ANGOLA

Disaster Risk Finance Diagnostic

January 2024

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Disaster Risk Financing & Insurance Program

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Acknowledgements

This Disaster Risk Finance (DRF) report was prepared by a World Bank team led by Qhelile Ndlovu (financial sector specialist), consisting of Delfim Mawete (financial sector specialist), Fernanda Senra de Moura (consultant), Alejandra Campero (consultant), and Victor Cardenas (consultant) with inputs and support from Ruben Barreto (senior financial sector specialist), Mazen Bouri (lead financial sector specialist), and Boban Paul (senior social protection specialist). The report was prepared by the Finance Competitiveness and Innovation Global Practice as part of a broader engagement between World Bank and the Government of Angola on the Country Climate and Development Report to develop a climate-informed investment and reform program to achieve Angola's development goals in the context of climate change. The DRF diagnostic aims to support the Government of Angola in better understanding the fiscal impact of disasters and crises and in planning and implementing options to strengthen financial resilience for government, rural households, and micro, small, and medium enterprises.

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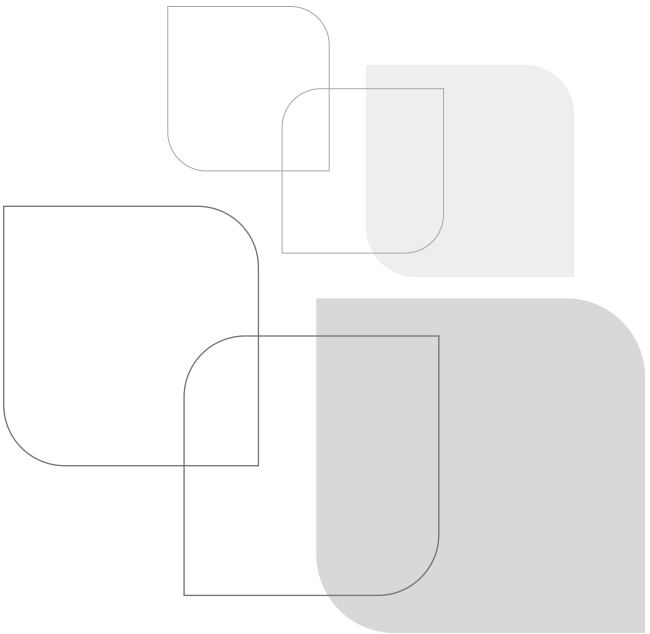

Executive Summary

Angola is highly exposed to natural disasters and climate change that threaten vital ecosystems, with droughts and floods being the most serious perils. Droughts are infrequent but tend to have a prolonged negative impact in rural areas, while floods are more frequent and localized in urban areas, causing direct damage and economic disruption. Climate change is expected to increase the frequency and severity of weather-related disasters, and the economic cost of disasters could further increase because of a growing economy and population. [1]

Vulnerable households and micro, small, and medium enterprises (MSMEs) are highly vulnerable to climate shocks. In the absence of protection measures, progress in poverty reduction and shared prosperity may easily be undermined by the high levels of households' vulnerability to climate and other covariate shocks, including weather-related ones. [2] There is also a critical need for financial protection solutions to strengthen the resilience of the small and medium enterprise sector[3] because of its strategic importance in job creation.

The cost of disaster response in Angola is borne largely by the government, as emergency official development assistance covers only a small share of it and there is a large insurance protection gap. Between 2011 and 2020, emergency development assistance covered only 8 percent of the total response cost, leaving a significant burden to the public sector and a potential protection gap for the population and economy.

The current approach to disaster risk financing is to retain risks with budgetary mechanisms, relying heavily on ex post budget reallocations and supplementations (extraordinary credits), and with some ex ante contingent budget lines in place. The country has a general contingency budget for unforeseen expenditures, including those from climate shocks, and some sectors finance post-disaster interventions with ex ante contingent budgets. The Ministry of Agriculture and Forestry is the most advanced, with an operational contingency budget line and a prearranged contingent emergency component available for post-disaster response (figure ES.1). There is an opportunity for expanding the use of prearranged financing and for transferring risk to the private sector.

The execution of post-disaster interventions is well coordinated by permanent civil protection commissions that include the civil protection, finance, and other key sectors. At the national level, the main executive body is the National Civil Protection Commission (CNPC) and, as a member of the CNPC, the Ministry of Finance mobilizes funds for disaster response in coordination with the affected sectors. The same structure is replicated at the local levels, and municipalities and provinces may seek support from higher levels of government if they cannot respond to the event with their own resources.

Overall, if funding is available disbursements can be agile, but public funding for disaster response is increasingly tight, particularly at the local level. While timelines can be shortened according to the severity of the event and the available funds may be allocated in a matter of days or even hours, mobilization of funding for recurrent, smaller events has been more challenging, potentially causing delays to the response.

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[1] On average, 7.5 percent of the population (equivalent to 1.9 million people) is directly affected by drought each year; if projected climate conditions and socioeconomic evolution are considered, these values would increase to 10 percent (7.9 million people) between 2051 and 2100.

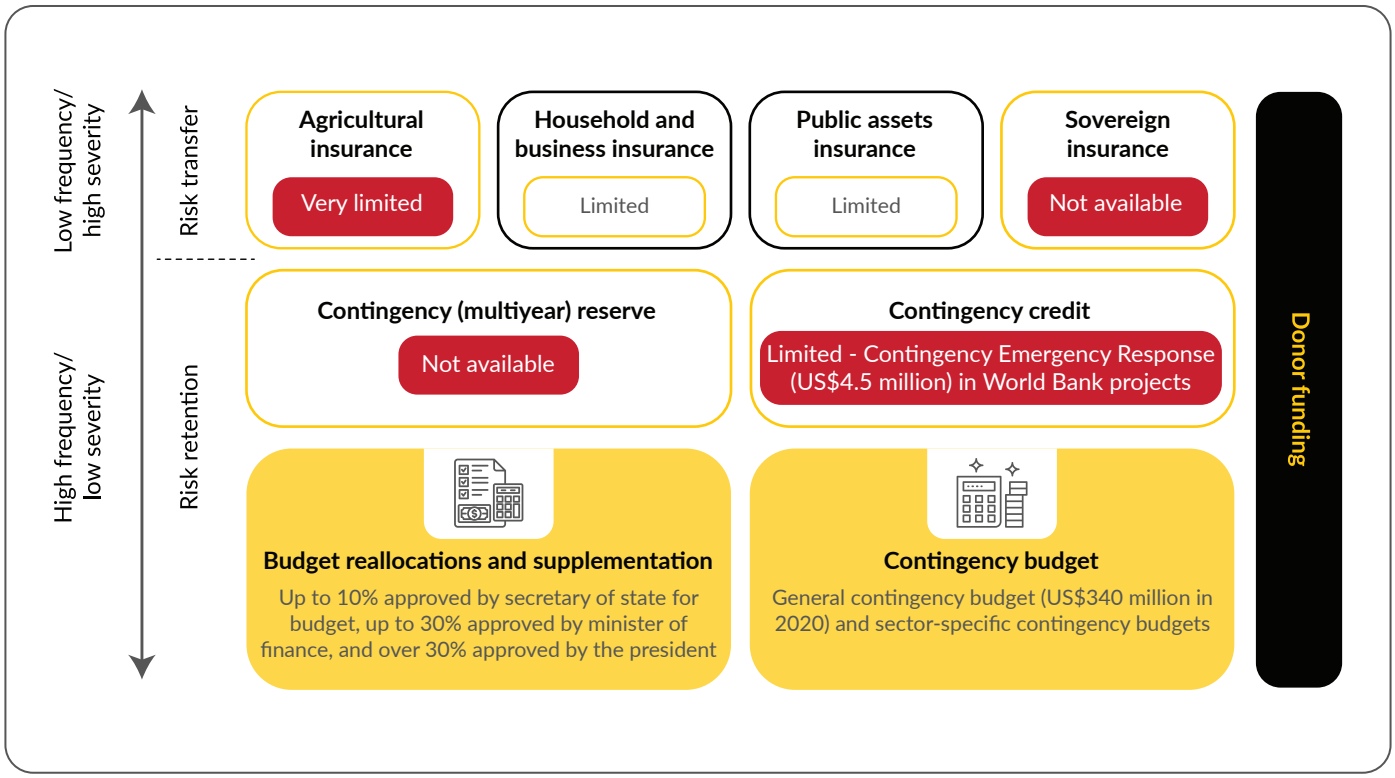
[2] Estimated at 35 percent of households in 2019.

[3] Our analysis of the effect of climate shocks on MSME lending indicates that there is a positive relationship between the number of people affected by disasters and the delinquency rate of microfinance institutions; the lending portfolio in delinquency increases by 4 percent when the number of people affected by disaster doubles (see section 1.5).

Currently, budget volatility due to oil price shocks limits the Government of Angola's ability to respond to shocks in a needs-based and sustainable way. Historically, disaster response spending in Angola has been driven by the availability of resources (thus indirectly driven by oil revenues): Government support following natural disasters declined significantly after the 2015 oil price shock despite the similar numbers of events and people affected by them, dropping from US$4.7 billion per year on average between 2008 and 2014 to US$1.1 billion between 2015 and 2020.

Moreover, despite its reliance on risk retention, the fiscal risk management frameworks currently in place in Angola do not explicitly address climate-related risks. Multiple units of the Ministry of Finance (MINFIN) manage contingent liabilities of various types, but none is responsible for those related to climate. The macrofiscal programming unit within MINFIN, for example, is responsible for monitoring risks to fiscal targets and debt sustainability, but climate risks are not explicitly considered within the scope of its fiscal risk analysis. There is a need for a fiscal risk model that captures climate-related risks to inform the budgeting process and for the inclusion of climate risks in the scope of the annual fiscal risk assessments required by the Fiscal Responsibility Law.

Figure ES.1: Status of risk financing instruments in Angola



Source: World Bank analysis.

Note: Reallocations are more common than supplementation, but extraordinary credits may be issued. The contingency budget is allocated at 5 percent of non-oil revenue each year.

Within this context, the gap between available funds and the average annual cost of disaster response is substantial. Statistical analysis done by the World Bank estimates the average annual cost of disaster response at US$75 million, with a 1-in-50-year shock estimated to reach US$600 million. Given the current funding approach, the funding gap after disasters could exceed US$65 million per year.

Expanding the government's portfolio of risk finance instruments in a risk-layered approach would be more cost-efficient, on average, and for extreme shock events. Analysis by the World Bank indicates that by combining reserve funds, contingent credit, and sovereign insurance, the Government of Angola could realize considerable savings (US$34 million) on average and significant savings for severe 1-in-10-year (US$60 million) events and very severe 1-in-50-year (US$300 million) events. In addition, the government could also consider insurance for public assets and critical infrastructure. More in-depth financial modeling should be undertaken to determine the optimal combination of financial instruments.

The Angolan Insurance Regulation and Supervision Agency is developing an agricultural insurance scheme to protect vulnerable farmers. The Government of Angola is considering provision of risk finance to stimulate demand and incentivize insurers to underwrite agricultural risk. The government is supporting product design and development and strengthening the capacity of the insurance market for core agricultural insurance operations and more technical aspects, such as use of remote sensing data, while developing partnerships to invest in data infrastructure and systems.

There is an opportunity to improve the delivery channels and targeting of post-disaster interventions as Angola's social protection system anchored around the Kwenda program is under development and has the potential to deliver post-disaster assistance. Given the value of using safety nets such as Kwenda as a disbursement mechanism and the vulnerability of households to covariate shocks that cannot be managed through mutual insurance, there is a strong case for an adaptive or scalable social protection system in some regions. The Angolan government could consider linking prearranged finance to the social protection system and using digital payments to increase the efficiency and timeliness of post-disaster assistance.

Photo Credit: Image: Freepik

The financial market presents an opportunity for the Government of Angola to achieve multiple policy objectives, including, to transfer risk off the budget, to mobilize private capital, and to deepen financial inclusion, particularly for women, rural populations, and MSMEs. The insurance sector is relatively small but growing. While property insurance with coverage against natural hazards is widely available, only one in four adults uses insurance to manage risk, and most public assets and infrastructure are uninsured. The use of savings and credit for risk management is also very limited, and nearly 70 percent of financially excluded people lack sufficient money, documentation, or know-how to use formal financial services. The government could explore the use of simplified banking accounts (Bankita) to drive the uptake and utilization of risk management products such as savings and insurance. The resilience of the MSME sector could be enhanced by strengthening the capacity of financial institutions to provide more diverse and long-term finance to MSMEs and by linking existing risk management mechanisms like the credit guarantee fund to contingency funds or climate insurance.

In the long term, the domestic capital market could be a good avenue for access to catastrophe products, but initially these could be accessed from the international markets. In the short to medium term, the Government of Angola could focus on developing the capacity of the local capital market, which is at an early stage of development and is dominated by government bonds, although there are several initiatives to foster growth, including the privatization of state-owned enterprises.

The government recognizes that strengthening financial preparedness is critical to achieving its development goals. A strategic approach to risk financing for climate-related disasters could also help prepare for other crises, such as economic shocks due to pandemics like COVID-19. Options to strengthen financial resilience in Angola are summarized in table ES.1. The Angolan government could consider prioritizing protection for the agriculture sector because of its strategic importance for economic diversification and shock-responsive social protection to protect the most vulnerable populations.

Photo Credit: Image: Freepik

Table ES.1: Recommendations to strengthen financial resilience in Angola

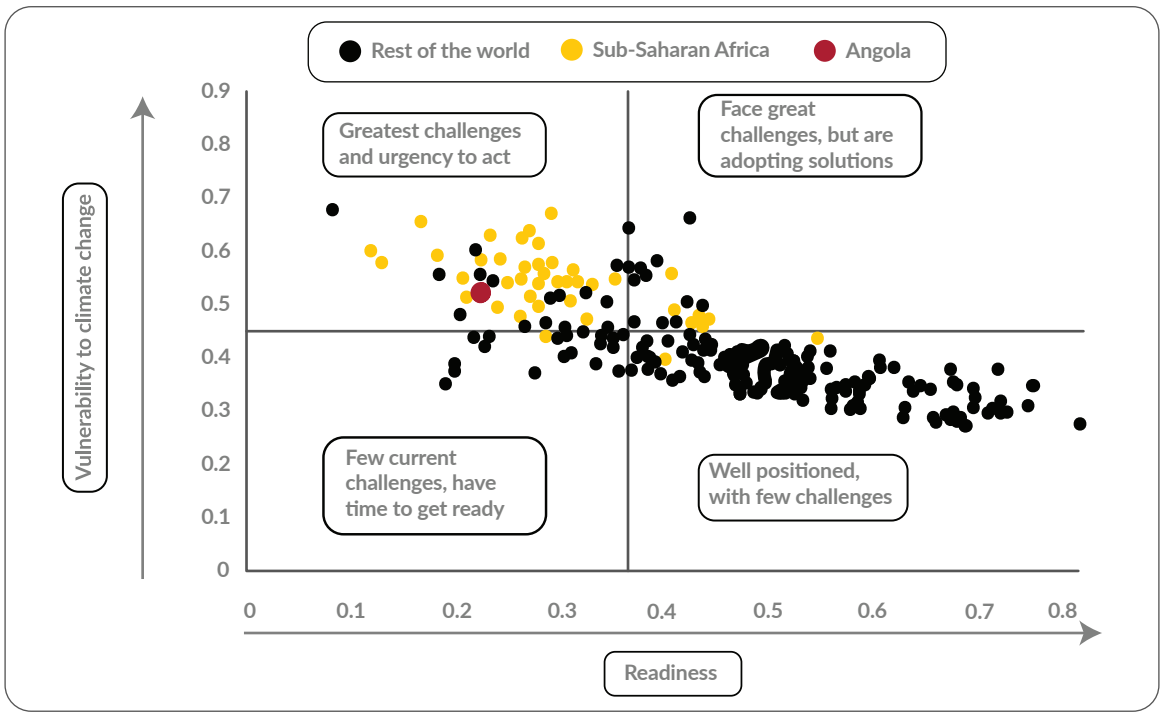
Time frame	Strengthen the policy and institutional framework	Improve public financial management and risk-informed decision-making	Strengthen existing risk-finance instruments and pre-arrange new instruments	Strengthen financial resilience of the MSME sector and vulnerable populations
Short term	• Update the strategic policies relevant for disaster response (e.g. Contingent Plans, DRR Plans, and Drought Recovery Framework) • Assess DRF practices and needs at local government level.	• Strengthen the technical capacity of the Ministry of Finance on disaster risk finance. • Annually assess climate-related contingent liabilities and include these in the Fiscal Risk Assessment as part of the Fiscal Strategy.	• Establish a dedicated multiyear disaster contingency or reserve fund.	• Facilitate private sector innovation to increase financial inclusion and close the protection gap. • Prearrange finance for shock responsive social protection linked to Kwenda.
Medium term	• Develop and adopt a comprehensive disaster risk financing strategy. • Revisit the Civil Protection Laws and consider an update.	• Develop a national database on the occurrence and impact of natural disasters.	• Secure a contingent line of credit. • Accelerate the development and implementation of a national agriculture insurance scheme.	• Build shock-responsiveness into government-supported MSME finance programs. • Strengthen the institutional capacity for shock-responsive social protection system.
Long term		• Develop a public expenditure tracking system for disaster and crisis response.	• Develop a risk-based asset management system to maximize the utility of public assets and strengthen resilience to physical shocks.	

Note: Short term = less than 24 months; medium term = 24–48 months; long term = over 48 months. DRF = disaster risk finance; MSME = micro, small, and medium enterprise.

1 Assessment of Climate Risk and the Impact of Past Disasters

Angola is exposed to multiple climatic hazards (droughts, floods, landslides, wildfires, and ravinas) and epidemics and is ranked as a high-risk country by the Notre Dame Global Adaptation Initiative (ND-GAIN), [4] **the Climate Risk Index (CRI),** [5] **and the INFORM Risk Index.**[6] Climate change is expected to increase the frequency and severity of weather-related disasters through a continued rise in mean temperatures and increasingly variable precipitation. By 2040–60, most of the country is projected to be 1.5–2.5°C warmer than the historical mean. Precipitation projections are more uncertain but indicate some reduction by the end of the century, with shorter rainy seasons, and a drier future in some southern areas (World Bank 2022).[7] Angola faces a significant challenge to improve readiness to respond to climate shocks and currently ranks low, at 160th out of 192 countries in the ND-GAIN index (Figure 1.1).

Figure 1.1: Comparison of Angola's readiness to respond to climate shocks to countries in Sub-Saharan Africa and the rest of the world



Source: World Bank based on data from the Notre Dame Global Adaptation Initiative (ND-GAIN).
Note: ND-GAIN aims to help private and public sectors prioritize climate adaptation, ultimately lowering risk and enhancing readiness.

[4] The ND-GAIN Country Index summarizes a country's vulnerability to climate change in combination with its readiness to improve resilience. Countries are ranked from 1 (lowest risk) to 181 (highest risk). Angola ranks 160th. Readiness measures a country's ability to leverage investments and convert them to adaptation actions. ND-GAIN measures overall readiness by considering three components: economic readiness, governance readiness, and social readiness. https://gain.nd.edu/our-work/country-index/rankings/.

[5] The global CRI indicates a level of exposure and vulnerability to extreme weather events. The CRI score is based on the impacts of extreme weather events on a country's socioeconomic indicators. Countries are ranked from 1 (highest risk) to 182 (lowest risk). Angola ranks 23th. https://reliefweb.int/sites/reliefweb.int/files/resources/Global%20Climate%20Risk%20Index%202021_1_0.pdf.

[6] The INFORM Risk Index is a global risk assessment tool using three dimensions: hazard and exposure, vulnerability, and lack of coping capacity. Countries are ranked from 1 (highest risk) to 191 (lowest risk).

[7] Projections according to the CORDEX model. The south of Angola and the Cuanza region are likely to experience a significant increase in drought events.

1.1 Overview of disasters

Total economic losses due to climate disasters amounted to at least US$3 billion between 2005 and 2017. [8] The cost of response was borne largely by the government and donors, as none of the losses were insured. Floods are the most frequent events, while droughts, which account for only about 8 percent of the total number of events, affected over 86 percent of the population. From 2001 to 2022, Angola lost 17.5 kilo hectares of tree cover from fires. The year with the most tree cover loss due to fires was 2015, with 1.5 percent of all tree cover lost. Losses are concentrated in Moxico, which lost 373 hectares of forest per year and has the second-highest levels of poverty.[9] Epidemics have been less frequent but deadly. While the population affected by epidemics accounts for only 1.3 percent of the total, over 80 percent of deaths are linked to epidemics. Overall, data on the impact of disasters are porous, so the actual cumulative impact of disasters is expected to be higher than what is on record (Table 1.1).

Table 1.1: Cumulative historical losses in Angola by type of peril, 1917–2021

	No Events	Affected[a]	No Deaths	Economic Losses US$ millions[b]
Drought	10	9,663,900	58	2,511.7
Flood	100	1,295,663	835	449.5
Landslide	5	23,939	288	78.5
Earthquake	2	7,914	NA	NA
Wildfire	1	NA	4	NA
Epidemic [c]	5	143,799	5,316	NA
Total	**123**	**11,135,215**	**6,501**	**3,039.7**

Source: United Nations Office for Disaster Risk Reduction (DRR), DesInventar, https://www.desinventar.net/DesInventar/profiletab.jsp?countrycode=ago&continue=y.

Note: The table presents aggregate impacts across different disaster events. NA = data not available;

a. Affected include the insured, missing, evacuated, and resettled in addition to the directly and indirectly affected.

b. Economic loss is the value of losses directly caused by disaster events. These were sourced from DesInventar in local currency and converted to US$ values using official exchange rates from the World Development Indicators and adjusted for inflation to 2021 US$ values. These are underestimates as financial information on losses and damages was available only for events that occurred between 2005 and 2017. Notably, information on deaths due to drought is also underestimated. Indirect deaths from malnutrition, disease, and displacement, which are the primary outcomes of droughts, largely occur after the emergency phase and are often poorly documented. Data on recurrent, localized floods are not available, suggesting that the actual cumulative impacts of floods are significantly higher than the available estimates.

c. This includes cholera and Marburg virus and excludes the impact of COVID-19, which is addressed separately in chapter 5.

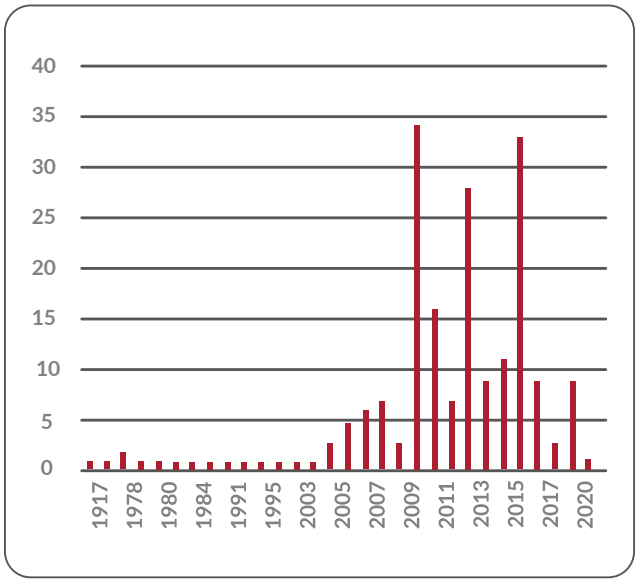
[8] Period for which estimates on the economic losses are available on DesInventar.

[9] Global Forest Watch, https://www.globalforestwatch.org/dashboards/country/AGO/15/?category=fires&map=eyJjYW5Cb3VuZCI6dHJ1ZX0%3D.

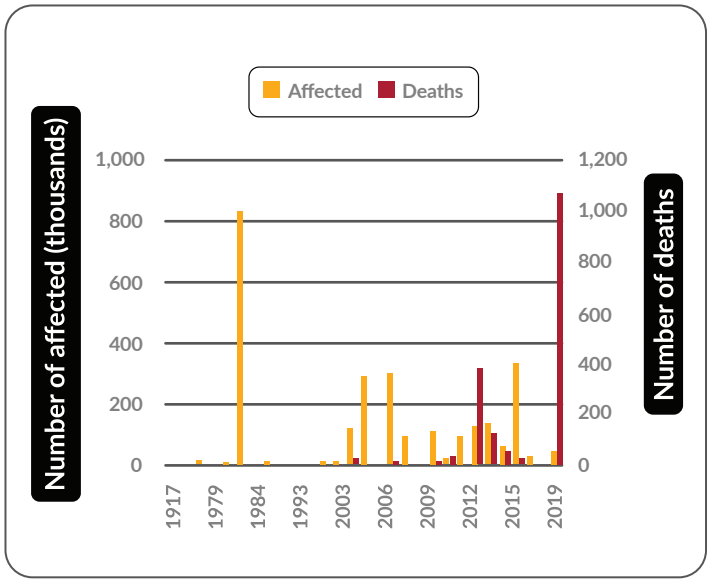
Angola has experienced an increase in the number of large-scale hydrometeorological events, which are likely to continue increasing because of climate change. The number of disaster events has increased from 7 in 1995–99 to 25 in the period 2000–04 and between 2005 and 2009. The number of disasters increased further to 71 events between 2010 and 2014 and to 64 events between 2015 and 2019. The number of deaths and people affected due to disaster events have also increased (Figure 1.2).

Figure 1.2: Number of disaster events and people affected

a. Number of events



b. Number of people affected or killed

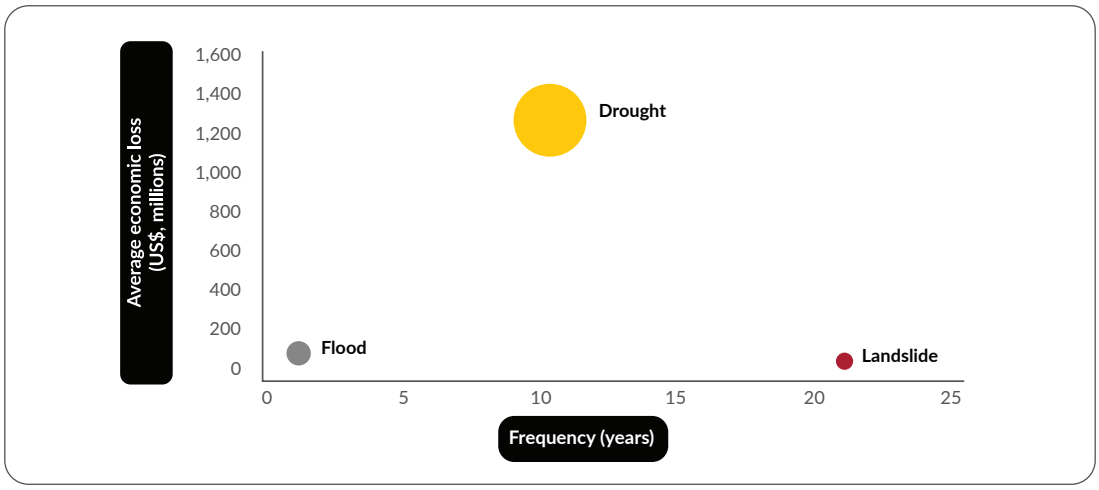


Source: United Nations Office for Disaster Risk Reduction, DesInventar, https://www.desinventar.net/DesInventar/profiletab.jsp?countrycode=ago&continue=y.

Drought and flood are the most serious perils in Angola. Droughts are of high severity and medium frequency, while floods are of low severity but high frequency (figure 1.3). In the past, droughts have occurred in 1 of every 10 years, with each occurrence creating an economic loss of US$1.2 billion on average. However, these figures mask great variability and may be due to data paucity that results in the availability of loss data for only severe droughts. Losses and damages from the 2012–16 drought are estimated at US$2.1 billion in 2021 values (US$562 million in 2016 values and 75 percent of agricultural gross domestic product [GDP]). Floods have occurred almost yearly and have resulted in economic loss of US$150 million on average though, again, the impact of a specific event can be more severe. The 2007 flood is estimated to have caused US$284 million in damages and losses across Benguela, Cuanza Sul, Huila, and Cabinda (JBA, 2022).


Photo Credit: Image: Freepik

Figure 1.3: Disaster risk profile of Angola, 1917–2021

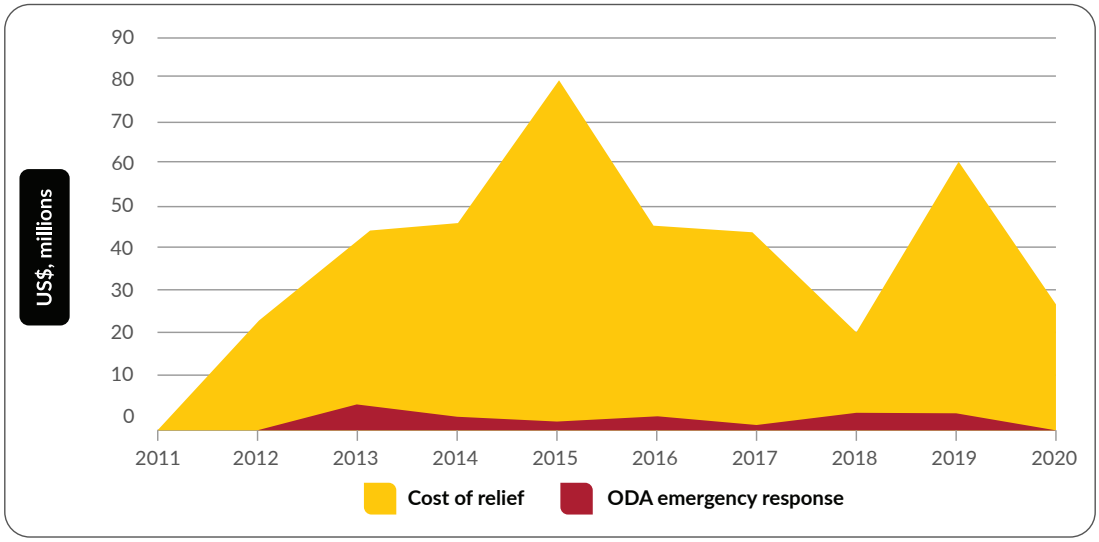


Source: Calculations by World Bank staff, based on historical events from the United Nations Office for Disaster Risk Reduction DesInventar database in US$ 2021 values.

Note: The size of the bubble represents average loss per event

A significant portion of the estimated cost of disaster relief in Angola is unfunded, as emergency official development assistance covers only a small share. Donor funding covered only 8 percent of the estimated annual cost of disaster response between 2011 and 2020 (Figure 1.4) Although emergency official development assistance spiked following the 2016–17 drought, from US$1.0 million to US$4.7 million in 2018, this met only 25 percent of the estimated cost of response, which was calculated using the number of people in need of emergency food assistance from DesInventar and from the Vulnerability Assessment Committee (VAC) for Angola.[10]

Figure 1.4: Humanitarian funding gap, 2011–20



Source: Calculations by World Bank staff based on Integrated Food Security Phase Classification (IPC) data, https://reliefweb.int/sites/reliefweb.int/files/resources/ and https://www.ipcinfo.org/ipc-country-analysis; Organization for Economic Co-operation and Development (OECD), OECD. Stat on overseas development assistance, https://stats.oecd.org/#.

Note: ODA = Official Development Assistance.

[10] From the Vulnerability Assessment Committee data, the population in emergency need of assistance consists of lives categorized in Integrated Food Security Phase Classification phases 3 to 5, or IPC3+. The estimation assumes that the average cost of assistance per person is US$50. This assumption is based on the national poverty line of US$1.90 per day and assumes a relief period of 28 days.

Droughts

Drought is the peril with the most severe impacts; it directly affects an average of 1.9 million people (7.5 percent of the population) per year.[11] The population affected increases nearly fourfold to 7.9 million if projected climate conditions and socioeconomic evolution are considered.[12]

Between 2012 and 2016, droughts in the three most affected southern provinces resulted in total damages and losses of US$750 million and annually affected 1.2 million people, according to the post disaster needs assessment (PDNA) summarized in box 1.1. The total damages and losses in the crop and livestock subsectors accounted for most of the impacts, amounting to nearly US$562 million (1.1 percent of GDP in 2016).

[11] Among 7.6 million people living in areas affected by drought.

[12] Under this scenario, over 2051–2100, about 42.2 million people are projected to live in areas hit by drought.

Box 1.1 Impact of the 2012–16 Drought on the Agriculture Sector

Angola's agriculture sector, which accounted for 9.8 percent of the country's GDP in 2016, is one of the greatest providers of both formal and informal employment; roughly 46 percent of the population works in the sector. The 2012–16 drought affected around 5.4 million people.

According to the post-disaster needs assessment (PDNA) for 2012–16, the epicenters of the losses and damages were in three provinces: Namibe, Cunene, and Huila. The total damage and losses in the crop and livestock subsectors amounted to nearly Kz 93 billion or US$562 million (1.1 percent of GDP, 2016).

Losses in the livestock subsector sector caused by droughts in 2012–16 (see table B1.1) accounted for about 63 percent of the total (Kz 59 billion, 0.72 percent of GDP, 2016). Damage and losses in the livestock subsector were due to livestock deaths and lower milk and meat production. In terms of cereal production, estimated losses were Kz 13.7 billion (0.17 percent of GDP, 2016), whereas for other crops, such as beans, the loss was nearly Kz 20 billion (0.24 percent of GDP, 2016).

B1.1 Damages and losses in agriculture

	Kz, millions								
	Namibe		Huíla		Cunene		Total		
	Damage	Losses	Damage	Losses	Damage	Losses	Damage	Losses	Total
Cereal	0.0	0.4	0.0	1.3	0.0	12.0	0.0	13.7	13.7
Other crop	0.0	2.7	0.0	13.4	0.0	3.8	0.0	20.0	20.0
Livestock	8.8	4.4	12.0	5.4	19.7	8.8	40.5	18.6	59.1
Total Kz	8.8	7.5	12.0	20.1	19.7	24.6	40.5	52.3	92.7
Total US$, milhões	53	45.5	73	122.07	118.7	149.2	244.7	316.9	561.6

Source: Angola National Commission for Civil Protection et al. 2016.

B1.2 Effects of drought on gross domestic product

The losses were close to Kz 53.4 billion (0.65 percent of GDP, 2016) compared to the pre-drought projections (table B1.2). Agriculture was the most affected sector, dragging down GDP by AKZ51.4 billion between 2012-2014, representing a decline of 0.7% compared to the baseline Agriculture GDP projections.

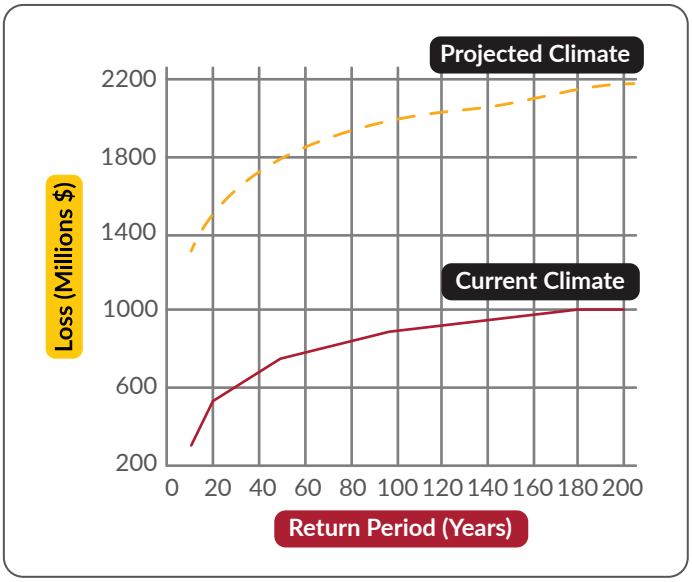
	2012-16 (Kz, million)				
Sector	Loss	Impact on GDP	Expected GDP	Revised GDP	Change (%)
Agriculture	70,000	51,459	6,815,644	6,764,185	-0.755
Water and energy	900	482	125,253	124,771	-0.385
Other sectors	2,500	1,544	55,214,385.42	55,212,842	-0.003
Total	74,100	53,485	62,155,282	62,101,797	-0.086

Source: Angola National Commission for Civil Protection et al. 2016.

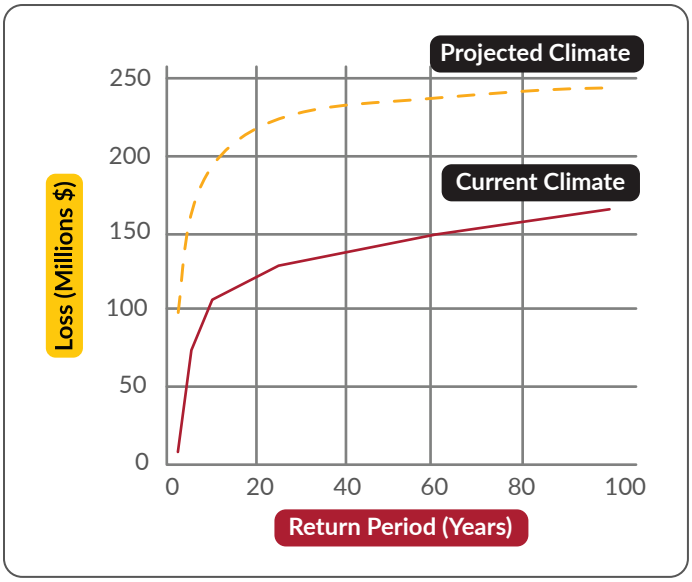
Agriculture and hydropower are the worst-affected sectors. The average economic loss from the impact of drought on crops is estimated at US$100 million per year (1.7 percent of average GDP) and could increase to US$744 million per year under future climate conditions. [13] While economic loss estimates for the livestock sector are not available, 48 percent of the national total stock is currently affected, and this could increase to 69 percent.[14] Losses in hydropower generation could increase to three times as much, from over US$30 million to almost US$100 million per year. [15] The future hydropower loss curve has a noticeably sharper slope, which means larger losses will become more frequent (for instance, losses of over 160 million are expected once in every 100 years under current climate conditions but would be experienced once every 5 years under projected climate conditions) (figure 1.5).

Figure 1.5: Economic loss due to drought

a. In crop production, US$, millions



b. In hydropower production, US$, millions



Source: Rudari et al. 2019.

Note: Loss is the probable maximum loss (PML), which is the value of the largest loss that could result from a disaster in a defined return period, such as once in 100 years. The term PML is always accompanied by the return period associated with the loss.

Droughts also severely decrease food and nutrition security and have been linked to increased incidence of diseases and mortality rates in recent years. Food insecurity spiked following the 2020–21 drought, the worst in the past 30 years, according to the National Institute of Meteorology and Geophysics (INAMET), because of massive crop failures in key agricultural provinces such as Huambo, Huila, and Bie. About 560,000 people in southern Cuando Cubango, Cunene, and Huila provinces required urgent humanitarian assistance in the first quarter of 2020. Prior to that, in the first months of 2019, a severe drought caused a food security and nutrition crisis that affected 2.3 million people, including half a million children under the age of five. Water scarcity for crops and livestock led to a poor 2018–19 harvest season, and the cost of basic commodities—such as corn flour, beans, and sugar—increased by 25 percent. Furthermore, the movement of people in search of water and pasture contributed to an increased number of school dropouts. For instance, in drought-prone Cunene province, 614 of 887 primary schools were affected, which left approximately 150,000 children - almost 70 percent of the total students in the province - without access to education (World Bank 2019). Similarly, following the 2011–12

[13] Crop production losses were calculated as the difference between the production of a year and the 20 percent lowest value from the current climate.

[14] Affected livestock are defined as animals living in areas that are hit by drought.

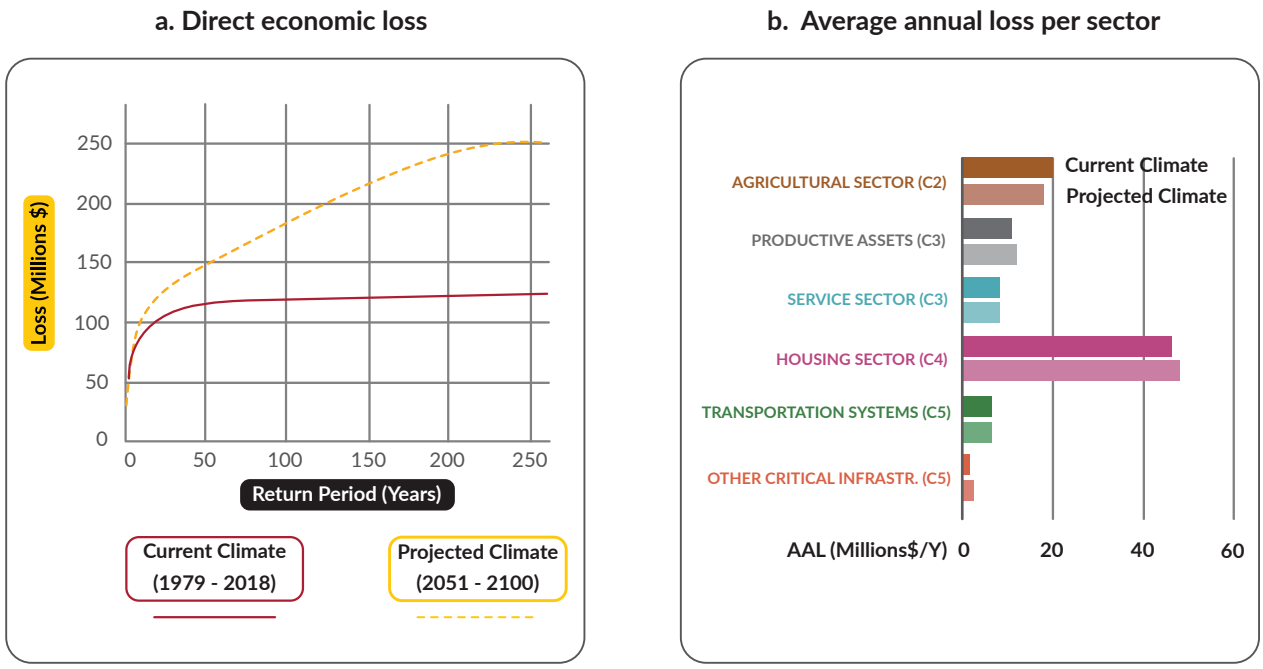
[15] Losses in hydropower generation are defined as production levels below average reservoir conditions.

drought, an estimated 553,000 children across 10 provinces were acutely malnourished, with 20 percent suffering from severe malnutrition, and facing a 20 percent mortality rate (International Federation of Red Cross and Red Crescent Societies 2012). By December 2013, about 1,000 people were infected, and 48 were confirmed dead over a two-week period because of a cholera outbreak in the drought-affected area (Gjerstad, 2014).

Floods

Floods are the most frequent disasters in Angola; they affect over 25,000 people and result in direct economic losses of about US$94 million (0.08 percent of GDP) on average, while 0.23 percent of the annual GDP is exposed to flooding every year.[16] The affected people are geographically concentrated in the most urbanized provinces—namely, Luanda, Cabinda, and Huambo. A report on flood risk in coastal cities across sub-Saharan Africa ranked Luanda [17] the 4th most exposed city to flood risk (World Bank 2021). Housing and agriculture are the most affected sectors, followed by the productive sector, services, and transportation. The loss distribution (Figure 1.6) shows that large losses are likely to become more frequent (for example, losses of US$100 million experienced every 25 years on average would be experienced every 10 years). This phenomenon can be attributed to Angola's high urbanization rates and rapid expansion of coastal zones. A greater likelihood of medium-frequency shocks that cause large losses in a short time poses more severe problems in terms of resilience. [18]

Figure 1.6: Economic losses due to flood



Sources: CIMA, UNDRR (2019).

Note: AAL = Average Annual Loss, which captures the expected cost of flooding on average per year. C2 = direct agricultural loss (Crops). C3 = Direct economic losses to productive assets. Productive assets include industrial buildings and energy facilities. C4 = Direct economic losses to housing sector. C5 = Direct economic losses to productive infrastructure. Transport systems include roads and railways and other critical infrastructures include health and education facilities.

[16] The number of people affected increases more than fourfold to 115,000 if projected climate conditions and socioeconomic evolution are considered. GDP exposed to flood is the total GDP produced in areas affected by floods.

[17] Luanda is the second most populated coastal city in sub-Saharan Africa, and second by exposure of infrastructure to coastal and rainwater flooding.

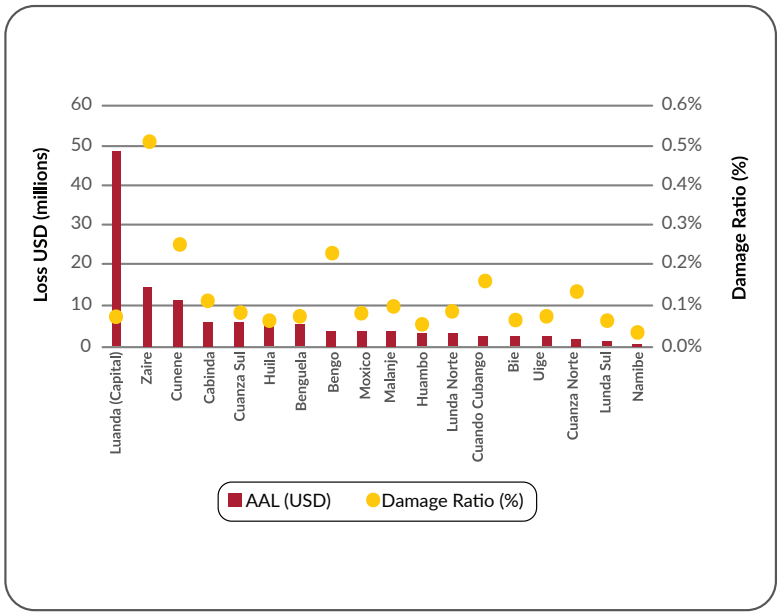
[18] IIdeally, risk retention instruments like reserve funds are cost-effective for high-frequency, low-severity events, while risk transfer solutions are cost-effective for low-frequency, high-severity shocks.

The value of residential and commercial buildings and contents that are exposed to floods is concentrated in the western provinces and estimated at US$133 billion, of which residential property accounts for 81 percent. The total expected cost of flooding is US$124.5 million, with a loss ratio of approximately 0.09 percent.[19] Luanda has the greatest loss (US$48.5 million), followed by Zaire and Cunene. Meanwhile, Zaire has the highest loss ratio (0.51 percent), followed by Cunene and Bengo (figure 1.7). In Angola, fluvial flood risk heavily dominates pluvial flooding. Zaire, Cunene, and Bengo have high damage ratios because more of their exposure is located close to a river, whereas Luanda's exposure is located at a distance from the main Cuanza River. There is an urgent need for financial protection solutions to mitigate the impact of increasing flood risk to households.

Figure 1.7: Flood loss and damage ratio for residential and commercial property in Angola

a. Flood total insured value

b. Flood average annual loss and damage ratio by province



Source: JBA Risk Management, 2022.

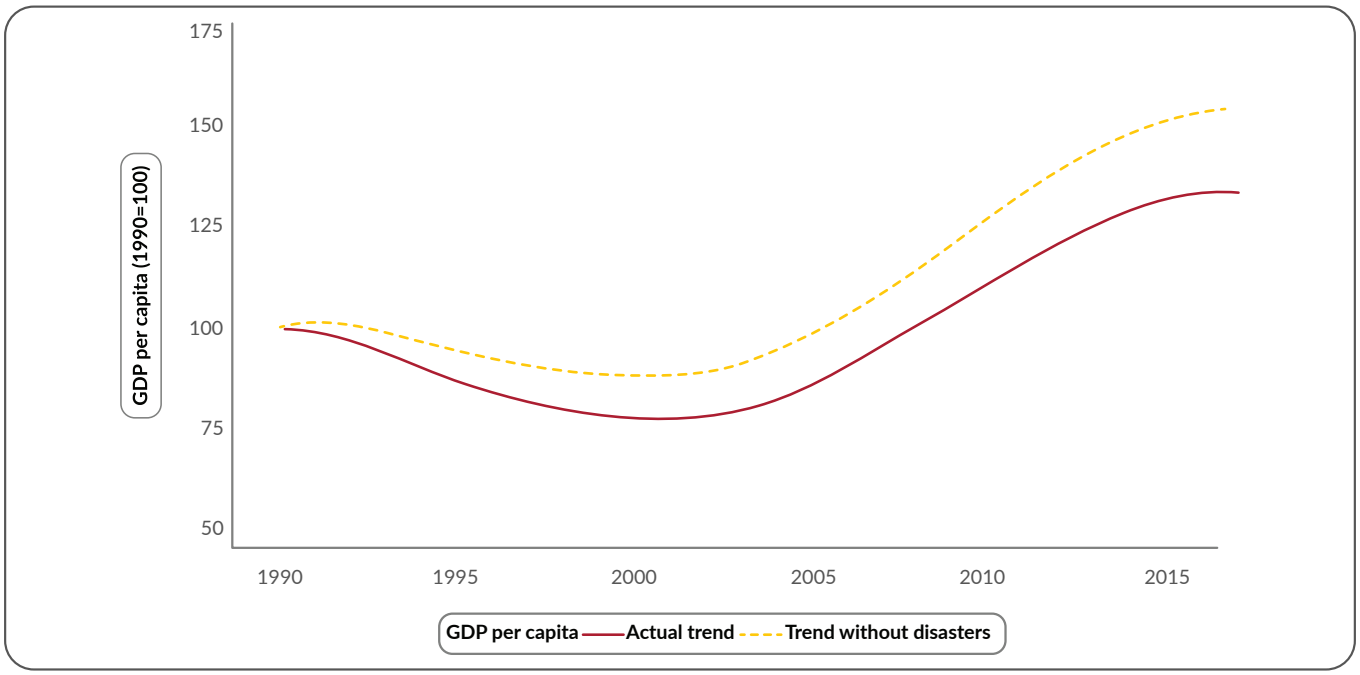
Note: Total insured value (TIV) represents the total insured value or replacement value of assets or required exposure in the database to be modeled in US$. It can include buildings, contents and business interruption values. AAL is the expected cost of flooding on average per year. This is calculated by averaging losses over each year of the simulation, in this case 10,000 years.

1.2 Macroeconomic and fiscal impacts

Disasters have negative and statistically significant impacts on long-term growth, in addition to adverse short-term macroeconomic impacts. Econometric modeling shows that, on average, an increase of 1 unit in the rainfall deviation indicator is associated with a 0.3 percent decrease in GDP per capita in the long run. Figure 1.8 simulates a path for the GDP per capita with and without disasters between 1990 and 2017. This path is attributed to the direct negative impact of extreme rainfall events and prolonged rainfall deficits on the agricultural sector, as well as indirect negative effects on capital accumulation and labor force productivity and availability, which are essential for spurring economic growth and social development (World Bank 2019). In the short run, fiscal balance deteriorates from about 1.4 percent of GDP to −0.2 percent on average, while the current account balance can shrink by up to 10 percent of GDP compared with the pre disaster year.

[19] This is calculated by averaging losses over 10,000 years of simulation.

Figure 1.8: Long-term impact of disasters on GDP per capita in Angola, 1990–2017



Source: World Bank 2019.

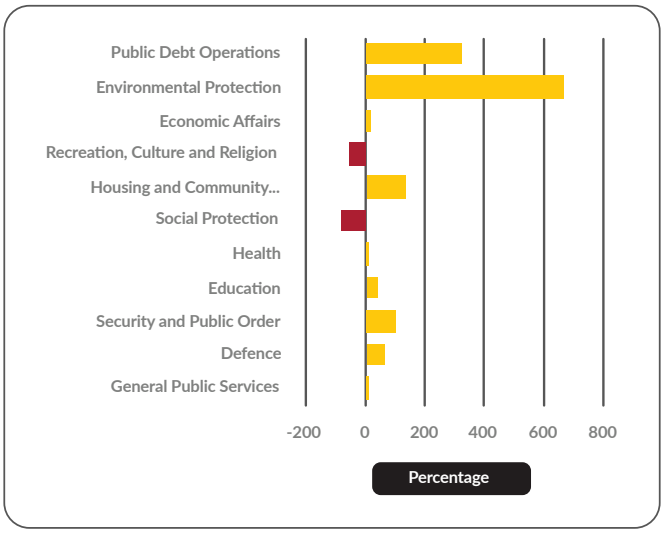
Note: Trend GDP per capita is calculated as a 10-year moving average of real GDP per capita (in constant 2010 US$).

1.3 Oil price volatility and disaster-related spending

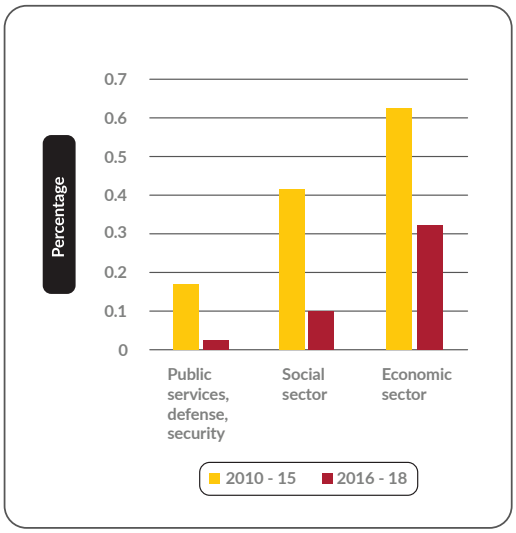
Crises and shocks create significant budget volatility, which exacerbates already-low levels of disaster risk management expenditure, at approximately 0.1 percent of total expenditure. The 2015 oil price shock resulted in budget volatility across all sectors, with the social sector the worst affected. Between 2015 and 2018, disaster risk management (DRM) related expenditure in public and defense services decreased by 12 percent on average compared to that in 2010–15. Expenditures in the social sector and in economic activities fell by about 32 percent over the same period (figure 1.9), while DRM-related capital expenditure (transactions in nonfinancial assets) decreased by 24 percent from over 45 percent to 21 percent of total expenditure. There is a need to strengthen the financial resilience of the budget as well as the shock responsiveness of the social protection-given sector because of the strategic importance of the social sector for inclusive climate-resilient economic growth in Angola. The government could further strengthen financial planning through more robust disaster-related expenditure tracking to better understand the amounts spent on the various phases of disaster response.

Figure 1.9: Fiscal trends and DRM-related expenditure

a. Average volatility (YoY), in share of expenditures



b. Share of DRM-related expenditures



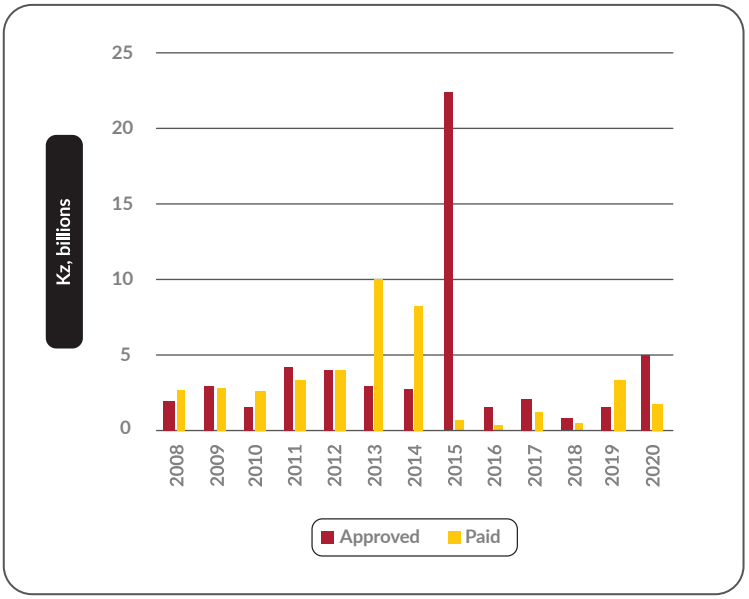
Source: World Bank Analysis based on consolidated central and local government budget data, 2008–18.

Note: DRM = disaster risk management; YoY = year-on-year. Social protection = –83.1

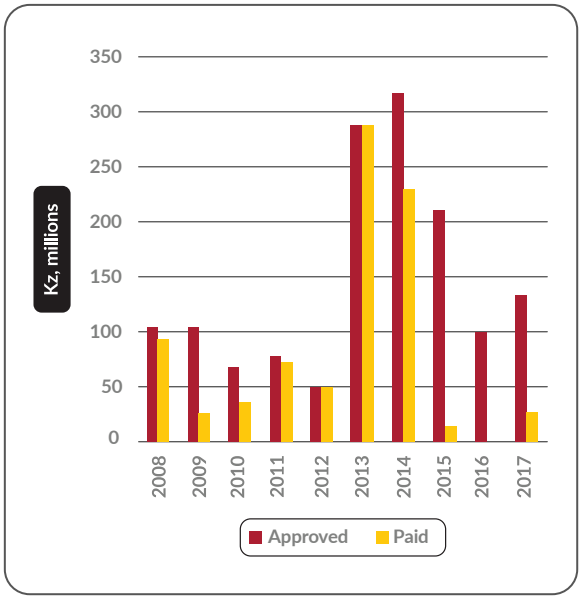
Since the 2015 oil shock, government support following natural disasters has declined and the gap between planned and actual expenditures has adversely widened. As of 2015, government support following natural disasters declined significantly compared to that in prior years despite similar numbers of events and people affected. Between 2008 and 2014, the Government of Angola spent US$4.7 billion per year on average, compared with US$1.1 billion between 2015 and 2020. In addition, the gap between the planned and actual expenditures has adversely widened. Prior to 2015, the government was able to mobilize additional resources for disaster response (approximately 66 percent over the approved budget), whereas lately it has paid 24 percent less than allocated (figure 1.10). There is a need to decouple the country's financial capacity to respond to disasters from budget volatility caused by oil prices and other shocks.

Figure 1.10: Support from the Government of Angola

a. Following natural disasters



b. Prevention and support for disaster situations



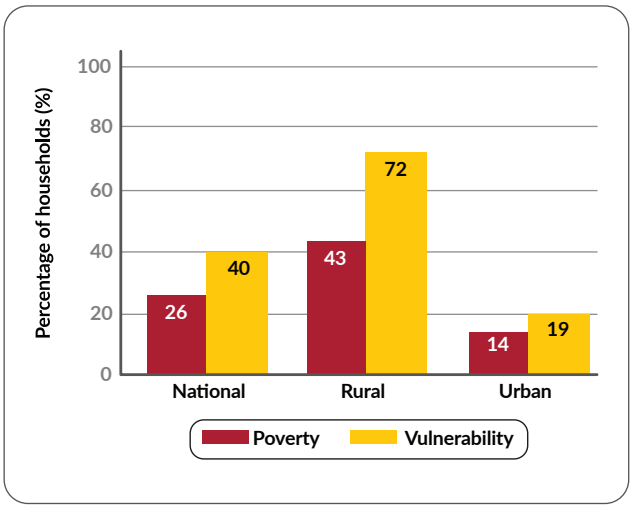
Source: World Bank Analysis based on BOOST data.

1.4 Impact on household poverty

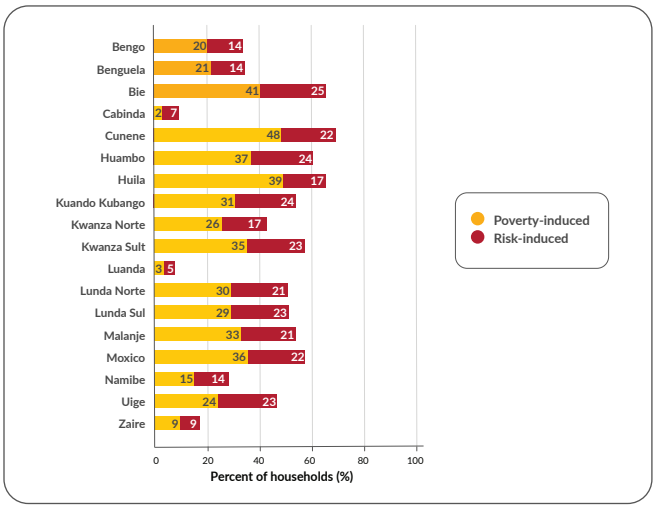
It is estimated that around 40 percent of households were vulnerable to poverty in Angola in 2019. The prevalence of vulnerability is significantly higher in rural areas than in urban areas. A sizeable 72 percent of rural households are vulnerable to poverty, whereas only 19 percent of urban households are vulnerable (figure 1.11). Decomposing vulnerability into two sources, vulnerability due to low human or physical capital (poverty induced) and vulnerability attributed to high consumption variability (risk induced), reveals that the vulnerability to poverty in rural areas is mainly poverty induced (48 versus 24 percent) while vulnerability in urban areas is more likely risk induced (figure 1.11).

Figure 1.11: Poverty and vulnerability rates in Angola, 2019

a. By location type



b. By region



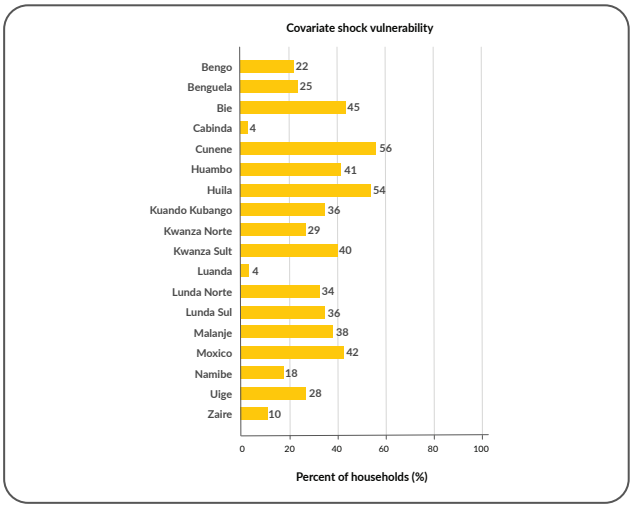
Source: Inquérito de Despesas Receitas e Emprego em Angola (IDREA) 2018–19 (Poverty team estimates).

High variability of welfare leading to vulnerability to poverty can arise from two broad types of shocks: (a) idiosyncratic shocks, such as illness, an accident, or job loss, all of which are specific to a household; and (b) covariate shocks, such as weather-related shocks that are common to all households in the same community or geographic area. Around 35 percent of households in Angola are vulnerable to poverty caused by covariate shocks. Figure 1.12 presents the prevalence of vulnerability to poverty associated with covariate shocks, by province. The provinces of Cunene, Huila, Bie, and Moxico have the highest rates of vulnerability to poverty associated with covariate shocks. The high prevalence of vulnerability in these provinces implies that future climate-related shocks are likely to lead to a substantial increase in the incidence and severity of poverty, increased food insecurity, and an increase in the incidence of child malnutrition and all the negative consequences this entails. These are followed by the provinces of Cuanza Sul, Huambo, and Malanje. The six provinces, excluding Malanje, are also the ones affected by frequent droughts over the period 1981–2021.

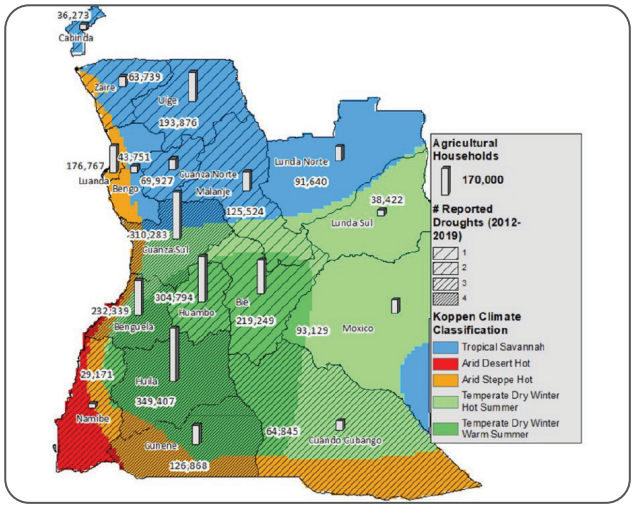
Photo Credit: faonews / flickr

Figure 1.12: Prevalence of vulnerability to poverty, Angola, 2019

a. Associated with covariate risks



b. Associated with climate, droughts, and distribution of agricultural households



Source: World Bank analysis based on Inquérito de Despesas Receitas e Emprego em Angola (IDREA) 2018–19 data.

The increased frequency and variety of climate-related shocks affecting households suggest that progress in poverty reduction and shared prosperity may be easily undermined by the high levels of vulnerability. Although households are likely to have developed risk-coping strategies to reduce income fluctuations or smooth consumption, the variance of consumption over time for some types of households (for example, those earning their livelihoods from agriculture) is likely to be great. In a context of significant volatility in consumption, a household's future poverty status or its vulnerability to poverty, or poverty risk, becomes a critical development priority. The increased incidences of natural disasters, extreme weather events and climate change-related shocks, civil conflicts, crime and violence, and health shocks may contribute separately and sometimes in unison to push vulnerable households below the poverty line and the poor into deeper deprivation. Depending on the ability of households to protect themselves through formal or informal arrangements and the capacity of existing social safety net programs (when available) to expand coverage and deliver benefits to the "new" poor in times of need, the impacts of such covariate and idiosyncratic shocks on poverty may lead to large and potentially severe and long-lasting negative effects on human development. [20]

In the provinces of Angola where climate-induced covariate shocks are relatively more important, the focus should be on protecting the community. Damage due to covariate shocks common to all households in a community is less likely to be covered by insurance through informal risk-sharing schemes within communities or even by mutual insurance schemes across communities. The prevalence of climate-induced covariate shocks in some regions provides a strong case for an adaptive or scalable social protection system based on community- or regional-scale indicators. For example, easily measured indicators of weather, such as rainfall or temperature, at the community or regional level could be used to trigger payments of cash, food, or vouchers to eligible households as a means of preventing asset depletion and protecting welfare.

[20] Vulnerability to poverty is related to but at the same time quite distinct from the concept of resilience. Resilience is about the speed of recovery of well-being in the face of shocks, especially the likelihood that any adverse outcome of either a risk avoidance strategy or a realized shock does not persist for an extended period. In statistical terms, a nonpoor household with high conditional variance of income might be both vulnerable (to becoming poor) and resilient. For example, a nonpoor household may be vulnerable to poverty caused by job loss yet quite resilient if the prospects for finding follow-on employment with similar compensation are high or if formal or informal safety net programs can provide adequate support promptly (Barrett and Constas 2014).

Poverty-linked programming has taken on more prominence with the introduction of Kwenda, the largest poverty-targeting program in Angola, which represents about 30 percent of the 2022 social safety net resource allocation. Introduced in 2020 by presidential decree, the Kwenda program aims to benefit 1.6 million households (the estimated number of poor households in Angola) and to make transfers that represent 32 percent of household consumption in the poorest quintiles, offering a good platform to protect the poor in regular times and to provide additional assistance when climate-related shocks occur.[21]

The Government of Angola recognizes social safety nets as an effective way to strengthen the capacity of poor households to withstand climatic and economic shocks, and in response to COVID-19 used some of the existing and new social protection programs to provide additional assistance to poor households. See appendix B for an overview of the social protection sector. [22] The Ministry of Social Action, Family and Women's Promotion (MASFAMU) vertically expanded the Valor Criança program in Bie, Moxico, and Uige provinces, increasing the monthly transfer amount from Kz 3,000 to Kz 5,000 (approximately US$6 to US$10). The vertical expansion of the Valor Criança benefited 11,473 children under the age of five in 6,325 households. In addition, the provincial government of Luanda also implemented an emergency cash transfer program providing via mobile payments a monthly transfer per child of Kz 5,000 (approximately US$10) and aiming to benefit 1,000 children under the age of five (Gentilini et al. 2021). This experience is valuable and could inform the design of adaptive social protection programs.

Photo Credit: Image: Freepik

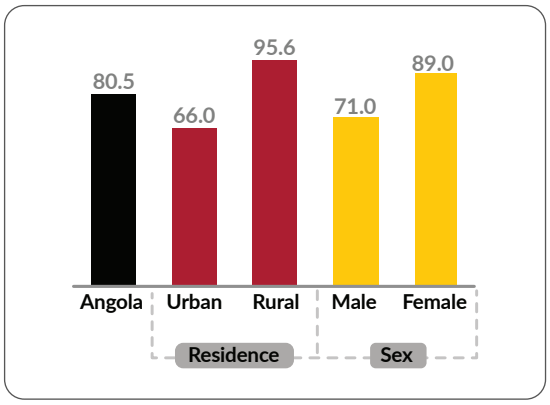
[21] Kwenda's targeting criteria and scale imply that a large proportion of households that are vulnerable to covariate shocks will be enrolled. Estimates using data for 2018–19 (see appendix C for details), and assuming perfect targeting of Kwenda, show that of the total 1.51 million households vulnerable to poverty from covariate shocks, around 0.97 million will be Kwenda beneficiaries when the program is fully rolled out.

[22] Angola's social protection spending has decreased significantly during the past decade. In 2022, only about 0.3 percent of GDP was dedicated to social safety net programs; this was three times the allocation in 2020 but still lower than allocations in previous years (0.6 percent in 2013) and significantly below the average allocation for Africa (1.3 percent).

1.5 Impact on MSME resilience and access to credit

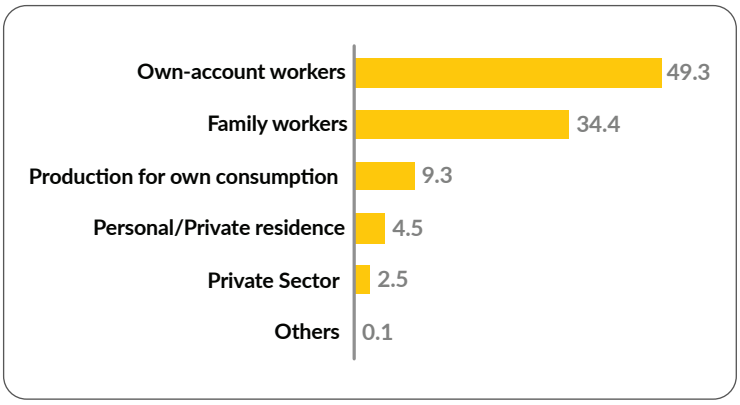
Angola's micro, small, and medium enterprises (MSMEs) are concentrated in the informal economy and highly vulnerable to extreme events, such as disasters and pandemics. The informal sector has become the employer of last resort for most of the population, with about 80.5 percent of employed Angolans in informal employment (71.0 are men and 89.9 percent are women). As shown in figure 1.13, the rate of informal employment is even higher in rural areas (96 percent) (Instituto Nacional de Estatística [INE] 2022).[23] Informal microenterprises are composed of one or two employees and represent 75 percent of all MSMEs. The employment was mostly self-employed (49.3%), family workers (34.4%) and workers for self-consumption (9.3%) (INE 2022) (Figure 1.14). Formal private firms play a small role in employment creation: about 41,339 firms certified in the National Institute to Support Small and Medium Enterprises (INAPEM) database (35,493 Micro, 3,017 small and 2,829 medium)[24] employ around up to 10 workers (micro), between 10 and 100 workers (small) and between 100 and 200 workers[25], just 4 percent of the employed Angolan population of about 9 million (INE, 2022).

Figure 1.13: Informal employment rate by area of residence and sex



Source: Statistical National Institute (Instituto Nacional de Estatísticas; INE), 2022.

Figure 1.14: Percentage distribution of the population with informal employment, according to employment status



Source: Statistical National Institute (Instituto Nacional de Estatísticas; INE), 2022.

The MSME sector faces significant challenges, including low levels of capitalization and restricted access to credit (Hernandez Uriz et al. 2019). Lack of funding remains the primary obstacle for MSMEs at all stages of the business cycle, but it particularly affects the expansion of operations. Credit access is hampered by the fact that banks demand guarantees and documentation that most informal business entrepreneurs do not have. Bridging this gap, microfinance institutions (MFIs) are becoming a relevant source of funding for MSMEs and, according to sector stakeholders, are typically focused on specific business niches. See appendix A for further details on MSMEs.

Statistical analysis of the relationship between disaster events and the performance of MFI portfolios in terms of delinquency shows a positive relationship between loan delinquency and the number of people affected by disasters.[26] Delinquency performance is assessed at the gross loan portfolio level from one to three months.[27] In

[23] While the business census may underestimate private sector employment because of limited coverage, both household survey data and the business census results point to low employment by the formal private sector.

[24]https://www.inapem.gov.ao/observatoriosas apontam para um baixo nível de emprego no sector privado formal.

[25] ILO(2021), "Angola: Study on the migration from the informal economy for formal economy", International Labor Organization.

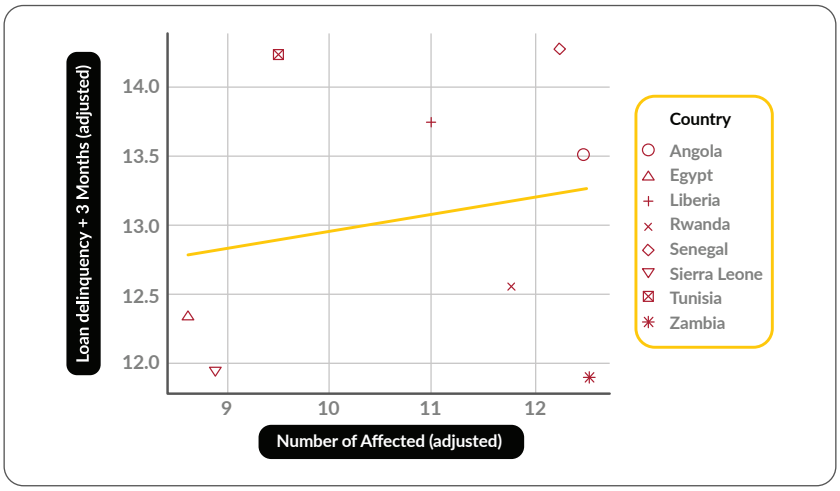
[26] This analysis serves as a proxy to measure the effect of climate shocks on MSME lending, and the evidence provided is indicative. Further analysis to quantify both the primary and the secondary impacts of shocks will be needed to inform policy and operational interventions to strengthen the financial resilience of small and medium enterprises (SMEs). The analysis used panel data on MFI portfolio delinquency performance and the population affected by disasters as a proxy for the severity of disaster events in a year, given the lack of data on the number of affected borrowers.

[27] Delinquency refers to the state of being past due on a debt, considering the MFIs reporting in the MIX Market database by country.

the sample of countries analyzed, there is a positive relationship indicated by the blue line as the average trend between them (figure 1.15). While the positive relationship does not prove cause, the assessment shows that Angola's financial institutions suffer higher delinquency rates per person affected by disasters than those of other countries; for example, Zambia is similarly resource-dependent.

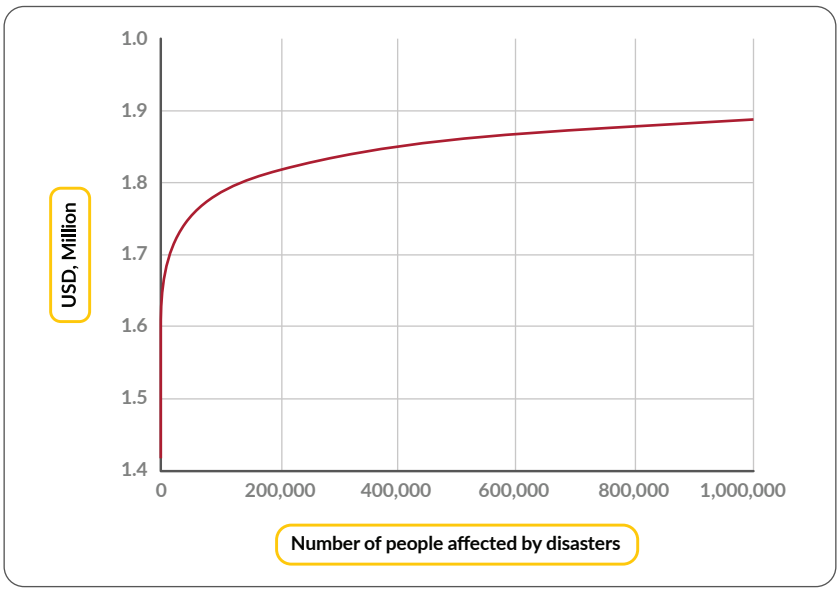
For Angola, doubling the number of people affected by disasters increases the portfolio in delinquency by roughly 4 percent (figure 1.15). In the case of a major catastrophe, this effect could lead to a severe impact on the lending portfolio and could compromise the lending capacity of MFIs and MSME sources of funding. The analysis shows that in major disasters, credit holders are experiencing funding distress in terms of repayment and debt servicing, which is reflected in the portfolio delinquency trending pattern (figure 1.16).

Figure 1.15: Loan delinquency versus population affected by disaster, 1999–2018



Source: World Bank analysis based on data from EM-DAT (international disaster database) and World Bank MIX Market database
Note: The Mix Market database was developed by the Center of Financial Inclusion and is managed by the World Bank. This database has worldwide coverage, including developing economies. The affected people per year was taken from EM-DAT.

Figure 1.16: Delinquency portfolio performance modeled for Angola



Source: World Bank analysis based on data from EM-DAT (international disaster database) and World Bank MIX Market database.

2 Current Approach to Disaster Risk Financing

This section presents the current institutional arrangements for disaster response in Angola, the legal and institutional frameworks most relevant for disaster risk financing (DRF), and the disaster risk financing instruments in place. The following discussion is based on a series of interviews with representatives from several government institutions[28] and on relevant laws and presidential decrees.

2.1 Post-disaster response: institutional arrangements and financing

In Angola, civil protection and firefighter institutions at all three levels of government respond to disasters, but national-level institutions play a key role in responding to more severe shocks. Municipal and provincial governments respond to less severe events with their own resources, but unexpected and larger disasters often require support from the national government. Figure 2.1 presents an overview of the main institutional arrangements for disaster response.

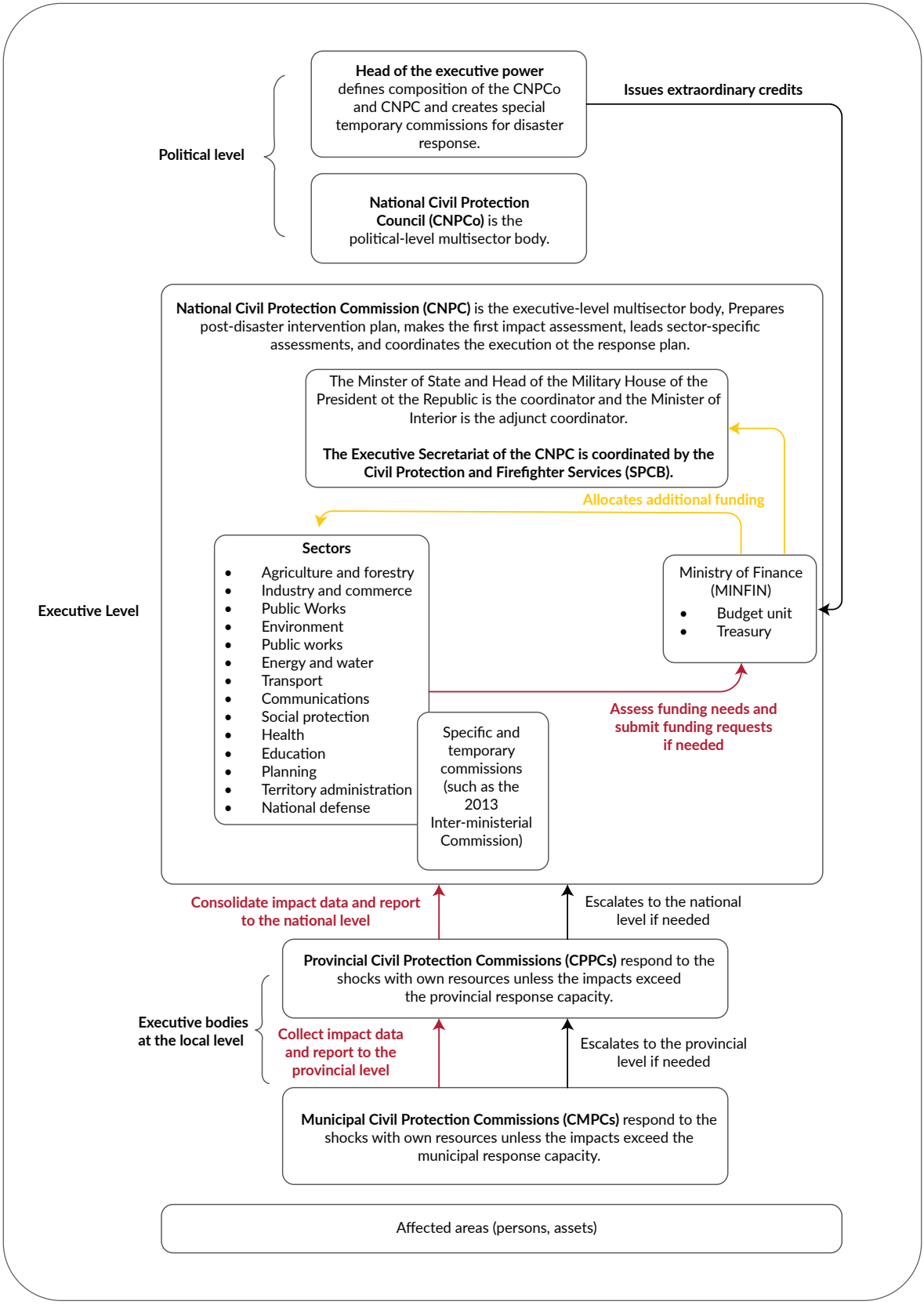
The National Civil Protection Commission (CNPC) is the main executive government body for disaster response at the national level (technical and operational)[29] and is responsible for developing, approving, and executing disaster response action plans. It is currently coordinated by the Minister of State and Head of the Military House of the President of the Republic and by the Minister of Interior. The CNPC has representatives from most line ministries, which participate in disaster response as needed, and its Executive Secretariat is led by the Civil Protection and Firefighter Service (SPCB) in the Ministry of the Interior (MININT).

Photo Credit: Image: Freepik

[28] The World Bank team held interviews with the following: the Ministry of the Interior, Ministry of Finance (budget, debt management, macrofiscal, treasury, and asset management units), Ministry of Health, and Ministry of Agriculture and Fisheries (MINAGRIP).

[29] Civil Protection Laws 14/20 and 28/03.

Figure 2.1: Overview of institutional arrangements for post-disaster response



Source: World Bank analysis based on the Civil Protection Laws nr. 14/20 and nr. 28/03, Presidential Decree nr. 77/2, and interviews with Government representatives. Notes: CNPC = National Civil Protection Commission; CNPCo = National Civil Protection Council.

The Ministry of Finance is also part of the CNPC and plays a key role in mobilizing funds for disaster response in coordination with affected sectors. The affected sectors assess the post-disaster financial needs (box 2.1) and, if necessary, request extra funding to MINFIN. [30] The treasury and budget units then consider the funding requests and the sources of funding available. These include the following: (a) reallocations from other budget lines (within the sector or between sectors); (b) extraordinary credits, which can be issued by presidential decree; and (c) funds from the general contingency budget, a budget line for unforeseen expenditures, including those arising from climate shocks (section 2.4 discusses the budgetary and financial instruments currently in use). The Treasury is responsible for identifying the most adequate sources of funding and, importantly, its representatives proactively engage with the response commissions to provide them with inputs regarding the availability of financial resources for their proposals. The budget unit, in turn, is responsible for formalizing the updated allocations in the budget.

Overall, the process for funding mobilization can be agile, and timelines can be shortened according to the event and the urgency of the requests, but the process tends to work better for more severe events; funds may become available in a matter of days or even hours. On the other hand, when additional funding is necessary for recurrent, smaller events, mobilizing the necessary resources may be more challenging because of limited fiscal space, causing delays in the response.

Box 2.1 Post-disaster Impact Assessments

After large events that require a national-level response, within 72 hours from the onset the National Civil Protection Commission (CNPC) carries out an initial assessment to estimate the affected areas and populations. Within the first week, a rapid but multisectoral and more comprehensive assessment is carried out by the CNPC in coordination with its main partners (agencies of the United Nations system, national and international NGOs, and civil society) on the basis of which line ministries and other government bodies prepare their post-disaster action plans (National Calamity and Disaster Preparedness, Contingency, Response and Recovery Plan 2015–2017).

Angola has used the post-disaster needs assessment (PDNA) methodology for large events in the past, but for recurrent localized events, the disaster impacts are assessed on the basis of the technical capacities of local institutions and, overall, there is room to strengthen disaster response at the local level by improving and facilitating data management and sharing.

The templates used in event-specific reports are flexible to accommodate each event's specificities, but since there is no common methodology for data collection and impact assessment in place, the post-disaster evaluations and funding requests submitted by different institutions are subject to inconsistencies. The data produced by the local committees may be submitted by any available means (such as phone, email, or text messages), and overall, the lack of information technology infrastructure is an important concern. The lack of technical and human resources in some provinces and municipalities also affects the availability and quality of post-disaster data. Institutional bottlenecks are at play too: pre-established procedures for regular meteorological data sharing are not in place, which in practice means that Provincial Civil Protection Commands must request, as needed, precipitation forecasts from INAMET. Such ex post arrangements may cause data-sharing delays, potentially hampering disaster preparedness and response effectiveness.

[30] If a multisectoral commission is established to coordinate the post-disaster interventions and these require additional funding for multiple sectors, typically the request is centralized at the commission level. Alternatively, for more localized events, line ministries may submit individual proposals for the response in their sector.

The adoption of a common methodology by all government units would be positive, and toward this goal the government has been training staff on the PDNA methodology, with only two provinces yet to receive training. This program is expected to continue and could be a sound basis for the development and adoption of disaster impact assessment methods and protocols tailored to Angola's risk profile.

Source: World Bank analysis based on the National Calamity and Disaster Preparedness, Contingency, Response and Recovery Plan and interviews with Government representatives. Note: NGO = Non-Governmental Organizations.

Local-level civil protection institutions also play a key role in disaster response, especially following recurrent and smaller events. The multisectoral structure of the National Civil Protection Commission is replicated at the province level by the Provincial Civil Protection Commissions, which are led by province governors. Similarly, the disaster response at the municipal level is managed through the Municipal Civil Protection Commissions. Both levels are responsible for preparing emergency plans and respond to climate shocks with their own resources before escalating to higher levels of government if the impacts of the event are beyond the local capacity. All provinces and municipalities are expected to prepare disaster contingency plans, which in turn are approved by the National Civil Protection Commission.

Municipal-level institutions also play a major role in collecting and sharing disaster occurrence and impact data. Disaster impact data are collected at the local level and sent to the National Civil Protection Commission via written, physical reports. The process is as follows: local-level committees (residents, neighborhoods, and/or municipal committees) collect disaster data and send them to the municipality's operational centers, which consolidate the information and submit it to the Provincial Civil Protection and Firefighter Command. In turn, event-specific reports are prepared and sent to the National Civil Protection Commission.

Public funding for disaster response is increasingly tight, particularly at the local level. In Luanda, the annual allocations for disaster response are very limited, potentially causing response delays, in contrast to previous times when financial resources for post-disaster response were plentiful. The approval process for post-disaster financial assistance is lengthy, and the lack of equipment and materials is also very challenging. Within this context, extra support from higher levels of government tends to be provided in kind rather than as financial resources.

2.2 Fiscal risk management

The fiscal risk management frameworks in place do not explicitly address climate-related risks. Multiple units of MINFIN manage contingent liabilities of various types, but none is responsible for those related to climate. The macrofiscal programming unit within MINFIN is responsible for monitoring risks to fiscal targets and debt sustainability, but climate risks are not explicitly considered within the scope of their fiscal risk analysis. Prepared by the same unit, the medium-term expenditure framework defines medium-term expected expenditures by priority areas (functions) but does not take the climate-related fiscal risks into consideration in the projections. More generally, it is worth noting that the annual publication of the medium-term fiscal framework and of a fiscal strategy that includes a fiscal risk declaration is required by the Fiscal Responsibility Law of 2020 (37/2020), but the corresponding 2021 and 2022 reports were not published until early 2023.

The technical capacity for climate risk quantification and contingency budgeting could be strengthened at all levels of government. Emergency action plans with expected needs for civil protection in each sector are prepared every year by the SPCB, but with a focus on operational aspects of the disaster response rather than on contingency budgeting. These are the only systematic and periodic accounts of the expected impacts of disasters at the national level, so strengthening the technical capacity for the financial management of disaster-related contingent liabilities would benefit both the finance and the civil protection sectors. At the local level, risk mapping and quantification responsibilities are currently shared between civil protection and urban planning institutions. In Luanda, the need for better mapping and risk assessments is perceived by both the civil protection and the urban planning sectors. Specifically, georeferencing technologies could be adopted and such improvements could be pursued in coordination with the ongoing efforts to develop municipal director plans.

2.3 Overview of the legal and strategic frameworks for disaster risk financing

The main legal and strategic instruments for disaster risk management and disaster risk financing in Angola are undergoing revisions and are expected to be updated in the short run. Disaster response in Angola is aligned with the principles of the Sendai Framework and is based on the civil protection laws alongside two strategic instruments: (a) the National Calamity and Disaster Preparedness, Contingency, Response and Recovery Plan (National Contingency Plan) and (b) the Strategic Plan for Prevention and Disaster Risk Reduction (National DRR Plan), both originally envisioned for the 2015–17 period. Civil Protection Law 28/03 was partially modified in 2020 in the context of the COVID-19 pandemic (Law 14/20), and a further revision and consolidation of both laws are being considered. In parallel, the National Contingency and National DRR plans are being updated to better align with the country's Multiannual Government Plan. Sector-specific and local-level strategic and contingency planning instruments are also under preparation (see table 2.1 for a summary). The disaster risk financing provisions in each of these key instruments are discussed in detail in Appendix E.

The 2020 revisions to the Civil Protection Law 28/03, the main legal framework for disaster risk management in Angola, included specific provisions on the financial management of disasters. Article 11 determines that the president declares a state of catastrophe or public calamity and decides on the extraordinary allocation of financial resources for the purpose of re-establishing normality. The article explicitly mentions additional extraordinary credits as an available option. Nonetheless, as some organizational changes made by Law 14/20 centralized decision-making and resulted in increased bureaucracy, further adjustments are under discussion.

The latest National Calamity and Disaster Preparedness, Contingency, Response and Recovery Plan (2015–17) recommends the establishment of a financial protection plan, with the goals of identifying the financial protection instruments best suited to the country's needs and priorities and of developing a financial preparedness and response strategy. It determines that the financial management of disaster response and recovery be led by the

CNPC and implemented by the SPCB, the Ministry of Interior, and the Ministry of Finance. It also defines the responsibilities and timelines for post-disaster impact assessments but does not specify methodologies to be used consistently by all government levels and sectors. The National Contingency Plan is being revised with the support of the United Nations Development Programme, and this update is expected to better address the role of province-level institutions in disaster response, including provisions related to contingency budgeting.

Similarly, the Strategic Plan for Prevention and Disaster Risk Reduction (2015–17) recommends the development of a financial protection strategy—including risk retention and risk transfer instruments—to lower the country's fiscal vulnerability and build resilience. Toward this end, the National DRR Plan recommends the adoption of financial protection instruments, the establishment of a Solidarity and Assistance National Fund, insurance and reinsurance, and risk reduction in public investment processes. It also includes activities to improve the understanding and quantification of climate risks. In particular, it plans for a risk-mapping research program and for the development of an integrated disaster risk data management system. The Disaster Risk Reduction Plan is also under revision.

Strategic planning instruments for post-disaster interventions at the sector and local levels are also under development but still require technical, human, and institutional capacity building. Local-level drought preparedness plans for provincial water utilities will be developed under the scope of the project Climate Resilience and Water Security in Angola (RECLIMA), which is led by the Ministry of Energy and Water and funded by World Bank and the Agence Française de Développement. Simplified drought preparedness plans for key pilot municipalities might be developed as well, depending on local capacity. While this project illustrates the ongoing efforts to improve resilience to droughts, the Drought Recovery Framework (QRS), which is an important national-level DRM instrument, still awaits approval. Its implementation has been delayed by transitions in the government, but since improving the institutional and strategic basis for drought management remains among the government's priorities, there is opportunity to revisit and approve the QRS in light of the other recent and ongoing reforms.

Table 2.1. Current status of legal and strategic instruments related to disaster risk management and disaster risk financing in Angola

Instrument	Period	Scope	DRF relevance	Status
Base Civil Protection Law (no. 28/03)	2003-present	Main legal framework for civil protection and DRM.	• Defines the Civil Protection System (institutions and responsibilities) • Determines the preparation of emergency plans at all levels of government.	Further revisions and consolidation with Law no. 14/20 are being considered.
Adjustment to the Base Civil Protection Law (Law no. 14/20)	2020-present	Updates the Base Civil Protection Law (no. 28/03) within the context of the COVID-19 pandemic.	• It establishes that in cases of State of Catastrophe or Public Calamity the measures taken to re-establish normality may be funded with extraordinary allocations, as decided by the president.	Further revisions and consolidation with Law no. 28/03 are being considered.

Instrument	Period	Scope	DRF relevance	Status
			• It also determines that emergency and contingency plans be prepared at all levels of government (municipal, provincial, and national).	
National Calamity and Disaster Preparedness, Contingency, Response and Recovery Plan	2015–17	Disaster preparedness, response and recovery.	• Defines responsibilities on the financial management of disaster response and recovery. • Recommends the establishment of a financial protection plan to identify the financial protection instruments and to develop a financial preparedness and response strategy. • The next update is expected to address the role of provinces and contingent budgeting.	Under revision.
Strategic Plan for Prevention and Disaster Risk Reduction.	2015–17	Disaster risk reduction.	It recommends: • Development of a financial protection strategy, including risk retention and risk transfer instruments. • Establishment of a Solidarity and Assistance National Fund. • Activities to improve the understanding and quantification of climate risks.	Under revision.

Instrument	Period	Scope	DRF relevance	Status
Drought Recovery Framework.	Pending approval.	Drought recovery.	Its DRF relevance and relationship with a DRF strategy should be considered as the framework is revisited and approved.	Pending approval. An update might be considered.
Local-level drought preparedness plans.	Activities expected to start in September 2023.	Contingency planning for provincial water utilities and key pilot municipalities (if local capacity allows).	The DRF relevance and relationship with a DRF strategy should be considered from the inception phase.	In the planning phase.
Presidential Dispatch n. 77/23	April 2023 - present	Updates the composition of the National Civil Protection Commission (CNPC).	The composition of the CNPC and the possibility of future updates should be considered in the development of a DRF strategy.	Implemented. Further updates might be considered in the short or medium term.

Note: DRF = disaster risk financing; DRM = disaster risk management.

2.4 The status of disaster risk financing instruments

Risk retention instruments

The main funding mechanisms for post-disaster interventions are ex post budgetary reallocations and supplementations. Most requests are funded with budgetary reallocations, in which case the proposals should indicate which appropriations are to be cancelled, but additional extraordinary credits may be issued by presidential approval. For existing budget lines, reallocations require approval at different executive levels depending on the amounts requested: overall, revisions equivalent to up to 10 percent of the original budget are approved by the state secretariat, those between 10 and 30 percent must be approved by the ministry of finance, and revisions above 30 percent require approval by the president.

The country has a general contingency budget for unforeseen expenditures, including those from climate shocks. A general contingency budget managed by the Treasury allocates five percent of nonoil revenues for unforeseen expenditures, including those arising from climate shocks. This budget line is noncumulative, and the perception is that its current levels (totaling US$340 million in 2020) typically meet funding needs. In addition, the Sovereign Wealth Fund, established in 2012 with an initial endowment of US$5 billion, provided funds to the Treasury during the COVID-19 pandemic in 2020 (US$1.5 billion), but it still lacks clear rules and a strong governance structure.

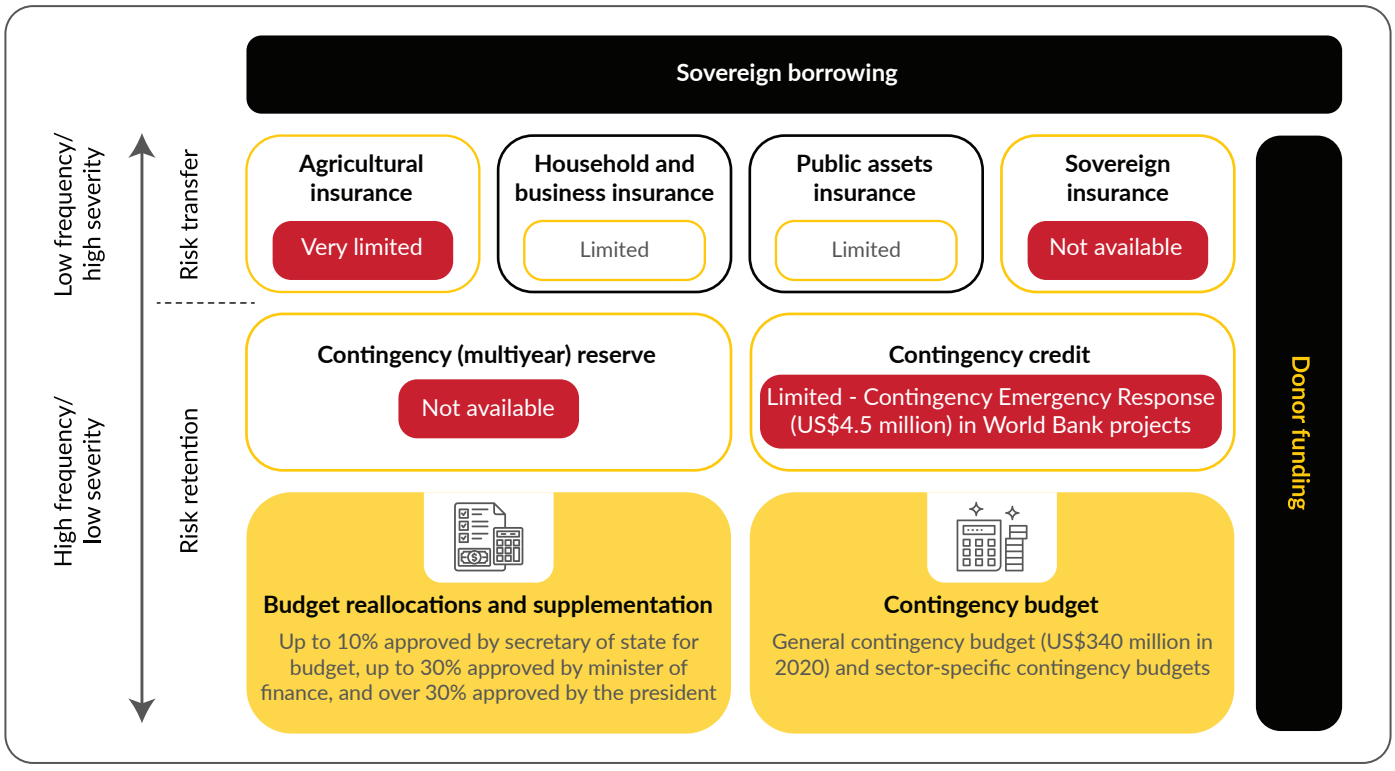
Multiyear reserves are not established, and even though Angola is working to reduce its number of funds, a disaster-dedicated facility is perceived as a possible solution to pool risk, improve the predictability of funds for post-disaster interventions, and strengthen the planning practices in the DRM sector. This is at least partially reflected in the National DRR Plan, which includes the establishment of a Solidarity and Assistance National Fund among its actions for DRM coordination and promotion. However, this recommendation is made in general terms and does not address concrete issues such as the fund's sources of revenue; disbursement, procurement, and reporting procedures; delivery channels; or its relationship with the local-level institutions involved in disaster response.

Some sectors manage climate risks with ex ante contingent budgeting—agriculture being the most advanced sector, with an operational contingency budget line and a prearranged contingent emergency component available for post-disaster response. The Ministry of Agriculture and Forestry (MINAGRIF) allocates about US$1 million for disaster response using a specific budget line (the program Emergency Actions and Natural Calamities until 2021 and the program Support to Family Farming in 2022). Moreover, a line of credit of up to US$4.5 million is accessible to MINAGRIF for emergencies via the Contingent Emergency Component of the Smallholder Agriculture Transformation project (Mosap 3, 2022–29). MINAGRIF can use this source of funding for post-disaster interventions in any affected area, since it is not limited to those included in the project. This operation is a recent innovation as the amount available for the emergency component has been defined ex ante, therefore allowing for better planning and speedier disbursement. The Ministry of Public Works, Urbanism and Housing also operates a contingent budget for emergency works. In the civil protection sector, the Ministry of the Interior attempts to regularly allocate funds for post-disaster interventions under the scope of the Civil Protection and Firefighter Service. Historically, these appropriations averaged about US$1.1 million, but more recently, the availability of funds for this purpose has significantly decreased.

Risk transfer instruments

The current approach to disaster risk financing is to retain risk with budgetary mechanisms, and the use of insurance and availability of other market-based risk transfer instruments is still very limited. Property insurance is available, and coverage against natural hazards is possible as an extension, but the use of homeowners insurance is still very limited. Agriculture insurance is practically nonexistent, and the government is developing a subsidy scheme to grow the market. See section 3 for a review of the insurance and capital markets. Risk financing strategies in Angola are summarized in figure 2.2.

Figure 2.2: Status of risk financing instruments in Angola



Source: World Bank analysis

Note: Reallocations are more common than supplementation, but extraordinary credits may be issued. The contingency budget is allocated at 5 percent of non-oil revenue each year. CERC = contingent emergency response component.

Insurance of public assets is decentralized and mandatory in some, but not all, sectors. Requirement of insurance is focused mainly on economic sectors (for vehicles, for example), but other government bodies may choose to allocate funds for insurance since they are allowed to pay for premiums using a specific budget line. At present, the level of coverage across the different institutions is neither managed nor monitored centrally. State-owned real estate assets are managed by the asset management unit in the Ministry of Finance.[31] There is no insurance for the buildings in the portfolio, but the unit intends to protect the assets and has been working to establish a register. The main risk to the buildings of the public administration is environmental: underground water may cause severe infiltration and structural damage to buildings. The exposure of the portfolio to this hazard is known to be high, but a detailed and systematic assessment to quantify the risks and adaptation needs has yet to be done.

Delivery channels

The Government of Angola is investing in social protection systems that protect poor households in regular times, and the development of adaptive social protection mechanisms will be considered in the short run. The government is increasing the coverage of the Social Registry and of the Kwenda program, Angola's flagship unconditional cash transfer program implemented by the Social Support Fund under the Ministry of Territorial Administration. Kwenda was initially funded by a World Bank loan of US$320 million plus US$100 million from government resources (budget line Combat Poverty Program). From 2023 to 2025, the Government of Angola has pledged to allocate an additional Kz 75 billion per year within the context of the ongoing subsidy reform. In 2023, this additional allocation was implemented via budgetary supplementation funded with a share of the increased tax revenues from the subsidy reform. The establishment of an adaptive component will be discussed in the upcoming phases of Kwenda, and it is worth mentioning that limited data availability is an issue to be addressed as the triggers for the shock-responsive component are developed. The strengthening of Kwenda follows the efforts undertaken during the COVID-19 pandemic, when the government expanded a safety net program to provide additional assistance to a small number of rural households and leveraged social protection systems to provide a one-time cash transfer to urban poor in Luanda.

3 Review of Financial Markets

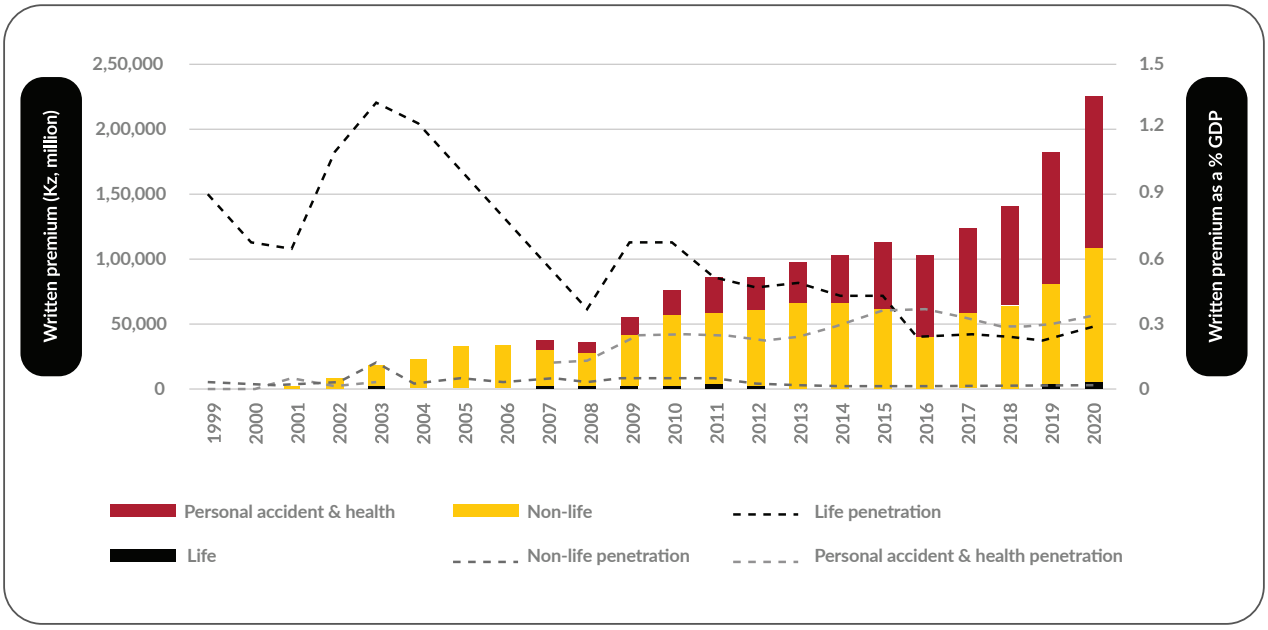
This section reviews the state of the financial markets and relevant legal and regulatory frameworks, given the sector's importance for financial resilience. The use of insurance by businesses, farmers, households, and government entities can be an effective way to reduce government contingent liability for disasters by transferring disaster-related risk to insurance markets through property and agricultural insurance, as well as microinsurance. Financial institutions could provide more diverse and long-term financing to MSMEs to enable investments in mitigation and adaptation, thus strengthening the resilience of this key economic sector (World Bank, forthcoming). Constraints and opportunities for climate-related finance are also discussed.

3.1 Insurance market

The insurance sector in Angola is relatively small, with a total gross written premium of US$224 million (or 0.6 percent of GDP) in 2020. The total premium written has grown rapidly since 2003 but has yet to reach a meaningful penetration rate (figure 3.1). Growth is driven by the nonlife and personal accident and health segments, which grew at averages of 51 and 337 percent per annum, respectively, in terms of written premium. However, penetration of the nonlife segment has been declining since 2003, while personal accident and health penetration is on a modest upward trend. The life insurance segment contributes less than 2 percent of the total premium and has been flat over its two-decade history at under Kz 5 million. Overall, demand for insurance is constrained by low rates of formal employment. About 70 percent of the population earns a living mainly from informal-sector and subsistence agriculture activities (ILO 2018). Microinsurance has not been established in the Angolan insurance market. Catastrophic insurance is not mandatory for the public sector or for households and businesses, and there is no state pool or catastrophe fund.

[31] These include residential buildings for public officials and buildings used for public administration.

Figure 3.1: Trends in total premium written and insurance penetration, 1999–2020



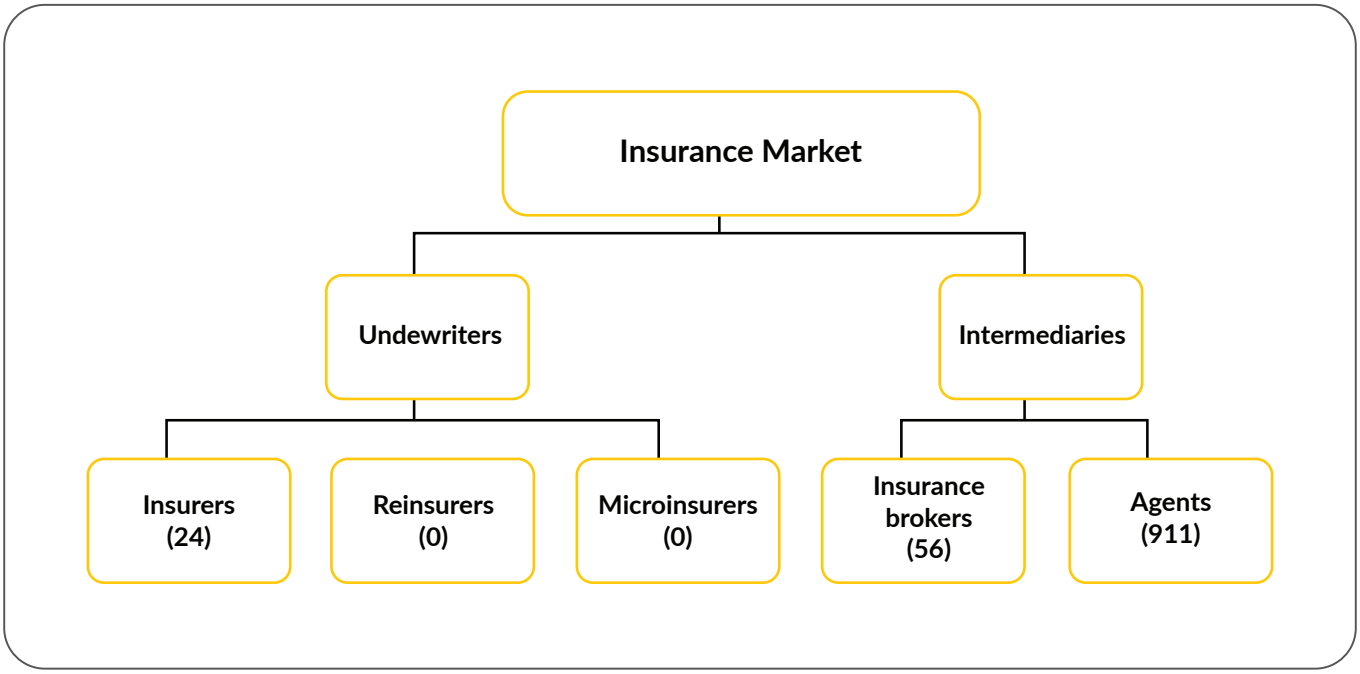
Source: Axco, https://www.axcoinfo.com/.

The insurance industry in Angola evolved through two distinct phases, a liberal pre-1978 period and a closed pre-2000 period. Prior to 1978, there were 26 insurers operating in Angola, including foreign-owned insurers. In 1978, the insurance industry was nationalized, with the state-owned Empresa Nacional de Seguros e Resseguros de Angola (ENSA) assuming a monopoly.[32] Law 1/00, which came into effect in 2000, ended the monopoly of the state insurer and is now the basis of insurance law in Angola. By the end of 2021, there were 22 licensed insurers, including ENSA. [33] There is no licensed reinsurance company in Angola, although a national reinsurance company, Sociedade Angolana de Resseguro SARL (ANGO Re), is expected to be launched. All insurers are members of the Angolan Association of Insurers (Associacao de Seguros de Angola [ASAN]), which was launched in 2012 and is working with MINFIN and the Angolan Insurance Regulation and Supervision Agency (ARSEG) to establish new standards for reporting, solvency, capital, and enforcement requirements. For an overview, see figure 3.2.

[32] In July 2021, ENSA put 51 percent of its share capital up for sale. There is interest from both foreign and local investors. The government plans to sell the remaining 49 percent through a local stock market listing in the next two to five years.

[33] The number of insurers is down from 28 in 2020 because of a combination of the market contracting in real terms, insignificant business volume, and regulatory actions by ARSEG. Garantia Seguros SA's license was revoked in 2020 for failure to meet minimum solvency requirements, while Master Seguros's license was revoked in 2021 for repeated infractions of Angola's insurance laws.

Figure 3.2: Composition of the insurance market, 2021



Source: Angolan Agency of Regulation and Supervision (Agência Angolana de Regulação e Supervisão/ARSEG), https://www.fsra.co.sz/sectors/irf/licensed/index.php
Note: All insurers have life and non-life insurance licenses, while ENSA has a composite license.

Policyholders still lack protection in the event of insurer insolvency and the market is unprotected in the event of climatic catastrophe, although the regulator has been working to strengthen the insurance regulatory framework over the past few years.[34] The Angolan insurance market is regulated and supervised by ARSEG, which was established by presidential decree in 2013. [35] At present, there is no central fund to protect policyholders in the event of insurer insolvency.

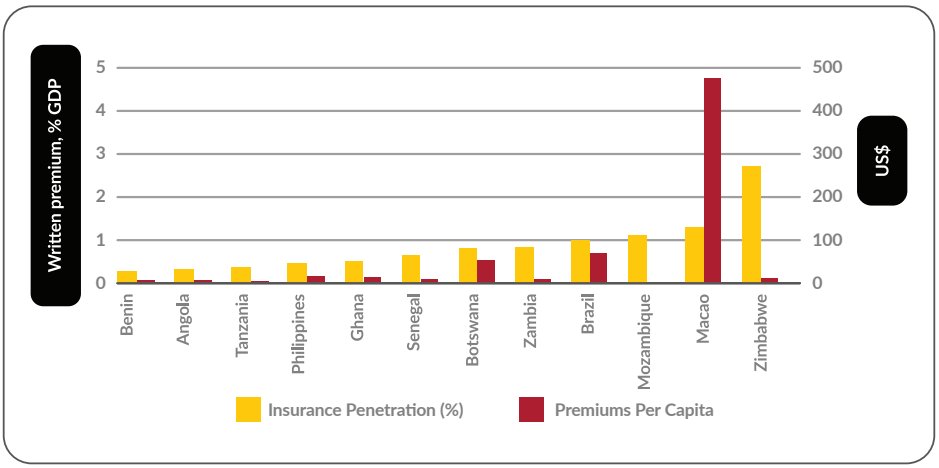
Nonlife Insurance

Nonlife insurance penetration and density have shrunk since 2003, following significant economic difficulties arising from the oil price collapse of 2014, the recent recession, and high inflation. Insurance penetration reached a peak in 1998 (written premium at 14.7 percent of GDP) and plummeted to just under 1 percent in 1999 and has been declining since then to less than 0.3 percent in 2020. Insurance density has also been on a downward trend, declining from a high of US$26 per person in 2013 to US$5 per person in 2020. Penetration and density are lower than in other Portuguese-speaking countries such as Brazil and Mozambique, as well as in comparable lower-middle-income countries in Sub-Saharan Africa (figure 3.3).

[34] In 2020, ARSEG launched public consultations on a new draft law to replace law 1/00 and a new draft insurance mediation law. The draft law aims to reform the basic legal framework of the insurance market to reflect international best practices with respect to protection of policyholders and beneficiaries under insurance policies. The proposal for the new law was approved by Angola's National Assembly in May 2021, but the law has yet to be approved. Similarly, the draft insurance mediation law aims to bring insurance mediation in Angola in line with current best international principles and practices. The results of the consultation have not yet been published.

[35] Presidential decree 141/13. ARSEG has an information-sharing protocol with the Capital Markets Commission (CMC) for the protection, efficiency, and supervision of capital market investments by insurance companies and pension funds.

Figure 3.3: Non-life insurance penetration and density: Cross-Country Comparison (2020)

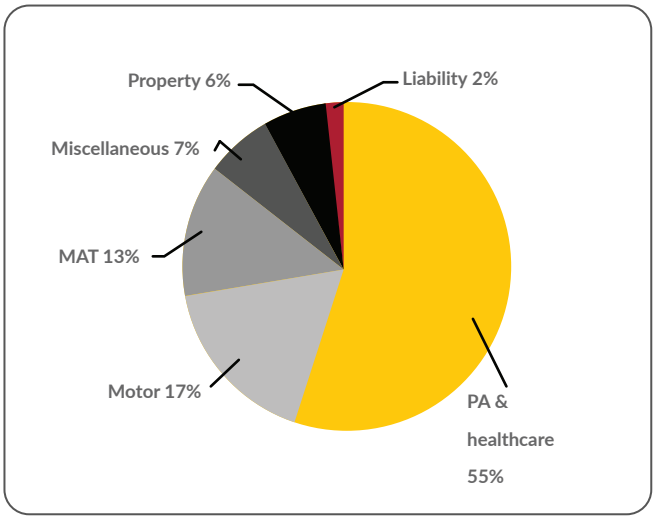


Source: Axco, https://www.axcoinfo.com/.

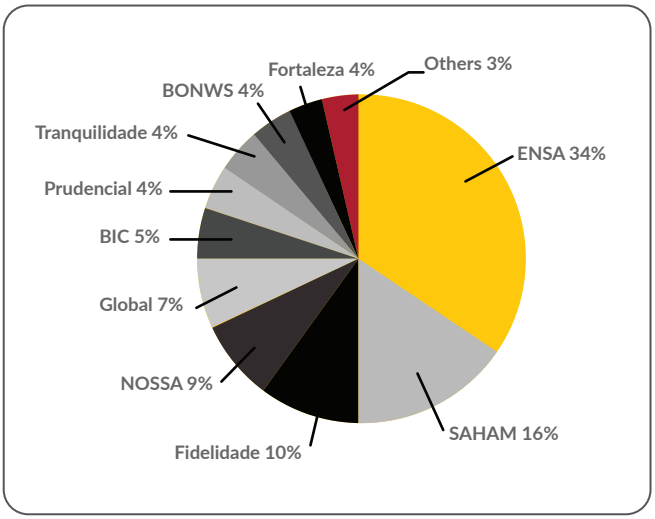
The nonlife insurance segment is highly concentrated and is only marginally profitable because of a difficult operating environment. Expense ratios seem to be trending upward, although market participants indicate that expense ratios are distorted as a result of the upsurge in inflation and devaluation of the local currency. The retention ratio is increasing, a trend driven by difficulties in obtaining foreign currency to purchase reinsurance protection. The three largest insurers account for 60 percent of the premium, with ENSA continuing to enjoy a large market share attributable to its legacy as a sole insurer coupled with leading shares in the coinsurance pools for the petrochemical and mining industries as well as for state-owned aviation risks. Participation by foreign insurers is limited by government restrictions. The largest class of business in Angola is personal accident and health care insurance, which reflects the preference of many individuals and companies to use the private health care sector. Demand for motor insurance is driven by compulsory third-party motor liability, while the marine, aviation and transit (MAT) sector is driven by the large petrochemical industry (figure 3.4).

Figure 3. 4: Non-life insurance market shares by premium volume

a. Business classes



b. Insurance companies



Source : Axco, https://www.axcoinfo.com/

Notes: MAT = marine, aviation and transit; PA = personal accident. Petrochemical business is included within MAT but itself represents 10.3 percent of the total non-life market.

Property insurance

Property insurance is available and covers natural hazards including lightning, floods, earthquakes, windstorms, and subsidence. Homeowners insurance is very limited but is expected to increase when the economy stabilizes, as property ownership has increased to wider economic groups beyond the middle class and more conventional construction standards and protocols have been followed since the construction boom in 2014. Enforcement of standards may help reduce the cost of property insurance and lead to greater demand. To encourage adoption of insurance, including climate-related insurance, the Government of Angola could consider mainstreaming insurance into national financial inclusion strategy and financial awareness programs.

Agricultural insurance

ARSEG is developing an agricultural insurance scheme to protect vulnerable farmers while growing the agriculture insurance market. The scheme aims to stimulate demand and supply by offering premium subsidies ranging from 50 to 80 percent and to further incentivize insurers to underwrite agriculture by offering reinsurance protection of the agriculture insurance portfolio. Alongside risk financing, the Government of Angola, with technical assistance from the International Financial Corporation, is supporting product design and development and is strengthening the capacity of the insurance market in core agricultural insurance operations and more technical aspects such as use of remote sensing data. At the same time, they are developing partnerships to invest in data infrastructure and systems. There is further opportunity to enhance outreach by linking the program to other public and private programs that aim to de-risk lending to the agricultural sectors; see, for example, the credit guarantee fund for an overview of the roles that governments typically play in the development of agricultural insurance.

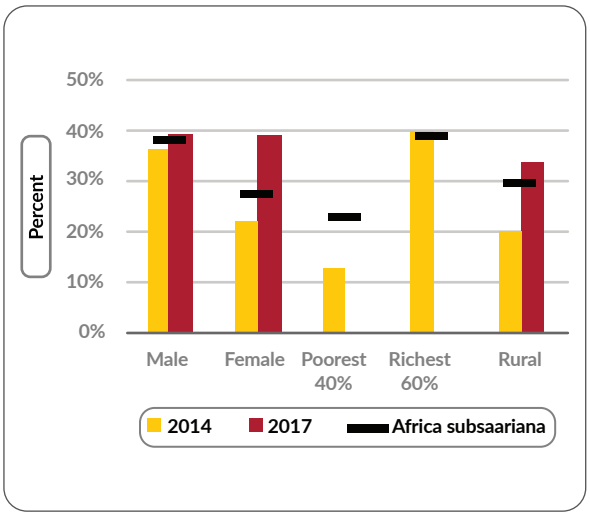
3.2 Financial inclusion and financial protection

Emerging evidence shows that financial inclusion contributes to financial resilience by enabling households and communities to build assets and cope with shocks (box 3.1), but the level of financial inclusion in Angola remains limited and a gender gap persists. A recent study by World Bank and the Central Bank of Angola found a gender gap of 14 percent (Smith and Bowen 2020). In 2017, about 40 percent of adults held an account at a financial institution, higher than the Sub-Saharan Africa average of 33 percent. However, only 13 percent of the poorest in Angola had an account, compared with over 23 percent of the poorest in Sub-Saharan Africa. Angola seems to have closed the gender gap in terms of access to financial institution accounts. However, among those without accounts, more women than men cite insufficient money and documentation as barriers to opening a formal account. In addition, more women than men are unable to raise emergency funds, and a majority of those who can do so rely on friends and family. Overall, compared with the average adult in Sub-Saharan Africa, more Angolans struggle to come up with emergency funding. Angola's challenge lies in closing the gap in financial inclusion and financial resilience between the poorest 40 percent and the richest 60 percent (Figure 3.5).

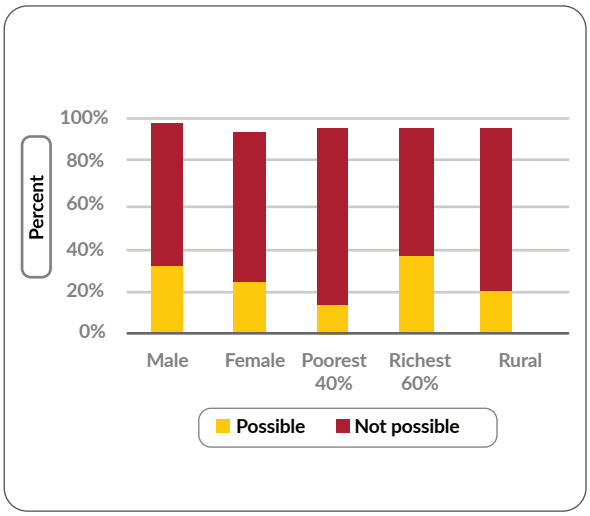

Photo Credit: Ivan Kmit / pixels

Figure 3.5: Adults with accounts at a financial institution and possibility of raising emergency funds

a. Financial institution account



b. Raising emergency funds

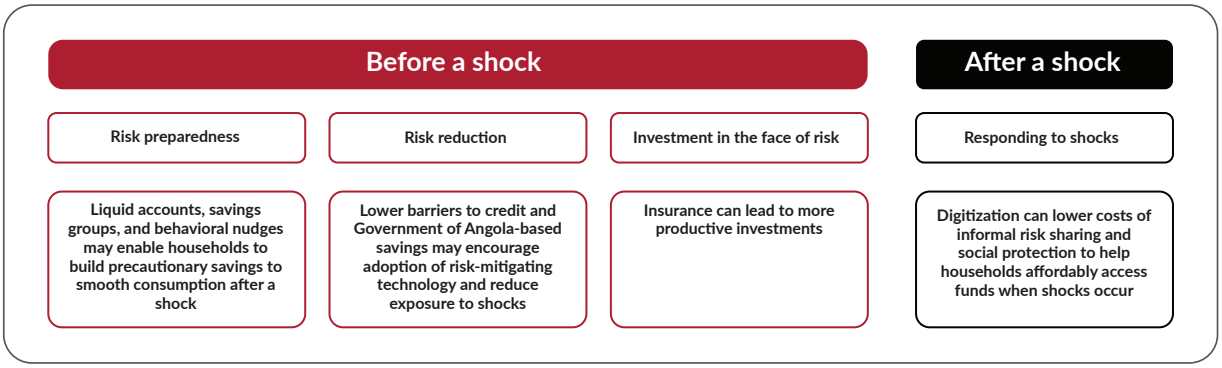


Source: Finder 2017.

Box 3.1 Building Resilience through Financial Inclusion

Low-income households are particularly vulnerable to shocks, but they are the least prepared to cope with and recover from the impact of shocks. The effects of climate change exacerbate vulnerability. Financial inclusion can enable households to manage risk before a shock and to recover after a shock occurs. This builds resilience, the ability to mitigate, cope with, and recover from shocks and stresses without compromising future welfare. Evidence suggests that well-designed financial products and services can play a role in increasing low-income families' resilience by helping them be prepared for risk, reducing risk, increasing investment in the face of risk, and responding when a shock occurs (figure B3.1.1).

Figure B3.1.1: Emerging evidence on building resilience through financial inclusion

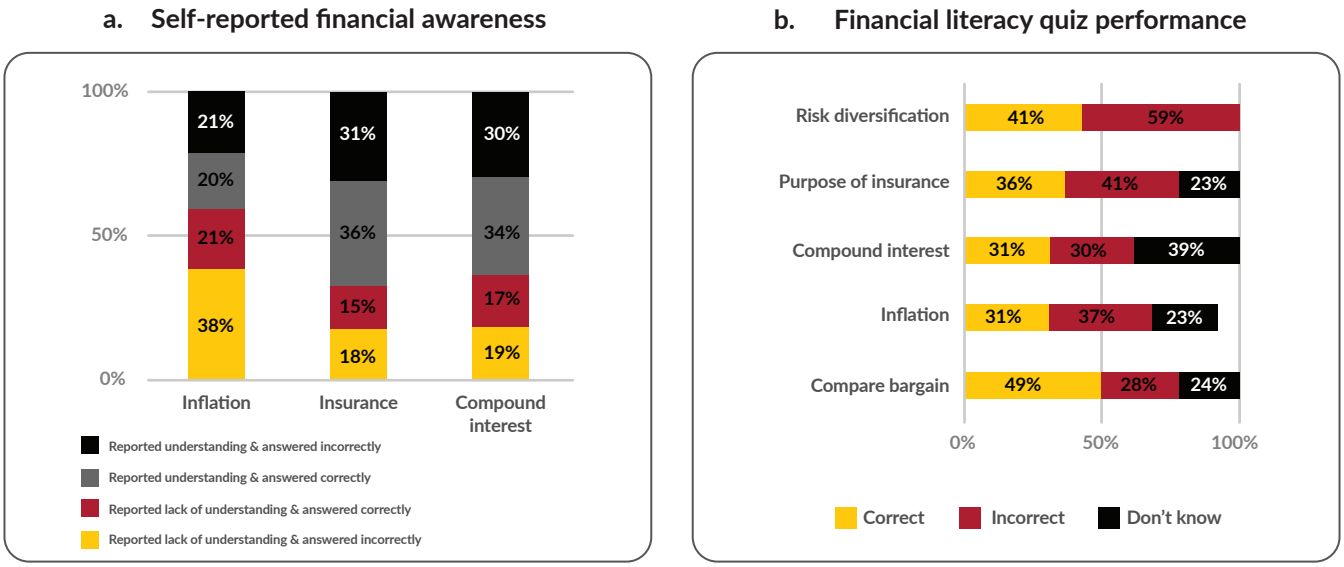


Source: Moore et al. 2019.

Insurance utilization in Angola is low. Only one in four adults use insurance to manage risk. About 26 percent of adults have a general insurance policy (car, household contents, or building). Adults with stable incomes utilize risk management products marginally more (26 percent) than those with unstable incomes (25 percent), even though the latter need them more to manage the risks associated with irregular and erratic income streams. Low levels of insurance utilization have been linked to low levels of financial inclusion (lack of formal bank accounts) as well as low financial literacy and awareness of insurance. In Angola, those with formal accounts have greater awareness

of insurance (39 percent) than adults with no formal accounts (9 percent) (World Bank 2019). While educated Angolans are more financially literate, improvement in capability diminishes beyond secondary education. About half of Angolan adults lack an understanding of insurance, and only 36 percent of respondents in a survey were reported to know the purpose of insurance (figure 3.6).

Figure 3.6 Angolan adults' understanding of insurance



Source : World Bank Financial Capability Survey, Angola 2019

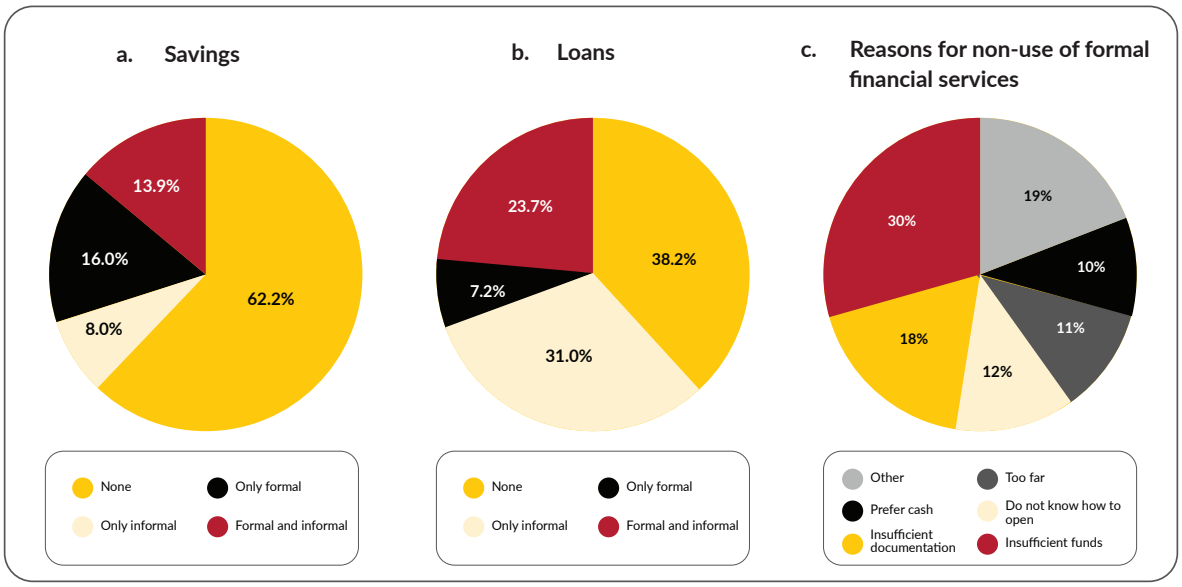
The use of other financial services for risk management is very limited (figure 3.7).[36] Most Angolans save for education and borrow for health.[37] Women save four percent less than men, and significantly more men than women report any type of borrowing (42 versus 34 percent). The Government of Angola could explore the use of digital money and Bankita accounts to drive the uptake and utilization of risk management products such as savings and insurance.[38] However, the financial sector would still need to invest in remote access points. Over 710,000 accounts were opened between the launch of Bankita in 2011 and June 2019. During the same period, over 350,000 ATM debit cards were issued, about 1,200 Bankita savings accounts were created, and the volume of deposits traded reached Kz 30 million. In addition to providing basic accounts, there is a need to increase financial literacy and promote the development and sustainable provision of diversified financial services tailored to the specific needs of the poor, rural dwellers, and women. An area yield index and index-based livestock and fisheries insurance could be developed to enhance the financial resilience of households that heavily depend on agriculture, livestock, and fisheries. While the private sector is likely to play a key role in developing more suitable products for large parts of the population, the government has a key role in providing public goods like data and developing an enabling regulatory framework.

[36] The main barriers to formal account ownership are lack of money (29 percent), insufficient documentation (18 percent), and lack of knowledge on how to open one (12 percent).

[37] Findex 2017.

[38] Bankita is a simplified bank account that customers can open immediately, with a low required opening balance of Kz 100 and no maintenance costs.

Figure 3.7: Percentage of population with



3.3 Capital markets instruments and options

Angola's capital markets remain underdeveloped and limited to mainly government bond issuance. The capital markets comprise bonds, equities, derivatives, and venture capital, but market activity consists mostly of trade and investment in government securities and issuance of corporate bonds through private offers. The Angola Debt and Stock Exchange (Bolsa de Divída e Valores de Angola; BODIVA) is in its infancy.[39] No companies are listed yet, but 14 banks and two brokerage houses are registered and actively trading.[40] Market share is concentrated, with only two institutions responsible for 70 percent of the trades on this platform in 2017 (World Bank 2019).

While the capital market in Angola is at an early stage of development, the volumes traded have grown significantly since the launch of BODIVA. The annual amount traded on BODIVA increased from US$830.67 million in 2015 to US$1.08 billion in August 2021.[41] Over the same period, the net asset value of collective investment schemes grew from US$6.71 million to US$648.53 million, driven by the growing number of participants in the market (the number of securities custody accounts increased from 243 in 2016 to 21,122 in 2021), investments in real estate, and the relative attractiveness of government-issued bonds in comparison to other local investment alternatives. The derivatives market has also grown significantly, from US$2.3 million in 2015 to US$3.8 billion in August 2021, driven by the introduction of foreign exchange swaps between national and foreign banks in 2019.

There are several ongoing initiatives to foster the growth of capital markets, including the privatization of state-owned enterprises. The Capital Markets Commission is reviewing regulatory conditions necessary for the issuance of environmental, social, and governance bonds, with emphasis on green and blue bonds,[42] and is implementing a program to enable the issuance of project bonds.[43] These could enable the mobilization of private funding for resilient public infrastructure and could lay the necessary foundation for the development of other market-based risk transfer instruments (see box 3.2 for more details). The CMC is also working to accelerate the issuance of corporate stocks and bonds through financial education and market training programs to assist SMEs in preparing to raise financing from the capital market.

[40] Initially, 10 companies were planned to enlist in quarter (Q)3 2020 with initial public offerings estimated at US$6.0 billion

[41] Volumes traded reached a high of US$3.16 billion in 2017 but fell since then because of depreciation of the kwanza following liberalization of the exchange rate.

[42] These are debt instruments issued by governments, development banks, or other institutions to raise capital from impact investors to finance sustainable ocean-based projects that have positive environmental, economic, and climate benefits.

[43] Project bonds are listed, tradable securities that enable investors to participate in infrastructure projects.

Box 3.2 Market-Based Risk Transfer Instruments

Several disaster-related risk transfer instruments are available in capital markets worldwide. They include catastrophe (CAT) bonds, catastrophe swaps, weather derivatives, and others.

A CAT bond allows the insurer to raise funds in case of a natural disaster and does not count against a country's debt ceiling. A CAT bond pays out only if a specific event such as an earthquake or a flood occurs. The occurrence of an insured event triggers payment to the bond issuer, while the interest and principal repayments can be deferred or stopped. CAT bonds are often used by insurers to transfer risks to investors. Investors target CAT bonds because they offer high yields and portfolio diversification, as CAT bond interest rates are usually higher than most fixed-income securities. In addition, they enable diversification because losses on CAT bonds are not correlated with other capital market instruments. The CAT bond price is composed of a risk-free base rate and the spread, which represents only the insurance risk and not the credit risk of the issuer. The spread varies, depending on the probability of disaster occurrence.

Catastrophe swaps can be executed between two counterparties with exposure to different types of catastrophe risk. The main objective is to diversify a portfolio and therefore minimize risk concentrations. A few examples of CAT bonds and catastrophe swaps follow.

Weather derivatives are index-based instruments that pay out when a specific weather-related threshold is reached. Unlike insurance, which covers rare catastrophic weather events, weather derivatives cover more common events, such as hot or cold spells. Weather derivative indexes are usually based on observed weather data at a weather station (temperature, snowfall, rainfall, and so forth).

Examples of CAT bonds and CAT swaps used by sovereign governments:

In February 2020, Mexico issued its sixth CAT bond of US$425 million for its natural disaster fund FONDEN to top up the resources for an extreme event (Artemis 2020). In November 2019, the Philippines issued a CAT bond in the amount of US$225 million against losses from the perils of earthquakes and tropical cyclones (World Bank 2019a).

In July 2021, World Bank helped Jamaica to issue a CAT bond for US$185 million (1.3 percent of GDP). The CAT bond insures the government against named storms and hurricanes. World Bank holds the principal, and Jamaica can access part of it or the full amount, depending on the severity of the disaster. Coupon payments, estimated at US$8.3 million (0.2 percent of fiscal 2021 expenditures), are funded by donors at present. However, Jamaica hopes to renew the CAT bond using its own finances post recovery from COVID-19. The bond matures (the insurance ends) on December 29, 2023, and does not add to the national debt. It is designed to help protect economic progress and development gains Jamaica has been making in recent years.

A developed domestic capital market could be a good anchor for access to catastrophe products (see box 3.2), but initially, they could be accessed from international markets. There are no legal constraints hindering Angola from accessing international capital markets. Development institutions such as the World Bank can facilitate access to international markets by acting as intermediaries for placing the instruments, taking on any credit risk from market counterparties, and providing end-to-end support for product design, preparation, and market execution. An in-depth cost-benefit analysis would be required to determine the attractiveness of this option. In the short to medium term, the Government of Angola could focus on developing the technical capacity of the local capital market to develop disaster-related products and to expand to a wider base of investors.

4 Funding Gap Analysis and Risk Financing Strategies

Statistical analysis was conducted to estimate the costs of disaster relief to the Government of Angola. The analysis excludes costs of recovery and reconstruction since governments tend to have more time to plan for these later phases. First, we estimated the historical cost of relief; then we conducted statistical analysis to derive indicative expected future costs of relief, which were compared to the available funding to determine the funding gap.

4.1 Overview of the legal and strategic frameworks for disaster risk financing

In the first step of the analysis,[44] two distinct estimation methods were used to derive relief costs from the economic losses: one for the impacts of droughts through food insecurity, and the other for the impacts of floods through physical damage to property and assets. For droughts, the number of lives in need of emergency food relief between 2012 and 2021 was multiplied by the average cost of relief per person.[45] For floods, the uninsured economic loss value was multiplied by an emergency relief factor. The uninsured loss was based on the results of a flood catastrophe model.[46] The relief factors were based on international reinsurance practice. The analysis assessed a range of different statistical distributions and selected the one that best fits the empirical data. Monte Carlo simulation was then carried out to simulate 10,000 years of losses from the fitted distribution. These simulated relief costs indicate the frequency and severity of future relief costs. For the Government of Angola to make decisions, the analysis would need to be refined, with better information on historical fiscal costs, the cost of insurance, and so on. As discussed, the government could invest in a national database on economic and fiscal impact and expenditure related to disasters to strengthen the evidence base for disaster risk financing and disaster risk management more broadly.

The fiscal cost of emergency disaster response in Angola is conservatively estimated at US$75 million per year and may reach US$600 million for 1-in-50-year events. As shown in figure 4.1, the simulated distribution is highly positively skewed, which suggests a substantial likelihood of very large relief costs. Damage to public assets and infrastructure is excluded; hence, costs are expected to increase once damage to public assets and infrastructure is accounted for. This estimate also excludes the cost of scaling up social protection.

Photo Credit: Image: Freepik

[44] This analysis is indicative because of limited availability of data on economic losses and fiscal costs of disasters.

[45] The number of lives was as reported through the South African Development Community Regional Vulnerability Assessment and Analysis Programme based on the Integrated Food Security Phase Classification. The cost of relief per person is assumed to be US$50.

[46] The catastrophe model covers residential and industrial property and excludes public assets and infrastructure because of the lack of a public assets and infrastructure database.

Figure 4.1: Simulated average annual costs of disaster response due to drought and flood in Angola over the next year for different return periods

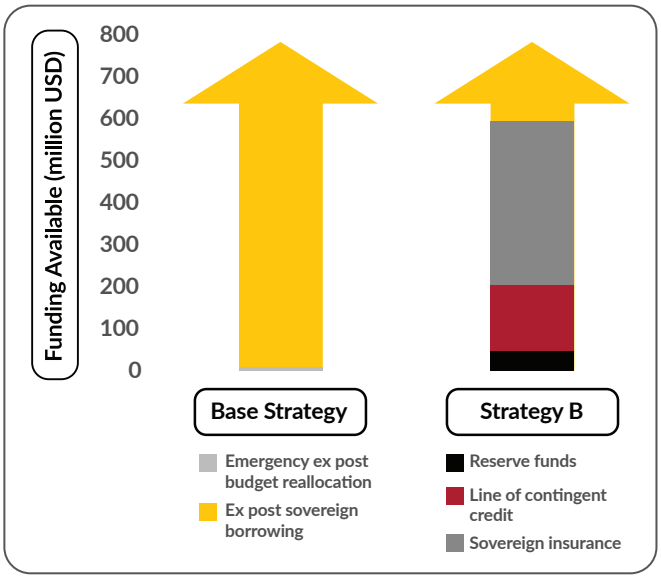
Source: World Bank analysis.

Note: The return period is the duration over which a loss of the same or greater magnitude should be expected. A 1-in-5-year return period is the estimated annual loss expected to be exceeded once every five years on average; in other words, in any given year there is a 20 percent probability of a loss at least as great as this. Similarly, a 1-in-10-year return period is the annual loss expected to be exceeded once every 10 years on average (that is, with a 10 percent probability). The estimates do not mean these disasters will occur only once every 5 (or 10) years.

4.2 Funding gap and comparison with risk-layered strategy

The indicative distribution of fiscal costs of relief presented in the preceding section is then compared with the funding currently available to the Government of Angola to assess the funding gap at various return periods. The analysis also compares potential coverage provided by alternative risk financing strategies that the government could consider. The analysis, therefore, demonstrates how the Government of Angola could develop a risk financing strategy consisting of multiple financial instruments that balance risk retention and risk transfer (risk layering) and compares this strategy to the current financing approach (base strategy). The total funding available under each strategy is presented in figure 4.2. The Government of Angola would need to consider key trade-offs, its risk appetite, and the overall macroeconomic context when developing its strategy (box 4.1).

Figure 4.2: Funds under each financing strategy



- **The base strategy consists of a budget reallocation of US$16.5 million,** which is the maximum annual reallocation over the last 5 years adjusted for inflation to USD 2021 values. This base strategy is only illustrative, as Angola does not have a defined financing strategy in place.
- **Strategy B consists of a reserve fund of US$50 million, to cover mild events, combined with contingent credit of US$155 million for moderate to severe events, and sovereign insurance with a maximum payout of US$445 million for severe to extreme events.**

Source: World Bank analysis.

Note: The instruments in Strategy B are layered. The reserve fund covers losses of up to a 1-in-2.5-year event. Contingent credit covers losses of up to a 1-in-15-year event, while insurance covers up to 1-in-50-year events. We assume that the reserve fund is exclusively for natural disaster relief and incurs small administrative costs. The contingent credit used for illustrative purposes is a World Bank CAT DDO (Catastrophe Deferred Drawdown Option). The sovereign insurance is assumed to cover all perils and has a 100 percent ceding share, which mean all losses in the sovereign insurance layer are protected. The attachment is set such that insurance pays out when costs of relief exceed US$205 million, which is the cost of a 1-in-15-year loss event. Insurance would cover losses above those covered by the other two funding instruments (reserve fund and contingent credit). Any losses beyond the insurance exhaustion point, which has been set at a 1-in-50-year loss of nearly US$600 million, would not be covered by the insurance. In such a rare event, the Government of Angola would raise additional funds through borrowing.

Box 4.1 Risk Layering: Key Trade-offs When Establishing a Disaster Risk Finance Strategy

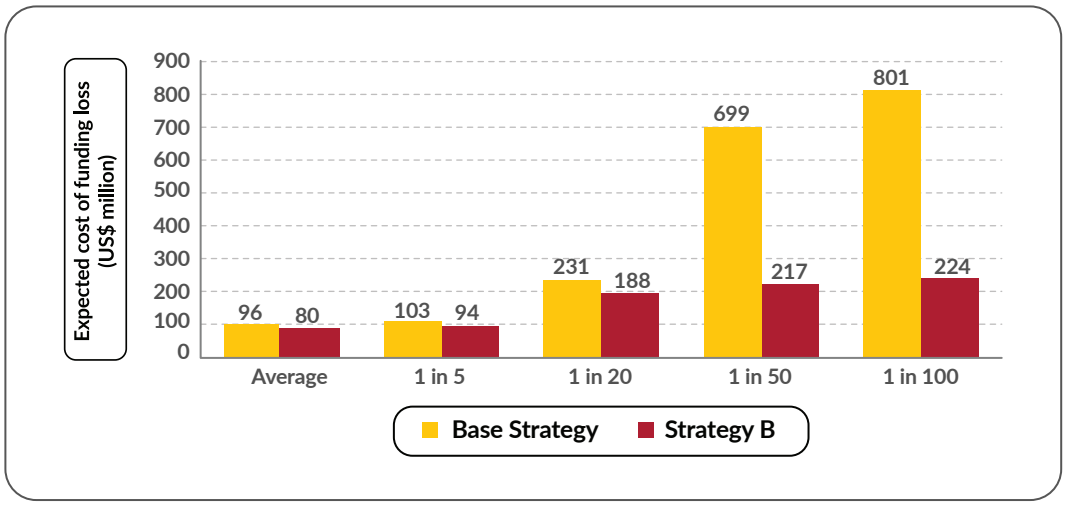
When a national disaster risk financing strategy is developed, it is important to decide on the level of risk that the national balance sheet can retain and the amount to transfer to private financial markets, which will be limited by the costs of the various instruments.

The Government of Angola would need to consider the following trade-offs:

- Different risk financing instruments have different costs and differ in cash flows. For example, reserves incur a delayed opportunity cost, while insurance has an up-front cost of premiums.
- While holding large reserves entails an opportunity cost, if a major event occurs in the absence of reserves, mobilizing funding through budget reallocation and borrowing can result in avoidably high response costs.
- Budget reallocations carry a high opportunity cost, as resources are channeled away from planned high-yielding social and capital investments.
- Ex post borrowing is especially time costly, and many countries face challenges raising debt after a shock, which results in high time costs. Furthermore, a disaster event can result in a credit downgrade and trigger a debt crisis.
- Insurance is suited for relatively extreme events—that is, events occurring less frequently than every 5–10 years, on average.

A risk-layered financing strategy would be more cost-efficient, on average and for more extreme shock events, than Angola's current approach. As shown in figure 4.3, compared with the base strategy, a risk-layered approach would yield considerable savings on average and particularly during uncommon, severe 1-in-20-year events and very severe 1-in-50-year and 1-in-100-year events. Savings increase to nearly US$300 million for severe events and over US$800 million for extreme events. Budget reallocations and ex post borrowing carry high opportunity costs; they are less timely and less predictable; and they divert resources away from higher-yielding social and capital investments. These financing instruments are used less frequently under Strategy B, which creates significant savings compared to using the base strategy. In addition, the significant savings for severe to extreme events demonstrate the ability of insurance to mitigate the financial impact of larger costs as the premium leverages additional capital. This analysis is indicative. For the Government of Angola to make decisions, the analysis would need to be refined with better information on previous fiscal costs, available funding, and economic assumptions underlying the analysis, such as interest on sovereign debt and the cost of insurance.

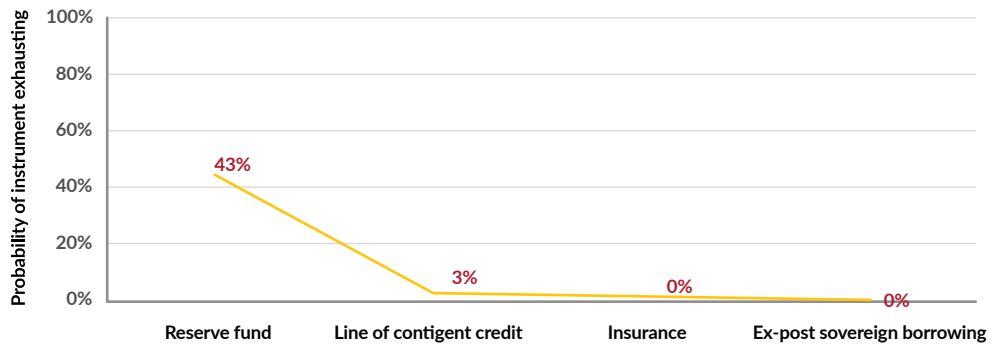
Figure 4.3: Effect of risk-layered financing approach on cost of covering losses, based on expected loss events over a multiyear period



Source: World Bank analysis.

Under Strategy B, the Government of Angola would have a wider range of risk financing options that can be triggered after disasters, including sovereign insurance to protect the budget against severe events, which would significantly reduce the likelihood of emergency borrowing. Note that the sovereign insurance policy modeled in the analysis is a hybrid for floods and drought and would need to be developed specifically for Angola, which would take time and possibly add to the cost of the cover.[47] The chance of exhausting the reserve fund is 43 percent, and the chance of exhausting the contingent credit is 3 percent, at which point the sovereign insurance would be triggered (figure 4.4). In the rare event (which has a near-zero chance of happening) that the insurance is exhausted, the Government of Angola would resort to ex post borrowing. The probability of insurance being exhausted is directly linked to the maximum loss covered by the insurance. Ex post sovereign borrowing is assumed to be unlimited. More in-depth analysis with a limit on ex post sovereign borrowing would be required when the government develops its disaster risk finance strategy.

Figure 4.4: The chances of each instrument being exhausted over a year



Source: World Bank analysis.

[47] ARC Limited recently issued such a hybrid product in Djibouti. It took nearly a year to develop this product.

Disaster risk reduction should be strengthened to ensure the sustainability of the disaster risk finance strategy. Disaster risk reduction and disaster risk financing are complementary since risk reduction can reduce the total expected loss, which in turn reduces the opportunity cost of covering the loss. Studies show that investing in infrastructure resilience results in cost savings and helps mitigate impacts and disruption of critical public services. A 2019 World Bank study found that every US$1 invested in infrastructure resilience could result in US$4 in benefits. In addition, risk reduction can lower the cost of insurance by reducing the required coverage or the risk that insurance will be triggered.

4.3 Shock-responsive social protection cost analysis

It is estimated that in a low-intensity shock, it would cost around US$50 million to expand Kwenda [48] and provide additional assistance to beneficiaries who are vulnerable to poverty due to covariate shocks (vertical expansion) and to cover additional households that are nonbeneficiaries but vulnerable to poverty due to covariate shocks (horizontal expansion). We use low-, medium-, and high-intensity shocks (equivalent to drops in consumption by households equal to the value of a monthly Kwenda cash transfer, 1.25 times the transfer, and 1.5 times the transfer, respectively) lasting for four months each. The duration of four months was selected on the basis of the lean season in Angola. The different-intensity shocks simulated have cumulative monetary losses of about US$50 million, US$63 million, and US$75 million, respectively. The simulation then assumes that Kwenda is used to respond to these shocks by providing a cash transfer top-up of a month's value of the food poverty line (equivalent to slightly less than the monthly Kwenda cash transfer) also for four months. Given these parameters, the vertical expansion costs about US$30 million (assuming a five percent administrative cost to use existing systems), whereas the horizontal expansion costs about US$20 million (assuming a 25 percent administrative cost to rapidly scale-up existing systems and put in place adaptations), and together they cost US$50 million. It would cost more for the medium- and high-intensity shocks. Prearranging funds, as well as establishing rapid targeting and payment systems to ensure that funds reach the right beneficiaries in the most efficient way, is critical to be able to respond in a timely and effective manner.

5 COVID-19: A Case Study

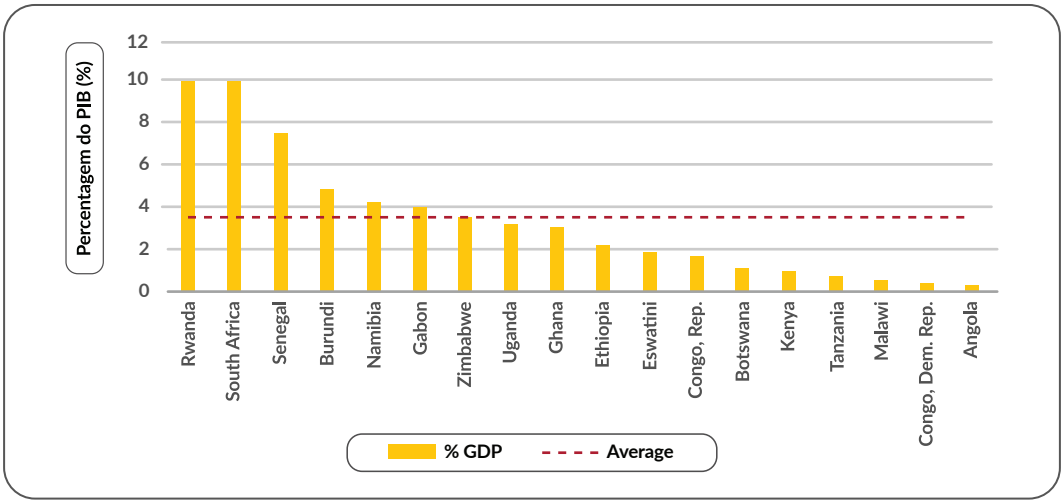
The COVID-19 crisis greatly slowed down economic growth and placed additional pressure on public finance to meet large government financial needs. As a result, these challenges have also increased the unemployment rate and deepened poverty. This chapter explores the impact of COVID-19 in terms of the general impact on the economy (subsection 5.1), the impact on public finance (subsection 5.2), and the estimated cost of the government response (subsection 5.3). The objective is to distill lessons on the efficacy of the current financing approach.

5.1 Economic impact

The lack of prearranged funding and a tighter fiscal space severely limited Angola's response, which is estimated at 0.25 percent of GDP. As shown in figure 5.1, the Government of Angola's response is significantly lower than the average response of Sub-Saharan Africa and the responses of other lower-middle-income countries such as Senegal (7.5 percent of GDP) and Ghana (3.5 percent of GDP). COVID-19 bolstered the oil crisis, which worsened the flow of one of the main national sources of income in Angola. At the same time, it expanded the government's expenditures, particularly within a narrow time frame during 2019 and 2020.

[48] In a hypothetical scenario, using 2018–19 conditions. A beneficiary receives cash transfers of Kz 8,500 in four quarterly payments.

Figure 5.1: Cross-country comparison of COVID-19 response as a percentage of GDP

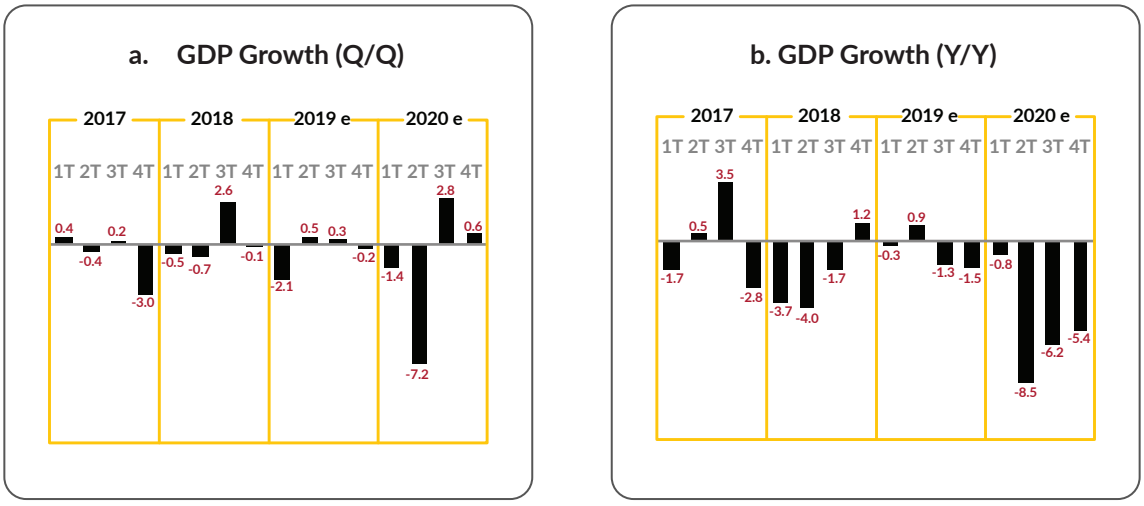


Source: World Bank analysis based on International Monetary Fund COVID-19 tracker: https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19.

The Government of Angola's strategy to mitigate the effects of the pandemic severely affected economic activities. First, it imposed strict restrictions[49] on mobility and social contact. Second, the government implemented many economic actions,[50] such as emergency assistance intended to support the economy, individual businesses, and households. At the macroeconomic level, the Government of Angola made several readjustments to the National Development Plan, as well as changes to the national budget.

According to the National Statistical Institute (INE), annual GDP growth fell by 5.2 percent at the end of 2020 because of COVID-19, the sharpest drop in the last 17 years (figure 5.2). The effect of the crisis was initially reflected in the second quarter of 2020, when GDP growth fell by 7.2 percent (quarter on quarter; Q/Q). According to the central bank (Banco Nacional de Angola [BNA]), this fall in the economy growth reported at the end of 2020 was more than expected.

Figure 5.2 : Angola GDP growth 2017–20



Source: BNP Paribas with data from National Statistical Institute (INE).
Note: e = estimated; Q/Q = quarter on quarter; Y/Y = year on year; T=quarter.

[49] Diário da República, I SÉRIE – N.º 36 – de 26 de março de 2020.

[50] CISP (Centro Integrado de Segurança Pública), https://www.cisp.gov.ao:10443/en/governo-adopta-21-medidas-para-aliviar-o-impacto-da-covid-19-sobre-as-familias-e-as-empresas-fonte-mep/.

5.2 Fiscal impact

The COVID-19 crisis caused a fall in oil revenue of 45 percent (550 billion kwanzas) from Q4 2019 to Q4 2020, roughly equivalent to 4 percent of the GDP during the first year of the crisis.[51] The main impact of COVID-19 in terms of total government revenues was experienced in the second quarter of 2020. Total revenues declined by nearly Kz 600 million to around Kz 1.2 billion. The COVID-19 crisis compounded the currency depreciation and oil price crises and resulted in Angola posting a record level of indebtedness at close to 131 percent of GDP in 2020. The drastic fall in income and high indebtedness alongside fiscal pressure to finance a response negatively affected the sovereign debt rating (downgraded by Fitch Ratings and S&P Global Ratings), given the already poor macroeconomic stability.

5.3 Financing the COVID-19 response

The Government of Angola response was financed mainly through the sovereign wealth fund and emergency borrowing from multilateral development agencies, with US$1.5 billion (18 percent of capital) from the sovereign wealth fund and close to US$2.5 billion from multilateral institutions. World Bank and the International Monetary Fund (IMF) provided the bulk of the loans (see table 5.1).

Table 5.1: COVID-19 financing by sources

External financing	US$, m	Kz, b		Local financing	US$, m	Kz, b
World Bank[a]	700	405		BDA	71	41.0
UN[b]	157	91		FACRA	12	7.0
European Union[c]	20	12		FADA	26	15.0
Africa Development Bank[d]	1.04	1		Kwenda program	420	243.0
European Investment Bank[e]	57	33		Valor Criança	0	0.1
IMF (Fifth review)[f]	772	447		PRODESI	25	14.3
IMF (Third review)[g]	765	443				
Total	2,472	1,432		Total	708	410.0

Sources: a. World Bank 2021; b. UNDP 2021; c. European Union 2020; d. African Development Bank 2020; e. European Investment Bank 2021 (including loans and grants); f. IMF 2021; g. IMF 2020.

Note: b= billion; m = million.

f. The IMF approved the Fifth Review of the ongoing Extended Fund Facility (EFF) program and disbursed US$772 million in budget support in June 2020.

g. The IMF Executive Board approved the authorities' request for an augmentation of access of SDR 540 million (about $765 million at the time of approval) to support efforts to mitigate the impact of COVID-19 and sustain structural reform implementation.

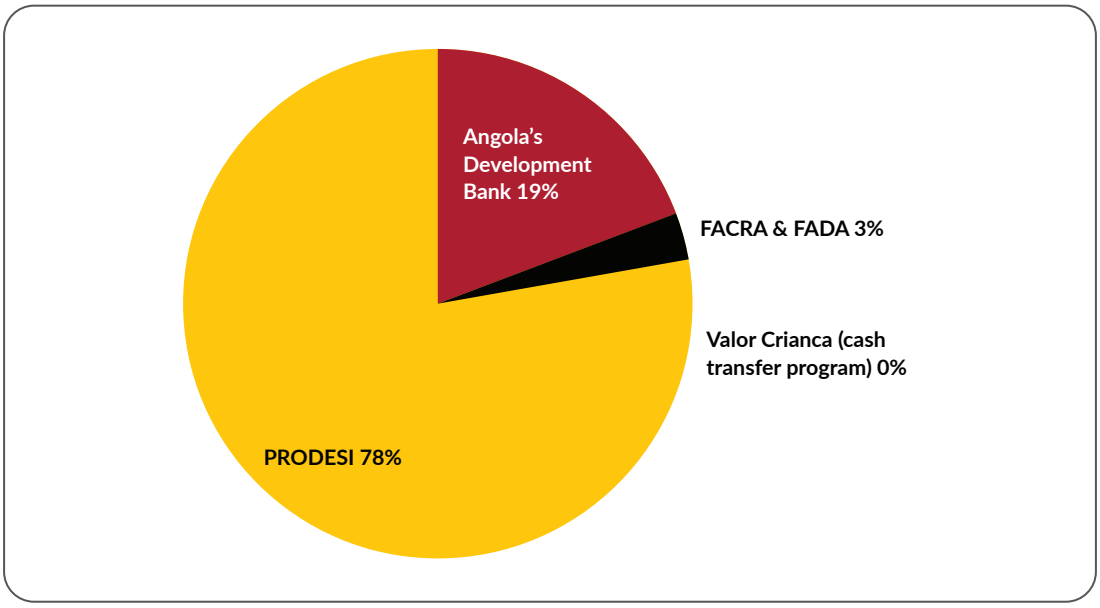
[51] Estimated with data from BNA (2021).

The Government of Angola prioritized the agricultural, livestock, and fisheries sectors. Among the initiatives promoted by Angola in response to COVID-19, the Banco de Desenvolvimento de Angola (BDA) (Angola's development bank) provided credit lines up to Kz 41 billion to finance the purchase of locally produced agricultural and fishery products (65 percent of the credit lines), improved seeds, fertilizers (33 percent of the credit lines), and pesticides by domestic agricultural companies and to fund the modernization and expansion of agriculture and fishery cooperatives in the provinces (2 percent). In addition, two government-owned funds—Fundo Activo de Capital de Risco Angolano (FACRA) and Fundo de Apoio ao Desenvolvimento Agrário (FADA)—were deployed. FACRA dedicated 43 percent to equity investment in cooperatives and 57 percent to individual credit lines. By the end of 2022, the FADA credit facility had disbursed 15 percent of the Kz 15 billion to finance family agriculture (figure 5.3).

The Government of Angola also supported cash transfer programs to respond to COVID-induced poverty through Kwenda. Kwenda was piloted in several municipalities, with about 5,800 families receiving transfers as of October 2020. The government expanded this program with a goal of reaching 1.6 million beneficiary households by the end of 2021. The project is funded by a World Bank loan of US$320 million, plus US$100 million from government resources. From 2023–25, the Government of Angola has pledged to allocate an additional Kz 75 billion per year within the context of the ongoing subsidy reform. Furthermore, another cash transfer program, Valor Criança, was launched with the aim of benefiting households with children under five years of age. By December 2020, the program had aided 20,000 children, disbursing a total of Kz 100 million.

Finally, to alleviate the economic impacts, the Government of Angola supported the manufacturing sector with a focus on essential goods that were in deficit. Financial institutions were mandated to deliver lending in the Production Support, Export Diversification, and Import Substitution Program (PRODESI). The support was for the production of 54 essential goods that were in deficit in the country. Since 2019, PRODESI has disbursed Kz 14.3 billion.

Figure 5.3: Government of Angola response to COVID-19 percent of total (Kz 214 billion)



Source: World Bank analysis.

6 Recommendations to Strengthen Financial Resilience

This section provides options for strengthening financial resilience against crises and disasters in Angola grouped into four areas: (a) the policy and institutional framework, (b) public financial management, (c) risk financing instruments, and (d) resilience for households and MSMEs. For each area, an indicative timeline is given to support the Government of Angola with prioritization over the next five years.

6.1 Strengthen the policy and institutional framework

In many countries, this effort is jointly led by the MINFIN and the national disaster response agency, which is the SPCB in the case of Angola.

- **Update the relevant strategic and legal instruments for disaster response.** The update of the latest National Calamity and Disaster Preparedness, Contingency, Response and Recovery Plan, and Strategic Plan for Prevention and Disaster Risk Reduction, which were designed for the 2015–17 period, could be concluded as to reflect recent developments and priorities in DRF and DRM and in development objectives more broadly. Similarly, the Strategic Plan for Prevention and Disaster Risk Reduction could be updated. The approval of the Drought Response Framework could also be concluded, and an assessment of the main bottlenecks affecting the regular update of these instruments at the national level could be considered. These reforms could take into consideration sector-specific and local-level instruments and ongoing reforms, such as the development of contingency plans at the sector, province, and municipality levels. The Base Civil Protection Law (28/03) and the Adjustment to the Base Civil Protection Law (14/20) could be revisited, and their consolidation into a single instrument that simplifies the operation of the CNPC could be considered.
- **Further assess DRF practices and needs at the local level.** Within the context of the ongoing decentralization process and considering the role of local institutions in responding to recurrent events, their budgeting processes, fiscal risk management practices, and financial needs could be assessed so that the DRF strategy can account for and pool risk at various levels of government.
- **Develop and adopt a comprehensive disaster risk financing strategy.** This is an immediate step that the Government of Angola could take to determine (a) priority sectors, assets, and populations for financial protection; (b) the financing instruments that the government intends to use; (c) the delivery mechanisms through which funds will be disbursed to the beneficiaries; and (d) the institutional reforms needed to strengthen the financial management of the post-disaster response and to implement and streamline the DRF strategy. A disaster risk financing strategy and implementation plan could be developed through a working group led by the Ministry of Finance and consisting of the Ministry of Interior and different line ministries, agencies, and broader stakeholders.

6.2 Improve public financial management and risk-informed decision-making

- **Assess climate-related contingent liabilities and include them in the fiscal risk assessment under the ongoing public financial management reforms.** Specifically, the fiscal risks declaration in the fiscal strategy could include a climate risk assessment component and be published annually in accordance with the Fiscal Responsibility Law. A template for the assessment of climate-related fiscal risks could be developed; this could include contingent liabilities due to natural disasters explicit in the legal framework or implicit by common practices and could be done by comparing existing exposure data with disaster scenarios. Such assessments may also be informed by catastrophe modeling. This could be done by the Ministry of Finance.
- **Develop a national database on the occurrence and impact of natural disasters.** The availability of data on the occurrence and impact (damages and losses) of natural disasters is limited, especially for recurrent, localized events. The Government of Angola could consider recovering historical data from administrative records and developing an electronic register for future events. Assessments of the impacts of disasters may also be inconsistent across time and regions, as the country lacks official, detailed guidelines for post-disaster impact assessment. Technical assistance could support the development of a database, tailored methodologies, and, in the medium term, development of an integrated system for the collection and management of disaster

occurrence and impact data, which in turn could improve the quality of disaster risk assessments and refine the DRF strategy. The implementation of such a system could be phased, starting with key indicators of human impacts and direct damages to physical assets and, if needed, progressing to include a broader set of sectors and indirect impacts. This could be led jointly by the Ministry of Finance and the SPCB and done in collaboration with local-level institutions and initiatives such as the development of municipal director plans.

- **Develop a public expenditure tracking system for disaster and crisis response.** This includes integrating tracking of spending (disaggregated by response, recovery, and reconstruction) into a government financial information system. Tracking could cover spending from reserve funds and document budget reallocations as well as disaster expenditures that usually remain embedded in the budget, such as in operations and maintenance. Given the extent of the impact of COVID-19 and budget spending on the response and recovery, the Government of Angola could also consider reviewing how much was spent and how financing decisions were made. This step would help clarify gaps to improve the process of disaster risk financing in the future. This is led by the Ministry of Finance.
- **Strengthen the technical capacity of the Ministry of Finance on disaster risk finance.** Since MINFIN plays an essential role in ensuring financial resilience for disaster response, it is important to build the ministry's capacities for assessing climate-related financial risks as part of the macroeconomic framework and budget planning, including implementation of the climate fiscal risk assessment suggested above. A technical assistance program for MINFIN could start with training on the fundamentals of DRF and advance to more complex topics, such as the climate fiscal risk assessments suggested above, the quantification of contingent liabilities from natural disasters and crises, and the design and structuring of DRF instruments. The Ministry of Finance could leverage support from the World Bank and other development partners.

6.3 Expand the portfolio of prearranged risk finance instruments

The Government of Angola could optimize the use of public funds through the introduction of new risk-financing instruments. Further analysis would be required to assess the optimal combination of financing instruments for different severities and frequencies of losses based on Angola's disaster risk profile to ensure cost-efficiency. This could entail risk retention through a multiyear contingency reserve and contingent credit for moderate shocks, as well as risk transfer for severe shocks in key sectors like agriculture, MSMEs, and public assets. These activities are typically led by the Ministry of Finance.

- **Consider establishing a dedicated multiyear contingency or reserve fund** to provide immediate liquidity after disasters. For such a fund to be effective, timely, and well-managed, the following areas should be defined: (a) explicit purpose and beneficiaries; (b) the fund's legal and institutional frameworks; (c) its governance, transparency, and accountability principles; (d) its disbursement mechanism; (e) the financing structure, with complimentary sources of funds; and, in light of the ongoing decentralization process, (f) its relationship with local-level institutions. Introducing this fund as an accruing multiyear account that provides immediate support could help prevent budget volatility while ensuring a timely response.
- **Secure a contingent line of credit** to strengthen the resilience of the budget to shocks and provide liquidity in the event of an emergency with minimal impact on the country's credit rating. The funds could be used to respond to any peril per an agreed-upon trigger and could be disbursed through existing mechanisms, such as social safety nets.
- **Accelerate the development and implementation of a national agriculture insurance scheme** for productive farmers. Two insurance products are recommended based on international experience: area yield index insurance for crop farmers and index-based livestock insurance for livestock producers. In addition to risk finance, the Government of Angola could support the following: (a) data collection for product design and pricing, (b) farmer registration and creation of awareness to facilitate outreach and distribution, and (c) strengthening of the enabling environment, particularly relating to consumer protection.

- **Develop a risk-based asset management system to maximize the utility of public assets and strengthen resilience to physical shocks.** This could foster the use of insurance to protect public assets and critical infrastructure in the long term. In the short to medium term, there is a need to enhance the collection, management, and analysis of information on the impact of disasters on public assets. In the short term, the government could review the national database on public buildings and infrastructure and develop guidelines for public asset insurance. An asset registry would empower asset owners with relevant and accurate underwriting information, which would result in competitive terms and conditions, particularly cost-effective premiums. The registry could also inform exploratory work on the viability of a public asset insurance scheme in the medium to long term.

6.4 Strengthen financial resilience of vulnerable households and MSMEs

- **Strengthen the institutional capacity and shock responsiveness of the social protection system.** The prevalence of covariate shocks in some regions of Angola and the increasing trend in the frequency and severity of climate-related shocks provide a strong case for an adaptive or scalable social protection system; a shock-responsive safety net would support people at risk of falling into poverty and provide additional assistance to poor and vulnerable people affected by disasters.
- **Specifically, such shock-responsive systems require setting out operational and budgetary procedures in advance and should be part of a disaster risk-financing strategy.** The DRF strategy includes information on where resources will come from and can help streamline the allocation of funds to programs such as Kwenda following shocks. This could be led jointly by the MASFAMU, which has a mandate for social protection policy, and the Ministry of Territorial Administration, which currently implements the Kwenda program through Fundo de Apoio Social.
- **In turn, scalable social protection can help speed up response to disasters by providing a pre-established distribution channel** to reach the poorest and most vulnerable households when a shock occurs, which is also a key component of a DRF strategy. Evidence shows that social protection can be used effectively to channel funds quickly and securely to poor households affected by shocks. However, clear parameters on transfer amounts, household coverage, geographical scope, types of disasters to respond to, and so forth need to be pre agreed for rapid delivery, to inform estimates of the potential costs of scaling up social protection programs, and to establish support for financial instruments. For example, scale-ups could be informed by community- or regional-scale indicators of weather conditions or levels of food insecurity. The government could also strengthen adaptive social protection based on the analytical findings from the Angola Adaptive Social Safety Nets underway to assess climate-linked vulnerability to poverty and the adaptability of Kwenda to shocks.
- **Facilitate private sector innovation to increase financial inclusion and close the protection gap.** The objective would be to stimulate the use of integrated financial services for risk management by households. Mobile money and Bankita accounts could be used to increase penetration of insurance in urban areas to mitigate the increasing impact of floods. The technical capacity of the private sector could be strengthened. This could include training on designing and delivering products for the bottom 40 percent and for women, given the existing financial inclusion and protection gaps. Such improvements could be integrated into the national financial inclusion strategy led by BNA.
- **Build shock responsiveness into government-supported MSME finance programs.** Explore the feasibility of embedding risk finance into existing SME lending and risk management facilities, such as the Credit Guarantee Scheme, to introduce liquidity into the market following a disaster and to protect vulnerable SMEs. This effort could be led by the Ministry of Finance working closely with the respective administrators of existing programs.

These recommendations are summarized in table 6.1.

Table 6.1: Recommendations to strengthen financial resilience in Angola

Time frame	Strengthen the policy and institutional framework	Improve public financial management and risk-informed decision-making	Strengthen existing risk-finance instruments and pre-arrange new instruments	Strengthen financial resilience of the MSME sector and vulnerable populations
Short term	• Update and finalize the strategic instruments relevant for disaster response (e.g. Contingent Plan, DRR Plan, and Drought Recovery Framework). • Assess DRF practices and needs at local government level.	• Strengthen the technical capacity of the Ministry of Finance on disaster risk finance. • Annually assess climate-related contingent liabilities and include these in the Fiscal Risk Assessment as part of the Fiscal Strategy.	• Establish a dedicated multiyear contingency reserve fund.	• Facilitate private sector innovation to increase financial inclusion and close the protection gap. • Prearrange finance for shock responsive social protection linked to Kwenda.
Medium term	• Develop and adopt a comprehensive disaster risk financing strategy. • Revisit the Civil Protection Laws and consider an update.	Develop a national database on the occurrence and impact of natural disasters.	• Secure a contingent line of credit. • Accelerate the development and implementation of a national agriculture insurance scheme.	• Build shock-responsiveness into government-supported MSME finance programs. • Strengthen the institutional capacity for shock-responsive social protection system.
Long term		Develop a public expenditure tracking system for disaster and crisis response.	Develop a risk-based asset management system to maximize the utility of public assets and strengthen resilience to physical shocks	

Note: Short term = less than 24 months; medium term = 24–48 months; long term = over 48 months. DRF = disaster risk finance; MSME = micro, small, and medium enterprise.

Appendixes

Appendix A The MSME Sector in Angola: Key Challenges and Recent Developments

According to a study conducted by the United Nations Development Programme, the micro, small, and medium enterprise (MSME) sector faces significant obstacles. Most productive microbusinesses operate in substandard business facilities and are hindered by inadequate infrastructure and public utilities. They have very restricted access to credit as well as other business services, and their capitalization levels are low. Participants in the survey admitted that they lacked the knowledge or resources necessary to run a successful business and were unable to pay their employees regular wages. Microentrepreneurs in the service sector enjoyed greater levels of success and possessed a keen business sense but were lacking in more innovative business skills.

Angola's MSME sector has been characterized by a lack of support services for micro and small businesses. Credit access is hampered by the fact that regular banks demand guarantees and documentation that most informal business entrepreneurs do not have. When they are available nearby, courses designed to improve business skills are both expensive and of little relevance to those who face the difficulties inherent in operating at the lower end of the market. In general, there are a limited number of training institutions in Angola.

The Government of Angola has been deploying resources to MSMEs, mainly through INAPEM. Since 2012, INAPEM has provided support to the entrepreneurial and business community by building capacity and fostering entrepreneurship and monitoring its development.

In 2021, Presidential Decree 94/21 established a law on MSMEs, which improved their regulatory framework. This regulation outlines procedures for classification, constitution, certification, and accounting procedures and defines differentiated treatment and institutional support mechanisms regarding MSMEs. For example, it established a simplified procedure for its constitution, named Guichet Único da Empresa, which may be held in multiple institutions. This is a one-stop shop in which all the procedures regarding the constitution of a company may be performed in a single site and at one time. Also, the law specifies that state bodies must set aside at least 25 percent of their budgets for procuring goods and services from Angolan MSMEs.

Appendix B The Social Protection Sector: An Overview and Cost-Benefit Analysis for Scalability

Angola's social protection spending (including pensions, subsidies, and social assistance) decreased from 7.8 percent of GDP in 2010 to 1.3 percent of GDP in 2021 and 1.2 percent in 2022. Price subsidies for fuel, electricity, water, and transport have historically represented the largest share of the social protection budget. However, since 2015, when a subsidy reform was initiated, social insurance (military and social security pensions for the public sector) has accounted for the bulk of social protection spending—about 75 percent of sectoral expenditure.

Social insurance spending in Angola is high and focused largely on pensions. Social insurance spending in Angola is 1.5 percent of GDP, more than twice the average spending in Sub-Saharan Africa of 0.7 percent of GDP. The share of social protection spending targeting the elderly accounted for 78 percent of the total social protection spending in 2016. Contributory pensions accounted for 70 percent of total social protection spending, and war-related social pensions made up 8 percent. This contrasts with the demographic composition of Angola, where the population aged 65 years or more is only 2 percent of the total (World Bank 2020a). Among people of working age, social insurance in Angola covers only around a 10th of the population. Growth of insured workers has been limited by the large informal sector (70 percent of workers), increased unemployment, the links of only small and medium enterprises to the system, significant failure of taxpayers to link workers, and the need to expand in the agricultural, livestock, fisheries, and commercial sectors (Giron-Gordillo and Ishizawa 2018).

Kwenda is the Government of Angola's flagship poverty mitigation program. Beneficiaries receive cash transfers in four quarterly payments. The monthly payment was initially established at Kz 5,000 per family per month and later increased to Kz 8,500. World Bank is providing technical and financial support to the program.

Before the introduction of Kwenda, the largest non-war-related programs were Support to Vulnerable Families (the Kikuia Card, or Cartão Kikuia) and the Child Value cash transfer program (Valor Criança), representing 12 and 8 percent of total social safety net spending in 2019 and covering around 40,000 and 14,000 households, respectively.

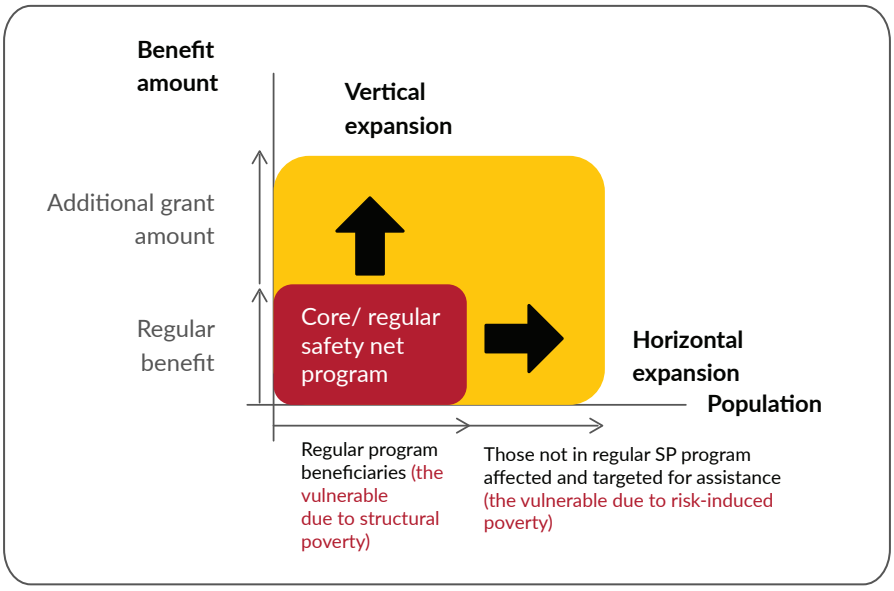
There are also around 10 job and economic inclusion programs in Angola. These programs are implemented mostly by the Ministry of Public Administration, Employment and Social Security (MAPTSS) (six entrepreneurship and training programs), followed by the Ministry of Social Action, Family and Women's Promotion (MASFAMU) (two entrepreneurship support schemes) and the National Institute for Employment and Professional Training (INEFOP) (two training and labor market intermediation initiatives) (World Bank 2020a). The largest such program is the Employability Promotion Action Plan (Plano de Acção de Promoção da Empregabilidade; PAPE). PAPE was approved in 2019. It aimed to train more than 250,000 young people in three years. PAPE is aimed at youths, entrepreneurs (already established or emerging ones), and women. PAPE is based on microcredit, entrepreneurship courses, and professional training, as well as the distribution of professional kits. For PAPE, the government approved a budget of Kz 21 billion, corresponding to US$65.6 million, which was to be implemented between 2019 and 2021.

Adaptive safety net programs and systems are increasingly being designed to "scale up and out" in times of crisis. When shocks strike, social protection programs can adapt to provide additional benefits and increase coverage to affected poor and vulnerable households. This helps create resilience and helps families manage risks, cope with shocks, and continue to invest in productive assets and human capital.

Scalable social protection systems respond to shocks by combining regular social protection programs with a mechanism that allows the programs to expand. The expansion can:

- provide additional cash transfers to existing beneficiaries during a disaster (vertical expansion) and/or
- temporarily include newly eligible beneficiaries that have become transitorily vulnerable (horizontal expansion) (figure B.1).

Figure B.1: Vertical and horizontal expansions of social safety net programs



Source: Adapted from Smith and Bowen 2022.

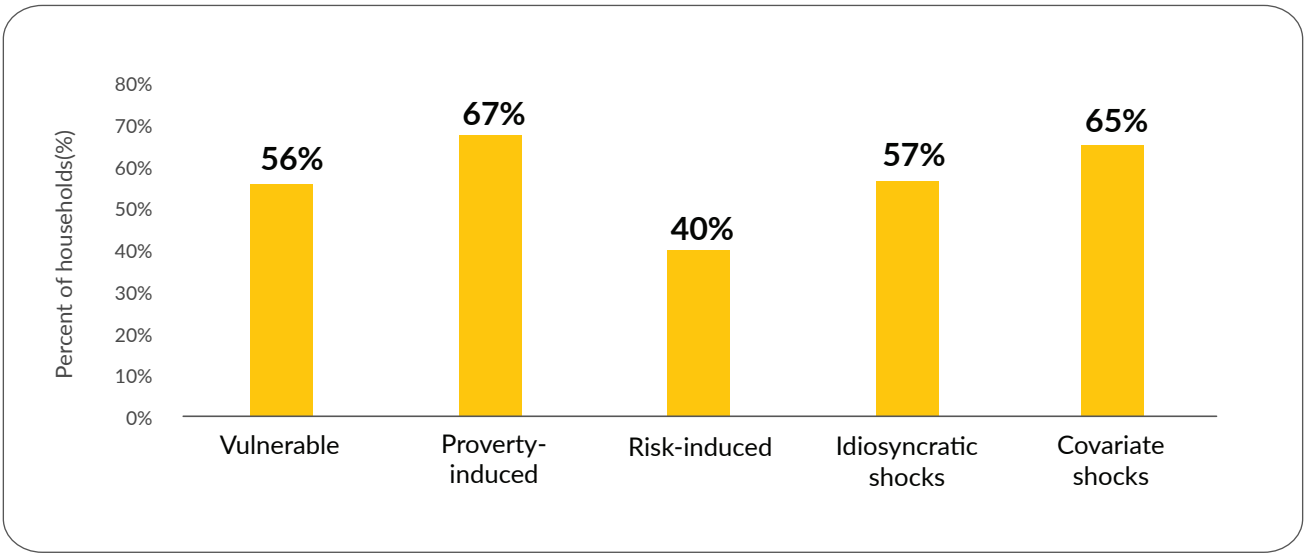
Appendix C Shock-Responsive Safety Net: Simulated Costs and Poverty Impacts

This appendix presents the potential poverty impact and cost of using the Kwenda program in Angola to respond to shocks and reach the population that is vulnerable to poverty. To do so, the Inquérito de Despesas Receitas e Emprego em Angola (IDREA) dataset is used to simulate the targeting process of Kwenda. Estimations consider the current size of transfers, assume that the Kwenda program has been fully rolled out, and perfect targeting of the population vulnerable to poverty (figure C.2).

Once Kwenda reaches 1.6 million households in all provinces in Angola, the poverty rate in Angola could be significantly reduced. The poverty rate in Angola was estimated to be at 32 percent. If Kwenda included 1.6 million poor households as program beneficiaries and provided cash transfers,[52] chronic poverty would drop to 28 percent, assuming perfect targeting.

Kwenda's targeting criteria and scale imply that a large proportion of households that are vulnerable to covariate shocks in particular will already be enrolled to receive cash transfers. As can be seen in Figure C.1, Kwenda covers 56 percent of households estimated to be vulnerable to poverty, assuming perfect targeting. Given its poverty-based targeting criteria, it is unsurprising that coverage among the poverty-induced vulnerable households is greater than that among risk-induced vulnerable households. At the same time, considering the overlaps between households that are chronically poor and affected by covariate shocks such as droughts, Kwenda's coverage among those experiencing covariates shocks is relatively high at 65 percent. As a result, of the 1.51 million total households vulnerable to poverty from covariate shocks in Angola, around 0.98 million will be Kwenda beneficiaries when the program is fully rolled out. Around 0.53 million households are estimated to be vulnerable to poverty due to covariate shocks but are not Kwenda beneficiaries.

Figure C.1: Fraction of vulnerable households receiving Kwenda by type of vulnerability



Source: Inquérito de Despesas Receitas e Emprego em Angola (IDREA) 2018–19 (poverty team estimates).

As a result, Kwenda could serve as a good platform for improving households' inherent resilience to shocks and providing post-shock assistance. As a large proportion of households will already be receiving cash transfers, their inherent resilience to shocks is likely to be greater than if they had not received the cash transfers, especially if they are complemented by jobs and financial inclusion interventions. Moreover, in the immediate aftermath of a shock,

[52] The cash transfer assumed is Kz 4,575.53, which is the equivalent of the current program transfer of Kz 8,500 in 2018 prices.

additional support could be provided to existing Kwenda beneficiary households through a vertical expansion of the cash transfer. A horizontal expansion of the program could also aid households that are vulnerable to poverty from covariate shocks and are not Kwenda beneficiaries. Returning to a pre-shock welfare level would require horizontal expansion (top-ups to non-Kwenda beneficiaries affected by a shock) in addition to vertical expansion (top-ups in addition to Kwenda transfers).

Simulation estimates that expanding Kwenda in response to shocks in 2018–19 to protect the vulnerable to poverty would have had a cost of around US$50 million. The simulation uses a perfect targeting scenario for selecting Kwenda beneficiaries and assumes that all households are affected by shocks. We use low-, medium-, and high-intensity shocks (equivalent to drops in consumption by households equal to the value of a monthly Kwenda cash transfer, 1.25 times the monthly transfer, and 1.5 times the transfer, respectively) lasting for four months each. Four months was selected on the basis of duration of the lean season in Angola. The different-intensity shocks simulated have cumulative monetary losses of about US$50 million, US$63 million, and US$75 million. The simulation then assumes that Kwenda is used to respond to these shocks by providing a cash transfer top-up of a month's value of the food poverty line (equivalent to slightly less than the monthly Kwenda cash transfer) also for four months. Given these parameters, the vertical expansion costs about US$30 million (assuming 5 percent administrative cost to use the existing systems), whereas the horizontal expansion costs about US$20 million (assuming 25 percent administrative cost to rapidly scale up the existing systems and put in place adaptations), and together they cost US$50 million.

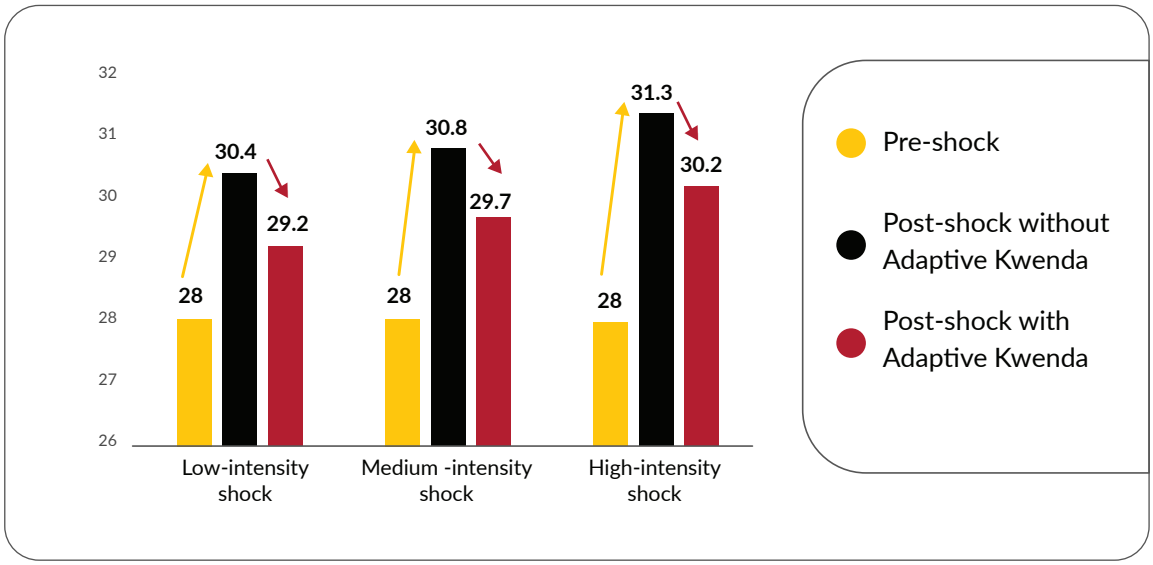
A vertical and horizontal expansion of Kwenda could significantly mitigate the increases in poverty rate caused by shocks. Under the shock scenarios, poverty rates are estimated to increase from 28 percent (baseline assuming Kwenda has been fully rolled out) to 30.4, 30.8, and 31.3 percent for the low-, medium-, and high-shock-intensity scenarios. Neither vertical expansion nor horizontal expansion alone gets Angola to the preshock poverty rate. A combination of vertical and horizontal expansion under the low-intensity shock scenario comes closer (table C.1 and figure C.2).

Table C.1: Poverty rates by response and shock intensity

	Intensity of shocks		
	Low (%)	Medium (%)	High (%)
Baseline	28		
Post-shock	30.4	30.8	31.3
Vertical expansion only	29.9	30.2	30.7
Horizontal expansion only	29.7	30.2	30.7
Both vertical and horizontal expansion	29.2	29.7	30.2

Note: The analysis assumes a fully operational Kwenda–that is, stipulated transfers are available to the eligible 1.6 million households.

Figure C.2: Impact of adaptive Kwenda on poverty rates



Source: World Bank analysis.

Note: The y-axis denotes poverty rates with and without Adaptative Kwenda for low, medium, and high-intensity shock scenarios).

Globally, social protection programs have been increasingly used as a platform to protect households in the immediate aftermath of shocks, especially ones that aren't climate related, most recently those related to COVID-19. In Sub-Saharan Africa, in countries such as Ethiopia, Kenya, and Uganda, governments expand social protection programs to respond to droughts. In response to COVID-19, between March 2020 and May 2021, a total of 3,333 social protection measures were planned or implemented in 222 countries around the world (Gentilini et al. 2021).

Appendix D COVID-19: Health Background and Overall Response

The emergence of diseases with epidemic potential is recurrent in Angola, as indicated by several historical events that reveal the endemicity of different diseases (such as malaria and tuberculosis). The COVID-19 pandemic was catalyzed by two main factors: significant vulnerability to epidemics and a lack of health infrastructure. The great vulnerability to epidemics is reported by the 2021 Global Health Security index, which ranked Angola 142nd of 195 countries, similar to the rank of Angola's health infrastructure as 135th out of the same set of countries. The first case of COVID-19 was reported on March 23, 2020. By May 2020, the country had recorded 84 infections. By December 12, 2020, 16,644 active cases had been reported, along with 387 deaths.[53] On January 6, 2021, Angola had reached 17,864 cases and 413 deaths. The latest government report,[54] published on February 23, 2022, announced a cumulative count of 98,698 cases and 1,899 deaths.

The evolution of the pandemic in Angola was, according to official reports, quite slow compared to that of other countries. By the end of 2020 and early 2021, the mortality rate was roughly 2.3 percent, and it has since decreased to 1.9 percent according to the latest report in February 2022. The country has experienced four peaks: in October 2020, May 2021, October 2021, and April 2022 (figure D.1).

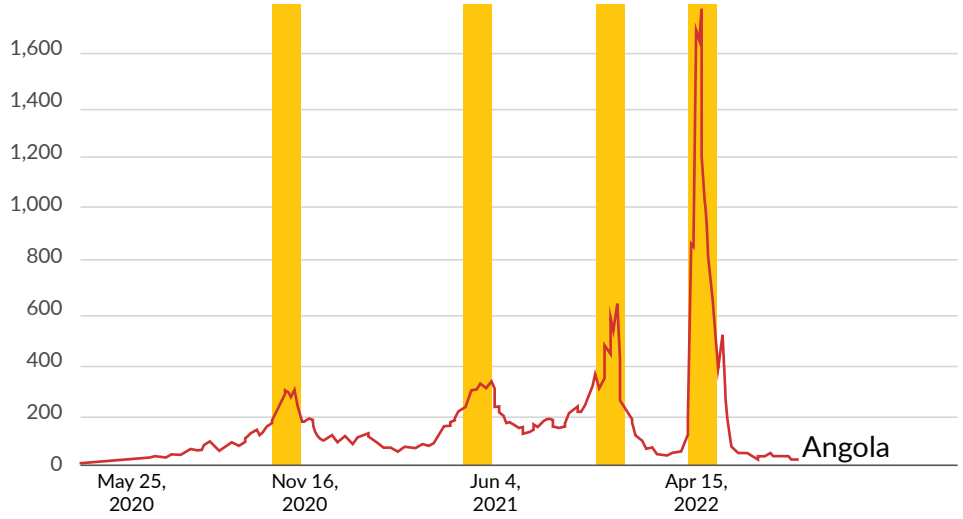
[53] On that date, the mortality rate was roughly 2.33 percent.

[54] CISP (Centro Integrado de Segurança Pública), COVID-19, https://www.cisp.gov.ao:10443/.

Figure D.1: COVID-19 case load in Angola

Daily new confirmed COVID-19 cases

7-day rolling average. Due to limited testing, the number confirmed cases is lower than true number of infections.

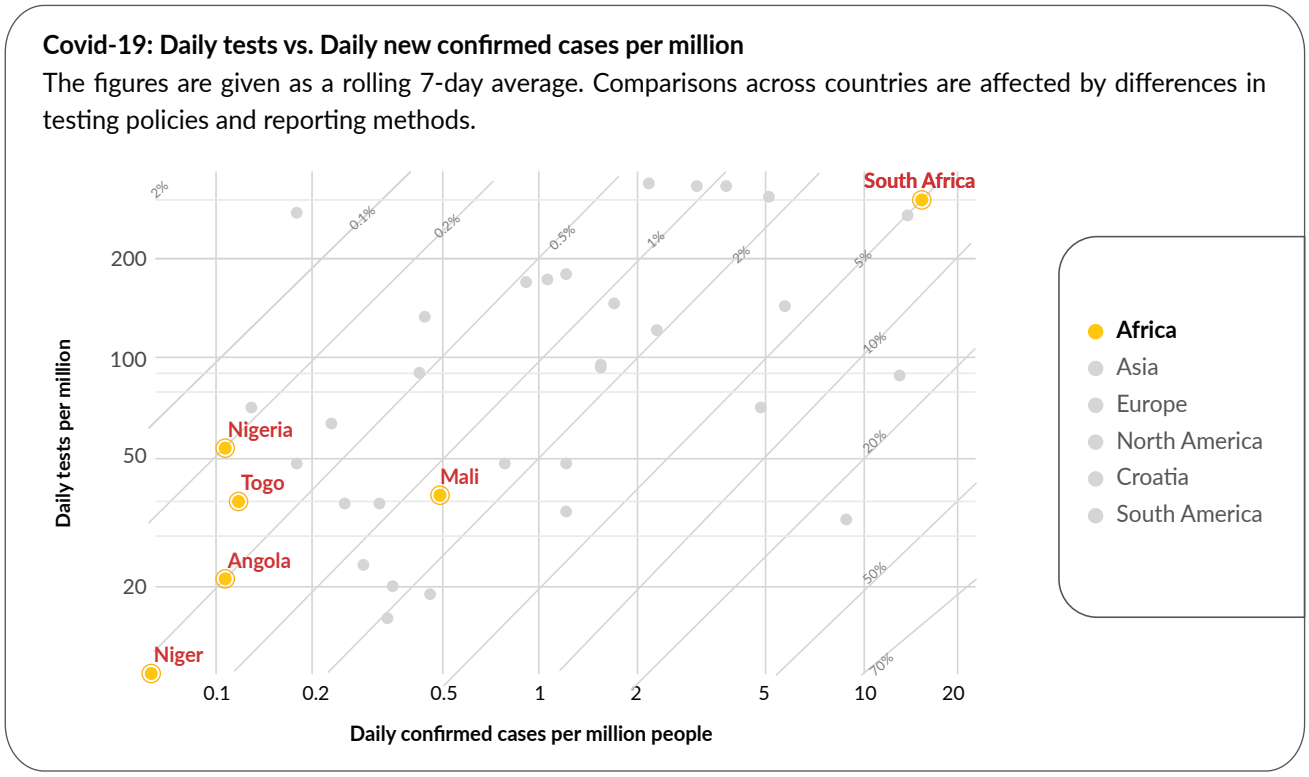


Source: Johns Hopkins University CSSE COVID-19 data.

According to the Ministry of Health, COVID-19 in Angola has been characterized primarily by asymptomatic cases. The age range with the highest rate of infection is between 30 and 39 years, which also corresponds to the most economically active population. Luanda Province was identified as the area with the highest level of transmission of COVID-19, which may be attributed to its being the largest international entry point and the place where the first cases were identified. Although COVID-19 testing capacity increased during 2020, the number of daily reverse transcription-polymerase chain reaction (RT-PCR) tests conducted has remained below 200,000, which is low even among its regional peers (figure D.2).


Photo Credit: SW-TZ1434a / World Bank

Figure D.2: Cross-country comparison of COVID-19 testing capacity



Source: Testing data from official sources collabed by Our World in Data,confirmed causes from Hopkina University CSSE OurWorldInData.org/coronavirus-CC By

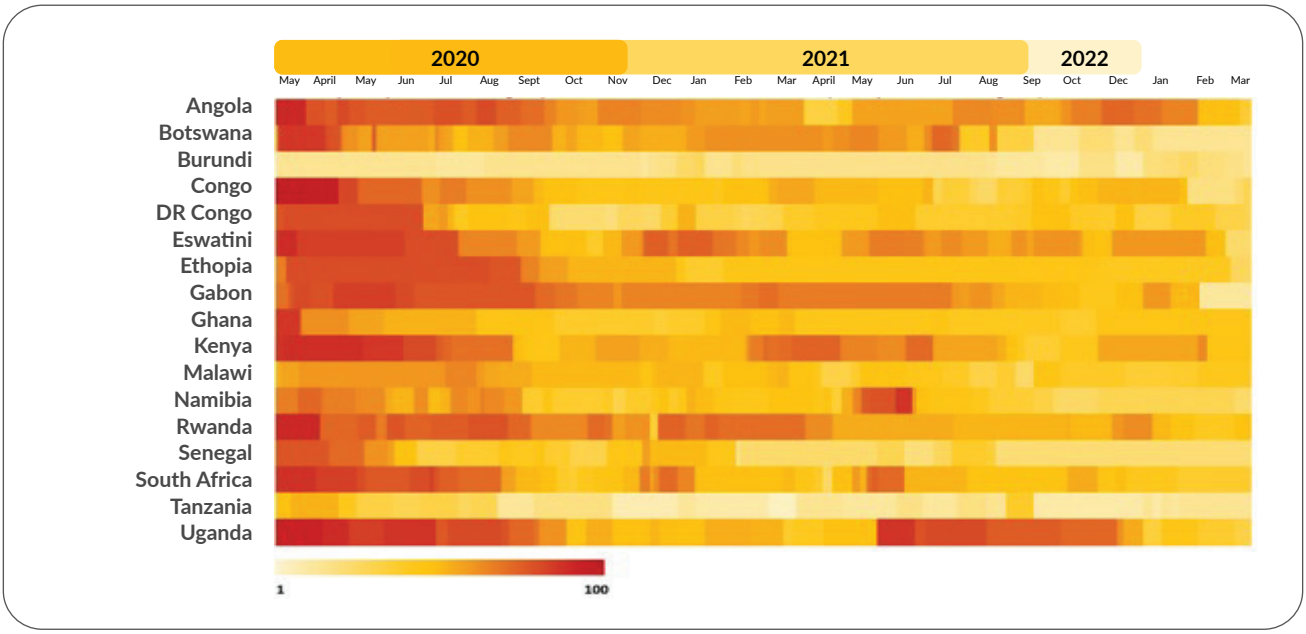
In March 2021, Angola launched its vaccination program, which was supported by the World Health Organization vaccination program (COVAX-Facility[55]) and aimed to serve 16 million people. It was designed to provide vaccines at no cost to 20 percent of the population at higher risk of mortality, especially those with low income. The Angolan vaccination program was designed to unfold in two stages, with the expectation of serving 16 million in total. For the first stage, 20 percent of the national population (6.4 million people) was to be vaccinated. The ultimate purpose behind this was to reduce morbidity and mortality. This includes the population with continuous exposure to the virus, such as health, social services, and public order and security professionals; people with increased risk due to health comorbidities; and people over the age of 40. In the second stage, the Government of Angola intended to vaccinate the population in the range of 18 to 39 years of age (9.1 million people). The purpose of this stage was to reduce the transmission of COVID-19. Although this portion of the population has a lower mortality rate, it has the highest incidence rate of the disease.

Angola is ranked among the top countries in terms of COVID-19 restrictions imposed and has been slower than its regional peers in easing the restrictions (see the stringency index in figure D.3). Initially, the Government of Angola prohibited entry into Angola to citizens of China, the Islamic Republic of Iran, Italy, and the Republic of Korea. The restrictions evolved according to the evolution of the pandemic domestically and internationally.

[55] World Health Organization, COVAX, https://www.who.int/initiatives/act-accelerator/covax.

[57] The stringency index is a composite measure based on nine response indicators including school closures, workplace closures, and travel bans, rescaled to a value from 0 to 100 (100 = strictest).

Figure D.3: COVID-19 stringency index



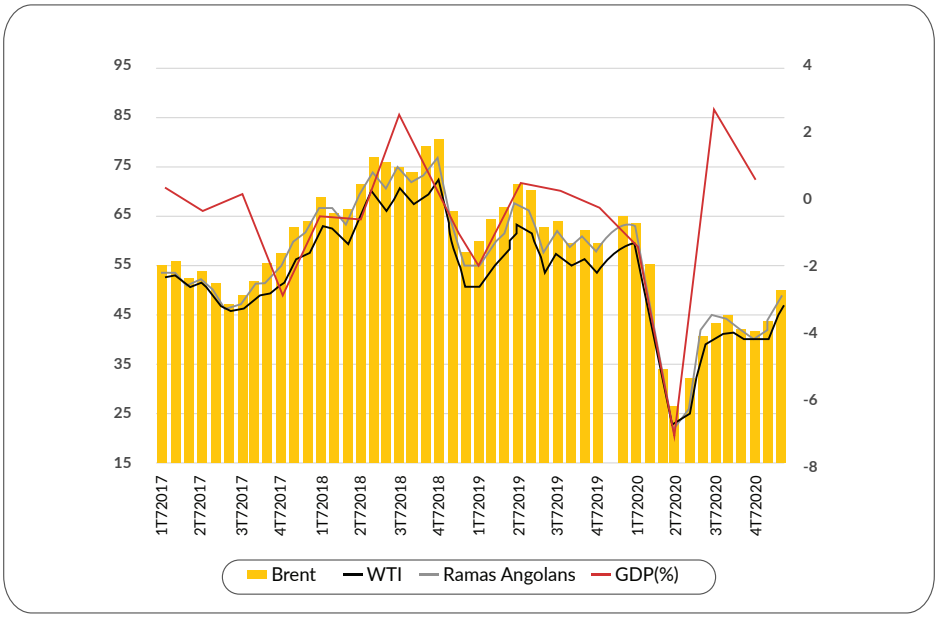
Source: Mathieu et al. 2020.
Note: The figure indicates different countries' monthly stringency ratings, from lowest value of the index (yellow=1) to highest value (strong red=100).

The economy was already in a fragile state before the crisis and had been experiencing a steady decline since 2015. The lack of growth from 2015 to 2020 can be attributed to international oil prices. The Angolan economy is strongly linked to fluctuations in international oil market prices. The oil sector accounted for around 30 percent of Angola's GDP, 60 percent of fiscal revenues, and more than 90 percent of exports in 2019.[56] International oil prices began trending downward by the end of January 2020 because of the growing number of cases of COVID-19 in China (figure D.4).


Photo Credit: Curt Carnemark / World Bank

[56] National Statistical Institute (INE), National Accounts.

Figure D.4: Crude oil price trend (US$/Bbl)



Source: Banco Central Angolano with data from Bloomberg and MIREMPET.
Note: T = Quarter.

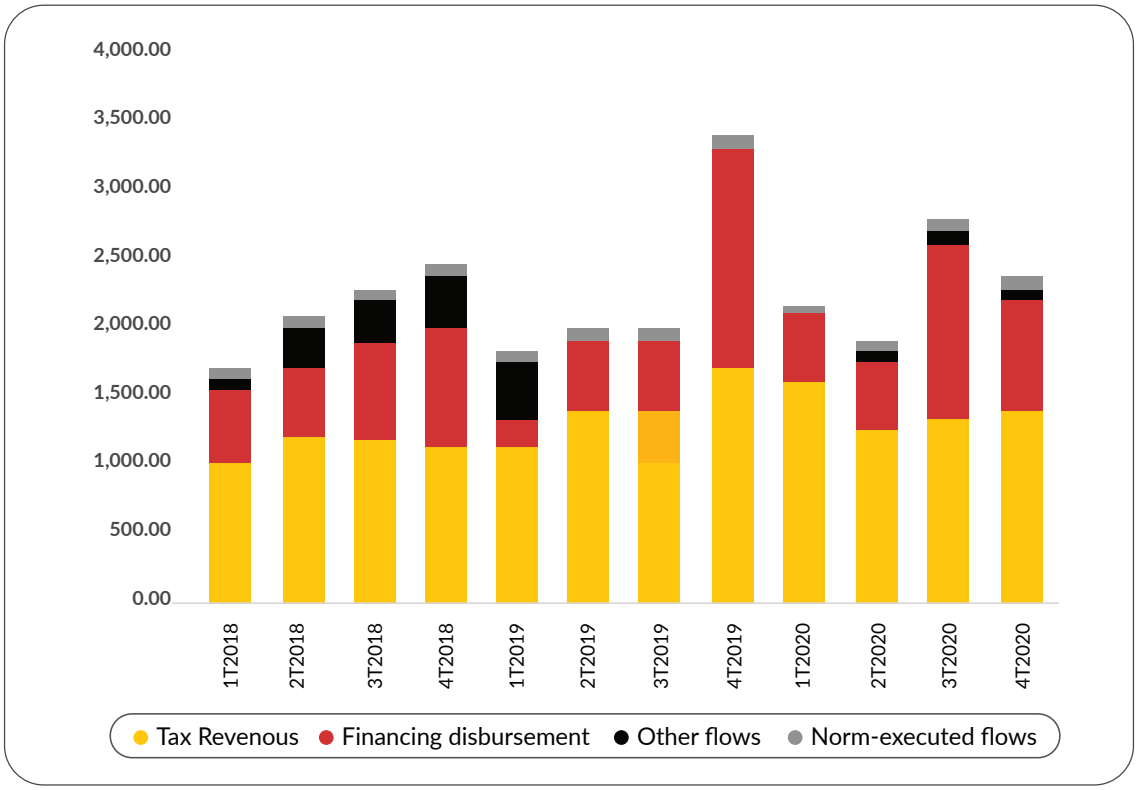
The main impact of COVID-19 in terms of total government revenues was experienced in the second quarter of 2020. Total revenues declined by nearly Kz 600 million to around Kz 1.2 billion in Q2 2020, compared to Kz 1.9 billion in Q1 2020 and to nearly Kz 290 million below the figure reported in Q2 2019. Although COVID-19 triggered many loan disbursements from international organizations, this increment in total revenues of lending operations (financing revenues) started emphatically in Q4 2019 (figure D.5, panel a, red areas).

Tax revenues stood at roughly Kz 1.4 billion by the end of Q4 2020, of which 48 percent came from the oil sector. During the second quarter of 2020, tax revenue fell by close to 20 percent compared to that of Q2 2019, largely due to the oil price shock. However, since Q4 2021, there has been a strong recovery in oil-related revenue because of an oil price boom in late 2021 driven by a global surge in demand as the world recovered from the COVID-19 recession. In addition, from Q3 2020, there has been a recovery in nonoil revenue, reflecting the reduction of restrictions on economic activity due to the COVID-19 pandemic (figure D.5, panel b).

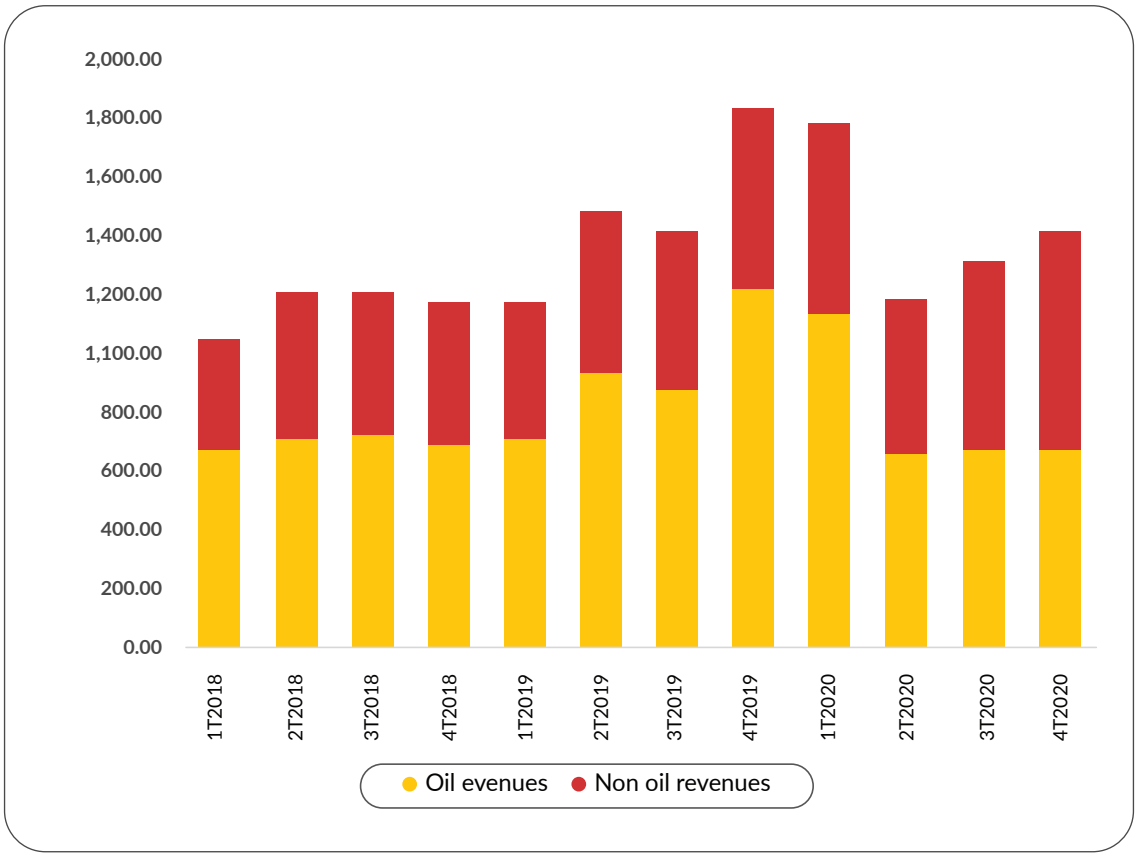

Photo Credit: Dominic Chavez/World Bank

Figure D.5: Angola revenue

a. Quarterly fiscal revenue (Kz, billion)



b. Quarterly tax revenue, 2018–21 (Kz, billion)

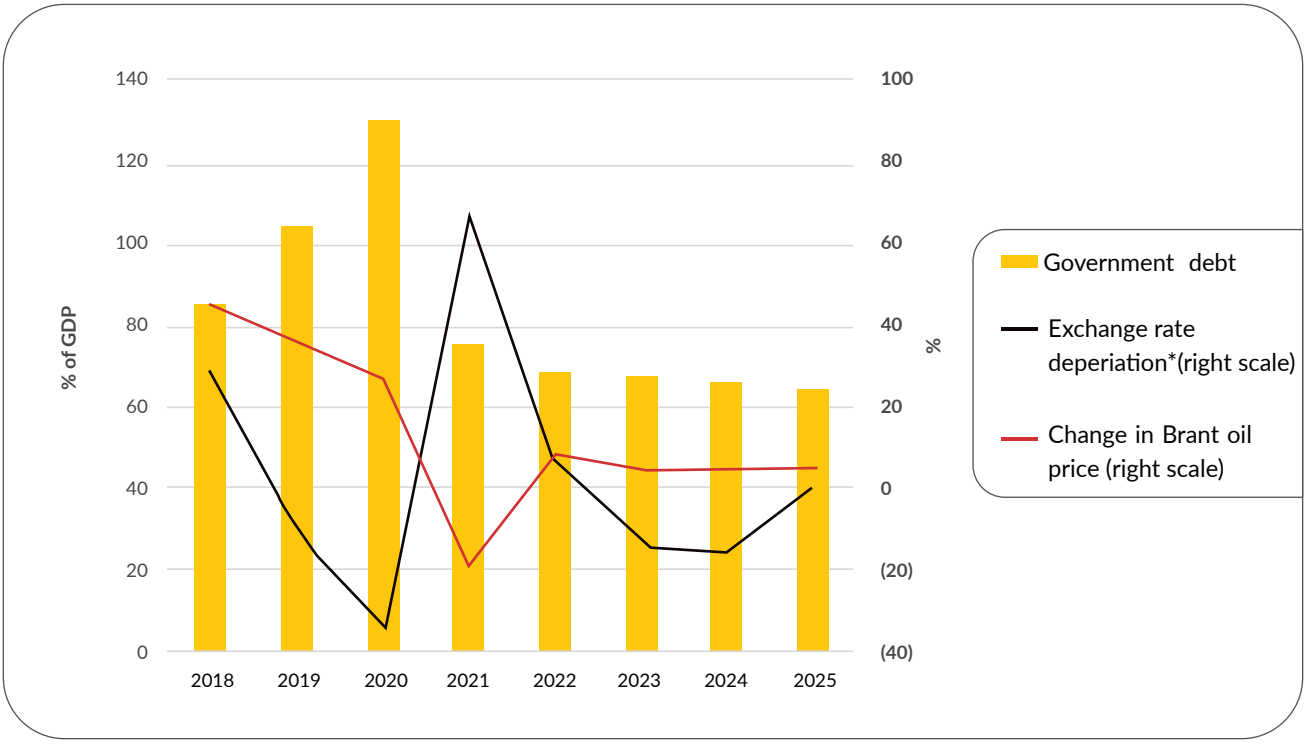


Source: BNP Paribas with data of Ministry of Finance (PFT 2018–2021).

Note: T = Quarter.

The COVID-19 crisis compounded a currency depreciation and oil price crises and resulted in Angola posting a record level of indebtedness at close to 131 percent of GDP in 2020 (figure D.6). The currency depreciation was from 2018–20 after its liberalization; at the same time, there was a fall in international oil prices (Figure D.7). Oil prices and Angola's fiscal balance are correlated; figure D.7 shows that during 2018–19, Angola's oil revenues contributed about 60 percent of government revenue.

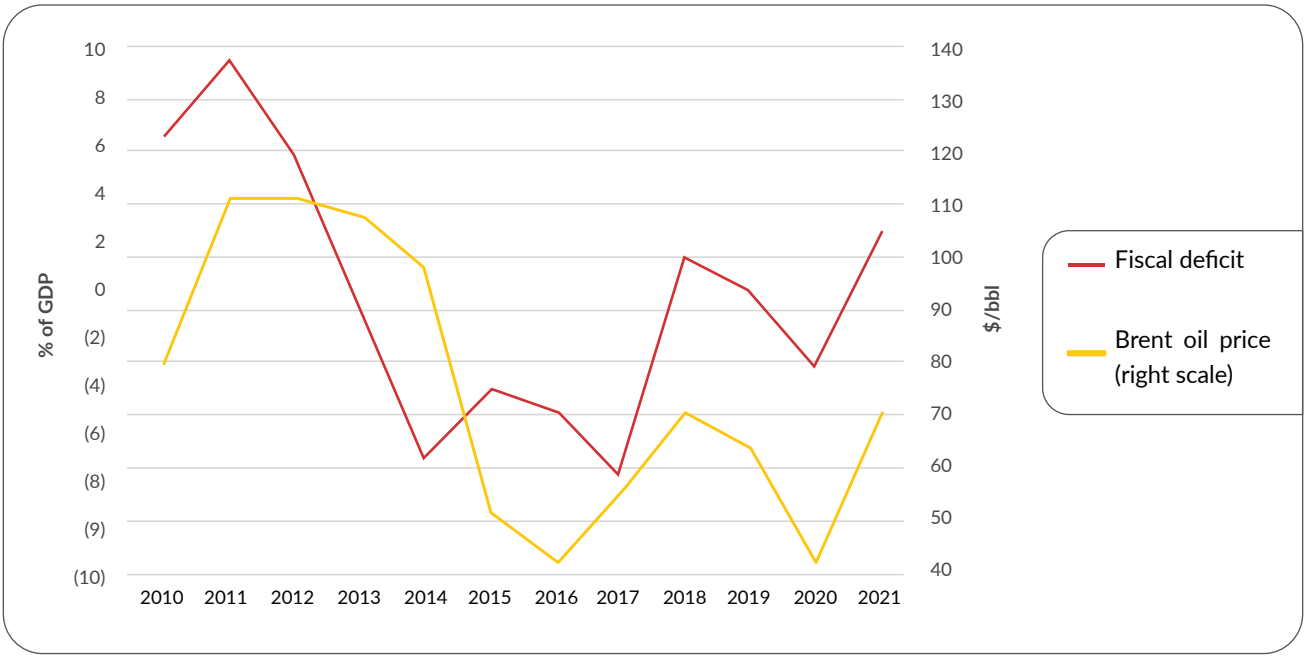
Figure D.6: Angola's debt trajectory linked to exchange rate and oil prices



Sources: S&P Global Ratings with data from Angola Ministry of Finance, Banco Nacional de Angola.

**Negative represents currency appreciation.*

Figure D.7: Oil prices and Angola's fiscal outcomes



Sources: S&P Global Ratings with data from Angola Ministry of Finance.

Appendix E Review of institutional arrangements for disaster risk financing

Civil protection commissions

In Angola, civil protection and firefighter institutions at all three levels of government respond to disasters, and which level is triggered depends on the severity of the event: less severe, local, and recurrent events are often managed by municipalities with their own financial and operational resources. If the effects of the shock exceed the local response capacity or if the disaster affects multiple municipalities, the response is led by the provincial government. Similarly, for large events that transcend the capacity of provinces, the response is carried out by national-level civil protection institutions. Responding to unexpected events often requires support from higher levels of government.

At the political level, the head of the executive power (president) is the highest authority of the National Civil Protection System. The president is the head of the National Civil Protection Council, which is the political-level sectorial body comprising ministers and directors. The council is responsible for assessing civil protection policies, the overall organizational structure of the bodies and services in the Civil Protection System, proposals for legal frameworks relevant to the sector, international cooperation agreements related to civil protection, and the National Emergency Plan. [57]

At the executive level, the National Civil Protection Commission (CNPC) is the main government body for disaster response, responsible for developing, approving, and executing disaster response action plans. It is coordinated by the Civil Protection and Firefighter Service in the Ministry of the Interior and has representatives from most line ministries, which participate in disaster response as needed. The main institutional arrangements and processes in place for civil protection at the central level are mirrored in provinces and municipalities.

Management of contingent liabilities

Overall, the management of contingent liabilities is the responsibility of multiple units of MINFIN, depending on the contingency type. However, currently, no units within MINFIN are responsible for managing climate-related contingent liabilities. For example, contingent liabilities from debt operations are the responsibility of the debt management unit, while those related to public-private partnerships are managed by a multiagency task force. The macrofiscal programming unit within MINFIN is responsible for monitoring risks to fiscal targets and debt sustainability - the unit identifies the main risks and proposes mitigation measures, but climate risks are not explicitly considered within the scope of the fiscal risk analysis. At present, the fiscal risk analyses prepared by the unit are published as part of the national budget reports.

Other key policy instruments of the macrofiscal programming unit are the medium-term fiscal framework and the medium-term expenditure framework. Neither of these instruments explicitly addresses climate-related fiscal risks. The former establishes and tracks medium-term fiscal and debt sustainability targets, whereas the latter defines medium-term expected expenditures by priority areas (functions). Nonetheless, the impacts of climate shocks may be embedded in the macroeconomic assumptions on which the frameworks are based. For example, the impacts of droughts on GDP are considered by the Ministry of Economy and Planning when preparing the GDP growth estimates used in the frameworks.

Finally, while the treasury and budgeting units' main role in the disaster risk financing cycle of providing ad hoc support to the implementation of the recovery programs has been working well, the units do not have specific practices to proactively manage climate-related risks. Within this context, creating technical capacity for disaster risk financing within MINFIN, including capacity for the quantification of fiscal and economic risks, could increase the predictability and improve the planning and budgeting practices of disaster-related contingent spending.

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[57] Civil Protection Laws 14/20 and 28/03.

Notes on the civil protection laws

The Civil Protection Law is the main legal framework for disaster risk management in Angola. It establishes the civil protection policy and defines the mandates of all civil protection institutions. It also presents key legal definitions for the DRM systems, such as the scope of civil protection activities, the types of disaster events, and definitions for the States of Catastrophe and Public Calamity.[58]

The Civil Protection Law 28/03 was updated by Law 14/20 in 2020 within the context of the COVID-19 pandemic. The revision redefined "public calamity" to reflect the magnitude and features of the pandemic and reorganized key civil protection and disaster response decisions around the holder of the executive power (president). Moreover, Article 21 determines the preparation of emergency and contingency plans at all levels of government: municipal, provincial, and national.[59] The plans should take stock of the resources available for disaster-related interventions, establish rules and procedures for all acting institutions, and define the criteria for mobilizing and coordinating the use of resources, public or private. The municipal and provincial emergency and contingency plans are subject to approval by the CNPC, based on a prior assessment by the corresponding provincial governor and/or municipal authority. The National Emergency and Contingency Plans are approved by the holder of the executive power. Finally, Article 22 addresses topics related to international assistance. First, it determines that, unless otherwise established by international treaties or conventions, appeals and concessions to external institutions are under the mandate of the president. Second, it provides tax exemptions for imports or exports of goods and equipment for disaster preparedness and post-disaster relief and recovery.

Warnings and declarations

In Angola, the warning system and the Declarations of State of Emergency and of State of Catastrophe or State of Calamity have an operational nature and are not directly related to the disbursement of funds for post-disaster response. The National Calamity and Disaster Preparedness, Contingency, Response and Recovery Plan 2015/2017 establishes a warning system that relates the event severity to the level of government responsible for taking action. From the warning or onset of the event, a Blue Alert is activated by the municipal commissions if the impacts of the event are within the municipal-level management capacity. If the impacts of the event require action at the provincial level, a Yellow Alert is activated by the provincial commissions. An Orange Alert is activated by the National Civil Protection Commission for large events that require the resources of the central government, and Red Alerts are activated by the National Civil Protection Council for large-scale, high-severity events. Whenever the response capacity at a level of government is exceeded, the next-level commission should provide support.

Overall, the legal framework for the exceptional states is relatively new and has been triggered only a few times, the COVID-19 pandemic being the most recent event. The 2010 constitution provides for the declaration of State of War, Siege, or Emergency (Art. 58), and Law 17/91, which governs the State of Siege and State of Emergency, defines a State of Emergency and State of Siege in case of occurrence or imminent occurrence of a public calamity, where a State of Siege concerns foreign invasion or domestic disorders and a State of Emergency relates to a state of public calamity (World Bank, 2019). In turn, the Civil Protection Laws (14/20 and 28/03) define a State of Catastrophe or a State of Public Calamity as referring to the need to adopt exceptional measures to reestablish normality in areas affected by (a) severe accident (sudden and unexpected event with limited impacts), (b) catastrophe (sudden and unexpected event with severe and broad impacts, including on safety), or (c) calamity (slow-setting and wide-scope events, often predictable, with severe and broad impacts and in large areas). A discussion on how these states could be used to trigger contingent credit operations can be found in World Bank (2019), appendix C.

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[58] In Angola, declarations of State of Emergency or State of Calamity have operational implications but are not required to trigger post-disaster responses or to justify the allocation of additional funding for post-disaster interventions. Moreover, declarations are a recent institution and, to date, have been issued for only a few major events.

[59] The CNPC is responsible for providing preparation guidelines.

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References

Angola National Commission for Civil Protection, UNDP (United Nations Development Programme), European Union, and World Bank. 2016. "Droughts in Angola 2012–2016—PDNA: Post Disaster Needs Assessment." UNDP, New York.

Artemis. 2020. "Mexico returns for $425m+ quake & hurricane World Bank cat bond." https://www.artemis.bm/news/mexico-returns-for-425m-quake-hurricane-world-bank-cat-bond/

Barrett, Christopher B., and Mark A. Constas. 2014. "Toward a Theory of Resilience for International Development Applications." Proceedings of the National Academy of Sciences USA 111, no. 40 (October 7): 14625–30. doi: 10.1073/pnas.1320880111.

BNA (Banco Nacional de Angola). "Relatório da Análise da Conjuntura Económica e Financeira, I Trimestre 2021."

CIMA, UNDRR. 2019. "Disaster risk profile. Angola." https://www.undrr.org/publication/disaster-risk-profile-angola

Gentilini, Ugo, et al. 2021. Social Protection and Jobs Responses to COVID-19: A Real-Time Review of Country Measures (May 14, 2021). COVID-19 Living Paper. World Bank, Washington, DC. http://documents.worldbank.org/curated/en/281531621024684216/Social-Protection-and-Jobs-Responses-to-COVID-19-A-Real-Time-Review-of-Country-Measures-May-14-2021.

Gjerstad, Reidun. 2014. "Angola's Migration of Thirst: The 2013 Drought." In The State of Environmental Migration 2014, edited by François Gemenne, Pauline Brücker, and Dina Ionesco, 85–100. Geneva, Switzerland: International Organization for Migration.

Governo de Angola. 2021. “National Vaccination Plan for COVID-19 Vaccination.” Multisectoral Commission for the Prevention and Combat of COVID-19.

Hallegatte, Stephane, Jun Rentschler, and Julie Rozenberg. 2019. Lifelines: The Resilient Infrastructure Opportunity. Washington, DC: World Bank. https://openknowledge.worldbank.org/handle/10986/31805.

Hernandez Uriz, Zenaida, et al. 2019. “Angola—Country Private Sector Diagnostic: Creating Markets in Angola—Opportunities for Development Through the Private Sector.” [In Portuguese.] Country Private Sector Diagnostic (CPSD). Washington, D.C.: World Bank Group. http://documents.worldbank.org/curated/en/632601558495680544/Angola-Country-Private-Sector-Diagnostic-Creating-Markets-in-Angola-Opportunities-for-Development-Through-the-Private-Sector.

International Federation of Red Cross and Red Crescent Societies. 2012. “Emergency Appeal Angola: Food Insecurity.” Appeal MDRAO005 Glide TC DR-2012-000092-AGO November 13, 2012. https://reliefweb.int/sites/reliefweb.int/files/resources/MDRAO005ea.pdf.

Instituto Nacional de Estatística. 2022. “Indicadores de Emprego e Desemprego: Inquérito ao Emprego em Angola.” May 2022.

JBA. 2022. “Angola Flood Risk Profile.” Unpublished technical report.

Moore, Danielle, Zahra Niazi, Rebecca Rouse, and Berber Kramer. 2019. “Building Resilience through Financial Inclusion: A Review of Existing Evidence and Knowledge Gaps.” Financial Inclusion Program, Innovations for Poverty Action. https://poverty-action.org/sites/default/files/publications/Building-Resilience-through-Financial-Inclusion-English.pdf.

Mathieu, Edouard, et al. 2020. "Coronavirus Pandemic (COVID-19)." Published online at OurWorldInData.org: https://ourworldindata.org/coronavirus.
Rudari, Roberto, et al. 2019. “Angola Disaster Risk Profile (2019).” United Nations Office for Disaster Risk Reduction—Regional Office for Africa Centro Internazionale in Monitoraggio Ambientale.

Smith, Gabrielle Ruth, and Thomas Vaughan Bowen. 2020. “Adaptive Social Protection: The Delivery Chain and Shock Response”. Washington, DC: World Bank. http://documents.worldbank.org/curated/en/799281603376140118/Adaptive-Social-Protection-The-Delivery-Chain-and-Shock-Response.

World Bank. 2019. “Disaster Risk Management Background Note.” Internal document, World Bank, Washington, DC.

World Bank. 2019a. “World Bank Catastrophe Bond Transaction Insures the Republic of Philippines against Natural Disaster-related Losses Up to US$225 million”. https://www.worldbank.org/en/news/press-release/2019/11/25/world-bank-catastrophe-bond-transaction-insures-the-republic-of-philippines-against-natural-disaster-related-losses-up-to-usd225-million

World Bank. 2020a. “Angola Poverty Assessment”. World Bank, Washington, DC.

World Bank. 2020b. “Enhancing Financial Capability and Inclusion in Angola. A Demand-Side Survey.” World Bank, Washington, DC.

World Bank. Forthcoming. Angola Financial Inclusion Diagnostic. Washington, DC: World Bank.

World Bank and UNDP (United Nations Development Programme). 2020. “Confronting the Socioeconomic Consequences of COVID-19 in Angola.” UNDP, New York. https://documents.worldbank.org/en/publication/documents-reports/documentdetail/264751607918142701/confronting-the-socioeconomic-consequences-of-covid-19-in-angola-outlook-and-policy-responses-to-an-evolving-multi-dimensional-crisis-policy-document

The World Bank. 2021. “Living on the water’s edge. Flood Risk and Resilience of Coastal Cities in Sub-Saharan Africa”. https://documents1.worldbank.org/curated/en/099042623122580007/pdf/P17703604875c205e0a95b0d3f8997b32c8.pdf

World Bank. 2022. “Angola Country Climate and Development Report”. Country Climate and Development Report (CCDR) Series. Washington, DC: World Bank. http://hdl.handle.net/10986/38361.

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