



THE ENABLING ENVIRONMENT FOR DISASTER RISK FINANCING IN FIJI

COUNTRY DIAGNOSTICS ASSESSMENT

FEBRUARY 2019

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ISBN 978-92-9261-504-8 (print), 978-92-9261-505-5 (electronic)
Publication Stock No. TCS190008-2
DOI: <http://dx.doi.org/10.22617/TCS190008-2>

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Notes:

In this publication, “\$” refers to United States dollars.

On the cover (from left to right): Roofs was carried by strong winds caused by cyclone in Fiji. Fijian woman boarding up her house during a tropical cyclone storm in the Yasawa Islands in Fiji (photos by Robert Armstrong and Rafael Ben-Ari).

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Acknowledgments

This report was prepared under Technical Assistance (TA) 9007: Strengthening the Enabling Environment for Disaster Risk Financing (Phase 1). The TA was executed by the Asian Development Bank (ADB) in collaboration with the Government of Fiji.

Charlotte Benson (Principal Disaster Risk Management Specialist, Climate Change and Disaster Risk Management Division, Sustainable Development and Climate Change Department, ADB) and Arup Chatterjee (Principal Financial Sector Specialist, Financial Sector Group, Sector Advisory Service Cluster, Sustainable Development and Climate Change Department, ADB) provided oversight, direction, and technical advice for the report, while staff of ADB's Pacific Subregional Office in Fiji provided support during the mission.

The report was produced by a team of ADB consultants comprising international consultants Rodolfo Wehrhahn (team leader, insurance and capital market regulatory specialist), Arman Oza (agriculture insurance and microinsurance specialist), Lawrie Savage (insurance regulation specialist), and Richard Walsh (public sector disaster risk specialist); national consultant Gilbert Veisamasama (insurance industry specialist); and ADB consultant Maria Cristina Pascual (Project Coordinator).

The report benefited extensively from the generous participation by, and courteous interaction with, the many key organizations listed below. The report team expresses great appreciation to the staff of these organizations for their time and candid opinions.

Government Agencies

Department of Housing

Department of Social Welfare

Fiji Meteorological Service

Ministry of Agriculture

Ministry of Economy

Ministry of Forests

Ministry of Infrastructure and Transport

Ministry of Rural and Maritime Development and National Disaster Management

Reserve Bank of Fiji

South Pacific Stock Exchange

Private Sector

Australia and New Zealand Banking Corporation

Bank of Baroda

Bank of South Pacific Health Care Ltd.

Fiji Care Insurance Co. Ltd.

HFC Bank

Insurance Holdings (Pacific) Ltd.
Life Insurance Corporation of India
New India Assurance Co. Ltd.
QBE Insurance Ltd.
Sun Insurance Co. Ltd.
Tower Insurance
Fiji Development Bank

Bilateral and Multilateral Agencies

Department of Foreign Affairs and Trade, Australia
Japan International Cooperation Agency
United Nations Capital Development Fund

Development and Research Agencies, and Associations

Fiji Crop and Livestock Council
Fiji Hotel and Tourism Association Secretariat
National Centre for Small and Micro Enterprise Development
Sugar Cane Growers Council
Sugar Cane Growers Fund

Currency Equivalent

(as of 31 January 2018)

Currency Unit	–	Fiji dollar (F\$)
F\$1.00	=	\$0.49839
\$1.00	=	F\$2.00642

Abbreviations

ACCF	–	Accident Compensation Commission Fiji
ADB	–	Asian Development Bank
APEC	–	Asia-Pacific Economic Cooperation
AYIP	–	area yield index product
CIU	–	Construction and Implementation Unit
CSRL	–	Central Share Registry Limited
CTP	–	compulsory third party
DFS	–	digital financial service
DRF	–	disaster risk financing
DRM	–	disaster risk management
FCLC	–	Fiji Crop and Livestock Council
FIG	–	Financial Institution Group
FISP	–	Financial Inclusion Strategic Plan
FMS	–	Fiji Meteorology Service
FNPF	–	Fiji National Provident Fund
FSC	–	Fiji Sugar Corporation
FY	–	fiscal year
GDP	–	gross domestic product
IRCM	–	insurance, reinsurance, and capital market
ILS	–	insurance-linked security
MSMEs	–	micro, small, and medium-sized enterprises
NDMC	–	National Disaster Management Committee
NDMO	–	National Disaster Management Office

OECD	-	Organisation for Economic Co-operation and Development
para.	-	paragraph
PCRAFI	-	Pacific Catastrophe Risk Assessment and Financing Initiative
RBF	-	Reserve Bank of Fiji
SPSE	-	South Pacific Stock Exchange
TA	-	technical assistance

Note: The fiscal year (FY) of the Government of Fiji ends on 31 August. “FY” before a calendar year denotes the year in which the fiscal year ends, e.g., FY2017 ends on 31 August 2017.

Executive Summary

This country diagnostics assessment reviews the current disaster risk financing (DRF) landscape and enabling environment in Fiji, with a particular focus on risk transfer instruments—insurance, reinsurance, and capital markets.

The assessment is based on a modified version of the W&W Development Framework for accommodating international best practice, as well as public and private sector stakeholders' inputs. This framework allows insight into existing or perceived demand and supply barriers shaping and, in part, restricting the development of an enabling environment for DRF in Fiji. Within this framework, six areas relevant to the development of insurance and capital market solutions for DRF are reviewed: government policy; social protection policy; unlicensed competition; economic conditions; credibility of the insurance, reinsurance, and capital markets providers; and product appeal.

A risk-layered structure is proposed for the stimulation, development, and implementation of financially sustainable and scalable DRF strategies and solutions in Fiji. The assessment identifies gaps and opportunities for enhancing the enabling environment for public sector DRF instruments, insurance, reinsurance, and insurance-linked securities through the capital markets. The below table recommends improvements to the DRF enabling environment.

The diagnostics tool and a toolkit that describes the proposed enabling environment actions and their importance, the DRF tools and instruments of general use, including a glossary of technical terms, completes the suite of documents of this technical assistance.

Table: Key Recommendations for Strengthening the Enabling Environment for Disaster Risk Financing

Recommendations	Responsible Body	Timing ^a	Reference in the Report
1. Develop a DRF strategy following a risk-layered approach.	Ministry of Economy	Near term	para. 73
2. Develop a comprehensive register of all government-owned infrastructure and other assets. It is further recommended that the register is linked with the PCRAFI database and that the data is suitable for valuation.	Ministry of Economy	Near term	para. 73
3. Develop a comprehensive disaster risk model and mapping.	Ministry of Economy	Near term	para. 73
4. Facilitate Government of Fiji and international funding to broaden weather station coverage and protect wind measuring devices from strong winds.	Government of Fiji	Near term	para. 73
5. Improve the underwriting standards of the insurance sector to accept more catastrophic risk.	Reserve Bank of Fiji, insurance sector	Medium term	para. 97
6. Stipulate standard wording with regard to certain provisions contained in Fiji homeowners' policies.	Reserve Bank of Fiji	Near term	para. 99
7. Consider the allocation of funds from CTP auto insurance to one of the funds maintained by the government to provide emergency relief for the poorest of the poor.	Government of Fiji, Reserve Bank of Fiji	Medium term	para. 100
8. Establish a disaster insurance pool as a means of providing universal property coverage against disasters triggered by natural hazards.	Reserve Bank of Fiji, insurance sector	Near term	para. 102
9. Enter future purchase agreements on construction materials at the beginning of the cyclone season.	Government of Fiji	Near term	para. 111
10. Develop customized insurance awareness programs for disaster insurance.	Insurance sector, Reserve Bank of Fiji	Medium term	para. 150

continued on next page

Table continued

Recommendations	Responsible Body	Timing ^a	Reference in the Report
11. Keep in mind an insurance consumer compensation plan for Fiji as the insurance sector grows.	Reserve Bank of Fiji	Medium term	para. 151
12. Introduce an individual insurance company catastrophe reserve in the regulations.	Reserve Bank of Fiji	Near term	para. 153
13. Develop a consumer education strategy and framework for promotion of microinsurance and digital financial services.	Insurance sector, Reserve Bank of Fiji	Medium term	paras. 138 and 181
14. Improve access to the offshore insurance market for risk transfer that the local market cannot provide and consider fronting as an option.	Reserve Bank of Fiji	Medium term	para. 162
15. Introduce mandatory environmental liability insurance.	Government of Fiji	Medium term	para. 175
16. Develop and pilot a holistic disaster risk management solution for farmers involving community risk sharing and insurance. The insurance product should be a hybrid agriculture insurance product with a combination of indemnity-based and index-based covers.	Ministry of Agriculture, insurance sector, Reserve Bank of Fiji	Medium term	paras. 115, 176, and 177
17. Consider insurance-linked securities, including catastrophe bonds, as additional DRF instruments.	Ministry of Economy	Medium term	para. 172
18. Develop a comprehensive strategy providing social protection for households below the poverty line through social insurance, and offer innovative microinsurance products through commercial insurance providers to those above the poverty line.	Government of Fiji, Reserve Bank of Fiji, insurance sector	Medium term	paras. 182 and 193

CTP = compulsory third party, DRF = disaster risk financing, para = paragraph, PCRAFI = Pacific Catastrophe Risk Assessment and Financing Initiative.

^a “Near term” is within 1 year. “Medium term” is 1–3 years.

Source: Asian Development Bank.

Introduction

1.1 Background

1. **Disasters delay long-term development and hamper efforts to reduce poverty in developing member countries of the Asian Development Bank (ADB).** Disasters set back development, directly damaging and destroying infrastructure and disrupting related economic activities and the provision of services. They place countries on lower long-term growth trajectories, push vulnerable communities deeper into poverty, and force adjustments in both short- and longer-term development targets and goals. They can place significant fiscal strain on governments, businesses, and individual households, particularly if financial preparedness arrangements are limited. Delays and shortages in the availability of funding can significantly exacerbate the consequences of direct physical losses, extending the time taken to rebuild. Government officials, policy makers, and insurance regulators from developing countries across Asia and the Pacific have therefore expressed the need to strengthen their financial preparedness for disasters, smoothing the cost of disasters over time and ensuring the timely availability of post-disaster funding.¹ A strong enabling environment for disaster risk financing (DRF), including for the stimulation of commercial risk transfer markets, is a priority prerequisite for achieving these objectives.

2. **Enhanced financial preparedness for disasters is an ADB priority.** The ADB technical assistance (TA) project, *Strengthening the Enabling Environment for Disaster Risk Financing* (ADB 2015), under which this document is prepared, is consistent with ADB's Operational Plan for Integrated Disaster Risk Management, 2014–2020, which supports “the development of DRF instruments and wider DRF strategies for households, businesses, and governments, enhancing the public and private financial management of residual disaster risk” (ADB 2014b). It is also consistent with the 2017 Review of the 2011 Financial Sector Operational Plan (ADB 2017c), which calls for building capabilities in emerging and innovative finance areas such as DRF.

3. **ADB's holistic approach to DRF is reflected in this TA.** ADB strongly advocates an integrated approach to disaster risk management (DRM), seeking to strengthen disaster resilience, both through disaster risk reduction and the enhanced management of residual risk. ADB is seeking to enhance financial preparedness for disasters as part of broader efforts to strengthen disaster resilience. It is doing so in close coordination with governments, global

¹ For example, these views were expressed at two events that ADB organized in partnership with the Organisation for Economic Co-operation and Development (OECD) to exchange knowledge and practices on financial protection against disaster risks among officials and experts from ADB, Asia-Pacific Economic Cooperation (APEC), the Association of Southeast Asian Nations, governments in Asia and elsewhere, and the insurance industry. These events comprised of (i) the ADB-OECD Forum on Disaster Risk Financing for Inclusive Development, 15–16 September 2015, Manila, Philippines; and (ii) the ADB-OECD Global Seminar on Disaster Risk Financing: Developing Effective Approaches to the Financial Management of Disaster Risks, 17–18 September 2015, Kuala Lumpur, Malaysia.

and regional DRF initiatives,² standard-setting bodies—the International Association of Insurance Supervisors, the International Organization of Securities Commissions, the Basel Committee on Banking Supervision, the Islamic Financial Services Board, and the Financial Stability Institute—and the insurance industry. Disaster risk reduction efforts should be the first consideration in addressing disaster risk, tackling the root causes of the issue. DRF solutions should also conform to international financial standards and be designed around the context of broader disaster resilience, financial stability, and financial inclusion, incorporating incentives for disaster risk reduction. This approach should lead to the development and implementation of financially sustainable, scalable DRF strategies and solutions. ADB applies a risk-layered approach to support the appropriate selection of DRM options, including DRF instruments (section 1.2).

4. **This country diagnostic assessment identifies areas of improvement to promote an enhanced enabling environment for DRF in Fiji.** The country diagnostic is expected to facilitate the development and implementation of appropriate instruments for different layers of risk. It identifies areas of improvement to enhance the enabling environment for public sector DRF solutions as well as for insurance, reinsurance, and capital market solutions.

5. **Recommendations based on the assessment are comprehensively presented at the end of the section of each axis.** The recommended series of activities and measures to enhance the enabling environment for key public sector DRF instruments as well as insurance, reinsurance, and capital markets solutions.

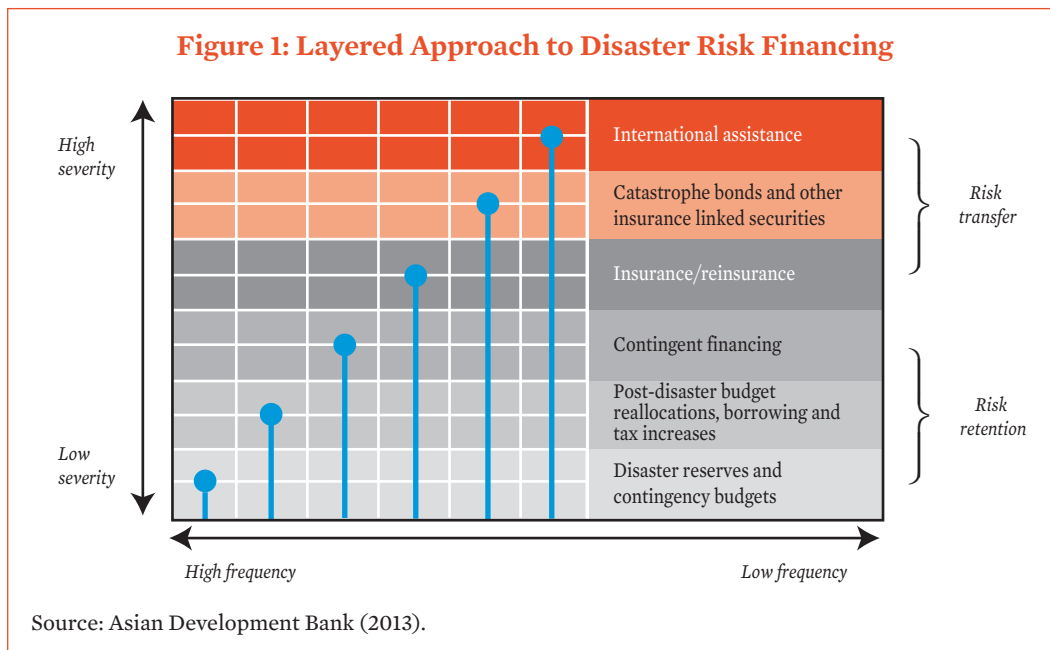
1.2 Risk-Layering Approach

6. **Disaster resilience begins with risk reduction, that is, acting to reduce levels of loss in the event of natural hazards.** However, disaster risk cannot be eliminated, so investment in financial preparedness for disasters also needs to be enhanced, seeking to ensure that sufficient financing is available to support timely relief, early recovery, and reconstruction efforts.

7. **Government can draw on an array of instruments to support enhanced financial preparedness.** These instruments are ideally applied using a risk-layering approach, breaking disaster risk down according to the frequency of occurrence of different types of hazard events of varying severity and associated levels of loss, and designing bundles of instruments targeting differentiated layers of risk (ADB 2014b). Governments should seek to select the most appropriate instruments for each layer of loss based on a range of factors, including the scale of funding needed, the speed with which disbursement is required, and the relative cost-effectiveness of alternative instruments for specific layers of risk.

8. **DRF instruments for residual risk begin with risk-retention instruments for more frequent, less damaging events (Figure 1).** These include annual contingency budget

² Vulnerable Twenty (V20) Group; Disaster Risk Financing and Insurance Program of the World Bank, Market Global Practice and Global Facility for Disaster Reduction and Recovery; Pacific Disaster Risk Financing and Insurance Program; G20/OECD initiative for development of Methodological Framework for Disaster Risk Assessment and Risk Financing for G20 Finance Ministries; APEC/OECD initiative on the conduct of surveys on disaster risk financing practices and implementation challenges in APEC economies.



allocations, disaster reserves, and contingent financing arrangements, all of which are put in place before disasters strike. After a disaster strikes, governments can also reallocate budgets, increase borrowing, and raise taxes to provide additional resources.

9. **Market-based risk transfer solutions provide more cost-efficient financing for medium-level risks, generating higher levels of loss, but doing so less frequently.** These include insurance, reinsurance, and insurance-linked securities, such as catastrophe bonds, and are taken out in anticipation of disasters. In the event of major disasters, governments also appeal to the international community for assistance.

10. **DRF is not only a government responsibility: the private sector and individuals should be encouraged and enabled to share in these endeavors.** A similar risk-layering approach is applicable. Decisions on reduction, retention, and transfer of disaster risk should be made within the structure of this broader framework, selecting appropriate instruments for each layer of risk. The insurance sector is called on to play an important role in this by developing tailor-made products suitable to the Fiji context.

11. **The availability and assortment of instruments selected for a DRF strategy depend on a range of factors.** The most appropriate bundle of instruments depends on (i) the scale of resources required at each layer of loss relative to the scale of resources each instrument can facilitate access to; (ii) the speed with which funds are required relative to the disbursement speed of each instrument; (iii) the marginal cost of each instrument; (iv) individual country circumstances, including prevailing macroeconomic circumstances; (v) the scale of potential events relative to gross domestic product (GDP); (vi) government economic, fiscal, and monetary goals and objectives; (vii) access to international finance markets; and (viii) the market-based cost of borrowing (ADB 2013). For example, if probable maximum losses from extreme events are low relative to GDP, then a country is better able to retain risk. A country with a low level of indebtedness can rely more on post-disaster borrowing than one with a higher level of indebtedness. The effectiveness of disaster risk

transfer instruments also depends crucially on the availability of well-developed and sound domestic insurance and capital markets. Cultural and religious dimensions are important, while it should be noted that government policy could potentially crowd out the private insurance sector.

1.3 Country Diagnostics Methodology

1.3.1 Diagnostics Tool

12. **A diagnostics tool was developed to conduct the Fiji diagnostics assessment and diagnostics for three additional countries under the TA.** The tool, a series of questions, seeks to identify gaps between international best practice and the country situation. It assesses the current state of the enabling environment for DRF in each country, gaps in best practice, and opportunities for enhancement.

13. **The diagnostics tool draws on a modified version of the W&W Development Framework.**³ This framework was refined to provide a methodology for assessing the DRF landscape and its enabling environment. It focuses on six areas of relevance for the development of disaster insurance and capital market solutions:

- (i) **government policy in the development of risk transfer instruments for DRF**, including the introduction of mandatory insurance protection, risk-pooling structures, and insurance-linked securities;⁴ pertinent regulations; and the creation of a level playing field for insurance, reinsurance, and capital market activities;
- (ii) **economic conditions** and other support functions that influence the decision for retaining the risk, rather than purchasing insurance, reinsurance, and capital market products (e.g., legal framework, data availability);
- (iii) **disaster risk product availability and affordability**, including products for large corporates as well as micro, small, and medium-sized enterprises (MSMEs), individual households, and low-income populations;
- (iv) **the credibility of the private sector offering risk transfer solutions**, covering aspects such as the regulatory environment, the solvency of risk carriers, the reputation of insurance and capital markets, and the availability of infrastructure (e.g., financial transaction platforms, use of technology, and support from professionals such as actuaries, risk assessors, auditors, dealer brokers, and stock brokers);
- (v) **social protection policy**, recognizing that low-income populations should enjoy social protection or support in obtaining insurance coverage, while insurance

³ The W&W Development Framework has been used on several occasions by Rodolfo Wehrhahn, one of the assessors, to determine barriers to an enabling environment in work done for ADB, the International Monetary Fund, and the World Bank. The relevant areas for an enabling environment as determined in this framework follow from Wehrhahn (2010).

⁴ Insurance-linked securities bonds, including catastrophe bonds and other risk-linked securitization, represent assets whose value is largely driven by the occurrence of events not correlated to the financial markets, allowing for a high degree of diversification. With an ILS bond, the investor is exposed to a well-defined catastrophic or insurable event in addition to the credit risk of the issuer. For this additional exposure, investors are compensated with higher coupons, but if no covered event occurs during the risk period the bonds are redeemed at 100% of face value. When a covered event meets the thresholds in the risk transfer contract, investors stand to lose coupon payments and/or a percentage of the principal. The redemption price of the bonds is reduced accordingly. For more details, see the companion report entitled *Toolkit for Insurance, Reinsurance, and Capital Market Solutions for Disaster Risk Financing*.

solutions for people that can afford the premium should not be crowded out, as well as exploring the degree to which social protection complements or crowds out market-based solutions; and

- (vi) **unlicensed competition**, recognizing that insurance credibility and resilient insurance providers are important, and examining the licensing and supervision of insurance providers by the regulator.

14. **The diagnostics tool generates an overview of current policies and mechanisms for DRF.** It identifies enabling conditions for effective use of well-established DRF instruments and existing related barriers or gaps; sets policy priorities for implementing reforms and introducing new DRF instruments; and provides the basis for new or deeper engagement on DRF by governments, regulators, and development partners, as part of broader DRM and/or public financial management dialogue. The findings of the diagnostic can feed directly into the development of DRF strategies to enhance financial preparedness.

15. **The tool consists of questions to identify gaps between international best practice and the current country practice.** It also identifies enabling conditions for the effective use of well-established DRF instruments and existing related barriers or gaps.

16. **The diagnostics tool focuses in particular on assessment of disaster risk transfer instruments, covering both sovereign and nonsovereign instruments.** Governments can play an important role in providing an adequate enabling environment for nonsovereign insurance, such as homeowner and commercial property insurance, business interruption cover, and crop insurance. In the process, these instruments can reduce the contingent liability falling on government in the event of a disaster. Tools used for self-insurance or disaster risk retention by the government are mentioned in this assessment, but are not addressed in any depth as these are covered in a complementary tool developed by ADB and the World Bank in 2017 (Box 1).

17. **A more comprehensive description of the tool, including the questions under each of the six areas of relevance, is presented in a companion document produced under the TA** (ADB, forthcoming). The document also presents a generic tool kit for disaster insurance, reinsurance, and capital market solutions. The tool kit focuses on actions to strengthen the enabling environment to support potential DRF instruments, and includes a glossary of technical terms.

1.3.2 Application of the Diagnostics Tool

18. **The diagnostics tool is used to determine and confirm current DRF practices and gain insights into existing or perceived barriers hindering the development of DRF tools.** The diagnostics tool is applied through a combination of desk work, stakeholder questionnaires, interviews, and group discussions. This wide-ranging approach is taken to accommodate the international good practice of countries with successful results and to incorporate expert judgement on the actions needed to better enable effective use of DRF instruments. The basic steps are the following:

- (i) Background information on the DRF strategy of the country is gathered. This information is drawn from extensive publications, government websites, insurance and reinsurance industry documents, and capital market analyses.

Box 1: Examining the Full Landscape for Sovereign Disaster Risk Financing

The disaster risk financing diagnostic developed by the Asian Development Bank and the World Bank assesses levels of financial protection against disasters, to identify opportunities for enhancement. It contains questions for ministries of finance drawn upon to extend and expand on country analyses performed under technical assistance projects. This helps build up a more complete picture of the state of sovereign disaster risk financing arrangements, including risk-retention mechanisms. The questions within the diagnostic cover the following issues:

1. Assessment of fiscal shocks associated with disasters:
 - (i) contingent liability of the government,
 - (ii) fiscal risk assessment of disaster shocks, and
 - (iii) public disclosure of disaster-related fiscal exposure.
2. Ex ante disaster risk financing:
 - (i) annual contingency budget,
 - (ii) dedicated budget lines for disaster risk reduction,
 - (iii) dedicated disaster reserve funds,
 - (iv) line agency funding,
 - (v) contingent financing arrangements,
 - (vi) insurance of public assets,
 - (vii) any other forms of sovereign insurance, and
 - (viii) risk transfer arrangements through capital markets.
3. Ex post disaster risk financing:
 - (i) post-disaster budget reallocations,
 - (ii) external assistance, and
 - (ii) other ex post mechanisms.

Source: Asian Development Bank and World Bank (2017).

- (ii) The background information is complemented using extensive questionnaires with open questions on areas relevant to the DRF strategy and instruments used in the country. These questionnaires, integral to the diagnostics tool, are sent to relevant stakeholders for their responses. The insights gained are critical for a robust assessment and, as such, questions to the stakeholders are explained carefully, stressing the importance of providing comprehensive and open answers.
- (iii) Onsite interviews are conducted with selected stakeholders from the public sector and the insurance, reinsurance, and capital market sector, including actuaries, rating agencies, brokers, auditing firms, and engineers. These interviews enhance and complete the information gathered through the analysis of paperwork and the questionnaire responses.
- (iv) The comprehensive information is analyzed, and gaps between international best practice and current country practices are identified.
- (v) The recommended actions are discussed with the stakeholders and the feasibility and relevance of these recommendations are confirmed before the country diagnostic is finalized.
- (vi) Implementation of the recommendations should follow.

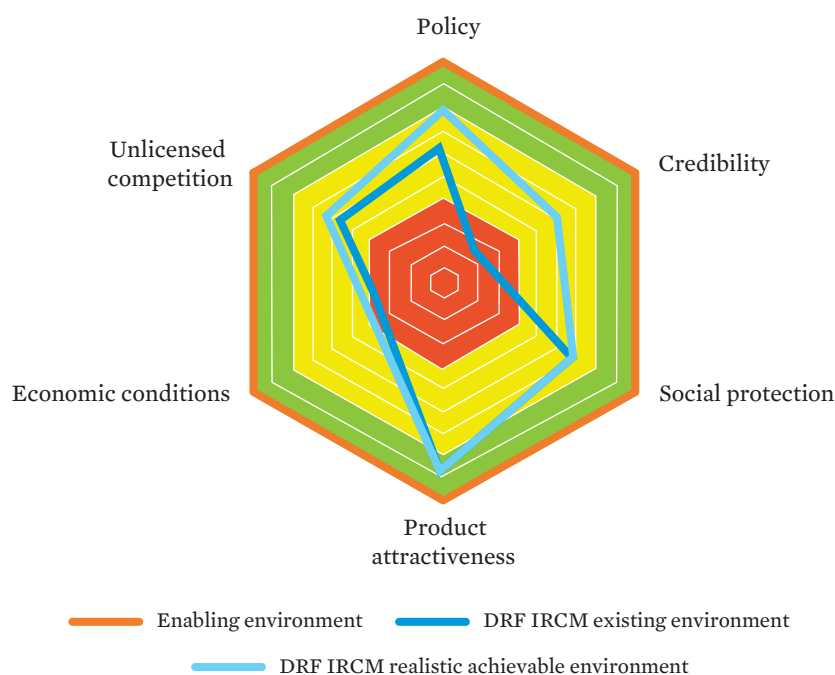
19. **There is, nonetheless, an expectation that not every stakeholder will respond to all questions.** Experience shows that the questionnaire will provide a wide range of responses, including contradictory statements, and some questions will remain unanswered. The assessors judge and filter the information to draw conclusions, but these conclusions are then verified with the stakeholders repeatedly. Only after verification are recommendations provided.

1.3.2 Presentation of the Diagnostic Results

20. The country diagnostics assessment begins with presenting findings on the broad public sector DRF landscape, including related recommendations. The results of the diagnostic analysis are then presented in a diagram depicting country scoring for each of the six areas of relevance for the development of disaster insurance and capital market solutions: government policy; economic conditions; product availability and affordability (attractiveness); credibility of insurance, reinsurance, and capital markets providers; social protection policy; and unlicensed competition (Figure 2). For each area, the diagram depicts an ideal scenario, a realistic scenario, and the current state of the enabling environment.

21. **The ideal enabling conditions for the development of insurance, reinsurance, and capital market solutions for each of the six areas are defined.** The assessors define this environment based on international best practice and expert judgement, while also taking into account a country's political, cultural, and religious contexts.

Figure 2: The W&W Insurance, Reinsurance, and Capital Markets Solutions Development Framework (Hypothetical Example)



DRF= disaster risk financing; IRCM= insurance, reinsurance, and capital market.

Source: Asian Development Bank.

22. **A reality check defines the next-best enabling environment that can be achieved for insurance, reinsurance, and capital market solutions.** The ideal enabling environment may never be achieved, so a realistic or aspirational enabling environment for each of the six areas is also determined. These targets are developed by drawing on local expertise gained from the project's national consultants as well as through extensive consultation with stakeholders and analysis of the completed questionnaires. These measures help identify likely impediments to achieving the ideal enabling environment. However, the ideal and realistic enabling environments may not differ significantly. This proved to be the case for Fiji, where the ideal and realistic scores were similar for all areas of relevance, except for unlicensed competition because this competition is currently needed to help ensure an effective risk transfer environment.

23. **The current environment is then populated.** Using local expertise and comments from relevant national stakeholders (government authorities, private sector providers, and professional bodies), the current environment for each of the areas of relevance is determined.

24. **The resulting diagram depicts the gaps between the current enabling environment and the ideal and realistic alternatives for disaster insurance, reinsurance, and capital market solutions.** The comparison enables ready identification of areas for action, leading to the development of a strategy and road map to bridge the gaps. Actions to address the gaps should be prioritized depending on the scale of need and reflecting time frames for completion. Urgent actions are recommended to strengthen the enabling environment in the areas achieving scores of four or below (red); medium-term actions are needed for scores between four and six (yellow); and no immediate actions are required for higher scores (green). Where the realistic enabling environment differs from the ideal scenario, that difference is considered in determining the urgency of the actions needed. The absolute scores have no further meaning and should not be used for cross-country comparisons.

Public Sector Disaster Risk Financing

2.1 Landscape Overview

25. **Economic conditions in Fiji appear to be generally favorable.** The Reserve Bank of Fiji (RBF) communicated in 2017 that GDP grew by just 0.4% in 2016, but rebounded in 2017 to grow by 4.2%. GDP was forecast to grow by 3.6% in 2018 and 2.9% in 2019 (RBF 2017). Sectors contributing to this growth include manufacturing, public administration and defense, information and communication services, construction, and the wholesale and retail sectors. The latest International Monetary Fund (IMF) report on economic developments and policies, released in December 2017, stated that

The economy is recovering well after Tropical Cyclone Winston and is expected to record its eighth consecutive year of expansion in 2017. Growth is expected to pick up to about 4 percent in 2017, underpinned by reconstruction activities, a vibrant tourism sector, and the recovery of agriculture production. The growth momentum is projected to continue in the coming years. Inflation declined sharply in recent months as the supply of food items started to normalize and is projected to remain around 3 percent.⁵

26. The economic outlook according to ADB also remains positive. Fiji's growth continues to be supported by fiscal stimulus, public investment, higher visitor arrivals, and continuing reconstruction after Tropical Cyclone Winston—all supported by low interest rates and a sound external position (ADB 2017a). In July 2017, Standard & Poor's affirmed its ratings for Fiji of B+ for the long term and B for the short term. Meanwhile, in September 2017, Moody's upgraded Fiji's rating from B1 to Ba3 and changed the outlook from stable to positive. This upgrade recognizes Fiji's improved institutional framework and effective policies for economic growth. While inflation rose in the months after Tropical Cyclone Winston, due to increases in food prices that were caused by crop damage, it has since normalized. From 1.6% at the end of 2015, it stood at 3.9% at the end of 2016, peaking at 5.3% and 5.6%, respectively, during the June and September quarters of that year. At the end of September 2017, inflation was 2.0% (RBF 2017).

27. **Public sector structural reforms are advancing.**⁶ In its budget statement for FY2018, the Government of Fiji reported that it would be implementing structural reforms to improve efficiency and sustained development in the civil service to embed modern management practices. Public enterprise reform has been aimed at facilitating strong financial performance, payment of dividends to government, and improved monitoring of enterprises

⁵ International Monetary Fund. 2017. Article IV Consultation. Press Release No. 18/41. 11 December. release <https://www.imf.org/en/News/Articles/2017/12/12/pr17479-fiji-imf-staff-completes-2017-article-iv-visit>.

⁶ Government of the Republic of Fiji, Economic and Fiscal Update, Supplement to the 2017/2018 Budget Address, June 2017.

to achieve strategic policy goals. Sales of shares in the Fiji Electricity Authority and the sale of some smaller enterprises were being progressed during FY2018. Financial sector reforms being undertaken by the RBF include the development of an inclusive insurance framework to promote reasonably priced insurance plans for low- and middle-income families to mitigate risks associated with natural hazards. The Ministry of Economy is implementing financial management reform through the devolution of financial and operational authorities to permanent secretaries, designing a new chart of accounts structure to improve financial reporting, and developing a national asset register for the whole of government, which will focus on both registration of assets and their management. The National Asset Management Framework Policy was approved by the Fiji Cabinet and the Ministry of Economy mandated to implement the policy in 2018. The Pacific Region Infrastructure Facility is supporting the ministry to develop a related Asset Management Strategy, which the ministry will implement and roll out to the whole of government. This process began with a pilot in April 2018.

28. **Fiji is aware of its exposure to large natural hazards, and recognizes that climate change is likely to amplify these risks.** The high level of exposure to natural hazards and the expected amplifying effects of climate change are threatening the development objectives of the country. Fiji experiences, on average, one cyclone per year and is exposed to other natural hazards, including floods, droughts, landslides, tsunamis, earthquakes, and volcanoes.

29. **Modeling by the Pacific Catastrophe Risk Assessment and Financing Initiative (PCRAFI) predicts severe losses for Fiji due to tropical cyclones, earthquakes, and tsunamis.**⁷ The PCRAFI modeling concluded that in the next 50 years, Fiji has a 50% chance of experiencing losses exceeding F\$1.5 billion, and a 10% chance of experiencing losses exceeding F\$3 billion. The analysis indicated that Fiji faces average losses of F\$158 million per annum due to earthquakes and cyclones over the long term. It does generate some area maps, depicting hazard intensity and average annual losses by district. However, data and information underlying the PCRAFI Country Risk Profile of Fiji, issued in September 2011, have not been made public. Detailed data on hazards, the probability of events occurring, and their characteristics, as well as on exposure, population, and assets affected by hazards, are also not available.

30. **Financing the response to natural catastrophic events presents a sizable challenge for the government.** In February 2016, Tropical Cyclone Winston caused damage equivalent to 19% of Fiji's GDP, if environmental damage is included, and losses equivalent to 17% of GDP. While that was the worst disaster in recent times, there were many disasters during the decade between 2007 and 2017 (Box 2).

⁷ PCRAFI was originally established in 2007 as a joint initiative of the Secretariat of the Pacific Community, the World Bank, and ADB, with financial support from many other bilateral and multilateral agencies. It developed cyclone, earthquake, and tsunami risk models for Fiji and other Pacific island countries. The World Bank launched a disaster insurance pilot as part of this initiative in 2012. Phase II of the PCRAFI program began in 2016, supported by the PCRAFI Multi-Donor Trust Fund, with the World Bank as trustee. Phase II includes the establishment of a PCRAFI Facility as an insurance captive to provide Pacific island countries with catastrophe risk insurance coverage on competitive terms. This insurance program aims to assist Pacific island countries with post-disaster funding needs, without compromising their economic stability. The current member countries are the Cook Islands, the Marshall Islands, Samoa, Tonga, and Vanuatu. The Pacific Catastrophe Risk Insurance Company is a captive insurance company that is owned by the PCRAFI Foundation, both of which were established by legal statute in the Cook Islands in 2016. The foundation is governed by a council of members that own the captive insurer, Pacific Catastrophe Risk Insurance Company. The company uses parametric insurance to enable access to immediate funds in the aftermath of a disaster.

Box 2: National Disaster Risk Management Fund

Cyclone Gene hit the Fijian capital Suva in January 2008, killing eight people, causing widespread flooding and blackouts, and causing damages estimated at F\$51 million. Over 340 people were evacuated to 61 evacuation centers and 61 houses were destroyed.^a

Flooding occurred in Fiji in January 2009, after 4 days of heavy rain on the towns of Nadi, Labasa, Sigatoka, and Ba on the island of Viti Levu. The flooding killed 11 people, damaged roads and bridges, caused the loss of crops, and impacted 20% of the population. Damages were estimated at F\$112.9 million. Agricultural losses totaled F\$8.7 million. Humanitarian assistance costs totaled F\$4.7 million, while development partners provided in-kind assistance valued at F\$3.6 million.^b

Tropical Cyclone Mick, a category 2 cyclone, struck in December 2009, resulting in three deaths and F\$59.4 million in damages.^c **Tropical Cyclone Tomas**, a category 4 cyclone, struck in March 2010, resulting in one death and F\$83.4 million in damages.^d

In 2012, Fiji experienced severe **flooding** in January and again in March, with the estimated damage from the two floods estimated at F\$21 million.^e **Tropical Cyclone Evan** struck in December of the same year, with no loss of life or serious injury. The cyclone did, however, require the evacuation of 14,039 people and caused total damages of F\$121.5 million and total losses of F\$73.4 million. Recovery and reconstruction needs were estimated at F\$135 million.^f

In February 2016, **Tropical Cyclone Winston**, a Category 5 cyclone, struck Fiji, impacting 540,000 people and causing almost F\$1.5 billion in damages, i.e., destroyed physical assets, and F\$1.3 billion in losses. Recovery, reconstruction and resilience needs were estimated at F\$ 2.0 billion.^g

Sources:

^a Wikipedia. https://en.wikipedia.org/wiki/Cyclone_Gene.

^b Office of the Prime Minister (2009).

^c National Disaster Management Office (2010c).

^d National Disaster Management Office (2010d).

^e National Disaster Management Office (2012).

^f Government of Fiji (2013).

^g Government of Fiji (2016a).

31. **The economic impact of disasters on the government is considerable, leading to significant fiscal risks because of the high probability of severe disaster shocks.** The government retains nearly all public sector disaster risk exposure, and assumes some of the household and private sector commercial risk, resulting in sizable ex post disaster funding activity. The government has become accustomed to reallocating its proposed capital works program appropriation to disaster emergency assistance, recovery, and rehabilitation in supplementary budgets.⁸ The government has been forthcoming in its public disclosure of disaster-related fiscal exposure through the publication of post-disaster needs assessments. Data have been made available on government expenditure on post-disaster relief, recovery, and reconstruction after all types of disasters (Table 1).

⁸ For instance, the 2016/2017 Supplementary Budget allocated F\$207.9 million to rehabilitation, reconstruction, and rebuilding (schools F\$142.6 million; roads, bridges, and jetties F\$31.8 million; water and sanitation F\$8.6 million). The budget for FY2018 allocated F\$206 million to the rehabilitation of infrastructure (schools F\$181 million; rural housing F\$6.8 million; agriculture F\$16 million; health F\$1 million; police F\$1 million).

Table 1: Losses and Damages Caused by Fiji Disasters and Their Share of Gross Domestic Product

	Current Price GDP (F\$ million)	Damage and Losses (F\$ million)	Proportion of GDP (%)
2008	5,371	51	0.9
2009	5,434	172	3.2
2010	5,389	83	1.7
2011	5,739	–	–
2012	6,000	71	1.2
2013	6,429	–	–
2014	7,040	–	–
2015	7,541	195	2.6
2016	7,994	1,591	20.0

GDP = gross domestic product.

Sources: Government of Fiji (2013, 2016a); Office of the Prime Minister (2009), National Disaster Management Office (2010, 2012); Wikipedia. https://en.wikipedia.org/wiki/Cyclone_Gene.

32. **The fiscal risks that materialized from Tropical Cyclone Winston in 2016 were a F\$61 million loss in value-added tax (VAT) collection⁹ and commitments to housing and infrastructure rehabilitation.¹⁰** After Tropical Cyclone Winston, the Ministry of Economy estimated that F\$1.96 billion was required for disaster recovery, reconstruction, and resilience. Of this amount, F\$216 million was for recovery, F\$1.71 billion for reconstruction, and F\$31 million for building resilience (Table 2). The recovery part of the financial requirements focused on enabling access to goods and services, and on assisting those who had lost income, were vulnerable, and below the poverty level. Of this total program, 43% was for private householder requirements, 15% was a commercial private sector responsibility, and 41% belonged to the public sector, based on the public-private sector split of losses and damages by sector outlined in the Post Disaster Needs Assessment (Government of Fiji, 2016a).

33. In response to the extreme funding requirements following Tropical Cyclone Winston, a disaster recovery framework was prepared for the reconstruction and rehabilitation program. In September 2016, the Ministry of Economy's Strategic Planning Office prepared a comprehensive Disaster Recovery Framework for Reconstruction and Rehabilitation. This document envisaged a F\$731 million program over 2 years to 2018, of which F\$184 million was for housing, F\$170 million for restoring livelihoods, F\$353 million for critical infrastructure, and F\$24 million for building resilience. The government planned to spend F\$134 million, while donors were expected to provide F\$23 million. The program contained a funding gap of F\$574 million, which was narrowed somewhat by new ADB and World Bank lending.

⁹ Total budgeted VAT collections were F\$845 million, implying a loss of 7%.

¹⁰ After most recent disasters, the Government of Fiji has embraced a contingent liability in the form of a government contribution for uninsured low-income households whose houses have been partially or fully destroyed, as well as some income support. The government spent F\$128 million to support housing rehabilitation through to 31 July 2017.

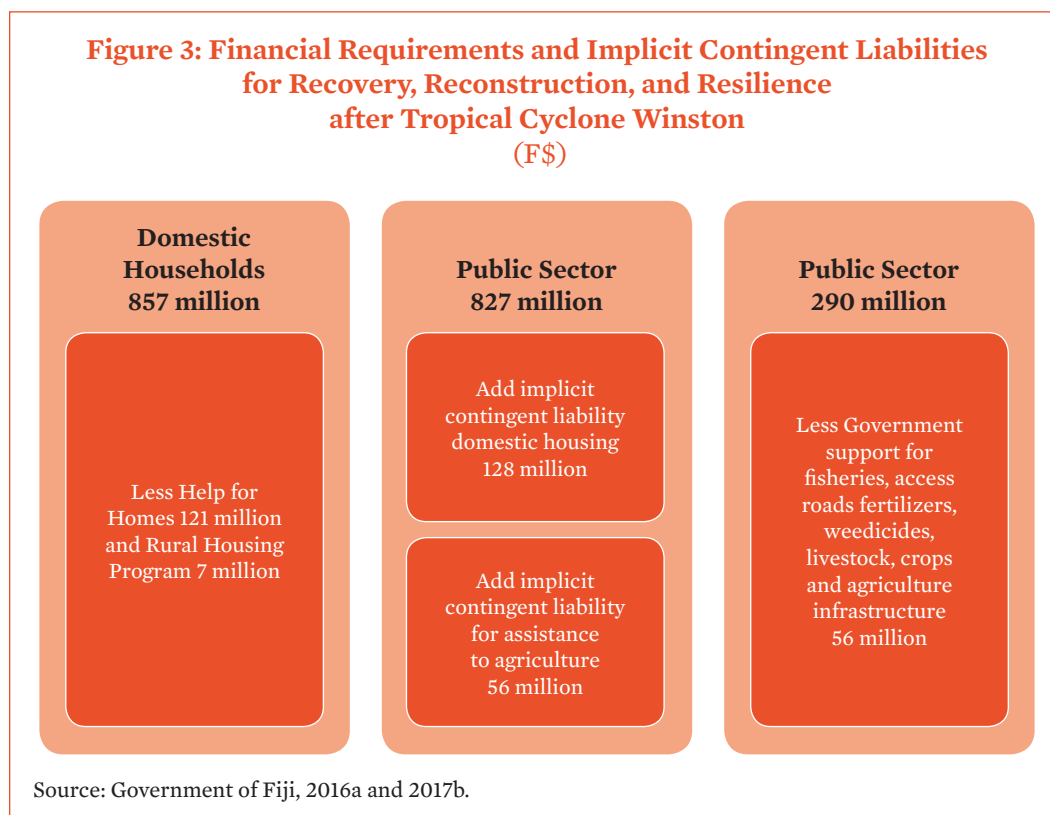
Table 2: Financial Requirements by Sector for Recovery, Reconstruction, and Resilience after Tropical Cyclone Winston
(F\$ million)

Sector	Damages	Recovery	Reconstruction	Resilience	Total
Productive Sectors	241.8	94.1	173.6		267.7
Agriculture	81.3	65.3	96.1		161.4
Commerce and Manufacturing	72.9	17.8	43.5		61.3
Tourism	76.1	5	29		34
Mining	11.5	6	5		11
Social Sectors	827.9	12.4	1,261.7		1274.1
Education	69.2		385.9		385.9
Health	7.7	12.1	18.8		30.9
Housing	751.0	0.3	857		857.3
Infrastructure Sectors	208.2	15.3	250.7	18.8	284.8
Transport	127.1	3.2	174.7		177.9
Water and Sanitation	16.9	3.6	20.7		24.3
Electricity	33.0	2.1	25.9	5.8	33.8
Communications	31.2	6.4	29.4	13	48.8
Cross-Cutting Issues	239.6	63	24.7	12	99.7
Environmental	232.5	60.8	13.1		73.9
Gender		1.6	0.4		2
Culture and Heritage	5.1	0.6	8.5		9.1
Disaster Risk Management	2.0		2.7	12	14.7
Employment, Livelihoods and Social Protection		31.5			31.5
Total	1,517.5	216.3	1,710.7	30.8	1,957.8

Source: Government of Fiji (2016a).

34. **Government engagement to support affected low-income households increased the funding requirements further.** The total public sector financing requirement for the recovery, reconstruction, and resilience program was increased by F\$121 million spent to 31 July 2017 on the Help for Homes program, which provided assistance for the reconstruction of domestic housing to economically vulnerable households that had lost or partially lost their homes. This resulted in a total public sector requirement of at least F\$930 million, once the Rural Housing Program was included. The Help for Homes reconstruction strategy was intended to catalyze rebuilding and repairing through construction-materials grants made to every affected household earning less than F\$50,000, according to the level of damage. The grants were provided in the form of pre-loaded electronic cards with approved amounts only useable in eligible prequalified hardware stores. Figure 3 summarizes the impact of these implicit contingent liabilities as a result of Tropical Cyclone Winston (section 2.3).

35. **The government faces a disaster risk financing gap of several hundred million Fiji dollars as a result of Tropical Cyclone Winston.** Forecast public expenditure for FY2018

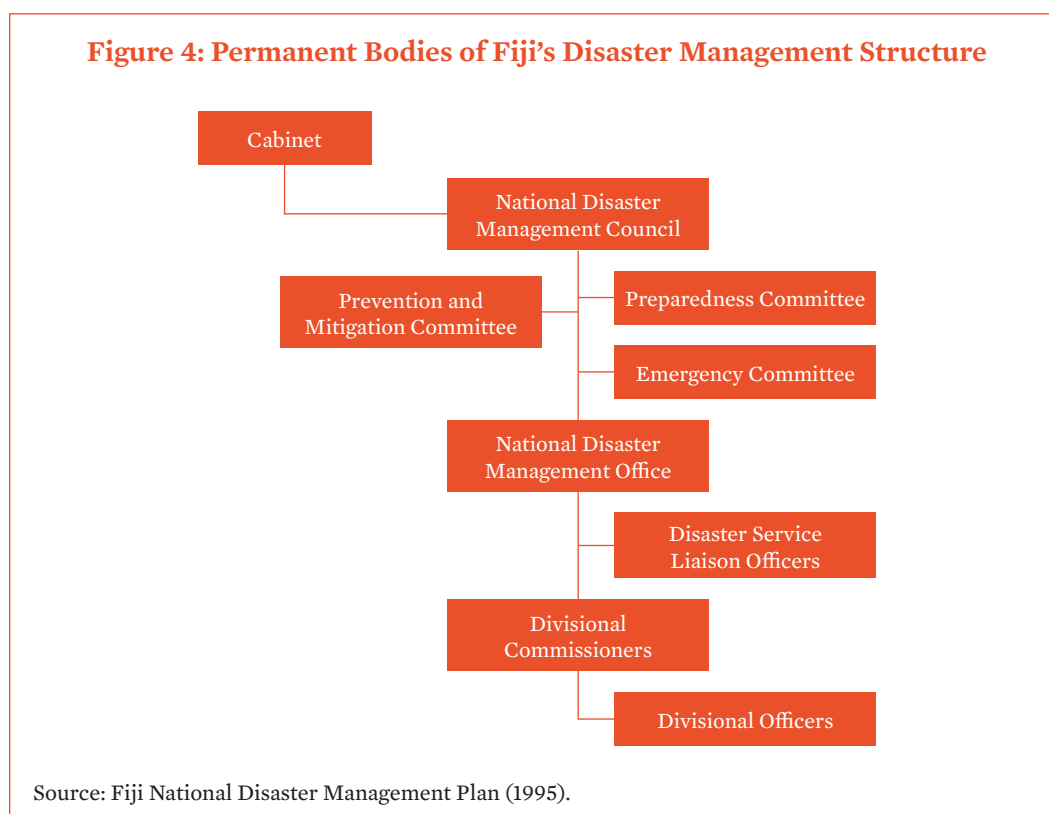


was F\$4.4 billion, with revenues of F\$3.9 billion resulting in a budget deficit equal to 4.5% of GDP. However, the government recorded debt equivalent to 45.6% of Fiji's GDP, according to the Debt Management Unit at the Ministry of Economy. The government also had contingent liabilities of F\$1.3 billion as of July 2016, equivalent to 12.8% of GDP. This comprised guarantees of government business enterprises at F\$787 million and other contingent liabilities at F\$472 million. Total capital expenditure amounted to around F\$1.26 billion in the FY2016 budget, which represented 39% of projected spending. The capital expenditure for FY2017 was just over F\$1.21 billion, which also represented 39% of spending. The capital expenditure budget for FY2018 was almost F\$1.78 billion or 41% of planned outlays (Government of Fiji 2017b). Fiji puts aside less than 0.01% of budgeted spending, or F\$22 million, for disaster reduction and disaster humanitarian response and recovery, a fraction of the costs resulting from past disasters. Further, the government retains the total risk exposure for management of its own assets and public infrastructure.

2.2 Disaster Risk Management in Fiji

36. **The Natural Disaster Management Act 1998 legally institutionalizes the disaster management system of Fiji.**¹¹ The Ministry of Rural and Maritime Development and National Disaster Management is responsible for the country's coordination of responses to disasters. The ministry operates under the jurisdiction of the Natural Disaster Management

¹¹ This section draws on the World Bank—Country Note Disaster Risk Financing and Insurance Fiji, February 2015.



Act (1998), which sets out the provisions for the relevant agencies in management of disaster response and related activities. The act provides the legislative basis for the Fiji National Disaster Management Plan (1995). The plan outlines the organizational structure as well as the roles and responsibilities of government bodies that are set up to address disaster management issues (Figure 4). The Natural Disaster Management Committee (NDMC), the Natural Disaster Management Office (NDMO), and disaster service liaison officers all have a permanent charter with specific responsibilities during emergencies. Others, including the emergency operations centers at national, divisional, and district levels, operate only during emergencies. The NDMC formulates disaster management policies. The NDMO implements policies in close cooperation with relevant departments through disaster service liaison officers and in cooperation with divisional commissioners and district officers. At divisional and district levels, the commissioner and the district officers, respectively, coordinate the implementation of policies with their respective disaster management councils.

37. **During emergency operations, each level of government has its own emergency operations center.** At the national level, coordination and control is provided by the Emergency Committee of the NDMC, which includes the permanent secretaries of key ministries. At the division and district levels, the commissioner and the district officers, respectively, are responsible for emergency operations, in close cooperation with the NDMC.

38. **The Fiji National Disaster Management Plan 1995 provides that, in the event of an emergency, the Ministry of Economy is responsible for**

- (a) ... issuing specific instructions and/or procedures to Ministries/Departments for the maintenance of essential supplies and services and to ensure that the fastest possible approval machinery is in place for the disaster emergency operations, relief, and rehabilitation. Such instructions should be updated yearly before the onset of the cyclone season, preferably during the month of September.
- (b) Ensur[ing] that laid down accounting procedures and financial instructions as in time (a) above are strictly observed by Ministries/Departments and updated from time to time.
- (c) ... ensuring that Ministries/Departments have adequate financial resources to meet their obligations in emergency operations.
- (d) Issu[ing] appropriate instructions to Ministries/Departments for the release of government vehicles for emergency operations before the onset of the cyclone season.¹²

39. **The Financial Management Act 2004 contains the key requirements and standards for Fiji's Public Financial Management System.** Underlying these are the Finance Instructions 2010 and the Procurement Regulations 2010. Regulation 32 and Regulation 33 of the Procurement Regulations 2010 enable ministries and departments to engage in emergency procurement “in the event of a natural disaster such as a cyclone, flood, earthquake, tsunami, whirlwind, landslide, forest fire, or drought”¹³ subject to processing and analysis by the Fiji Procurement Office before submission to the minister of finance and only within 30 days after a state of natural disaster has been declared. The permanent secretaries of ministries, given special responsibilities under the Disaster Management Control Act, can procure goods, services, or civil works for immediate relief assistance—such as food items and access to clean and safe water, medical supplies, temporary shelter materials, and seeds for subsistence purposes—provided that the procurement has been endorsed by the National Disaster Management Controller. When procuring these goods, services, or civil works, agencies must first utilize existing standing offer contracts before procuring goods, services, or civil works from other suppliers. All emergency procurement transactions expenditure must be acquitted in a report to the Compliance Unit of the Fiji Procurement Office at the Ministry of Economy, in accord with Regulation 34. Otherwise, the standard financial instructions remain in effect.

40. **A finance manual was developed for National Disaster Management Council operations, but its approval is still pending.** Since Tropical Cyclone Evan in 2012, the government has developed a finance manual containing detailed disaster-related finance procedures and processes, but that manual has not yet been endorsed by the cabinet and thus limited guidance on financial procedures during a disaster is available.

41. **The government has adopted a key measure to enhancing effectiveness of the immediate DRF mechanisms and instruments.** A real-time audit by two auditors was carried out immediately after Tropical Cyclone Winston. The details are recorded in a special audit forming part of the 2016 Report of The Auditor General issued in June 2017. The auditors reported on, and quantified, matters such as losses incurred due to goods becoming wet or infested, incomplete compliance with procurement procedures, and mistakes made in quantifying the level of goods required for distribution in certain regional areas. On each of their observations, the auditors recommended procedural change, such as continual updating

¹² National Disaster Management Council and Government Agencies. 1995. Fiji National Disaster Management Plan 1995. Suva Fiji. page 37.

¹³ Ministry of Economy. 2010. Procurement Regulations. Suva. para. 32(2)(i).

of population data using Ministry of Health figures, which NDMO management noted and undertook to implement.

42. **In its Disaster Recovery Framework of September 2016, the Ministry of Economy announced an intent to strengthen the building code and its enforcement.** These efforts, together with the intended enhanced regulation of the construction sector, will improve quality of construction and materials used. The government has since adopted the Regulation of Building Permits Act 2017, which became effective on 1 January 2018. Certification of buildings for compliance with cyclone category 4 and 5 requirements is now performed by members of the Fiji Institute of Engineers. The certificate requires compliance with the National Building Code of Fiji issued by the Minister of Health in 2004 and the Australian/New Zealand Standard 1170.2–2002: Wind Actions. Permits are generally approved by municipal councils and rural area councils. Villages are exempt by the Fijian Affairs Act Rev. 1985.¹⁴ The Construction and Implementation Unit (CIU) has been established at the Ministry of Economy, and has performed work on lessons learned from Tropical Cyclone Winston, including the stocking of certain building materials during cyclone seasons. The Fiji Master Builders Association and the Fiji Institute of Engineers have been providing the CIU with assistance.¹⁵ The CIU has monitored reconstruction of 180 schools, which have almost been completed using government resources; approximately 30 schools “adopted” for reconstruction by bilateral and multilateral development partners; and public buildings.

43. **A comprehensive National Disaster Risk Reduction Policy 2018–2030 has been developed by the NDMO, but remained a draft document as of December 2017.** The policy strategies outlined in the draft document include mainstreaming disaster risk reduction, ownership and governance, financing and investing, disaster preparedness, emergency response, and knowledge and information. It acknowledges that there has been inadequate consideration of climate change and disaster risk issues in land-use planning, urban and rural planning, coastal zone planning, and infrastructure plans. It also expresses concern about uncontrolled and unregulated clearing of marginal and vulnerable terrestrial areas, which has reduced the diversity and health of Fiji’s ecosystems. The document includes a planning strategy to address these matters in both national government departments and local government. The draft concludes with a very detailed action plan assigning responsibility to individual agencies.

44. **The Rural Housing Unit of the Ministry of Rural and Maritime Development, Disaster Management and Meteorological Services is engaged in training and assisting clients in strapping of roofs in homes.**¹⁶ The Rural Housing Assistance scheme works to eliminate homelessness in Fiji’s rural and maritime communities, through the provision of affordable, durable, and cyclone-resistant structures. Assistance that can be funded under the program includes the purchase and transportation of building materials from the supplier to the project applicant. Assistance offered by the Rural Housing Unit includes technical consultation and advice, provision of standard plans, purchase and/or delivery of building materials, supervision of community building projects, and other services approved by the

¹⁴ The act, to be cited as the Fijian Affairs Act, was adopted in 1945 and amended in 1966. A decree was issued in 1985 to change its citation to I Taukei Affairs Act.

¹⁵ Cyclone Winston Preliminary Assessment. <http://www.adoptaschool.gov.fj/images/25042016/GFN%20%20-%20181%20-Salialevu%20Primary%20School.pdf>.

¹⁶ Ministry of Rural and Maritime Development and National Disaster Management <http://www.ruraldev.gov.fj/index.php/2-uncategorised/23-rural-housing-unit>.

Permanent Secretary for Rural and Maritime Development, Disaster Management and Meteorological Services.

2.3 Disaster Risk Financing Mechanisms and Instruments

45. The Government of Fiji currently retains nearly all risk exposure, as can be seen from the existing DRF tools available in the country.

2.3.1 Ex Ante Disaster Risk Financing Mechanisms

46. An annual contingency budget fund of just F\$1 million is appropriated to the Natural Disaster Relief and Rehabilitation Fund, also known as the Prime Minister's Fund, which funds immediate humanitarian response, relief, or rehabilitation efforts during national disasters.

47. In the budget for FY2017, there was an Ongoing Contingency Fund for Disaster Risk of F\$5 million, increased to F\$7 million in the supplementary budget, and F\$5 million was appropriated in the budget for FY2018.

48. Line agency funding of the Ministry of Disaster Management and Meteorology Services in FY2018 was F\$15.2 million, comprising F\$7.7 million for operating expenditure, F\$7 million for capital expenditure, and VAT of F\$0.5 million. The capital works budget includes appropriation for disaster risk reduction to the National Disaster Risk and Climate Change Adaptation Fund, which is building Fiji's resilience to disasters through construction of, or upgrades to, evacuation centers and sea walls in low-lying areas and provides water tanks and rain water harvesters, for which it received an annual appropriation of F\$2.5 million in FY2018 and F\$2 million in the prior fiscal year. Other capital works are for equipment, instruments, and buildings at meteorological outstations; construction of a new weather office, supply and installation of water level and rainfall telemetry equipment; and projects for automatic weather observation system replacement at Nadi and Nausori airports.

49. Insurance for public assets, such as government buildings, was held only by the Fiji Revenue Customs Authority until some years ago and was discontinued. The Fiji Electricity Authority carries some insurance, but still required F\$55 million for reconstruction after Tropical Cyclone Winston. The Public Financial Management Improvement Program 2014–2019 includes development of a national asset management framework. The Ministry of Economy's Asset Management and Monitoring Unit is progressing development of a national asset register (para. 27). After a training program for asset managers in line ministries, a circular was issued in June 2017, asking that preparation of registers and asset management policies be commenced and guided by International Organization for Standardization code 55000, which provides an overview of asset management requirements and sets out principles and terminology on the subject. The Asset Management and Monitoring Unit now has a large asset database and is currently overseeing a valuation process of all land and buildings at replacement value. The unit envisaged the valuation process and the recognition of all other assets would be completed in 2018. An asset management policy will also be developed.

50. Ministry of Economy officials indicated that Fiji has not taken up the sovereign parametric cover policy of the Pacific Catastrophe Risk Insurance Company because the attachment point does not meet their specific needs on the severity of events to be covered. The policy is designed to increase the financial resilience of Pacific island countries against disasters by providing immediate funds in the aftermath of tropical cyclones, earthquakes, and tsunamis through parametric insurance, which triggers a payout once certain wind levels or other relevant triggers have been reached. Five countries are currently covered. PCRAFI insurance made payouts of \$1.3 million to Tonga, 10 days after Tropical Cyclone Ian in January 2014; \$1.9 million to Vanuatu, within 7 days after Tropical Cyclone Pam in March 2015; and \$3.5 million to Tonga, within 7 days after Tropical Cyclone Gita in February 2018.

51. Ministry of Economy officials also are skeptical about arrangements potentially available for a disaster response contingent credit because the arrangements do have an ongoing upfront minimal cost, but, more importantly, the available credit would lower its ability to access loan funds. In any event, the government believes it does not need such a facility as concessional financing should always be available from ADB and the World Bank in the event of another disaster.

52. Insurance-linked securities are currently not available in Fiji (para. 172). If they were, the government could utilize capital market instruments to transfer risk directly to the capital markets through catastrophe bonds.

53. The cost of these ex ante disaster risk financing options is very minimal when compared to total public expenditure of F\$4.4 billion per annum and the level of emergency response, recovery, and reconstruction requirements required after severe disasters.

2.3.2 Ex Post Disaster Risk Financing Options

54. Post-disaster budget reallocation, which the Government of Fiji has done after each of the country's major disasters, is largely financed by halting capital works programs where contracts are not already functioning, and by some loan receipts. After Tropical Cyclone Winston in 2016, the government reallocated F\$70 million for the Help for Homes residential rehabilitation and assistance program, administered by the Ministry of Women, Children and Poverty Alleviation. The same ministry delivered income support relief through the Poverty Benefit Scheme for families, the Care and Protection Scheme for children, and the Social Pension Scheme for the elderly, all of which were used to convey 3 months' worth of benefits in just 2 days where recipients received direct credits to bank accounts, and in 7 days for check recipients. For people whose livelihoods were impacted by the cyclone but who were not already clients, assistance was provided in the form of cash and food vouchers. Costs of emergency and humanitarian relief were estimated at F\$32 million and the recovery work to enable access to goods and services was also substantial. The government also financed relief programs for beneficiaries such as members of the Sugar Cane Growers Council, who were initially provided with loan funds where interest only was to be funded by the government, but the government later funded the whole program. Capital works programs, which can be stopped, have appropriations redeployed to rehabilitation programs. The redeployment of funds is done in accordance with Section 24 of the Financial Management Act 2004 and requires cabinet approval.

55. Appeals have been made for external assistance from bilateral and multilateral agencies. Around F\$107 million of aid in kind and around F\$35 million in cash was pledged after Tropical Cyclone Winston, with F\$23.5 million from the European Union and the balance from the Food and Agriculture Organization of the United Nations, the International Labour Organization, the World Food Programme, and the United Nations Children's Emergency Fund.

56. Borrowing, authorized by Section 59 of the Financial Management Act 2004, enables the minister of finance, on behalf of the state, to access money for purposes as the House of Representatives may authorize by resolution, which would be utilized for rehabilitation work following a disaster. This instrument was used extensively after Tropical Cyclone Winston, particularly to secure ADB and World Bank concessional loans.

57. The Natural Disasters Rehabilitation Facility is accessible to lending institutions for onlending at concessional rates for rebuilding after a disaster has been declared. The objective is to assist speedy recovery, enhance commercial activity, and boost employment opportunities. Following Tropical Cyclone Winston, the RBF reactivated the Natural Disasters Rehabilitation Facility and expanded it to include assistance to affected homeowners. The facility stopped operating on 30 June 2016, 4 months after Tropical Cyclone Winston, as its objectives were seen to be completed.¹⁷ Advances under the facility totaled F\$18.8 million for 37 businesses and 60 homeowners at the end of July 2016.

58. Following Tropical Cyclone Winston, withdrawals of Fiji National Provident Fund (FNPF) contributions amounted to F\$280 million to finance housing repair and reconstruction through reductions in the level of savings accumulated for retirement.

59. In the case of major disasters, the government usually launches flash fund appeals, with tax incentives such as a 200% tax deduction to encourage donations from the business community and the general population. Through this mechanism, the Fiji business community donated F\$10 million after Tropical Cyclone Winston.

2.4 Regional and International Support

60. **Several development partners are engaged in supporting Fiji to strengthen its disaster resilience, including its financial preparedness.**

61. The Pacific Community, the Secretariat of the Pacific Regional Environment Programme, the Pacific Islands Forum Secretariat, the United Nations Development Programme, the United Nations Office for Disaster Risk Reduction, and the University of the South Pacific have collectively developed an institutional framework in the Framework for Resilient Development in the Pacific: An Integrated Approach to Address Climate Change and Disaster Risk Management, 2017–2030.

62. The Pacific Island Emergency Management Alliance was established in July 2013 to support capacity building for emergency and disaster response coordination for national disaster management offices, fire and emergency services, police, and other national response

¹⁷ Economic and Fiscal Update, Supplement to the 2017–2018 Budget Address, RBF Annual Report 2016.

agencies. The alliance also supports improved interoperability and cohesiveness between key response agencies in Pacific island countries and territories. It is a coalition involving the Pacific Community, the Australasian Fire and Emergency Services Authorities Council, the Regional Disaster Managers Meeting, the Pacific Islands Fire Emergency Services Association, and the Pacific Island Chiefs of Police.

63. Priority support for Fiji from the Japan International Cooperation Agency is on disaster risk reduction, disaster response, and climate change. The agency has provided technical assistance to the NDMO, training for meteorologists at the Fiji Meteorology Service, and a medium-wave broadcasting system for more remote Fijian islands.

64. Since the January 2009 floods, several countries and development partners have assisted with disaster response and recovery programs.

2.5 Diagnostic and Recommended Actions

65. **Financial arrangements for disaster response need to be urgently strengthened, including through use of IRCM solutions.** The Government of Fiji's current fiscal strategy in responding to disasters triggered by natural hazards has involved suspending capital works programs for rehabilitation work, borrowing from multilateral institutions to finance the repair of infrastructure and housing for the economically vulnerable, and enabling access to retirement savings for rehabilitation work. These measures all reduce Fiji's financial ability to implement development objectives and withstand future disasters or other economic shocks. Additional tools are needed, and analysis undertaken, to determine the most cost-efficient bundling of instruments in accordance with the risk-layered approach (section 1.2).

66. **The appraisal of the government's financial response to Tropical Cyclone Winston requires splitting its response between sovereign and nonsovereign risks.** The explicit responsibility of the government concerns sovereign risk, of which the subcategories are humanitarian response, early recovery, and reconstruction, incorporating building back better. For nonsovereign risk, the government implicitly accepts a contingent liability, often as an insurer of last resort.

2.5.1 Sovereign Risk

Humanitarian Response

67. The immediate humanitarian response to Tropical Cyclone Winston required around F\$32 million. The funds were used to distribute water purification tablets and hygiene kits to 24,000 people, provide food and welfare assistance, relocate 10 health facilities, and open 758 evacuation centers. Contingency funds of F\$1 million had been appropriated for these purposes, which is very low. Another point of concern is that, while the country's procurement regulations contain emergency procedures, its finance instructions do not.

Recovery

68. **The recovery program after Tropical Cyclone Winston required F\$216.3 million, for which contingency funds of F\$5 million had been appropriated.** While appropriated

funding is very low, appropriation for the estimated total requirements would also be inappropriate.

Rehabilitation

69. **The rehabilitation requirement of F\$1.71 billion and the Disaster Recovery Framework requirement of F\$735 million present significant financial challenges for the government.** Capital works programs, which can be stopped and funding diverted to rehabilitation, along with concessional loans will continue to be the main source of resources for meeting these requirements. There may be scope to increase borrowing without compromising Fiji's fiscal sustainability. While suspending capital works programs and borrowing from multilateral institutions for rehabilitation work significantly addresses rehabilitation requirements, it also slows planned implementation of development objectives. Additional research is required on alternative sources and options for funding for rehabilitation work.

Building Resilience

70. **The degree to which building resilience and reduction of future risk exposure have become part of the government's total disaster recovery, reconstruction, and resilience program is commendable.**

2.5.2 Nonsovereign Risk Exposure

71. **Nonsovereign risk exposure includes the rehabilitation of the housing structures of the low-income population.** The main nonsovereign disaster risk which the government has explicitly accepted as its own contingent liability is a responsibility to rehabilitate the housing structures, and provide some immediate income support, for the economically vulnerable proportion of the population. The government has also accepted a considerable contingent liability for the recovery and reconstruction of agricultural infrastructure and, to some degree, for farmers' welfare.¹⁸ To reduce its nonsovereign risk exposure, the government has already commenced programs encouraging the uptake of insurance on the homes of lower-income earners and on agricultural assets. These programs should be widened and deepened.

72. Following the diagnostic, a number of actions are recommended to strengthen Fiji's public sector DRF instruments.

73. **An effective country DRF strategy should be developed and implemented based on detailed knowledge of the country's disaster risk.** The following actions are recommended:

- (i) **Develop comprehensive disaster risk data.** Fiji should obtain and collate all available data and information underlying the risk profile of hazards on Fiji, the probability of events of varying magnitude occurring and their characteristics, and the exposure and vulnerability of populations and assets in affected areas. This could include updating the PCRAFI analysis, including nonsovereign exposures.

¹⁸ Republic of Fiji Economic and Fiscal Update, Supplement to the 2017–2018 Budget Address.

Disaster risks, in the form of the asset value lost when affected by a hazard of varying magnitudes and the direct impact on human lives, should be available to the government, the public, and the private sector.

- (ii) **Establish a register of all government-owned infrastructure and assets.** This process made substantial progress in 2017, through a training program in asset registration and management for asset managers and through the completion of templates for asset recognition in line ministries. It is essential that the data is geo-tagged and includes the reconstruction cost of each asset. The register should also be linked with the PCRAFI database. Close coordination with line ministries, state-owned enterprises, and PCRAFI will maximize synergies.
- (iii) **Manage the risk exposure of infrastructure and other assets thorough a risk management plan.** Develop a risk management plan¹⁹ by performing a risk assessment of all government-owned infrastructure and assets exposed to natural hazards, including identification, assessment, and prioritization of risks, all clearly defined. This should be followed by a coordinated and economical application of resources to minimize exposure and vulnerability.
- (iv) **Increase the annual appropriation funding for humanitarian response and improve the disbursement process under emergency declaration.**
 - (a) The level of funding for the Disaster Relief and Rehabilitation Fund for immediate humanitarian response and recovery should be increased to a level that would allow a greater proportion of humanitarian response needs to be attended to immediately.
 - (b) To improve post-disaster disbursement processes, cabinet endorsement should be secured for the Finance Manual for Disaster Management Council Operations developed in the wake of Tropical Cyclone Evan. The manual details disaster-related finance procedures and processes and describes an appropriate share of the contingency funds for availability at the divisional commissioner level.²⁰
- (v) **Increase the appropriation for recovery to the ongoing contingency for disaster risk from F\$5 million.** An appropriate amount should be determined based on an examination of historic spending and of modeled probable maximum losses for hazards of varying intensity, combined with estimations of likely ratios of early recovery needs to losses, based on historical experience.

74. Sovereign risk transfer solutions should be developed to complement risk retention instruments. Sovereign risk transfer recommendations are discussed further in section 3.

¹⁹ The risk management plan should establish context and include a complete risk assessment—identification, analysis, evaluation, and treatment of each risk—and a monitoring and review process. It should follow a prioritization process whereby the highest-risk assets should be addressed first, with other assets handled in descending order according to associated levels of disaster risk. The risk management plan should propose applicable and effective measures for managing the risks and a schedule for implementation and responsible persons for those actions. It should include a complete cost-benefit analysis of the uptake of insurance on public assets.

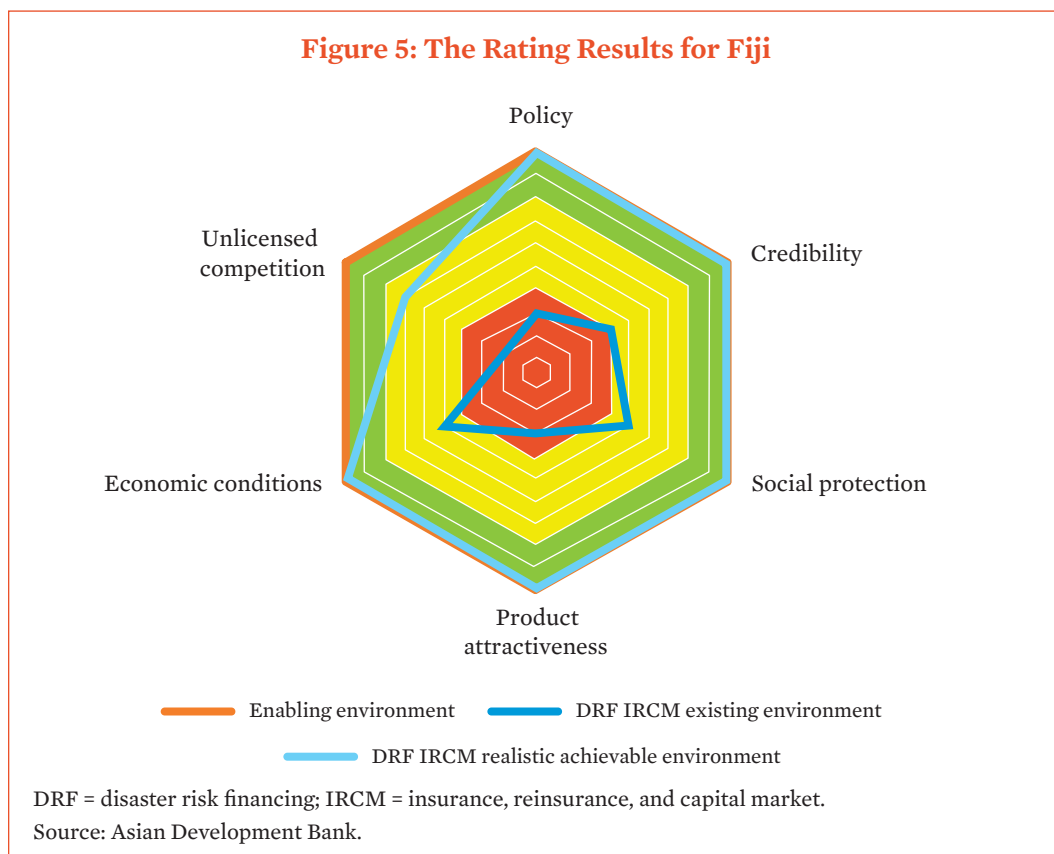
²⁰ This was recommended in the World Bank Concept Note of February 2015 “Country Note: Disaster Risk Financing and Insurance Fiji.”

3

Diagnostic on Insurance, Reinsurance, and Capital Markets for Disaster Risk Financing

75. **Enhanced use of disaster risk transfer instruments in Fiji requires significant improvement in the associated IRCM enabling environment.** Using the diagnostics tool presented in section 1, several areas of improvement with respect to the use and development of disaster risk transfer instruments have been identified for the six areas relevant to the development of disaster IRCM solutions (Figure 5). It should be noted that, in the case of Fiji, with the exception of the issue of unlicensed competition, the ideal scenario substantially coincides with the achievable scenario. For this reason, the assessors decided to focus on the ideal scenario and thus formulate the recommendations aimed at achieving that enabling environment. Unlicensed competition is discussed separately.

76. Given that economic conditions impact on other areas of relevance, the related diagnostic and recommendations for this area of relevance have been incorporated into the discussions for other areas. However, the scoring for economic conditions is summarized in section 4.



3.1 Government Policy Gaps

77. **Using the diagnostics tool, several areas where government policy could help nurture the growth of disaster IRCM solutions have been identified.** Fijian capital markets are still emerging and insurance penetration is low by international standards, with only 12% of the adult population of Fiji having any form of insurance coverage. In a country that is prone to natural hazards, there is huge potential to make more effective use of insurance as a vehicle for risk transfer. However, adjustments in government policy to remove barriers and encourage an enhanced enabling environment for the development of these risk transfer instruments is first necessary.

3.1.1 Household Disaster Risk Protection

78. **The impact of Tropical Cyclone Winston on the insurance sector was significant.** As has been documented in the post-disaster needs assessment, the combined value of destroyed assets and disruptions in the production of goods and services caused by Tropical Cyclone Winston in 2016 was equivalent to about F\$2.8 billion, or one fifth of the country's GDP in that year. The RBF indicated that, of this total, about F\$117 million or 5.9% was comprised of losses that were paid by the local Fiji insurance industry.²¹ By comparison, the RBF also estimates²² that considerably more than this amount—132% of the licensed market claims—was paid by offshore insurers, i.e., insurers that are not licensed to do business in Fiji (section 3.3).²³ The Fijian general insurance industry recorded gross claims in 2016 of F\$136.5 million, up from F\$76 million in 2015, again highlighting the major impact of Tropical Cyclone Winston. On a net incurred basis (i.e., taking account of reinsurance and also of estimated 2016 claims that were still to be paid at the end of 2016), the ratio of net claims incurred to net premiums earned was 94% in 2016, compared with 47% in 2015. This resulted in a loss on shareholders' funds of 15% in 2016, compared with a return of +20% in 2015. It is therefore apparent that the occurrence of Tropical Cyclone Winston had a significant negative impact on the profitability of the general insurance industry in 2016.

79. **Tropical Cyclone Winston constituted a substantial loss for the general insurance industry in Fiji, but it was much less significant than is typically reported by insurers in other countries following major disasters.** For example, the positive return of 20% on shareholders' funds in 2015 was sufficient to more than compensate for the loss of 15% in 2016. As well, although the 2016 loss ratio was high at 94%, the average loss ratio across both 2015 and 2016 was about 70%. In most insurance markets, a loss ratio of 70% is considered to be quite satisfactory.

80. **Fiji's general insurance industry follows a conservative underwriting philosophy relative to generally accepted financial norms for general insurers internationally.** This conservatism is evident at two levels. First, the overall amount of premium being accepted, i.e. the amount of assets being insured, is less than could be the case, given the total capital resources of the industry. Internationally, it is well accepted that the operating leverage, i.e., the ratio of a general insurer's net premium written to shareholders funds, should not exceed

²¹ When statistical references on insurance are attributed to the RBF, they are to the Reserve Bank of Fiji 2016 Annual Report on Insurance or to the RBF's annual report on insurance for the year indicated by the context.

²² Based on insured losses reported by Fiji insurance brokers with respect to offshore.

²³ Offshore insurers are allowed, on a case-by-case basis, to underwrite Fijian risks after approval from the RBF.

about 2.5:1, with a ratio of around 2:1 considered to be appropriate for smaller, less diverse insurers. However, the Fiji general insurance industry's actual leverage ratio is only 1:1. This indicates that the industry has significant additional capacity to underwrite business. The fact that it is not fully utilizing its capacity shows up also at the consumer level, where there are often prohibitive underwriting requirements being imposed as preconditions for coverage.

81. **Under current underwriting criteria, a large percentage of Fiji's homes remain uninsurable.** Based on information provided during interviews for this country assessment, conducted with business and government leaders in Fiji, it is understood that, in order to be underwritten against windstorms, properties have to meet at least one of two specific criteria. First, insurance coverage will generally be available if the property is certified to meet the up-to-date Fiji building code. However, a large percentage of properties do not meet this code because they were built prior to the introduction of the current code requirements, were built within the informal sector where code requirements are too expensive to meet, or were built by unprofessional contractors who lack the training required to build to the code's specifications. The second underwriting precondition is that the property has an engineer's certificate attesting to the fact that there is roof strapping sufficient to withstand winds of up to 200 kilometers per hour, equivalent to a category 3 event.²⁴ Again, the expense of conforming to this requirement, at a cost of F\$10,000 to F\$15,000 for an average-sized home, poses an insurmountable barrier to low-income individuals. Furthermore, an engineer's certificate is normally valid for just 7 years and many low-income households would not have the financial resources to meet this recurring expense. With modern technology, there may be other solutions that could be less expensive to implement while still providing adequate protection. For example, in some other countries less expensive strapping solutions are being utilized (footnote 32). This is an area that deserves further investigation.²⁵

82. **The entire system of certificate-based insurance underwriting is on the verge of collapse.** The report team was informed by the Fiji Institute of Engineers that, at the time of this assessment, there was a very small number of engineers in Fiji authorized to issue the required certificates, and that number was continuing to decline. There are two key reasons for this. First, when an engineer certifies that a property meets the required standard, he or she is the only individual who will be held liable if the structure is shown at a later date (perhaps as a result of a tropical cyclone) not have met that standard. Builders are not part of the liability chain, so engineers feel they are putting themselves in jeopardy, even though a failure may well be due to deficiencies in the underlying construction or negligence on the part of a builder. Second, the payment received by an engineer to provide certification is quite small relative to the amount of effort required to undertake it and the potential liability that might arise. These developments suggest that, if there is a catastrophic event for which rapid rebuilding should be given the highest priority, the lack of certifying engineers could become a critical bottleneck for Fiji's post-disaster rebuilding process.

83. **Modern underwriting would allow for a wider class of property to be insurable.** In most countries, underwriting standards present a relatively smooth continuum, from

²⁴ There is a widespread belief in Fiji that insurance coverage requires a certificate to the effect that the structure will be able to withstand a category 5 event.

²⁵ According to stakeholders interviewed for this country assessment, the engineering certificate requirements were introduced in the 1990s after two damaging tropical cyclones made landfall within days of each other, giving rise to heavy losses for insurers and reinsurers. Underwriters reacted by imposing strong certification requirements as a condition of providing coverage.

marginally acceptable risk covered at a relatively high level of premium, to more acceptable risk covered at a lower level of premium. Usually there are many important underwriting criteria, and some will offset others as individual risks are evaluated. In Fiji, however, the strict and definitive criteria for insuring property mean that the more flexible underwriting decisions that are common elsewhere do not occur. An individual will either have significant financial resources to comply with the building code or to make the requisite upgrades needed to obtain the engineer's certificate, or insurance coverage will not be an available mechanism for risk transfer.

84. **A sizable amount of business could be underwritten if more technically sophisticated underwriting standards were put in place.** The Fiji insurance industry is quite small. All but one of Fiji's general insurers, being subsidiaries of foreign-based insurers, are owned by non-Fijian shareholders. The observed market conditions may be the result of an inefficient market in which owners and managers work to protect their shareholders' funds. For a small market, and from the perspective of distant parent company head offices, it may be easier to turn business away than to maintain in Fiji the infrastructure required to support more complex and nuanced programs for underwriting business. Steps need to be taken to broaden the underwriting criteria and to permit simpler, but still carefully controlled, underwriting of policies.

85. **Low standards for workers within the construction industry also contribute to challenges in making insurance coverage more easily available.** In many areas of Fiji's construction industry, there are no standards for workers and a significant lack of formalized training programs. There are several trade schools in Fiji, but, although young graduates may be imbued with a basic knowledge about their trade, they have no practical experience and lack expertise in applying skills beyond the classroom. In more developed countries, similarly trained graduates would be required to spend several years in an articling position and, at the end of their articling period, they would have to demonstrate real expertise and skill in their chosen trade. Only then would they become licensed from their trade. Such licensing can be relied upon to establish the professional expertise of tradespeople.²⁶ This process is not in place in Fiji and it contributes to the difficulties mentioned with regard to engineers' certificates and, in general, to making insurance underwriting more challenging.

3.1.2 Agriculture Sector Disaster Risk Protection

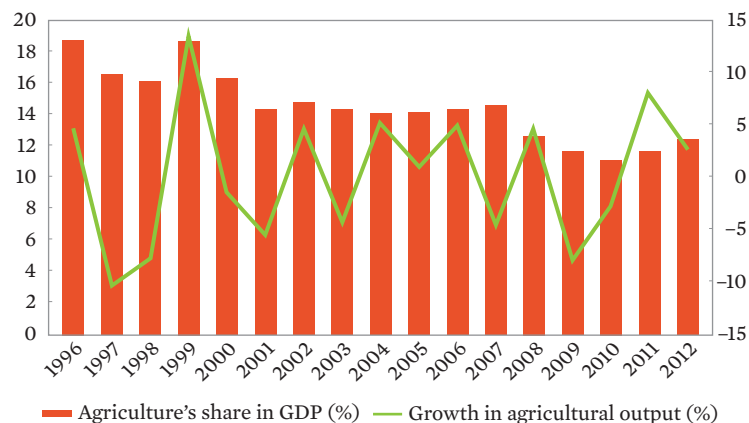
86. **The impact of natural hazards on farmers would be significantly mitigated by the use of appropriate IRCM solutions.** Despite the importance of Fiji's agriculture to the economy, the country does not have any kind of crop, livestock, or fisheries insurance. The entire agriculture value chain, from procurement of inputs to the sale of produce at an attractive price, is fraught with risks. Climate change and natural hazards have created additional risks. The ability of farmers, especially smallholders, to manage the multiplicity and complexity of the risks to which they are exposed is quite limited. As a result, more and more farmers are becoming vulnerable to various economic shocks arising out of disasters and other risks. Fijian farmers, like their counterparts across the developing world, are also confronted with issues such as a lack of technology, shrinking landholdings, ageing farming populations, declining productivity, and an absence of alternative incomes or supplementary

²⁶ A tiered level of licensing, where licenses of a certain class can construct buildings up to a certain value. This can then be linked to the engineering certification requirements.

livelihoods. All this results in farmer distress and exodus into petty and unremunerated urban vocations. The delicate nature of Fiji's agriculture sector, coupled with natural hazards hitting the country with regularity, necessitates a comprehensive discussion on the protection of agriculture assets through risk transfer.

87. **Agriculture continues to occupy an important position in Fiji's economic development, providing employment to over a quarter of the population.** Agriculture's share in Fiji's GDP has witnessed a steady decline, falling from 18.9% in 1996 to 12.3% in 2012 (Figure 6). More recently, it declined to 8.12% in 2015.²⁷ This has happened due to a sharp rise in the GDP contribution of sectors such as tourism and textiles. Agricultural output also produced a checkered performance from 1996 to 2012, with significant year-on-year fluctuations in levels of growth. Despite this, agriculture continues to provide direct and indirect employment to almost 28% of the Fijian workforce (Insurance Holdings of Fiji 2016). In 2009, Fiji had 65,033 farms with a total area of 251,858 hectares. Of these farms, almost 44% were less than 1 hectare in area.²⁸ In 2014, the total area devoted to agriculture was 425,000 hectares.²⁹

Figure 6: Performance of Fiji's Agriculture Sector, 1996 to 2012



Source: Asian Development Bank (2014b).

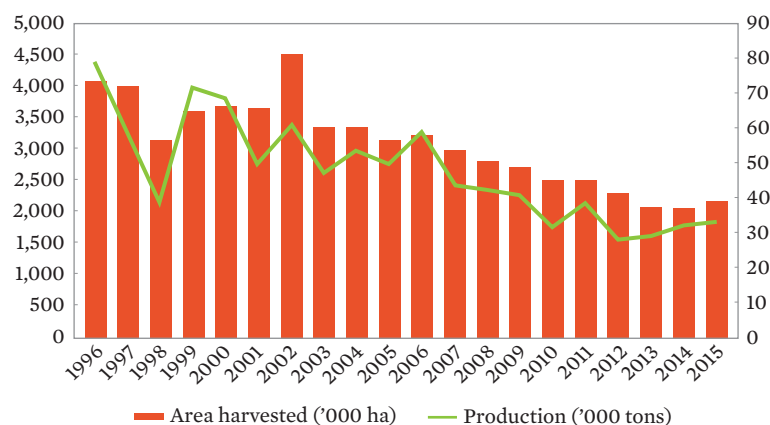
88. **Sugarcane continues to be the dominant crop grown in Fiji, but production has significantly diminished over the years.** Almost 13,700 Fijian farmers cultivate sugarcane, using over 39,000 hectares of arable land, with an average landholding of 2.8 hectares (Insurance Holdings Pacific Limited 2016). Sugarcane production has been consistently declining in Fiji over a long period. After a peak production of almost 4.4 million tons in 1996, the total harvest declined to just above 1.8 million tons in 2015 (Figure 7). The area of land

²⁷ Ministry of Agriculture. Crop and Livestock Production Performance, 2014–2015.

²⁸ Department of Agriculture, Economic Planning and Statistics Division. 2009. Fiji National Agricultural Census 2009. (http://www.fao.org/fileadmin/templates/ess/ess_test_folder/World_Census_Agriculture/Country_info_2010/Reports/Reports_3/FJI_ENG_REP_2009.pdf).

²⁹ Food and Agriculture Organization of the United Nations. Country Profiles: Fiji. (<http://www.fao.org/countryprofiles/index/en/?iso3=FJI>). Accessed on 15 January 2018.

Figure 7: Area of Land Cultivated and Production Volumes for Fiji Sugarcane, 1996 to 2015



Source: Fiji Bureau of Statistics (2016).

under sugarcane cultivation has similarly declined, from a high of 74,000 hectares in 1996 to 39,000 hectares in 2015. The problems associated with Fiji's sugar industry are largely attributed to the nonrenewal of a preferential purchase agreement the country had with the European Union. However, losses suffered on account of frequent tropical cyclones and other natural hazards may also have played a part. For example, the effects of Tropical Cyclone Winston resulted in a further decline in production in 2016, when only about 1.4 million tons of sugarcane reaching the sugar mills (RBF 2016b).

89. **Other crops are increasing their share in Fiji's overall agriculture GDP.** In 2015, crops other than sugarcane contributed 53% of total agriculture GDP, while livestock production contributed 10%. Root crops such as cassava, dalo, and kumala; vegetables such as eggplant and potato; and tree crops or fruits such as coconut, pineapple, and banana were all major contributors to this result. Poultry, dairy, and beef products were the main contributors for the livestock subsector. The expansion and variance in Fiji's crop basket reflects an increase in the number of farmers, improved agriculture assistance and inputs, and the country's high dependence on agriculture for food security.³⁰

90. **While sugar accounts for 18% of Fiji's domestic exports, other crop exports account for approximately 3.8%.** Major agricultural exports other than sugar include fruit (mainly pawpaw) and vegetables, including root crops. While most fruit and vegetables are sold fresh, there are a few establishments engaged in processing local fruits and vegetables (mainly for the domestic market) and in producing fruit juice concentrates (from pineapple, orange, guava, mango, passionfruit, and other citrus fruits). A small volume of certified organic products, including coconut and fruit products and nutraceuticals, is exported.³¹ Agricultural export volumes declined 15% in 2016, while agricultural export value dropped

³⁰ Footnote 27.

³¹ Fiji Country Commercial Guide. www.export.gov.

1% in the same year. These falls were attributed to losses arising from the effects of Tropical Cyclone Winston (Ministry of Agriculture 2016b).

91. **The regular occurrence of natural hazards has further destabilized the already checkered performance of Fiji's agriculture sector.** Cyclones and floods have caused losses extensive damage to Fiji's crops and other agriculture assets in recent years. In 2016, Tropical Cyclone Winston alone caused direct damages worth F\$81.3 million to Fiji's agriculture sector, according to a government assessment of post-disaster needs. Additional future production losses worth F\$460.7 million were estimated. Thus, the total value of damage and production losses in agriculture could amount to F\$542 million. Crop production (other than sugarcane) was the subsector most affected by Tropical Cyclone Winston, accounting for 40% of total damage and loss for the agriculture sector. This was followed by fisheries (38%), sugarcane (14%), forestry (5%), and livestock (3%). Permanent crops, such as kava and coconut, were the most impacted by the cyclone, but seasonal vegetables and annual crops, such as cassava and taro, also suffered significant losses (Government of Fiji 2016b).

92. **The real impact of losses in the agriculture sector could be much deeper than that reflected by mere numbers.** Many people living on or below the poverty line depend heavily on agriculture for livelihoods as well as subsistence. Almost half of the population living below the poverty line rely on agriculture for at least a part of their incomes, as compared to only a quarter of the population living above the poverty line (World Bank 2017a). Every 1% reduction in agriculture income (for whatever reason) would push an additional 1,000 people into poverty (World Bank 2017a).

93. **Disasters also have food security implications, especially for smaller countries such as Fiji.** At the time of the mission, the report study team was advised that Fiji had food reserves that would last for 2 months. However, in the event of the country being affected by a severe cyclone or other natural hazard, large scale importing of food at very short notice may be required. This may necessitate the diversion of funds from early recovery and reconstruction. However, maintaining a bigger stockpile of food will create its own infrastructural and financial challenges for Fijian authorities.

94. **The smaller landholdings that are largely reflective of subsistence farming further expose vulnerable farmers.** A farmer with a small landholding is not able to attain economies of scale, leading to the loss of bargaining power at both the input and output stage. A smallholder is also unable to build sufficient financial buffers to absorb the economic shocks that he or she is likely to face at regular intervals. Despite a significant presence of contract farming in Fiji, over 80% of the country's farms are classified as subsistence farms, suggesting a high number of smallholders (Table 3). For them, losses inflicted by natural hazards carry a higher multiplier than for other farmers operating on a more commercial scale.

95. **The Ministry of Agriculture is the nodal ministry for all agricultural subsectors except sugarcane and fisheries.** The five implementing divisions of the ministry are Economic Planning and Statistics, Crop Extension, Animal Health and Production, Crop Research and Human Resources, Finance and Information. The sugar industry falls under three institutions. The Fiji Sugar Corporation (FSC) was incorporated in 1972 by an Act of Parliament. In 2006 the Fiji Sugar Corporation Act was repealed and FSC converted into a company under the 1985 Companies Act. The Government of Fiji is a major shareholder,

Table 3: Farms in Fiji by Level of Commercialization, 2017

District	Commercial	Semi-Commercial	Subsistence	Total
Central	735	1,839	14,624	17,198
Northern	540	2,130	12,641	15,311
Western	619	1,761	11,504	13,884
Total	1,894	5,730	38,769	46,393

Source: Ministry of Agriculture (2018).

with a 68% shareholding, while statutory bodies, local companies, and individuals own the remainder of the shares. The FSC controls the milling activity for sugar in Fiji. It is mainly engaged in exporting sugar, but also caters to domestic demand. The FSC procures sugarcane from the growers at a price arrived at based on demand and supply factors. Although Fiji does not have a formal administered pricing mechanism for sugarcane, to support growers, the government often tops up the price offered by the FSC. Hence there is an indirect subsidy structure in place for sugarcane growers. The Sugar Cane Growers' Council is a membership-based organization of sugarcane growers in Fiji. It was established under the Sugar Industry Act 1984 to protect and further the interests of the country's sugarcane growers. There are about 16,000 members of the council, of which around 13,000 are active. The Sugar Cane Growers' Fund was established in 1984 by an act of the Parliament. The fund mainly engages in providing priority and specialized loans ranging from F\$5,000 to F\$50,000 to members of the Sugar Cane Growers' Council, for working capital and asset creation funding requirements. The fund has around F\$67 million as its corpus fund, of which it has loaned F\$31 million to council members. In the aftermath of Tropical Cyclone Winston, the fund offered restructuring of loans and also provided grants of up to F\$10,000 to almost 4,000 members. The loan facilities and other benefits are available only to members who are sugarcane growers and not to farm laborer members. The fund has offered all its members a bundled microinsurance product developed by a Fiji-based insurer. The product provides life, accident, dwelling (against fire only), and funeral cover. Full premiums for members were paid by the fund.

96. **Agricultural insurance has an important role to play in managing disaster risk, in particular pertaining to extreme weather events.** This includes insurance at the individual farmer- or micro-level, to smooth consumption and offer protection, to incomes in the event of major weather shocks and plant disease outbreaks; at the meso-level as a business interruption cover to protect agriculture loan portfolios of financial institutions and input suppliers; and, finally, at the macro-or government-level to support relief and early recovery for vulnerable groups in the aftermath of disasters. Agricultural insurance also increases access to farm credit by reducing associated risks of lending and encourages investment in related technological tools and modernization necessary for its implementation, e.g., weather stations, satellite monitoring. The Appendix 1 outlines the key learnings from international experience on agricultural insurance.

3.1.3 Diagnostic and Recommended Actions

Property Insurance

97. **Some property insurance products are now being designed in Fiji, and these incorporate a more nuanced underwriting approach.** As a response to a request from the government for increased engagement by the insurers in assuming disaster risk, the insurers association is considering the introduction of a three-tiered property insurance product, with tiers characterized as “gold,” “silver,” and “bronze.” The gold standard would require a property to meet the standards mentioned in para. 81 with regard to building code compliance and engineer’s certification. The silver standard would be available to households that could qualify for a wind certificate (not available in Fiji at the time of this assessment) or to a risk previously rated as gold but where the engineer’s certification has not been renewed after its term of 7 years. The bronze standard would apply to houses that are generally of low build quality but still deemed insurable with some basic reinforcement such as roof strapping. The details of the proposed product are still being finalized, but such a product would provide for a broader spectrum of risk conditions, as opposed to the rigid underwriting criteria already described. Developments such as this will stimulate the increased use of insurance as a risk transfer mechanism for private residences. They will require public-private partnerships to implement the silver and bronze standards. Local insurers and others should also investigate additional techniques for anchoring roofs, rather than merely relying on the well-established but expensive formal engineering approach.³²

98. **The government could further encourage developments to expand the outreach of property insurance.**

By stipulating standard wording with regard to certain provisions contained in Fiji homeowners policies:

99. The government could ensure that underwriting standards are balanced to an extent that is in the public interest, while not being unfair to insurers. Many countries incorporate into regulations standard policy wordings for key types of consumer policies, such as homeowners and motor vehicle policies. For homeowners, it may be feasible to adopt standardized wording that would correspond to the gold, silver, and bronze policy standards being considered in Fiji and referred to in para. 97.

By considering the allocation of funds from the compulsory third party (CTP) auto insurance to one of the funds maintained by the government to provide emergency relief to cover the poorest of the poor:

100. Beginning in 2018, the Government of Fiji was to assume responsibility for CTP auto insurance coverage from the private insurance industry. The government will therefore

³² Silver- and bronze-level products might also incorporate progressively less demanding standards in certain areas to be specifically indicated in the policy terms. It may be possible, for example, to permit at the lowest level, straps which go right over the roof, with anchors in the ground, and which can be easily installed. This type of strapping is in use in some parts of the Caribbean, where wind damage is also a critical risk. In some countries, large weights are even placed on roofs to provide a certain amount of windproofing. As progress is made with this type of approach, it may be possible to move from three tiers to five tiers or even more, all the time making progress on pushing down the thresholds so that more people will qualify for coverage, and with lower premiums, albeit with reducing amounts of protection. Such developments will help to meet the objective of extending risk transfer products to a much greater percentage of the population.

have a potential pool of funds in the form of CTP premiums because gross CTP premium income has ranged from F\$9 million to F\$10 million since 2012, with a loss ratio between 13% and 57%. However, with the establishment of the Accident Compensation Commission Fiji (ACCF), claims payments are expected to rise as the commission provides a no-fault scheme for victims, with minimal exclusions, unlike the previous approach where policy exclusion rendered the system unfair for victims. As such, the loss ratio for CTP insurance could increase. The commission will also have its own office with some staff, implying higher operating costs. Once it is fully operational and demonstrates its ability to meet prudential regulatory requirements, the transfer of excess funds, if any, to one of the government funds maintained for providing emergency relief to the poorest of the poor may be considered (section 2.3).³³

101. With the government entering the CTP market, the development of partnerships between government and industry, and the fostering of joint projects, will become all the more relevant.

By establishing an insurance pool as a means of providing universal property coverage against disasters:

102. Beyond encouraging residents of Fiji to make greater use of existing insurance markets, an additional approach will be needed to provide for the transfer of significant disaster risk to a new insurance medium expressly designed for that purpose.

103. **A disaster insurance pool could provide compulsory property damage cover for all single-family homes in Fiji, each for a relatively small amount of coverage and for a correspondingly small premium.**

104. **With a compulsory scheme, the premium can be considerably lower than might otherwise be assumed because, when all homes are insured, there is complete risk-sharing.** In noncompulsory insurance schemes, there is always a certain amount of anti-selection, i.e., those who own the best-constructed homes may conclude that they won't suffer much damage and therefore do not buy insurance. Under such schemes, others have to pay a higher premium because they do not have the benefit of pooling their risks with those who may have lower probability of loss.

105. **The precise structure and objectives of the pool would need to be deliberated, and actuarial assessment carried out.** However, it appears that a low level of basic coverage of around F\$4,000 or so per household could be provided for a total premium of less than F\$2 million. The total premium could be comprised of individual household premiums, with partial subsidies, or paid entirely by the government for poorer households. The pool could be structured in five layers for risk-sharing. The first layer of coverage could be provided by the government, to an extent that would be in keeping with the country's available financial resources. The second layer could be provided by international donors. The third layer could be covered by Fiji's licensed insurers. The fourth layer could be subscribed by other insurers

³³ One area for underwriting savings is through the use of volume discounts. Typically, a homeowner will be able to have a lower-cost insurance package if he or she insures both home and auto with the same insurance provider. This possibility may no longer be available to the same extent when the government becomes the underwriter of the CTP product.

not licensed in Fiji. The final and most significant layer could be subscribed by international reinsurance companies.

106. **There are two possibilities for the assessment and payment of claims.** The traditional option is on an indemnity basis, where, after a loss event, each property is assessed and a commensurate payment is arranged, up to the maximum loss amount covered under the policy. However, for a disaster solution with high covariate risk, individual loss assessment is expensive and time-consuming, especially when actual payment amounts are limited to relatively small sums. A more expeditious method might be to use a parametric approach. In this case, certain events are clearly defined ahead of time and, if any of these occurs, payment is triggered under the policy, without the need to investigate each damaged property. For example, the trigger could be the declaration of a category 4 or higher tropical cyclone making landfall in Fiji. The major possible shortcoming with the parametric approach arises around what is known as “basis risk.” This refers to the chance that, although a disaster event has occurred and has caused widespread devastation, the specific trigger condition is not met. As an illustration, suppose a category 4 tropical cyclone moves along the shore of Fiji, but does not make landfall according to satellite imagery and other evidence. Wind strength and volumes of precipitation experienced on land could be high, resulting in extensive damage, but without the tropical cyclone having technically “made landfall” payment under the policy would not be triggered.

107. **Although there are some risks, it is recommended that a parametric approach, carefully defined and perhaps with multiple triggers to reduce basis risk, is the most feasible approach.**

108. **A mandatory insurance pool would provide Fiji with a basic level of disaster risk protection.** It would help to ensure that, in catastrophic conditions, even poor rural families would have some capacity to reestablish their livelihoods.

109. **A disaster insurance pool could be modeled in collaboration with industry members and government officials, to establish how it might best be structured in practice.** Items to be decided could include the legal format of the entity, the management structure, the capital requirement, the types of business to be covered, and so on.

110. In addition to these efforts, there is a paramount need to focus on identifying effective, workable ways to reduce damage from severe weather events, such as cyclones. This can be achieved by strengthening and enforcing building codes and standards, as well as improving building products, construction practices, and repair and replacement techniques.

By entering future purchase agreements on construction material at the beginning of the cyclone season:

111. **A significant problem in the aftermath of a major disaster, especially for island countries such as Fiji, is that basic commodities required for rebuilding are suddenly in short supply, so their prices skyrocket.** Insurers and banks have experience with various types of financial futures and options contracts. Through financial institutions, the government could enter into arrangements that fix future prices for commodity products such as wooden two-by-fours, plywood sheeting, cement, and other building materials. This type of hedge

would extend the government's available funds for early recovery and reconstruction. This type of provision might require the use of foreign capital markets.

By adopting regulations that authorize qualified builders, engineers (and, perhaps, architects) to certify that properties meet required standards:

112. New certification regulations could give builders an incentive to ensure they are meeting required standards and that the tradespeople they have working on the project are properly qualified and licensed to do the work. In addition, the Construction Industry Council requires the support of government to help to ensure that there is proper training of graduates entering the building trades, and that there are required programs and standards for articling. The result should be government-issued licenses that reliably testify to the level of skill of the license holders. The council has members representing all aspects of the construction industry in Fiji. When construction work is being carried out by well-qualified, professionally responsible tradespeople, the insurance industry will feel more comfortable about providing insurance coverage for a wider range of properties (to say nothing of the benefits to consumers of having more professionally constructed buildings and residences).

Agriculture Insurance

113. **The funding gap for agriculture recovery and reconstruction following tropical cyclones is huge.** Recovery and reconstruction costs tend to be much higher than the cost of direct damages. Moreover, future production losses are often higher again. For example, compared to the estimated damages of F\$81.3 million directly caused by Tropical Cyclone Winston, the total costs of recovery and reconstruction amounted to F\$161.4 million (Government of Fiji 2016a). This often puts an unsustainable strain on government finances, which may ultimately result in rendering the losses unfunded.

114. **The agriculture sector needs to be fed with subsidies for its normal operations, and even more subsidies and welfare interventions in the event of a disaster.** In addition to the fiscal pressure created by subsidies and welfare costs, this results in a more subtle but dangerous phenomenon of moral hazard.³⁴ Since ex ante subsidies and post-facto relief are tantamount to some kind of insurance, Fiji's agrarian communities can become indifferent to proactively managing risk, which can in turn worsen outcomes for them in the long run. A more sustainable approach might be to develop market-based risk management solutions for agriculture.

115. **In order to address such a complex situation, de-risking agriculture in a sustainable and holistic manner is necessary.** A comprehensive risk management solution for agriculture is needed. This may be achieved through a combination of risk reduction, risk sharing, and risk transfer initiatives. Risk reduction would include interventions such as (i) soil testing, (ii) rotation of crops, (iii) avoiding conspicuous use of chemical fertilizers, (iv) complementary livelihood activities, (v) better disaster forecasting through use of technology and corresponding adjustments in farm activities, (vi) better information and access to national and/or international markets, and (vii) timely provision of inputs to prevent localized damage (Box 3).

³⁴ "Moral hazard" occurs when an insured increases their exposure to disaster risk because the insurer will bear resulting losses.

Box 3: Roadmap to a Holistic Risk Management Solution for Fijian Agriculture

1. Define objectives.
It is imperative to define clearly the objectives for a comprehensive risk management solution for agriculture. Some of them could be
 - (i) de-risk agriculture so it becomes a sustainable activity for farmers and the nation;
 - (ii) establish and/or maintain food security for the nation;
 - (iii) adapt to climate change and build resilience to natural hazards in a planned and effective manner;
 - (iv) increase investment in agriculture and agribusiness industries; and/or
 - (v) reduce the reliance of agriculture on ex ante subsidies and ex post relief measures.
2. Lay down the policy and strategy:
 - (i) conduct a comprehensive review of existing policies, strategies, and regulations relating to agriculture;
 - (ii) acknowledge risk management as an integral part of agriculture policy;
 - (iii) design a risk management strategy for agriculture, with the key elements of risk reduction, risk retention, risk sharing, and risk transfer;
 - (iv) identify the key areas of work under each of the above elements;
 - (v) identify existing policies, strategies, and regulations that need to be aligned with the strategy; and
 - (vi) lay down priorities in terms of crops, areas, market segments, etc. to be brought under the strategy in a phased manner.
3. Design the risk management solution:
 - (i) develop the package comprising (a) risk reduction interventions and support, and (b) limits and risks identified for risk sharing and risk transfer;
 - (ii) design the technology solutions around the package;
 - (iii) develop the institutional framework for implementation, including finalizing the risk-carriers as well as the community risk-sharing mechanisms;
 - (iv) set up the community risk-sharing structures;
 - (v) define the enrolment process;
 - (vi) align various benefits such as credit, subsidies, and relief around the risk management product;
 - (vii) fix the subsidy portion for the premium on risk transfer component; and
 - (viii) establish the process for claims settlement under risk-sharing as well as risk transfer components.
4. Monitor and evaluate the solution:
 - (i) set up a monitoring mechanism including grievance redressal protocols;
 - (ii) collect and analyze data on enrolments, utilization, and claims; and
 - (iii) make recommendations for the removal of bottlenecks and further improvements.

Source: Asian Development Bank.

3.2 Credibility of the Private Sector Offering Risk Transfer Solutions

116. **Fiji is a largely underinsured nation.** Fiji's insurance penetration rate of 3.2%³⁵ and the insurance density of about \$175³⁶ makes it comparable to many emerging and developed insurance markets. However, these figures are affected by premiums paid by the tourism sector, and are therefore not quite reflective of insurance penetration among middle- and low-income earners in Fiji. According to the 2015 demand side survey (para. 133), only 12% of adult Fijians reported having any kind of insurance. This figure can be further examined by place of residence and level of income. While 17% of urban Fijians said they have insurance, only 7% of the rural Fijian population was covered by any kind of formal insurance. Similarly, only 3% of Fijians in the bottom 20% income band, and 6% in the bottom 40% income band, reported having any kind of insurance. This indicates that Fiji is a largely underinsured nation, with the majority of the population not having any kind of insurance protection for their lives and livelihoods, including against disasters. Moreover, the top three reasons cited by the respondents for not having insurance were “does not need insurance” (41%), “insurance is too expensive” (30%), and “does not know what insurance is” (25%). This explains the behavioral issues impeding the purchase of insurance, especially by poor households.

3.2.1 Regulation and Supervision

The Reserve Bank of Fiji

117. **The RBF oversees the supervision and regulation of Fiji's financial sector.** The RBF was established by law in 1983. Its powers for supervision of the financial sector flow from of Section 4[c] of the Reserve Bank of Fiji Act, which states that one of the RBF's principal purposes is “to promote a sound financial structure.”³⁷ The RBF supervises banks, other deposit-taking institutions, the superannuation industry (made up solely by the Fiji National Provident Fund), the insurance industry, and foreign exchange dealers. The RBF's Annual Report January–July 2016 indicated that its supervision covered 95.6% (F\$15.78 billion) of the country's total financial sector assets of F\$16.44 billion (RBF 2016a). Within the Financial Institution Group (FIG) of the RBF, there are 20 frontline supervisors and 4 managers responsible for the oversight of both banks and insurers. Onsite and offsite work is also integrated, i.e., each individual supervisor has responsibilities that include both types of duties. An individual is assigned as the supervisory manager for each of the seven general insurance companies. When an onsite examination is carried out, it is with the company's supervisory manager involved and other team members selected from the FIG. Onsite examinations most often target particular risk areas that have been identified by offsite analysis of insurer returns as well as information collected during previous onsite visits.

118. **The FIG maintains a range of stipulated policies that provide for a supervisory system generally in line with international standards.** For example, the Reserve Bank of Fiji Insurance Supervision Policy Statement No. 8,³⁸ which came into effect on 1 October

³⁵ Reserve Bank of Fiji. 2016. Insurance Annual Report 2016. Gross premium as a percentage of total GDP.

³⁶ Insurance premium per capita. Gross premium in Fiji for 2016 was F\$311.9 million (roughly \$151.97 million) (RBF). Fiji's population was around 912,000 in 2018 according to the United Nations.

³⁷ Reserve Bank of Fiji Act 1983.

³⁸ Reserve Bank of Fiji Insurance Supervision Policy Statement No. 8, Minimum Requirements for Risk Management Frameworks of Licensed Insurers in Fiji, April 2010.

2010, comprehensively sets out requirements for the maintenance by general insurers of quite sophisticated systems of enterprise risk management. These include the need for board approved policies covering all key areas of risk, along with specific responsibilities of senior management in terms of maintaining and implementing those policies. Fiji incorporated insurers must have a board risk committee with a majority of nonexecutive directors. The responsibilities of this committee are set out in some detail in the policy statement, along with many other risk management functions and responsibilities. There are also policy statements covering matters such as reinsurance management, the role of actuaries, investment management policy, corporate governance, and other key areas of insurer management. The Insurance Supervision Policy Statement No. 3B, which was made applicable to insurers from 31 December 2002, sets out the minimum solvency requirements for general insurers in Fiji. Basic aspects of insurer corporate governance are included in the Companies Act 2015.

119. The Fiji Insurance Act 1998 notes the function of the RBF over the insurance industry include

- (i) the formulation of standards governing the conduct of insurance business and insurance broking business in the Fiji Islands;
- (ii) the superintendence of the conduct of agents, brokers and insurers in the Fiji Islands;
- (iii) advising the Minister with regard to all matters concerning insurance;
- (iv) recommending to the Minister regulations for the carrying out of Government policies relating to insurance;
- (v) the approval of standard terms and conditions contained in policies of insurance;
- (vi) the determination, with the approval of the Minister, of the rates of insurance with respect to any class or classes of business; and
- (vii) such other functions relating to the supervision of Fiji insurance business, or business incidental to Fiji insurance business, as are assigned to it by the Minister.³⁹

Note: As of early 2018, the RBF was developing a new insurance law to update the Insurance Act of 1998. A copy of the draft law was not available for review.

120. Supervisory actions are triggered by comprehensive risk-based assessments that assign risk levels to supervised institutions. The FIG maintains a risk profile for each insurer, based on findings from its offsite and onsite analyses. Internationally accepted financial ratios for insurance companies, tailored to Fiji insurance markets, are utilized as part of the offsite analysis. The onsite assessments include detailed reviews with regard to the quality of corporate governance and other areas for risk mitigation. A company's solvency position is also considered to be an important element of the overall risk assessment. Procedures for review are designed to maximize the consistency and reliability of the risk ratings. The RBF should consider requiring insurers, as part of their risk management system, to include accumulation risk. The RBF could then use this information to create a countrywide accumulation statistic.

121. Supervisory staff are well-trained and attuned to evolving international standards. In conversation with officers at RBF staff for the for the purposes of this report, it was evident that developed country websites and other sources are routinely monitored, and that staff are familiar with international standards. Reference was made to various training programs that have been arranged for staff, and it is clear that they have benefited from such programs.

³⁹ Insurance Act 1998. Section 3(2)(a) to (g). http://www.pacii.org/fj/legis/num_act/ia1998116/.

3.2.2 Insurance Providers

122. **The insurance sector in Fiji consists of nine insurers, of which seven are general insurers and two are life insurers.** All but one of the general insurers are Fiji subsidiaries of international insurance companies, and one (New India) is a branch operation of a foreign insurer. The two life insurers are incorporated in Fiji, but one is a subsidiary of a foreign bank, while the other is owned by a foreign insurance company. More than 40% of Fiji's nonlife insurance business is placed through four insurance brokerage firms, of which three are Fiji subsidiaries of international firms.

123. **Total assets of the general insurance industry amount to F\$429 million, and all companies appear to be maintaining significant margins of solvency.** Assets are conservatively invested, mainly in bank deposits. Table 4 shows total assets for each of the seven general insurers. Life insurers invest mainly in real estate assets, in line with their long-term liability structures.

Table 4: Fiji Insurers Assets, 2017
(F\$ million)

Insurance companies	Assets (F\$ million)
BPS ^a Health	19
Dominion	30
Fiji Care	15
New India	148
QBE	111
Sun	62
Tower	44
Total	429

^a Previously known as Bank of South Pacific Limited.
Source: Reserve Bank of Fiji (2018).

124. **Although Fiji significant risk from tropical cyclones and other natural hazards, insurance utilization is low.** According to the Annual Insurance Report of the Reserve Bank of Fiji, only 12% of the adult population of Fiji has any form of insurance coverage. For the general insurance industry, gross premium as a percentage of GDP is only about 1.8% and gross premium per capita runs to only about F\$350. Both of these figures are low relative to international norms. The existing products are described in section 3.4.1.

125. **In years when there are no tropical cyclones, general insurance lines tend to be quite profitable.** In 2015, which was a relatively quiet year in terms of losses due to catastrophe, the ratio of gross claims paid to gross premiums written was 46%. The after-tax return on shareholders' funds was 19.7% in 2015.⁴⁰

⁴⁰ Note that Medical Insurance is included with "general" business. Medical tends not to be much affected by windstorms and so the inclusion of the Medical line may tend to make the "general" line appear more profitable than if it only included Property and other classes that are more vulnerable to typhoon damage. However, Medical premiums are not very large relative to Property, so the impact is not considered to be very material to the overall picture.

126. **Tropical cyclones, droughts, and other natural hazards can significantly impact the insurance industry from one year to the next.** In 2016, Fiji was devastated by Tropical Cyclone Winston, one of the most severe storms on record for the Pacific region, with winds reaching almost 300 kilometers per hour. For that year, the ratio of gross claims paid to gross premiums written increased from 46% to 77%⁴¹ and the industry sustained an after-tax loss on shareholders' funds of -15%.

127. **There is considerable variation in profitability between different lines of general insurance.** In 2016, fire insurances reported the highest net loss ratio of 170%. This was followed by the motor vehicle insurances and other insurances at 107% and 89%, respectively. However, liability insurances generated a net loss ratio of just 18%, while marine insurances generated a loss ratio of 54%. The figures partly reflect the fact that some types of business are much more vulnerable than others to windstorm losses (section 3.4.1). Disaster losses are covered by way of normal policy forms that include named exclusions in respect of wind damage, earthquake, and other perils. The standard named exclusions can then be modified to the extent supported by engineer's certificates and other underwriting documentation as described in para. 81.

128. **Local insurers have the potential to provide a more substantial role in disaster risk protection in Fiji.** As mentioned in para. 80, the ratio of net premiums written to shareholders funds for Fiji general insurers indicates that the industry has the financial capacity to underwrite a considerably greater volume of premiums, i.e., to accept significantly more risk. In fact, with a conservative ratio of 2:1, net premiums would have been F\$262 million in 2016, compared with the actual level of F\$131 million. Additional premiums of over F\$100 million would provide for more coverage and, correspondingly, more claims.

3.2.3 Insurance Support Services and Data

129. **The insurance sector in Fiji has access to appropriate insurance expertise and support.** Fiji is a small country with less than 1 million inhabitants, and the insurance industry is correspondingly small. For example, if one excludes the largest of the seven general insurers, the average general insurance company asset size is less than F\$50 million. Companies of this size normally cannot support a full-time actuary as an officer. However, consulting actuaries are available from Australia and other places. For example, the RBF itself has a consulting actuary to provide technical insurance input as required. A lack of actuarial expertise is not a key issue for the insurance industry in Fiji. Similarly, other key professional support staff, such as auditors and accountants, are available within the country or on a "fly in, fly out" basis.

130. **Cyclone and earthquake data are available, but this information has limitations.** The Fiji Meteorology Service (FMS) has 47 years of data on Fiji's weather, largely limited to data from 25 weather stations in coastal areas, 3 of which were destroyed during Tropical Cyclone Winston in February 2016. Available information enables the FMS to convey the likely paths of cyclones, but it does not have the hardware and software for high resolution modeling. The FMS has concluded from its data that the possibility of all categories of cyclones in Fiji has declined very slightly, but the probability of category 3 to 5 cyclones

⁴¹ Since most of the premium and loss data in the RBF report is net of reinsurance, the figures have been recalculated on a gross basis. The incurred claim ratio was 94% on a net earned premium basis.

remains constant. Fiji has experienced damage and losses as a consequence of earthquakes in 1850, 1884, 1902, 1919, 1932 (twice), 1953, and 1979. Earthquake data are recorded by the Mineral Resources Division of the Ministry of Lands. Probable earthquake hazard maps were prepared for the Fiji islands in close collaboration with the Government of Australia in 1997, for use in the National Building Code for Fiji, the design of special structures, emergency management planning, and risk management (Jones 1997).

3.2.4 Microinsurance

131. **Poverty in Fiji has remained stable since 2009, with extreme poverty at a minimal level.** In 2009, 31% of the population and 26% of households were living below the poverty line (Fiji Bureau of Statistics 2011). In 2015, poverty levels appear to have fallen slightly to 28.1% of the population,⁴² although there is a strong variance in levels of poverty between rural and urban areas. However, the proportion of Fiji's population living on less than \$1.90 a day (2011 purchasing power parity), the international measure of extreme poverty, was just 1.5% in 2013.⁴³ This suggests that, while there is a significant low-income population in the country, extreme poverty is at a minimal level.

132. **Poverty in Fiji has several dimensions.** There is affluent subsistence for many native Fijians, who have sufficient resources to meet most basic needs, but have limited economic opportunities to move beyond that level. For those not part of communal land-holding systems, poverty is about not having access to land, being forced off the land because leases expire, and/or struggling to grow new cash crops in a sufficiently profitable way. Poverty in Fiji also stems from being unemployed, or underemployed as a day laborer in seasonal agriculture, and about limited job opportunities in cities, where there are few job vacancies beyond basic services such as retailing, transport, and security (BASIX 2009).

133. **Fiji's financial inclusion indicators continue to be strong.** According to a demand side survey undertaken in early 2015 for the Reserve Bank of Fiji, 60.2% of all adults, and 39% of adults earning less than \$2 a day, had at least one regulated deposit account with a regulated financial institution (RBF 2015). Out of the country's total bank accounts, 51.9% were active deposit accounts (having a deposit or withdrawal transaction in the past 90 days). Meanwhile, 37.9% of adult Fijians had saved at a financial institution in the past year. However, only 9.4% adults reported having at least one regulated credit account. This means that, while financial inclusion is high in terms of having active bank accounts, most accounts are used only for savings and access to credit is still limited to a small segment of population. The prevalence of bank accounts was expectedly lower, at 45%, in the bottom 20% income band. As regards financial inclusion by income source, 46% of casual income earners, and 48% of agriculturists, were reported to possess a bank account. However, the demand survey again revealed that most of the bank accounts are used for personal transactions only. While 95.7% of account holders use their bank accounts only for personal use, 3.5% of the banked population use their accounts for both personal and business transactions, and just 0.6% use them exclusively for business purposes. This indicates that most business transactions in Fiji, at least in the informal and semiformal sectors, are carried out in cash.

⁴² ADB Base Statistics. April 2017. <https://www.adb.org/publications/basic-statistics-2017> (accessed on 17 January 2018).

⁴³ World Bank Data. https://www.databank.worldbank.org/data/views/reports/reportwidget.aspx?Report_Name=CountryProfile&Id=b450fd57&tbar=y&dd=y&inf=n&zm=n&country=FJI (accessed on 10 January 2018).

134. **Fiji experiences very low levels of mobile money usage, despite high levels of awareness.** Nearly 76% of adult Fijians own a mobile phone, and 41% of those who do not own a phone regularly use someone else's. Among these, 80% have heard of mobile money, yet only 6.5% have a mobile money account. According to the demand survey of 2015, only 1.4% of adults had sent money through mobile financial services for person-to-person transfers and/or bill payments in the previous 12 months. The usage of other payment mechanisms, such as internet banking and credit cards, is also quite limited. Most of the payments made by the government are through electronic transfer, which perhaps explains the high penetration of bank accounts in Fiji. However, it does not seem to have translated into people adopting digital and/or electronic payment methods for their own transactions.

135. **Apart from the mainstream commercial banks there is one microfinance institution offering credit facilities to low-income earners in Fiji.** Microfinance started as a developmental initiative in the 1990s but soon attained a commercial character with dedicated microfinance institutions entering the space. However, with the RBF insisting that mainstream commercial banks could also offer microcredit products, most microfinance institutions in Fiji have since become defunct. As of early 2018, only South Pacific Business Development Microfinance Ltd., with around 6,900 active loan clients (mostly women) and a loan portfolio of F\$46 million, has some presence in the country.

136. **Savings and loan cooperatives are registered under the Cooperatives Act and administered by the Department of Cooperatives.** In rural areas, there are sugarcane cooperatives, cooperatives serving the interests of farmers producing other crops and livestock, and communal cooperatives set up to run village or community shops. The cooperative movement in Fiji was very strong during the 1980s, but it lost pace as access to markets became easier for farmers due to infrastructure development.⁴⁴ The other reason for the decline was that the members had limited financial understanding, and differences of opinion emerged as the cooperatives grew in size (BASIX 2009).

137. **Promoting financial literacy and financial education, especially among the financially excluded population of Fiji, is one of the important priority areas for the government as well as the RBF.** The National Financial Inclusion Strategic Plan 2016–2020 (FISP) clearly spells out the action plan as well as targets to be achieved within given timelines. Financial inclusion indicators in Fiji are higher than lower middle-income countries, but lower than upper middle-income countries. They are better than peers such as the Philippines and Indonesia. The eastern region of Fiji has the highest exclusion rate at 40%. The FISP's overall target is to increase the formally served adult population from 64% to 85% (or by 130,000 adults).

138. **The promotion of digital financial services (DFSs) is also one of the FISP's strategic goals.** It seeks to increase the percentage of adults that have an active mobile money account (used in the past 90 days) from 2.16% in 2015 to 15% in 2020. The FISP's strategic goal on DFSs lists the following more specific priorities:

- (i) creation of a digital financial ecosystem that enhances the use of DFSs;
- (ii) review product and services design and delivery of DFSs in Fiji, with a view to increasing usage;

⁴⁴ Of these, only communal-based cooperatives that operate community and/or village shops are still operating. However, there is a rise in individual family-owned canteens and smallgoods shops in villages and communities.

- (iii) promote retail payment efficiency and an environment conducive to support consumer protection;
- (iv) implement interoperability between all financial service providers and mobile network operators;
- (v) promote the use of DFSs through e-money channels and near-field communication devices to facilitate retail payments and cash-in and cash-out services;
- (vi) adopt or maintain a proportionate and risk-based regulatory and/or supervisory framework where necessary to develop the financial services market, while maintaining sufficient consumer protection standards; and
- (vii) design education and awareness programs on DFSs for consumers and service providers.⁴⁵

139. **Promoting access to insurance products for low-income earners also figures prominently in the FISP.** The target for overall insurance penetration is set at 25% for 2020, compared to 12% in 2015. Actions have already begun to run awareness programs about insurance. A joint media campaign, developed by the RBF in partnership with the Pacific Financial Inclusion Programme and insurance underwriters, was conducted in October and November 2016. The campaign used social media, print, television, and radio to raise awareness and understanding of the concept of insurance, explain the use of insurance within a risk management strategy, and explain the main types of risk that can be dealt with by insurance. The RBF reported to the study team that an independent study to measure the impact of the campaign found that knowledge and understanding of insurance products improved significantly. A further insurance media awareness campaign was run in May and June 2017. The Financial System Development Group of the Reserve Bank will continue to lead this campaign.

140. **The objectives of the FISP are commendable.** Although there is no mention of using financial services as disaster risk financing tools, promotion of financial services through financial literacy and education will result in increased uptake of these services. The simultaneous thrust on DFSs will enable distribution and servicing of these products, especially after a disaster situation, in a socially effective as well as cost-efficient manner, thereby enabling market-led disaster financing through IRCM (section 3.4).

141. **On the demand side, several issues have been identified.** In the specific context of Fiji, the Microinsurance Assessment—Prospects for Fiji, carried out by BASIX in 2009, offers the following insights into the attitudes of Fijians toward insurance:

Understanding: Poor people have some kind of functional and financial literacy, understand the importance of financial planning for future, and save with the microfinance institutions and commercial banks in urban areas but have not ventured into using financial mechanisms to protect against uncertainties.

Risk Appetite: The Fiji community is mostly risk averse and lacks entrepreneurial skills mainly due to the availability of abundant natural resources, lack of infrastructure, and commercialization in rural areas. On the other hand, Indo-Fijians who do not have access to resources, especially land, are more entrepreneurial in nature.

⁴⁵ Reserve Bank of Fiji. 2016. National Financial Inclusion Strategic Plan 2016–2020. Suva, Fiji. pages 13 and 14.

Trust: Wage earners in urban areas and rural Fijians are unaware of insurance products and hence the trust in the product and services is not explicit. In fact, knowledge of insurance companies and their products is very low, even in urban areas.

3.2.5 Capital Markets

142. **The capital markets are supervised by the RBF.** In December 1996, the Government of Fiji introduced the country's first securities market legislation, the Capital Markets Development Authority Act. It subsequently set up the securities commission, known as the Capital Markets Development Authority. The authority is now administered by the RBF through its Capital Markets Unit and plays a developmental role, as well as a regulatory role, in ensuring fair and transparent capital markets supported by investor confidence. Although overall supervision of the capital markets is conducted through the RBF, the South Pacific Stock Exchange (SPSE) is responsible for the direct supervision of stock market transactions and stock market brokers. Powers to supervise the capital markets are provided under the Companies Act 2015 and the Reserve Bank of Fiji Act 1983. The capital markets totaled F\$4.70 billion as of the end of June 2016 (RBF 2016a). This included market capitalization of listed companies in the equities market, funds under management in the unit trust market, and outstanding bonds in the bonds market.

143. **The SPSE is the only licensed securities exchange in Fiji.** The stock exchange was incorporated in November 1978 and commenced its operations in 1979, originally known as the Suva Stock Exchange, a wholly owned subsidiary of the Fiji Development Bank. In 2000, the exchange was renamed, with a view to becoming a regional exchange. In 2009, the SPSE entered a service agreement with the National Stock Exchange of Australia to access its electronic trading system through a sublicensing arrangement and, in July 2010, the SPSE launched an electronic trading platform. During 2016, the SPSE continued its development with several initiatives for information exchange and knowledge transfer, including ADB-funded technical assistance projects.⁴⁶ From the initial 6 securities listed in 1979, 19 companies were listed as of the end of 2016, with a market capitalization of F\$1.32 billion. After recording strong growth on the back of greater investor demand, capitalization stood at F\$1.80 billion at the end of 2017.^{47,48}

⁴⁶ ADB facilitated knowledge transfer between SPSE and the New Zealand Stock Exchange (NZX) to open up opportunities for further collaboration in the area of research reports, exchange traded funds (ETFs) and information sharing.

- Establishment of a working relationship with PacWealth Advisory for the establishment of a workable regional ETF product. This is a 2–3 years agenda and will continue into 2017.
- Knowledge exchange and information sharing with Port Moresby Stock Exchange (POMSOX) under the agenda of dual listing.
- In 2017, an ADB Private Sector Development Initiative (ADB PSDI) was begun through the Reserve Bank of Fiji (RBF) Technical Assistance that includes the alignment of SPSE's operational and regulatory responsibilities with the Companies Act, 2015, requirements, as well as new products/infrastructure that can be introduced by SPSE in the future to increase depth and liquidity in Fiji's stock market.

⁴⁷ SPSE received the Compliance Listing Application on 13 December 2016 from Free Bird Institute Limited for a quarter one, 2017 listing.

⁴⁸ South Pacific Stock Exchange. 2018. *2017 Stock Market Review*. 8 January. <https://announcements.spse.com.fj/ftp/news/021726596.PDF>.

144. **Notwithstanding important efforts by the SPSE⁴⁹ and the Government of Fiji, the country's capital market remains small.** Fiji is generally regarded as having a fairly well-developed financial sector relative to other Pacific island countries. However, the range of investments and financing options available remain limited basically to equities. Including all the ordinary trades as well as the one-off transactions, the number of trades via the SPSE e-trading platform for 2017 stood at 1,434 transactions, close to the 1,580 trades in 2016. However, the total volume and value of trades significantly declined between the 2 years. Total volume traded stood at 2,958,671 shares at the end of 2017, compared to 37,624,869 shares in 2016. Total value traded stood at F\$7,535,000 at the end of 2017, compared to F\$58,682,000 in 2016. There were no one-off transactions recorded during 2017, but various one-off transactions were recorded during 2016, including the Vision Investments Limited private placement trades and special crossing transactions.

145. **The Central Share Registry Limited (CSRL), established in August 2002, is a fully-owned subsidiary of the SPSE.** The CSRL underwent a rebranding exercise in 2016. The rebranding included the development of an independent website and corporate logo as well as the development of tailor-made, cloud-based share registry software called ShareSoft. The new branding and custom software was officially launched in November 2016. At the time of this assessment, CSRL provided registry services to 15 out of the 19 listed securities. Some of the services offered by the CSRL include

- (i) receiving, validating, and processing of share transfers;
- (ii) printing and issuing of share certificates;
- (iii) dividend distribution by all modes including direct deposit, telegraphic transfers, telegram money orders, and checks;
- (iv) issuing of shareholding confirmations;
- (v) processing of off-market transfers (private transfers);
- (vi) issuing of replacement certificates;
- (vii) obtaining tax clearances from the Fiji Revenue & Customs Authority;
- (viii) obtaining exchange control clearances from the RBF; and
- (ix) handling of independent public offerings and share splits.

3.2.6 Diagnostic and Recommended Actions

146. **Increasing insurance awareness and encouraging the industry to serve the whole population with appropriate products is necessary, including to strengthen disaster-related IRCM.** Several joint actions between the RBF and the insurance industry are suggested.

147. **The RBF can simply remind insurance companies of the need to design policy features in ways that cost-effectively respond to the disaster risk needs of Fiji's property owners, including those who are not relatively wealthy.** Bulletins and guidance from the RBF could help to stimulate innovative thinking and the development of new products.

⁴⁹ To further develop the securities market, the SPSE promotes investor awareness and education activities, including frequent social media updates, periodic meetings with institutional investors, monthly newspaper articles, television commercials, bi-annual public awareness sessions, and more private corporate awareness sessions with business houses. SPSE signed a memorandum of understanding (MoU) with the Taukei Land Trust Board in 2016 for investment education initiatives targeted at all landowning units over a 3-year period.

148. **The RBF has considerable insurance expertise within its pool of executives.** It could, from time to time, volunteer senior personnel to work in partnership with the insurance industry in the development of new disaster-related products⁵⁰ that will better respond to Fiji's special requirements.

149. **The industry association could work with the government to publicize industry developments with regard to consumer-friendly, disaster-related products and feasible insurance solutions.** Perhaps insurers that make special efforts along these lines could even be singled out by the government through the presentation of special achievement awards. For example, the RBF might sponsor an annual insurance conference which would feature new insurance products, including disaster products, and highlight insurance innovations, with a special insurer achievement award being part of the show. Members of the business community and general public could also be invited to attend and to participate in the discussions about insurance-related issues.

150. **To raise disaster insurance awareness, the government and the insurance industry could cooperatively develop awareness brochures for the public and material for the media.** Needless to say, such efforts would also be beneficial to the industry.

151. **An insurance consumer compensation plan, including coverage for disaster-related products, appears premature for Fiji, but should be kept in mind as the insurance industry grows.** A consumer compensation plan⁵¹ protects consumers up to certain limits and subject to prescribed conditions where an insurance company becomes insolvent and is unable to meet its obligations to policyholders. Such a plan needs to be designed in a way that minimizes the possibility of moral hazard, where policyholders may lose the incentive to deal with strong, well-capitalized insurers. Nevertheless, a compensation plan can be a worthwhile addition to the system of consumer protection and insurer supervision. When even one insurer in a marketplace is unable to meet its policy obligations, it damages the reputation of the entire industry and undermines consumer confidence in the financial system. In a country such as Fiji, where insurance is already little used, insolvencies would further reduce the uptake of insurance products to transfer risk. There are a number of ways these types of plans can be structured, but generally they involve a form of self-insurance by the industry members. Ultimately, then, insurance companies as a collective must have the financial strength to support the claims of an industry member if it becomes bankrupt.

152. This type of plan would be difficult to establish in Fiji because the industry is still very small. Furthermore, under Section 20 of the Insurance Act 1998, insurers are required to maintain (clean) deposit certificates with the RBF, equivalent to the required solvency margin.

⁵⁰ Developing innovative products and schemes is not risk-free, and their transformative implications need to be scrutinized by regulators to manage systemic risks that may arise. In many countries, regulators are exploring ways to apply innovation responsibly by working with the private sector to experiment within certain bounds to learn how to regulate and supervise this emerging industry, using a "sandbox" approach. The sandbox gives limited authorization to pilot new products and models with a small number of actual users in a simulated environment. This gives them more time to build and test business ideas, instead of spending time navigating complex financial services regulations. Focusing on regulatory compliance absorbs seed capital before anyone knows whether an idea could work and be scaled up. Participants are nonetheless required to follow rules on marketing, privacy, anti-money laundering, disclosure, and management of conflicts of interest (ADB 2016).

⁵¹ Funding for the consumer protection plan can be either an ex ante or ex post payment. With ex ante funding arrangements, funds can be built up slowly and will be available immediately. However, the target of the funding amount tends to be conservative due to its unpredictability. In the case of ex post payments, post-funded levies can be imposed, where the cost of failures exceeds the fund size.

Deposits are deemed to be assets on the part of the insurer and the manner in which they can be used is stipulated by Section 21 of the Act. The general insurance industry is comprised of just seven companies and, if the largest of those (New India) is excluded, the average insurer has assets of less than F\$50 million, with Fiji Care at only F\$15 million and BSP⁵² Health at F\$19 million. Although the small insurance companies are solvent, it would be difficult to consider them as having sufficient resources to support a consumer compensation plan. However, an insurance consumer compensation plan may become feasible with additional profitable growth, subject to careful analysis of the plan's net benefits. A regional plan might also be considered, but this would raise questions of jurisdiction and oversight. Such a plan would also require a feasibility study and cost-benefit analysis to determine its viability.

153. **A mandatory catastrophe reserve⁵³ for each individual insurance company reserve should be introduced.** This reserve should be structured to supplement consumer protection in two ways. The first and most direct way would be by increasing insurer resources to pay related claims when major disasters occur. There is, however, an additional dimension of consumer protection within this recommendation. Functioning something like a single insurer compensation plan, a catastrophe reserve would afford each insurance company an additional buffer against general insolvency. In the normal course of event, insurers accept premiums, which are held for the payment of future claims. If, over the course of an accounting period, the earned premiums are more than sufficient to pay claims and other operating expenses, the insurer will record an underwriting profit. Under normal accounting rules, insurers may not set aside amounts other than collected premiums to pay future claims. However, if required by the RBF through regulation, insurers could designate a part of their operational costs as being applicable to some future claim event, such as a major earthquake or tropical cyclone. The amounts put aside in this manner normally would not attract tax (because they will never become available to the insurer in the form of profit) and constitute an earmarked component of the shareholders' equity account.⁵⁴ Following implementation of International Financial Reporting Standards (IFRSs), catastrophe reserves are not allowed as liabilities. However, IFRSs do not prohibit the reporting of catastrophe reserves as a component of equity and "catastrophe reserves are currently treated as part of an insurer's capital base. Therefore, the release of these reserves will not impact capital sufficiency, unless they are either taxed or paid out as dividends."⁵⁵ More details on catastrophe reserve regulation is provided in Appendix 2.

154. **The payment of a reinstatement premium is required for per event excess-of-loss reinsurance treaties in the event of a covered catastrophe.** This premium "is to reinstate the original policy limit (after it has been exhausted by the covered catastrophe) in order to cover another possible catastrophe under the reinsurance policy. In general, such a premium

⁵² Previously known as Bank of South Pacific Limited.

⁵³ A catastrophe reserve is used in several jurisdictions to allow (re)insurers to accumulate funds in a tax free manner in the form of qualified technical reserves that will be available in the event of a catastrophe. This practice is useful since the catastrophic events do not occur frequently but when they do the loss is large. Thus, (re)insurers become more resilient to catastrophic events with this preventive and tax supportive regulation.

⁵⁴ A number of jurisdictions already have provisions for catastrophe reserves. For example, the west coast of Canada sits on a well-established earthquake zone, and the Canadian supervisor, the Office of the Superintendent of Financial Institutions, has required that every general insurer must have accumulated by 2022 a reserve sufficient to provide for a 1 in 500-year event. Detailed accounting and other requirements for Fiji should be determined by the RBF, in keeping with the requirements of International Financial Reporting Standards as defined from time to time.

⁵⁵ FitchRatings. 2004. *Mind the GAAP: Fitch's View on Insurance IFRS*. 5 May. <https://www.iasplus.com/en/binary/resource/fitchinsurance.pdf>, page 13.

must be accounted for once the loss that would trigger such premium is incurred.”⁵⁶ The RBF is considering mandating insurers to set up a contingent premium reserve. Such a reserve is an important source of risk capital for those operators with limited opportunities to obtain capital from external sources (Försäkrings Förbundet 2010).

155. If the level of available capital in Fiji’s nonlife insurers is to remain the same, without reinstatement reserves being counted in, a capital injection may be required. One consequence “of an increased demand for capital is that premiums will be raised across the board for nonlife insurance.”⁵⁷ The proposed regulations must consider, among other factors, the maximum allocation of capital to the contingency reserve and rules for the dissolution and dispensation of reserves. The allocation level varies across different lines of insurance business with the highest allocations being applied to those lines of business where risks are difficult to predict and where results can fluctuate sharply. The cumulative maximum exposure limit for each line of business ultimately determines the aggregate exposure of an insurer (Försäkrings Förbundet 2010).

156. **Alongside the supply side challenges and constraints for holistic development of the microinsurance market, it is also essential to understand the demand side issues.** Potential consumers of insurance, especially low-income earners, suffer from several behavioral anomalies that preclude them from buying insurance (para. 116). These anomalies include loss aversion, status quo bias, availability bias, and cognitive dissonance, and they need to be understood and addressed effectively through educational programs (paras. 146–150).

3.3 Unlicensed Competition

157. **Unlicensed insurers, i.e., insurers that are licensed and supervised in jurisdictions other than Fiji, play an important risk transfer role in Fiji.** In many countries, unlicensed competition hinders the development of the local insurance industry. In the case of Fiji, the relatively small size of the country’s economy—and hence its insurance industry—along with its large exposure to natural hazards, mean that unlicensed or offshore insurance providers are important in providing underwriting capacity to the market. However, a smoother process to gain access to that underwriting capacity is recommended.

3.3.1 Unlicensed Insurance Providers

158. Unlicensed insurance providers deliver a significant amount of coverage to policyholders in Fiji. Insurance business can be placed in the overseas market if it is coverage that cannot be obtained locally from licensed insurers, or if the local coverage is significantly more expensive than the overseas placement. Each such placement requires the approval of the RBF. As a measure of the importance of the overseas market, claims related to Tropical Cyclone Winston and covered by offshore insurers amounted to F\$154.9 million, whereas local insurers had claims of F\$116.5 million. Approval by the RBF of offshore placements is based on one of two main criteria: (i) the coverage is not available in the licensed market, or

⁵⁶ R.S. Blanchard. 2005. *Premium Accounting—CAS Study Note*. <https://www.casact.org/library/Miscell/blanchard6a.pdf>, page 8, bullet 3.

⁵⁷ Försäkrings Förbundet. 2010. *Contingency Reserve as Risk Capital of Highest Quality*. 28 May. page 4(6).

(ii) the coverage is available, but at a cost of more than 15% in excess of the cost in the licensed market. According to the RBF's Insurance Report for 2016, the bank considered and approved 1,384 applications for offshore placements during that year.

159. **Well controlled, incremental use of unlicensed markets could be facilitated by arranging for memoranda of understanding (MOUs) between the RBF and supervisory agencies in other jurisdictions having standards of supervision which are in line with international standards.** The major concern about the use of unlicensed insurance is that, without further qualification, it may be underwritten by insurers that are largely unsupervised or are not adhering to the supervisory requirements in their home jurisdictions. By negotiating MOUs, specific jurisdictions having supervisory standards acceptable to Fiji would agree that insurers licensed in their jurisdictions will provide sound insurance products and reliable claims-paying services to policyholders in Fiji. Each such MOU must be negotiated on its own merits, but putting such arrangements in place could be highly beneficial in terms of broadening the availability of insurance coverage to Fijian residents.

3.3.2 Diagnostic and Recommended Actions

160. **Fiji's high exposure and vulnerability to natural hazards requires unlicensed insurance providers.** In an ideal situation, the local market should be able to provide the necessary insurance. In Fiji, the high level of disaster risk requires sophisticated underwriting expertise and high amounts of risk capital and/or efficient reinsurance. Local insurers currently do not have that required capacity.

161. **Making the offshore market more accessible would add insurance capacity to the market in Fiji.**

162. **Competition from the offshore market could help to stimulate local insurers to provide better products and better rates.** On the one hand, use of the offshore market is injurious to the licensed market because premiums are not being retained in the country and are not helping to build the capital resources of Fiji's insurance companies. On the other hand, a significant amount of insurance business is going offshore, suggesting that the local companies are not providing the lowest rates and some sought-after insurance products for Fiji residents. Over time, competitive forces could also help to stimulate more nuanced underwriting evaluations within the licensed market. On balance, if the offshore market leads to increased amounts of disaster risk being transferred to the insurance sector, then the net result is positive.

163. **Rather than requiring every offshore placement to be approved by the RBF, it is recommended that the Fijian brokerage market performs this role using criteria set by the RBF.** This would free up RBF staff from what is likely a time-consuming process of assessing international insurers to establish whether they are financially sound and in a position to assume insurance risks from Fijian consumers. Also, having approved a particular placement, the RBF may find itself in a position of potential liability if the insurer in question then does not perform. Brokers in the private sector already have the requisite knowledge of international markets and financial positions of insurance companies to make the required determinations. The following model would accomplish this objective without sacrificing consumer protection:

- (i) Brokers with acceptable international contacts and credentials could apply for and obtain a special Brokers license, which would authorize them to place business directly with offshore insurers.
- (ii) Granting of the special brokers license would be conditional upon (a) at least 5 years of brokerage experience with no record of supervisory sanctions or infractions, and (b) the placing of a deposit of F\$50,000 with the RBF. Such a deposit would demonstrate the intention of the brokerage firm to behave responsibly, and provide a buffer for consumers in the case of financial difficulties at the brokerage.
- (iii) An offshore placement could only be arranged where the specially licensed broker is able to demonstrate that the requested coverage is not available in Fiji or, if available, would be at a price at least 15% higher in Fiji compared to the offshore premium.
- (iv) Any insurance consumer in Fiji who intends to make use of the offshore market would have to be provided with a written statement disclosing that offshore insurance companies are not subject to supervision by the RBF, including with regard to claim disputes, and are not subject to the jurisdiction of Fiji courts. The written statement must also notify the consumer that additional taxes may be payable on the premium (because excise tax may apply to the insurance service being imported into the country).
- (v) If the offshore placement remains attractive to the Fiji resident, the intended policyholder would have to sign off to indicate that he or she has read and understands the conditions, and that they agree to the placement as arranged.

164. **Carefully specified controls and limits overseen by the RBF could allow “fronting” as another way to access beneficial offshore insurance.** The process described in para. 163 could be mirrored by local companies through fronting arrangements. Under a fronting arrangement, local insurers could agree to distribute products from offshore companies through the use of their own policy forms on a licensed basis. When fronting arrangements are in place, premiums are passed along by the local company to the offshore company, then a fronting fee is paid to the local company. The local company pays claims (because the product is being sold on the local company’s policy forms), but it is reimbursed for claim payments by the offshore insurer. Fronting is generally frowned upon by insurance supervisory agencies because there are risks involved. The most obvious risk is that the offshore company does not reimburse the local company for claims, either because of a dispute or because the offshore company has become insolvent. In that case, the local company is still legally responsible for paying all claims, but it must meet that obligation without having received the premiums from the policies that were sold. Such an eventuality could certainly threaten the solvency of local insurers in Fiji, so carefully specified controls and limits must be overseen by the RBF.

3.4 Product Availability and Affordability

165. **Product development is hindering disaster risk transfer to the insurance sector and the capital markets.** Although the general insurance industry in Fiji has the potential to assume a greater proportion of property and agriculture-related disaster risk, appropriate products need to be developed. Sophisticated securities also need to be introduced to take full advantage of the capital markets to transfer disaster risk from the government and individuals.

3.4.1 Nonlife Insurance Products

166. **Nonlife insurance policies, which command 56.5% of total premiums underwritten in Fiji, are focused on high-end commercial lines of insurance, especially those relating to tourism.** Hotels and other tourist-related facilities typically have coverage for property and business interruption as well as other standard forms of protection, including disaster-related risks pertaining to tourism. Most of the property insurance is driven by treaty and facultative reinsurance placements abroad. A large proportion of direct insurance business is also placed abroad through international brokers. The second major product line for nonlife insurance is motor insurance (CTP as well as comprehensive, with the latter including coverage for natural hazards in some policies, either as part of the policy or as an additional protection). The fast-growing automobile market in Fiji has been responsible for boosting this market segment for nonlife insurance. With the dominance of these two major product lines, very little underwriting capacity is left for personal lines of insurance. Moreover, with brokers generating almost 50% of total industry premiums, Fiji is a broker-driven market. Retail and individual businesses are obviously not the priority of insurance companies. Most insurance agents in Fiji are again concentrated in the urban areas, and focus on relatively big-ticket products such as motor and health insurance, as well as catering to tourism operators (Table 5).

Table 5: Insurance Premiums by Class of Business, 2016

Class of Business as Defined by the RBF	Gross Premium Income (F\$ '000)
General Insurance	
Fire	52,339
Householders	10,367
Motor Vehicle	46,067
Marine Hull	2,414
Marine Cargo	1,995
Cash in transit and Burglary	1,024
Motor CTP	9,398
Personal Accident	668
Professional Indemnity	1,294
Public Liability	2,808
Workers Compensation	7,445
Medical	27,456
Term Life	7,923
Other	5,102
Total	176,300
Life Insurance	135,600
Total All Lines	311,900

CTP = compulsory third party, RBF = Reserve Bank of Fiji.

Source: Reserve Bank of Fiji (2016b).

3.4.2 Agriculture Insurance Products

167. **The Fiji Crop and Livestock Council (FCLC) was formed in 2013 with financial support from the European Union.** It was set up to mobilize farmers producing livestock and crops other than sugarcane to form collectives or similar groups, which would then be supported by training, technical advice, and other inputs from the FCLC. These groups, known as commodity associations, are supposed to act as collectives for advocacy as well as for marketing various services, such as insurance, to members through the FCLC. To date, the FCLC has formed commodity associations for 12 commodities, including pigs, honey, dalo, ginger, cocoa, rice, and coconut. The FCLC has also developed a mobile application through which it can reach out to the almost 33,000 members of its various commodity associations.

168. **The FCLC, with financial support from the Food and Agriculture Organization of the United Nations, commissioned an in-depth feasibility study on a potential agriculture insurance products and/or schemes for Fiji.** The study report was submitted in September 2017 and included the following salient features:

- (i) The report recommended the development of an index-based insurance product covering the risks of wind (category 3 and above), flood (above the levels of a 1 in 10-year event), and drought.
- (ii) The report ruled out the possibility of developing an indemnity-based multiperil crop insurance programme, although this has since been reconsidered (para. 177).
- (iii) The report identified sugarcane and other crops such as dalo, cassava, ginger, coconut, and pineapple for coverage under the proposed product.
- (iv) The report included detailed calculations for margins under various crops, gross value at risk, the probable impact of disasters on various crops, loss scenarios at various levels of enrolment, and, ultimately, tentative premium rates.
- (v) The report suggested the tentative reinsurance mechanism for the proposed scheme.
- (vi) The report recommended full or substantial premium subsidies, keeping in view the low capacity to pay of Fijian farmers.

3.4.3 Microinsurance Products

169. **Microinsurance is re-emerging in Fiji, with the RBF as a main driving force.**⁵⁸ The low market penetration of insurance in Fiji, with just 12% of the population having any kind of insurance, including CTP motor insurance, suggests an absence of microinsurance in the Fijian market. The RBF has emphasized the need to develop microinsurance in Fiji and, as a result, three microinsurance products are being offered in the country (Box 4).

3.4.4 Capital Market Products

Traditional Capital Market Products

170. **The main issuer of bonds is the government.** With an outstanding volume at F\$3.21 billion (240 issues) of September 2017 and F\$200 million (one issue with a coupon of 6.6% and a duration of 5 years), the Government of Fiji is the main bond issuer in the country. At the end of September 2017, government bonds comprised 92.6% of the total outstanding

⁵⁸ Due to overlap, recommendations pertaining to this section are included in Section 3.5.

Box 4: Microinsurance Products Available in Fiji

Bundled Microinsurance Product by FijiCare: In partnership with the Pacific Financial Inclusion Programme, FijiCare, a local nonlife insurer, rolled out a bundled microinsurance product in August 2017. This product offers coverage for life insurance (F\$3,000), funeral benefit (F\$1,000), personal accident (for total or partial disability arising out of accident, up to F\$3,000), and fire insurance (excluding cyclones and earthquakes) for dwellings (up to F\$3,000). The annual premium per person for this product is fixed at F\$52. The strategy is to sell this product to employers, trade and business groups, and farmer groups on a “group policy” basis. The Sugar Cane Growers’ Fund has been the first group to cover its membership, totaling 12,500 growers, under this product.

Mobile Insurance by BIMA: Offering microinsurance in partnership with mobile network operators has gained momentum around the world, especially in Africa. BIMA, a mobile microinsurance provider, has joined with Digicel in Fiji to offer life and hospital cash coverage to Digicel’s mobile phone subscribers. The life cover is available for a sum assured of F\$3,000, F\$6,000, and F\$12,000, while the hospital cash cover is available for benefit limits of F\$24, F\$48, and F\$96 per day of hospitalization. Premium payments can be made by subscribers on a daily or monthly basis through airtime recharge. The risk is carried by Dominion Insurance, a licensed insurer in Fiji. This programme is also supported by the Pacific Financial Inclusion Programme.

Microlife by Life Insurance Corporation of India: A savings-linked life microinsurance product is available in Fiji through Life Insurance Corporation of India. The product is available for a term of 5 to 10 years. The benefits include death cover (basic sum assured), funeral benefit (10% of the basic sum assured), maturity benefit for insured persons surviving until the end of the policy term, accident benefit (additional amount equivalent to the basic sum assured), and loyalty addition, if any, at the end of the policy term. This product is sold through individual agents.

Sources: Life Insurance Corporation of India. www.licifiji.com; Pacific Financial Inclusion Programme. www.pfip.org.

bonds, followed by statutory bonds: Fiji Development Bank at 4.3%, Fiji Housing Authority at 1.3%, Fiji Electricity Authority at 1.1%, and Fiji Sugar Corporation at 0.7%. Between August 2017 and July 2018, the government intended to issue debt in the amount of F\$533 million. The government yield curve, as of December 2017, had a rate of 3.65% for a 1-year duration, rising to 7% for 30 years. The placement of the bonds is done mainly by tender with selected institutional investors. Given that most of the investors hold to the bonds, there is no secondary market. Buyers—including the Fiji National Provident Fund (FNPF) as the dominant buyer, banks, insurers, and private individuals listed as “others”—are indicated in Table 6.

171. **Fiji has become the first emerging market to issue a sovereign green bond.** As 23rd Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) President, the Government of Fiji showed leadership in supporting climate change adaptation by issuing a green bond in November 2017. The bond received a great response from the market, resulting in the over-subscription of its first tranche.⁵⁹ Green

⁵⁹ At the request of the RBF, the World Bank and the International Finance Corporation (a member of the World Bank group that focuses on the private sector) provided technical assistance to assist the government in issuing this sovereign green bond. This collaboration took place under a broader, 3-year capital markets development project supported by the Government of Australia. Through this partnership, Australia and the International Finance Corporation are helping to stimulate private sector investment, promote sustainable economic growth, and reduce poverty in the Pacific.

Table 6: Government Bonds by Buyer, September 2012–September 2017
(F\$ million)

Year	FNPF	Banks	Insurers	Others	Total
Sep-12	1,704	36	387	381	2,508
Sep-13	1,690	55	412	387	2,544
Sep-14	1,668	94	476	371	2,609
Sep-15	1,691	139	543	381	2,754
Sep-16	1,910	133	586	430	3,059
Sep-17	2,045	104	617	443	3,209

FNPF = Fiji National Provident Fund.

Source: Reserve Bank of Fiji (2017).

bonds are fixed income, liquid financial instruments that are used to raise funds dedicated to climate mitigation, adaptation, and other environment-friendly projects.⁶⁰ The green bond investments will be utilized in climate change adaptation programs.

Insurance-Linked Securities

172. **An insurance-linked security (ILS), currently not available in Fiji, is an innovative financial product that transfers insurance risk to capital market investors.**⁶¹ Catastrophe bonds remain the dominant type of ILS globally. These are bonds whose coupon and principal payments depend on a predefined catastrophic event not occurring. Other types of ILSs include those based on mortality rates, longevity, and medical claim costs. As of 28 December 2017, the global ILS issuance for 2017 had risen to \$12.5 billion, up from \$7 billion in 2016, and the outstanding market had increased to \$31 billion, up from \$26.8 billion in 2016.⁶²

173. **Typical investors include life insurers' pension funds, mainly incorporating catastrophe risk into their investments to diversify their exposure to market risk.** To a lesser extent, nonlife insurers are also investing in ILSs, assuming mortality and morbidity risks. Other institutional investors, including hedge funds searching for yield in a global environment of low interest rates, are looking at ILSs favorably.

174. **Insurers, reinsurers, and governments have been the traditional issuers of ILSs, seeking to offload their underwriting exposure into the global capital markets.** The Government of Mexico is an active issuer of catastrophe bonds,⁶³ for both earthquakes and hurricanes. The costs of those instruments can be as high as 9% over Libor covering the frequent Atlantic hurricanes of category 4 or higher (\$210 million for 2.5 years, issued in 2017). The trigger for earthquake protection relating to the bond issued in 2017 was set at magnitude 7.9 or higher on the Richter scale, for a cost of 4.12% over Libor. This bond

⁶⁰ World Bank. 2017. *Fiji Issues First Developing Country Green Bond, Raising \$50 Million for Climate Resilience*. 17 October. World Bank press release. <http://www.worldbank.org/en/news/press-release/2017/10/17/fiji-issues-first-developing-country-green-bond-raising-50-million-for-climate-resilience>.

⁶¹ For details, see the companion report entitled "Toolkit for Insurance, Reinsurance and Capital Market Solutions for Disaster Risk Financing."

⁶² Artemis Catastrophic Bond & Insurance-Linked Securities Deal Directory.

⁶³ Global Capital by Katie Llanos-Small, 12 October 2017, <https://www.globalcapital.com/article/b154ccrvz0yhcd/mexico-vs-cat-bonds-1-1>.

will pay \$150 million, following the 2017 Chiapas earthquake, which had a magnitude of 8.0. Note that the devastating earthquake in central Mexico in 2017 did not trigger this bond as its magnitude was 7.1, below the trigger level.

3.4.5 Diagnostic and Recommended Actions

Nonlife Insurance Products

175. **Environmental liability insurance, linked with climate change and therefore with changing disaster risk, needs to be developed.** While no significant past events affecting the environment have been attributed to industry, climate change discussions have raised awareness of the need to purchase environmental liability insurance. Unfortunately, this type of insurance is not well-developed in Fiji, so the availability of coverage is limited. The introduction of mandatory insurance against environmental damage by industries that have the potential to harm the environment would make available funds to repair the damage and provide compensation to affected entities and/or individuals. It would also require the implementation of proper risk management measures by industry to avoid environmental accidents as a precondition to obtain the mandatory liability insurance. The certification of proper risk management systems would have to be undertaken by a credible and knowledgeable institution. The mandatory character of such an insurance, together with the fact that Fiji's active industries are not considered to be high risk, would result in low insurance rates through a wide base and no adverse anti-selection effects.

Agriculture Insurance Products

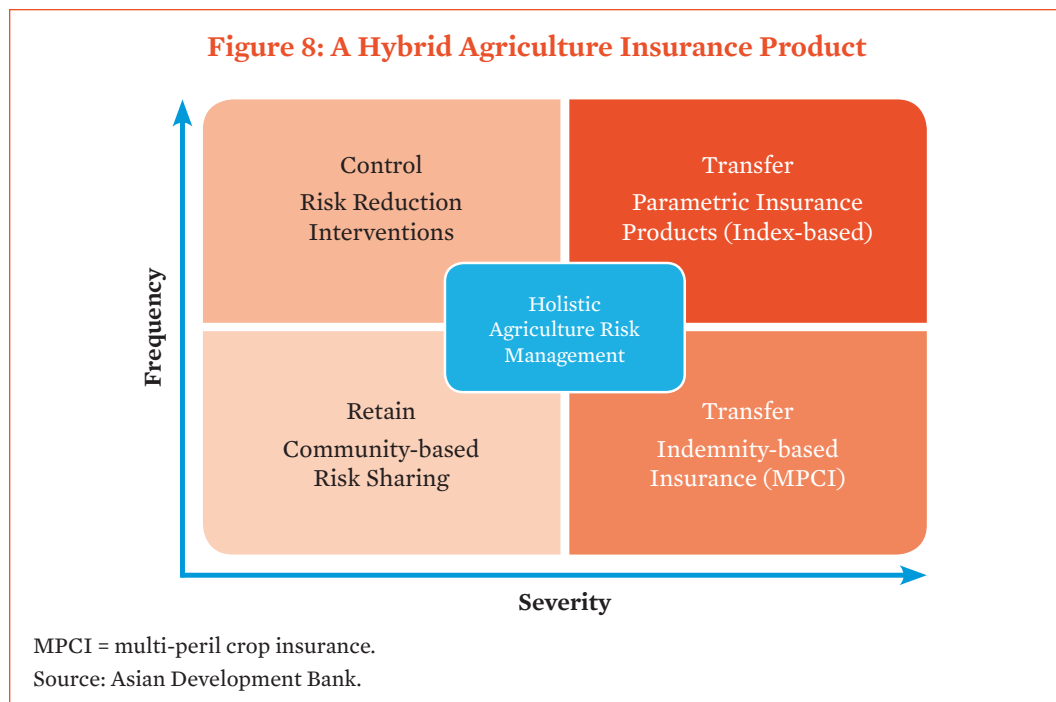
176. **A holistic risk management solution for farmers should be developed.** Risk-sharing at the community level for idiosyncratic risk, and risk transfer for covariate and catastrophic risks to the insurance industry, is recommended. Sharing of idiosyncratic risks through farmers' collectives on a mutual insurance basis will lead to better ownership and solidarity among the farming community. A risk-sharing arrangement exists in Fiji for coconut farmers, and this needs to be further refined and expanded to other agricultural producers. Risk transfer of remaining covariate and catastrophic risks through commercial insurance will increase the utility of insurance for farmers, while making it sustainable for the insurance industry. A product that manages all three risk elements (idiosyncratic, covariate, and catastrophic) can then be positioned as a total risk management solution for farmers. Such a solution may enjoy better buy-in from farmers, compared to a partial risk transfer solution that would cover only catastrophic losses. The government, through institutions like the FCLC, can undertake guidance, facilitation, and training of the risk-carrying farmers' collectives. The FCLC can be equipped to monitor the farmers' collectives on parameters of inclusivity, risk management, democratic operations, transparency, financial discipline, and so on. Suitable incentives can be designed for better-performing collectives over time.

177. **Developing a hybrid agriculture insurance product, with a combination of indemnity-based and index-based covers, could best suit the needs of Fijian farmers.** Such a product will be able to retain the strengths of both product types, while overcoming their limitations to a great extent. Globally, index-based weather insurance on a standalone basis has faced difficulties for reasons of basis risk (para. 106). In fact, index-based insurance is more in the form of a financial derivative on the lines of a "put" and "call" option. Options as financial instruments are better suited for hedging against huge losses for a portfolio of

risks, and hence are useful for insurers who aggregate risks. They may be less suited for individual exposure units, such as farmers or households. Moreover, the correlation between the parameter (wind, rainfall, etc.) and the underlying asset (agricultural yield or output) is often far from perfect, further aggravating basis risk. Lastly, parametric products become attractive for individual exposure units only when the premium-to-payout ratio is above a certain threshold, say, more than 1:10. Often, the actuarial pricing of index-based covers does not confirm to this tendency, and hence uptake becomes limited if offered on a voluntary basis. Efforts are being made to overcome these limitations through improvements in product design (for example, having just two or three payout triggers), but the fact remains that index-based insurance, although easy to implement, enjoys limited effectiveness in meeting the actual losses suffered by the insured.

178. **The use of technology can help to determine the actual loss suffered per landholding or farm in the context of an area yield index product (AYIP).** The challenge of farm or area level loss assessment in an AYIP can be largely addressed by developing multilevel loss assessment models using satellite imagery, drone surveillance, and ground-level monitoring using mobile applications. Data from these sources can be integrated and plotted on cadastral maps to arrive at near-accurate assessments of loss. Specially developed mobile applications, installed by every insured farmer, can be used to provide real-time information and inputs specific to each insured farm. Such a technology-driven loss assessment and management system for an AYIP can attain multiple objectives, including de-risking agriculture, offering a holistic solution, overcoming dissonance, fostering ownership, providing comprehensive protection, and avoiding moral hazard.

179. A pilot could encompass risk reduction. This could be achieved through the use of technology, risk-sharing of idiosyncratic risks through community structures, and risk transfer of covariate risks through a combination of indemnity-based and parametric covers (Figure 8).



180. **A pilot around the hybrid agriculture insurance product is already being considered in Fiji.** The Ministry of Agriculture, in collaboration with the FCLC, has developed a hybrid project and, as of March 2018, talks were ongoing regarding the securing of reinsurance for the product. However, the RBF reported to the study team that the insurance industry in Fiji has indicated its resistance to an agricultural insurance product. It is possible that this attitude reflects a lack of information within the Fiji insurance industry as respects the development of these types of products, and this may be addressed as the pilot project is further developed.

Microinsurance Products

181. **Microinsurance needs to be developed for uninsured households living slightly above the poverty line.** Market development, whether for digital financial services (DFSs) or microinsurance products, involves addressing demand side issues. These include the development of cost-effective products. Behavioral issues impeding people from adopting new technology or products also need to be addressed. For example, payment of insurance premiums is often considered a loss rather than a cost. This is because the benefits of insurance (claim payouts) are distant and contingent while the sacrifice (payment of premium) is immediate and real. Paying for insurance amounts to a choice between a large but rare loss and a small but frequent loss. Given this choice, diminishing sensitivity to rare losses causes risk-seeking (H. Kunreuther et al. 2013). In the case of DFSs, a major reason why people do not use mobile money may be that cash often gives a better sense of pride or empowerment as compared to a bank card or mobile application. Behavioral economics has been able to explain these tendencies in detail with evidence-based research. This learning can be translated into various communication tools to educate consumers and change their behaviors. In the context of Fiji, various studies have already brought out the demand side issues preventing people from buying insurance or adopting DFSs. This can now be translated into a comprehensive consumer education program for financial services, with the active involvement of all stakeholders. The insurance and finance industries, the government, and international agencies can help establish a formal consumer education framework for Fiji, so this can be institutionalized and carried on in a sustainable manner. This, again, will be a longer-term investment that will enable not just DRF but overall financial inclusion.

182. **Low-income earners in Fiji appear to be suffering a variety of losses on account of repeated disasters.** Any strategy to deal with disaster risks through social and commercial microinsurance therefore has to essentially revolve around the issues associated with such losses.

- (i) **Loss to residential units (dwellings):** Huge losses were reported on this account as a consequence of Tropical Cyclone Winston. Most of the dwellings may not be compliant with the building code and are therefore considered uninsurable by the insurers. This requires innovation in the design of products to develop more inclusive insurance (para. 97).
- (ii) **Loss of household contents:** Disasters can cause significant damage to household contents. Apart from the normal indemnity-based fire insurance, household contents insurance is an optional cover when applying for home and/or fire insurance, but most individuals do not opt for it.
- (iii) **Loss of livelihoods (other than crops and livestock):** In addition to inflicting loss to the assets of poor households, disasters invariably result in a temporary

loss of livelihoods for those running small businesses or working on a casual basis. No insurance product is currently available for these losses.

Capital Market Products

183. **The government could take advantage of ILSs as an addition to its set of DRF instruments.** Building on the positive experience with the issuance of green bonds, the Government of Fiji could take advantage of ILSs to finance disaster risk. While the current level of sophistication of the country's capital markets and its risk rating do not allow for an efficient introduction of ILSs for catastrophic risks, the government could still take advantage of such instruments. The appropriate instruments would be ILSs issued by a AAA-rated entity and including as triggers disasters affecting Fiji, such as tropical cyclones, floods, and earthquakes. The government could contribute to the risk premium of the ILS in exchange for access to the funds if the trigger events occur. Precise specifications of the trigger events and associated return periods would need to be defined depending on the risk appetite of global markets and the government's disaster protection needs (footnote 61).

184. **The size and investment needs of the FNPF has important consequences for the development of the government bond market.** The FNPF's cash inflow together with the limited investment instruments with similar risk return profile has led FNPF to be the prevailing buyer of government bonds, acquiring roughly 75% of the net increase in government bonds outstanding in every year from 2012 to 2017 (RBF 2017). The dominance of the FNPF as buyer of government bonds together with its need to hold those investments to maturity hinder the development of a secondary market limiting liquidity. The government should address the challenge to develop the bond market by better tailoring issuances to new buyers, including insurers.

3.5 Social Protection

3.5.1 Existing Social Protection Programs

185. **Social protection of vulnerable sections of Fijian society is managed by the Ministry of Women, Social Welfare and Poverty Alleviation.** The ministry maintains a comprehensive computerized database of 25,000 families for the administration of two major schemes supporting poor households. All payments under both schemes are made electronically.

186. **Under the Poverty Benefit Scheme, a monthly assistance of F\$30 per family member (to a maximum of four members in a family) is paid.** In addition, a food voucher worth F\$30 per family is also provide. The maximum benefit per family is therefore F\$150 per month. The maximum period of benefit is 3 years. Eligibility or otherwise for the scheme is decided based on home visits made by ministry officials and by data retrieved from the Household Income and Expenditure Survey.

187. The Social Pension Scheme provides F\$100 per month to people aged 65 years or more, who have no source of income and are not recipients of the following schemes:

- (i) FNPF pension or lump sum
- (ii) Ex-Serviceman of After Care Funds
- (iii) Government pension
- (iv) Poverty Benefit Scheme

188. **Help for Homes is an initiative to support reconstruction of homes damaged by Tropical Cyclone Winston.**⁶⁴ Households were eligible to apply for assistance under this scheme if they met the following conditions:

- (i) had an annual income of F\$50,000 or less;
- (ii) had a home located in the declared path of Tropical Cyclone Winston; and
- (iii) sustained roofing damage as a consequence of Tropical Cyclone Winston.

189. **The Help for Homes scheme was administered by The Ministry of Women, Children and Poverty Alleviation.** A total amount of F\$120 million has been distributed to almost 50,000 households under this scheme. Funds were released through a preloaded electronic card issued to every beneficiary. The card could be used for purchase of hardware and/or construction materials from approved vendors. The amount of assistance provided was contingent on the following parameters:

- (i) Homes that sustained damage and were on squatter land or under a vakavanua arrangement, or similar, received F\$1,500.
- (ii) Homes with partial roofing damage received F\$1,500.
- (iii) Homes with complete roofing damage received F\$3,000.
- (iv) Homes that lost roofs and supporting walls received F\$7,000.

190. **The FNPF is the only public sector superannuation fund and annuity provider in Fiji.** Membership of the FNPF is open to all adult Fijians, anyone who is self-employed, and students aged 16 years and above. A snapshot of FNPF figures is given in Table 7. An FNPF account can be operated with a minimum deposit of F\$7 per month. There is no maximum deposit limit. The amount set aside by a member for his or her pension is paid into the Retirement Income Fund, and the pension is paid out of this same fund. The following options are available on retirement:⁶⁵

- (i) **Life Pension** on single or joint basis. The pension is guaranteed for the first 5 years. The pension amount is calculated based on an age-wise pension conversion rate fixed by the FNPF. The pension received is tax-free.
- (ii) **Term Annuities** provide for a fixed monthly payment for 5, 10, or 15 years as per the option exercised. Payments are guaranteed for the selected term irrespective of the death of annuitant. Term annuity rates are specified by the FNPF. Payments are tax-free.
- (iii) **Lump sum** payment of the entire corpus can be taken by the annuitant.
- (iv) **Combination** of options (i) to (iii) is also available.

⁶⁴ Information obtained from Fiji Government Online Portal (www.fiji.gov.fj).

⁶⁵ Fiji National Provident Fund. <http://www.myfnpf.com.fj>.

Table 7: The Fiji National Provident Fund, 2016

Particulars	2016
Number of employers	10,646
Number of members	406,065
Members' funds (F\$ billion)	4.4
Withdrawals (F\$ million)	574.9
Withdrawals for assistance following Tropical Cyclone Winston (F\$ million)	275.5

Source: Fiji National Provident Fund (2016).

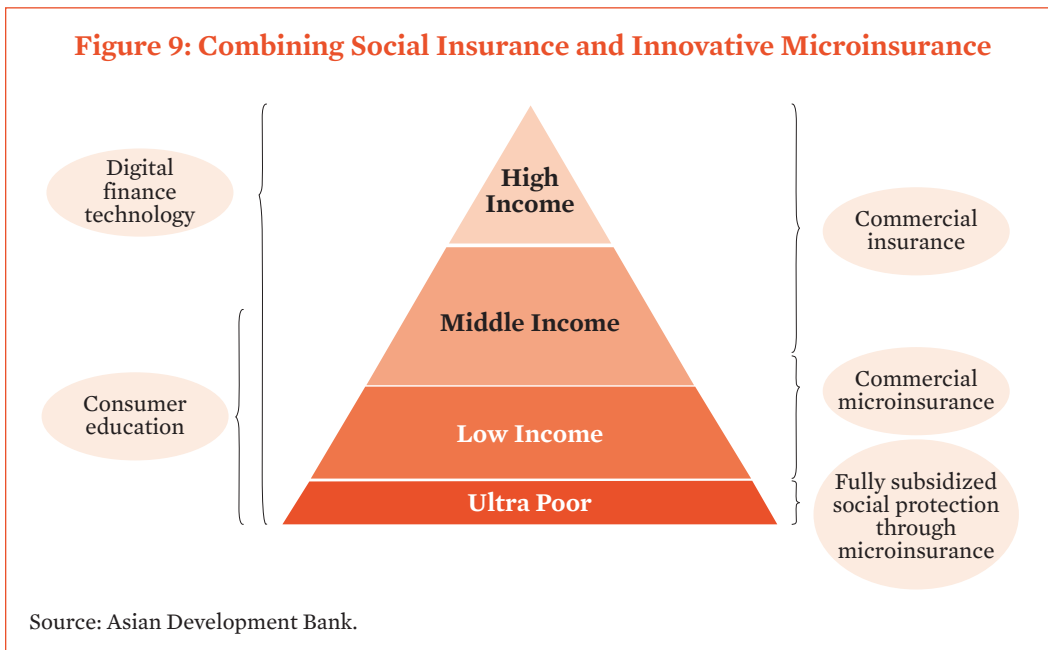
191. **In the aftermath of Tropical Cyclone Winston, partial withdrawals from individual FPNF accounts were allowed.** A total of F\$275.5 million was withdrawn by members under this concession. While this measure helped FPNF members alleviate their strained financial situation after the cyclone, it should not be ignored that this financial relief came at the cost of their future retirement income.

192. **The Fiji Financial Sector Development Plan 2016–2022 (RBF) places clear emphasis on the development of a Fijian pension market.** The plan aims to develop the pension market by engendering a culture of savings for retirement among all age groups, supplementing the compulsory pension scheme, and developing a vibrant private pension industry. Enabling the development of market-based pension products is important from a social protection standpoint as well as the DRF angle. Long-term savings accumulated in annuities could be made available immediately to members in the event of an emergency, such as occurred following Tropical Cyclone Winston.

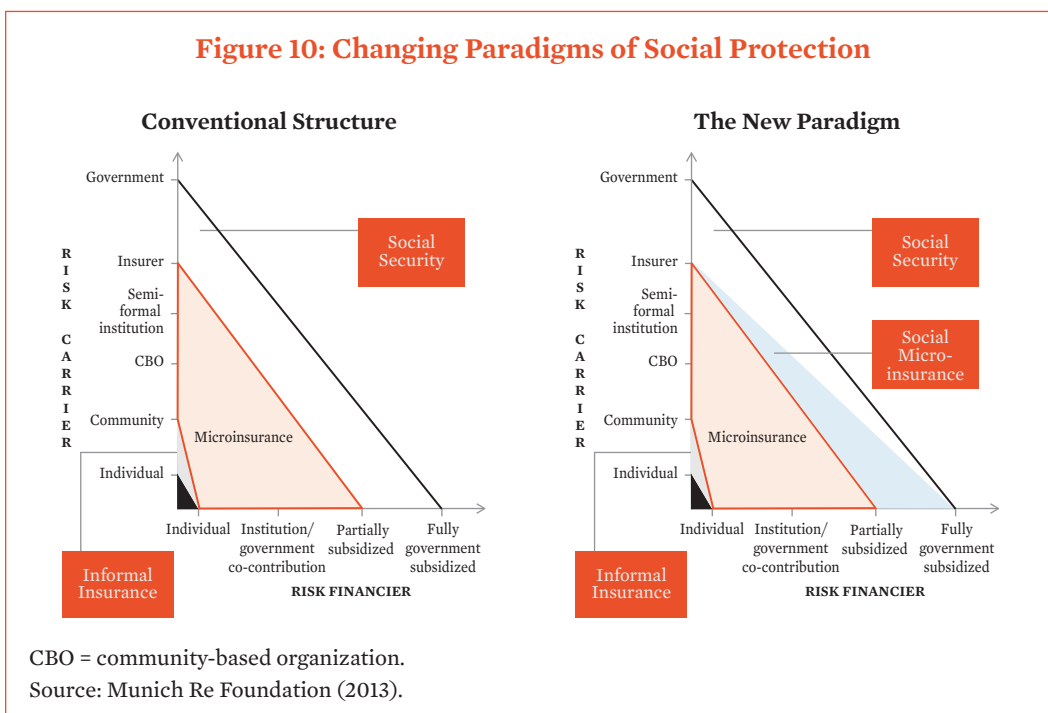
3.5.2 Diagnostic and Recommended Actions

193. **The cost of a disaster is disproportionately higher for households living on or below the poverty line, compared to middle-income families.** Compared to the rest of the Fijian population, low-income households are exposed to diverse risks that tend to be more frequent and have more severe effects on these households. Disasters aggravate this situation by inflicting potentially severe loss of life, homes, and livelihoods on low-income earners. Such losses can often lead to the distress sale of valuables, liquidation of any savings, and creation of high-cost indebtedness. All of these consequences push poor households further into poverty. From a national perspective, such a situation exerts added pressure on government finances in terms of post-disaster relief and the cost of addressing poverty. Any comprehensive strategy to address these issues should combine social protection through social insurance for households living on or below the poverty line, with innovative microinsurance products through commercial insurance providers for households above the poverty line (para. 97). Such a strategy is likely to address disaster impacts in a more holistic and sustainable manner (Figure 9).⁶⁶

⁶⁶ The products mentioned in Section 3.1.3 can be offered through the combination of social protection and microinsurance interventions.



194. **Fiji’s relatively strong poverty and financial inclusion indicators support market-based risk transfer solutions.** Global trends strongly indicate a shift in the social protection approaches of governments, from the classical government-funded social security models to market-based social insurance arrangements (Figure 10).



195. **Social insurance is most prevalent in health and agriculture.**⁶⁷ However, in the context of Fiji, where disaster risk is high, the concept can also be extended to property and livelihoods. A detailed risk assessment of Fiji's low-income population, particularly in the context of disaster risk, followed by the development of a comprehensive social insurance strategic plan, covering all the risks faced by poor households, will enable proper risk mitigation for the low-income population as well as better fiscal planning for the government. Such a plan can insulate the finances of both poor households and the government in the event of disasters.

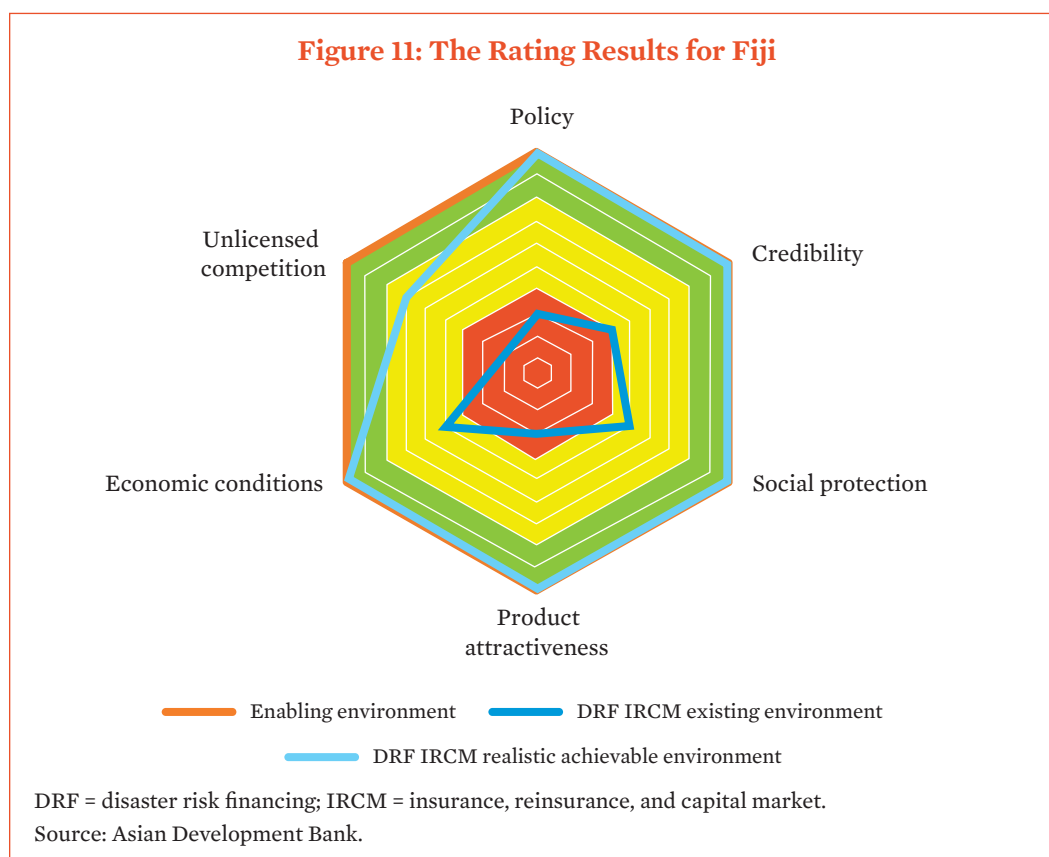
196. **DFSs can not only enhance financial inclusion, but can also strengthen people's disaster resilience.** A digitalized society tends to work with better efficiency, transparency, and accountability than those using traditional methodologies. With adequate investments in digital infrastructure, transactions costs to consumers can be reduced significantly once sufficient volumes are achieved. Fiji has already experienced the effectiveness of digital or electronic transfer of relief funds. If this can be augmented to people-to-people payments for routine household and business transactions, then the hardship, cost, and time associated with the supply of cash to remote areas in the aftermath of disasters can be largely overcome. Increased use of DFSs—such as internet banking, digital wallets, and mobile money—by micro, small, and medium-sized enterprises (MSMEs) can also improve their access to credit over time. MSMEs in Fiji often face difficulties in offering collateral to access credit facilities from formal financial institutions. With increased usage of DFSs, formal financial institutions can be encouraged to shift from a collateral-based credit system to cashflow-based lending, i.e., the cashflow evidence established through DFSs can eliminate, or at least reduce, the need for MSMEs to offer collateral.

197. **In Fiji, while most people have bank accounts, the use of DFSs is quite limited.** One reason for this could be the costs involved. For example, credit card transactions in Fiji attract a sizable surcharge (merchant discount rate). The Government of Fiji, with help from international agencies, can work toward reducing these costs by investing in cost-effective digital hardware and software such as payment gateways, ATM switches, secure networks, and mobile applications that can be used across multiple banks. After the enactment of the Fiji Interchange Network (Payments) Act 2017, it is expected that Fiji will enter a new era of payment systems. A comprehensive review of digital infrastructure in Fiji might help deliver enhanced DFSs that are seamless as well as cost-effective. Such an exercise may also throw open opportunities for public-private partnerships in the digital space.

⁶⁷ In 2012, it was estimated that almost 1.7 billion lives and properties were covered under some kind of social insurance scheme partly or fully subsidized by government.

The Rating Summary and Recommended Main Actions

198. In the Fijian context, an ideal scenario for ICRM solutions coincides to a vast extent with the achievable scenario, except with regard to unlicensed competition. Based on the insights gained by applying the diagnostics tool, no key differences were found between Fiji's ideal scenario and its realistic or achievable scenario for any of the areas of relevance, except for unlicensed competition (where, in light of Fiji's small economy, this form of competition is actually required to achieve an effective risk transfer environment). For the other five areas of relevance, the responses from stakeholders generally provided additional solutions on how to achieve the ideal scenarios, rather than describing limitations that might result in there being only an achievable scenario. The diagram presenting the ratings therefore shows only the current situation and the ideal scenario for five of the areas of relevance; and both the realistic and the current scenario for unlicensed competition (Figure 11).



199. For each of the areas of relevance depicted in Figure 11, the report study team has provided further explanation, identified gaps, and made recommendations to close those gaps.

4.1 Gaps in, and Recommendations for, Government Policy

200. The rating is in the red zone implying an urgent need for action (sections 2 and 3.1).

201. *Main gaps identified:*

- (i) Fiji has available only an outdated macro assessment of disaster risk, prepared by PCRAFI in 2011, and covering only earthquakes, tsunamis, and tropical cyclones.
- (ii) A detailed national hazard map (tropical cyclones, earthquakes, flooding, and drought) does not exist.
- (iii) The government has not taken up sovereign risk transfer mechanisms, with few public assets insured.
- (iv) Under current underwriting criteria, a large percentage of the country's homes remain uninsurable.
- (v) There is underutilized underwriting capacity in Fiji's insurance industry, which could be utilized by assuming more risk to benefit the economy.
- (vi) The funding gap for agriculture is huge in the case of tropical cyclones.

202. *Main recommended actions to close the gaps:*

- (i) develop a DRF strategy following the risk-layered approach;
- (ii) develop a comprehensive register of all government-owned infrastructure and other assets;
- (iii) develop a comprehensive disaster risk model and mapping;
- (iv) broaden the underwriting standards of the insurance industry to accept more catastrophic risk;
- (v) stipulate standard wording with regard to certain provisions contained in Fiji homeowners' policies;
- (vi) consider the allocation of funds from CTP auto insurance to one of the funds maintained by the government to provide emergency relief for the poorest of the poor;
- (vii) establish a disaster insurance pool as a means of providing universal property coverage;
- (viii) enter future purchase agreements on construction materials, at the beginning of the tropical cyclone season; and
- (ix) develop a comprehensive risk management solution for agriculture, through a combination of risk reduction, risk-sharing, and risk transfer initiatives.

4.2 Gaps in, and Recommendations for, Credibility in the Insurance Sector and the Capital Markets

203. The rating is in the red zone implying the urgent need for action (section 3.2).

204. *Main gaps identified:*

- (i) very low awareness and understanding of insurance;
- (ii) limited protection in case of insolvencies; and
- (iii) no regulatory requirements pertaining to catastrophic reserves.

205. *Main recommended actions to close the gaps:*

- (i) develop a customized awareness program for disaster insurance;
- (ii) introduce into regulations catastrophe reserve requirements for individual insurance companies; and
- (iii) keep in mind an insurance consumer compensation plan as the insurance industry grows.

4.3 Gaps in, and Recommendations for, Products

206. The rating is in the red zone implying an urgent need for action (section 3.4).

207. *Main gaps identified:*

- (i) agriculture, livestock, and fisheries insurance is nonexistent;
- (ii) environmental liability insurance is basically nonexistent; and
- (iii) insurance-linked securities (ILSs) are not available.

208. *Main recommended actions to close the gaps:*

- (i) develop a consumer education strategy and framework to promote microinsurance and digital financial services;
- (ii) develop a hybrid agriculture insurance product with a combination of indemnity-based and index-based covers;
- (iii) introduce mandatory environmental liability insurance; and
- (iv) introduce ILSs as a DRF instrument.

4.4 Gaps in, and Recommendations for, Social Protection

209. The rating is in the yellow zone implying a need for action (section 3.5).

210. *Main gaps identified:*

- (i) Most of the responsibility for social protection of the low-income population rests with the government.
- (ii) There is untapped scope for enhancing the use of technology to improve the efficiency of social protection programs.

211. *Main recommended actions to close the gaps:*

- (i) develop a comprehensive strategy combining social protection of households below the poverty line through social insurance, with innovative microinsurance products through commercial insurance providers for households above the poverty line; and
- (ii) conduct a comprehensive review of digital infrastructure in Fiji to enhance seamless as well as cost-effective digital payment platforms.

4.5 Gaps in, and Recommendations for, Economic and Other Preconditions

212. The rating is in the yellow zone implying a need for action.

213. *Main gaps identified:*

- (i) The level of poverty remains at around 26% of households. For the low-income segment of the population, insurance has low priority and competes with basic necessities such as food, shelter, and clothing.
- (ii) Access to experienced property insurance underwriters is limited.
- (iii) Meteorological data are incomplete.

214. *Main recommended actions to close the gaps:*

- (i) The establishment of awareness programs and related initiatives by the RBF and the insurance industry will, along with economic growth and increased purchasing power of the population, enable insurance to become a more important factor in protecting against losses from catastrophic events.
- (ii) The introduction of standardized wording for property insurance policies will assist members of the public to obtain broader forms of coverage and will push insurance industry members to improve their underwriting standards.
- (iii) Development partners should facilitate funding from government and international agencies to broaden weather station coverage and protect wind-measuring devices from strong winds.

4.6 Gaps in, and Recommendations for, Unlicensed Competition

215. The rating is in the red zone for the ideal scenario, but in the yellow zone for the realistic scenario (due to the current need for unlicensed providers in the market).⁶⁸ This implies a need for action (section 3.3).

216. *Main gaps identified:*

- (i) The country exposure to catastrophic risk currently requires unlicensed insurance providers. As mentioned in para. 159, this can be provided by entering into MOUs with other jurisdictions to enable insurers from those jurisdictions to transact business in Fiji, and also by providing greater access to unlicensed markets by utilizing the controlled, professional resources of specially licensed brokerage firms in Fiji for the placement of such business. In an ideal situation, the local market should be able to provide the needed insurance, sometimes making use of fronting arrangements subject to particular oversight by the RBF. In Fiji, the high level of disaster risk requires sophisticated underwriting expertise and high amounts of risk capital and/or efficient reinsurance. Although local insurers have more capacity than they are currently utilizing, they do not have the level of resources required to underwrite all risks within the country.
- (ii) The access to the underwriting capacity of the unlicensed insurance providers is not efficient.

217. *Main recommended actions to close the gaps:*

- (i) Improve access to the offshore insurance market for the risk transfer coverage that the local market cannot provide. This can be done by making use of RBF-authorized brokers having the required knowledge and international connections to place business offshore with qualified insurers in cases where the Fiji insurance market is unable to provide the required capacity. Additionally, by entering into well crafted MOUs with particular jurisdictions, Fiji can open access to its insurance market for acceptable unlicensed insurers, to the benefit of Fijian consumers.

⁶⁸ The fact that the realistic environment has been rated (7), or 3 levels below the ideal scenario, results for a rating of (2) an equivalent rate of (5).

APPENDIX 1

Key Learnings from International Experience in Agriculture Insurance

1. Insurance should not be treated as a standalone solution, but as a package closely linked to wider risk management and adaptation efforts. These include social safety nets, early-warning and awareness-raising programs, disaster-proofing infrastructure, and investment in more sustainable livelihoods. Without a comprehensive response, there is a danger of creating a false sense of security, encouraging unwise risk-taking and a reluctance to adapt.¹
2. There must be sustained, predictable, and long-term financial support to pay the premiums for vulnerable countries (macro-level insurance) and individuals (micro-level insurance) noting that, in most rich countries, insurance (e.g., for agriculture or flooding) is heavily subsidized by the government.²
3. Insurance is not efficient for many types of loss and damage, such as frequent events (more than 1 in 5 years), slow onset phenomena, and social or cultural losses.³
4. Agriculture insurance can only be fairly priced if reliable and granular data is available. Pricing with substandard data requires from actuaries to put a credibility margin. Thus, adding to the costs of covering the claims a penalty for the uncertainty in the data.
5. Agriculture related data is required for many government activities, like for food safety and security, land planning, etc. In addition, the costs to collect data can be very large, especially when looking at weather data. It has become a main activity for government to collect agriculture and weather-related data to fulfill their obligations. The data collected by government can be a good starting point to make data for insurance available. However, insurance pricing requires more granular data and also other aspects like average yield per land, etc. Dialogue and cost sharing between the public and the private sector to collect data that is useful for both parties can be very beneficial for the country.
6. The need for reinsurance in agriculture that is exposed to catastrophic risk is a reality. Only global reinsurers will have the capacity and ability to diversify the potentially large risks. Reinsurers will collect their data and use models to price their exposure. However, the data needs to be complemented by local data. For instance, the availability of a dense set of weather stations is a requirement for some reinsurance programs. The need to develop this type of infrastructure is indispensable for the agriculture insurance supported by reinsurance to develop.

¹ S. Surminski et al. 2016. WIM Submission: Best Practices, Challenges and Lessons Learned from Existing Financial Instruments.

² World Bank. 2010. Government Support to Agricultural Insurance.

³ Munich Climate Insurance Initiative. 2012. *Insurance Solutions in the Context of Climate Related Loss and Damage*.

7. By providing a layer of reinsurance, governments can support agriculture insurance programs over initial periods, when data sets are imperfect and while investments are being made in market data infrastructure.⁴ These governments can then offload the risk to reinsurance markets over time, as data quality improves and the coverage gap reduces.

⁴ World Bank. 2015. Agricultural Data and Insurance. page 5, para 5.

APPENDIX 2

The Regulatory Approach to a Catastrophe Reserve

1. Regardless of how an individual company's catastrophe reserve is technically established and accounted for, as a preliminary suggestion it is proposed that the ability to draw down the catastrophic reserve would be subject to several requirements, in that:

- (i) During the calendar year, there has been a government-decreed catastrophe along the lines described in para. 153 of the main assessment, which discuss an industry-wide catastrophe pool.
- (ii) In addition to a government decree of catastrophe, for any covered line of business and for the year of account in question, the loss ratio for the line exceeds 90%, in which case the catastrophe reserve can be drawn down to pay claims in the particular lines of business involved. Thus, even when a catastrophe event has been decreed by the government, the insurer would not be able to utilize its catastrophe reserve unless its claims ratio for a line of business exceeds 90%.
- (iii) If an insurer is deemed by the Reserve Bank of Fiji (RBF) to be in a position where it cannot meet its obligations to policyholders and needs to be wound up, any catastrophe reserve amount would transfer to the benefit of all policyholders of the company, regardless of the lines of business involved. It is in this sense that the individual company catastrophe reserve would serve as a de facto policyholder compensation plan, as it would provide an additional buffer to solvency.

2. The catastrophe reserve could not be reduced by means of a dividend payment or other transaction that would have the effect of returning capital to shareholders, except in the case that the insurer is being wound up on a voluntary basis. In the latter circumstance, the catastrophe reserve would become taxable on dissolution of the company.

3. The RBF would likely want to place a cap on the catastrophe reserve, for example, by specifying that once it corresponds to a probable maximum loss amount for a particular type of disaster, such as tropical cyclone, no further allocation could be made to the reserve.

4. A mandatory catastrophe reserve applicable to covered lines has the potential to provide a worthwhile, additional line of defense for policyholder losses in the event of a major catastrophe event.

5. Of course, if no additional claims are incurred because of stringent underwriting standards included in standard policies, then individual catastrophe reserves will not be utilized to a very great extent. Therefore, in conjunction with establishing a catastrophe reserve requirement, it would be important to take other measures to ensure that underwriting standards are broadened so that, when a significant tropical cyclone or other covered event occurs, covered claims dramatically increase and the catastrophe reserve can play its required role.

6. By way of illustration, let's say that, in order to prepare for a specified cyclone or earthquake event, an insurer annually allocates on a tax-free basis certain amounts of net premium earned to a special catastrophe reserve account, held in the equity section of its balance sheet, until the accumulated reserve amount is sufficient to provide for a maximum probable loss event as determined by the RBF.

7. In order to qualify for the setting up of a catastrophe reserve, an insurer would need to be licensed and be actively transacting in one or more lines of business that the RBF deems to be relevant to catastrophic events (i.e. "covered line"). Thus, insurers may have earned income to which the catastrophe reserve requirements would not apply, and some specialty line insurers may not have any covered lines at all.

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Enabling Environment for Disaster Risk Financing in Fiji

Country Diagnostics Assessment

This country diagnostic assessment seeks to strengthen financial preparedness for disasters in Fiji, focusing on insurance and other risk transfer instruments. It explores the current application of disaster risk financing solutions by the government, businesses, and individual households; related demand and supply constraints; and opportunities for improvement. The assessment forms one of a series of country diagnostics undertaken using a common methodology to determine the state of the enabling environment for disaster risk financing.

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