The Role of Financial Market Solutions for Building Resilience to Shocks in Agriculture

This knowledge series aims to bridge the knowledge gap for government officials and practitioners about the development and use of disaster-responsive financing mechanisms and instruments for the agriculture sector. Completion of the series will provide a grounding for Ministries of Finance (MoFs) and related ministries to establish, evaluate, and implement Disaster Risk Financing Agriculture (DRFA) programs as part of an overarching risk financing strategy. The content builds on the Fundamentals of Disaster Risk Financing (FDRF) training series, which provides an overview of the principles of disaster risk financing and their application in different contexts. Familiarity with the FDRF content is assumed as a basis for this DRFA webinar and fact sheet series, and further resources and information can be found here.

This module, the third in the series, focuses on the importance of ensuring financial inclusion in the agriculture sector to build resilience to shocks. It highlights the wide range of benefits of greater access to finance including resilience of the agriculture sector, rural livelihoods and economies; as well as deepening of the financial sector, improved productivity and food security.

Disaster Risk Financing & Insurance Program
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1. Finance can help farmers address diverse objectives

Financial services can help farmers address diverse objectives. For example, savings at a financial institution and small/short-term credit from a mobile network operator would enable farmers to smooth their volatile income and expenses. Seasonal credit is designed to allow farmers to buy quality inputs for the production of high-value crops. As explained later in the module, such financial products are also highly useful for smallholder farmers to manage numerous risks that they face. However, they usually have limited access to financial services. The session will first discuss financial inclusion and provide an overview of the demand and supply of finance in the agriculture sector, especially for smallholder farmers, and the benefits of greater financial access.

Financial inclusion means that individuals and businesses have access to useful and affordable financial products and services that meet their needs – transactions, payments, savings, credit, and insurance – delivered in a responsible and sustainable way by a variety of financial services providers.

The current state of financial inclusion can be assessed through the demand for and supply of finance. Policymakers and development professionals first need to assess: the demand for finance, especially the major segments of the smallholder households and their needs for financial products and services; the current suppliers of these products and services, who are diverse and serve a different set of clients depending on their business strategies and mandates; and the enabling environment, including agricultural and financial policies.

There are about 450 – 550 million smallholder farming households in the world and they range widely by the size of plots, crops they grow, and income level[1]. About 80% of the smallholder households are estimated to operate in small plots and concentrate on staple crops. They practice agriculture for consumption and to survive and not as a strategic or commercial business. Meanwhile 5% of households are commercially-oriented farming households that produce higher-value crops with quality inputs to sell to clearly defined buyers and/or markets. It is important to understand the specific needs for financial products by these diverse groups of smallholder households. For example, commercially-oriented smallholder farmers may want to use external credit to buy high-quality inputs to produce crops demanded by the buyers, while subsistence farmers' priority may be to save money at a financial institution for future emergencies.

There is a wide range of financial services providers for smallholder farmers, ranging from public and private banks, microfinance institutions (MFIs), financial cooperatives, agribusiness companies (e.g. traders and input suppliers), mobile network operators to informal money lenders. Informal lenders and community-based mechanisms such as Village Saving and Loan Associations (VSLAs) are estimated to provide about 45% of the financial needs of smallholder households. The value chain actors such as agribusiness companies are the second largest suppliers with 30%, leaving the formal financial institutions with the smallest share of 25%. Within the formal lenders, state and agriculture development banks make up more than half of the disbursement, followed by MFIs with about 20%. Commercial banks are minor players with a share of less than 10%.

1 - There are various ways to categories smallholder farmers. For example, an earlier literature classifies commercial farms into two groups – one group in tight value chains and the other groups in loose value chains. The segmentation could be more nuanced based on granular data. For example, see Chapter 1 of the Africa Agriculture Status Report 2017 by AGRA.

Greater financial access in the agriculture sector is important to eradicate extreme poverty and achieve balanced economic growth. Access to finance is one of the key ingredients to increase agricultural production and enhance the growth and resilience of rural and agricultural households. There are 2.5 billion people involved in agriculture in developing countries, among the 3 billion people living in rural areas. In fact, agriculture GDP growth has twice the impact on poverty reduction than non-agriculture GDP growth. Moreover, the sector often accounts for more than half of GDP growth during the early stages of development and its growth can help reduce current account deficits by boosting exports/reducing imports. However, the share of agriculture in total lending is often much lower than the share of agriculture in GDP. The demand for finance and investment in the sector remains largely unmet.

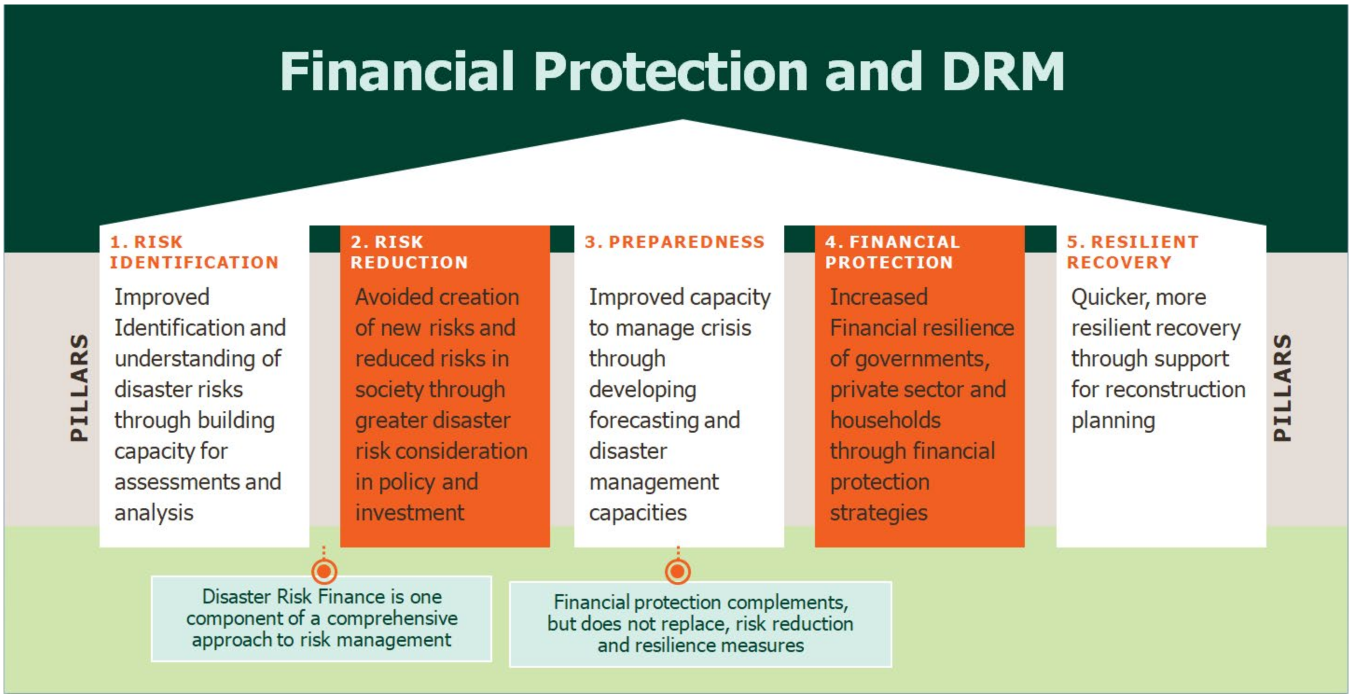
The direct benefits of greater agriculture finance include the following:

(1) Growing income of farms and agriculture SMEs through access to better technologies and commercialization;

(2) Increasing resilience (risk management capacity) through climate-smart production and risk diversification;

(3) Smoothing the transition of non-commercial farmers out of agriculture and facilitating the consolidation of farms, assets, and production.

2. There are various financial services for farmers to manage risks, both for risk reduction and financial protection



In this course, we define 'financial products for risk reduction' as those which farmers can use to reduce their vulnerability to agricultural risks. For instance, such financial products can help farmers invest in irrigation equipment, or drought resistant seeds that will allow them to continue growing their crops and generating income when droughts happen. 'Financial products for financial protection' are defined as financial products that allow farmers to access liquidity aftershocks.

TABLE 1 – THE ROLE OF FINANCIAL SERVICES FOR RISK REDUCTION AND FINANCIAL PROTECTION

	Credit	Savings	Remittances	Insurance
Risk Reduction	**Capital Investment** (Irrigation) **Input Credit** (Drought resistant seeds etc)	**Commitment Savings** for climate smart investments	**Remittances** used for investments	X
Financial Protection	**Emergency Credit**	**Precautionary savings** for emergencies	**Remittances** used for shocks	**Agriculture insurance payouts**

Credit can be used both for risk reduction and financial protection.

Farmers can use credit to make capital investments in irrigation equipment, greenhouses or to buy drought-resistant seeds. For instance, solar water pumps allow farmers to irrigate their crops and reduce their vulnerability to drought while avoiding greenhouse gas emissions. Drought-resistant seeds also allow farmers to reduce their vulnerability to droughts.

In addition, farmers can apply for emergency credit to meet their needs when faced with the impacts of shocks, for example to restore productivity through investments in inputs and equipment, or to meet basic welfare needs. For instance, microfinance institution BRAC in Bangladesh[2], offers emergency loans support families to cope during emergencies and resume economic activities and build resilience. Access to emergency credit greatly reduces the need for resource poor families to reduce their consumption and/or to engage in distress sales of productive assets after a climatic shock.

2 - http://www.brac.net/program/microfinance/emergency-loans/

Savings can be used both for risk reduction and financial protection. Farmers can use commitment savings to save for climate-smart investments. In addition, they can also build precautionary savings that they can use for financial protection, in case of emergency:

In Mali and Senegal, social enterprise myAgro has developed a layaway savings program that enables smallholder farmers to save little by little for agricultural inputs such as seed, fertilizers and tools to improve their productivity by using a prepaid scratch card model. For instance, farmers can save for drought resistant seeds. myAgro indicates that its increases net income by $150 – $300 per farmer.

In Côte d'Ivoire, recent research conducted among cashew nut workers showed that workers offered the direct-deposit commitment savings account increased their labor productivity and earnings by 10 percent, which translates into an 18 percent increase for workers who opened an account[3]. Such savings can be used for investments in risk reduction.

In Kenya, research supported by the World Bank for social enterprise Digifarm showed that female farmers experience on average 2.5 times as many emergencies as Kenyans overall. However, women farmers manage to save, informally, at the same rates as Kenyans overall, while earning less money with more volatility, experiencing more emergencies, and struggling with more expenses. Based on these insights, Digifarm is currently developing a savings product that would allow female farmers to cater for emergencies[4].

3 - Gender Innovation Lab, 2018, Working Under pressure: improving labor productivity through financial innovation

4 - Varangis, Panos; Buchenau,Juan; Ono,Toshiaki; Sberro-Kessler, Rachel; Okumura,Asuka.2021.Women in Agriculture : Using Digital Financial Services - Lessons Learned from Technical Assistance Support to DigiFarm, Fenix, and myAgro (English). Agriculture finance Washington, D.C. : World Bank Group

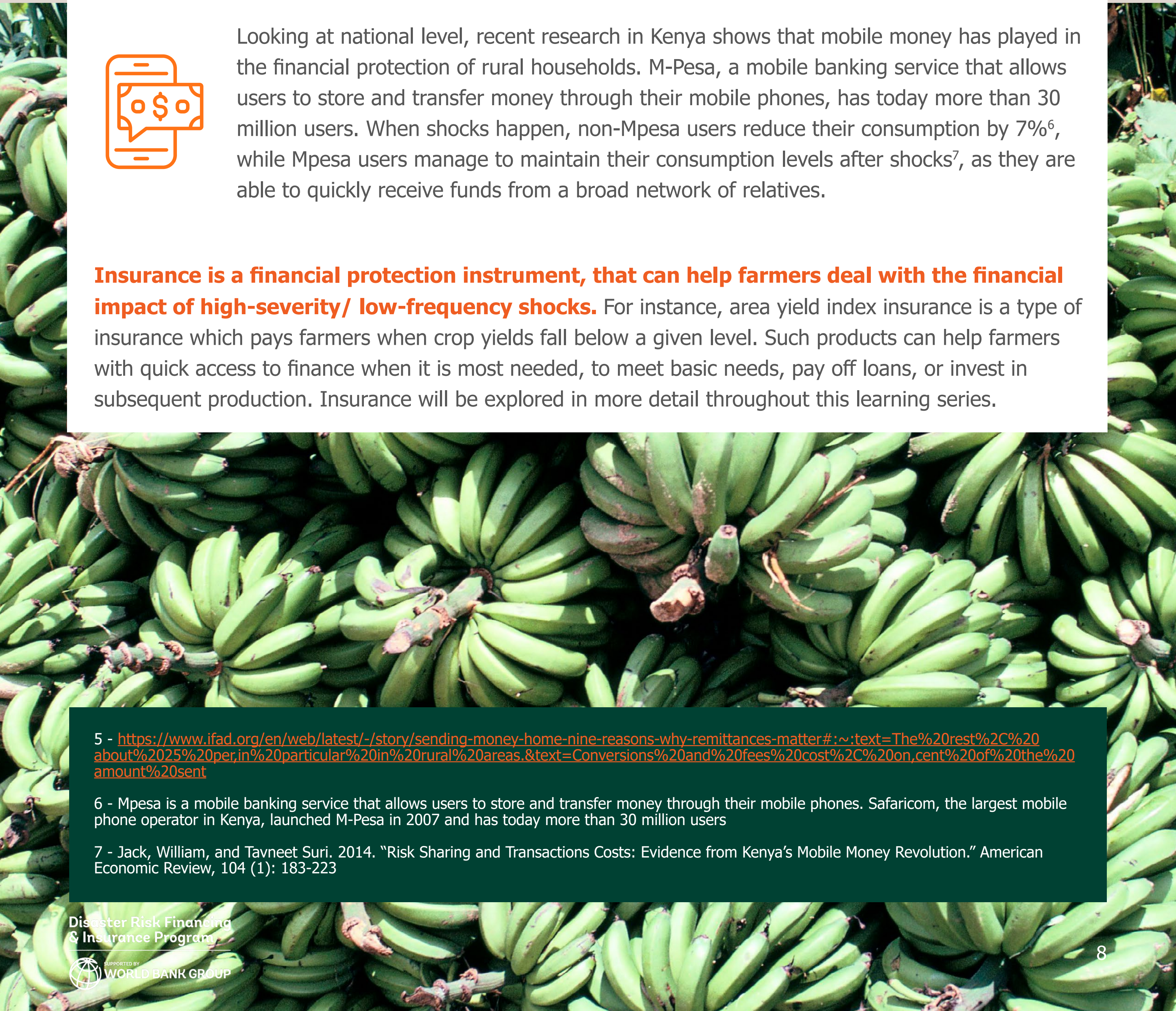
Remittances, both international and domestic, play a key role in risk reduction and financial protection. In 2018, US$529 billion of international remittances went to developing countries which is over three times the amount of official development assistance and beyond foreign direct investment combined[5].

About 75 per cent of international remittances are used by receiving households to put food on the table, cover medical expenses, school fees, housing expenses, cover loss of crops or family emergencies. They account for up to 60 per cent of a household's total income and represent a lifeline for millions of rural families.

About 25 per cent of international remittances are saved or invested in asset building, which may be investments in risk reduction.

Looking at national level, recent research in Kenya shows that mobile money has played in the financial protection of rural households. M-Pesa, a mobile banking service that allows users to store and transfer money through their mobile phones, has today more than 30 million users. When shocks happen, non-Mpesa users reduce their consumption by 7%[6], while Mpesa users manage to maintain their consumption levels after shocks[7], as they are able to quickly receive funds from a broad network of relatives.

Insurance is a financial protection instrument, that can help farmers deal with the financial impact of high-severity/ low-frequency shocks. For instance, area yield index insurance is a type of insurance which pays farmers when crop yields fall below a given level. Such products can help farmers with quick access to finance when it is most needed, to meet basic needs, pay off loans, or invest in subsequent production. Insurance will be explored in more detail throughout this learning series.



5 - https://www.ifad.org/en/web/latest/-/story/sending-money-home-nine-reasons-why-remittances-matter#:~:text=The%20rest%2C%20about%2025%20per,in%20particular%20in%20rural%20areas.&text=Conversions%20and%20fees%20cost%2C%20on,cent%20of%20the%20amount%20sent

6 - Mpesa is a mobile banking service that allows users to store and transfer money through their mobile phones. Safaricom, the largest mobile phone operator in Kenya, launched M-Pesa in 2007 and has today more than 30 million users

7 - Jack, William, and Tavneet Suri. 2014. "Risk Sharing and Transactions Costs: Evidence from Kenya's Mobile Money Revolution." American Economic Review, 104 (1): 183-223

3. Governments have different tools in their policy toolbox to support agriculture finance

Governments can intervene in various ways to promote agricultural finance, often times combining various instruments. For example, Governments can intervene through:

- The legal and regulatory framework - for instance some Governments set interest rate caps for agricultural loans or mandatory lending quotas for agriculture lending[8].
- Provision of direct financing to agriculture (through agricultural public banks)
- Creation of incentives that can support the development of financial products (e.g.interest rate subsidies, rural expansion start-up costs subsidies, agricultural insurance subsidies, matching grants, partial credit guarantees).
- Creation of financial infrastructure and data that can be used by financial services providers (ex: credit bureaus, agricultural production and risk data, agricultural cooperatives registries etc.).
- Capacity-building (ex: demand and supply-side capacity building, financial literacy campaigns, etc.).

In this module, we focus on two common instruments that the World Bank supports in several countries: Partial Credit Guarantees and Matching Grants.

Partial Credit Guarantee schemes (PCGs) are a popular policy intervention to alleviate credit constraints, by absorbing part of the default risk of the borrower with a view to increase credit supply to credit constrained individuals and firms. At least half of countries in the world have introduced public PCGs as a way to alleviate firm credit constraints. You can read more here.

Matching grants are a one-off, non-reimbursable transfer to project beneficiaries, for a specific purpose, based on the condition that the recipient makes a contribution for the same purpose. You can read more here.

8 - International experience shows that such policies can have adverse impact on financial inclusion.

Partial Credit Guarantees, can be a smart instrument to de-risk agriculture finance but need to be designed carefully to ensure additionality and sustainability. In particular, the key design features include: targeting, coverage provided, pay-out procedures of the guarantee, diversification and cost coverage.

Matching grants can allow farmers to access technical assistance and climate-smart equipment but need to be designed carefully to ensure linkages with formal financial institutions[9]. Indeed, while the primary objective of matching grants is often to increase the income of beneficiaries in the absence of well-functioning financial markets, matching grants should also be designed in a way that help beneficiaries build relationships with financial institutions so that their future expenses and investments can be undertaken without the need for grants. For instance, it may be required or incentivized that matching grants beneficiaries save the proceeds from the investment at a financial institution. Alternatively, matching grants beneficiaries may be required or incentivized to obtain credit to finance part of their investment.

As a conclusion, Governments have different tools in their policy tool-box to support the development of financial services for farmers that can help them manage risks. These various financial services include credit, savings, insurance, payments, and remittances and may be used for risk reduction and financial protection. The World Bank supports Governments around the world to put in place policies, instruments and institutions that facilitate access of farmers and agricultural micro, small and medium enterprises to access a broad range of suitable financial services.

9 - Sberro-Kessler, Rachel; 2020, How can matching grants for agriculture facilitate access to finance (English). Washington, D.C. World Bank Group

Key take-away from this session:

- Finance can help farmers address diverse objectives.
- There are various financial services for farmers to manage risks, both for risk reduction and financial protection.
- Governments have different tools in their policy toolbox to support agriculture finance.

Glossary

Financial Inclusion
Financial inclusion means that individuals and businesses have access to useful and affordable financial products and services that meet their needs – transactions, payments, savings, credit, and insurance – delivered in a responsible and sustainable way by a variety of financial services providers.

Insurance
Insurance is a means of protection from physical and financial loss. The insurer commits to provide compensation for specified risks in return for payment of a specified premium.

Loan
Loan is a form of debt. The lender advances a sum of money to the borrower. In return, the borrower agrees to a certain set of terms including interest, repayment date, and other conditions. In some cases, the lender may require collateral to secure the loan and ensure repayment.

Microfinance Institutions
Microfinance Institutions are financial institutions which provide a range of financial services to micro and very small enterprises and retail customers, primarily of low-income population.

Payment
Payment is a transfer of money which can be made in many forms including cash, check, wire transfer, credit card, debit card, mobile money payment, in exchange for a product or service.

Remittances
Remittances are funds, generally a portion of a salary, transferred from one individual to another. International remittances are funds transferred by a foreign worker to his/her home country, while domestic remittances are funds within one nation, generally from a worker in an urban area to a household in a rural area

Savings Account
Savings account is a basic type of bank account that allows one to deposit money, keep it safe, and withdraw funds, all while earning interest.

Transfer
Transfer is a one-way payment to a person or organization which has given or exchanged no goods or services for it.

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Work Sheet 3: The Role of Financial Market Solutions for Building Resilience to Shocks in Agriculture

Test your knowledge and record your insights through this easy, DIY worksheet!

Activity 1: Identify which of the following statements regarding financial products are true or false.

#	STATEMENT	TRUE	FALSE
1	Financial products can help farmers address diverse objectives.	○	○
2	Credit can be used both for risk reduction and financial protection.	○	○
3	Savings can only be used for risk reduction and not financial protection.	○	○
4	Matching grants can allow farmers to access technical assistance and climate-smart equipment.	○	○
5	Insurance is a financial protection instrument, that can help farmers deal with the financial impact of low-severity/high-frequency shocks.	○	○
6	Partial Credit Guarantees, can be a smart instrument to de-risk agriculture finance.	○	○

Activity 2: Four financial products are listed below. Identify which products fall under 'risk reduction' and which products can be used for 'financial protection'.

#	FINANCIAL PRODUCTS	RISK REDUCTION	FINANCIAL PROTECTION
1	Capital Investment	☐	☐
2	Emergency Credit	☐	☐
3	Precautionary Savings	☐	☐
4	Agriculture Insurance	☐	☐
5	Input Credit	☐	☐

Activity 3: Governments intervene in various ways to promote agricultural finance, often times combining various instruments. Can you identify 3 financial instruments used by your governments to promote agriculture finance in your country.

Financial Instruments

[1]

[2]

[3]

Activity 4: Reflections

[1] These are my top two take-aways from this fact sheet.

[2] Here are two concepts or ideas that I would like more information about.