of the final poverty estimate is a weighted average of the within and between simulation variances.

¹⁶The description of methodology draws from (Yoshida, N., X. Chen, S. Takamatsu, K. Yoshimura, S. Malgioglio, and S. Shivakumaran. (2020) "The Concept and Empirical Evidence of SWIFT Methodology." Mimeo).

In the case of Sierra Leone, the baseline is the data from SLIHS 2018. The target survey is CFSVA 2020, which also contains the key poverty correlates. The baseline model and the imputations are based on the variables and regression parameters as shown in the table below.

Table A1: Baseline model for welfare imputation

Dependent variable is a log of consumption aggregate	Coef.	SE
Household size	-0.167***	(0.006)
Household size, squared	0.005***	(0.000)
East	-0.138***	(0.021)
North	-0.131***	(0.021)
North West	-0.089***	(0.020)
South	-0.111***	(0.021)
Ratio of adults with some college degree	0.136***	(0.034)
Ratio of adults with university degree	0.492***	(0.062)
Household resides in dwelling provided free	-0.069***	(0.012)
Material of the floor is mud	-0.285***	(0.070)
Material of the floor is cement	-0.195**	(0.070)
Lighting is from EDSA	0.065**	(0.020)
Cooking fuel is firewood	-0.304**	(0.094)
Cooking fuel is charcoal	-0.299**	(0.093)
Household has flush toilet facility	0.172***	(0.019)
Household has radio	0.046***	(0.011)
Household has mobile	0.053***	(0.015)
Household has standing fan	0.114**	(0.022)
Household has DVD player	0.086***	(0.019)
Household purchased coffee	0.120***	(0.011)
Household purchased malt drink	0.087***	(0.016)
Household purchased beef	0.183***	(0.019)
Household purchased fish	-0.072***	(0.014)
Household purchased eggs	0.088***	(0.014)
Household purchased tomato paste	0.068***	(0.012)
Household purchased plantains	0.138***	(0.020)
Household purchased okada services	0.157***	(0.012)
Household purchased recharge phone cards	0.105***	(0.015)
Number of days household resorted to reducing the size of the meal portion	-0.025***	(0.004)
Number of days household resorted to reducing the quantities of adult meal for the sake of young children	0.017***	(0.004)
Constant	9.378***	(0.117)
Number of observations	6534	
R-squared	0.663	

Standard errors in parentheses

Robust standard errors

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

There does not seem to have been any major structural shift in the economy of Sierra Leone due to the COVID-19 pandemic, meaning the model is more likely to remain valid and accurately impute household welfare in 2020. The (official) number of cases and deaths has been quite low, and thus the government restrictions on economic activity have been fairly light and short-lived. There have been no closures of non-essential businesses (except some brief closures of bars and nightclubs). Data from the employment section of the CIMS shows that there has been no big decrease in employment, or shifts of people from one sector to another, or one form of employment to another. There hasn't been massive internal migration of people back to their home villages in rural areas as some countries have seen (less than 6 percent of household in the CFSVA report a household member migrating). The variables on consumption of certain non-food and food items might reflect shortages in the market, rather than declining household purchasing power, and there have been some disruptions to supply chains, both international and national. The CIMS, however, shows almost no shortages of key foods in the markets. The CIMS does only ask about a few key staples, while other more "luxury" foods are included in the model. The Ebola epidemic in Sierra Leone brought a massive infusion of cash and created new job opportunities. Given the global nature of the pandemic, and the relatively small case numbers in Sierra Leone, this hasn't been the case for COVID-19 in Sierra Leone.

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