

**UPDATE ON THE ECONOMIC IMPACT OF THE 2014 EBOLA EPIDEMIC ON
LIBERIA, SIERRA LEONE, AND GUINEA**

DECEMBER 2, 2014

SUMMARY

The Ebola epidemic continues to cripple the economies of Liberia, Sierra Leone, and Guinea. The crisis is resulting in flat or negative income growth and creating large fiscal needs in all three countries, as they work to eradicate the virus.

This update presents the World Bank's most recent analysis of the economic effects of the Ebola epidemic on the three countries. All three had been growing rapidly in recent years, and into the first half of 2014. But GDP growth estimates for 2014 have been revised sharply downward since pre-crisis estimates. Projected 2014 growth in Liberia is now 2.2 percent (versus 5.9 percent before the crisis and 2.5 percent in October). Projected 2014 growth in Sierra Leone is now 4.0 percent (versus 11.3 percent before the crisis and 8.0 percent in October). Projected 2014 growth in Guinea is now 0.5 percent (versus 4.5 percent before the crisis and 2.4 percent in October).

As the epidemic continues, these economies will face a difficult year in 2015, as second-round effects kick in and investor aversion takes a further toll. 2015 growth estimates are 3.0 percent in Liberia, -2.0 percent in Sierra Leone, and -0.2 percent in Guinea, down from pre-Ebola estimates of 6.8 percent, 8.9 percent, and 4.3 percent respectively. In Sierra Leone and Guinea these growth forecasts are lower than our October estimates (7.7 percent for Sierra Leone; 2.0 percent for Guinea). In Liberia, where the epidemic may be abating and where there are some signs of economic activity picking up, the 2015 estimate is an increase on October's (1.0 percent). These projections imply forgone income across the three countries in 2014–15 of well over \$2 billion (over \$250 million for Liberia, about \$1.3 billion for Sierra Leone, about \$800 million for Guinea).

Combining the effects on revenue and spending with cuts made to public investment to finance the response, the total fiscal impact is well over half a billion dollars in 2014 alone. Liberia has been hardest hit fiscally. Relative to pre-Ebola forecasts, revenues are down \$86 million while public spending has increased \$62 million, a combined impact of more than 6 percent of GDP. In Sierra Leone, revenues are down \$85 million while spending has increased \$43 million, a combined impact of more than 2.5 percent of GDP. In Guinea, revenues are down \$93 million while spending has increased \$106 million, a combined impact of more than 3 percent of GDP. Although the resulting fiscal deficits in the three countries have so far been financed by inflows from development partners, governments have also cut public investments by more than \$160 million across the three countries, damaging future growth prospects.

The World Bank's October report on the economic impact of Ebola (released at the 2014 Annual Meetings of the IMF and the World Bank) found that if the epidemic continues in the three worst-affected countries and spreads to neighboring countries, the two-year regional financial impact could range from a "low Ebola" estimate of \$3.8 billion to a "high Ebola" estimate of \$32.6 billion. These scale estimates of potential impact remain valid: the epidemic is not yet under control. Containment, combined with a full-fledged financial recovery effort to restart business activity and bring back investors, are now both therefore urgently needed for the region to improve on the downbeat forecasts in this update.

LIBERIA

The number of new weekly cases of Ebola in Liberia has recently declined and this may explain some incipient signs of economic recovery. The government ended the state of emergency on November 12 and shortened curfew hours, in principle allowing an increase in economic activity.

Yet the economic effects of Ebola remain stark. A cellphone survey commissioned by the World Bank¹ indicates generally lower incomes and jobs being shed in both the wage-earning and the self-employed sectors. Two rounds of the survey have been carried out to date, in October and November. The proportion of wage earners that reported no longer working in their latest job was 51 percent in the November survey, up from 40 percent in October. Of the self-employed, 64 percent reported no longer working in November, up from 57 percent in October. In focus group interviews conducted by MercyCorps in early October more than 60 percent of households reported a decrease in income larger than normal for the time of year. Table 1 shows reported drops in median income ranging between 400 and 1750 Liberian dollars since August in two of the hardest hit counties, Lofa and Nimba, and Monrovia, the capital.

Table 1: Reported Income Changes (Liberian Dollars)

	Lofa	Nimba	Monrovia	Total
Median income category	2,001 – 5,000	2,001 – 5,000	2,001 – 5,000	2,001 – 5,000
Median change in monthly income since Aug	-400	-1,000	-1,750	-1,000
Maximum change	-20%	-50%	-35%	-50%
Minimum change	-8%	-20%	-18%	-20%

Source: https://www.mercycorps.org/sites/default/files/MercyCorps_Liberia_EconomicImpactEbolaOutbreak_2014.pdf.

More recently, some signs of stabilization and recovery have appeared. Projected GDP growth for 2014 is now 2.2 percent (down from 2.5 percent in our October analysis) but projected growth for 2015 has been raised, to 3.0 percent (up from 1.0 percent in our October analysis), based on expected recovery in construction and manufacturing (Table 2). These revisions assume progress on containment of the epidemic.

Table 2: Liberia, Successive Growth Projections (%)

	2014	2015
June (pre-Ebola)	5.9	6.8
October	2.5	1.0
December	2.2	3.0

Source: World Bank analysis

Domestic aversion behavior seems to be abating, while international aversion behavior is not yet. Seasonally adjusted petrol sales have recently returned to pre-crisis levels (Figure 1), suggesting increasing mobility, despite increasing transport costs due to curfews and road closures (Figure 2). The surge in international support has increased demand for hotel and restaurant services. Brussels Airlines has maintained two flights per week; Air Maroc recently cut its flights from three

¹ <http://www.worldbank.org/en/topic/poverty/publication/socio-economic-impacts-ebola-liberia>

to two, while Air Côte d'Ivoire initiated two flights a week in October. There is as yet little sign of a recovery in construction, proxied by cement sales (Figure 3). Construction at the Mount Coffee hydroelectric plant remains on hold, with expatriate contractors yet to return. Overall, services are projected to post marginal positive growth in 2014 (about 1 percent).

Commercial mining, which accounts for more than half Liberian exports, has remained robust. ArcelorMittal reports it is likely to meet its 2014 production target of 5.2 million tons (up from 4.7 million in 2013). China Union, Liberia's other large mining operation, resumed production in early October following temporary closure of its inspection facility in August (due to Ebola). Mining could therefore post growth above 10 percent in 2014. Investments in capacity remain on hold, for example the planned expansion of capacity at ArcelorMittal from 5 to 15 million tons per year, but could resume if the epidemic is contained. Commercial gold mining (Aureus Mining Inc.) has also been delayed, but production is likely to commence by the second quarter of 2015.

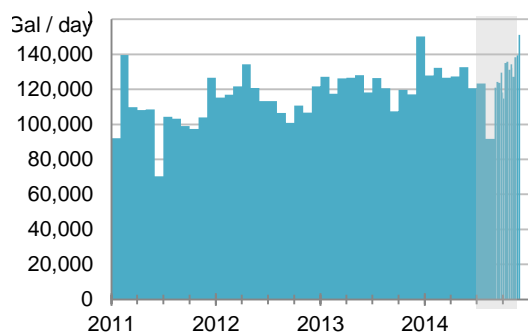
The impact on agriculture may not be as serious as earlier thought. MercyCorps data suggested that government advice against congregating in large groups may have affected farm labor-sharing, reducing the size of groups from up to 50 to below 10 people, with an estimated effect on the rice harvest of up to about 25 percent. However, the most recent World Bank cellphone survey shows farm abandonment not as widespread as earlier feared, with at least some members of families remaining employed throughout the crisis. The November round of the survey also suggests a return to farming by those who had abandoned farms. Investments in commercial agriculture remain on hold, including a US\$10 million oil palm mill, on which work had started in July 2014.

Food prices are moderating (Figure 4) but remain above pre-crisis levels and the October round of the WFP phone survey reports all areas of the country affected by food insecurity. Ongoing border closures affect not only the distribution of produce but also the sourcing of inputs. Closures of weekly wholesale markets are restricting the flow of goods, particularly into Monrovia.

Fiscal impact has been acute. Revenues have been hit by the sharp reduction in economic activity and lower tax compliance. Expenditure has been driven up by the costs associated with the epidemic. For Fiscal Year 2015 (July to June), government had anticipated tax and non-tax revenues of \$499 million (all figures in US dollars, excluding grants; Table 3); expected revenues are now only \$413 million.

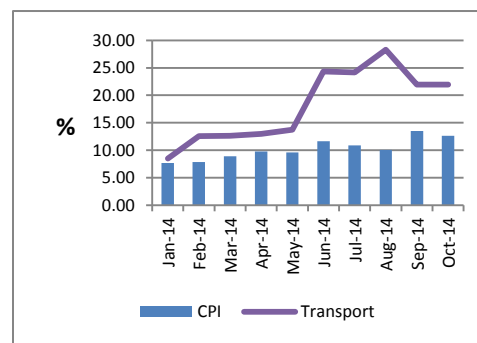
At the same time, expenditure projections have risen from \$718 million to \$779 million, with \$174 million on the recovery program, pushing the overall fiscal deficit from an original projection of \$159 million (then 7.1 percent of projected GDP) to \$306 million (14.3 percent of GDP). The composition of spending has also shifted. Prior to the crisis, a strategic push on infrastructure lay behind a planned \$276 million capital spending; that figure is now expected to be no more than \$168 million. Combining these measures of falling revenues, increased spending, and foregone investment, the fiscal effect of Ebola on Liberia in Fiscal Year 2015 is of the order of \$250 million.

Figure 1: Liberia, Petrol Sales (Seasonally Adjusted)



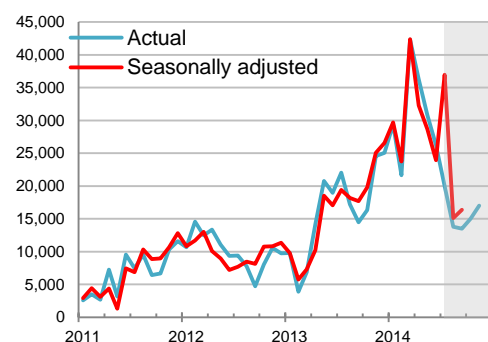
Source: World Bank analysis, LPRC

Figure 2: Liberia, Transport Costs



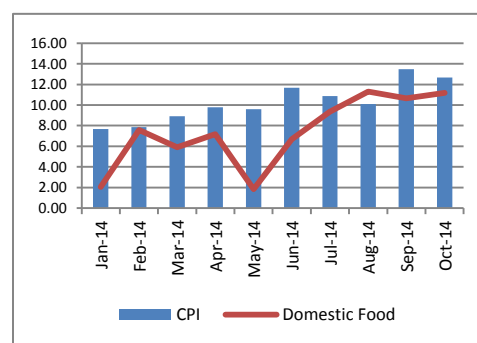
Source: World Bank analysis, LISGIS

Figure 3: Liberia, Cement sales (bags/day)



Source: Liberia Cement Corporation

Figure 4: Liberia, Inflation (%)



Source: World Bank analysis, LISGIS

Table 3: Liberia, Fiscal Projections, Fiscal Year 2015

	Original Projection (June)	Revised Projection (September)	Revised GOL Projection (October)
Tax and Non-Tax Revenues	<u>499.3</u>	<u>453.6</u>	<u>413.2</u>
Expenditure	<u>717.6</u>	<u>764.7</u>	<u>779.4</u>
Current Expenditure	441.9	509.1	611.0
of which: Health response	0.0	20.0	31.0
Social response	0.0	47.2	55.0
Capital Expenditure	275.6	255.6	168.4
Grants	59.6	59.6	60.0 ^{1/}
Overall Balance	<u>-158.7</u>	<u>-251.5</u>	<u>-306.2</u>
(% of GDP)	-7.1%	-11.8%	-14.3%
Overall Balance net of Recovery Plan			<u>-132.6</u>
% of GDP			-6.2%

Source: Ministry of Finance and Development Planning, World Bank Analysis; Note ^{1/}: Grant amount does not include the approximately US\$27.5 million grant announced by the EU at end-November, 2014.

SIERRA LEONE

Ebola transmission remains intense in Sierra Leone, with, as yet, no sign of a reduction in new cases. Freetown and the Western and Northern Areas appear to form the current epicenter.

The economy contracted at an estimated annualized rate of 2.8 percent over the second half of 2014, having grown during the first half at an estimated annualized rate of 11.3 percent. 2014 growth is projected at 4.0 percent, largely on account of the robust performance of iron ore. The 2015 growth forecast has also been adjusted downward to a 2.0 percent contraction (from our October forecast of an expansion of 7.7 percent; Table 4) as containment of Ebola has not been achieved.

2015 growth will be hit by the base-year effect (given growth in early 2014) as well as important second round effects of the prolongation of the crisis. Much foreign direct investment, previously deferred, is likely to be canceled. Domestic activity will shift towards government consumption as the recovery effort focuses on Ebola containment. GDP in 2014 will be over \$400 million lower than under the projection before Ebola; for 2015 the loss in GDP is projected to be over \$900 million.

Table 4: Sierra Leone, Successive Growth Projections (%)

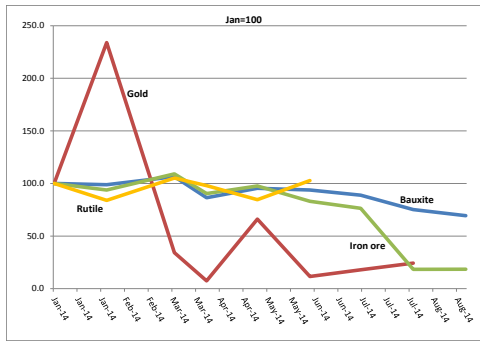
	2014	2015
June (pre-Ebola)	11.3	8.9
October	8.0	7.7
December	4.0	-2.0

Source: World Bank analysis

Reduced planting during the June-August planting season is likely to hit agricultural production in 2015. WFP has ramped up its feeding program and reports that food insecurity has increased more for rural dwellers than urban residents, due to better market access in urban areas. The rice harvest, which usually commences in August in the east and October in the north, has been delayed due to heavy rainfall in September.

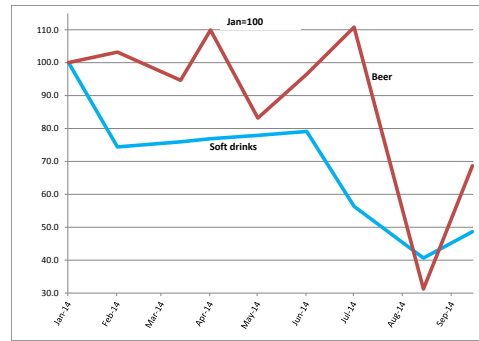
Iron-ore mining lifted overall GDP growth into double digits in 2012 and 2013 but the recent near halving of the world price now jeopardizes the sector. The smaller of the two main mines was placed under administration in late October. The larger mine continues to run at a loss and trading in its stock on the London Stock Exchange was recently suspended. Sierra Leone's production of other commodities, including diamonds, gold, bauxite, ilmenite and rutile has been flat or declining in 2014 (Figure 5). Manufacturing is also declining, illustrated by collapsing sales of drinks (Figure 6). Visitor arrival data reflect the influx of foreign aid and medical workers (Figure 7). Fuel sales, usually good leading indicators of economic activity, show sharp falls since June, although with an apparent stabilization since October (Figure 8).

Figure 5: Sierra Leone, Mining Production, 2014



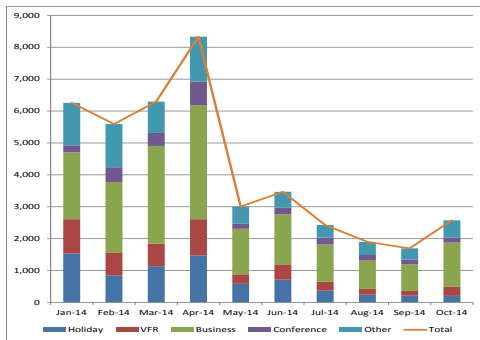
Source: Bank of Sierra Leone

Figure 6: Sierra Leone, Soft Drink/Beer Sales, 2014



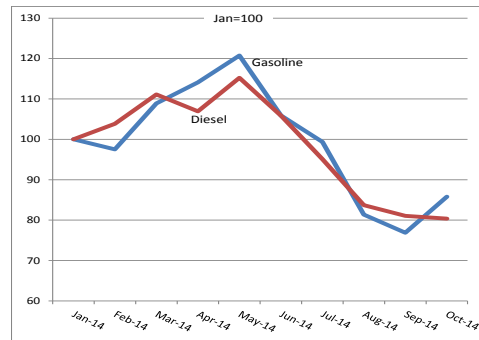
Source: Bank of Sierra Leone

Figure 7: Sierra Leone, Visitor Arrivals, 2014



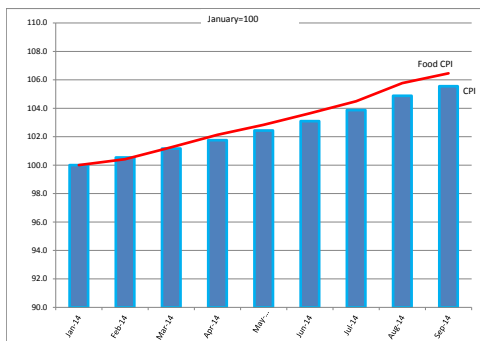
Source: Immigration Department

Figure 8: Sierra Leone, Fuel Sales (m liters)



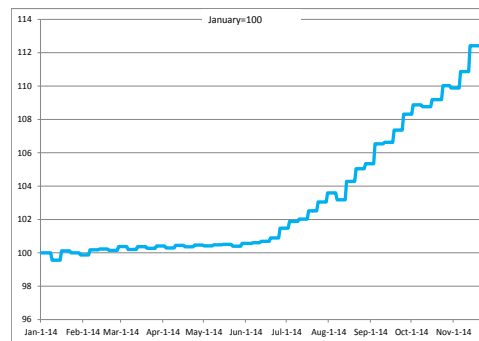
Source: Petroleum Regulatory Agency

Figure 9: Sierra Leone, Inflation



Source: Statistics Sierra Leone

Figure 10: Exchange Rate (Le/USD)



Source: Bank of Sierra Leone

CPI inflation remains around 7.5 percent, while food price inflation has been only slightly higher at 8.5 percent. Field reports from WFP indicate the price of locally produced rice has fallen in production zones with the start of the harvest. Inflation is expected to rise to 10 percent by year end, with food prices rising due to reduced domestic supply and a weaker currency raising import costs. The exchange rate with the US dollar was stable in nominal terms over the first half of 2014 but depreciated by between 1-3 percent per month thereafter, cumulatively losing about 11

percent of its value since July. Terms of trade are projected to deteriorate by 13 percent in 2014, mainly due to the falling iron-ore price.

The fiscal position has worsened slightly versus September estimates (Table 5). Lower economic activity and reduced taxpayer compliance have reduced revenues by about \$85 million on pre-Ebola forecasts. Expenditure needs in response to the epidemic have been managed largely off budget, with government making a direct contribution of US\$41 million to the response fund managed by the National Emergency Response Center, which is mainly donor financed. Combining measures of falling revenues, increased spending, and foregone investment, the fiscal effect of Ebola on Sierra Leone in 2014 is about \$150 million.

Development partners have increased support to the 2014 budget by US\$137 million. In September the IMF augmented its financing by about \$40 million. The European Union, the UK Department for International Development, the African Development Bank, and IDA have collectively increased their 2014 financial support by about US\$100 million, implying that government's 2014 financing needs are now covered. The 2015 budget forecasts a fiscal deficit of around \$150 million.

Table 5: Sierra Leone, Fiscal Projections, 2014 (USD million)

	Pre-Ebola Projection (June)	Revised Projection (September)	Revised Projection (November)
Tax and Non-Tax Revenues	<u>605</u>	<u>542</u>	<u>520</u>
Expenditure	<u>977</u>	<u>982</u>	<u>1020</u>
Current Expenditure	580	616	647
<i>of which:</i> Health response	-	25	38
Social response	-	3	3
Capital Expenditure	397	366	373
Grants	171	174	220
Overall Balance	<u>-201</u>	<u>-267</u>	<u>-280</u>
% of GDP	-4.2%	-5.7%	-5.9%

Source: Ministry of Finance and Economic Development, IMF and World Bank analysis

GUINEA

The rate of Ebola transmission in Guinea has fluctuated in recent months, with an increase in new cases in some districts and a decrease in others. As of November, the capital Conakry and the southeast zone of Macenta are witnessing new Ebola cases, while ten of the 34 districts have not reported any cases.

Guinea's GDP growth forecast has been reduced to 0.5 percent from our October estimate of 2.4 percent (and 4.5 percent in June; Table 6). Commerce and services have been hit by a sharp drop in international travel and regional trade; agricultural and manufacturing exports to neighboring countries have come to a standstill; and projects involving expatriate workers have slowed or stopped. A contraction of 0.2 percent is now forecast for 2015 (versus a forecast of 2.0 percent growth in October).

Table 6: Guinea, Successive Growth Projections (%)

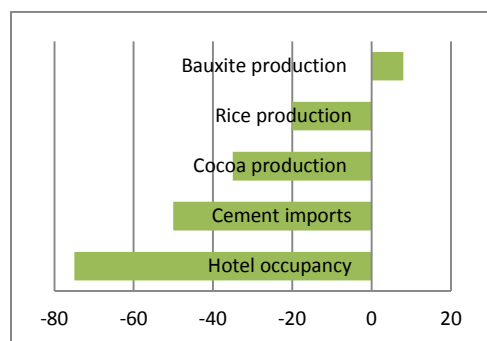
	2014	2015
June (pre-Ebola)	4.5	4.3
October	2.4	2.0
December	0.5	-0.2

Source: World Bank analysis

All agricultural sectors have been hit by the crisis. 2014 rice production is estimated to have fallen by 190,000 tons, a fifth of the total (Figure 11). Coffee production has also fallen by half in 2014 relative to 2013 (from 5,736 tons to 2,671 tons year to date); cocoa production has declined by a third (from 3,511 tons to 2,296 tons). Corn production has declined by 25 percent. Fish exports have fallen by more than 40 percent.

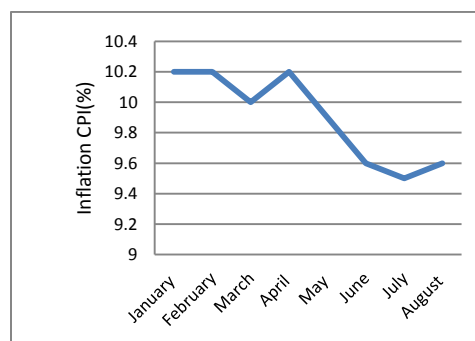
Manufacturing, though accounting for less than 7 percent of GDP, has been hit by difficulty obtaining imported inputs due to port delays and logistics challenges. Cement imports have fallen by 50 percent year to date, relative to 2013. Industrial production is reported by one large enterprise to be down by one third.

Figure 11: Guinea, Sector Growth (%)



Source: World Bank analysis

Figure 12: Guinea, 2014 Inflation (%)



Source: Central Bank of Guinea

Growth in services for 2014 is now projected 1.0 percent (versus 6.7 percent before the epidemic), with transport and commerce stagnant. On one hand, many services are tied to the mining sector, where major companies, including Vale and Rio Tinto, have evacuated foreign workers. Interviews in November with several private sector companies revealed increasing lay-offs. Hotel occupancy rates for most of the hotels in Conakry are only about 20 percent. All major construction projects remain on hold. On the other hand, mining output itself has not yet been severely affected because many of the largest mines are not located in Ebola-affected areas. Mining production was forecast to contract by 3.0 percent before Ebola; the forecast contraction is now 4.0 percent.

Inflation has fallen slightly through 2014, to 9.5 percent from slightly above 10 percent (Figure 12). Upward pressure on food prices due to lower agricultural production has been offset by the dampening effect of low domestic demand. 2014 annual inflation is expected to remain at 9.5 percent. Food insecurity continues to be a concern in certain regions: WFP phone surveys have found some households reducing the quality and frequency of meals to cope with shortages and substituting rice with cassava. The exchange rate has remained stable, depreciated by only 2.5 percent between June and November.

The fiscal impact of the Ebola outbreak has been significant. Revenues have fallen in several categories, with mining royalties, taxes on international trade, and taxes on goods and services accounting for two-thirds of the overall decline. Non-Ebola related spending has been curtailed while the government has adopted a \$90 million response plan to fund logistics, health centers, the purchase of food and equipment, and salaries (Table 7).

Mobilization of donor grants and some government borrowing have fully financed the 2014 budget (including budget support from the World Bank of \$50 million, from the IMF of \$41 million, and from the African Development Bank of \$32 million). While revenue is down \$93 million (1.4 percent of GDP) relative to projections in June, projected expenditures have increased by \$106 million (1.6 percent of GDP). Direct Ebola-related spending in 2014 has been \$90 million, including \$10 million from own resources. Combining measures of falling revenues, increased spending, and foregone investment, the fiscal effect of Ebola on Guinea in 2014 is over \$200 million.

Table 7: Guinea, Fiscal Projections, 2014 (USD million)

	Pre-Ebola Projection	Revised Projection	Revised Projection	Revised Projection
	(June)	(Sep.)	(Oct.)	(Nov.)
Tax and Non-Tax Revenue	<u>1,365</u>	<u>1,315</u>	<u>1,250</u>	<u>1,272</u>
Total Expenditure	<u>1,960</u>	<u>2,030</u>	<u>1,981</u>	<u>2,066</u>
Current Expenditure	1,090	1,160	1,226	1,225
<i>of which:</i> Health response	0	50	133	70
Social response	0	20	20	20
Capital expenditure	870	870	755	840
Grants	335	335	448	508
Overall balance	<u>-260</u>	<u>-380</u>	<u>-283</u>	<u>-286</u>
(% of GDP)	-4.0%	-5.8%	-4.2%	-4.4%

Note: Guinean Franc converted at exchange rate of Guinean Franc 7,000/USD

Source: IMF and World Bank analysis