



Japan-World Bank Program
for Mainstreaming Disaster Risk
Management in Developing Countries



The Global Facility for Disaster Reduction
and Recovery (GFDRR)



The World Bank Group

DISASTER RISK FINANCE DIAGNOSTIC

Albania

DECEMBER 2020

ABBREVIATIONS

AFSA	ALBANIAN FINANCIAL SUPERVISORY AUTHORITY
ALSE	ALBANIAN SECURITIES EXCHANGE
ASIG	ALBANIAN STATE AUTHORITY FOR GEOSPATIAL INFORMATION
CAT BOND	CATASTROPHE BOND
CAT DDO	DEVELOPMENT POLICY LOAN WITH A CATASTROPHE DEFERRED DRAWDOWN OPTION
CCP	CENTRAL COUNTERPARTY CLEARINGHOUSE
CERC	CONTINGENT EMERGENCY RESPONSE COMPONENT
DASK	TURKISH CATASTROPHE INSURANCE POOL
EC	EUROPEAN COMMISSION
EU	EUROPEAN UNION
GDP	GROSS DOMESTIC PRODUCT
GEM	GLOBAL EARTHQUAKE MODEL
GoA	GOVERNMENT OF ALBANIA
HSNP	HUNGER SAFETY NET PROGRAM (KENYA)
IMF	INTERNATIONAL MONETARY FUND
MOFE	MINISTRY OF FINANCE AND ECONOMY
MTPL	MOTOR THIRD-PARTY LIABILITY INSURANCE
NCPA	NATIONAL CIVIL PROTECTION AGENCY
NE	NDIHMA EKONOMIKE
PDNA	POST-DISASTER NEEDS ASSESSMENT

Currency: Albanian lek (ALL), United States dollar (US\$)

Relevant-year exchange rates are used throughout the diagnostic. For 2020, an average exchange rate as of November 2020 is used as provided by the Bank of Albania: US\$1 = ALL 105.

TABLE OF CONTENTS

ABBREVIATIONS	2
ACKNOWLEDGEMENTS	4
EXECUTIVE SUMMARY	5
1. INTRODUCTION	9
1.1. HISTORICAL IMPACT OF DISASTERS	11
1.2. ASSESSMENT OF POTENTIAL DISASTER IMPACT IN ALBANIA	18
1.3. AGGRAVATING IMPACT OF COVID-19 IN ALBANIA	22
2. ASSESSMENT OF THE CURRENT APPROACH TO DISASTER RISK FINANCE	24
2.1. LEGAL AND INSTITUTIONAL FRAMEWORKS	24
2.2. PUBLIC FINANCIAL MANAGEMENT OF NATURAL DISASTERS	28
3. FUNDING GAP ANALYSIS AND RISK FINANCING STRATEGIES	52
4. OPTIONS FOR CONSIDERATION	59
ANNEX 1. OVERVIEW OF THE DOMESTIC INSURANCE MARKET	64
ANNEX 2: OVERVIEW OF THE LOCAL CAPITAL MARKETS	68
REFERENCES	71

ACKNOWLEDGEMENTS

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The Team gratefully acknowledges the data, information, and other invaluable contributions from representatives of the **Government of Albania**, in particular the **Ministry of Finance and Economy**, **Ministry of Interior - Directorate of Local Affairs and Prefectures**, **National Agency for Civil Protection**, **Albanian Financial Supervisory Authority**, **State Committee on Reconstruction and State Authority for Geospatial Information**.

The Team is sincerely thankful to **Maryam Salim** (Country Manager for Albania) for the guidance and review, and for the sizable contributions provided by **Evie Calcutt** (Financial Sector Specialist), **Lisa Yu** (Consultant), and the peer reviewers: **Enrique Blanco Armas** (Lead Economist), **Samantha Cook** (Senior Financial Sector Specialist), **Salih Bugra Erdurmus** (Senior Disaster Risk Management Specialist), **Barry Patrick Maher** (Senior Financial Sector Specialist), **John Luke Plevin** (Financial Sector Specialist), **Nicola Ann Ranger** (Senior Financial Sector Consultant), **Hilda Shijaku** (Senior Economist), and **Christoph Ungerer** (Senior Economist). The contribution on the energy sector financial instrument was provided by a Team consisting of **Luciano Canale** (Senior Hydro-power Specialist), **Rome Chavapricha** (Senior Energy Specialist), **Gazmend Daci** (Senior Energy Specialist), and **Tatyana Kramskaya** (Senior Energy Specialist). The contribution on the impact of disasters on poverty was provided by **Yann Kerblat** (Disaster Risk Management Analyst), **Brian James Walsh** (Consultant) and **Ali Arab** (Consultant). The contribution on social protection was provided by **Sarah Coll-Black** (Senior Economist) and **Vlad Alexandru Grigoras** (Senior Social Protection Economist).

The Team is grateful for financial support received from the **Global Facility for Disaster Reduction and Recovery (GFDRR)** and **The Government of Japan** through **The Japan–World Bank Program for Mainstreaming Disaster Risk Management in Developing Countries**, which enabled preparation of this country diagnostic. Disaster risk modeling was provided with support from the **United Kingdom Foreign, Commonwealth and Development Office** through **the World Bank Disaster Protection Program**.

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EXECUTIVE SUMMARY

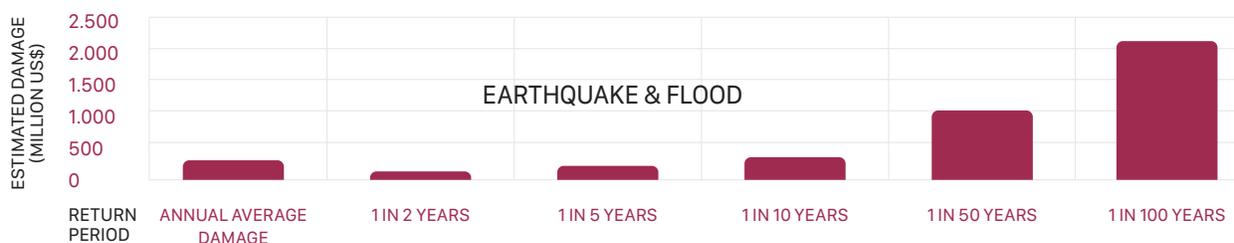
Exposed to various natural hazards, in particular flooding and earthquakes, Albania has the highest level of disaster risk in Europe according to the World Risk Index 2019 (Bündnis Entwicklung Hilft and RUB 2019). Over the period 1995–2015, an average of 30,000 people were affected annually by natural disasters, and more than 95 percent of Albanian municipalities were affected by at least one disaster; in 2019, Albania was hit by a severe earthquake (detailed below). The economic cost of disasters could further increase as a result of the growing economy. Climate change may further increase the severity and/or frequency of weather-related disasters, such as floods and storms. By changing the patterns of such disasters, climate change also makes historical data on disasters less reliable guides to the future.

Global risk modeling firm, AIR Worldwide, estimates the average future damages from earthquakes and flooding as US\$147 million per year, with a catastrophic event—for example, a 1-in-100-year earthquake—causing damages of over US\$2 billion (see FIGURE 1 and section 1.2). Major earthquakes are in general infrequent but can result in very large damages (such as the 2019 earthquake); they are estimated to cause on average almost US\$99 million in damage per year. In contrast, floods often cause localized but more frequent damages with an estimated average damage of about US\$48 million per year. These estimates cover private sector assets (primarily residential property), but not public assets. Evaluation of the recent 2019 earthquake suggested around 23 percent of the damages were in relation to public assets (Government of Albania (GoA) et al. 2020). Therefore it is possible to assume that damages to public assets would amount to 20-30 percent of the damages to private assets as shown in FIGURE 1.

The current impact of the novel coronavirus (COVID-19) makes Albania more vulnerable to disasters that could cause deterioration of the country's economy and fiscal position. The pandemic is causing health, economic, and financial impacts. Among its many effects, it is reducing government's fiscal capacities and the capacity of households and businesses to recover after disasters.

FIGURE 1

Modeled risk profile from the combined risk of earthquakes and floods in Albania



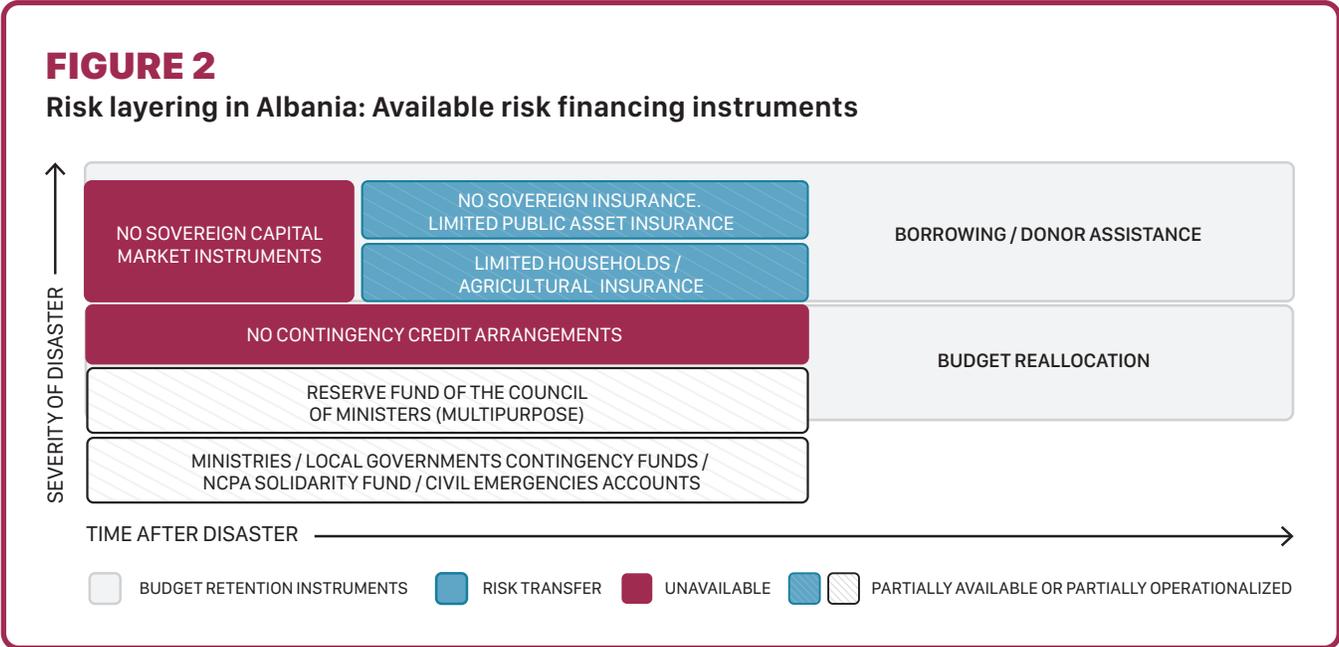
Sources: Risk profile is from AIR Worldwide's catastrophe models for Earthquake and Flood in Albania. Values were provided in ALL, converted to US\$ using 1 to 102.5, US\$ to ALL exchange rate. Index factors have been applied and all reported values reflect 2020 estimates.

Note: The return period is the time period over which one should expect to see a loss of the same or greater magnitude. For example, a 1-in-10-year return period refers to losses that are expected to be exceeded once per 10 years—i.e., in any given year there is a 10 percent probability of such losses at least as great as this. The estimates do not mean these disasters will occur only once every 10 (or 20 or 50) years.

In 2019, a strong earthquake of magnitude 6.4 hit Albania, affecting over 200,000 people in 11 municipalities, including Tirana and Durrës, and causing a sizable economic impact. According to the Post-Disaster Needs Assessment (PDNA) carried out in its aftermath, the earthquake caused damages equal to 6.4 percent of 2018 gross domestic product (GDP), and losses equal to an additional 1.1 percent (GoA et al. 2020). Damages were highest in the housing sector, and losses were highest in the productive sector. The earthquake was projected to slow down economic growth by 0.5 percent in 2019 and increase the fiscal deficit by an additional 0.7 percent of GDP as a result of increased expenditures to finance reconstruction. On the revenue side, lower economic activity was expected to bring a reduction of ALL 1.4 billion (US\$12.7 million) in tax revenues and social contributions. However, with the additional impact of COVID-19, economic growth due to both is now projected to contract by 8.4 percent in 2020 (World Bank 2020b).

The GoA absorbed significant costs in the aftermath of the 2019 earthquake. At the time of the PDNA, about ALL 20 billion (around US\$182 million) was already planned for reconstruction, but short-term recovery needs alone were estimated at ALL 67.1 billion (US\$610 million) (51 percent of the total needs). The earthquake also harmed human development and increased subjective poverty in the affected areas: according to the PDNA, subjective poverty rates rose by 2.3 percentage points and the situation for those at risk of poverty worsened (GoA et al. 2020). These effects, together with the COVID-19 pandemic, threaten to push the poverty level back by eight years in a best-case scenario.

With few prearranged risk financing instruments spread across the budget, Albania might be unable to mobilize funds in a cost-effective manner after major disasters, relying instead on budget reallocation, borrowing ex post, and donor aid (see **FIGURE 2** on the instruments available). Albania has had a consistently large catastrophe insurance protection gap, one that is not narrowing, for example, for households and farmers.¹ The funding gap after disasters could exceed on average US\$130 million per year and the GoA will likely resort to borrowing, budget reallocation and requesting donor aid already after moderate disasters.



¹ This report had identified no information or data on public asset insurance, such as insurance of critical infrastructure, schools, hospitals, or government administration buildings.

The government is making efforts to improve financial preparedness. For instance, a recent law introduces a number of contingency funds, and the government is currently considering a law on mandatory insurance for homeowners to address the protection gap. Ex post funding is available, but no guidelines have been identified on the required time frame for mobilization, while donor aid is uncertain and often arrives fragmented and in kind. Against such a background, the GoA will have to continue to shoulder the large share of disaster costs from the public budget, an arrangement that will lead to long-term impacts on human and fiscal well-being² and on economic growth, and that could cause any development gains to unwind.

The government's financial preparedness to meet disaster-related contingent liabilities is of growing importance. Prearranged planning and a strategic approach to disaster risk financing³ could help, for instance by making public financial management of natural disasters more effective and speeding up post-disaster response and recovery. Financial preparedness for contingent liabilities could also help preparation for other crises, such as the spread of COVID-19.⁴ Some options for a proactive and systematic approach to financial management of natural disasters could include the following (details are in part 4):

- **Developing a comprehensive Disaster Risk Finance Strategy.** The GoA could design a comprehensive strategy that would identify the optimal risk-layering approach beginning with clarifying the priorities in disaster risk financing. This strategy could then identify various risk financing instruments to target different groups and address disasters of different frequency and severity.
- **Developing a contingency plan for natural disasters during and after the COVID-19 crisis.** Disasters will happen regardless of the pandemic. The GoA could consider developing a plan that prepares for such a combined impact.
- **Improving the understanding of risk.** Data on disasters are limited and fragmented. The GoA could improve this situation by building a comprehensive understanding of the available data, increasing the use of data on disasters for financial decision-making, and improving the understanding of disaster risk and contingent liabilities. There is a need to increase data collection and strengthen tracking of post-disaster expenditures for COVID-19 as well as other shocks, and to further clarify local-national government cost sharing.
- **Optimizing the use of public budget through the introduction of new risk financing instruments.** This option could involve either retaining or transferring risk, as follows:
 - **Risk retention to cover the low layer of disaster risk at national and local government levels and address new disasters and COVID-19.**⁵ This option could include establishing a dedicated disaster reserve fund that builds on the envisaged Solidarity Fund. Such a fund could also address the combined impacts of the potential third wave of COVID-19 and other potential disasters. To ensure the fund's effectiveness, the GoA would need to carefully design legal, institutional, and governance aspects and provide for adequate funding. In view of decentralization efforts and increased responsibilities for local governments, this option could also include establishing a risk-sharing facility for local governments to pool risks and share disaster-related costs.

² Human impact could include increased suffering due to delays in provision of response or restoration of critical services, longer time needed for households to recover and come back to normalcy, and reallocation of funds to disasters from critical development projects. Fiscal impacts could include impacts on debt sustainability, reduction in revenues and increase in spending, etc.

³ Disaster risk finance is a proactive approach to financial management of natural disasters that aims to develop and implement a credible strategy and systems for how costs from potential future disasters and crises will be paid for.

⁴ The full extent of the fiscal and economic impact of COVID-19 in Albania is still uncertain as of the time this report was being prepared, but it could be severe, as in most countries across the world.

⁵ Under the retention option, the government assumes and manages disaster losses through its budgetary resources—for example, through the creation of budgetary reserves or funds, or through post-disaster budget reallocations or borrowing.

- **Risk transfer to prepare for catastrophic events.**⁶ This option includes mobilizing private sector to address post-disaster costs, for instance, through: (i) adopting an earthquake insurance law under consideration by the GoA that provides for mandatory catastrophe insurance for households; and (ii) exploring how insurance can protect public budget, including public asset insurance or sovereign insurance; (iii) exploring how to protect smallholder farmers through agricultural insurance; and (iv) strengthening small and medium enterprises' resilience to natural disasters.

- **Strengthening infrastructure and social protection systems to become shock-responsive.** Building on the existing social protection scheme, the GoA might consider strengthening social protection systems to help ensure that people do not fall into poverty after disasters. In view of the potential disruption and economic impacts from shock events on infrastructure and the critical services provided, this option could include designing risk-resilient infrastructure systems. This would comprise financial solutions to allow for timely and cost-effective recovery of services after disasters, such as a risk-sharing facility for the power sector.

These options are based on the findings of the diagnostic and need to be further refined according to the GoA's objectives.

The table below provides an indicate time frame for implementing the options for consideration.

TABLE 1

Indicative time frame for implementing options and responsible government agencies

OPTION FOR CONSIDERATION	TIME FRAME ^a	KEY RESPONSIBLE STAKEHOLDERS
DEVELOPING A COMPREHENSIVE DISASTER RISK FINANCE STRATEGY AND CONTINGENCY PLAN FOR NATURAL DISASTERS DURING AND AFTER THE COVID-19 CRISIS	SHORT TERM	MINISTRY OF FINANCE AND ECONOMY IN COORDINATION WITH OTHER STAKEHOLDERS
IMPROVING THE UNDERSTANDING OF RISK	SHORT TO MEDIUM TERM	MINISTRY OF FINANCE AND ECONOMY, TREASURY, NATIONAL CIVIL PROTECTION AGENCY, ALBANIAN STATE AUTHORITY FOR GEOSPATIAL INFORMATION
OPTIMIZING THE USE OF PUBLIC BUDGET THROUGH THE INTRODUCTION OF NEW RISK FINANCING INSTRUMENTS	MEDIUM TO LONG TERM	MINISTRY OF FINANCE AND ECONOMY, ALBANIAN FINANCIAL SUPERVISORY AUTHORITY, NATIONAL CIVIL PROTECTION AGENCY, LOCAL GOVERNMENTS, AND MINISTRY OF INTERIOR—DIRECTORATE OF LOCAL AFFAIRS AND PREFECTURES
STRENGTHENING INFRASTRUCTURE AND SOCIAL PROTECTION SYSTEMS TO BECOME SHOCK-RESPONSIVE	SHORT TO LONG TERM	MINISTRY OF FINANCE AND ECONOMY, MINISTRY OF HEALTH AND SOCIAL PROTECTION, MINISTRY OF INFRASTRUCTURE AND ENERGY

^a. **Short term** = less than one year; **medium term** = less than three years; **long term** = more than three years.

⁶ Under the transfer option, the government transfers potential future disaster losses to financial or insurance markets by paying a premium—for example, through traditional insurance, alternative risk transfer products, or contingent financing mechanisms.

1. INTRODUCTION

The objective of this diagnostic is to provide an overview of the current state of Albania's financial resilience to natural disasters, and to offer options for strengthening its financial resilience. The diagnostic is based on the following sources: (i) data on disaster impacts available through DesInventar⁷, the Post-Disaster Needs Assessment (PDNA) for the 2019 earthquake (Government of Albania [GoA] et al. 2020); (ii) modeled damages for earthquakes and floods from AIR Worldwide (AIR), a global catastrophe risk modeler; (iii) annual budget data available online, including through the World Bank Open Budget Portal (BOOST), and related information provided by the GoA; and (iv) analysis performed by the World Bank Disaster Risk Financing and Insurance Program (DRFIP) and staff estimates.

Albania's economy has recently demonstrated robust growth but remains vulnerable to shocks; as in other countries, it was severely affected by the novel coronavirus (COVID-19). Albania was the poorest nation in Europe in the early 1990s, but due to strong economic growth it had transitioned to an upper-middle-income country by 2008. Growth slowed after the global financial crisis of 2008–2009 (from an average 6 percent over 1998–2008 to 2.4 percent in 2008–2014), but recovered during 2015–2018 (to an average of 3.4 percent). Due to the COVID-19 pandemic and 2019 earthquake, the country's economy is expected to contract by 8.4 percent in 2020 (World Bank 2020b). In 2019, Albania's gross domestic product (GDP) was estimated at US\$15.3 billion and its GDP per capita at US\$5,325. In terms of GDP composition, the service sector contributed 54.1 percent, industry 24.2 percent, and agriculture 21.7 percent as of 2017.⁸ Albania's exports and imports are at 31.7 and 45.4 percent of GDP respectively.⁹ The country's trade represents 77 percent of its GDP; the vast majority of trade is with Europe, and Italy accounts for more than half of total exports.¹⁰

Historically, unemployment has been substantial, but it reached a record low of 11.5 percent in the second quarter of 2019, down from 17.5 percent in 2014. This trend changed in 2020; unemployment is increasing due to the combined consequences of COVID-19 and the 2019 earthquake. Around 40 percent of the population is employed in agriculture, where small subsistence farmers dominate (World Bank 2019a). Over 60 percent of Albania's 2.8 million population lives in urban areas,¹¹ and around 40 percent lives in the two largest cities, Tirana and Durrës, which together form the economic engine of the country. Poverty remains high: in 2019, about 34.6 percent (approximately 990,000 people) of Albanians were estimated to live on less than US\$5.5 per day per capita (in 2011 purchasing power parity) (World Bank 2019d), and 1.7 percent live on less than US\$1.9 a day.¹² Poverty in rural areas is higher than in urban areas (World Bank and INSTAT 2012). In 2020, poverty is expected to increase by 5 percent (World Bank 2020b). The combined impacts of the 2019 earthquake and COVID-19 pandemic negatively affected the Albanian economy (see details on the impact of the COVID-19 pandemic in part 1.3).

Albania is exposed to many natural hazards, including fires, landslides, floods, earthquakes, and snowstorms; natural disasters adversely impact the well-being of its population. Such events

⁷ DesInventar database, http://www.desinventar.net/index_www.html

⁸ CIA, The World Factbook, <https://www.cia.gov/library/publications/the-world-factbook/geos/al.html>.

⁹ World Bank data as of 2018, <https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS>.

¹⁰ World Integrated Trade Solution, <https://wits.worldbank.org/countrysnapshot/en/ALB>.

¹¹ Ibid.

¹² Ibid.

as floods and landslides occur frequently, while earthquakes, though less frequent, can cause a devastating impact in Albania. The 2019 earthquake, whose magnitude was the strongest of any such an event in the last 30 years—highlighted earthquake’s potential disruptive impact. It caused extensive damage, totaling ALL 121.21 billion (US\$1.1 billion), to 11 municipalities, including the capital and economic hub Tirana (ALL 35 billion or US\$318 million) and the main tourist hub of Durrës (ALL 37.4 billion or US\$340 million). The sections below offer details on historical and estimated disaster impacts, including a case study of the 2019 earthquake **(BOX 1)**.

Governments tend to shoulder a significant share of the costs for disaster response and recovery, and when financing is unavailable or access is delayed, disaster impacts can be unnecessarily high.

The sources of these costs in the aftermath of a disaster vary. They include emergency response, rehabilitation of public assets, restoration of public services, support to uninsured households and small enterprises, and fiscal transfers to local governments. Disasters can slow down economic growth and reduce government revenue by, for instance, destroying private assets, affecting businesses, and causing supply chain breakdowns. It is especially the case for uninsured disasters – it was estimated such disasters can slow down economic growth by an average of 0.6 – 1 percent and cause cumulative output loss of two to three times this magnitude (von Peter, Von Dahlen, and Saxena 2012). In addition, disasters can threaten efforts to reduce poverty and build shared prosperity, especially in economically vulnerable areas, as people may be pushed back into or trapped in poverty. With increased spending from the public budgets, disaster can lead to budget volatility and impact a country’s fiscal position (See **BOX 1** for a case study of the fiscal impacts of the 2019 Durrës-Mamurras earthquake). Without prearranged risk financing solutions, use of public funds can be inefficient, while response and recovery can be unnecessarily slow.

Timely access to prearranged funding after disasters improves the speed and quality of government’s public financial management of natural disasters, and it also hastens the human and economic recovery.

Such prearranged funding can be provided through a combination of instruments tailored to address different requirements for the size and timing of funding (see the discussion in chapter 2 on combining different instruments through risk layering). Such an approach could help reduce the need for emergency borrowing and budget reallocation, and could lessen the delays and uncertainty associated with donor aid. It can also facilitate more effective use of public funds and attract private sector funding to post-disaster recovery and reconstruction.

This diagnostic will allow the GoA to assess its level of financial protection against disasters and set policy priorities for implementing reforms and for introducing new risk financing instruments to strengthen financial resilience.

1.1. HISTORICAL IMPACT OF DISASTERS

Albania has the highest disaster risks among the European countries. According to DesInventar, almost 4,000 disaster events were registered in Albania between 1995 and 2015 (**TABLE 2 AND FIGURE 3**). Over this period, more than 95 percent of Albanian municipalities have been affected by at least one disaster. In addition, the 2019 World Risk Report ranks Albania as having the highest level of disaster risk in Europe (Bündnis Entwicklung Hilft and RUB 2019)¹³. Historical data prior to 1995 is limited, and there is no data recorded on disaster damages after 2015; for instance, estimated damage of the 2019 earthquake is not recorded as of December 2020. Even in years with data available, this should be used with caution as there is limited information on the data collection methods and quality drawing on limited and inconsistent financial loss assessment and likely biased to larger events and certain data providers.

TABLE 2

Historical disaster damages in Albania by type of hazard according to DesInventar database (1995–2015)

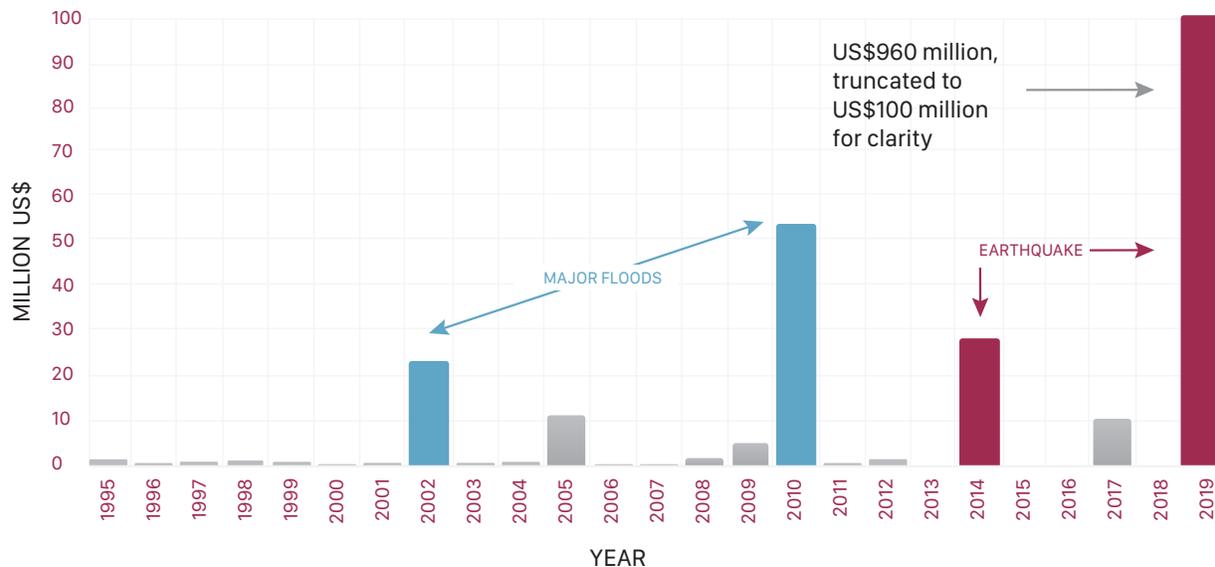
TYPE OF HAZARD	NO. OF EVENTS	TOTAL DAMAGES (ALL)	TOTAL DAMAGES US\$ (SCALED TO 2019)
FLOOD	391	3,564,484,883	39,424,305
FLASH FLOOD	130	3,793,399,995	30,020,367
EARTHQUAKE	162	2,357,968,376	27,201,225
LANDSLIDE	542	1,369,823,910	14,024,068
STORM	147	719,794,314	7,552,599
OTHER ^a	1014	555,078,515	4,126,230
SNOWSTORM	444	105,601,290	1,089,813
FOREST FIRE	900	13,404,444	102,764
HAILSTORM	29	4,554,700	50,902
FROST	40	N/A	N/A
TOTAL	3,799	12,484,110,427	123,592,274

Source: DesInventar database, http://www.desinventar.net/index_www.html.

Note: The table presents aggregate impacts across different disasters from 1995 to 2015 as listed in the DesInventar database. N/A = data are not available. Data on disaster damages after 2015 are not available in the database.

^a Other hazards are epidemic, cold wave, cyclone, heat wave, rains, thunderstorm, windstorm, etc.

¹³ The World Risk Report's World Risk Index score for Albania is 8.18, reflecting a combination of very high exposure, medium lack of coping capacities, and low vulnerability, susceptibility, and lack of adaptive capacities (Bündnis Entwicklung Hilft and RUB 2019).

FIGURE 3**Historical disaster damages in Albania (Million US\$), the red bars represent the largest events**

Source: DesInventar database, http://www.desinventar.net/index_www.htm, and 2019 PDNA.

Note: The figure presents aggregate annual impacts of disasters from 1995 to 2015 as listed in the DesInventar database and the 2019 earthquake damages are as per the PDNA.

Over the 20 years from 1995 to 2015, an average of around 30,000 people, or 1.1 percent of the total population, have been affected by disasters each year. Total recorded losses over this period come to about ALL 12.5 billion (US\$124 million) (**TABLE 2**). According to estimates, the highest economic losses during the period 1995–2015 were due to flash floods (responsible for 30 percent of losses) and floods (28 percent), followed by earthquake (19 percent) and landslides (11 percent).

Flooding in 2002 affected more than 3,000 households and caused a total damage of US\$23 million, affecting thousands of arable lands. 2010 floods affected nearly 2,500 houses, causing damage to water supply, arable lands and transport infrastructure. Total damage was more than double of floods in 2002, amounting to US\$51 million.

Major earthquakes occur less frequently than floods but can cause a devastating impact in Albania. In 2014, the Belsh region was hit by a magnitude 5.1 earthquake, affecting six municipalities¹⁴ and causing close to US\$25 million in damage. The most recent and strongest earthquake in the last 30 years, measured at magnitude 6.4, occurred on November 26, 2019, and caused extensive damage to 11 municipalities. A case study of this earthquake is provided in **BOX 1**.

Droughts also have had large-scale negative impacts on the energy and agricultural sectors in Albania. For instance, droughts caused the “energy crisis” of November 2003, and electricity interruptions in 2007 (FAO 2018). Nearly all domestic energy supply in Albania comes from hydropower, which depends

¹⁴ Global Disaster Alert and Cooperation System, “M 5.1 in Albania from 19 May 2014 00:59 UTC to 00:59,” <https://www.gdacs.org/Earthquakes/report.aspx?eventid=1031937&episodeid=1050002&eventtype=EQ>.

on rainfall patterns and can be heavily impacted by droughts. The World Bank estimated that there is a 2.5 percent annual probability of a financial loss in the energy sector exceeding ALL 15 billion (over US\$130 million, or 1 percent of GDP) in the period 2019–2021 due to low rainfall (World Bank 2019c). For instance, the production of the Fierza Hydroelectric Power Station decreased by 33 percent due to the impact of a 2007 drought (Laska Merkoci et al. 2012). Such volatility in hydropower production exposes the GoA to significant fiscal risks.

As a result of climate change, it is expected that by 2050, temperatures in Albania will increase by 2.4°C to 3.1°C (USAID 2016) and that precipitation will become more variable. Historical climate trends since the 1960s have already shown an increase in annual mean temperatures by 1°C, and a further upward trend is expected (USAID 2016).

Changing climate could lead to an increase in the frequency and/or severity of extreme weather events. Subsequently, this could impact, for example, such sectors as energy and agriculture, decrease water availability and food security. The rural, low-income population will be disproportionately affected by climate change, as they have fewer assets, including savings, and often lack access to finance—characteristics that increase their vulnerability to climate uncertainty and shocks. Smallholder farmers under marginal rain-fed production will also be at risk (FAO 2018). Changes in patterns of weather-related disasters will also reduce the reliability of historical data for future estimates.

BOX 1

CASE STUDY: DURRËS-MAMURRAS EARTHQUAKE

In November 2019, an earthquake of magnitude 6.4 on the Richter scale hit Albania. It affected 11 municipalities in total. Among the most affected municipalities were Shijak, Durrës, Krujë, Tirana, Kamëz, Kavajë, Kurbin, and Lezhë. The earthquake caused 51 fatalities and at least 913 injuries, with 17,000 people displaced due to the loss of their homes. In total, more than 200,000 people were affected in the country, around a quarter of them directly and three-quarters indirectly (GoA et al. 2020).

ECONOMIC IMPACT

According to the PDNA, the earthquake's total effects amounted to ALL 121.21 billion (US\$1.1 billion); of this sum, ALL 103.84 billion (US\$944.9 million) represents the value of destroyed physical assets and ALL 17.37 billion (US\$158.1 million) represents losses^a (TABLE 3). Most of the damages were recorded in the housing sector (78.5 percent), followed by the productive sector (8.4 percent) and the education sector (7.5 percent). Losses were the highest in the productive sector (56.4 percent), followed by housing (24.1 percent) and civil protection/disaster risk reduction (9.4 percent). The PDNA estimates that 76.5 percent of damages and losses were in the private sector, concentrated mostly in the housing and productive sectors (GoA et al. 2020).

^a Damages are defined as costs to repair or reconstruct the partially or fully destroyed infrastructures or physical assets. Losses are the changes in economic flows, expressed as the value of production of goods and services as well as changes in the costs of production and unexpected additional costs.

TABLE 3

Damages and losses due to November 2019 earthquake,
by sector and subsector (million US\$)

SECTOR / SUBSECTOR	DAMAGES	LOSSES	TOTAL
EDUCATION	71.16	9.80	80.96
HOUSING	741.11	38.05	779.16
PRODUCTIVE	79.25	89.14	168.39
BUSINESS AND EMPLOYMENT	53.13	6.12	59.25
TOURISM	18.70	82.28	100.98
CULTURAL HERITAGE	5.94	0.49	6.43
AGRICULTURE	1.48	0.25	1.72
INFRASTRUCTURE	34.03	3.37	37.40
COMMUNITY INFRASTRUCTURE	6.78	0.18	6.96
ROADS	5.40	0.48	5.89
WATER AND SANITATION	0.39	0.00	0.39
COMMUNICATION	1.03	0.18	1.21
PUBLIC BUILDINGS	11.27	2.53	13.80
ENERGY	9.15	0.00	9.15
SOCIAL PROTECTION		0.69	0.69
CIVIL PROTECTION AND DISASTER RISK REDUCTION	9.79	14.79	24.58
TOTAL	944.31	157.98	1,102.29

Source: GoA et al. 2020.

Note: Original values were in euros.

Around 95,000 units were damaged or destroyed in the housing sector; total damages and losses are estimated at almost ALL 90 billion (US\$818.9 million). A

total of 11,490 housing units were significantly damaged or destroyed and need to be replaced. Another 18,980 housing units are recorded as having sustained moderate damage, and the remaining units were slightly damaged. Housing units built before 1993 suffered the highest degree of damage, while those built after 1993 showed better resilience due to their reinforced concrete construction. As shown in **TABLE 3**, the total effects (damages and losses) are valued at ALL 85.68 billion (US\$779.16 million), with the total damages amounting to ALL 81.50 billion (US\$741.16 million) and the total losses estimated at ALL 4.18 billion (US\$38.05 million) (GoA et al. 2020).

As for the productive sector, the PDNA found that 300 businesses in manufacturing and 414 in trade were damaged, out of a total 3,534 businesses. Over 500 people from

over 150 businesses in manufacturing and trade temporarily lost their jobs as a result of the disaster. The PDNA estimates that it will take an average of 3.4 months to access a job in manufacturing, and 4.4 months to access a job in trade depending on the level of damage and disruption of business service. Losses due to unemployment in manufacturing and trade are estimated to be ALL 180.88 million (US\$1.65 million) and ALL 57.8 million (US\$0.53 million), respectively. The estimated income loss is ALL 237.5 million (US\$2.16 million), of which ALL 156.3 million (US\$1.42 million) corresponds to manufacturing businesses and ALL 91.2 million (US\$0.83 million) to businesses in trade (GoA et al. 2020).

The earthquake also harmed human development and exacerbated poverty in the affected areas, increasing poverty rates and worsening the situation for people at risk of poverty. Of the 9.2 percent of people in the affected districts who had to move

out of the area, one-third had not returned by the end of 2019. The PDNA further reports that subjective poverty rates in the affected districts increased by 2.3 percentage points, equivalent to 26,000 people^b. The number of persons estimated at risk of poverty has increased across municipalities, except in Tirana (GoA et al. 2020). World Bank (2020d) further reports that due to combined consequences of the earthquake and COVID-19, overall poverty is expected to increase in 2020, breaking a downward trend; unemployment will also increase. According to the PDNA, the earthquake will also likely aggravate inequality and affect women, who will be pushed toward traditional roles and caretaking and have less mobility to search for casual jobs.

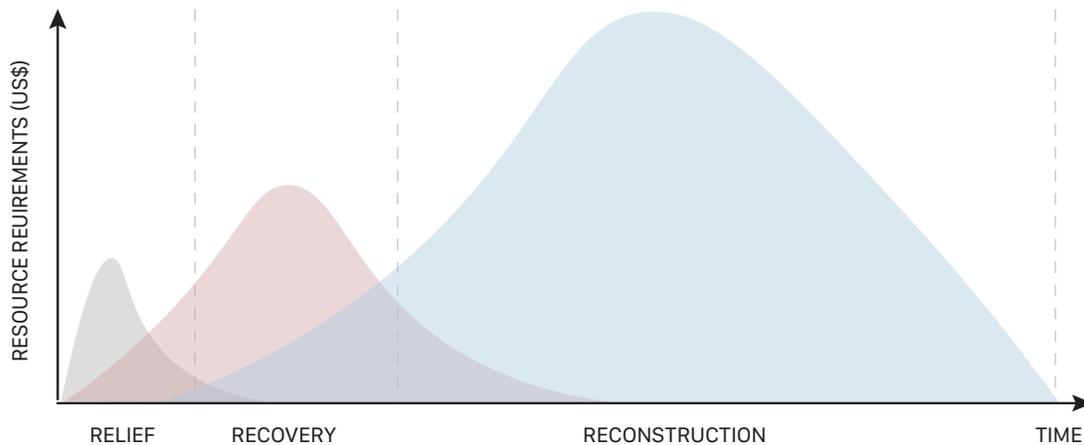
The total recovery needs are ALL 132.4 billion (US\$1.2 billion) across all sectors and for the 11 affected municipalities. It is estimated that to return to normality, financing

will be required until 2025. Such a time distribution reflects that while it is critical to have rapid access to the required resources for response and early recovery, not all funds are needed at the same time. **FIGURE 4** shows the usual timing of resource requirements after a disaster.

^b According to the PDNA, subjective poverty based on self-assessment of households in seven municipalities was estimated at 11.9 percent before the earthquake, and it increased to 14.2 percent afterward.

FIGURE 4

Timing of needs and execution of financial instruments following a disaster



Source: World Bank and GFDRR 2014.

FISCAL IMPACT

Disasters have an impact on government finances through additional, unplanned spending for relief and reconstruction and declines in expected revenues. The need to respond promptly and reconstruct public assets and infrastructure, as well as to support the affected population by helping to reconstruct residential housing, can trigger an increase in government debt or budget reallocations and destabilize the country's fiscal position. A disaster's local impact can also spread to the national economy, as insolvencies and loan defaults create a domino effect (World Bank, GFDRR, and SECO 2016) and the current account deficit widens due to hampered export capacity and surging imports.

According to the PDNA report, the damages caused by the Durrës-Mamurras earthquake are estimated at the equivalent of 6.4 percent of 2018 GDP, and losses are estimated at 1.1 percent of GDP (GoA et al. 2020). The hardest-hit economic sectors were tourism and real estate in terms of losses, but significant damages were also inflicted on education, health, public infrastructure, manufacturing and trade, and agriculture. Economic growth is projected to slow to 2.4 percent in 2019 and 3.2 percent in 2020, down from previously estimated growth of 2.9 percent and 3.5 percent for the respective years. In addition, the fiscal deficit is estimated to increase by 0.7 percent of GDP.^e On the revenue side, lower economic activity is expected to reduce tax revenues and social contributions by ALL 1.4 billion (US\$12.7 million).

^e Figures for 2020 show an isolated effect of the November 2019 earthquake and exclude COVID-19 impact.

To mobilize the required resources, the government used the Reserve Fund of the Council of Ministers, reallocated budget, and requested donor assistance. Through the Law on Budget (2020), the GoA approved establishment of an ALL 20 billion (US\$182 million) Reconstruction Fund to bring together government resources and donor funding to finance earthquake recovery and reconstruction. The foreseen composition of the fund is ALL 13 billion (US\$118.3 million) for reconstruction and ALL 7 billion (US\$63.7 million) for aid/grants. Right after the earthquake the donations contributed through government accounts in total ALL 1.98 billion (€15.2 million) (GoA et al. 2020). After four months, in February 2020, donors and development partners pledged over US\$1 billion (about 80 percent in loans and the rest in grants and in-kind support) to further support Albania's recovery and reconstruction efforts.

Although some damages were insured, the GoA absorbed significant costs in the aftermath of the disaster. For example, to support affected households, entrepreneurs, and small and medium enterprises, the Council of Ministers adopted several decisions on social and financial support for families of the earthquake victims and economic recovery actions through the Reconstruction Fund:

- Financial assistance of ALL 1.0 million (US\$9,100) was allocated to the families of each of the earthquake victims. Scholarships of ALL 15,000 (US\$137) per month were granted to the children of those killed who are attending pre-university or vocational secondary education in public educational institutions.
- Pensioners who lost a family member in the earthquake received a payment equal to as much as eight monthly social pension payments. Those who lost all family members received the equivalent of 13 monthly social pension payments.
- Temporary accommodation costs in the amount of ALL 2,000 (US\$18) per person per day were covered by the state budget.
- An additional ALL 470 million (US\$4.3 million) from the Reserve Fund in the 2019 budget was reallocated to the already approved 2019 Ministry of Defense budget to cover the renovation and reconstruction of houses damaged by the earthquake.
- Rent at the average amount in the free market was paid for one year.
- Unemployment benefits were provided for employees who have become jobless due to the collapse of, damage to, or displacement of, their workplace.
- Financial support was provided for entrepreneurs and small and medium enterprises, with the goal of ensuring quick reconstruction of their business establishment.

The impact of COVID-19 on post-earthquake recovery and reconstruction, including its impact on the capacity of households and businesses to recover, has yet to be determined.

1.2. ASSESSMENT OF POTENTIAL DISASTER IMPACT IN ALBANIA

This section presents the figures from AIR's risk modeling on earthquake and flood events in Albania (AIR Worldwide 2020). AIR's models are fully stochastic, event-based models capturing the effects on properties of earthquake-induced ground shaking and precipitation-induced flooding (for both on- and off-floodplain locations). The stochastic nature of these models means that a full distribution of annual damages can be generated (see TABLE 4 below). These models therefore help to answer questions like these: Where are future events likely to occur? How large or severe are they likely to be? How frequently are they likely to occur? What is the property damage and loss associated with each potential event?

The models combine data on the hazard, asset exposure, and vulnerability to the hazard to generate the distribution of expected damages. They use industry exposure data across selected business lines (i.e., data on residential, commercial, industrial, and agricultural assets) and exclude public assets such as government buildings, schools, and hospitals. The total exposure from private assets is greater than from public assets, although the exact ratio of private to public asset exposure is unknown. The evaluation of the 2019 earthquake suggested around 23 percent of the damages were in relation to public assets; therefore it is possible to assume that damages to public assets could be equivalent to 20–30 percent of the damages to private assets. The concentration of exposed assets according to AIR's exposure database is in the larger cities (see FIGURE 5).

TABLE 4

Modeled risk profile from earthquake and flood hazards across return periods (US\$ millions)

RETURN PERIOD ^a	EARTHQUAKE	FLOOD	COMBINED RISK
ANNUAL AVERAGE	99	48	147
1 IN 2 YEAR	2	12	20
1 IN 5 YEAR	36	32	73
1 IN 10 YEAR	119	57	165
1 IN 50 YEAR	998	181	998
1 IN 100 YEAR	2,131	290	2,131

Sources: AIR Worldwide.

Note: Values converted from ALL to US\$ assuming an exchange rate of US\$1 = ALL 102.5. Figures are in 2020 terms. Albania is exposed to other perils, such as landslides and storms, but these are less material and this report therefore focuses on the perils where catastrophe risk models are available, i.e., earthquake and flood.

a. The return period is the time period over which one should expect to see a loss of the same or greater magnitude. For example, a 1-in-10-year return period refers to losses that are expected to be exceeded once per 10 years—i.e., in any given year there is a 10 percent probability of such losses at least as great as this. The estimates do not mean these disasters will occur only once every 10 (or 20 or 50) years.

FIGURE 5

AIR's modeled exposure database

Sources: AIR Worldwide.

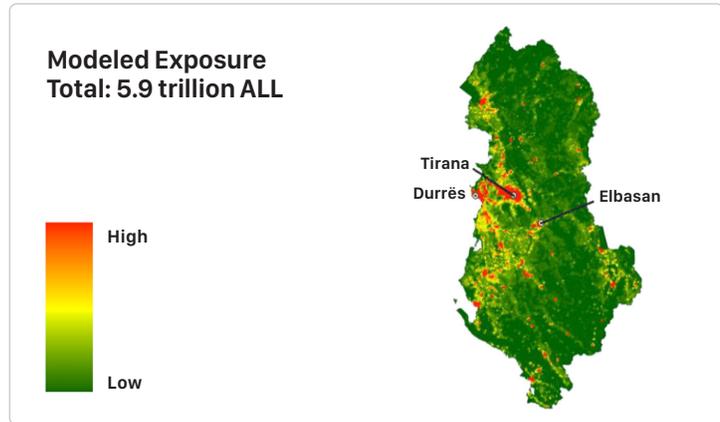
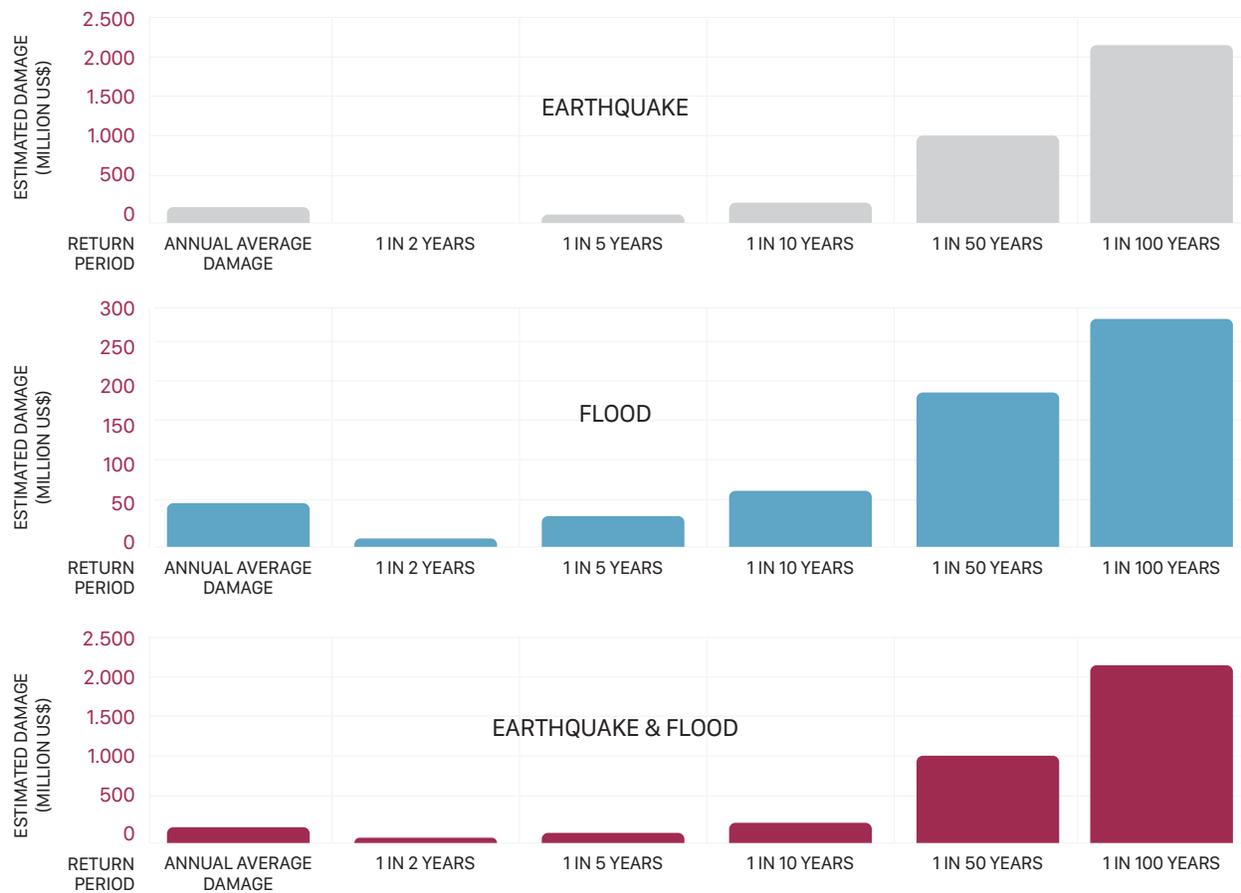


FIGURE 6

Modeled risk profile from earthquake (top panel), flood (middle panel), and combined risk (bottom panel) across return periods (US\$ millions), as presented in TABLE 4



Source: AIR Worldwide.

Note: Values converted from ALL to US\$ assuming an exchange rate of US\$1 = ALL 102.5.

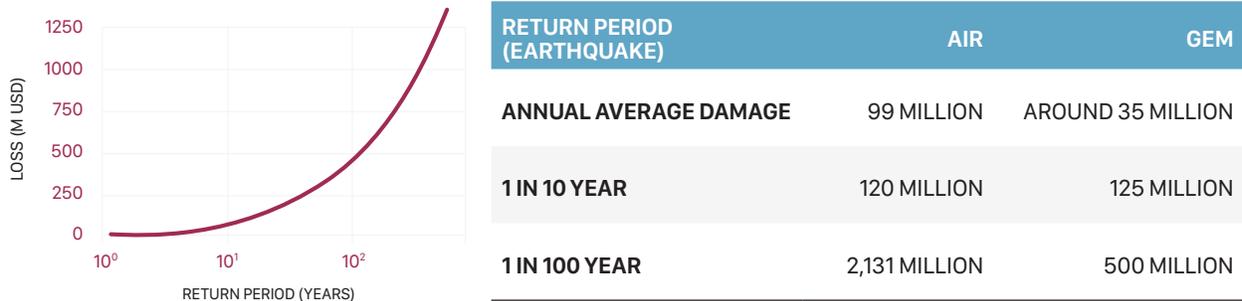
Figures are in 2020 terms. The axis scale varies by graph.

Historical data on disaster damages show that Albania is predominately vulnerable to two shocks with different risk profiles. AIR estimates the average damages from earthquakes and flooding as US\$147 million per year (TABLE 4; FIGURE 6, bottom), with a catastrophic event—for example, a 1-in-100-year earthquake—causing damages of over US\$2 billion (TABLE 4; FIGURE 6, top). Earthquakes are in general infrequent but can result in very large damages (such as the 2019 earthquake); they are estimated to cause on average almost US\$99 million in damage per year (TABLE 4; FIGURE 6, top). In contrast, floods are often more localized and more frequent, and are estimated to cause damages on average at about US\$48 million per year (TABLE 4; FIGURE 6, middle). The shape of the risk profile is important and has implications for structuring a Disaster Risk Finance Strategy: different instruments are required to manage the different risks, and it’s unlikely that one instrument will be able to manage both flood and earthquake risk optimally. The shape of the risk profile also affects the decision about what disaster risk to retain, mitigate, or transfer.

Given the limited data on historical disaster events and their damages, there is uncertainty around the actual risk from earthquakes and flood events. Using different data and models to those employed by AIR is likely to result in materially different outputs, and the correct output depends on the precise question being answered. Below is a comparison of the AIR risk profile to the estimates produced by the Global Earthquake Model (GEM) (FIGURE 7). This comparison highlights how a different earthquake model can result in different loss amounts. This diagnostic did not review GEM’s data or the model in detail, so there is no clarity on reasons for the discrepancy. However, a comparison of the two models’ loss costs ratios (model loss divided by exposed value) shows that although there is a different shape in the tail of the distribution, in general the ratios are similar, suggesting exposure data or scaling of exposure data may be one of the key drivers of the different figures.

FIGURE 7

Earthquake loss exceedance curve (left) and comparison with the fitted distribution (right)



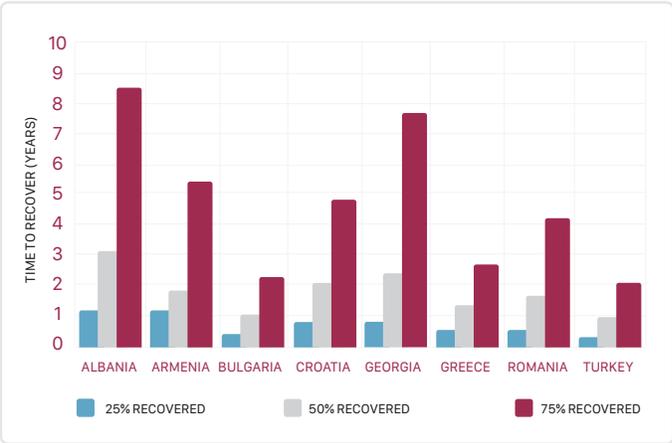
Source: Global Earthquake Model, “Albania,” <https://downloads.openquake.org/countryprofiles/ALB.pdf>.

Note: GEM indicates using loss values in its estimates but also indicates that these measure “direct damage.”

The World Bank estimates that the impact of disasters on consumption poverty in Albania could be significant. A World Bank (forthcoming-b) poverty report analyzes potential impacts of major earthquakes and floods in the Tirana and Shkoder regions respectively. Preliminary results indicate that consumption losses (defined as the decline in households’ use of goods and services) resulting from

a 200-year earthquake event would likely push some 24,800 individuals (4.7 percent of the regional population) into consumption poverty in Tirana and could cause 4,400 people to lose their middle-class status. The analysis shows further that consumption losses resulting from a 200-year flood event in the Shkoder region would likely push some 9,200 individuals into consumption poverty (7.0 percent of the regional population) and could cause 500 people to lose their middle-class status. In addition, it is estimated that without any assistance, Albanian households would, on average, take longer to recover than households in other countries, with some regions such as Tirana recovering faster than others (see **FIGURE 8** below).

FIGURE 8
Cross-country comparison of time required to reconstruct damaged assets after a 200-year earthquake event (above, left and right), and average time to recover 75 percent of assets and reconstruct following a 200-year earthquake event (below).



REGION	LEVEL OF POST-DISASTER RECONSTRUCTION AND RECOVERY COMPLETION RATE		
	25%	50%	75%
ALBANIA	442 DAYS	39 MONTHS	> 8 YEARS AND 9 MONTHS
ARMENIA	256 DAYS	23 MONTHS	5 YEARS AND 6 MONTHS
BULGARIA	164 DAYS	13 MONTHS	2 YEARS AND 4 MONTHS
CROATIA	307 DAYS	26 MONTHS	4 YEARS AND 11 MONTHS
GEORGIA	318 DAYS	30 MONTHS	> 8 YEARS
GREECE	208 DAYS	17 MONTHS	2 YEARS AND 10 MONTHS
ROMANIA	248 DAYS	21 MONTHS	4 YEARS AND 5 MONTHS
TURKEY	148 DAYS	12 MONTHS	2 YEARS AND 2 MONTHS



Average number of years needed to recover 75% of assets (200 year EQ event) according to the projections of the World Bank poverty report

Source: Projections of the World Bank poverty report (World Bank, forthcoming-b)..

1.3. AGGRAVATING IMPACT OF COVID-19 IN ALBANIA

The novel coronavirus (COVID-19) severely affected many countries across the world, including Albania. COVID-19 continues to spread across the world, with many countries already experiencing its second wave. The pandemic is taking an increasing number of lives, overstressing health systems, and deteriorating economies and governments' fiscal positions. The GoA has adopted a series of measures to counter the crisis, including social distancing, support to businesses, and social transfers (World Bank 2020b). A state of emergency ended in June 2020, but, along with many other countries, Albania is now facing the second wave of the pandemic. Although the development of a vaccine comes as promising news, it is still uncertain how the pandemic will develop in 2021.

Albania has taken a series of measures, including mobilizing additional funding, to respond to the pandemic and alleviate its impact on the economy. The GoA introduced wage subsidies, increased social spending, enacted a temporary moratorium on loan installments, and offered credit guarantees to ease salary payments and working capital (World Bank 2020b). The government has mobilized substantial funds through reserve funds, spending reallocations, sovereign guarantees, and other sources. For instance, the GoA has already allocated a large share of the Reserve Fund of the Council of Ministers to address urgent needs during the pandemic, and has had to reallocate budget and borrow to handle COVID-19 expenditures. These measures, although necessary, led to a deterioration of fiscal position and surge in fiscal deficit, forcing an increase in public debt. The outcomes of the ex post budget mobilization for the country are still not fully clear.

As of December 16, 2020, Albania had 49,191 confirmed COVID-19 cases and 1,016 deaths from COVID-19; but projections of future cases are uncertain and depend on how fast the vaccine will become available and on measures the GoA will take to contain the pandemic. According to the Institute for Health Metrics and Evaluation (IHME), a global health research center at the University of Washington, by April 2021 Albania is projected to face from 1,806 to 5,178 total deaths from COVID-19 and an infection rate of between 229 and 3,861 persons per day, depending on the measures in place and vaccine rollout. This projection demonstrates large uncertainty in the development of the pandemic.

The impact of the COVID-19 crisis on the country's economy was profound, but impacts going forward remain uncertain, as in many other countries across the world. Besides the health and human impact, the pandemic drives worldwide economic disruptions – dealing with these disruptions could be especially challenging in developing economies. Albania's economy was hit hard: GDP is expected to fall by 8.4 percent and fiscal deficit to surge up to 8.5 percent in 2020, along with increasing unemployment and poverty (World Bank 2020b). In 2021, the economy is projected to recover, but still to remain below the pre-COVID-19 projections.

Disasters will happen regardless of the pandemic, and COVID-19 could hinder financial preparedness to these events. The effort to address the pandemic is exhausting the government's reserves, while revenues temporarily decline. It is also increasing public debt, in turn reducing the borrowing capacity and posing liquidity constraints. In addition, the impact of COVID-19 is reducing the recovery capacity of businesses and households, while also increasing unemployment and poverty in the face of future disasters. Taken together, these effects are making Albania more vulnerable to natural disasters. If a disaster happens during the outbreak, the GoA will likely see

growing costs for disaster response, including response coordination, while the spread of COVID-19 might rapidly increase. It is therefore important to anticipate these impacts, as well as prepare for further developments of COVID-19 (for example, the potential third wave). This effort could potentially focus on financial protection for the most vulnerable people and for small and medium enterprises by ensuring that budgetary resources are available and contingency plans ready for a third wave of COVID-19 and natural disasters.

2. ASSESSMENT OF THE CURRENT APPROACH TO DISASTER RISK FINANCE

2.1. LEGAL AND INSTITUTIONAL FRAMEWORKS

Set of legal frameworks in Albania highlights many efforts the GoA is taking to better prepare for disasters and some regulations are in place for the related areas, yet there is no systematic approach to post-disaster financing. For instance, through the Law on Civil Protection (2019), the government adopted several risk financing instruments, such as dedicated contingency funds. While it is unclear how many of the funds were already operationalized, this underlines importance the GoA pays to financial preparedness to disasters. The legal environment also enables establishing off-budget reserve funds, potentially introducing compulsory insurance for homeowners and accessing capital markets. Some legal frameworks are in place also for regulating post-disaster financing instruments such as, for example, budget reallocation. However, time requirements for these instruments to be utilized in an emergency are not prescribed in the reviewed legal frameworks. There have been identified no national contingency plans or strategies that consider how to efficiently use the existing instruments, what are the responsibilities of the stakeholders and priority order of the funding sources (except for the provision on exhausting local contingency funds before requesting the support from the national government).

Below is an overview of the legal frameworks that define disaster risk financing in Albania:

- The new **Law on Civil Protection** adopted in 2019 regulates broader disaster risk management. It defines institutional responsibilities and regulations in civil protection and provides for some responsibilities and instruments in post-disaster financing. Sub-laws, strategies, plans, and activities at national, regional, and municipal levels still need to be harmonized with the 2019 law.
- The **Law on Management of Budgetary System in the Republic of Albania** (2008) provides for program budgeting, sets out budget preparation and monitoring principles, and clarifies roles and responsibilities. For each budgetary institution, the law establishes “authorizing officers,” senior civil servants with authority for public expenditure management; these authorizing officers in turn appoint “executive officers,” high-level civil servants who implement financial management rules, keep accounts, and prepare financial statements. The law establishes requirements for budget classification and specifies provisions for establishing special funds. In addition, it improves the framework for public expenditure management at local levels by requiring balanced budgets, common classification systems, and accounting standards to be determined by the Ministry of Finance and Economy (MOFE). It also defines guiding provisions for reserve funds, including the request for supplementary funds during the budget cycles. Article 58 of the law originally specified that total public debt, including guarantees, was not to exceed 60 percent of GDP. In 2013, this specific numerical limitation was replaced by a limitation on borrowing for financing of capital expenditures. The revised rule, described as a “golden rule,” prohibits borrowing for current expenditures; current expenditures are to be covered by

revenues, and borrowing is only to be used to finance capital investment. Local budgets have similar requirements: they must be balanced, except in cases where borrowing is to finance investment projects. All borrowing is subject to review by MOFE. Limitations on total state debt and total loan guarantees are established in the annual budget law.

- The **Albania Public Finance Management Strategy 2014–2020** was adopted to support implementation of the Law on Management of Budgetary System in the Republic of Albania.
- The **Law on Local Self-Government Finance** (2017) allows fiscal transfers between local governments, allows an increase in the level of taxation within certain limits, and allows revision of budget expenditures in case a local government is financially distressed.
- The catastrophe insurance legal framework is composed of (i) the **Law on the Albanian Financial Supervisory Authority** (2006); (ii) the **Law on Insurance and Reinsurance** (2014); and (iii) bylaws issued by the Albanian Financial Supervisory Authority (AFSA) to regulate and supervise the insurance sector. The GoA is currently discussing implementation of compulsory earthquake insurance for households, and the draft law is being reviewed.
- For capital markets, a new **Law on Collective Investment Undertakings** (replacing the old Law on Collective Investment Undertakings) has been drafted, and a new **Law on Capital Markets** (to replace the existing Securities Law and the Corporate Bonds Law) was approved by the Parliament in 2020.
- The **Organic Budget Law** regulates the budgetary process, including the budget calendar, for all levels of public budget. It integrates all the stages of budget planning, preparation, scrutiny, and approval. The government formulates and approves its budget, and monitors its fiscal framework through the general budget, which includes national government (line ministries and national government institutions), social insurance and health funds, and local governments.
- Decrees and acts adopted after 2019 earthquake, for instance on **Setting the rules and procedures for reconstruction grant program eligibility and model designs** or the **Conditions, Criteria and Procedures for the Implementation of Economic Recovery Actions**, etc. These decrees define procedures of providing financial support after the 2019 earthquake.

There are several key stakeholders involved in disaster risk financing in Albania, including MOFE, which together with the National Civil Protection Agency (NCPA) plays an important role in deciding on provision of financing after disasters. TABLE 5 summarizes these stakeholders and their responsibilities in disaster risk financing.

TABLE 5**Disaster risk financing stakeholders and relevant responsibilities****STAKEHOLDERS AND MAIN RESPONSIBILITIES****ASSEMBLY**

- Approve the NCPA budget as part of the budget of the ministry responsible for civil protection (currently Ministry of Defense)
- Decide whether to extend the state of disaster beyond 30 days as announced by the Council of Ministers

COUNCIL OF MINISTERS

- Approve the National Civil Emergency Plan
- Approve the central-level risk assessment document
- Decide whether to declare a state of natural disaster emergency (for a period no longer than 30 days) for one territory or the entire territory of the country
- Request that the Assembly of the Republic of Albania approve extension of the state of disaster emergency beyond 30 days
- Approve policies on responding to, and addressing, consequences of natural and other disasters

MINISTRY OF FINANCE AND ECONOMY

- Design financing strategies to optimize the allocation of government funds and resources
- Develop annual budget proposal
- Approve reallocation of funds
- Define debt management strategy
- Coordinate public financial management across participating institutions
- In some cases, review funding requests for post-disaster needs, including those channeled through the NCPA

MINISTRY OF DEFENSE

- In some instances, review funding requests for post-disaster needs channeled through the NCPA

MINISTER RESPONSIBLE FOR CIVIL PROTECTION

- Define strategic directions and objectives of the NCPA
- Develop and oversee the implementation of disaster risk reduction and civil protection policies
- Periodically inform the Council of Ministers about disaster risk reduction and civil protection
- Oversee NCPA budget management, in accordance with the applicable financial legislation

NATIONAL CIVIL PROTECTION AGENCY UNDER MINISTRY OF DEFENSE (OPERATIONALIZED IN 2020)

- Implement the Council of Ministers' disaster risk reduction and civil protection policies, as well as strategic directions and objectives set by the minister responsible for civil protection
- Coordinate efforts under the National Strategy for Disaster Risk Reduction and the National Civil Emergency Plan, and as part of disaster risk assessment at the national level
- Cooperate with international bodies and counterpart international organizations within the framework of civil protection and disaster risk reduction
- Plan funds for disaster prevention and rehabilitation measures in damaged infrastructure, as well as other activities in the field of civil protection
- Establish and implement a method for developing the Civil Emergency Plan
- Conduct inspections to determine whether provisions of the Law on Civil Protection are being implemented by state institutions and structures and by private entities

- Collect, manage, process, and assess all preliminary assessment reports, in-depth experts' reports, and any other data on the consequences of natural and other disasters that are received from local self-government units or other government authorities
- Receive and evaluate funding requests from local governments after disasters; decide on provision of compensation and other types of support after disasters

STATE MINISTRY FOR RECONSTRUCTION (ESTABLISHED AFTER 2019 EARTHQUAKE, WITH POTENTIAL TO BE ESTABLISHED AFTER OTHER MAJOR DISASTERS)

- Draft and approve the general reconstruction program
- Coordinate the activities of government institutions and private entities, including donors, in line with the general reconstruction program and the reconstruction process
- Submit, through the minister responsible for reconstruction, a proposal to the Council of Ministers on use of the reconstruction fund by implementing units and local self-government units subject to a state of natural disaster, and on designation of the project implementation units in the context of the reconstruction process
- Ensure public information and transparency on the reconstruction process
- Submit fund use proposals through the State Minister for Reconstruction to the Council of Ministers for approval

INTER-MINISTERIAL COMMITTEE ON CIVIL EMERGENCIES (TEMPORARY)

- Coordinate all civil protection institutions and structure activities
- Determine methods and procedures for employment of material and financial resources
- Decide on the allocation of funds aimed at recovery from natural disasters

CIVIL PROTECTION COMMITTEE (TEMPORARY)

- Implement policies on disaster risk reduction and civil protection

MINISTRIES AND NATIONAL GOVERNMENT INSTITUTIONS

- Draft, approve, and update the Civil Emergency Plan and submit it to the NCPA
- Plan an annual budget for disaster risk reduction and civil protection, equal to between 2 percent and 4 percent of the total annual budget, for ministries responsible for civil protection, defense, internal affairs, transport, infrastructure, agriculture, health, energy, education, environment, and culture
- Establish a disaster loss database in the area of responsibility within two years
- Analyze the existing state of administrative, technical, and financial capacities for civil protection
- Conduct an assessment of disaster losses within the area of responsibility

IMPLEMENTING UNITS

- Manage the funds that the Council of Ministers transfers out of the reconstruction fund, including any contributions in kind, and conduct procurement procedures

LOCAL SELF-GOVERNMENT UNITS

- Manage the funds that the Council of Ministers transfers out of the reconstruction fund and other contributions in kind, when appointed as implementing units in a Council of Ministers' Decree
- Adopt mandatory local plans, detailed local plans, and development and building permits in the context of the reconstruction process
- Establish, manage, and update a database on the individuals and families who suffered casualties and / or became homeless as a result of a natural disaster, and meet their needs under the reconstruction process programs

2.2. PUBLIC FINANCIAL MANAGEMENT OF NATURAL DISASTERS

2.2.1. RISK LAYERING GENERAL FRAMEWORKS

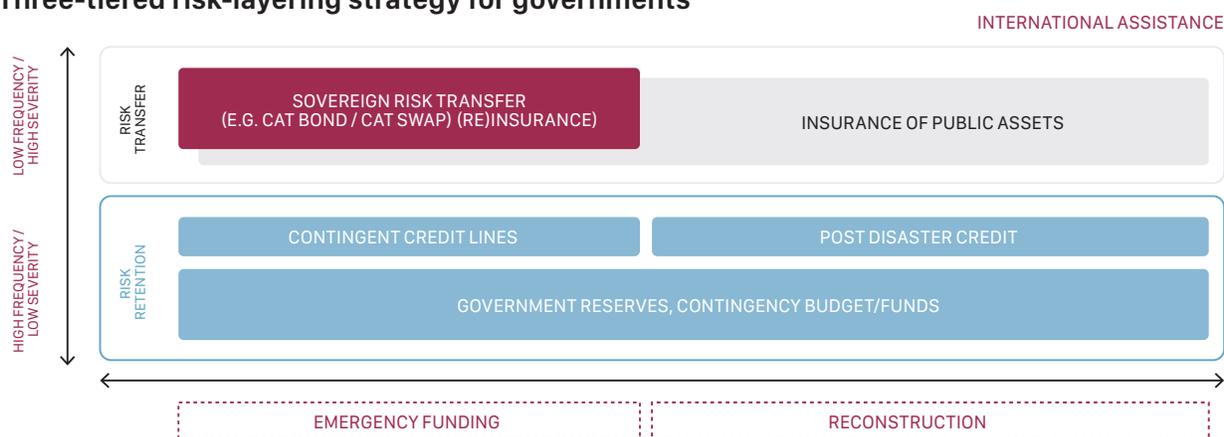
Literature shows that combining different instruments is typically more cost-effective than relying on one source of funding¹⁵. For the government, having rapid access to resources to meet surge demand for emergency assistance entails benefits; these are due to cost efficiencies generated by early procurement and response. For households, early relief can reduce the resort to negative coping strategies, which have been shown to have detrimental long-term consequences. Wider economic benefits are expected to result from other early intervention activities, such as clearing debris from roads and restoring access to cut-off communities. At sovereign level, financing mechanisms can be grouped into two main categories:

- **Retention**, in which the government decides to assume and manage disaster losses through its budgetary resources—for example, through the creation of budgetary reserves or funds or through post-disaster budget reallocations or borrowing.
- **Transfer**, in which the government transfers potential future disaster losses to financial or insurance markets by paying a premium—for example, through traditional insurance, alternative risk transfer products, or contingent financing mechanisms.

Risk layering allows the combination of different instruments to ensure that cost-efficient financing is available after disasters (FIGURE 9). The bottom layer represents the cheaper funds, which are designated to cover recurring, less severe disaster events. For every additional layer, the funds are more costly and cover less frequent but more severe disaster events. This approach enables governments to allocate cheaper sources of funds toward more frequent events and to pay for rarer events with funds obtained from more expensive sources.

FIGURE 8

Three-tiered risk-layering strategy for governments



Source: World Bank and GFDRR 2014.

An example of possible risk layering for the Albanian power sector, described in **BOX 2**, highlights how risk retention, contingent credit, and insurance instruments can be effectively combined to address disaster impacts.

¹⁵ See for example Clarke et al. (2016).

BOX 2

PROPOSAL FOR A COMPREHENSIVE RISK FINANCING SOLUTION FOR MANAGING FINANCIAL RISKS TO HYDROPOWER IN ALBANIA

Hydropower has been a reliable and affordable source of power for over a century, but its success comes with financial risks linked to volatility in production, particularly in countries like Albania, where hydropower accounts for nearly all domestic power production. In Albania, electricity production is significantly affected by variations in rainfall and falls short of consumption needs in periods of low rainfall and when reservoirs run low. Albania's energy sector is then required to purchase expensive electricity from abroad to meet domestic needs and sell to regulated end users at the fixed regulated tariff. When low rainfall coincides with high international energy prices, the result is large financial gaps in Albania's state-owned electricity utility. The government is then forced to intervene. For instance, such net budget lending to Albania's electricity sector amounted to 0.4 percent of GDP in 2016 and 0.6 percent of GDP in 2017.

International experience suggests that financial solutions are available for the power sector that can smooth out financing needs as part of a broader risk mitigation strategy. Such solutions can help address a combination of volatile domestic hydro generation and volatile international import tariffs. But implementing this risk mitigation strategy is daunting. On the financial resilience side, electricity companies may be reluctant to pay up-front costs for expensive financial instruments to smooth out their financing needs, as long as the regulated tariffs are not cost-reflective and there is an implicit expectation of government bailouts.

However, emergency budget lending to the power sector in years with low rainfall and high energy import prices can put public finances at risk. Transfers from the budget also hollow out the principle proclaimed by many governments that electricity companies should be run on a commercial basis. Instead of relying on budget transfers, the power sector needs to develop its own financial instruments to smooth out financing needs. Hydropower risk mitigation tools can play a key role in increasing the share of renewable energies in the global energy mix and thus in meeting Sustainable Development Goal 7 (affordable and clean energy). Risk mitigation tools hold the promise of de-risking hydropower.

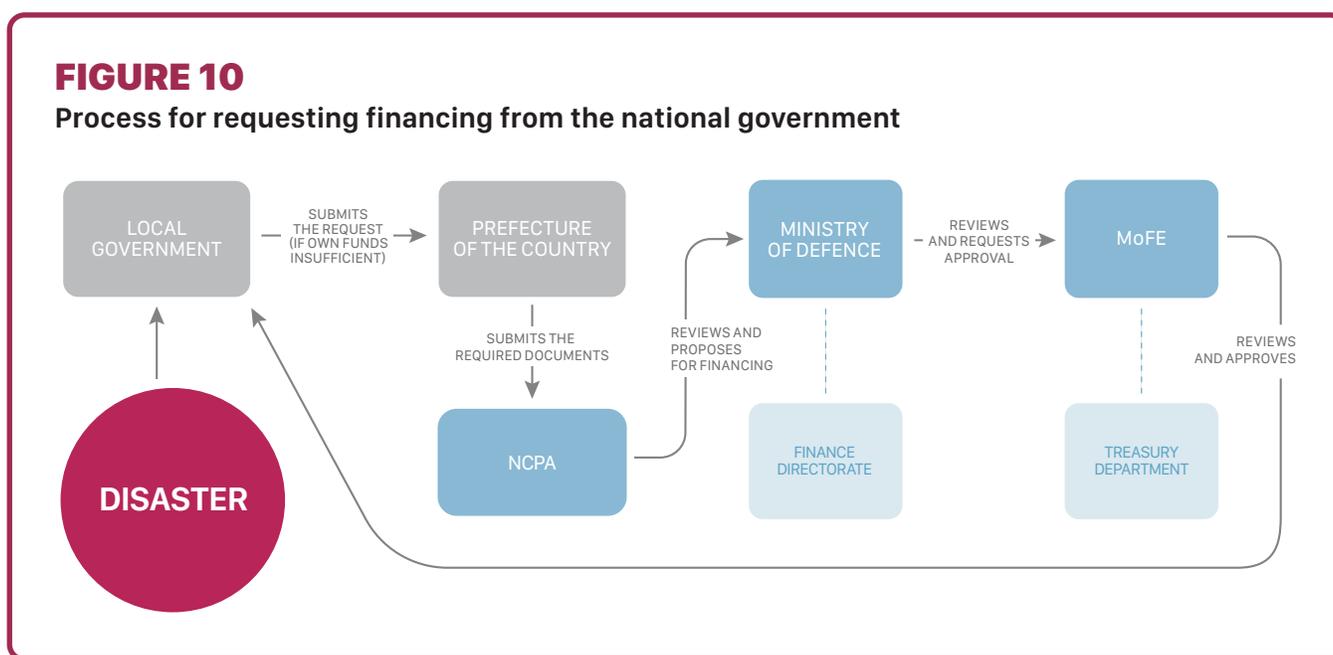
The World Bank's 2019 analysis proposed to the GoA a comprehensive financial solution for the power sector supported by broader risk mitigation recommendations. This analysis builds on a hydro-financial risk mitigation model for Albania's energy sector based on supply-demand projections over the next 10 years. This model can inform policy makers on the magnitude of hydro-financial risk and preliminary design of the mitigation measures. The analysis tested several financial instruments, including (i) tariff adjustment, (ii) a stabilization fund, (iii) a contingent loan, and (iv) weather insurance. The World Bank recommends rolling out a combination of these financial instruments and making the institutional arrangements that are required to implement the risk mitigation strategy.

Sources: Canale et al. 2019; World Bank 2019c.

2.2.2. APPROACH TO PUBLIC FINANCIAL MANAGEMENT OF DISASTERS IN ALBANIA

The GoA's approach to post-disaster financing includes a few prearranged instruments (with many only partially operationalized or not yet established); the funding gap after large-scale events is financed through ex post risk financing instruments and donor aid. The prearranged instruments include (i) the Reserve Fund of the Council of Ministers; (ii) a contingency budget for each line ministry and other public agencies to be used for disaster response, equal to 2–4 percent of the entity's annual budget; (iii) a contingency budget of each municipality of no less than 4 percent of their annual budget; and (iv) a Solidarity Fund for civil protection under the National Civil Protection Agency, which could be used to finance disaster response, recovery, and reconstruction, as well as provide fiscal transfers to local governments for the same purposes. While the GoA recognizes the importance of risk retention instruments such as the four listed above, the latter three instruments have been only partially operationalized or not yet established. Ex post instruments include budget reallocation, emergency borrowing, and donor aid.

Concerning the sharing of disaster costs across different levels of the government, the Law on Civil Protection introduces a principle of subsidiarity in line with the decentralization efforts of the GoA. According to the Law on Local Self-Government (2015), civil protection is a responsibility of the local governments, and it includes post-disaster financing. As defined under the Law on Civil Protection, disaster-affected units (and neighboring units) may request assistance from the national government only when their own capacities are insufficient. Local governments are expected to first utilize their own civil protection funds, both for major disasters that involve the declaration of a state of emergency, where the national government plays a leading role, and for smaller disasters, where local governments are expected to finance response and recovery (but can potentially request national government support). **FIGURE 10** shows the process by which local governments request financial assistance from the national government.



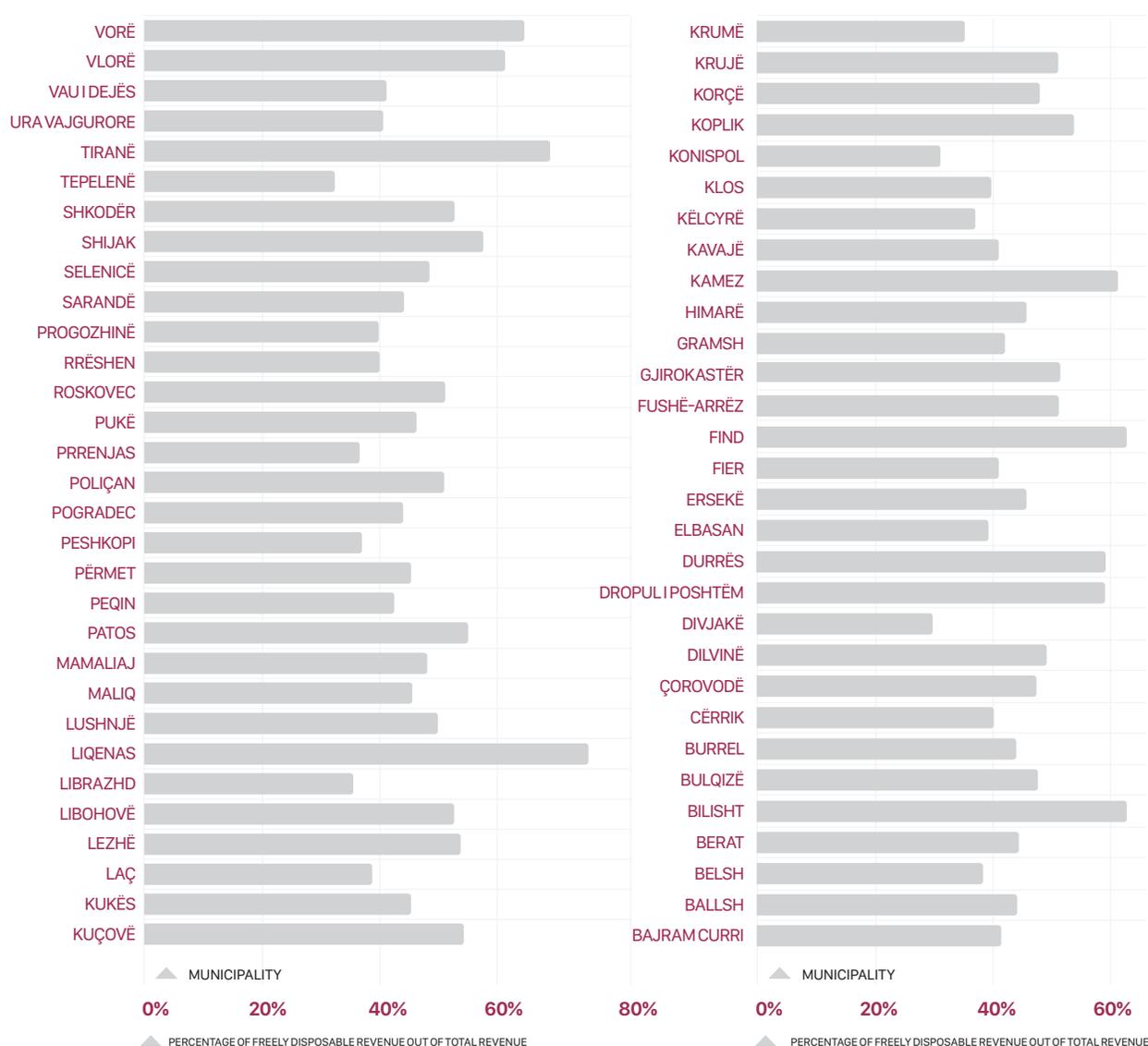
Source: Government of Albania.

Note: Grey = local government; Blue = national government.

The Law on Civil Protection also defines the right to compensation and indicates that the GoA is responsible to compensate and support the affected population after disasters. If municipalities do not have sufficient funds for compensation, they will plan them for the following year in the amount required to compensate the affected entities (it is not specified if the compensation will be provided in the current or subsequent year). If the amount of compensation exceeds 8 percent of the municipal budget, the compensation may be carried out by the NCPA. The compensation amount, along with the procedure and time frame for payment, is approved by the Council of Ministers. There is no explicit cost-sharing arrangement for reconstructing public assets and infrastructure; the decision is likely made ad hoc and is the responsibility of the asset owner.

FIGURE 11

Freely disposable revenue as a percentage of total revenues of municipalities in Albania, 2016



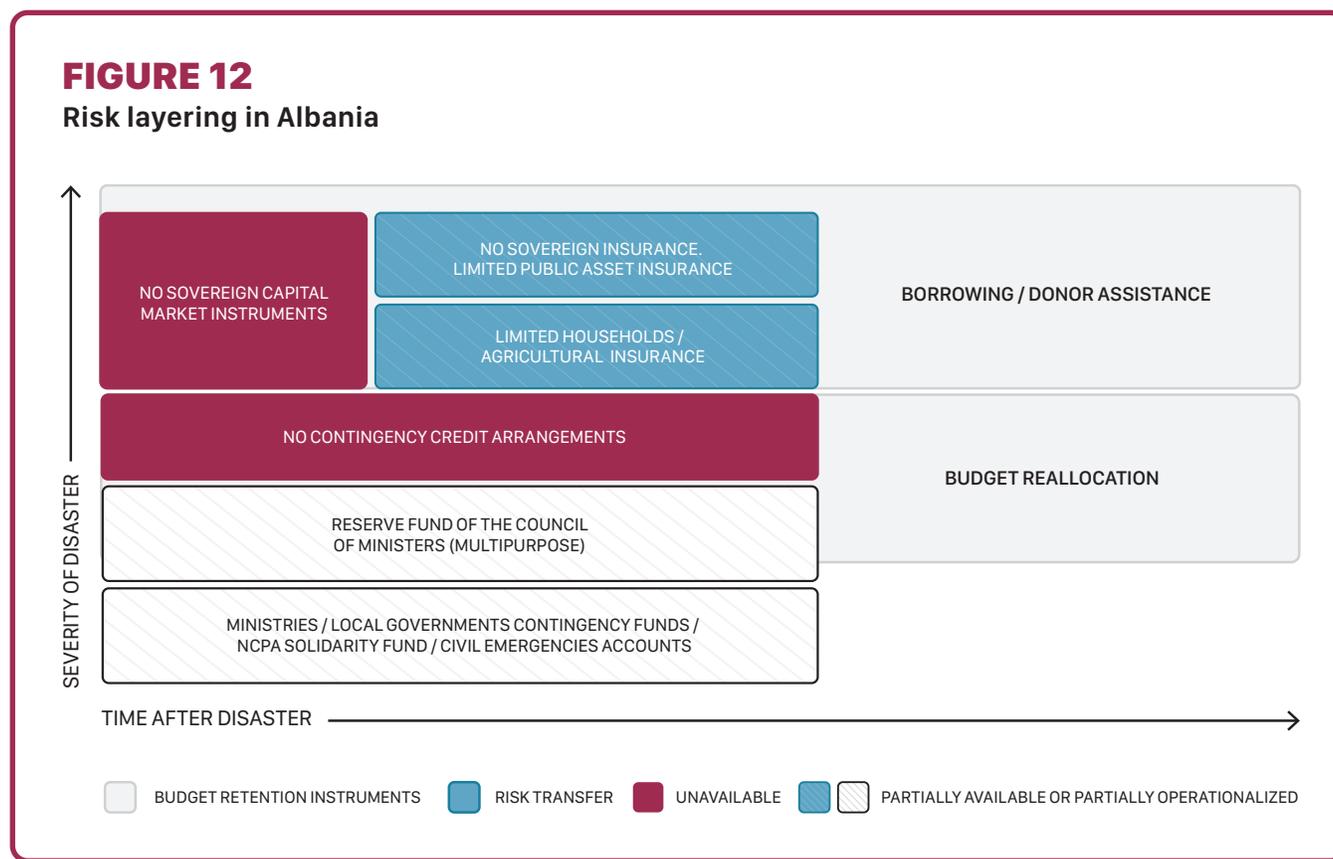
Source: Financat Vendore, "Total Income by Financing Sources," <http://financatvendore.al/data/revenues>

Note: As shown, Liqenas, Tirana, and Vorë have the greatest resources to spend at their own decision.

There are financial disparities between the municipalities in Albania, and some are more able than others to mobilize funding after disasters. In terms of financial sustainability, municipalities rely on the national government budget to a large extent, with fiscal transfers accounting for over 50 percent of the total revenues.¹⁶ As of 2016, freely disposable income available to municipalities ranged significantly and was on average less than 50 percent of the total (see **FIGURE 12**), while own revenues were on average about 15 percent (ranging from 2 percent in Krumë to 50 percent in Tirana). Even minor disasters can put less self-sustaining municipalities under significant pressure if they are unable to mobilize sufficient funding to perform their responsibilities and have limited borrowing capacity. Such events will likely require national government intervention and thus delay recovery efforts. Fiscal transfers to the local governments are based on historical trends, and a better understanding of potential disaster expenditures might be required to strengthen local governments' financial resilience to natural disasters.

Defining cost-sharing arrangements across a government gives more certainty on fiscal costs of natural disasters and helps government actors understand how to finance these costs. The government of New Zealand, for instance, has a specific approach to cost-sharing that allows it to plan for how to meet disaster impacts.¹⁷ The approach also makes it possible to evaluate the readiness of the government, both at the local and national levels, to meet disaster costs and design appropriate financing instruments.

FIGURE 12 provides an overview of the GoA's existing risk financing instruments. **TABLE 6** summarizes the available instruments and their indicative funding where available.



¹⁶ Financat Vendor, "Total Income by Financing Sources," <http://financatvendore.al/data/revenues>.

¹⁷ See, for instance, White (1997) for a discussion of the role of the Reserve Bank of New Zealand in natural disasters.

TABLE 6**Sources of funds for disaster response in Albania, 2019**

DISASTER RISK	FINANCING SOURCE	FUNDING
HIGH-RISK LAYER (E.G., MAJOR FLOODS, MAJOR EARTHQUAKES)	DONOR ASSISTANCE	UNCERTAIN
	PUBLIC ASSET INSURANCE/ SOVEREIGN INSURANCE/RISK TRANSFER THROUGH FINANCIAL MARKETS	SOVEREIGN INSURANCE/CAPITAL MARKETS RISK TRANSFER IS UNAVAILABLE; LIMITED PUBLIC ASSET INSURANCE IS IN PLACE
	BORROWING	UNCERTAIN
	HOUSEHOLD INSURANCE	1 HOUSE IN 100 IS INSURED
MEDIUM-RISK LAYER (E.G., REGIONAL FLOODS, MINOR EARTHQUAKES)	AGRICULTURAL INSURANCE	FEW CONTRACTS ARE IN PLACE FOR COMMERCIAL FARMERS
	CONTINGENT CREDIT	UNAVAILABLE
	BUDGET REALLOCATION	10 PERCENT OF TOTAL APPROVED EXPENDITURES MAY BE REALLOCATED; HIGHER ONLY WITH APPROVAL BY THE NATIONAL ASSEMBLY
	RESERVE FUND OF THE COUNCIL OF MINISTERS	FUND HOLDS ABOUT US\$14 MILLION
LOW-RISK LAYER (E.G., LOCALIZED FLOODS, LANDSLIDES)	CIVIL EMERGENCIES ACCOUNTS	CURRENT EXPENDITURE ACCOUNT. UNCLEAR IF FUNDS CAN BE USED FOR DISASTER CONTINGENCIES
	SOLIDARITY FUND	NOT ESTABLISHED
	RESERVES OF LINE MINISTRIES, AGENCIES, AND LOCAL GOVERNMENTS	UNCLEAR IF ALL ARE OPERATIONALIZED. RESERVES SHOULD AMOUNT TO 4 PERCENT OF EACH ENTITIES' ANNUAL BUDGET

It is challenging to identify optimal risk layering and cost sharing, in part because limited information is available on disaster risks, GoA's contingent liabilities, and post-disaster expenditures and potential fiscal impacts:

- The limitation in the historical estimations of disaster impacts is a sizable challenge. Currently, according to the information available to this diagnostic, the GoA collects historical data on disasters in DesInventar, but methodology for data collection might be inconsistent across agencies or years and unreliable in terms of economic damages and losses. In addition, the data are limited—provided only until 2015, and with many missing attributes—making the data hard to validate and use for further analysis. This is a concern both for frequent but less destructive events and for rarer but larger disasters. Moreover, climate change will likely make historical data on weather-related disasters more unreliable as a guide to the future. Some disaster risk assessments are carried out by different agencies and development partners, but there seems to be no central database providing baseline data and assumptions or aggregating these assessments. Therefore, this disaster risk finance diagnostic relied on data provided by a leading risk modeling company—AIR Worldwide—and relied on its estimates in looking at disaster impacts and estimating the funding gap.

- This diagnostic has not identified a source that would allow the GoA to comprehensively analyze its contingent liabilities. This could include, for instance, an asset register with comprehensive risk data. The Albanian State Authority for Geospatial Information (ASIG) reported that a basic exposure catalog is available containing some data on private and public assets and their geospatial location. It is likely that more detailed data on exposure and asset attributes is collected at line ministries individually. ASIG's data are currently not utilized for decision-making on disaster risk financing.
- As shown by available budget execution documents, the GoA collects some (fragmented) data on post-disaster expenditures limited to spending out of reserve funds. Expenditures are reported by each agency according to the established budget categories, so that much of the spending on disasters can remain embedded in other budget lines, e.g., operations and maintenance budgets.
- Another challenge the GoA faces is that natural disasters are not integrated in the budget fiscal statements. Impacts of large shocks are therefore not estimated at the fiscal level or included in the fiscal planning.

The GoA is taking efforts to address the challenges with data on natural disasters. It has introduced broader framework of better reporting and tracking of public expenditures including attention toward extra-budgetary funds and increased budget transparency. The new Law on Civil Protection also envisages development of a disaster loss database at the national, regional, and local levels within two years from the adoption of the law (which might include collecting and updating data in DesInventar). ASIG was also established and tasked with collection, processing and updating geospatial information - public agencies are expected to contribute their data.

2.2.2.1. EX ANTE DISASTER RISK FINANCING INSTRUMENTS

Risk financing instruments arranged in advance can help governments respond to different types of disasters in a timely manner. Several instruments could be used for this purpose, such as budget reserves/contingency funds and contingent lines of credit, as well as risk transfer instruments like insurance and capital market instruments. Comprehensive risk-sharing arrangements for the private sector could be also put in place to reduce government's contingent liabilities. Different instruments are best used when combined, since no single instrument can address all risks. Insurance can be a source of funding, for example, for large disasters providing support to government budgets, households, farmers, and businesses up to certain limit. These instruments are reviewed below.

BUDGET RESERVES

Reserve funds are used by governments to keep some resources immediately available for uncertain needs; they are most effective for financing the lower layer of disaster costs because they come with an opportunity cost that increases with the amount of funding that is idle. The size of the reserves depends on the government's risk appetite, capacity to quickly mobilize other funding sources after a disaster, and level of disaster risk. Given the current state of the COVID-19 pandemic, with fiscal resources exhausted and the development of the pandemic still uncertain, it is important to keep some funds readily available—for instance, for the second wave of the virus or new disasters. This approach could help address future events promptly.

There are generally two options to structure a disaster fund:

- **On-budget fund.** This is a regular budget account (a contingency line) managed by a designated agency, usually lapsing at year end (and usually not allowing investment of idle resources).
- **Off-budget (extra-budgetary) fund.** This is an accruing off-budget account (or a separate legal entity) usually run by a designated fund management structure and governed by a board of stakeholders. Although more flexible and usually larger in size than an on-budget fund, it should be carefully designed against misuse. (**BOX 3** provides an example of an off-budget fund in Mexico)

In Albania, all the existing funds are on-budget contingency lines. They include the following:

- **The Reserve Fund of the Council of Ministers.** This is an on-budget contingency account not specifically designated to cover disaster-related needs. It is drawn on for unforeseen events to cover line ministries' additional expenses. In 2019, the Reserve Fund had ALL 1.5 billion (US\$13.6 million). In 2020, the Reserve Fund originally had ALL 1.7 billion (US\$16 million) and funding was increased to ALL 2.7 billion (US\$26 million), with ALL 1 billion (US\$9.5 million) of this amount allocated for COVID-19. According to the MOFE data, around 45 percent of the original 2020 budget (ALL 1.7 billion) has already been utilized, in part for the COVID-19 response, including establishment of the quarantine. (An additional ALL 13.5 billion, or about US\$130 million, was reserved by the GoA as the Anti-COVID-19 Social Package). Allocations to the fund lapse at year end.
- **Civil Emergencies account (budget line 10910).** This is a current expenditure account. Different institutions, like the Ministry of Defense and local government units, may have this budget line (according to the World Bank's BOOST Expenditure Database¹⁸). It is not clear if these funds can be used for disaster contingencies; they more likely cover current expenditures such as wages and administrative expenses.
- **Reserves of line ministries, agencies, and local governments.** The Law on Civil Protection adopted in 2019 specifies that line ministries and other national government institutions should have a separate budget line for disaster response allocating 2–4 percent of their annual budget; municipalities should have a similar budget line allocating no less than 4 percent of their annual budget. The capacity of local governments in Albania to allocate this budget differs according to how financially self-sustaining they are; in view of their increased responsibilities in cost sharing, local governments' lack of access to financing might cause delays in post-disaster response and recovery.
- **Solidarity Fund.** The new Law on Civil Protection also envisages establishment of a Solidarity Fund for civil protection by the NCPA, to be deposited in an account with a commercial bank. The Solidarity Fund could be used to finance response, recovery, and reconstruction, as well as provide fiscal transfers to local governments for the same purposes. The Fund has not yet been established.
- **State Reserve.** The State Reserve consists of in-kind resources, equipment, and supplies.

The Reconstruction Fund was established as a temporary vehicle by the GoA after the 2019 earthquake with the Act on Damage Relief from Natural Disasters. It is an on-budget fund designated for earthquake reconstruction to channel both government financing and donor aid. Resources in this fund roll over to the next year. The Council of Ministers decides on the use of the Reconstruction Fund. As of April 2020, according to the MOFE data, more than 80 percent of government resources (ALL 13 billion, or about US\$124 million) had already been utilized, while the donor-funded part (ALL 7 billion, or US\$67 million) had not been utilized. Most of the government resources (77 percent)

¹⁸ World Bank, BOOST Expenditure Database, <http://boost.worldbank.org/country/albania>.

were provided to the Albanian Development Fund, which is responsible for managing reconstruction of public assets and individual dwellings. The budget of the Reconstruction Fund was revised in July 2020, with the government budget share increasing to ALL 31 billion (US\$295 million) and grant budget share decreasing to ALL 3 billion (US\$29 million). According to the MOFE, this change reflected projects implemented by donors themselves or directly through nongovernment implementing units.

The Law on Management of Budgetary System in the Republic of Albania provides in Article 7 that no extra-budgetary fund shall be created that is not a special fund. Special funds can be established by national or local government units and must first be proposed to the minister of finance and economy. Proposals should include the fund's scope, financing arrangements, duration, and method for closure. Special funds of the national government units must be presented to the National Assembly together with the state budget. This law might provide the possibility of establishing an off-budget reserve fund for disasters.

BOX 3

EXAMPLE OF AN OFF-BUDGET RESERVE FUND FOR DISASTERS: FONDEN MEXICO

FONDEN, Mexico's Trust Fund for Natural Disasters, was established as a mechanism to support the rapid rehabilitation of federal and state infrastructure affected by adverse natural events.

FONDEN was established in BANOBRAS, Mexico's state-owned development bank. Funds from FONDEN can be used for the rehabilitation and reconstruction of (i) public infrastructure at the three levels of government (federal, state, and municipal); (ii) low-income housing; and (iii) certain components of the natural environment (e.g., forestry, protected natural areas, rivers, and lagoons).

FONDEN is funded through the federal budget and market-based risk transfer mechanisms, including insurance and catastrophe bonds. The federal law requires that an amount of no less than 0.4 percent of the annual federal budget should be available. In case the fund is exhausted, the law stipulates that additional resources must be transferred from other programs and funds.

FONDEN is activated with the declaration of emergency. Once this declaration has been made, the federal agencies and/or state government(s) can apply for funding and the damage assessment process can begin. The affected federal and state agencies must demonstrate that the magnitude of reconstruction needs exceeds their financial capacity and file specific requests detailing the extent of the damage and estimated cost of reconstruction. Based on this, the appropriations can be approved.

FONDEN provides funds directly to service providers in benefit of housing reconstruction and population support, response activities, and reconstruction of public assets. For public assets, FONDEN resources finance 100 percent of the reconstruction costs for federal assets and 50 percent of those for local assets; however, the second requests for FONDEN's support are reduced to 50 and 25 percent respectively. For private housing, during response, FONDEN can provide funds directly to the private companies contracted to, for instance, clean debris and allow for immediate occupation of the affected property. For reconstruction, FONDEN can provide construction materials and tools to poor homeowners, with some funds allocated to pay for labor and specialized advisory services, acquire lands, or construct new housing, but this support is limited to low-income households.

Source: World Bank, forthcoming-a.

CONTINGENT CREDIT

So far, Albania does not have any contingent credit arrangements linked to natural disasters.

Setting up ex ante contingent lines of credit enables governments to access finance at prearranged borrowing rates immediately after a disaster or a pandemic to meet emergency needs. It provides access to quick but limited liquidity, usually used to cover larger impacts of disasters or pandemic that lead to a declaration of emergency, and to bridge the gap between immediate disaster needs and recovery and reconstruction funding. For instance, a World Bank contingent credit (Catastrophe Deferred Drawdown Option, or CAT DDO) could provide Albania an estimated US\$38 million (see **BOX 4** on how CAT DDO works). Other private sector and development institutions could provide similar arrangements.

BOX 4

WORLD BANK CONTINGENT CREDIT CAT DDO

Contingent credit arrangements can be explored with commercial banks or development institutions. For instance, the World Bank offers a Development Policy Loan with a Catastrophe Deferred Drawdown Option (CAT DDO) (World Bank 2018). A CAT DDO offers the government access to immediate liquidity through an active but undisbursed line of credit, with a country limit of 0.25 percent of GDP or US\$500 million, whichever is less. Funds are disbursed upon occurrence of a natural disaster (often based on the declaration of a state of emergency) within three years from loan signing. The drawdown period may be renewed up to four times. CAT DDOs are funded from the World Bank's current country portfolio. Other development institutions can offer similar arrangements.

Several World Bank CAT DDOs were drawn down for the COVID-19 pandemic, including by the governments of Romania and Serbia.

RISK TRANSFER: INSURANCE

For natural disasters, insurance instruments are most effective for protecting against large-magnitude (but not too unlikely) events, and they can be structured to achieve different objectives. For example, insurance can be offered to governments in the form of sovereign insurance, which provides rapid budget support, or it can be purchased by government entities for specific assets or infrastructure. Sovereign insurance can either be provided through a regional facility¹⁹ or directly accessed through insurance and the secondary international (re)insurance markets. Insurance can also be offered to homeowners, farmers, or businesses through catastrophe insurance (named or multi-peril).

Insurance can be used to cover disasters of different frequency and severity, but not all events are cost-effectively covered by insurance. For instance, if events are too frequent, the price for accepting such risks could be too high, and if they are too unlikely, the premium might also be too high, while insurers might be unwilling to cover their consequences (a rare and devastating event can cause insolvency). The decision on the size of risk to cover with insurance is driven by price, business (solvency), and political considerations (for instance, what assets to cover and whether to purchase insurance or self-insure).

Albania is one of the smallest insurance markets in Europe, with gross written premiums in 2018 of ALL 16.9 billion (US\$154 million) from both the life and non-life insurance sectors. Insurance

¹⁹ Albania currently does not have access to any such facility. Examples of regional facilities include African Risk Capacity, Pacific Catastrophe Risk Assessment and Financing Initiative, Caribbean Catastrophe Risk Insurance Facility, and the recently established Southeast Asia Disaster Risk Insurance Facility.

penetration has been growing in the last 10 years, albeit from a very low base, from 0.65 percent in 2008 to 1.05 percent in 2018 (compared to the global average of about 6 percent with over 5 percent in the developed economies). Insurance premium per capita is low, at about US\$54, putting Albania behind other countries in south-eastern and central Europe. A detailed overview of the insurance market in Albania is provided in **ANNEX 1**.

The catastrophe protection gap (i.e., the difference between insured and total losses) is significant in Albania; few risk transfer options are used, and none has achieved a wide coverage.

Albania currently has no sovereign insurance to provide budget support after severe disasters. Public asset insurance is available (although limited) to cover replacement value for damages caused by different types of natural disasters (the total sum insured is over US\$2 billion as of the first quarter of 2020). Most policies cover earthquake and one other peril. Agricultural insurance is available, but rarely purchased. AFSA reports few indemnity contracts (three in 2019 and two in 2020), concluded mostly for commercial farmers. The GoA is seeking to strengthen the quality and availability of insurance for households, as discussed below.

PROPERTY INSURANCE AGAINST DISASTERS

Property insurance that includes coverage against disasters is offered in Albania as a policy combining fire, catastrophe perils (which may or may not include earthquake cover), theft, and sometimes public liability. The basis of indemnity is the rebuilding cost for the construction itself and the replacement cost for the contents (Axco 2020).

Penetration of property insurance remains low; penetration is supported by the mandatory insurance requirement under loan mortgage contracts (in most cases including coverage against disasters). In Albania, only one or two houses out of 100 currently have private catastrophe insurance coverage; this coverage is driven to a large extent by mortgages. For loan mortgage contracts, the premium is calculated based on the building type and the requested loan amount, in the order of 0.07–0.14 percent of the loan amount (World Bank 2020a). The property insurance required by banks will at any time at least cover the outstanding balance and accrued interest. That means that as the loan is amortized, the sum insured is being reduced. That is fine for the bank but not for the borrower. If the property is damaged or destroyed, the borrower needs to rebuild; this is likely to cost more than the outstanding balance of the loan, meaning that taking out a policy covering replacement value is advisable. Since this insurance provides protection primarily for lenders, they are the first beneficiaries, but homeowners also benefit from property insurance in events that damage the property.

Demand for insurance has continued to stagnate even after the introduction of good-quality insurance products and more accessible reinsurance capacity provided through Europa Re. The World Bank South East Europe Catastrophe Risk Insurance Facility (SEE CRIF) project was launched in 2012 by the governments of Albania, North Macedonia, and Serbia with the view of increasing access to catastrophe insurance for homeowners, farmers, and municipalities. To implement this project and provide reinsurance capacity, in 2014 the three governments established Europa Re, a licensed Swiss-based specialty reinsurance company. Europa Re designed catastrophe insurance products for such common perils as earthquake, flood, and drought, which were transferred to the local market to offer as voluntary insurance policies. Despite availability of these products, penetration of disaster insurance has remained low. Demand for disaster insurance is challenged by people's expectation that the government

will offer support after disasters, by their lack of trust in the insurance sector, and by their low incomes (making insurance cover unaffordable), as well as by the absence of an insurance culture.

Against this background, in case of a major disaster, households will appeal for government help.

With limited risk transfer, the GoA will be constrained to finance disaster recovery and rehabilitation through its budget or donor aid. For example, after the 2019 earthquake, when most damages were concentrated in the housing sector and many were uninsured (a total of 5,272 policies were triggered by the earthquake, 85 percent of them related to mandatory loan mortgage insurance), the GoA had to mobilize additional financing for affected households through compensations, scholarships, and housing reconstruction aid (see the case study in **BOX 1**). In this context, increasing catastrophe insurance penetration becomes even more important due to a narrow fiscal space for discretionary spending and the country's debt burden (both further affected by the COVID-19). Wider use of insurance could also crowd in private sector funding for post-disaster needs, increasing the available resources and speeding up economic recovery after disasters while making recovery more efficient.

To reduce the catastrophe protection gap, the GoA is currently considering introduction of compulsory earthquake insurance for households (**BOX 5** provides an example of such a scheme in Turkey). The proposed law on compulsory insurance of residential buildings from earthquake would mandate earthquake insurance for households and establish a non-profit facility to administer this program. The law was drafted by the AFSA with the technical assistance of the World Bank and is currently being reviewed by the GoA. The careful and balanced introduction of this type of insurance would likely be beneficial. For instance, the current envisaged sum insured is limited to around US\$27,000, with the possibility of private sector insurers providing additional top-up coverage on a commercial basis.

BOX 5

TURKISH CATASTROPHE INSURANCE POOL

Devastating earthquakes in the Marmara region of Turkey in 1999 caused an economic loss of about US\$10 billion, of which only US\$800 million was insured (reflecting low insurance penetration, especially for private property). The result was a significant burden on the public budget; the government faced a shortage of immediate funds and had difficulty in compensating affected households because of other competing priorities, such as restoring access to clean water, public services, and public assets and infrastructure as well as providing security. This funding gap led the government of Turkey to introduce a mandatory earthquake insurance program; a 2000 decree establishing the program was followed by a law adopted in 2012. The law had the following aims:

- Provide affordable earthquake insurance for every homeowner
- Allow for a true risk transfer mechanism
- Introduce claims-paying capacity to limit government's exposure
- Build national catastrophes reserves over time
- Improve the risk culture and the insurance consciousness of the public
- Rely on the distribution channels of the Turkish insurance industry

This program was established with the support of World Bank technical assistance and the World Bank Marmara Earthquake Emergency Reconstruction Project.

Launch of this program has led to the establishment of the Turkish Catastrophe Insurance Pool (DASK), a governmental special-purpose organization under the Treasury of Turkey.

Despite being a government organization, DASK operates on private market principles, including prudent risk management and efficient operations. The initial capitalization for creating DASK was provided as a loan to the government, which DASK has repaid in full. To ensure the pool's efficiency, a decision was made to seek private management, and following a competitive tender the Dutch company Eureka Sigorta was selected to manage the pool until 2020. This arrangement has decreased DASK's operating costs to 2 percent of annual written premium (the usual operational cost for such a business is 15 percent). In 2020, management of DASK was transferred to a state-owned reinsurance company.

The mandatory earthquake insurance offered in Turkey covers only residential buildings and excludes their contents. There are three pricing factors that determine the premium: property location, type, and size. A 2 percent deductible is included in all coverage. As of 2019, coverage of disaster insurance in Turkey had reached 54 percent.

TABLE 7

Pricing of earthquake insurance: Premium and coverage

RATES BASED ON ZONES AS PER THE BUILDING TYPE (PER MILLE)	1 ST ZONE	2 ND ZONE	3 RD ZONE	4 TH ZONE	5 TH ZONE
A-STEEL, CONCRETE	2.20	1.55	0.83	0.55	0.44
B-MASONRY BUILDINGS	3.85	2.75	1.43	0.60	0.50
C-OTHER BUILDINGS	5.50	3.53	1.76	0.78	0.58

Source: DASK 2015.

The DASK policies sell through private companies and organizations (including banks and intermediaries), which retain a commission.

Among the difficulties that DASK has faced is how to promote continuous sales and renewals of its policy. While the government has imposed checkpoints for verifying consumers' initial purchase of the insurance policy (e.g., when consumers apply for a mortgage, connect to utility services, or use land registry services), it is difficult to enforce the purchase of the policy the next year after the checkpoint has been passed. To increase sales, DASK offers some benefits for renewals, such as discounts for purchasing the policy several years in a row, or a discount when a whole condominium is insured—for example, a 10 percent discount is applied

for renewing a policy, a 20 percent discount is applied after four renewals, and a 20 percent discount is applied if all units in the condominium are insured.⁹ DASK also seeks to promote sales through public awareness campaigns carried out by the government, schools, other institutions, opinion leaders, etc.

DASK's loss adjustment process and the subsequent payouts to Turkish consumers are based on the replacement cost. DASK has paid out a total of US\$49 million in claims (altogether, about 22,000 claims have been received after 539 damaging earthquakes). According to DASK, the most recent major earthquake—in Van on October 23, 2011—caused losses estimated at about US\$40 million.

DASK has accumulated significant reserves—amounting to US\$1.4 billion—since its inception. Investment of the accumulated reserve funds is guided by the national law and follows a safe investment strategy, with the funds mostly invested in government securities. In 2017, about US\$3.25 billion of reinsurance protection was purchased. The government of Turkey also provides reinsurance support to DASK. DASK also uses other mechanisms for guaranteeing availability of financing, such as catastrophe bonds (CAT bonds). The second CAT bond, called Bosphorus Ltd., was issued in 2015 in the amount of US\$100 million for a three-year period. As of 2017, DASK's total claims payment capacity was US\$4.2 billion (DASK 2017).

Sources: DASK 2015; Gurenko et al. 2006; World Bank and GFDRR 2018.

^a See DASK, "Tariff and Instruction of Compulsory Earthquake Insurance," <http://www.tcip.gov.tr/mevzuat-tarife.html>.

INSURANCE FOR HEALTH EMERGENCIES

While health emergencies are not the focus of this diagnostic, it is important to note that the current pandemic will likely cause changes to future pandemic cover; in this transition period, obtaining cost-effective cover will likely be challenging. Though these are still early days, it can be expected that insurers will become more risk aware and turn to bespoke coverage for pandemics where it is cost-effective, and that pricing will be reassessed;²⁰ it is also possible that the state's role will become more pronounced (for example, the United States, United Kingdom, and France are now working toward pandemic reinsurance pooling arrangements²¹). In the shorter term, the ramifications of current exposures and wording issues (in cases where the pandemic was not explicitly excluded from contracts; see OECD [2020])—will continue adding confusion. In this transition period and before the markets settle, it will be challenging to obtain pandemic cover.

RISK TRANSFER: CAPITAL MARKETS

A number of disaster-related financial instruments are available in capital markets. These include catastrophe (CAT) bonds, catastrophe swaps, weather derivatives, and others.

²⁰ Actuarial Post, "General Insurance Article—COVID19 Future of Insurance Report," <http://www.actuarialpost.co.uk/article/covid19-future-of-insurance-report--18182.htm>.

²¹ See, for instance, Artemis (2020b) on a proposal to establish a Pandemic Risk Reinsurance Program in the United States.

A CAT bond is a risk-transfer capital market instrument that allows the insurer to raise funds in case of a natural disaster and does not count against a countries' debt ceiling. A high-yield debt instrument, a CAT bond pays out only if a specific event such as an earthquake or a flood occurs. If the insured event occurs and triggers the payment to the bond issuer, the interest and principal repayments can be deferred or stopped. CAT bonds are often used by property and casualty insurers as well as reinsurers to transfer risks to investors. Investors who are ready to take this kind of risk target CAT bonds because they offer attractive interest rates that are usually higher than most fixed-income securities. In addition, because losses on CAT bonds are not correlated with other capital market instruments, they offer portfolio diversification for large investors. 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. (BOX 6 provides few examples of CAT bonds and catastrophe swaps)

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, etc.).

BOX 6

EXAMPLES OF CAT BONDS AND CATASTROPHE SWAPS

There are a number of CAT bonds used by sovereign governments. For instance, 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 2020a). 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 (Artemis 2019).

An example of a catastrophe swap is the one executed by Mitsui Sumitomo Insurance and Swiss Re in 2003, which swapped US\$12 billion of Japanese typhoon risk against US\$50 million each of North Atlantic hurricane and European windstorm risk. In 2017, the World Bank arranged a US\$206 million catastrophe swap for the Philippines as a protection against losses from major typhoons and earthquakes. Swaps are facilitated by the Catastrophe Risk Exchange (CATEX), a web-based exchange where insurers and reinsurers can arrange reinsurance contracts and swap transactions.

The capital markets in Albania remain underdeveloped. Market activity currently consists of trade and investment in government securities and issuance of corporate bonds through private offers. Government bond markets generally exhibit more development than corporate bond markets. (Across the Western Balkans, however, Albania has the highest share of government securities to GDP, with over half of the debt stock in local currency.) A properly developed secondary market for government securities is lacking, though authorities recently launched and are operating a market maker program

for issuance and trade of government benchmark securities. The derivatives market is also very limited due to the limited demand for hedging instruments; only two banks have a few foreign exchange forward transactions. Impediments to stronger capital markets include lack of financial education, the very limited number of large companies, weak corporate governance practices, underdeveloped markets, and deficiencies in legal provisions and market infrastructure (for instance, lack of a central depository to handle clearing and settlement of all types of traded securities). The country is undertaking some measures to strengthen capital markets, including approval of new laws for capital markets and collective investment undertakings that address key gaps in the existing legislation. A detailed overview of the Albanian capital market is provided in **ANNEX 2**.

A developed domestic capital market could be a good anchor for better pricing of catastrophe products, although such products can be accessed from the international market. Development institutions such as the World Bank can facilitate the assessment process and access to international markets. They can act as intermediaries for placing the instruments, taking on any credit risk from market counterparties, and can provide end-to-end support for product design, preparation, and market execution. There are no legal constraints hindering Albania's access to international CAT bond and derivative markets, as long as the transaction is budgeted. In order to target a wider base of investors, access to global markets needs to be further explored. Capital market instruments can be explored in the local market, but given the nascent capital market in Albania, it might not be a sustainable option. On the other hand, due to COVID-19, accessing international capital markets soon might be costly (World Bank 2020c). Further cost-benefit analysis is required to determine the attractiveness of this option.

2.2.2.2. EX POST DISASTER RISK FINANCING INSTRUMENTS

Governments can mobilize funds through ex post instruments, all of which require time to become available. These include budget reallocation, taxation, and debt financing, as well as donor aid. Compared to ex ante instruments, these instruments can take more time to be mobilized, and come with a higher cost and/or less certainty. On the positive side, ex post instruments can be planned depending on the materialized needs and thus allow governments to reallocate or borrow accordingly.

BUDGET REALLOCATION

According to Article 44 of the Organic Budget Law, the Council of Ministers is authorized to approve reallocations of funds between programs, within national government units, and for various general government units. The reallocations should not exceed 10 percent of the total approved expenditures for the respective program. Reallocation above that limit requires approval by the National Assembly. Reallocating resources from ongoing and planned projects during the year can be time consuming, given that the initial budgets are already limited. No specific provisions were identified on the time required for the reallocations.

Although budget reallocation can be cost-effective when the cost of borrowing is higher than the opportunity cost of reallocating funds from the planned projects, the opportunity cost is usually high in less advanced economies. While there could be cases in which reallocating funds is cost-efficient as compared to borrowing, in developing countries additional resources are often mobilized from recurrent expenditures, such as operation and maintenance budgets, which are often insufficient for asset life-cycle

support; hence reallocation from such budgets could entail especially high opportunity costs. In addition, many governments worldwide do not tag spending from operation and maintenance budgets as disaster spending, which prevents ministries of finance from understanding the actual extent of post-disaster reallocations and their impact on the economy. Finally, post-disaster budget reallocation can be problematic when it draws on funds that were originally meant for important development projects.

EMERGENCY BORROWING

Depending on their access to capital markets and their credit rating, governments may borrow funds to finance disaster costs; they can also borrow from multilateral development banks. Significant resources can be mobilized through post-disaster loans, though these can take some time to prepare and can contribute to already high debt ratios (World Bank and GFDRR 2014). Emergency recovery loans offered by multilateral development banks such as the World Bank can be prepared over a comparatively short time (for instance, the Floods Emergency Recovery Project for Serbia for the 2014 floods was prepared and approved in less than six months). These loans also may include special provisions that facilitate implementation of the projects they fund. Further, where an existing project with the World Bank included a Contingent Emergency Response Component (CERC), the CERC can be activated quickly without restructuring the project. The CERC is however limited to the available project financing and time frame, and is reallocated from other activities.

According to the World Bank (2020b), Albania's public debt is expected to increase to 81.3 percent of GDP in 2020, deteriorated by the 2019 earthquake and COVID-19 pandemic. The debt is projected to gradually decline over the medium term, in line with the authorities' commitment to strengthening fiscal sustainability. However, in the future, severe adverse shocks to growth or a deterioration in regional financial conditions—such as those caused by the earthquake and pandemic—may impair Albania's access to financing, necessitating higher levels of borrowing and driving up the public debt.

ADDITIONAL TAXATION

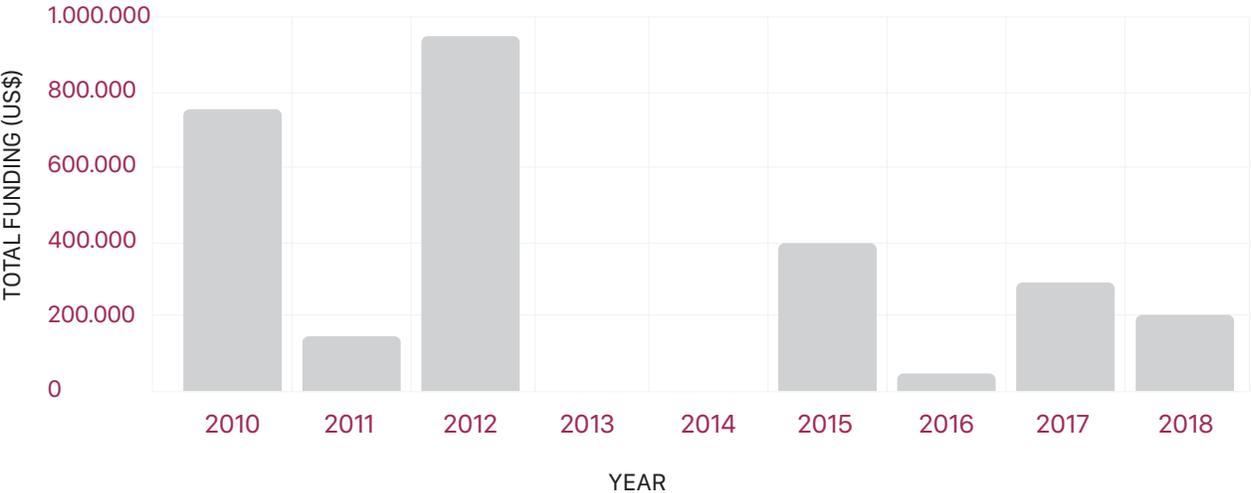
Tax increases may be used to mobilize additional funding after disasters. The effectiveness of this instrument depends largely on the country's tax base, tax compliance, and tax collection capacity. Introducing new taxes is never popular and may be politically costly, especially after a disaster that has directly or indirectly affected a large part of the population. Use of this instrument, however, may pose a significant burden, especially within narrow tax bases. In Albania, for instance, the International Monetary Fund (IMF 2019) reports low tax compliance and a series of tax base–narrowing measures that have eroded revenue-generating capacity, further limiting the use of this instrument.

DONOR AID

Albania would likely look for donor and humanitarian support in the event of a major catastrophe. However, this type of financing is unpredictable, often arrives late (as it may be based on evidence of extensive need), and does not allow governments to plan for rapid disaster response. Donor aid usually does not support government's response to more frequent but less catastrophic events. It also may come as in-kind aid for specific activities not necessarily related to government priorities or as loans that impact the country's fiscal position. **FIGURE 13** provides an overview of the amount of donor aid received in Albania over the last decade. It shows that, for instance, 2010, 2012 and 2015 were years with

the highest donor support provided. This does not correspond entirely to major disasters shocks reported by DesInventar (except for 2010 floods that were among the largest reported). This might mean that the support was provided in the following years or that disaster damages were not reported.

FIGURE 13
Trends in reported humanitarian funding in Albania, 2010–2018 (US\$)



Source: OCHA Financial Tracking Service, <https://fts.unocha.org/countries/3/summary/2019>.
Note: Data for 2019 and 2020 are incomplete as of March 2020 and are therefore excluded from the data extracted from the OCHA database. Donor aid provided after the 2019 earthquake is reviewed separately below.

The case of the Durrës-Mamurras earthquake can illustrate how donor aid was provided to Albania after a major event. According to the resources pledged to Albania in February 2020, the GoA might be able to cover most of the damages through a mix of loans, grants, and in-kind aid. Donors’ pledges were guided by the Post-Disaster Needs Assessment (GoA et al. 2020), which identified US\$1.2 billion as total recovery needs. Donors raised US\$1.29 billion (**TABLE 8**), with some of this amount pledged for specific sectors. More than US\$330 million was pledged in the form of grants and US\$954 million as loans. In addition, US\$3.4 million was offered in kind.

TABLE 8
Funding pledged by the international community for post-earthquake recovery in Albania as of February 2020 (million US\$)

TOTAL GRANTS	TOTAL LOANS	TOTAL IN-KIND	TOTAL PLEDGES
330	954	3.4	1,290

Note: Original values are in Euros.

Significant donor support was pledged to Albania after the 2019 earthquake, but some was fragmented, targeted at specific areas, or provided in-kind; thus this support may entail sizable coordination and operationalization costs, while some pledges might not materialize. The donor support to Albania was offered by around 50 bilateral donors, international organizations, and development partners. Multiple fragmented pledges were offered, including some in comparatively small amounts (US\$50,000 to US\$500,000), which impose high coordination costs. In addition, many of these pledges were directed at recovery of specific sectors—for instance, two of the largest pledges, from the European Commission (EC) and government of Italy, were for education and cultural heritage respectively—and thus might overlap. The in-kind contributions, such as those by Turkey and the United Arab Emirates, will likely require additional efforts to be of use within a national reconstruction approach. Finally, it is important that not all the pledges might materialize which can result in unrepaired assets and infrastructure.

Albania is also eligible for support from the European Union (EU) Solidarity Fund that can provide financing on response to major disasters, including to the EU accession countries. According to the available information, Albania has not accessed the EU Solidarity Fund so far, including for the 2019 earthquake. Since April 2020, the EU Solidarity Fund has also been able to provide support for pandemics.

2.2.2.3. TRANSLATING FUNDS INTO RELIEF, RECOVERY, AND RECONSTRUCTION THROUGH EFFECTIVE PUBLIC FINANCIAL MANAGEMENT

While access to funding to promptly address disasters is critical for a government, it is equally important to consider how the funding translates into relief, recovery, and reconstruction.

Given that government is responsible for a large share of post-disaster costs, it is important that an orderly and responsible public financial management system be in place (World Bank 2019b). This will help achieve the government's objectives of reducing disaster losses and ensuring timely recovery. Disaster Response: A Public Financial Management Review Toolkit (World Bank 2019b) provides frameworks for assessing how a country's public financial management system works after disasters. On the expenditure side, it highlights several important factors:

- Legal and institutional foundations, such as arrangements for mobilizing, appropriating, and executing financial resources prepared in advance
- Frameworks for budget appropriations, and their transparency and accountability
- Financial management controls, including accountability of stakeholders using public funds and capacity to track post-disaster spending
- Public procurement, including its accountability, transparency, and value for money, and frameworks in place for facilitating expedient procurement procedures (World Bank 2019b).

This diagnostic touches upon legal and institutional frameworks, available budget instruments and their regulatory frameworks, and expenditure tracking; the last is a concern for many countries across the world. Data on expenditure for disasters are often incomplete and fragmented; spending after disasters often remains embedded in other budget lines (for instance, operations and maintenance); and local governments might not submit comprehensive expenditure reports. These limitations make identifying and systematically recording post-disaster expenditures challenging. The GoA could be facing similar concerns. Careful tracking of post-disaster expenditure could help achieve more transparency on the use of public funds and shed light on how much the GoA spends on disasters annually. An example of expenditure tracking through budget tagging is in **BOX 7**.

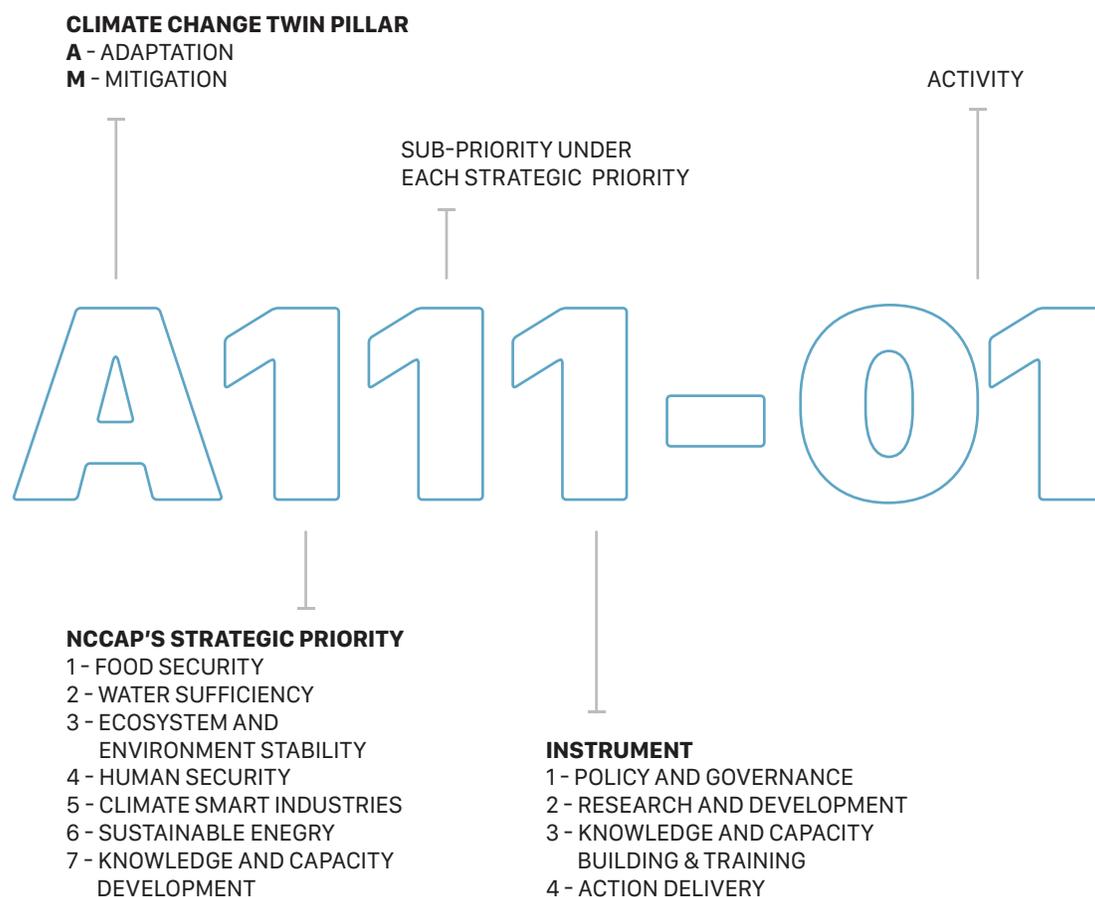
BOX 7

TAGGING CLIMATE CHANGE EXPENDITURES IN THE PHILIPPINES

In 2015, the government of the Philippines started tagging climate change–related expenditures. It has introduced a standardized typology and coding structure that allows tagging of and reporting on relevant programs, projects, or activities. This information is used for various purposes, including identifying financing gaps and determining what further funding should be mobilized by the government to support selected priority areas. **FIGURE 14** shows the coding structure used in tagging climate change expenditures; **FIGURE 15** offers an example of its application.

FIGURE 14

Climate change expenditure tagging: Coding structure



Source: Government of the Philippines, "National Climate Change Expenditure Tagging Typology Code Manual," <https://climate.gov.ph/files/Typology%20Code%20Manual.pdf>.

FIGURE 15

Example of coding structure for climate change–related budget expenditures in the Philippines

ADAPTATION	
SUSTAINABLE RENEWABLE ENERGY	
POLICY AND GOVERNANCE	
A621-01	Incorporate Climate change and climate variability risk factors in assessments of total and seasonal water availability for hydro power generation and water storage
A621-02	Water flow management throughout the hydrological cycle for hydroelectricity generation
A621-03	Design system of incentives for renewable energy host communities and local government units that can be used for sustainable livelihood programs and climate change adaptation measures
A621-04	Change to power systems to cope with shifts in seasonal peak demand results from climate change and climate variability
A621-05	Secure access to water for crops used as bioenergy source
RESEARCH AND DEVELOPMENT	
A622-01	Incorporate impacts of climate change and climate variability on power system reliability assessments
MITIGATION	
SUSTAINABLE RENEWABLE ENERGY	
POLICY AND GOVERNANCE	
M621-01	Strengthen regulatory and institutional framework to support expansion of renewable energy production and use
M621-02	Develop renewable energy project-based and service contracts-based portfolios to encourage potential investors is identified sites
RESEARCH AND DEVELOPMENT	
M622-01	Conduct studies on hybrid systems (e.g. fuel cells, electric vehicle)
M622-02	Conduct survey of renewable energy potential in off-grid areas

Sources: Republic of the Philippines 2015; Government of the Philippines, “National Climate Change Expenditure Tagging Typology Code Manual,” <https://climate.gov.ph/files/Typology%20Code%20Manual.pdf>.

Expedient public procurement in emergency situations is another concern. The GoA has made significant progress in public procurement reforms, but management, transparency, performance, and effectiveness of public procurement require further improvement (World Bank 2017). An effective public procurement process is especially critical after natural disasters and during emergencies, when

waiving of regular procurement rules for the sake of timely disaster response or recovery could lessen the transparency and quality of public works. Among the options for strengthening Albania's procurement system are framework agreements/pre-agreed contracts (for example, for disaster reconstruction) that could increase the cost-effectiveness and transparency of spending.

Another option for stronger and traceable post-disaster budget execution is delivery of funds through pre-established channels. Supporting the poor through pre-established social protection systems is discussed in the subsection below.

BUILDING FINANCIAL RESILIENCE TO SHOCKS THROUGH SOCIAL PROTECTION SYSTEMS

Globally, countries are increasingly turning to their social protection systems to provide direct support to poor households in response to shocks. Social protection has proven an effective means of providing direct support to poor and vulnerable households to help ensure their basic consumption needs are met and to support investments in human capital. Increasingly, these programs are being used to protect poor households from a sudden loss of income and the rising costs of essential goods and services in the aftermath of a crisis, thereby helping them to withstand, manage, and recover from shocks (Bowen et al. 2020). In some countries, social protection programs, specifically social assistance, are becoming a pillar of the response to disasters and climate change and are complementing the historic reliance on externally provided emergency response. This approach, which uses established national systems with robust internal controls and accountability, is able to channel support to households quickly, as soon as a shock has occurred. The extensive use of social protection in response to shocks is evidenced by the ongoing COVID-19 pandemic: almost every country in the world has harnessed its social protection programs to protect people from the negative economic consequences of the pandemic (Gentilini et al. 2020).

The Albanian social assistance system consists of both cash benefits and social services. The main cash programs are the Ndihma Ekonomike (NE) program and disability assistance. The NE program is the main poverty-targeted benefit; disability assistance is a categorical benefit provided irrespective of the economic status or degree of disability. The national government finances these programs; local governments implement them, based on centrally designed eligibility criteria; and local councils make the final decisions. The government has been reforming these programs to improve their equity and efficiency. In the first phase, this reform included developing and rolling out a management information system for the NE through which applicants' data are cross-checked with external databases, and adopting a new poverty-based targeting system that uses a unified score formula²². The government is currently reforming the disability assistance to change the basis for determining disability status.

While the NE was not designed to respond to shocks, the program has featured in the government's response to COVID-19. First, the government doubled the benefit for all beneficiaries, and for those who applied for the NE until March 10, 2020, the GoA doubled the benefit from April 1 until the end of June. Second, the government adopted a number of changes in operational procedures to limit the need for beneficiaries to present in person to apply or reapply for benefits; applying electronically or through the mail is now possible. As a result of these changes, the number of NE beneficiaries increased by 11

²² Eligibility for the NE is determined using a unified scoring formula, which is based on a proxy means test model.

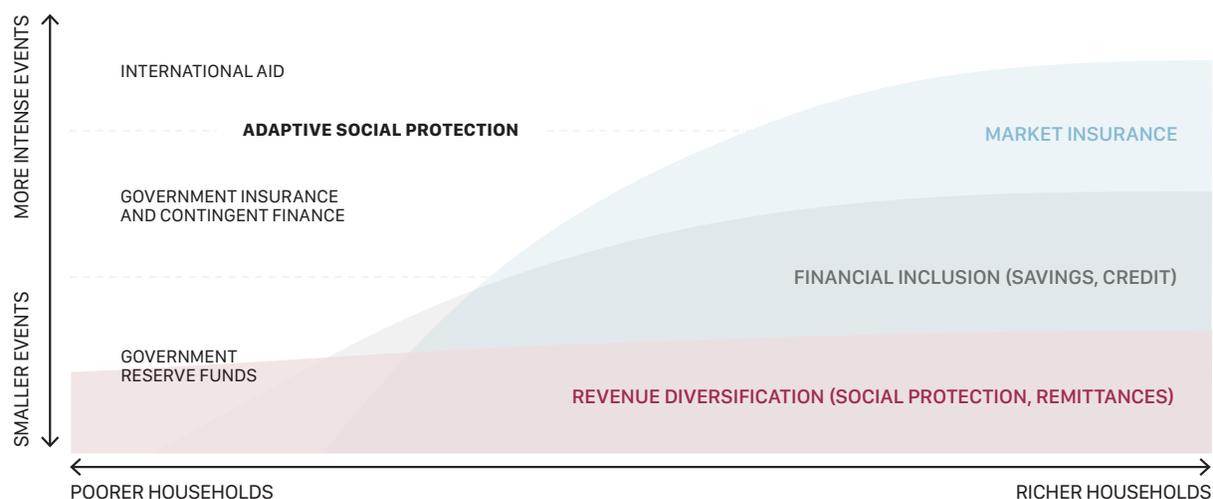
percent. In April 2020, the government provided a one-off benefit to 4,524 families who had applied for NE between July 2019 and April 2020, but who were no longer benefiting from it. In contrast, the NE was not expanded to additional households who were negatively affected by the pandemic. This was largely because the eligibility for the program is based on an assessment of chronic poverty. While it is possible to change this eligibility criterion, the speed of the response did not allow it in this case. A review is underway to identify these and other design and implementation issues that could support the use of the NE as part of the country's disaster response architecture.

Globally, experience shows that social assistance programs can be scaled up rapidly, provided that the operational procedures are set out in advance and supported by adequate funding.

Social assistance programs can be scaled up in two ways: (i) by providing additional support (by increasing the number of payments or the amount of each payment) to existing beneficiaries either before or during a disaster (vertical scale-up), or (ii) by adding newly eligible beneficiaries who have become temporarily vulnerable due to disasters (horizontal scale-up). (BOX 8 provides an example of a social safety net in Kenya that scales up both ways). To enable a rapid scaling up of a social assistance program, the eligibility criteria, targeting modality, outreach, and payment systems need to be set out in advance, as does the necessary surge capacity to support the extended reach of a program. In addition, such an expansion is only feasible if adequately funded with rapidly disbursing funds. That is, disaster risk financing instruments can be channeled to a social assistance program that would allow these funds to rapidly reach households in need of support. These programs can be used to respond to small(er) shocks, such as localized droughts or floods, through contingency budgets that are held within a program, sometimes at decentralized levels. These programs can also be expanded in response to major events, such as widespread drought in Ethiopia and Kenya and floods in Pakistan. The possible use of different risk financing instruments is set out in **FIGURE 16**.

FIGURE 16

Risk finance strategies for households and governments and role of social protection



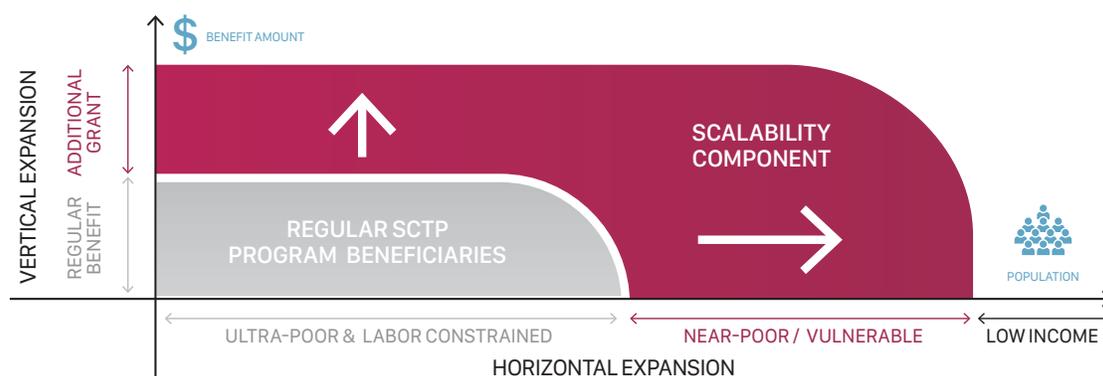
Source: Hallegatte et al. 2016.

Note: Instruments targeting households are in blue; instruments for governments or local authorities are in green.

BOX 8**HUNGER SAFETY NET PROGRAM OF KENYA**

Kenya is highly vulnerable to disaster shocks: 3–4 million people are affected by disasters each year, with the poor hit especially hard, and the country is subject to high economic and fiscal impacts. The Hunger Safety Net Program (HSNP) is a flagship example of a government social protection scheme aimed at supporting poor and vulnerable households. It was put in place in the four most arid counties in northern Kenya by the National Drought Management Authority within the Ministry of Devolution and Arid and Semi-Arid Lands, with initial assistance from the UK Department for International Development (DFID) and the World Bank. HSNP currently provides regular cash transfer payments to just over 100,000 of the poorest households in these counties.

In line with the objectives of the National Safety Net Program, the second phase (2012–2016) of HSNP introduced a scalability mechanism with the objective of being able to expand payments during crisis (see FIGURE 17).

FIGURE 17**Social protection scalability mechanism**

Source: World Bank.

Note: SCTP = scalable cash transfer program.

This involved registering all households in the four counties in order to provide them with bank accounts. The vast majority of these households now have active bank accounts, meaning that HSNP can make electronic cash transfers of any amount to any proportion or selection of the registered households in the four counties.

Over the last four years, the mechanism has been triggered over 20 times and provided one-month emergency payments to between 10,000 and 191,000 households (beyond the routine beneficiary case load). The HSNP payment infrastructure is available for any other government body, donor, or nongovernmental organization seeking to deliver emergency or regular cash transfer payments within the four existing HSNP counties.

3. FUNDING GAP ANALYSIS AND RISK FINANCING STRATEGIES

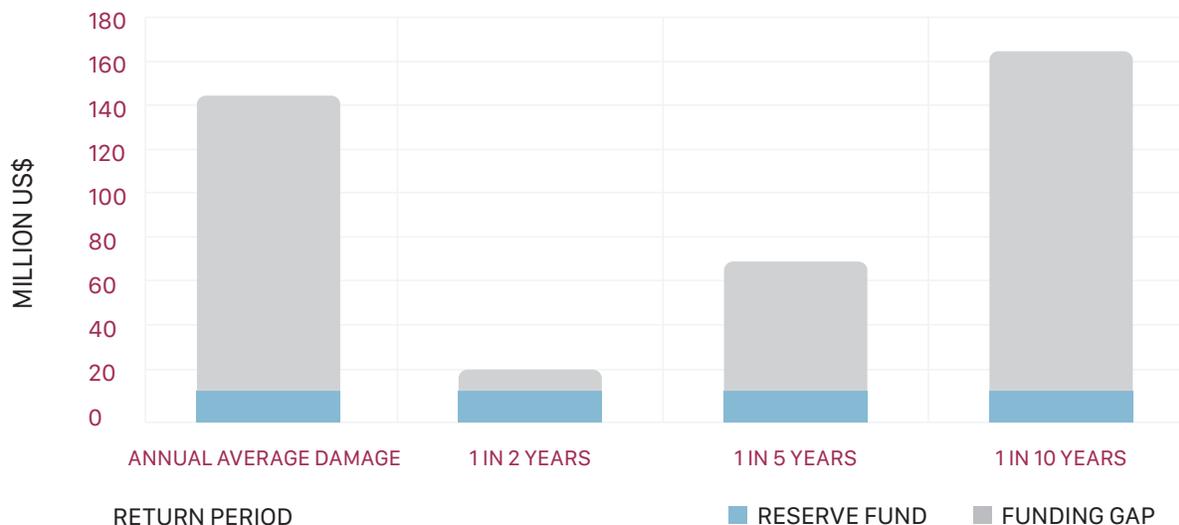
Lack of prearranged financing and planning may result in delays in disaster response and ineffective use of public budget, constraining the GoA to rely primarily on ex post sources of funds. The GoA has established several contingency funds, including the Reserve Fund of the Council of Ministers (the remaining funds are partially or not yet operationalized). All are on-budget accounts and do not accrue; the Reserve Fund can be used for multiple purposes, and hence might be depleted in case of a major disaster or if a disaster happens close to the end of the fiscal year. Budget reallocations are possible, but these might have a detrimental impact, as they divert resources from planned projects and operations and management budgets; delays associated with mobilizing budget reallocation also entail a cost. Donor support is uncertain, is associated with delays and coordination costs, and might come in kind and fragmented. Donors also tend to offer support after large and well-publicized disasters and not for more common recurring events; and they tend to target support at specific areas. Having prearranged instruments and plans in place can enable the GoA to implement a more timely and cost-effective disaster response. The analysis below illustrates a basic framework for disaster risk financing based on the quantitative disaster impact assessment presented above.

With the current prearranged funding in place (almost US\$14 million in the Reserve Fund), the funding gap is estimated to exceed on average US\$130 million per year. The funding gap is the difference between the available government budget and the probable loss for a given event size (or return period). For instance, if an event occurred comparable to the 2010 floods, which according to DesInventar caused damages of about US\$45 million (scaled to 2018 GDP), the Reserve Fund would be completely exhausted and a US\$31 million funding gap would remain. According to the AIR model output and World Bank assessment, such a flood event corresponds to a 1-in-5-year to 1-in-10-year return period loss event, which means that there is a 10 to 20 percent probability of losses greater than this occurring in any given year. This does not mean that events of such size occur only every 5 or 10 years; in fact, such events could happen in subsequent or even the same year, although the probability of that is small.

The funding gap graph (FIGURE 18) depicts the difference between the expected damages and the Reserve Fund for the combined earthquake and flood risk, up to a 1-in-10-year return period. The Reserve Fund of US\$14 million is static; therefore, as the losses increase (i.e., with higher return periods), the funding gap will increase. A 1-in-2-year return period corresponds to the median of the damages distribution, and the presence of a funding gap here suggests that a funding gap is likely every other year on average unless the Reserve Fund is increased or new instruments are put in place.

FIGURE 18

Funding gap across return periods, assuming Reserve Fund at US\$14 million and damages from the combined risk of earthquakes and flooding



Sources: AIR Worldwide and World Bank DRFIP staff estimates.

Note: The model output from AIR is based on industry data, which include commercial and residential assets and exclude public assets. For public assets alone, the damages would be lower. Hence, the funding gap should be interpreted with caveats, as not all of the above losses are likely to be the government's contingent liabilities.

Building on the indicative disaster damage distribution presented in section 1.2, an analysis was undertaken comparing costs and potential coverage provided by different risk financing strategies. When the GoA develops a Disaster Risk Finance Strategy, it will be important to decide on the level of disaster-related contingent liabilities that the government—as opposed to the private sector—is responsible for. For the purposes below we assume the GoA takes financial responsibility for all losses, which is an oversimplification.

The analysis illustrates the following:

1. Different risk financing instruments have different costs attached to them, such as the opportunity cost of keeping reserves, or up-front costs for insurance premiums.
2. Although keeping large reserves entails an opportunity cost, having no or too limited resources available can cause unnecessarily high disaster costs if a major event occurs and financing has to be mobilized through budget reallocation and borrowing or donor aid.
3. Insurance is suited for relatively extreme and rare events, that is, events occurring less frequently than every 5–10 years, on average, such as severe earthquakes. It will be more cost-effective for insurance to cover only a certain share of the damages (beyond which are damages for very unlikely events that can be covered by government resources or donor aid). The insurance is used to illustrate a risk-layering strategy that can provide the GoA protection against more severe earthquakes (similar to the event in 2019).

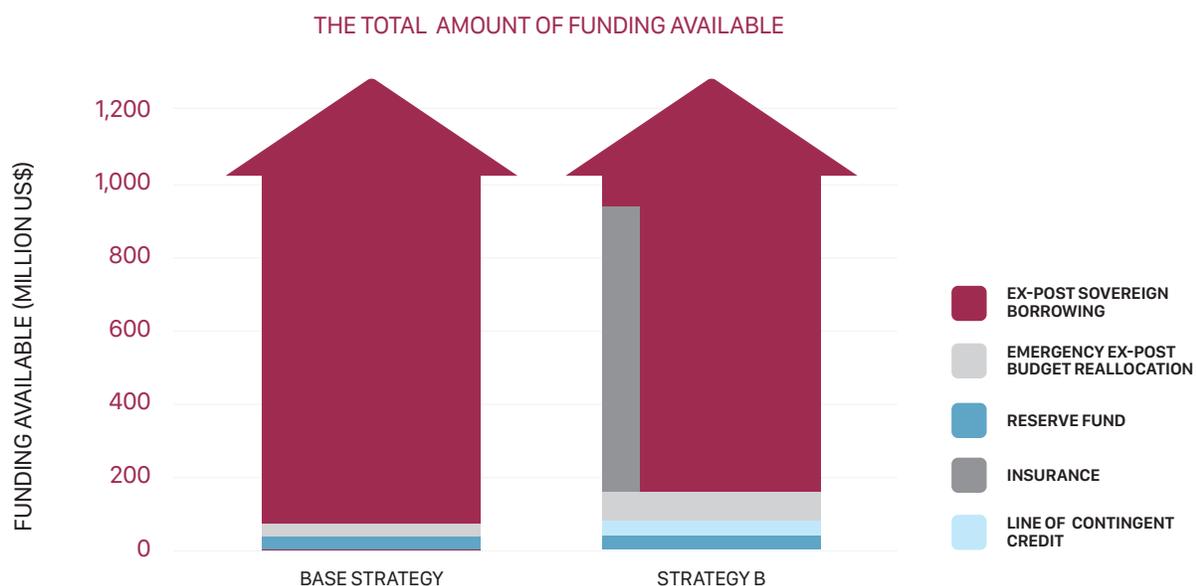
A simple example, explained below and illustrated in FIGURE 19, shows how GoA could develop a strategy with a balance of risk retention and risk transfer, and compares this strategy to the existing (base) strategy.

- Strategy A (Base Strategy).** Under the current situation, the Reserve Fund of US\$14 million is dedicated for multiple purposes (in 2020, a large share of it was used to cover the exceptional costs of COVID-19), minus a small administrative cost to maintain the fund; and budget reallocation is available (the amount is uncertain, but in the example an estimated additional US\$14 million can be mobilized through reallocation).
- Strategy B.** There is a dedicated reserve fund of US\$14 million with small administrative costs. In addition, it is assumed that up to US\$14 million of budget reallocation (similar to Strategy A) is possible. A contingent credit instrument is also available (a World Bank CAT DDO is used for illustration purposes; its maximum amount for Albania would be around US\$40 million). Further, it is assumed that single-peril insurance is purchased to cover against earthquakes, with the attachment set such that insurance pays out when damages from an earthquake exceed around US\$70 million; this is between the 1-in-5-year and 1-in-10-year earthquake loss as set out in section 1.2. Insurance would cover damages above those covered by the other three funding instruments (reserve fund, budget reallocation, and contingent credit). The insurance exhaustion point has been set at a 1-in-50-year earthquake loss. The insurance is assumed to be purchased with a 20 percent ceding share, i.e., if there was a US\$10 million loss in the insurance layer, the insurer would pay out US\$2 million.

Both strategies assume that once the prearranged instruments are exhausted, the GoA utilizes ex post sovereign borrowing to finance any funding gap (shown in dark red in FIGURES 19 and 20)

FIGURE 19

Disaster Risk Financing: Strategy A (Base Strategy) vs. Strategy B



Under the Base Strategy, the GoA will likely resort to borrowing and requesting donor aid after even moderate disasters. Assuming that the current Reserve Fund is fully available for disasters and the risk profile of disasters is as described in section 1.2, there is more than a 50 percent chance this fund will be exhausted in any given year. In this case, budget reallocations would be needed to complement the Reserve Fund. It is assumed that the government will be able to mobilize emergency borrowing (or donor aid) to cover the remaining costs. If the Reserve Fund is assumed to contain only half of its original amount when a disaster happens (as in 2020), there is a greater chance that it will be exhausted in any given year. If a disaster happens close to the end of the year, the reserve fund might already be entirely exhausted.

In the case of Strategy B, the GoA will have a wider range of risk financing options that can be triggered after major disasters, including earthquake insurance to cover some of the cost from the most severe events. While there is the same chance of exhausting the reserve fund in a given year, the fund is dedicated and fully available every given year. There is around a 20 percent chance that the contingent credit of US\$40 million is exhausted in the next year. At return periods more severe than this, single-peril earthquake insurance is in place to protect the budget against some of the high-impact catastrophic events. As the earthquake losses increase in magnitude, the benefit of having insurance protection increases (see **FIGURE 20**).

The graphs in **FIGURE 20** illustrate the drawdown of instruments for the two strategies for annual average damage (top panel), 1-in-5-year return period events (middle panel), and 1-in-50-year return period events (bottom panel). The dark red layer could be interpreted as the funding gap, given this is the size of damages funded by ex post sovereign borrowing.

FIGURE 20-1
Use of different instruments under two strategies for ANNUAL AVERAGE DAMAGE

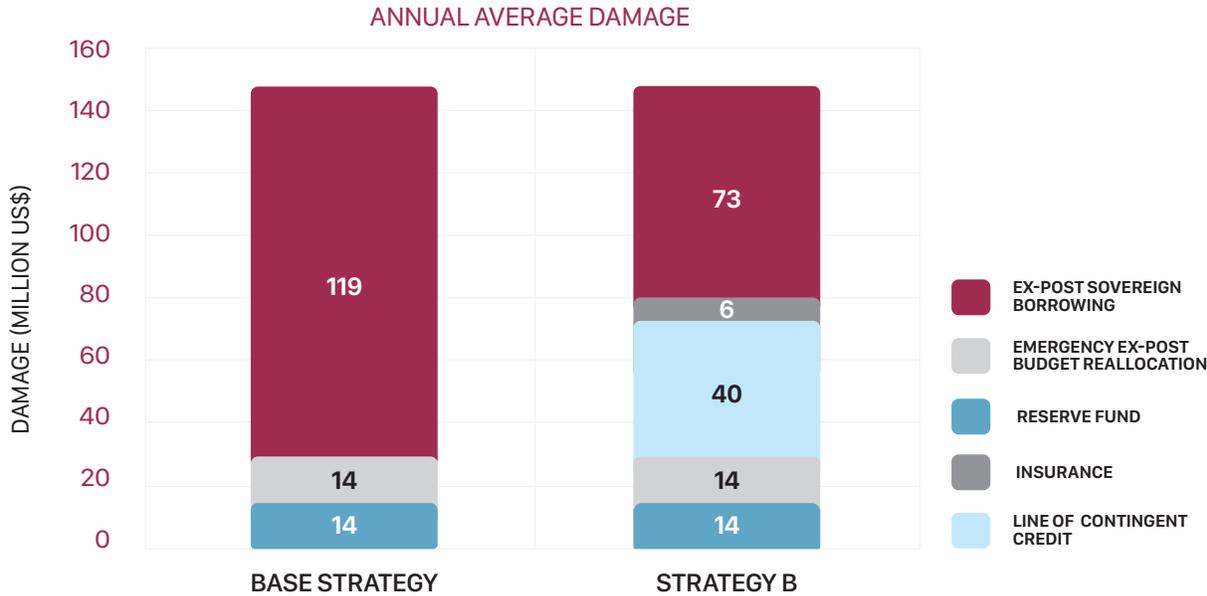
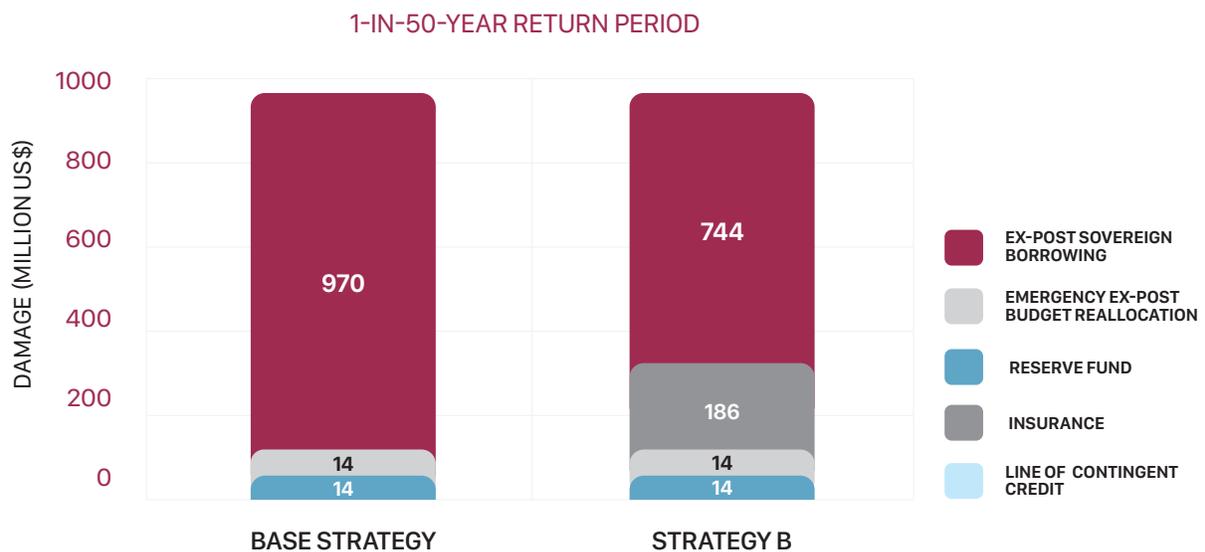
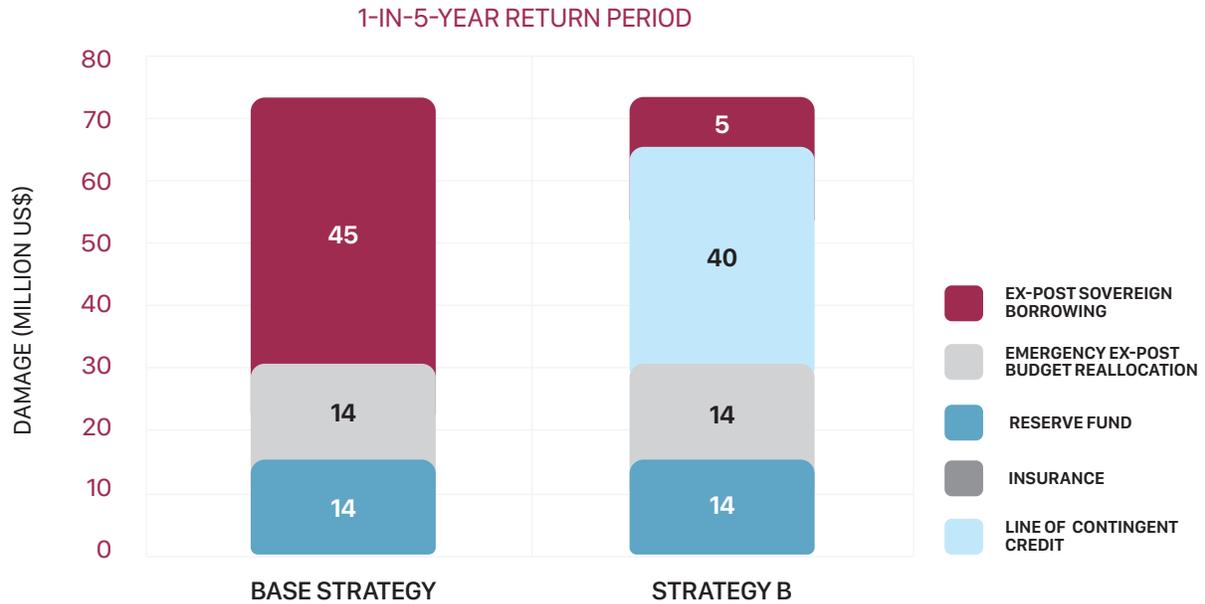


FIGURE 20-2

Use of different instruments under two strategies for 1-IN-5-YEAR RETURN PERIOD (top panel), and 1-IN-50-YEAR RETURN PERIOD (bottom panel)



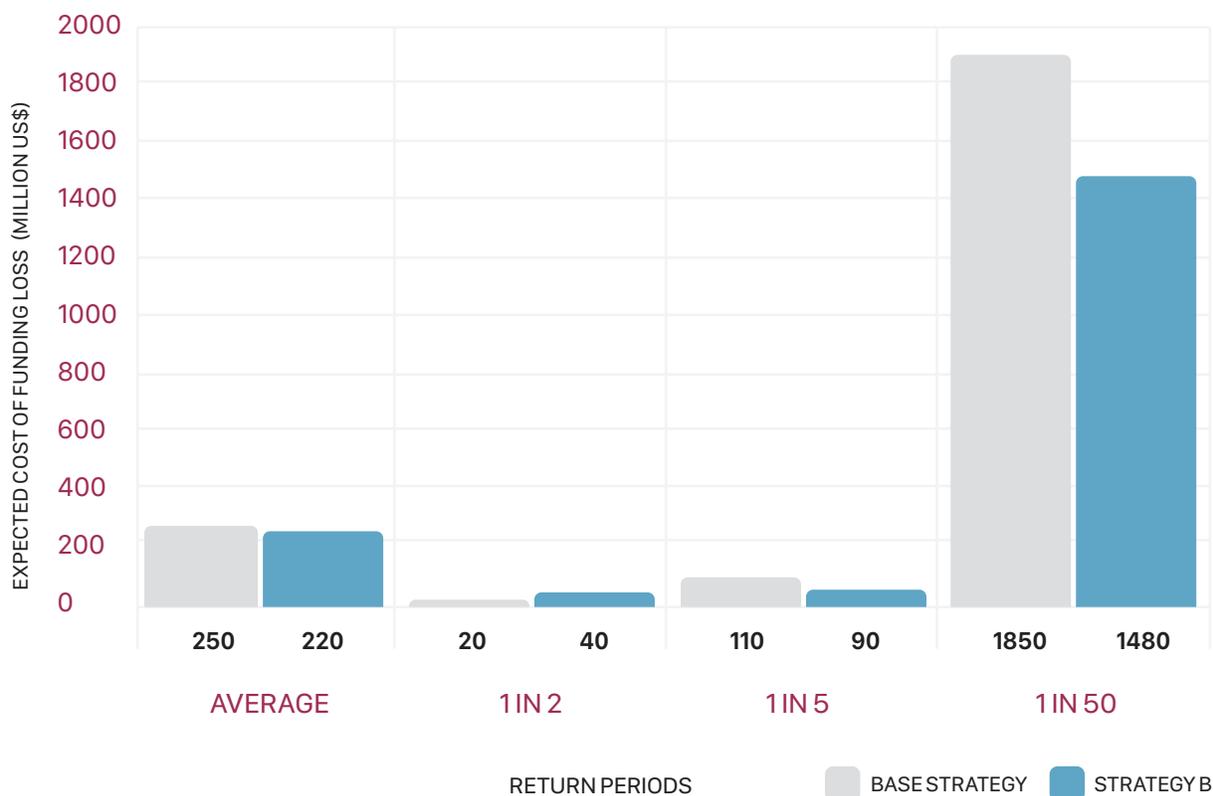
Source: World Bank DRFIP staff estimates.

Note: The average damages are similar to the 1-in-10-year event damages because the larger sizes of possible extreme earthquake losses are skewing the average. The axis scale varies by graph.

For medium to large events, the opportunity cost is lower for Strategy B than for Strategy A, showing that the higher up-front costs of Strategy B might result in savings if the worst happened. For frequent events (e.g., those with a 1-in-2-year return period), the Base Strategy allows minor savings by avoiding some up-front costs, but for more severe events (such as a 1-in-50-year disaster), it could be almost 25 percent more expensive (see **FIGURE 21**). This result reflects Strategy B’s higher up-front costs—for arranging the contingent credit and paying the insurance premium—and its ability to mitigate the financial impact of larger disaster costs as the premium leverages additional capital. These results show that Strategy B is more cost-effective for major disasters. This analysis is for purposes of illustration and is indicative only. For the GoA to make decisions, the analysis would need to be further refined, with better disaster risk data, better information on available funding in risk retention instruments, and refinement of several economic assumptions underlying the analysis, such as interest on sovereign debt, discount factor, and the cost of insurance.

FIGURE 21

Expected opportunity cost of funding losses for disasters of different magnitudes for each strategy (based on initial indicative assumptions)



Source: World Bank estimates.

Note: It is likely that frequent events might not trigger insurance and would therefore be more expensive under strategy B. Strategy B presents significant savings for less frequent events.

The GoA would achieve cost savings by covering the low-risk layer with a reserve fund dedicated to disasters and by having insurance in place for major disasters. Insurance has up-front costs because catastrophe insurance premiums are set by taking the annual expected loss and adding a loading factor, which includes administrative, operating, and start-up costs. Because the premiums are higher for more frequent payouts, insurance should be considered for relatively rare events. However, as mentioned above, insurance against very unlikely catastrophic disasters might also not be cost-effective; such cover is becoming less affordable as the disaster impacts insurers must account for become increasingly uncertain. At the same time, insurance can either be a potential source of funding for the budget or act to reduce government liabilities after disasters by covering households, farmers, or businesses (or specific economic sectors). In addition, having a fund dedicated to disasters that can accrue could alleviate immediate financing needs after medium and larger events, and could provide support for potential further developments of the pandemic. The GoA could also explore other budgetary instruments for immediate needs, such as contingent credit that could bridge the gap between the Reserve Fund and insurance. Section 4 provides more details on potential instruments and activities that could be explored to strengthen Albania's financial resilience to natural disasters.

Disaster risk finance does not replace but complements risk reduction. Risk reduction could decrease the total expected damages under each of the above strategies. Quantifying costs and benefits of risk reduction is a task for a separate study, but examples from multiple case studies show that investing in infrastructure resilience results in cost savings. Hallegatte, Rentschler, and Rozenberg (2019) indicate that every US\$1 invested in infrastructure resilience could result in US\$4 in benefits, helping to mitigate disaster impacts and disruption of critical public services. It could also lower the cost of insurance by reducing the required cover or lessening the risk that insurance will be triggered.

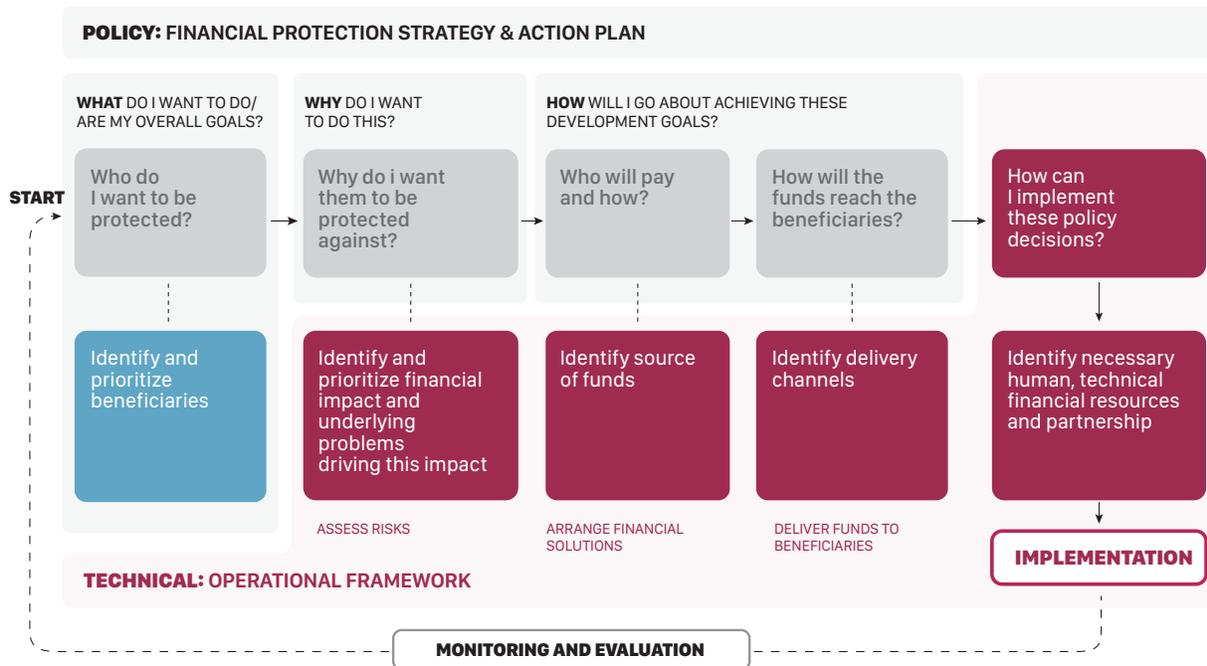
4. OPTIONS FOR CONSIDERATION

Some preliminary options for consideration, based on the findings of this diagnostic and intended to be refined according to the priorities of the GoA, are presented below. Each of the options can contribute to strengthening financial resilience to natural disasters and crises.

- Developing a comprehensive Disaster Risk Finance Strategy.** Determining priorities in disaster risk financing through a working group consisting of different ministries, agencies, and/or wider stakeholders is the starting point. This step will help stakeholders better understand how much financing is needed and who will benefit from it. Based on this information, it will be possible to determine an optimal risk-layering approach to address natural disasters and crises of different severities and frequencies and to meet different post-disaster needs as they arise. The GoA could explore how to combine funding needed for frequent disasters, for medium shocks such as the floods of the past 15 years, and for catastrophic events. Developing this approach based on accurate disaster risk information can ensure different sources of funds are combined in a cost-effective manner. Through this approach, the GoA could formalize the way that existing and new risk financing instruments work together (for instance, what sources are drawn down first). To explore its priorities, the GoA could consider following the proposed set of questions shown in **FIGURE 22**.

FIGURE 22

Decision process for disaster risk financing priorities



Source: World Bank, "Disaster Risk Finance: A Primer—Core Principles and Operational Framework," <https://www.financialprotectionforum.org/sites/default/files/DRF%20Primer.PDF>.

- **Developing a contingency plan for natural disasters during and after the COVID-19 crisis.**

Disasters will happen regardless of pandemics, and the 2019 earthquake already requires sizable recovery and reconstruction efforts. The GoA could consider developing a contingency plan to address the costs of natural disasters that might happen during the COVID-19 crisis (or its third wave), as well as in the post-crisis period of fiscal constraints and economic slowdown. Potential challenges that this plan will have to cover include limited fiscal space (e.g., exhausted reserve funds and hampered borrowing capacity) and increased pressure on insurance and capital markets.

- **Improving the understanding of risk.** To make informed decisions about allocating financing ex ante and gain understanding of the fiscal risks disasters pose, the GoA could explore these steps:

- **Understanding and effectively using available data.** According to ASIG, which is mandated to make decisions on the collection, processing, and updating of geospatial information from public authorities in Albania, relevant data are available, such as an exposure catalog of public and private assets. The GoA could use this catalog to better understand what assets and people are exposed to disasters, assess its contingent liabilities due to disasters, and define the priorities in disaster risk financing. However, these data are currently not used for risk financing decision-making. Other data are also available or currently being generated, usually owned and sometimes hosted by other ministries and agencies; for example, flood hazard maps are currently being developed by the National Agency of Water Resources Management (NWRA). The World Bank is supporting the GoA in building a catalog of existing data; this catalog will help to determine what data can be used for financial decision-making and to identify existing gaps.

- **Assessing disaster risk and contingent liabilities.** As a first step, the GoA could work on assessing fiscal risks and contingent liabilities due to natural disasters, comparing the existing exposure data to disaster scenarios. To further define contingent liabilities, the results could then be compared against the cost-sharing arrangements and explicit regulations in place that define how much support the GoA is obliged to provide after disasters (e.g., compensations to the affected population, support to businesses or farmers and specific sectors, such as energy). This work can be informed by catastrophe modeling of potential disaster impacts provided by AIR Worldwide through the World Bank; this will help refine the assessment. Both steps, in whatever degree of granularity, will help assess the expected spending from the government budget caused by these impacts.

- **Improving post-disaster expenditure tracking,** including integrating tracking of spending (disaggregated by response, recovery, and reconstruction) into a government financial information system. The expenditures tracked could include disaster expenditures that usually remain embedded in the budget, such as in operations and maintenance spending reported as regular budget categories. Tracking could cover spending from reserve funds and document budget reallocations. Given the extent of the COVID-19 impact and budget spending on the response and recovery, the GoA could also consider reviewing how much was spent, what the sources were, and how the decisions were made. This step would help clarify the gaps and the policies that could be put in place to improve the process of disaster risk financing in the future.

- **Further clarifying local-national government cost-sharing**, including the expected cost to be financed by each level for reconstruction of public assets and infrastructure, and the determination of who pays for improvements after disasters. This step could involve introducing a policy framework for identifying contingent liabilities due to construction of new assets and infrastructure. This framework could include a provision to specify the responsibilities of different levels of government and agencies/owners for these assets and infrastructure. Risks identified through these frameworks could feed back to the relevant government office to inform the fiscal risk estimates. This step might also include explicitly identifying what the GoA could be expected to cover to ensure realistic expectations (across both the government and population).

- **Optimizing the use of public budget through the introduction of new risk financing instruments.** This option could involve either retaining or transferring risk, as follows:

- **Risk retention to cover low layer of disaster risk.** To optimize the use of public funds, engage private capital in disaster recovery and reconstruction, and increase efficiency of post-disaster financing, the GoA could consider several options:

- **Establishing a dedicated disaster reserve fund (potentially building on the Albanian Solidarity Fund, which is not yet operationalized) to provide immediate liquidity after disasters and a potential second wave of COVID-19.** It is critical that such a fund is effective, timely, and well-managed. Toward that end, the following areas should be defined: (i) explicit purpose and beneficiaries; (ii) funds' legal and institutional frameworks; (iii) its governance, including transparency and accountability principles; (iv) its disbursement mechanism; and (v) the financing structure (ensuring sufficient funding to cover the intended share of estimated disaster impacts). Introducing this fund as an accruing account that provides immediate support for response—and potentially a larger amount of funding for recovery/reconstruction activities—could help the GoA better prepare for major disasters and crises and carry out timely response and recovery activities. Such a fund could link to other disaster risk financing instruments (for instance, sovereign insurance) and local funds, becoming a center of public financial management of natural disasters and helping to increase transparency. At the same time, smaller events could continue to be financed from small agency-level contingency funds or agencies' regular budgets to ensure the dedicated reserve fund is sustainable and not exhausted each year.

- **In view of decentralization efforts, supporting creation of a risk-sharing facility for local governments to pool and share disaster-related costs.** Establishment of such an instrument could benefit from lessons learned from the New Zealand Local Authority Protection Programme Disaster Fund (LAPP) and the challenges LAPP had to overcome after the Canterbury earthquakes. Among the benefits of such a pool is its ability to spread the risk while increasing the financial capacity of local governments and decreasing their reliance on budget transfers after disasters. This pool could be established and managed by the local governments, which could access risk transfer mechanisms to protect against more severe events or link to the national reserve fund for additional support.

▪ **Risk transfer to prepare for catastrophic events.** This option could include mobilizing private sector to address post-disaster costs, for instance, through the following:

• **Adopting and implementing the earthquake insurance law to close the catastrophe protection gap for households and reduce government contingent liabilities.** The context for this option is growing contingent liabilities from compensation to households. Gradual introduction of the mandatory insurance could help increase penetration, build trust in the scheme, and reduce government contingent liabilities due to natural disasters. Some positive evidence of growing demand is already in place, with over 5,000 households covered by insurance after the 2019 earthquake). To support the introduction of this law, the GoA could consider reviewing current policies on post-disaster compensations to ensure they do not challenge the insurance uptake (for instance, by ensuring that only the low-income population can benefit from the compensations and that compensations do not exceed insurance payouts). The GoA may also want to explore the option of supporting households affected by other types of disasters, such as floods.

• **Exploring public asset insurance or sovereign insurance for budget support.** According to the Organisation for Economic Co-operation and Development and the World Bank, damage to public assets and infrastructure is one of the largest drivers of disaster losses, while disruption to public services paralyzes the affected population and livelihoods (OECD and World Bank 2019). Underinsurance of public assets means a longer post-disaster reconstruction period and a greater impact of disaster on the affected population and economy overall. The GoA could explore sovereign insurance to protect budget against major events. The product could also be structured to cover future pandemics, but it is questionable if such a cover could be obtained at an affordable price in the short term.

• **Exploring options to protect rural population with focus on smallholder farmers.** Given the large number of smallholder farmers in Albania and their significant contribution to the country's economy, the GoA could consider strengthening their financial resilience to natural disasters. The GoA could focus on weather-related events that usually cause large impacts on the agricultural sector and that could lead to high government liabilities because of underinsurance. The government could consider insurance administered at the individual level or administered through local municipalities (learning, for instance, from CADENA catastrophe insurance in Mexico; see World Bank [2013]).

• **Strengthening resilience of small and medium enterprises to natural disasters.** Businesses in Albania have faced significant disaster impacts, including after the 2019 earthquake and the GoA has covered a large share of these costs by providing support from the budget. Increasing the resilience of the economy to natural disasters could help reduce the GoA's contingent liabilities due to natural disasters or explicitly set the amount of such liabilities up front. Relevant measures include targeted government support, such as government guarantee schemes that are put in place to be activated after major disasters (with criteria for supporting businesses determined beforehand) to stimulate provision of post-disaster loans. Other measures include promoting insurance solutions for businesses that target small and medium enterprises, particularly in view of the impact of both COVID-19 and the 2019 earthquake.

■ Strengthening infrastructure and social protection systems to become shock-responsive:

- **Addressing disaster impact on the poor and vulnerable.** Evidence shows that existing social protection can be used effectively to channel funds quickly and securely to poor households negatively affected by shocks. Households can then use the funds to meet a range of basic needs. This option requires setting out the operations procedures in advance. The GoA could plan for the measures to strengthen social protection based on findings by the World Bank, which is assessing the adaptability of Albania’s social protection schemes to disasters and crises. These measures would support people at risk of falling into poverty or provide additional assistance to poor and vulnerable people affected by disasters.
- **Addressing disaster impact on the infrastructure and critical services.** History has evidenced devastating impacts of disasters on infrastructure (for instance, drought on the power sector). Among GoA’s mandates is to mitigate the impacts of such events on the population, which also means stepping in to share disaster costs. Designing infrastructure and critical services to be more risk-resilient is important to manage better or reduce such costs on the public budget. Financial resilience complements broader disaster resilience. For example, the former could include adopting a financial solution for the power sector, given its criticality for the country and its vulnerability to weather-related hazards. Establishment of a risk-sharing facility would allow the power sector to manage volatility in production due to low-rainfall years more effectively and reduce its reliance on budget transfers.

TABLE 9 gives an indicative time frame for implementing the options and lists key responsible stakeholders. This time frame also considers the current constraints posed by COVID-19.

TABLE 9

Indicative time frame for implementing options and responsible government agencies

OPTION FOR CONSIDERATION	TIME FRAME ^a	KEY RESPONSIBLE STAKEHOLDERS
DEVELOPING A COMPREHENSIVE DISASTER RISK FINANCE STRATEGY AND CONTINGENCY PLAN FOR NATURAL DISASTERS DURING AND AFTER THE COVID-19 CRISIS	SHORT TERM	MINISTRY OF FINANCE AND ECONOMY IN COORDINATION WITH OTHER STAKEHOLDERS
IMPROVING THE UNDERSTANDING OF RISK	SHORT TO MEDIUM TERM	MINISTRY OF FINANCE AND ECONOMY, TREASURY, NATIONAL CIVIL PROTECTION AGENCY, ASIG
OPTIMIZING THE USE OF PUBLIC BUDGET THROUGH THE INTRODUCTION OF NEW RISK FINANCING INSTRUMENTS	MEDIUM TO LONG TERM	MINISTRY OF FINANCE AND ECONOMY, ALBANIAN FINANCIAL SUPERVISORY AUTHORITY, NATIONAL CIVIL PROTECTION AGENCY, LOCAL GOVERNMENTS, AND MINISTRY OF INTERIOR–DIRECTORATE OF LOCAL AFFAIRS AND PREFECTURES
STRENGTHENING INFRASTRUCTURE AND SOCIAL PROTECTION SYSTEMS TO BECOME SHOCK-RESPONSIVE	SHORT TO LONG TERM	MINISTRY OF FINANCE AND ECONOMY, MINISTRY OF HEALTH AND SOCIAL PROTECTION, MINISTRY OF INFRASTRUCTURE AND ENERGY

^a **Short term** = less than one year; **medium term** = less than three years; **long term** = more than three years.

ANNEX 1. OVERVIEW OF THE DOMESTIC INSURANCE MARKET

Albania is one of the smallest insurance markets in Europe, with gross written premiums in 2018 of ALL 16.9 billion (US\$154 million) from both the life and non-life insurance sectors. Insurance penetration has been growing in the last 10 years, albeit from a very low base, from 0.65 percent in 2008 to 1.05 percent in 2018. Despite this growth of premiums, the insurance sector in Albania remains small both in absolute terms and compared to peer countries in the region (TABLE 10). Insurance premium per capita is low, at about US\$54, putting Albania behind other countries in south-eastern and central Europe. For example, Albania's premium per capita is lower than Kosovo's (US\$61), North Macedonia's (US\$92), and Montenegro's (US\$164). Faster development of the sector has been hindered by lax insurance regulation, low disposable incomes, a poor industry record of claims performance, and a lack of trust in insurance among the public (World Bank 2014).

TABLE 10

Premium volume in Central and Eastern European countries, 2018

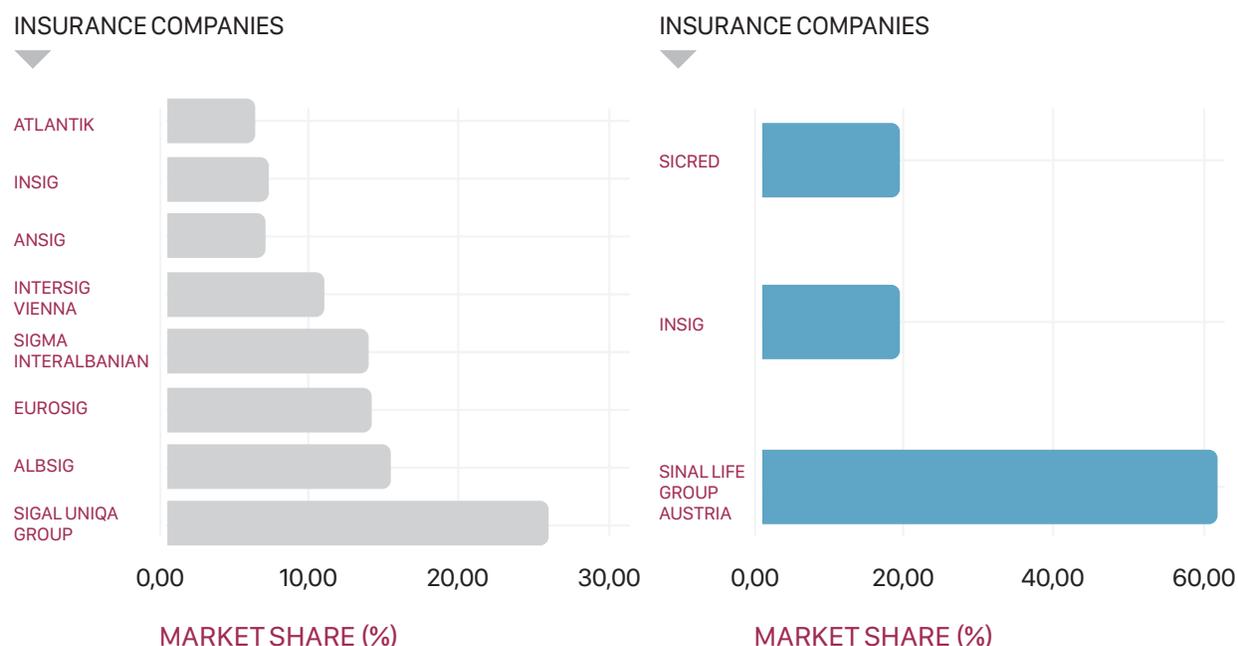
COUNTRY	GROSS WRITTEN PREMIUM (MILLION US\$)	GROSS WRITTEN PREMIUM/GDP (PERCENT)	GROSS WRITTEN PREMIUM/PERSON (US\$)	RATIO OF LIFE INSURANCE PREMIUM TO MARKET TOTAL (PERCENT)
BULGARIA	431	2.16	123	20.1
ESTONIA	1.526	2.35	217	17.59
HUNGARY	652	2.15	495	17.3
CROATIA	3.761	2.43	385	46.56
KOSOVO	111	1.38	61	3.21
LATVIA	893	2.56	462	19.21
LITHUANIA	1.037	1.95	372	28.28
MONTENEGRO	103	1.9	164	17.54
NORTH MACEDONIA	190	1.5	92	16.82
POLAND	17.075	2.94	450	34.91
CZECH REPUBLIC	7.118	2.95	672	36.27
ROMANIA	2.567	1.07	131	20.7
SERBIA	998	1.97	143	23.81
ALBANIA	157	1.05	54	6.75
SLOVAKIA	2.608	2.45	479	46.53
SLOVENIA	2.765	5.1	1.337	30.61
AVERAGE		2.15	361	33.56

Source: AFSA 2018.

By the end of September 2019, there were 12 companies operating in the insurance market, of which eight were non-life insurers and four life insurers. Foreign-owned companies (four subsidiaries of Austrian insurance groups) accounted for 62.4 percent of non-life gross written premiums and 60.1 percent of respective gross paid claims, as well as 61.8 percent and 42.1 percent of life insurance premiums and gross paid claims, respectively. Licensed entities also included 19 insurance brokerage companies, four of which were banks; 14 agent companies (including four banks); and 723 individual licensed agents, 45 independent claims adjustors, and 13 authorized actuaries. Sigal Uniqa Group Austria has the largest market share in both the non-life and life markets, with 26 percent and 61.9 percent respectively, in September 2019 (**FIGURE 23**). In March 2006, Sigal became the first company in the Albanian market to acquire a reinsurance license, which it uses largely to reinsure group companies in Kosovo and North Macedonia.

FIGURE 23

Market share in non-life insurance (left) and life insurance (right) (percent)

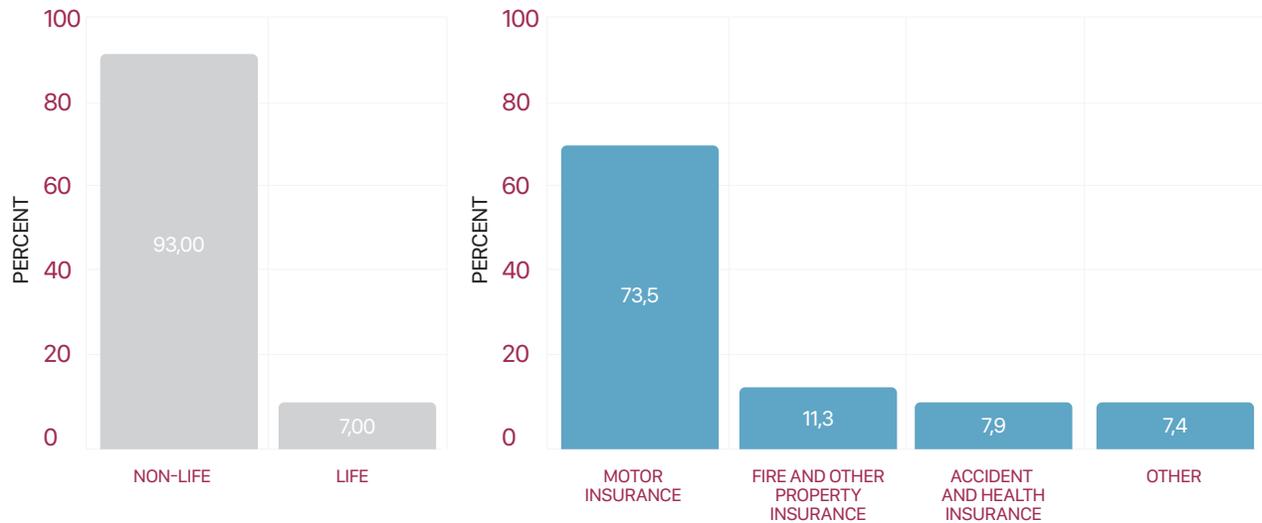


Source: AFSA 2019.

The share of life and non-life insurance in total premiums was 7 and 93 percent respectively in September 2019 (FIGURE 24, left), with motor third-party liability insurance (MTPL) insurance constituting the largest share of the total non-life premium, at 68.1 percent. As shown in **FIGURE 24** (right), about 73.5 percent of premiums came from motor lines of business, 11.3 percent from property, 7.9 percent from personal accident and health, and 7.4 percent from other lines (including general liability, marine, aviation, transport, and financial insurance). The strong increase in gross written premiums in 2014 (**FIGURE 25**) was mainly due to the increased level of compulsory MTPL premiums after a period of stagnation.

FIGURE 24

Insurance market structure (left) and breakdown of non-life insurance premiums (right) (percent)

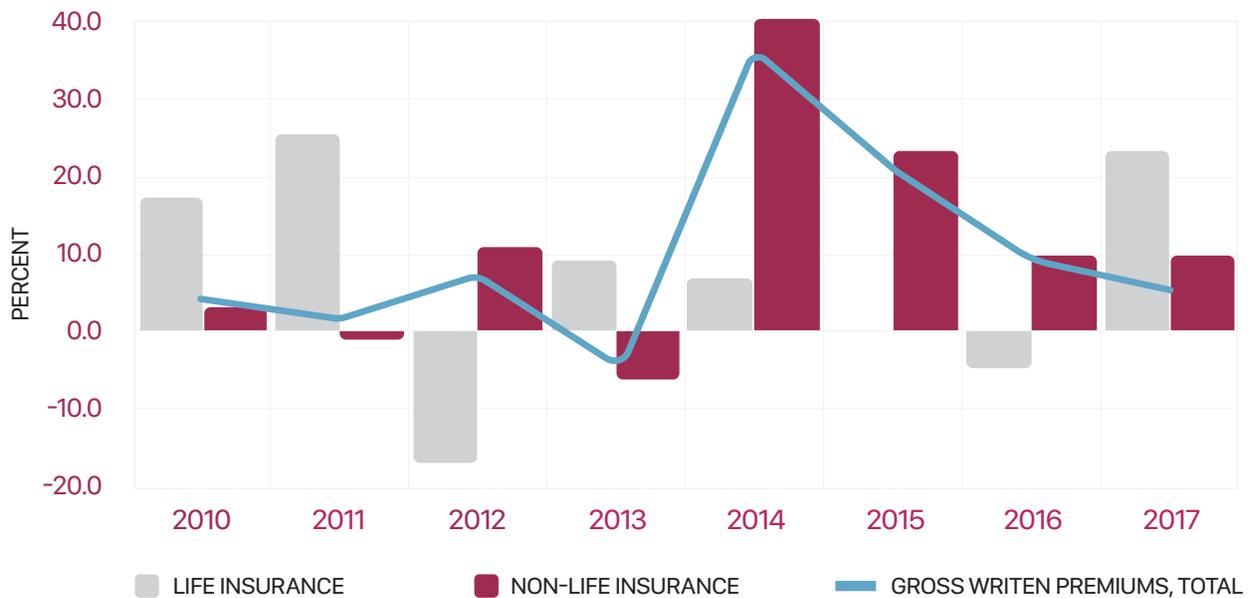


Source: AFSA 2019.

Note: Data are as of September 2019.

FIGURE 25

Change in gross written premiums, 2010–2017 (percent)



Sources: Finstat; Axco.

Market shares of voluntary and compulsory non-life insurance were respectively 29 percent and 71 percent of the total gross written premiums in September 2019. Most people will not buy insurance unless it is compulsory by law or a requirement under a bank's loan terms.

As shown in TABLE 11, the performance of the insurance sector has been improving in recent years, although problems remain. The improvement is evident in profitability, expenses, and technical provision ratios. The claims ratio has shown some slight increase, but it remains well below international benchmarks. While theoretically such a ratio is plausible at face value, it more likely indicates a poor claims performance by most insurers and a low level of consumer protection. Technical provisions have increased over the years. The strong upward trend of technical provisions reflects not only market growth but also the ongoing efforts of the AFSA to improve reserving standards. The solvency ratio has deteriorated since 2016, falling below 100 percent. This is not all spread and is attributed to two companies with negative solvency ratios.

TABLE 11

Various aggregated ratios of non-life insurance companies

RATIO	DEC. 2014	DEC. 2015	DEC. 2016	DEC. 2017	DEC. 2018	SEPT. 30, 2019
EQUITY PROFITABILITY RATIO	3.08	4.6	5.1	9.5	6.3	11.4
ASSETS PROFITABILITY RATIO	7.46	1.6	1.6	2.8	2.0	3.6
RATE OF TECHNICAL PROVISIONS	43.9	57.9	60.9	89.7	88.7	121.7
CLAIMS RATIO	35.8	38.7	29.7	37.1	39.9	38.9.4
EXPENSES RATIO	57.8	61.9	66.9	46.1	43.6	43.5
COMBINED RATIO	93.6	100.7	96.6	83.2	89.5	87.9
PREMIUMS RETENTION RATIO	78.1	78.6	81.1	79.4	81.9	81.4
SOLVENCY COVERAGE	196.3	180.8	60.3	27.9	33.9	

Source: AFSA statistical reports, <https://amf.gov.al/statistika.asp?id=1&s=1#>.

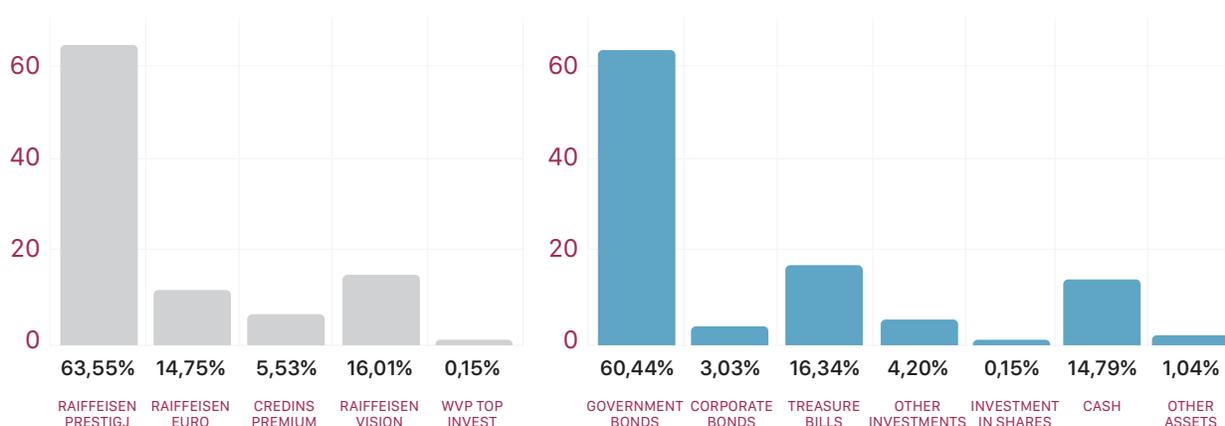
ANNEX 2: OVERVIEW OF THE LOCAL CAPITAL MARKETS

The capital markets in Albania remains underdeveloped with no listed companies in the stock exchange. This situation is mainly due to the level of economic and business development; micro, small, and medium enterprises dominate the economy, making up 99.8 percent of total enterprises and 78 percent of the added value generated. Market activity currently consists of trade and investment in government securities (interbank, retail, and through investment funds) and corporate bonds issued through private offers. The license of the publicly owned Tirana Stock Exchange (established in 1996) was suspended in 2017, following years of inactivity, with no companies ever traded. A private securities exchange, Albanian Securities Exchange (ALSE), was licensed in 2017, and trade of government securities began in February 2018. In December 2019 its subsidiary ALREG received permission from the Bank of Albania to clear securities transactions (cash leg), which will allow ALSE to also list and trade corporate securities in the future.

The investment funds sector, which emerged in 2012 and grew to 4.7 percent of GDP in the first few years of operations, is invested predominantly in government bonds. As of September 2019, the total assets of the investment funds amounted to US\$605 million. The number of investors is about 29,000 (only six are legal entities). There are currently six investment funds operating in the market, with the largest accounting for 64 percent of market share (see **FIGURE 26**, left). The market is dominated by investments in government bonds, which make up 60.5 percent of investments (see **FIGURE 26**). There are three licensed fund management companies that manage both voluntary pension funds and investment funds, and there is one that manages voluntary pension funds only and another one authorized to manage investment funds only. The lack of a developed secondary market for government securities represents a key liquidity risk to the investment fund sector in the event many unit holders simultaneously exercise their right to redeem their units. A developed secondary market for these bonds and the resulting yield curve serve as a strong foundation for pricing all other securities and capital market development.

FIGURE 26

Net assets of investment funds (left) and structure of investments (right)



Source: AFSA 2019.

Note: Data are as of September 2019.

Albania has no second pillar (mandatory/quasi-mandatory private pension saving), but it has a small voluntary pension system (third pillar). The current voluntary system is based on the Law on Voluntary Pension Funds (2009) and aims at supplementing pensions offered under the government's obligatory scheme.²³ There are four pension funds managed by four asset management companies, three of which are also licensed to manage investment funds. They can offer pension plans to individuals directly, or by setting up a plan for an employer. The number of members and total assets of the pension funds have been increasing by 20–30 percent annually, though from a low base. The growth is limited by lack of investment alternatives in the domestic market and inadequate fiscal incentives. The voluntary private pension market holds about 0.1 percent of financial system assets. As of September 2019, the three pension funds (the fourth one started operation in 2020) had around 27,000 members and net asset value of about US\$24.8 million. The member contributions are invested exclusively in long-term Albanian government bonds. As funds grow, there is a need for them to diversify into riskier securities, such as corporate bonds and shares, in order for them to remain attractive. In addition, the government needs to provide meaningful fiscal incentives to contributors and employers, subject to size limits, in order to increase the relevance of the pension funds as contributors to long-term savings in the economy.

On the debt side, government bond markets generally exhibit more development compared to corporate bond markets which are still negligible in size. The share of government securities to GDP in Albania stands at about 35 percent, higher than other Western Balkan countries but still below the EU average. With 52 percent of the debt stock in local currency, Albania relies heavily on the domestic market. However, this comes at a cost and risk, as the secondary market for government bonds is not deep enough to allow the price of those securities to find their market value. To mitigate such risk and enable true price discovery in the capital markets, the Ministry of Finance and Economy launched a Market Maker Pilot program in 2018 as an intermediary stage toward a full-blown primary dealer system.

Both primary and secondary markets for corporate debt securities are underdeveloped in Albania. The outstanding stock of corporate bonds is about US\$67.2 million, or 0.5 percent of GDP (compared to 30 percent of GDP observed in the EU on average). Key impediments to improving the functioning of the corporate debt markets include (i) general illiquidity of the market due to the limited number of institutional investors and to their low level of development, which also prevents the government securities market from serving as the linchpin of more efficient capital markets in general; (ii) inadequate legal provisions for public issuance of corporate bonds; (iii) lack of financial education among investors and issuers; (iv) low levels of corporate culture combined with high levels of transparency and disclosure requirements; (v) lack of tax incentives for corporate securities; and (vi) no rating agencies to establish ratings of these securities.

In Albania, the derivatives market is very limited due to the limited demand for hedging instruments. During the last seven years, only two banks had a few foreign exchange forward transactions with clients. Impediments are seen in low financial education levels, underdeveloped money and equity markets, general illiquidity of the market, and deficiencies in the market infrastructure—Albania has no central counterparty clearinghouses (CCPs) for clearing derivatives or facilitating commodity exchanges.

²³ The public pension scheme (first pillar) is the backbone of Albania's social security system. It is a mandatory pay-as-you-go system with universal coverage. Its management is entrusted to the Social Insurance Institute, an independent public entity under the supervision of the Ministry of Labor and Social Affairs.

Gaps exist in the financial market infrastructure. The Bank of Albania operates a systemically important payment system and the central securities depository (AFISaR) for government securities. There are no CCPs or trade repositories. The Albanian Securities Exchange has established its own central securities depository (ALREG). However, the market is very small to sustain separate depository activities, and there is a need to establish a central depository that will handle clearing and settlement of all types of traded securities.

Basic capital market legislation exists, but it needs to be modernized and aligned with the EU acquis. The capital market legal base includes the Securities Law, the Corporate Bonds Law, the Collective Investment Undertaking Law, and the Takeovers Law. While they provide the core requirements allowing securities activities to take place, the laws do not provide detailed definitions of financial instruments, market intermediaries, and activities. They also lack comprehensive provisions for consumer protection and for supervision by the regulator, and do not provide for a centralized market infrastructure. In addition, the laws are not in line with the EU directives. The GoA has drafted a new Law on Collective Investment Undertakings and a new Law on Capital Markets (to replace the existing Collective Investment Undertakings Law, Securities Law and the Corporate Bonds Law), and both are expected to be approved within 2020.

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Japan-World Bank Program
for Mainstreaming Disaster Risk
Management in Developing Countries



The Global Facility for Disaster Reduction
and Recovery (GFDRR)



The World Bank Group