

MAKING ACCESS POSSIBLE

map



Myanmar

မြန်မာ

Agricultural finance

Summary note

2015



ABOUT MAP MYANMAR

Making Access Possible (MAP) is a multi-country initiative to support financial inclusion through a process of evidence-based country diagnostic and stakeholder dialogue, leading to the development of national financial inclusion roadmaps that identify key drivers of financial inclusion and recommended action. Through its design, MAP seeks to strengthen and focus the domestic development of dialogue on financial inclusion. At country level, the core MAP partners (see “Partnering for a Common Purpose” below), collaborate with Government, other key stakeholders and donors to ensure an inclusive, holistic process. The global project seeks to engage with various other international platforms and entities impacting on financial inclusion, using the evidence gathered at the country level.

Preparation for MAP Myanmar was approved by the President of the Union of Myanmar in January 2013. The programme has been developed by the United Nations Capital Development Fund (UNCDF) in close cooperation with the United Nations Development Programme (UNDP) office in Myanmar and is embedded in the UNDP Country Programme and Action Plan (CPAP), which has subsequently been approved by the Government of Myanmar. MAP Myanmar is funded by UNCDF and Livelihoods and Food Securities Trust Fund (LIFT). The project is governed by a Steering Committee chaired by U Htein Linn, Managing Director of the Myanmar Microfinance Supervisory Enterprise (MSE) and consists of 10 members representing government and project sponsors.

This Agricultural Finance Summary Note was produced by Cenfri, and presents the main agricultural finance findings from the Country Diagnostic, a comprehensive demand-side, supply-side and regulatory analyses (“Making Access Possible: Myanmar Country Diagnostic Report”, 2014). A MAP Myanmar Synthesis Note was also produced which summarises the main overall findings from the Country Diagnostic. The supply-side analysis covers payments, savings, credit and insurance, and therefore provides an understanding of microfinance in a broad context. The demand-side component includes an analysis of access, usage, perceptions and attitudes of financial services by target groups. The demand-side analysis draws from quantitative data provided by the Myanmar FinScope Survey 2013 and qualitative research in the form of Focus Group Discussions (FGDs), Home Visits (HVs) and Key Informant Interviews (KIIs). For more information on the research methodologies and scope of the quantitative and qualitative research conducted, please refer to “Making Access Possible: Myanmar Country Diagnostic Report”, 2014 (henceforth referred to as Diagnostic Report). Within this document (unless otherwise referenced) demographic, income and financial usage data is obtained from the 2013 FinScope (henceforth referred to as FinScope) Survey. It should be noted that the last official census in Myanmar was conducted on 31 March 1983. The sampling framework and weighting for FinScope is based on the latest (2012/2013) demographic estimates provided by the Central Statistics Office (CSO). The CSO estimated a total adult population of 39 777 041 at the time of the 2013 FinScope Survey.

A summary report and presentation of FinScope Myanmar is available as a separate deliverable and the FinScope dataset is available on request for future research.

THIS REPORT WAS PRODUCED BY THE CENTRE FOR FINANCIAL REGULATION AND INCLUSION (CENFRI) WITH SUPPORT FROM BANKABLE FRONTIER ASSOCIATES (BFA).

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PARTNERING FOR A COMMON PURPOSE

MAP Myanmar represents a partnership between UNCDF, UNDP, LIFT, Cenfri and FinMark Trust for the Development of a Strategic Framework for Financial Inclusion in Myanmar. The MAP methodology and process has been developed jointly by UNCDF, FinMark Trust (FMT) and Cenfri to foster inclusive financial sector growth. This report was produced by Cenfri as part of the larger diagnostic work.



*Empowered lives.
Resilient nations.*



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List of Abbreviations and Acronyms

AWP	Annual work plan
BFA	Bankable Frontiers Associates
CCS	Central Co-operatives Society
Cenfri	Centre for Financial Regulation and Inclusion
CSO	Central Statistical Organization
FMT	FinMark Trust
GDP	Gross Domestic Product
IHCLA	Integrated Household Living Conditions Assessment
MADB	Myanmar Agricultural Development Bank
MAP	Making Access to Financial Services Possible
MEB	Myanmar Economic Bank
MFI	Microfinance Institution
MMSE	Myanma Microfinance Supervisory Enterprise
RSC	Rice Specialisation Company

USD/Kyat Exchange Rate

Foreign exchange. The local currency in Myanmar is the Myanmar Kyat (K). The United States Dollar (USD) equivalent shown throughout this document was calculated using a six month average exchange rate (between 1 April to 30 September 2013) of Kyat 946 /USD.



The government objective is to reduce poverty from **26%** to **16%** by **2015**

Key facts

Myanmar is the poorest country in Southeast Asia

Myanmar's population is the 24th largest in the world

\$3.50 per day average income

60.9 million people, 39.8 million adults

7% of adults have higher education

7 out of 10 adults are rural

400 000 new jobs will be needed in the financial sector by 2030

Urban average income twice that of rural

23 million adults (58%) reported to be involved in agriculture



Government Policy Objectives to improve financial access in Myanmar:

TASK 1: TO INCREASE AGRICULTURAL OUTPUT

19 million adults in Myanmar reported to be involved in farming

TASK 2: TO INCREASE RURAL PRODUCTIVITY AND ESTABLISH COTTAGE INDUSTRIES

7.2 million adults in Myanmar reported to be self-employed, 65% of which are informal

TASK 3: THE DEVELOPMENT OF MICRO SAVING AND CREDIT ENTERPRISES

189 microfinance institutions have been registered since December 2011

TASK 4: TO STRENGTHEN CO-OPERATIVE OUTREACH

7 490 co-operatives offer financial services in Myanmar



23 million adults derive a livelihood from agriculture



58% of adults



Adults whose main source of income is farming



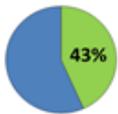
Adults whose main source of income is farm work



Other adults involved in farming and farm work as a secondary income source only



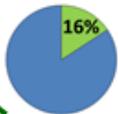
Farmers



43% of Farmers reported to use at least one financial service from a regulated financial service provider



8% of Farmers make use of more than one regulated financial product class



16% of Farmers make use of unregulated services only

Credit



37% have regulated credit

Payments



8% use regulated payments

Insurance



2% have regulated insurance

Savings



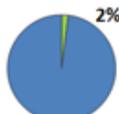
6% have regulated savings



Farm workers



12% of Farm workers reported to use at least one financial service from a regulated financial service provider



2% make use of more than one regulated financial product class



32% of Farm workers make use of unregulated services only

Credit



10% have regulated credit

Payments



2% use regulated payments

Insurance



0% have regulated insurance

Savings



2% have regulated savings

1. Executive summary

This Agricultural Finance Summary Note presents the main agricultural finance findings from the 2014 Making Access to Finance Possible (MAP) Myanmar Country Diagnostic Report, a comprehensive market assessment of retail financial services in Myanmar, including demand-side, supply-side and regulatory analyses. A MAP Myanmar Synthesis Note was also produced which summarises the main overall findings from the Country Diagnostic Report. MAP Myanmar was undertaken at the request of the Government of Myanmar. The purpose of MAP is to assist the Government of Myanmar to identify key priorities and opportunities to extend access to financial services, at a time where Myanmar is modernising its financial sector to better serve its economy and people, and growing opportunities to extend financial services to the majority of its people have opened up.

Myanmar's agricultural sector plays an important role in its current economic and social environment, and is a strategic (if underdeveloped) asset which is being leveraged in achieving public policy objectives. Myanmar is endowed with rich and favourable natural agricultural resources, has a large rural and farming population, and is strategically positioned in the region to be a major agricultural provider. However, despite its relative comparative advantage in the production of agricultural goods, Myanmar has underperformed in comparison to its peers and neighbouring countries over the last five decades, and rural poverty remains an issue. Myanmar's economy remains highly dependent on agriculture though, to support production, employment and foreign exchange revenue through exports, and will remain so for the foreseeable future (see **Section 3**). In addition to rural poverty, addressing agricultural productivity and the development of the agricultural sector are therefore key priority areas for the current government.

FinScope found that 23 million adults (58% of adults in Myanmar) are involved in agriculture, mostly in crop production and particularly paddy production (rice). These adults either received their main income from farming themselves (12.1 million Farmers), from working on someone else's farm (2.2 million Farm workers), or received secondary income from farming or farm work (8.7 million adults). This note only focused on Farmers and Farm workers, as those who derive secondary income from agricultural activities are dealt with under other target markets in the main Diagnostic Report.

Farmers constitute the largest target market and reported the highest levels of access to regulated credit with 37% of Farmers borrowing from a regulated financial services provider, mostly driven by loans from MADB. However, this high use of regulated credit does not translate into high take-up of other regulated financial services, with low levels of regulated savings, payments and insurance take-up amongst Farmers. In contrast, very few Farm workers have access to any financial services from regulated or unregulated financial services providers, other than those who borrow from an unregulated provider (31% of Farm workers borrow from unregulated providers only). Furthermore, of those Farmers and Farm workers who have access to regulated financial services, very few have access to more than one type of regulated service (i.e. credit, savings, payment or insurance), and most regulated usage is non-account based. It is therefore clear that much of agricultural financial services needs in Myanmar remain unaddressed or insufficiently addressed.

Current rural provision of regulated financial services is therefore mostly limited to credit and mostly driven by mandated capital¹ and subsidised operations. No purely commercial offering has achieved any significant scale and there is no evidence that any provider is poised to do so for the foreseeable future. Furthermore, even for mandated and subsidised models, rural delivery remains a challenge,

¹ Either state mandated capital (MADB has a mandate to serve rural farmers), or donor mandated capital (for instance, PACT has a mandate to serve low income clients and for part of their portfolio to focus on agriculture specifically).

with current interest rate caps, loan size and capital regulations and the higher cost of rural provision resulting in a withdrawal of certain NGO MFIs from more challenging low-income and particularly rural markets. For the time being, MADB therefore remains best positioned for credit delivery to farmers. Their mechanism of simple group-based seasonal loans works well for delivery, but may not work well for more advanced or individualised loan products. Current agricultural credit product features are also not meeting the needs of farmers, with the size of the farm, the size of the loan, restrictions on crop type and the disbursement and timing of repayments all being problematic. Opportunities therefore exist to improve the quantity and terms of agricultural input credit which in turn can increase agricultural productivity.

Provision of regulated risk mitigation products to rural areas and especially agricultural households is extremely limited. Furthermore, products specifically addressing the biggest risk mitigation needs for these households (i.e. Agricultural input credit insurance, health insurance or funeral insurance), are not currently allowed under insurance regulation. There is therefore a high degree of risk exposure for current agricultural households which are being mitigated through unregulated or personal mechanisms. There are also several issues in terms of distribution and innovation in the insurance market.

Lastly, there is very limited use of electronic payments due to the absence of electronic payments infrastructure, especially in rural areas where there is virtually no points of access for electronic payments. There is also low savings mobilisation capability in rural areas, with few products catering to the needs of rural households, i.e. to save and withdraw small amounts regularly, conveniently and cheaply. Given the current limited branch infrastructure outside urban areas, this will not change without remote electronic access. A dramatically upgraded and expanded payment system is therefore critical in the mobilisation of rural savings. Similarly, the extension of low-value credit and the collection of small insurance premiums become commercially viable on the back of low-cost electronic payments. Mobile payments offer the most immediate solution to achieve this. However, this will not obviate the need to extend branch infrastructure and build a network of agents to perform the encashment role. Pending the modernisation of banking systems, decentralised group-based credit will remain the most efficient way to provide rural credit.

The government of Myanmar has made good progress in bringing formal financial services to sections of society that commonly only have access to informal financial services. Considerable progress has been made in liberalising the market and strengthening both market and regulatory systems and capacity. The enabling regulatory environment for MFIs and co-operatives is creating an important platform to extend outreach, especially to rural areas. Direct delivery by state institutions and, particularly MADB, has played a critical role in financial inclusion to date. MADB has improved delivery over the last 5 years and there is opportunity to continue harnessing this role while seeking to modernise state institutions to continue and sustain its role in the future. However, given the current level of development of the financial sector, much work needs to be done to further expand access and, importantly, to improve the quality and depth of services offered to those already financially included.

It will also require the government to work together with other stakeholders such as the private sector, development partners and sector experts. To assist these stakeholders to address the opportunities in harmony, a MAP Roadmap has been developed and discussed with stakeholders at a National Stakeholders' meeting. The roadmap outlines in further detail the programme of actions necessary to address the identified market inefficiencies, such as ensuring better regulatory support or addressing the infrastructure bottlenecks, and linking these actions to existing government priority areas, such as institutional development, growth of agriculture, and poverty alleviation for low-income rural citizens.

2. The role of agriculture in Myanmar's economy

Agriculture is the single largest contributor to the economy. Myanmar's economy remains highly dependent on agriculture to support production, employment and foreign exchange revenue through exports. In 2010, agriculture and agricultural related production accounted for 60% of Gross Domestic Production (GDP) (see **Figure 1** below) and 30% of total exports (Kudo et al., 2013). In 2013, 58% of the adult population, or 23 million people, in Myanmar reported to be either farmers (19.8 million) or farm workers (3.2 million)².

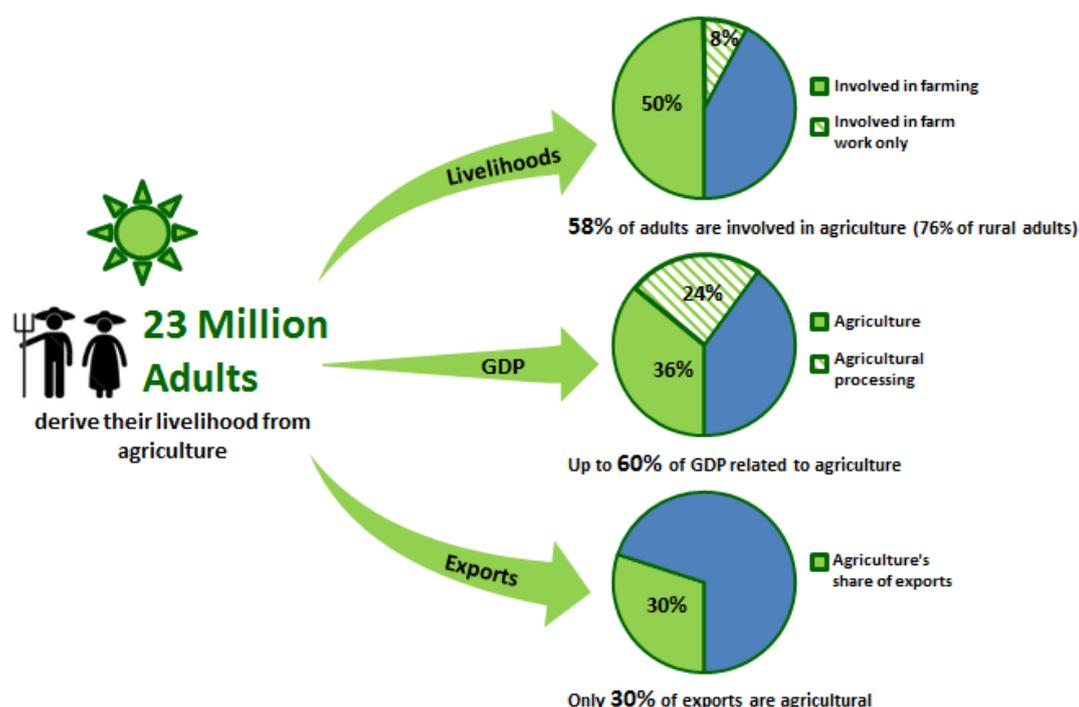


Figure 1: Agriculture in Myanmar

Source: Livelihoods: FinScope, 2013. GDP: Kudo et al. 2013 & LIFT, 2012. Exports: Kudo et al. 2013.

Agriculture expected to remain the largest source of employment for the foreseeable future. Slow agricultural productivity growth combined with rapid growth in natural gas and related sectors has seen agricultural contribution to GDP decline over the last decade. This is in-line with traditional growth models that suggest that agricultural contribution to GDP and employment decreases as GDP per capita increases³. However, based on the experience of neighbouring countries, Kudo et al. (2013) find that the proportion of the population involved in agriculture in Myanmar is expected to decline slower than agricultural contribution to GDP. Given the large share of the current agricultural population in Myanmar, "agriculture is expected to continue as a main employment source for the short and medium terms" for Myanmar (Kyung-Ryang and Abafita, 2012). In addition, Haggblade et al. (2013) find that

² Please note: FinScope distinguishes between those who are involved in farming, and those who are involved in farm work. There are adults who are only involved in one or the other, but there are also adults who are involved in both. In total, 4.6 million adults indicated that they were involved in farm work, of which 1.4 million is also involved in farming and 3.2 is not involved in farming. Only 12.1 million adults reported farming as their main source of income and only 2.2 million reported farm work as their main source of income. Our analysis in the main Diagnostic Report deal with adults whose main source of income is farm work as a separate economic group to those whose main income source is farming. In the main Diagnostic Report, farm workers are combined with other economic groups to form the informal consumer target market.

³ This is known as Petty-Clark's Law (Kudo et al., 2013).

“Myanmar’s agricultural potential remains considerable given the country’s resource endowments and favourable geographic location.”

Agricultural production and exports critical in generating foreign revenue. Agricultural products constituted the largest share of exports up until 2009 (Kyung-Ryang and Abafita, 2012) and agricultural goods accounted for nearly 30% of exports in 2010 (Kudo et al., 2013). Agricultural exports have however declined in nominal terms over the past decade, while Myanmar’s export portfolio continues to diversify from agricultural to non-agricultural goods. While the declining contribution of agriculture to exports is likely to continue as the rest of Myanmar’s economy develops, the large absolute contribution of agriculture to exports means that productivity gains and increased production in the sector will significantly contribute to increased foreign revenue.

Agricultural output key determinant of rural incomes. The rural population in Myanmar are dependent on agriculture to make a living. FinScope finds that 76% of rural adults (**Box 1** below) are either involved in farming (18 million or 65% of rural adults) or are not involved in farming but involved in farm work (3 million or 11% of rural adults). Although 40% of rural adults indicated that they do not own land for cultivation, only 13% of adults who indicated that they are involved in farming do not own land for cultivation. Most of the adults who indicated that they are not involved in farming, but are involved in farm work do not own land for cultivation (93% of 3 million).

Box 1 Agricultural priorities as set out by the Ministry of Agriculture

The new government led by U Thein Sein from 2011 recognised that in order to achieve national economic development, it needed to address the issue of rural poverty as 70% of Myanmar’s population was found in the rural areas and the majority of the poor were also found in these areas. Therefore, as an agro-based economy, primary issues that needed immediate attention were identified as (i) development of the agricultural and livestock breeding sector, (ii) development of rural areas, (iii) climate change, (iv) food security and (v) achieving higher incomes for rural communities.

Building on the previous regime’s rural development tasks, which were promotion of education, health, safe water supply, transport and agricultural development, the current regime developed eight tasks in which to approach rural development and poverty alleviation. These are (i) development of agricultural production sector, (ii) development of rural productivity and cottage industries, (iii) development of micro saving and credit enterprises, (iv) development of rural cooperative tasks, (v) development of rural socio-economy, (vi) development of rural energy and (vii) environmental conservation. These were proposed after consultation meetings in the form of a workshop attended by key Myanmar economic experts.

Source: President U Thein Sein, 2011

3. Key factors affecting agricultural activity

Despite its relative comparative advantage in the production of agricultural goods, Myanmar has underperformed in comparison to its peers and neighbouring countries over the last five decades (Haggblade et al, 2013). Harvard (2011) estimates that “per capita rice production in Myanmar dropped from 2005/06 to 2009/10 and also that the price of paddy and of many pulses fell by half in real terms.” LIFT (2012) finds “universally low” paddy yields⁴ and estimates that a family of 5 who produces at the lower range (about 30 baskets per acre) “would require steady production from 2 acres of paddy just for consumption needs⁵”. The following section will list several non-finance determinants of agricultural production relevant to this paper.

Strategic positions, favourable agricultural conditions and large rural population. Myanmar is well placed as a producer of agricultural goods. It is endowed with favourable resources like an abundant water supply, with the “Ayeyarwady and related river systems... (supplying) over ten times the levels (of renewable fresh water) available in China and India and more than double (that of) Vietnam, Thailand and Bangladesh” (ADB, 2012). Due to its “diverse topography and eco-systems”, farmers can also produce a wide range of agricultural produce and “cultivate (different) crops at different times of the year” (Haggblade et al., 2013). Furthermore, Myanmar is strategically located for exports to both India and China, being situated in between these “two enormous regional markets” (Haggblade et al., 2013). Lastly, Myanmar has a large rural population that is already involved in and dependant on agricultural production for a livelihood, so it has abundant human resources available for the production of agricultural goods.

Increased impact of floods, droughts and natural disasters. Research by Haggblade et al. (2013) finds that Myanmar, following record flooding in 2008, has experienced increased incidences of flooding and drought due to increasingly irregular rainfall coupled with poor water control. They also found that “most studies of climate change in Myanmar suggest... higher volatility and increased incidence of both flooding and drought” over the coming decades. This unpredictability will contribute to the high volatility of agricultural production and related prices.

Evidence of landlessness, but impact on agriculture uncertain. Although all farmland is state owned, rights to cultivate the land are given by the state (called tillage rights) (Haggblade et al., 2013), and appears to be secure (LIFT, 2012). Households that do not have such tillage rights but who indicated that they are involved in farming are essentially landless (UNDP Myanmar, 2011). The IHLCA reports growing incidences of landlessness in rural areas. FinScope found that only 15% of adults currently involved in farming do not own land (2.9 million of the 19.8 million adults involved in farming)⁶, but that 93% of farm workers (3 million adults) do not own farm land (as can be expected)⁷. The average farm size for families who indicated that they “own” farm land is 6 acres, with 88% of these farms being less than 10 acres. Supply side interviews revealed fears that growing indebtedness was leading to landlessness, but clear evidence for this remains lacking. FinScope can only report on current indebtedness of the landless versus landowners (for both Farmers and Farm workers), but there does not seem to be major differences that would support the indebtedness versus landlessness theory.

⁴ “between 30 and 60 baskets/acre”

⁵ This estimate is based on a national rice consumption average “of 211 Kg of milled rice per year (one of the highest rates in Asia)”

⁶ In comparison, the proportion of landless families were found to be 23.6% of all agricultural households in 2010 by the Integrated Household Living Conditions Survey in Myanmar

⁷ For a complete overview of previous findings on landlessness in Myanmar and how this compares to FinScope, please refer to Annex A.

Labour migration out of agriculture sets a floor under rural wages. Myanmar has traditionally enjoyed substantial cross-border trade, especially in agricultural goods, with China to the Northeast and Thailand to the South. The estimated number of Myanmar citizens working outside of Myanmar is indicated to range between 2 and 6 million (Hall, 2012). These trends (trade and migration) will further be strengthened by the formation of the Association of Southeast Asian Nations (ASEAN) common market, which is foreseen to take place in 2015. Myanmar has a relatively high rate of urbanisation at 2.6% per annum⁸. McKinsey (2013) estimates that the share of Myanmar's population that lives in large cities could double from 13% to around one-quarter of the total population by 2030. The extensive movement of people across the borders and within the country can have an effect on wages in the agricultural sector. Harvard (2011) finds evidence that "the ability to migrate has put a floor under rural wages" in Myanmar.

Low agricultural productivity and pressure on agricultural sustainability. Supply side consultations during the diagnostic process revealed a struggling agricultural sector. Accounts of rising input costs, low yields, and declining prices for agricultural goods were prevalent. This theme also emerges from various literature sources. For instance, Haggblade et al. (2013) find general underperformance of Myanmar's agricultural sector over the past five decades compared to its regional peers as a result of underinvestment in agricultural support institutions. They find several constraints on Myanmar's agricultural sector that contribute to current low productivity, including low investment, high transportation costs, weak rural financial institutions and unpredictable agricultural policies.

Impact of infrastructure limitations. Myanmar's physical infrastructure challenge severely impacts its rural and agricultural production. It also impacts the ability of banks and other providers to expand provision of financial services in rural areas. Several financial service providers sighted high-costs as a challenge to the delivery of services outside of the urban centres. Amongst other factors, limited road infrastructure, a low electrification rate and limited telecommunications infrastructure attribute to these costs. There are signals that various elements of infrastructure will receive substantial investments over the coming year. Nonetheless, given the sheer scale of the infrastructure challenge, development is likely to take time and face challenges. The key physical infrastructure statistics for Myanmar are listed in **Box 2** below.

Box 2: Key physical infrastructure statistics for Myanmar

- Myanmar has the lowest road density in Southeast Asia with 41.3 km of road per thousand square meters. 11.9% of the 27 000 km road network is paved.
- Myanmar has the lowest per capita electricity production in Southeast Asia with 104 KWh per capita. It is estimated that only 38% (UNDP Myanmar, 2007) of households have access to electricity, which suffers regular black-outs. The urban rural distribution is such that 89% of urban households have electricity while only 34% of rural households have electricity. However, access has increased from 38% in 2005 to 48% in 2010
- Telecommunications provision is currently limited to Myanmar Post and Telecommunications (MPT) and mobile and fixed line penetration is still low. In 2013/14 mobile penetration rates reached 27% (Eleven, 2014), while fixed line penetration was slightly above 1% in 2013 (Deloitte, 2013). This is expected to change with the new entry of Ooredoo and Telenor communication providers that are will support achieving the Government's target of 80% mobile phone penetration by 2016.
- Internet penetration is less than 1 % and majority of Internet access is via internet enabled mobile devices (Open Technology Fund, 2013).

⁸ It's not possible to deduce from the data whether rural to urban migration is primarily driven by migrant workers or relocated families. Various studies do however indicate to the prevalence of migrant workers.

4. Overview of farming activities

This section provides an overview of the agricultural activities as reported by all adults whose households are involved in farming (19.8 million) in order to provide an overview of all farming activity in Myanmar.

Paddy production the dominant agricultural activity in terms of number of adults. Almost all adults (94% or 18.6 million) who indicated that their households are involved in farming also indicated that they are involved in crop production (see **Figure 2** below). Paddy is overall the biggest crop produced, with 14.4 million adults (73% of all adults involved in farming) reporting that their households are involved in paddy production (4.8 million households). Wong and Aye Wai (2013), estimate that almost 75% of “farm household income is derived from rice farming and related activities”.

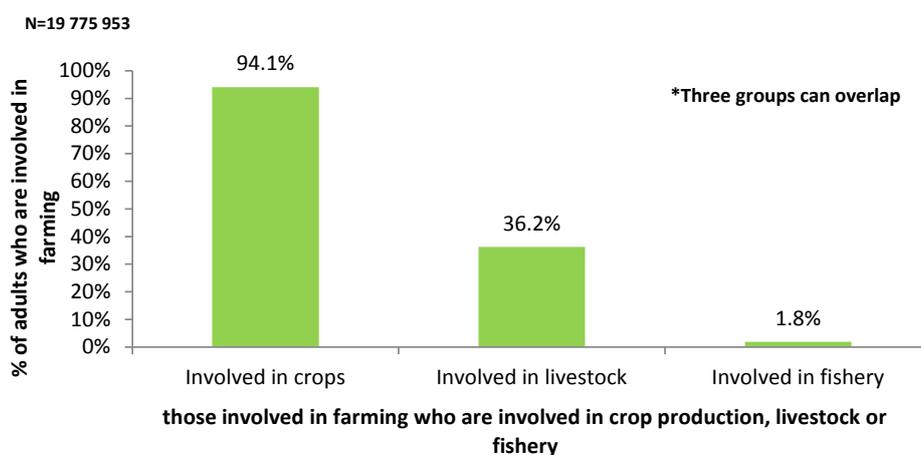


Figure 2: Involvement in crops, livestock and fishery

Source: FinScope 2013

Most adults involved in fewer than 2 crops. Of those adults who are involved in crop production (18.6 million), most are involved in two crops or less (during the past 12 months) with only 21% of these adults involved in more than 2 crops and the average number of crops for adults involved in crop production being 1.9 (see **Figure 3** below).

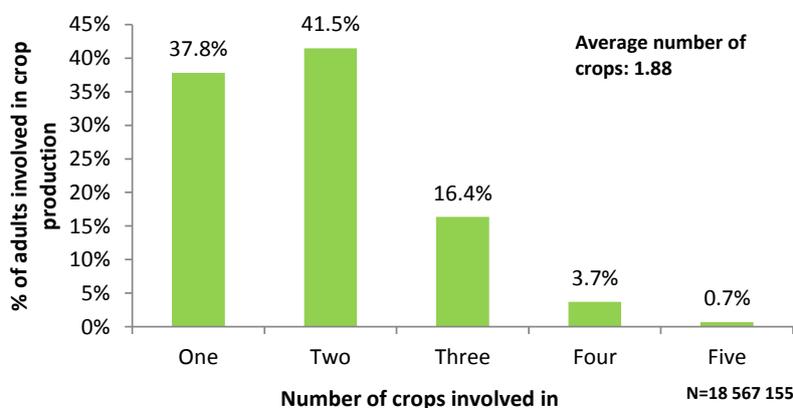


Figure 3: Number of crops involved in

Source: FinScope 2013

High concentration of crop types and large overlap between main 3 crops produced. Of those involved in crop production, 93% of adults (or 88% of all adults involved in agriculture) are involved in at least one of three main crop types: Paddy (77% of adults in crop production), beans and pulses (40% of adults in crop production), and cereals (31% of adults in crop production). As can be seen from **Figure 4** below, there is a large degree of overlap between those who are involved in the production of paddy and those who are involved in the production of cereals or beans and pulses. While 36% of crop farmers (6.6 million) are involved in paddy but not cereals or beans and pulses, 42% (7.7 million) are involved in paddy production and at least one of the other two main crops.

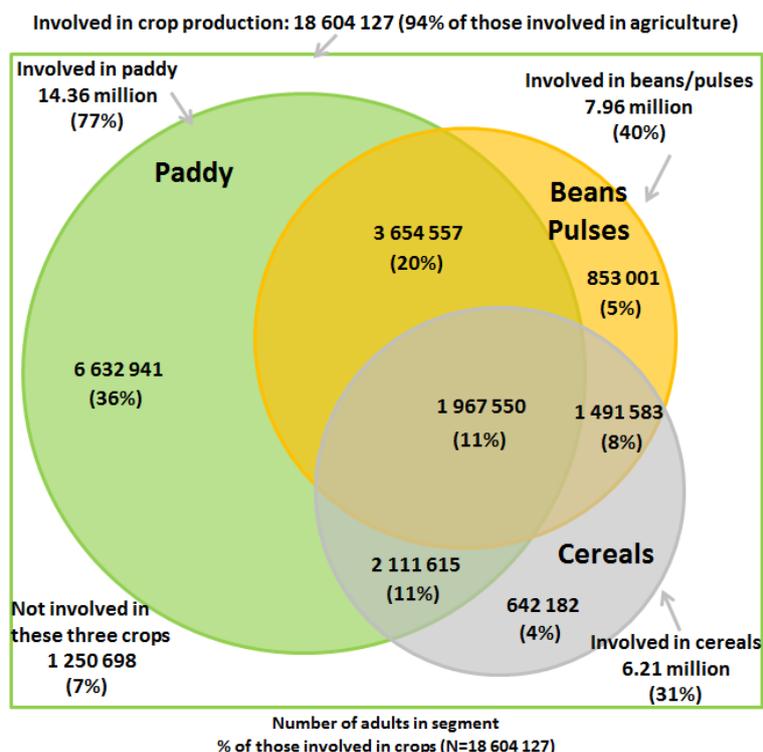


Figure 4: Overlaps between three main crops

Source: FinScope 2013

Significant proportion of farmers has farms larger than 5 acres. Of the 19.8 million adults whose households are involved in farming, 85% indicated that their households own land for cultivation, while 36% of farmers who own land (31% of farmers) indicated that their land is larger than 5 acres in size. This represents 6.1 million adults or 2.1 million households.

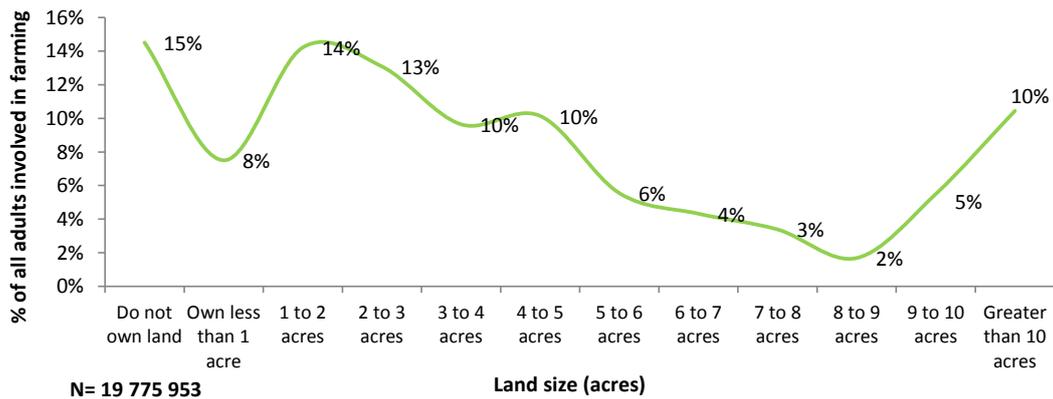


Figure 5: Land size distribution for all adults who are involved in farming

Source: FinScope 2013

Significant proportion of lower income farmers has farms larger than 5 acres. Of the 19.8 million adults whose households are involved in farming, 12.8 million earn less than USD 5 per day (K 141 900 per month). Of these 12.8 million farmers who earn less than USD 5 per day, 28% (3.5 million adults) farm on land that is 5 acres or larger. 960 000 adults involved in farming and who earn less than USD 5 per day have farm sizes larger than 10 acres (see **Figure 6** below).

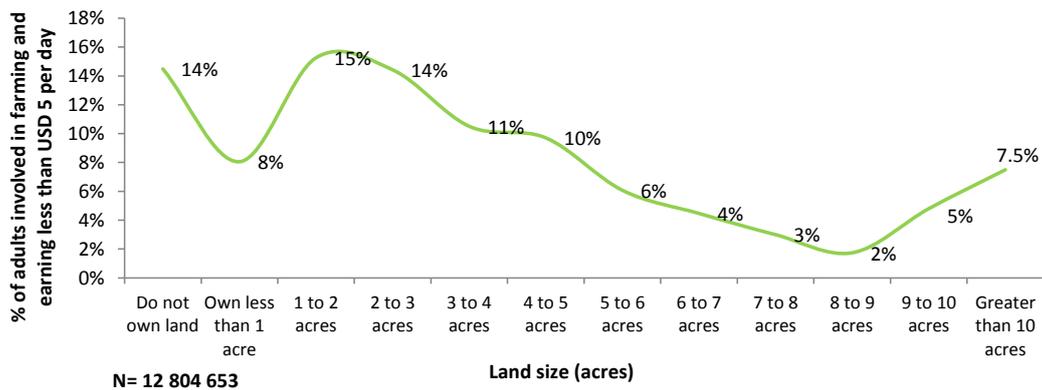


Figure 6: Distribution of land size for farmers earning less than USD 5 per day

Source: FinScope 2013

The rest of this document will focus on the financial services usage of only the two distinct groups that are involved in agriculture as discussed in **Section 5.1**: Farmers (the 12.1 million adults who reported farming as their main source of income) and Farm workers (the 2.2 million adults who reported their main source of income as farm work).



5. Understanding the target market for financial inclusion

5.1. Who is agricultural finance for?

Bulk of adults involved in agriculture requires increased access to financial services. According to the World Bank (2013), Myanmar is the poorest country in Southeast Asia. FinScope estimates the average monthly income of the total adult population (39.8 million) to be K 93 527 (about USD 99 per month or just more than USD 3.50 per day), while the average income of those who are involved in agriculture (23 million, see Section 2 and below) is significantly lower at K 79 223 (USD 84). **Figure 7** below indicates that, of those adults who are involved in either farming or farm work and reported their income⁹, 49% of adults live on less than USD 2 per day, 87% on less than USD 5 per day, and 96% on less than USD 10 per day (16.9 million of the 17.5 million who reported income).

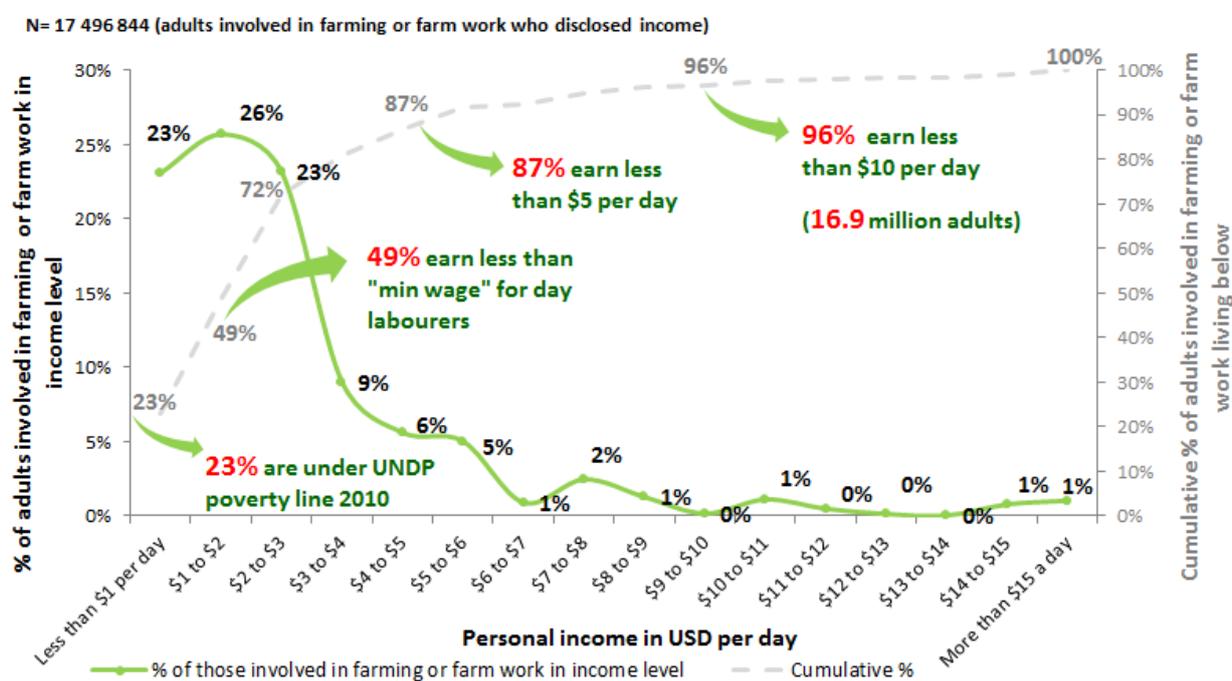


Figure 7: Income distribution of population dependent on farming income

Source: FinScope 2013

Farmers and Farm workers as two distinct agricultural finance target groups. As mentioned in Section 2 and above, 58% of adults in Myanmar (23 million) reported income from either farming, farm work or both. Of these, 19.8 million adults¹⁰ (50% of adults) reported income from farming and 4.6 million reported incomes from farm work (8% of adults). 1.4 million Adults therefore reported income from both farming and farm work. In total, 12.1 million adults (30% of adults¹¹) reported farming as their main source of income¹² (henceforth called Farmers) and only 2.2 million (5.5% of adults) reported farm work as their main source of income (henceforth called Farm workers). The remaining 8.7 million adults reported an alternative source of income as their primary or main source of income (e.g. having

⁹ 17.5 million out of 23 million adults who are involved in farming or farm work disclosed their income.

¹⁰ Equating to about 7 million households

¹¹ Or 61% of all adults whose households is involved in farming, or 4.1 million households.

¹² These would be self-employed farmers (farming their own land or family land), and engaged in activities such as crop and livestock cultivation.

own business, or employed). These three groups are depicted in **Figure 8** below, including the demographic profiles of Farmers and Farm workers compared to that of the overall population.

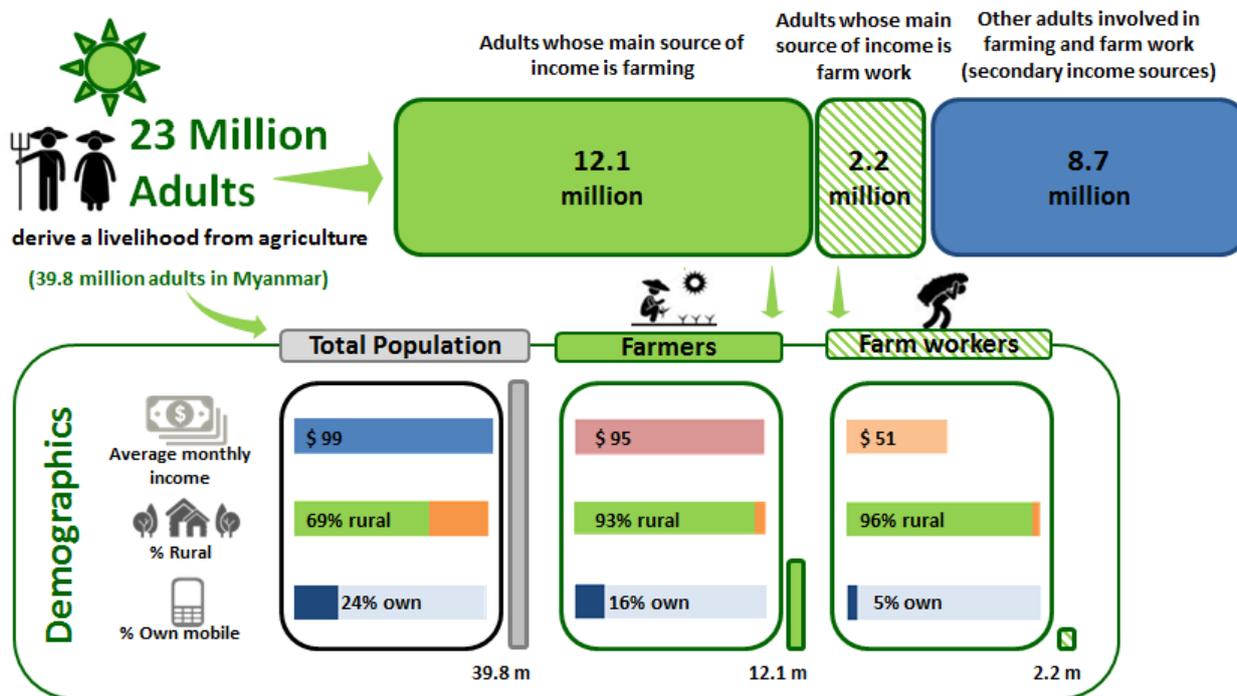


Figure 8: Breakdown of population involved in agricultural activities

Source: FinScope 2013

Profile of Farmers. Farmers form the largest single economic group (12.1 million adults) and are almost exclusively adults in rural areas (93%), while also being more likely to be male (62%). Their average reported monthly income is close to that of the overall population (K 89 723 (USD 95) vs. K 93 527 (USD 99) for all adults), but those with farm sizes less than 2 acres have significantly lower income at K 53 927 (USD 57 and 10% of the group). Qualitative research found that many farming households indicated multiple sources of income as a way of coping with their seasonal income. Some farmers engage with alternative sources alongside farming, while others only seek alternative income sources during the monsoon period when farming is not viable¹³. FinScope found that 43% of Farmers had secondary income sources. More than half of these Farmers relied on other household members to obtain income from non-Farming activities.

Profile of Farm workers. Farm workers consist of 2.2 million adults almost exclusively in rural areas (96%). They are the lowest educated and youngest economic group in Myanmar¹⁴, and have the lowest mobile phone ownership of all economic groups (5%) (See full Diagnostic report for all financial inclusion target groups in Myanmar). Individuals in this group also have the lowest average income compared to all other groups, with average income at only 52% (K 48 611 (USD 51)) of the overall population average. Farm workers have a higher reliance on secondary income sources, with 53% of this group having more than one income source.

¹³ It should be noted that the monsoon period presents a challenge to all sectors as general production and spending is often curtailed. Respondents did highlight that it is difficult getting alternative income during such periods.

¹⁴ 46% of Farm workers are below the age of 35 and 86% have no education, or either have Pre-primary or Primary education only.

5.2. Usage of agricultural finance

Majority of Farmers and Farm workers with access to regulated financial services only make use of one product class. Although 30% of adults in Myanmar reported to use at least one financial service from regulated financial services providers, only 6% make use of more than one regulated financial product class (a combination of credit, savings, insurance and payments). This is similar for Farmers with 43% of Farmers having access to a regulated financial service or product (this is the highest of all target markets, see main Diagnostic Report), but only 8% of Farmers making use of more than one regulated financial product class. Only 12% of Farm workers have access to a regulated financial service or product (among the lowest of all income groups), and only 2% use more than one regulated financial product class. **Figure 9** below shows this breakdown of Farmers and Farm workers using financial services from regulated financial services providers and classifies adults that make use of more than one financial service as **broadly served** and those who only make use of one financial service from a regulated provider as **thinly served**. This highlights that most adults that are considered to be served by regulated financial services providers are only **thinly served** and are still candidates for financial inclusion.

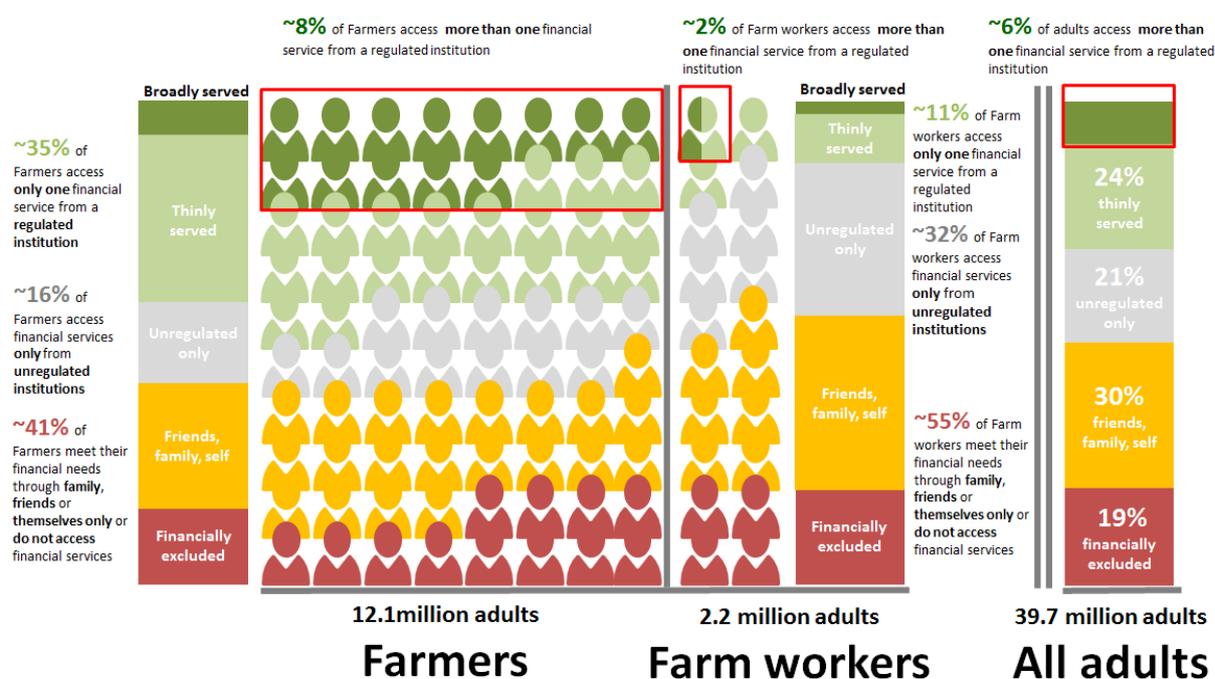


Figure 9: Nature of financial services usage

Source: FinScope 2013

Thinly served driven largely by regulated borrowing without an account and non-account based payments. Of the 35% of Farmers identified as **thinly served**, 83% (or 3.5 million adults) only borrow from regulated financial services providers (mostly from MADB) and 12% (0.5 million adults) use only payment services from regulated financial services providers. Of the 11% of Farm workers that are **thinly served**, 73% only have a regulated loan, and 22% only use regulated payments. Adults who report using only payments from a regulated financial services provider consist almost entirely of adults who indicated that they use a bank to send or receive remittances, but do not report having a bank

account¹⁵. Regulated payments as captured in our analysis are therefore largely non-account based. These two services (adults only borrowing from regulated financial services providers and adults using only payments from regulated financial services providers) make up 95% of the **thinly served** category for both Farmers and Farm workers.

State provision of credit drives higher take-up in rural areas. Higher financial services usage by Farmers, 46% compared to 30% for the entire adult population, shows that despite the distribution challenges associated with rural provision in Myanmar, the distribution of financial services to these areas has had some success. This has been driven primarily by the provision of credit by state-owned financial institutions such as MADB. However, the low uptake of financial services by Farm workers (13%) and large usage of unregulated financial services by both Farmers (16%) and Farm workers (32%) highlights the remaining challenges that will need to be addressed.

The usage of each financial services type by Farmers and Farm workers is considered in **Figure 10** below, which depicts Farmers and Farm workers' usage of credit, payments, savings and insurance by regulated and unregulated providers, compared to usage by the overall adult population in Myanmar.

 *Farmers have high take-up of regulated credit, but unmet demand still exists.* Farmers reported the highest levels of access to regulated credit with 37% of Farmers reporting that they borrow from a regulated financial services provider. This high take-up is mostly driven by MADB, with 31% of Farmers having a loan from MADB. However, this high use of regulated credit does not translate into high take-up of other regulated financial services, with Farmers reporting low levels of regulated savings, payments and insurance. Furthermore, regulated borrowing correlates with plot size. 24% of Farmers with plots smaller than 2 acres have regulated credit. This increases to 54% for Farmers who have plots 10 acres or larger. While Farmers are the best served group for regulated credit, high levels of unregulated credit usage indicates demand for additional credit and credit products.

Farm workers have the lowest take-up of financial services from regulated or unregulated financial services providers.  Outside of borrowing, very few adults in this economic group have access to financial services from regulated or unregulated financial services providers. Almost 40% of Farm workers rely on family and friends or themselves for risk mitigation, 18% save at home or with family and friends. Approximately 73% of the group do not save and adults rely on credit, either from an unregulated financial services provider or family and friends, to meet most of their financial needs.

¹⁵ In Myanmar, it's common to use bank branches to remit money without holding an account with a bank. Only about 40 000 or 1% of remittance senders and receivers have a transactional bank account, while only 12% of adults who indicated they use banks to send or receive remittances indicated that they have any account with a commercial bank or MEB, or that they currently save or borrow from a commercial bank or MEB.

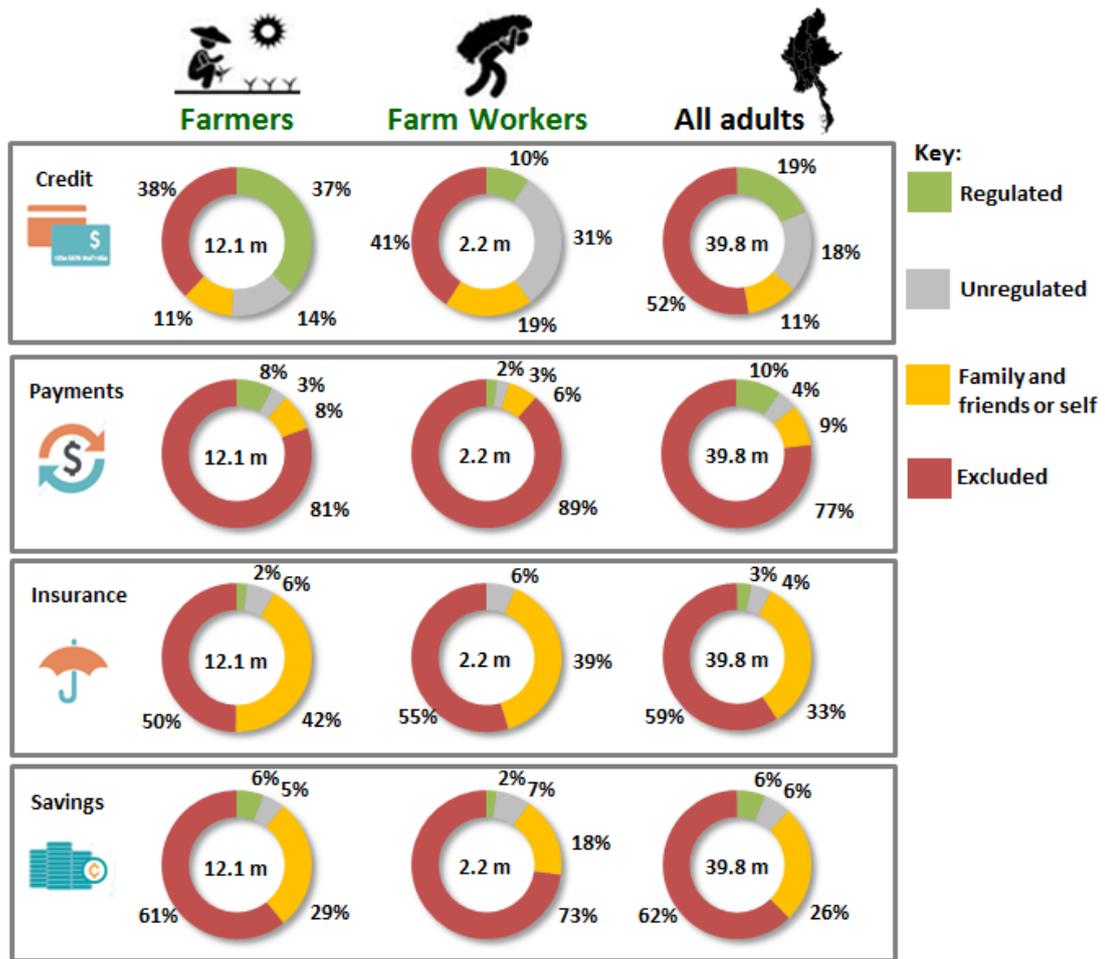


Figure 10: Uptake figures of farmers and farm workers

Source: FinScope 2013



5.3. Use cases

The following use cases serve as a summary of demand for particular credit, savings, payments and insurance services. This will provide the context of demand before delving into the findings in subsequent sections. **Table 1** below follows the main use cases for financial services in Myanmar by financial market:

	Use case 1: <i>Agricultural production</i>	Only 38% of Farmers (4.6 million) currently do not make use of credit. Farmers therefore have the highest use of credit of all target markets with 37% using regulated credit).
	Use case 2: <i>Consumption</i>	39% of Farmers who owe money and 71% of Farm workers who owe money reported obtaining loans for the purposes of funding living expenses (other than medical and/or education expenses).
	Use case 3: <i>Health or education expenses</i>	12% of Farmers (1.5 million) reported obtaining credit for medical expenses, and 9% of Farmers (1.1 million) obtained credit for education and school fees. Similarly, 20% of Farm workers borrowed for medical expenses and 9% for education and school fees.
	Use case 4: <i>Risk management</i>	52.5% (5.4 million) of Farmers who experienced an unexpected event that affected their income borrowed as a response in order to cope financially. Similarly, 54.8% of Farm workers who experienced a risk borrowed in response.
	Use case 5: <i>Repaying existing loan obligations</i>	7.4% of Farmers (600 000) and 5.1% of farm workers indicated that they are planning to repay their current debt by taking a new loan.
	Use case 1: <i>Short-term savings for consumption smoothing.</i>	56% of Farmers (who save) report saving for their living expenses (consumption) while 61% of Farm workers who save report saving for living expenses.
	Use case 2: <i>Larger, medium-term savings for health, emergencies or education.</i>	27% of Farmers who save do so for medical expenses (planned or emergency), while 26% save for non-medical emergencies and 19% of Farmers who save do so for education. Similarly, 26% of Farm workers who save do so for medical expenses while 12% save for non-medical emergencies and 12% save for education.

	Use case 3: <i>Compulsory savings for loans.</i>	MFIs and co-operatives collectively report around 1.1 million clients with compulsory savings (as requirement for accessing loans). In addition, MADB history required Farmers to hold savings as collateral.
	Use case 4: <i>Longer-term saving for investment and productive use.</i>	9.5% of Farmers and 8.4% of Farm workers save to start or expand their business, while 4.5% of Farmers save to buy farming equipment. Approximately 81% and 83% of Farmers and Farm workers respectively indicated that they own the house they live in report that they bought their home with their own savings.
Payments 	Use case 1: <i>Remittances</i>	Myanmar has a large migrant population who remit money either locally, between urban and rural areas, or internationally from countries such as Thailand, Malaysia, Singapore and the United Arab Emirates.
	Use case 2: <i>Agricultural/ seasonal demand for payments (B2P and B2B).</i>	Banks report a seasonal dimension to the demand for transfers, particularly to specific rural areas which closely follows the seasonal nature of agricultural production.
Insurance 	Use case 1: <i>Health insurance</i>	The most prominent risk event reported by FinScope (2013) is illness within the household or family that requires medical attention, with 30% to 35% of Farmers and Farm workers indicating that this risk has affected them in the past and 84% to 89% of Farm workers and Farmers believing this to be a potential risk.
	Use case 2: <i>Agricultural insurance</i>	Weather risk was ranked as the second most prominent risk by adults in Myanmar. 48% of Farmers indicated they have experienced losses of crop or harvest failures and 43% indicated that they experienced drought, poor rainfall or loss of access to water. In the absence of insurance products, 40% of farmers who have experienced these risks relied on credit, 10% on savings and 22% sold assets or reduced expenditure in order to cope.
	Use case 3: <i>Life, funeral insurance and disability insurance.</i>	About 4.5% and 5.4% of Farmers and Farm workers reported experiencing the death or debilitation of a family member. Savings and credit have to-date been the largest coping mechanism followed by the sale of assets or reduction of expenditure.

Table 1: Financial needs of farmers in Myanmar

Source: FinScope 2013



6. Financial sector overview

Nascent banking sector growing rapidly. The financial sector in Myanmar has been growing since the introduction of financial sector reforms in 2008. Banking assets as a percentage of GDP have increased from 8% in 2008 to 21% in 2012 and operational costs ratios (a measure for banking efficiency) have decreased from 52% to 41% over the same time (CBM, 2012). This period has also seen the rapid expansion of infrastructure by regulated financial services providers such as bank branches, automatic teller machines (ATMs) and point-of-sale (POS) devices. However, the growth has been off a small base and does not yet translate into widely available regulated financial services. Myanmar still lags behind its Southeast Asian neighbours. The financial sector landscape includes providers that can be broadly categorised into **regulated** and **unregulated** institutions.

Regulated financial services providers. Regulated financial services providers are registered legal entities that are regulated for the provision of financial services. Regulated financial services providers include banks, Microfinance Institutions (MFIs), co-operatives and state-regulated pawnshops. Banks in Myanmar include local and foreign owned private banks, purely state-owned banks, banks considered as semi-private as they are co-owned by the government and banks with government representation on their boards. There are five types of MFIs operating in Myanmar and include International Non-governmental Organizations (INGOs) and domestic Non-governmental Organizations (NGOs) that are donor funded and dictated to by donor interests, local for-profit MFIs, co-operatives that have registered as MFIs and lastly, foreign-owned MFIs. Co-operatives include both financial cooperatives that do on-lending and do not hold MFI licenses and agricultural co-operatives that have started on-lending to their members. Financial co-operatives include savings and credit co-operative societies, as well as bazaar and microcredit co-operative societies. Regulated pawnshops are divided into two categories, Myanmar Small Loans Enterprise's network of pawnshops and other pawnshops that are licensed by local governments across Myanmar.

Large number of unregulated financial services providers. Unregulated financial services providers are not registered with any public authority and are not subject to any institutional, prudential or market conduct supervision in their provision of financial services. Even though legislation or regulation may exist that govern their provision of financial services, unregulated providers are not registered under such regulation. Likewise, if an entity is registered with a public authority, but no regulation exists that govern their provision of financial services, the entity will be an unregulated provider. Unregulated financial services providers include RSCs, agricultural input providers, unregulated money-lenders, community-based assistance groups, *hundis* and unregulated pawnshops.

The institutional landscape directly relevant to agricultural production is summarised in **Table 2**.

		Number of agricultural clients	Infrastructure		Product Markets			
			Institutions	Branches	Credit	Payments	Insurance	Savings
	Regulated financial service							
	Unregulated financial service							
Regulated Providers	Banks (Excl. MADB)*	1.8m**	23	909				
	MADB (Bank)	1.6 to 2.3 m	1	205				
	State-owned insurer	359k**	1	39				
	NGO (MFIs)	Unknown/Limited	19	19				
	INGO (MFIs)	< 100 k	6	163				
	Agricultural co-operatives	400 k	5 222	5 222				
	Regulated Pawnshops registered with local government	Unknown	1 842	1 842				
	State-owned Pawnshops	Unknown/Limited	184	184				
Unregulated Providers	Rice Specialisation Companies	12 k	3	3				
	Agricultural Input Providers	1.5 m	N/A	N/A				
	Unregulated money-lenders	3.9 m**	400 000	400 000				
	Community-based assistance groups	Unknown	N/A	N/A				
	Hundis	879 k**	N/A	N/A				
	Unregulated pawnshops	Unknown	N/A	N/A				

Table 2: Financial sector overview

Source: MMSE (2013), CCS (2013), FinScope (2013) and Supply-side interviews (2013)

*These include private, semi-private and state owned banks (excluding MADB). Although commercial banks and MEB also offer loan products, it is not indicated in Table 1 as the number of agricultural clients that have these products are negligible to none. The 1.8 million adults indicated here are mostly adults who sent and receive remittances through a bank (1.6 million) without holding a bank account¹⁶, although it also include 168 000 adults who save with MEB and 58 000 adults who save with commercial banks.

** Based on 23 million adults who indicated that they are involved in farming or farm work (FinScope, 2013)

¹⁶ In Myanmar it's common to use bank branches to remit money without holding an account with a bank.

7. Providers and products of agricultural financial services

A broad overview of financial services provision to adults involved in agriculture (by product category) is provided immediately below, providing a summary of both providers and products by financial services categories (credit, savings, insurance and payments). The following sections will then review in more detail those providers or provider categories that have a specific agricultural focus, as well as their associated products. These sections will also cover the key issues raised by providers. A complete discussion on all providers of financial services in Myanmar is available in the full Diagnostic Report.

7.1. Overview of product categories

Credit provision: Credit has the highest take up of all financial services categories amongst adults involved in agriculture, with 51% of Farmers and 41% of Farm workers having a credit product with either a regulated or unregulated provider (see **Figure 10** in **Section 5.1**). The largest regulated credit product currently being offered specifically to adults involved in agriculture is agricultural production loans (including input finance, output finance and asset finance). Providers of regulated agricultural credit fall within three categories based on the scale of outreach:

- Large provider: MADB (1.6 million clients)
- Medium providers: Agricultural co-operatives (400 000 clients) and PACT (70-80 000 clients)
- Small providers: Providers with small client portfolios of fewer than 15 000 each (Including INGO's other than PACT as well as RSCs).

In addition, there are also unregulated providers reaching large groups of clients like agricultural input providers (Awba has 1.5 million clients) and unregulated moneylenders (up to 3.9 million adults who are involved in agriculture have a loan with a moneylender). Other groups of unregulated credit providers only reach small groups of agricultural clients. The following product related aspects of the agricultural credit market can be highlighted:

- **Input financing products not regulated.** Beyond MADB, the bulk of finance seems to be provided on an unregulated basis by input providers and value chain players (e.g. Myanmar Awba). Average reported loans are very low at K 50 000 (USD 53) per client. Awba is in the process of applying for a microfinance license with the intention of extending its lending operations beyond input finance.
- **Rapid expansion of agricultural credit provided by co-operatives.** Credit provision by agricultural co-operatives has grown rapidly over the last year, driven by new funding injected in the form of a loan from the Export-Import Bank of China to the Government of Myanmar.
- **Other regulated agricultural products have achieved limited reach.** MFIs' agricultural portfolios are relatively small (particularly if one looks beyond PACT). Some MFI products are also not particularly suited to farmer needs. For instance, the term of some loans is actually shorter than the production season, which makes it difficult to repay these loans.
- **Across all providers, the bulk of loans are for Paddy Rice.** While some reviews caution against the concentration of finance in the rice sector, there are still many rice farmers who were unable to access MADB loans to date (e.g. as they did not have the land registration documentation). It would suggest that there is still further room for growth in the rice sector. This is also substantiated by the FinScope findings (see **Figure 12** on **page 28** below).
- **Bulk of credit is provided as seasonal loans with very little asset/equipment finance.** The only asset finance products are a small portfolio of term loans by MADB and possibly a small number of loans by MFIs. In total, this is unlikely to reach more than 50 000 farmers.

- **Most loans are focused on plots smaller than 10 acres.** Only MADB term loans are for plots greater than 10 acres. Co-operatives and MADB provide credit to farmers with more than 10 acres but only partial finance (MADB only provides per acre finance for the first 10 acres and co-operatives only provide per acre loans for half of farmers' acreage for farmers who have more than 10 acres). There are 2.1 million adults (698 000 households) involved in farming who indicated that they have farms that are 10 acres or larger. 46.5% of these adults indicated that they earn less than USD 5 per day.
- **Maximum loan sizes already exceeding K 500 000 (USD 529).** In a number of cases, loan ranges already exceed K 500 000 and for RSCs and MADB maximum loans exceeds K 1 million (USD 1 057).
- **Documentation requirement possible access barrier.** Both MADB and Awba require documentation to prove right of use of land in order to obtain a loan. It is estimated that 3.4 million farmers cannot provide this documentation (Harvard Kennedy School, 2011).

Savings provision: Only 11% of Farmers and 9% of Farm workers have a savings product from either a regulated or unregulated provider (see **Figure 10 in Section 5.1**). The only regulated savings providers with specific agricultural focus are MFI's, MADB, and agricultural co-operatives, all of which only have compulsory savings products. However, a limited number of adults involved in agriculture also report to be saving with MEB, and a few also reported to be saving with commercial banks, although these institutions do not provide savings products specific to agriculture.

The Diagnostic Report found that the current physical distribution networks of regulated savings provider branches is limited and there is a stark urban - rural divide. It also found that regulated savings providers offer a limited range of basic deposit or savings products that are not tailored with features that support the use cases for savings (see **Section 5.3** above) or to attract new rural clients. In addition, the qualitative research conducted as part of the Diagnostic Report revealed that bank accounts were viewed as burdensome, in terms of requirements, inconvenience and the interest rates offered which were considered too low to justify the use of accounts. Some respondents also felt that the amounts they saved were too small for banks and that should they require the money for emergencies, obtaining the funds from the bank would take time and effort such as travelling long distances¹⁷.

FinScope indicates that about 1.3 million adults involved in agriculture have savings with or belong to an unregulated savings group. Qualitative research revealed that saving in gold and in piggy-banks was preferred due to low transaction costs and the ability to pawn gold if cash is required. The use of these savings mechanisms is further reinforced by relatively low crime rates as none of the respondents mentioned being robbed as a concern. FinScope revealed that about 4 million adults involved in agriculture save in the form of livestock, while 2.7 million save in gold¹⁸.

Payments provision: The vast majority of the people of Myanmar use nothing other than cash for payments. Only 11% of Farmers and 5% of Farm workers use a payments service from either a regulated or unregulated provider (see **Figure 10 in Section 5.1**). The main reason for this limited use of electronic payments is the absence of electronic payments infrastructure, especially in rural areas where there is virtually no points of access for electronic payment instruments. ATMs, POS devices and the like are available in urban areas only but even there the networks are still severely restricted. The largest current use of regulated payments is for remittances, with 8% of Farmers and 2% of Farm workers remitting via bank transfers¹⁹. However, even these transfers can be considered cash-based, as adults need to physically bring cash to the bank and little effort is made by banks to convert these into account

¹⁷ Please note, these qualitative responses were not limited to adults involved in agriculture.

¹⁸ These are not counted as regulated or unregulated savings in FinScope, but as saving with yourself.

¹⁹ Both sending and receiving.

clients. Furthermore, almost all cross-border payments and a significant proportion of domestic remittances are made through unregulated *hundis*. FinScope found that 18% of Farmers and 24% of Farm workers who received remittances did so through a *hundi*.

Microfinance institutions are legally permitted to facilitate remittances payments, however this service is not allowed in practice since the MMSE has restricted MFI services to credit and deposits for the time being. However, MFIs still have a limited geographical footprint (especially in rural areas), so allowing MFIs to process remittances would not necessarily have a radical impact on access to formal remittances services.

The Diagnostic Report found that the need for electronic payments is growing rapidly. The most immediate and pressing demand for retail electronic payments will flow from the need to buy pre-paid airtime electronically in the wake of the roll-out of mobile services. This will follow the pattern in other countries. However, much of the future development of regulated financial services depends on the introduction of accessible, low cost, electronic payments. Migrating savings from outside of regulated institutions to regulated institutions will not happen unless households can save and withdraw small amounts regularly, conveniently and cheaply. Given the current limited branch infrastructure outside urban areas, this will not happen without remote electronic access. Similarly, the extension of low-value credit and the collection of small insurance premiums become commercially viable on the back of low-cost electronic payments.

In late 2013 the first third-party mobile payments service provider, Mobile Money Myanmar, was granted approval and launched using a strictly mobile money platform. Mobile Money Myanmar will provide mobile wallets (m-wallets or e-wallets), salary and pension disbursements, airtime top ups and cash-in /cash-out services. The two newly (2014) licensed mobile network operators (MNOs), Telenor and Oreedoo, have expressed intent to do the same.

Insurance or risk mitigation provision: FinScope found that only 8% of Farmers and 6% of Farm workers have insurance or risk mitigation products from either a regulated or unregulated provider. Yet both Farmers and Farm workers are exposed to a large degree of risks that are insurable. In the last 12 months, 48% of Farmers experienced harvest failure or losses, 43% experienced drought, poor rainfall or loss of access to water for farming and 30% experienced illness within their household or family that required medical expenses. Similarly, 42% of Farm workers reported experiencing illness within their household or family in the last 12 months. There are currently three categories of insurance providers to be considered in Myanmar:

- **Regulated insurers:** Until May 2013, Myanmar only had one government-owned insurer, Myanma Insurance. It was the only insurer in Myanmar for over 50 years and has 39 regional, state or district offices, but customers can also use MEB branches (329) to make premium payments. Myanma Insurance has 996 staff members²⁰ and uses an additional agency force of 700 agents to distribute its products. In May 2013, five new licences have been issued for domestic insurers²¹ with a further four licensed later in 2013 (Horn, 2013). However, Myanma Insurance does not offer agriculture or health insurance and it is also not included in the product lines allowed by regulation for newly registered private insurers, although 285 000 Farmers and 74 000 Farm workers did report to have another insurance product with Myanama Insurance. Agricultural value chain players may provide potential channels through which insurance could be provided to the agricultural sector. However,

²⁰ They are allowed a maximum of 1 394 staff members, but government is currently restricting their staff budget and they therefore only have 996 staff members at the moment.

²¹ 3 life and 2 composite insurance

it is not clear that the distribution mechanisms allowed for the newly licensed insurers will accommodate partnerships with agricultural value chain players. This presents a potential area for further exploration and engagement with the insurance supervisor. The capacity of insurers to underwrite such products would need to be considered particularly as the new regulation is proposing to prohibit the employment of foreign staff by insurers.

- **Regulated financial services providers who are unregulated for the provision of insurance:** The use of unregulated “welfare” or “provident” funds to provide some type of risk cover seems to be widespread amongst INGO MFIs, but are also used by a proportion of co-operatives. These funds cover a variety of risks including life, household structure and crop risks. In the case of MFI’s like PACT, the cover is compulsory, so all agricultural loan clients (for instance) will be covered. This type of cover is currently the only risk mitigation product that is specifically tied with loans to farmers.
- **Unregulated societies:** Qualitative research indicated that regulated insurance as a concept is virtually unknown, except for a few government employees who had life insurance. However, unregulated risk mitigating groups, community structures or charities seem to be prevalent and assist community members with medical expenses, funeral expenses and other risk events. Such unregulated risk mitigation seems to be wide spread (like the Free Funeral Service Society).

7.2. MADB

MADB is the largest single regulated credit provider.

MADB is the largest formal provider of credit in terms of numbers of clients, providing loans to an estimated number of 1.6 to 2.3 million farmers in 2013²². It also has the second largest bank branch network with 206 branches. MADB disbursed K 568 billion (USD 600.4 million) in loans to farmers during 2012/2013 and had outstanding loans of K 193 billion (USD 204 million) in 2013.

Rapid growth of client base and credit book. In 2009/2010 MADB extended 1.3 million loans but this has increased to 2.3 million loans in 2012/2013 (MADB, 2012). MADB’s loan portfolio also expanded rapidly over this period, from K 93.5 billion (USD 98.8 million) disbursed in 2009/2010 to K 568 billion (USD 600.4 million) disbursed in 2012/2013. This trend is continuing as MADB applied for and received K 1.4 trillion (USD 1.5 billion) from MEB in June 2013, for disbursement in the 2013/2014 financial year²³. Although the number of loans disbursed per year has increased over this period, growth in the loan portfolio was also substantially driven by significant increases in the loan amount per acre that MADB approved (See **Figure 11** below). However, the number of MADB branches remained consistent over the same period (from 205 in 2012 to 206 in 2013), indicating that growth has been driven by factors outside of outreach.

Name	Myanma Agricultural Development Bank (MADB)
Ownership	State-owned, Ministry of Agriculture
# of clients	1.6 – 2.3 million
Branches	206
Products	Group seasonal loans, compulsory savings
Regulated/ Supervision	Special dispensation, regulated and supervised by the Ministry of Agriculture

Table 3: MADB at a glance

Source: MADB

²² Based on Seasonal loans disbursed in 2012/2013. Total seasonal loans disbursed were 2.3 million, however, there is probably a degree of overlap between the three types of seasonal loans. The largest single group of seasonal loans were Monsoon loans, of which 1.6 million were disbursed. Therefore, there are at least 1.6 million farmers with MADB loans (assuming 100% overlap with other loans), or a maximum of 2.3 million farmers with MADB loans (assuming 0% overlap).

²³ Information received directly from MADB (August, 2013).

MADB offers a limited portfolio of credit products targeted at specific crops. MADB provides seasonal, and term loans, including farm machinery loans. Seasonal loans are the largest of MADB's credit lines at 98% of loans disbursed for 2012/2013, the bulk of which (91%) are to paddy rice farmers, up from 81% in 2009/2010.

- **Seasonal loans** are provided across three seasonal cycles namely pre-monsoon, monsoon and winter. In the 2012/13 financial year 76% of seasonal loans were in the monsoon cycle (reduced from 89% in the 2009/10 financial year).
- **Short-term loans** make up the remaining 2.3% (in 2012/2013) of loans disbursed by MADB. Short-term loans include loans for sugarcane (70% of short term loans, dramatically up from 1%-2% in 2009²⁴), and for special projects like salt mining, tea and coffee farming and citronella gas production, as well as some loans for farm machinery and "special loans" which are executed on behalf of other ministries.
- **Farm machinery loans** have decreased from K 1.5 million (USD 1 585) disbursed per client in 2009/10 to K 744 000 (USD 787) in 2012/13. These loans made up 80% of term loans in 2009/10 but this reduced sharply to 1% in 2012/13. This was mainly the result of a change in government policy to limit financing for the purchase of locally manufactured machinery (Fujita, 2013). These are individual loans for asset-purchases where the asset is used to collateralise the loan in addition to the cash collateral requirement. Two guarantors are also required. Depending on the industry cash collateral, between 30% and 50% of loan value is required as cash collateral (Fujita, 2013). These loans are available to farmers with plots in excess of 10 acres and loans are approved at the MADB head office. The loan term is 3 years and interest is charged at 35% per annum. Loan principle and interest is repaid at the end of 3 the years.

MADB credit issued on a village screening and group-liability model. Seasonal loans are structured as group loans with five to ten farmers in each group. Loans are approved by a Village Tract Committee and are done at the MADB branch, while guarantees have to be provided as part of the group liability model. Farmers obtain and repay loans in person and in cash at MADB branches (high transaction cost). Both the interest and the capital are repaid at the end of the loan term (on harvest). MADB charges 8.5% per annum interest on their loans and reports a historically low non-performing rate for its loan portfolio²⁵.

Although it cannot be used as collateral, farmers are required to have the necessary documentation to verify the farmer's right over land leased from the government. A report by the Harvard Ash Centre (2011) estimated that 3.4 million farmers did not have this documentation and would, therefore be excluded from MADB loans. Under the Farm Law that was passed by the parliament in 2013, farmers will be issued ownership certificates which could be used as collateral. It is likely that the issuing of these certificates will take several years to complete.

Regulatory flexibility applied to MADB. The *Financial Institutions Law* does not apply to the MADB (*Article 86*), which is established under the *Myanmar Agricultural and Rural Development Bank Law* (No. 17/1990). Under this Law, MADB is allowed more flexibility around collateral so commercial banks (for instance) will not be able to use groups (like MADB does) as a substitute for collateral (See **Box 3** below for more information on the Law, or the Diagnostic Report for a full regulatory discussion).

²⁴ The average loan disbursed per client for sugarcane also increased from K 80 000 (USD 85) to K 354 000 (USD 374) from 2009-2013.

²⁵ 0.18% for 2011-2012

Box 3: The Myanmar Agricultural and Rural Development Bank Law

The *Myanmar Agricultural and Rural Development Bank Law* describes the main aim of this bank as being; “to effectively support the development of agricultural, livestock and rural socio-economic enterprises in the country by providing banking services” (*Article 5*). To realize this aim, the bank is mandated to pursue the following specific objectives (*Article 6*):

- Provide loans for agricultural enterprises, utilizing “a simple procedure”;
- Promote rural banking;
- Encourage a savings habit and bring about a self-help spirit among the rural population;
- Support socio-economic development in rural areas; and
- Cultivate a habit of using banking services.

Significant drop in MADB's savings deposit base. Under the *Myanmar Agricultural and Rural Development Bank Law*, MADB has a mandate to mobilize savings; however, it has faced recent setbacks in this regard. The current deposit base has decreased significantly from approximately K 87.6 billion (USD 92.6 million) reported at the end of 2011/12 to K 14.7 billion (USD 15.5 million) reported in August 2013. There are two reasons offered for the drop in savings: The bulk of MADB deposits are classified as “rural savings deposits” and collected by MADB under a 1993 scheme to encourage farmers to open MADB savings accounts to mobilize rural savings. Mobile savings units have been instrumental in extending outreach to service these clients. Under this ongoing scheme savers are attracted by their ability to borrow a multiple of their savings to finance farm development expenses such as fertilizer and machinery (note, this was compulsory deposits for term loans, MADB has never been able to attract sufficient voluntary deposits). Initially, 25% of the loan amount had to be saved to access a loan but this ratio has changed over time. Most recently, the 50% savings needed to take out a loan was decreased to 30% as a response to paddy crop failures, leading to a massive withdrawal of savings in 2011/12. The drop in savings may also be attributed to the 2012 decision by the Ministry of Irrigation and Agriculture to decrease the interest rate on loans while maintaining the same retail deposit interest rate, causing the MADB's interest margin to shrink from 5% to 0.5% forcing MADB to curb its deposit mobilization and seek out funding through wholesale deposits from MEB.

MADB loans subsidised by MEB funding. Until recently, MADBs loans were largely funded from deposits but following a collapse in its deposit book, the bulk of loans are now funded by a loan facility provided by MEB. MADB charges 8.5% per annum interest on their loans, and funding received from MEB is in the form of a credit facility, with funding being withdrawn repayable within one year²⁶ (short-term loan) and charged at 4% interest per annum²⁷. The MEB subsidy translates into an effective subsidy of USD 15 per MADB borrower per year (author calculated). In addition to the funding subsidy, MEB branches are also used by MADB for much of its cash handling (as MADB branches are not all equipped to handle cash). This is an additional cost subsidy that needs to be considered in the interpretation of the financials of MADB and MEB. MADB does not have an electronic management information system (MIS) system and their branches are not connected, so operations are almost entirely paper based.

Interest rates on MADB loans reduced substantially over last five years. The current 8.5% per annum interest that MADB charges on their loans, is a substantial discount compared to loans by other market players. This is made possible by the subsidised finance provided by MEB. Prior to 2012, MADB charged interest rates of between 13% and 18% on its loans. During this period, the bulk of loans were funded

²⁶ Although MADB township branches have to pay quarterly interest to MEB Branches.

²⁷ MEB normally charges 13% interest rate per year, and the difference (9%) can be seen as a subsidy to MADB.

from compulsory deposits on which MADB paid 8% interest. The institution managed to generate a surplus during this time and was, therefore, able to operate on a sustainable basis. As noted above, this surplus did not explicitly account for the cost of using MEB branch infrastructure for cash handling.

Box 4: Institutional evolution of MADB

Agricultural development has been a focus area for the Government of Myanmar since its independence in 1948. Initially, agricultural development fell under the State Agricultural Bank established in 1958, but it was merged with the other state banks during the mass nationalisation period to create the People’s Bank (1970 to 1975)²⁸. In 1975, the Myanmar Agricultural Development Bank (MADB) was established during the restructuring of the monolith bank and its mandate expanded to provide short-term and seasonal credit to farmers. In 1997, the Act establishing MADB was amended to move MADB under the supervision of the Ministry of Agriculture from the Central Bank of Myanmar.

Substantial increase in loan size per acre provided. MADB provides loans to farmers on a maximum amount per acres basis, up to a maximum of 10 acres, and farmers tend to take the maximum loan amount²⁹. This maximum amount per acre has increased significantly over the last 5 years (see **Figure 11** below) from as low as K 8 000 (USD 9) per acre in 2009, to a current level of K 100 000 (USD 106) per acre for paddy and K 20 000 (USD 21) per acre for other crops.

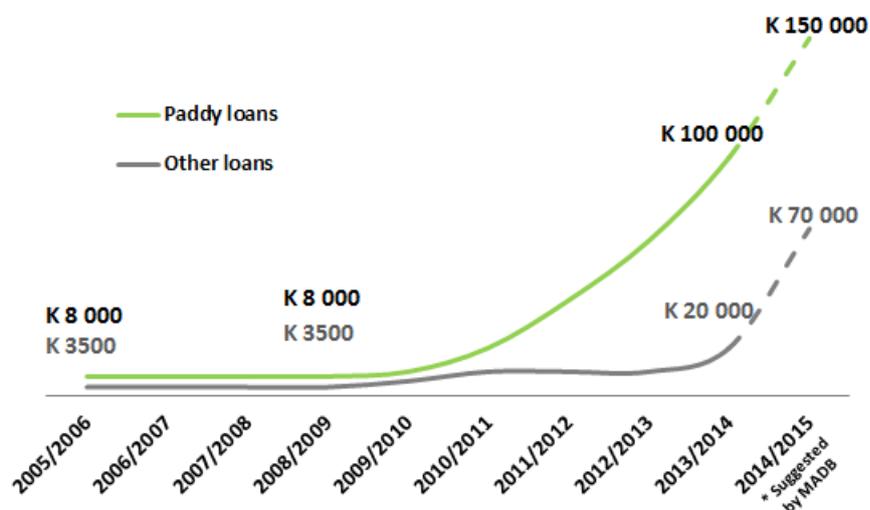


Figure 11: MADB increase in financing rate per acre (2005 -2015)

Source: MADB presentation, JICA presentation

Loan size per acre could still increase. There are differences of opinion about whether MADB products are meeting farmers’ financing demands. Some argue that per acre loan values for paddy production now exceed what is required and also what can reasonably be repaid by farmers (Fujita, 2013). However, several other sources suggest that production costs still exceed current loan levels. During consultation with MADB in May 2013, MADB indicated that they are applying for increased finance to increase the maximum loan amount per acre for paddy to K 150 000 (USD 159) per acre and K 70 000

²⁸ Preceded by the State Agricultural Bank (1953 to 1970)

²⁹ Information received directly from MADB (May, 2013)

(USD 74) for other crops, but that (paddy) farmers needed K 200 000 (USD 211) to K 300 000 (USD 317) per acre to cover production costs. Haggblade et al. (2013) found that a loan of K 50 000 (USD 53) per acre only covers “25-50% of the overall financing needs per acre”, putting estimated production costs at K 100 000 (USD 106) to K 200 000 (USD 211). Production costs were estimated by the Myanmar Farmers Association at between K 140 000 (USD 148) to K 177 000 (USD 187) per acre. Statements by government note production costs that may go up to K 400 000 (USD 423) per acre for better quality rice. A careful evaluation of farmer credit needs and capacity will be essential to inform any further expansion by MADB.

MADB demand side information

MADB loans mostly focused on paddy production. Figure 12 below shows all loans from MADB broken down by the type of agricultural activity that adults who have the loan are engaged in. Adults have been classified similar to Figure 4 in Section 4, however, all adults who are involved in paddy production are grouped together (regardless of overlap with the other two main crops). Similarly, adults who are involved in the production of beans or pulses, but not in the production of paddy have been grouped, regardless of their overlap with cereal production. Lastly, adults who are involved only in cereal production (of the main 3 crops) have been grouped. There are also 2 additional groups, both of which are not involved in any of the main 3 groups: Adults who are involved in other crops, and adults who are not involved in crop production, but are involved in livestock or fisheries (Also see Section 4 for the breakdown). As can be seen from Figure 12, 86% of MADB loan clients are involved in paddy production, while 97% are involved in at least one of the 3 major crops.

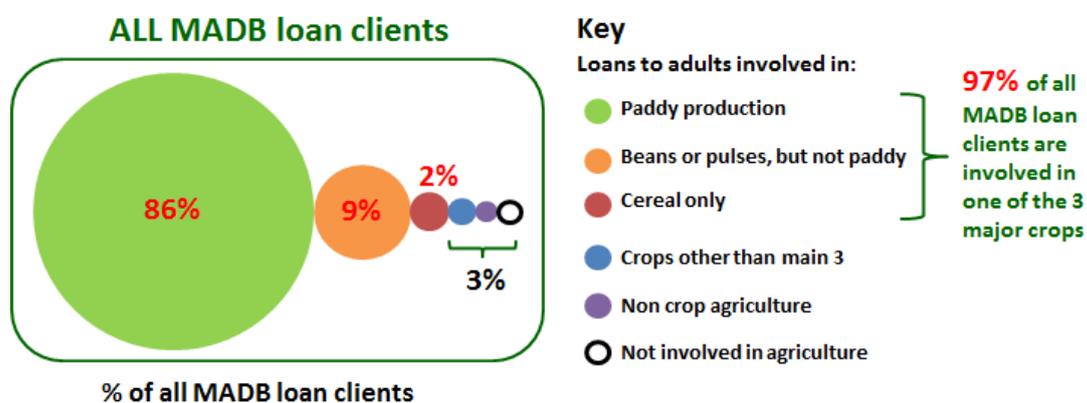


Figure 12: MADB clients disaggregated

Source: FinScope 2013

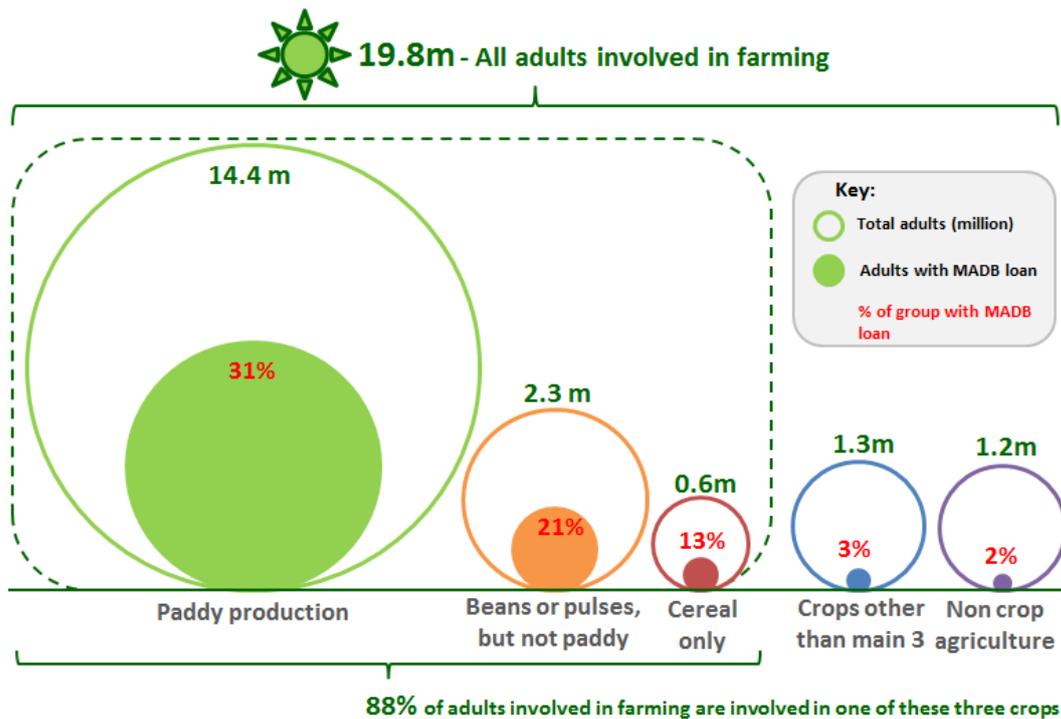


Figure 13: Saturation of MADB loans across crops

Source: FinScope 2013

MADB loans are not saturating the market for agricultural credit. As can be seen from Figure 14 below, MADB loans are the main driver of regulated credit access for both Farmers (31% of 12.1 million have an MADB loan) and all adults who are involved in farming (26% of 19.8 million have an MADB loan). However, MADB is not nearly saturating the market for agricultural credit, with 31% of Farmers and 33% of adults involved in farming having a loan from a source other than MADB (other regulated loan, unregulated loan, or loan from family or friends). Furthermore, nearly half of Farmers and 42% of adults involved in farming currently do not have access to a loan.

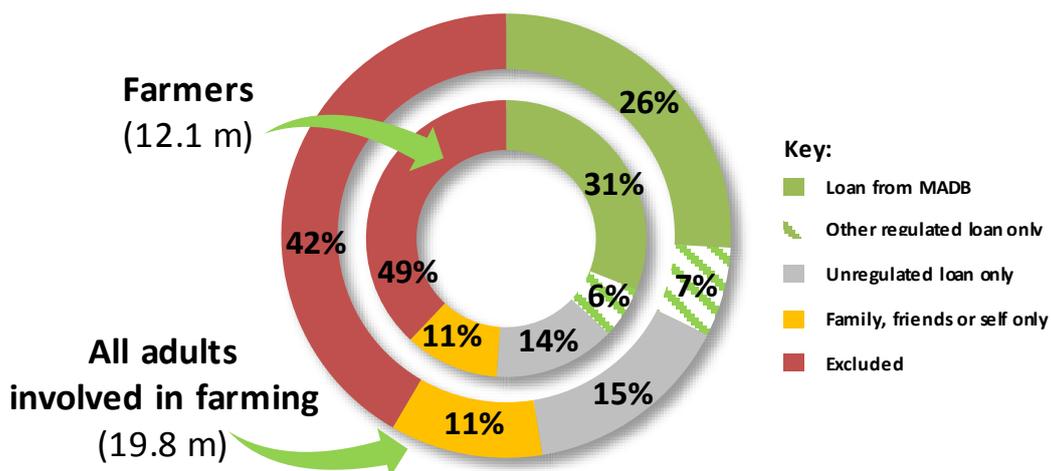


Figure 14: Loan saturation for Farmers (12.1m) and all adults involved in farming (19.8m)

Source: FinScope 2013

MADB loans not saturating the market for paddy production. Even though most of MADB loans are held by adults involved in paddy production (86%), only 31% of adults in paddy production have an MADB loan while 18% have a regulated or unregulated loan other than an MADB loan. In addition, adults who are not involved in paddy production, have much lower access to MADB loans. Only 21% of those who are not involved in paddy production, but are involved in the production of beans and pulses have MADB loans, while only 13% of those who are not involved in the production of paddy or beans and pulses, but who are involved in the production of cereals have MADB loans (see **Figure 13** above). Of the 2.4 million farmers not involved in one of the 3 main crops³⁰, only 2% have a loan from MADB. Furthermore, of the 14.7 million adults who live in households involved in farming, but who do not have a loan from MADB, 29% (4.3 million) currently has a regulated or unregulated loan (not from MADB). MADB has therefore not saturated the market for paddy loans, and in fact has very low penetration rates for farmers not involved in paddy production.

MADB products appreciated but service levels require attention. The qualitative research with regards to MADB loans revealed that farmers were appreciative of the low loan interest rates charged. However, loans are often not dispersed in time to finance the necessary preparations for the planting season and loan repayment is due when the crop prices are at their lowest (immediately after the harvest). Consequently, farmers are often forced to source additional credit, mostly from unregulated money lenders, at a high cost as an interim financing measure. Until recently, these loans were also too small to address the financing needs of farmers, resulting in farmers having to finance the gap through unregulated money lenders. This has been partially addressed through the introduction of increases in loan sizes over the last few years.

7.3. INGOs

MFI agricultural products have achieved limited reach. The only MFIs who are known to provide agricultural loan products are PACT, Proximity, World Vision, and Save the Children (all INGOs). The exact number of agricultural loan clients with INGO's are unknown, but is likely to be less than 100 000. MFIs' agricultural portfolios are therefore relatively small, particularly if one looks beyond PACT. Some MFI products are also not particularly suited to farmer needs, for instance, the term of some loans is actually shorter than the production season, which makes it difficult to repay these loans.

MMSE does not allow MFIs to take deposits from non-borrowers. Both MFIs and co-operatives have sought deposit taking licenses under the *Microfinance Law* to accept deposits from their borrowers and the public to fund their loan portfolio. However, in implementation of the law, the MMSE does not yet allow these institutions to take savings from non-borrowers, and savings cannot be taken in amounts exceeding the client's loan. In the long term this will be a significant challenge for mature MFIs that have the potential to be key players in providing savings services, and is likely to harm the sustainability of some newly-licensed institutions by denying them a source of funds. From a market perspective,

Name	International Non-governmental Organisations
Ownership	International donors or microfinance operators
# of INGOs	6
# of agricultural clients	< 100 000
Branches	163
Products	Group loans, individual loans, compulsory savings & (micro)insurance
Regulated/ Supervision	MOU with line ministry and supervised by MMSE

Table 4: INGOs at a glance

Source: Various

³⁰ Adults who are involved in crops, but not in the main 3 crops (1.3 million) plus adults who are not involved in crop farming (1.2 million).

despite the dispensation for deposit-taking microfinance, deposit taking MFIs are effectively unable to mobilize deposits beyond their members, and will not be able to stir up competition amongst providers of savings services. This is appropriate at this time, as most MFIs in Myanmar are small, unprepared, and not mature enough to take deposits from the general public and intermediate funds. However, there are signs of a small number of maturing MFIs often with international experience that if properly regulated under a separate tier with higher prudential standards should be able to mobilize deposits.

Box 5: Product features of agricultural loan products provided by INGOs

- **PACT** MFP provides an agricultural loan to 19% of its borrowers (71 600 borrowers). The loan size is K 250 000 (USD 264) and interest is 2.5% per month with a term of 5 months. PACT's agricultural loans are therefore seasonal, and are mostly monsoon paddy loans, with some loans going to pulses and rice. They limit farm size to a maximum of 5 acres to retain focus on landless and marginalised farmers. Using take up figures as well as the loan size, estimated loans disbursed for agricultural loans is K 17.9 billion (USD 18.9 million).
- **Pact Global Microfinance Fund (PGMF)** also offers a similar agricultural loan for up to K 200 000 (USD 211) at 2.5% interest per month, but take up figures have not been obtained for this product.
- **Proximity** provides a standard crop loan and a premium crop loan to 32% (4 320) and 64% (8 640) of its borrowers on an individual basis via village organisations. They also provide a standard crop loan on a group loan basis to 4% (540) of their borrowers. 96% of their borrowers are paddy farmers, and all farms are smaller than 30 acres, with a median farm size of 5 acres. While expanding in other parts of the country, they have a strong Delta area focus. Although they indicated about 13 500 loan clients as at May 2013 (MFWG, 2013), loan data received for the 2012/2013 financial year indicates about 23 500 loans for that period, suggesting multiple loans per client per year. In addition to providing crop loans, Proximity Designs also provides loans for financing their irrigation products. The structure and terms of these loans is unclear, but it appears as though farmers may also take out "extra cash" with these loans "to be used in agriculture". Data provided by Proximity indicate that about 16 000 of these loans were provided in the 2012/2013 financial year. Their irrigation products (pumps, drip and storage systems) cost between K 15 000 (USD 16) and K 40 000 (USD 42) and a "full set" costs about K 70 000 (USD 74)³¹.
- **World Vision** has a limited agricultural portfolio consisting of 2 084 seasonal loans provided on a group basis. They reported that local authorities in some of the areas that they operate did not want them to go into agriculture.
- **Save the Children** provides agricultural loans to 3 746 farmers in the form of seasonal group loans, mostly for paddy in the rainy season and for beans in summer. They report that they operate in the same areas as MADB but that they focus on smaller farmers of between 1 and 5 acres. They see this as the first phase exploration of the agricultural sector on which they have limited experience. Given their limited experience and the absence of a detailed loan assessment in the first phase, they are limiting loans to K 50 000 (USD 53) over four months, with bi-weekly interest payments and the principle due at the end (at harvest time). As at March 2013, 27% of their loans (by number of clients) were in this experimental area. Given earlier discussion on likely production costs, these loan sizes are likely to fall short of the value required by farmers. The loan term and repayment frequency also does not seem to match the agricultural production season.

³¹ <http://proximitydesigns.org/products-services/irrigation-products>

Unregulated risk cover only source of agricultural risk mitigation. Unregulated insurance (insurance not obtained from an insurance company) comprise of adults who borrow from or have savings with MFIs as well as adults who reported belonging to an unregulated risk mitigation group like a funeral aid association or social welfare association. Overall take-up of unregulated insurance was reported as higher than take-up of regulated insurance products for both Farmers (2% total regulated vs. 7% total unregulated) and Farm workers (0% total regulated vs. 7% total unregulated).

INGO MFIs offer unregulated compulsory insurance cover. The use of unregulated “welfare” or “provident” funds to provide some type of risk cover seems to be widespread amongst INGO MFIs and the majority of the 100 000 MFI agricultural clients are therefore covered by these funds. These funds not only cover the outstanding debt in the case of the death of the borrower, but also cover a number of other risks including household structure and crop risks.

Box 6: Product features of compulsory risk cover offered to INGO loan clients

PACT is the largest contributor and covers all of its credit clients (more than 70 000 agricultural credit clients) with a compulsory policy that covers their outstanding debt, provides additional life benefits and also covers crop and household assets for fire, flood and storm damage (see below for more details). The premium is set at 1% of the original loan value and this pricing was derived by trial and error without actuarial support or input. PACT reported that this product recently managed to cover expenses, although it is not clear whether expenses include management costs or only claims paid. If it only includes claims paid it suggests that PACT’s products have a claims ratio of close to 100%. It provides the following cover:

- **Life cover:** The outstanding debt is settled and it also pays an additional benefit of K 100 000 (USD 106) to the family. Cover is limited to the borrower only and there is no option available to cover other family members.
- **Crop failure:** This benefit covers loans to members for damages to their crops resulting from fire, floods and storms. The local credit committee has to assess the damage and makes the decision on whether to grant a write-off. The loan write-off amount is based on the value of the loss experienced, but by definition would not exceed the loan amount.
- **House reconstruction:** Damage to the borrower’s house due to fire, floods or storms is covered for a lump-sum of K 50 000 (USD 53).

World Vision also covers all of its credit clients with compulsory risk cover, but only has 2 084 agricultural loan clients. The cover was also not designed with actuarial inputs, but the premium is charged at a K 1 000 (USD 1) flat charge on all loans (except for borrowers with educational loans only), which amounts to 0.43% of the average value of loans disbursed. The policy provides life cover for the borrower (outstanding debt plus K 70 000/USD 74), their spouse (K 50 000/USD 53) and child (K 30 000/USD 32). This cover is subject to a three month waiting period (exclusion period) from commencement of the loan, and the average loan term is only about seven months, so the borrower is effectively only covered for four months. Catastrophe cover is excluded from the insurance contract as World Vision’s policy is to cancel the outstanding debt (up to a maximum of K 600 000/USD 634) in case of catastrophe. While this approach may work in principle, it may be less transparent than coverage through an insurance contract.

MFIs cannot complement existing distribution network. MFIs are legally permitted to provide remittance services, but this provision is not “activated” in the approvals and authorization process, thereby limiting MFIs from using their distribution network to compliment the bank branch remittance network. It may not be appropriate for MFIs to offer payment services themselves, as this would require operational capacity beyond the current resources of MFIs. However there may be opportunities for MFIs to act as agents of payment services providers (such as banks) and thus focus on payment acceptance and disbursement in order to bring services closer to customers and reduce the reliance on unregulated channels and services. This could impact on extending financial services access in rural and remote areas which is currently only served by MFIs.

MFI credit regulations may potentially discourage entry and expansion in more challenging markets. All MFIs are still adjusting to the new regulatory environment and its implications for businesses. It is also likely to still take some time to process the full implications. Three areas of regulation that may discourage and possibly inhibit expansion of credit to priority areas such as rural and agriculture have been identified in the main Diagnostic Report. These are interest rate (spread) caps, loan size caps and regulatory and supervisory complications in sourcing both foreign and domestic capital.

7.4. Agricultural co-operatives

Rapid expansion of credit through agricultural co-operatives to 400 000 members. While most financial co-operatives seem to operate largely in urban areas, the exception is agricultural producers’ co-operatives. There are about 7 000 agricultural producers co-operatives in Myanmar, of which 5 222 started lending to their members recently as a result of funding being channelled to agricultural co-operatives which was obtained from the Export-Import Bank of China in August 2013 (see below). The CCS only indicated 21 agricultural co-operatives doing on-lending as of January 2013, at which stage a loan amount of K 1.1 billion (USD 1.7 million) had been extended to 10 900 members. However, as of July 2013, agricultural co-operatives as a group had disbursed K 26.4 billion (USD 27.9 million; April 2013 to July 2013) with loans outstanding of K 23.8 billion (USD 25.2 million) to 400 000 members. This represents a massive expansion of credit provision in rural areas and is the equivalent of almost 60% of the reported MFI client base. Portfolio management software that would be capable of dealing with the increase of these loans does not seem to be in place.

# of agricultural cooperatives	7 000
# of clients	400 000
Products	N/A
Regulated/ Supervision	Ministry of Co-operatives

Table 5: Agricultural co-operatives at a glance
Source: Various

Agricultural co-operative loan features. Only member farmers are eligible for loans and credit is used mostly for agricultural production, with the most common crop types being paddy, beans and pulses. However, loans for farm implements are provided on a case by case basis, but require collateral. The loan size varies between K 10 000 (USD 11) to K 50 000 (USD 53) per acre (based on the size of the co-operative), with most farm sizes smaller than 10 acres and typically around 5 acres. Farmers with less than 5 acres are eligible for a loan covering their total acreage, while farmers with between 5 and 10 acres are eligible for a loan covering a maximum of 5 acres and farmers with more than 10 acres are eligible for a loan covering half their acreage. The repayment period depends on the period of production/ length of season.

Agricultural co-operatives may be providing welfare fund cover. Although information is not available for all co-operatives, the co-operatives interviewed during this project showed similarly structured risk funds derived from a product originally designed by the CCS. At least one co-operative reported to have established a smaller group of at least ten co-operatives to manage their own risk pool with a product copied from the CCS scheme. These schemes do not have the technical skills to price and manage the risk of such a product and still apply the product structure and pricing proposed by the CCS scheme even though the risk pool is much smaller. It is not clear whether agricultural co-operative members are covered by non-CCS cover. The CCS scheme provides life cover to the main member where outstanding debt is covered as well as an additional pay out of K 100 000 (USD 106) being provided. It also provides health (K 30 000/USD 32 - K 50 000/USD 53), disability (K 100 000/USD 106) and disaster cover for housing (K 100 000/USD 106).

The number of co-operatives societies is set to expand exponentially. The Ministry of Co-operatives intends to create over 5000 new co-operatives per year with the support of the Department of Co-operatives and CCS. The aim is to establish one co-operative in every village (totalling 60 000), as a means of increasing MFI penetration and reducing poverty. Each co-operative will receive K 10 million (USD 10 571) in seed funding. A further K 50 million (USD 52 854) per co-operative will be distributed as the capacity of the co-operatives develops. A projected total of K 3.6 trillion (USD 3.8 billion) in lending will be distributed through the co-operatives by 2015. In August 2013, Myanmar received a K 94.6 billion (USD 100 million) loan from the Export-Import Bank of China, which will be used “to fund co-operative programs that support farmers and the rural poor”³². The loan received from China (discussed above) seems to be the first step in this direction, although it is still unclear to what extent new co-operatives are being established by this funding, or whether it is only being funnelled to existing agricultural co-operatives. China and the Government of Myanmar also agreed to finance USD 600 million (K 568 billion) in the next 3 years for agriculture, and the funding is disbursed from the Ministry of Co-operatives to CCS who directs it to primary agricultural co-operatives through the co-operative apex structure. Farmers will be able to borrow a maximum of K 100 000 (USD 106) and the interest rate charged to farmers is 18% per annum.

7.5. Rice specialised companies

Only three RSCs remaining, operating in four townships only. Although 57 RSCs have been registered since 2008, there are currently only 3 (Gold Delta, Khittayar Hinthar Rice Specialization and Ayeyarwady Greenland) that are still in operation, as well as 1 newly established agricultural public corporation that also does contract farming (Myanmar Agribusiness Public Corporation (MAPCO)³³). With the remaining RSCs providing credit to an estimated 12 to 15 000³⁴ farmers, RSCs have very limited reach and they usually operate in one township only, with contract farmers farming around a core or nucleus farm owned by

# rice specialized companies	3 + 1
# of clients	12-15 000
Products	Agricultural input credit
Regulated/Supervision	N/A

Table 6: Rice specialised companies at a glance

Source: Various

³² <http://www.irrawaddy.org/archives/tag/tha-lun-zaung-htet-the-irrawaddy> [Accessed November 2013]

³³ MAPCO is a “wholly-owned non-government Public Corporation, established in 2012. MAPCO was formed to mobilise public savings and to foster broader investment in agriculture and agro-based industries of Myanmar”. MAPCO distributes urea fertilizer under contract farming in the Nyaung Done Township and Ayeyarwady Region. However, it is unclear whether they operate under the same agreement with government as RSCs, and could possibly qualify as a separate category of financial services providers (<http://mapco.com.mm/index.php>).

³⁴ Gold Delta is the largest RSC with between 3 000 and 6 000 farmers while Kittayar Hinthar is second largest with 3 000 farmers. Ayeyarwady Greenland should therefore have less than 3 000 farmers. , MAPCO has a larger loan book for the 2013

the RSC. The four townships that the three RSCs and the agricultural public corporation operate in are the Danu Phyu Township, Phyar Pon Township and Nyaung Done Township, all three of which are in Ayeyarwady Region as well as Pyay Township in Bago Region.

RSCs provide seasonal loans (monsoon and summer paddy) at 2% per month, based on the agreed sale of farmers' rice crop to the RSC at a pre-determined price. The combined loan book for the four RSCs for the 2013 Monsoon season was K 5.2 billion (USD 5.5 million), with Gold Delta having the largest loan book (K 2.2 billion (USD 2.3 million)) followed by MAPCO (K 1.7 billion (USD 1.8 million)), Kittayar Hinthar (K 0.8 billion (USD 0.85 million)) and Ayeyarwady Greenland (K 0.5 billion (USD 0.53 million)). For further information on Gold Delta, see **Box 7** below.

Failure of agricultural specialisation companies. RSCs were originally created in 2008 as part of a government-initiated regime to improve access to farm inputs (including credit) whereby large investors/registered firms “were encouraged to provide paddy inputs on credit under contract farming schemes in return for rice export permits” (Haggblade et al., 2013). Initially, RSCs seemed to have a positive impact on the rice industry as Wong and Aye Wai (2013) found an increase in rice exports from 2008 onwards. However, Haggblade et al. (2013)³⁵ find that the poor performance of the RSCs in Myanmar is to be expected because “while contract farming schemes can work well for highly specialized, high value export commodities, they are unlikely to prove commercially sustainable for low-value commodities with broad market outlets, such as ordinary rice”³⁶. They advise that contract farming is therefore not a solution for Myanmar’s “weak rural credit systems and weak input markets”, given the current nature of agriculture in Myanmar.

Weather risk has further undermined the viability of production and therefore, credit provision. The failure of RSCs has at least partially been ascribed to the “heavy cost of input finances and poor repayment rates resulting from crop losses, flooding and low paddy prices” (Haggblade et al., 2013). Currently, a third of the farmers of the largest rice specialisation company that still provides credit, Gold Delta, are unable to repay their current loans because of poor harvests caused by flooding³⁷.

Monsoon season, and might possibly therefore also have more farmers than Khittayar Hinthar, but if 3 000 farmers is assumed, overall contract farmers with RSCs would be around 15 000.

³⁵ See Box 4 on page 49 of their report for a detailed explanation

³⁶ This is because of the ease of side selling by contract farmers in order to obtain higher prices, and the fact that RSCs cannot match these prices because they have to recover their capital costs.

³⁷ Understanding the scale of value chain credit as well as the apparent success of input credit compared to the failure of credit linked to agricultural processing will require further investigation.

Box 7 Gold Delta

More information is available for **Gold Delta** than for the other RSCs and is included below:

Gold Delta RSC was established in April 2009 by the Eden Group Company and operates exclusively in Danubyu Township (Ayeyarwaddy). From 2009 to 2011 they have provided finance to between 4 000 and 6 800 farmers who conducted farming activities on a combined 35 000 to 60 000 acres³⁸. Their average loan size for Monsoon Paddy have increased from K 149 000 (USD 158) per farmer in 2009 to K 440 000 (USD 465) in 2011 (or from K 18 000 (USD 19) to K 50 000(USD 53) per acre) and have remained relatively stable for summer paddy at K 297 000 (USD 314) in 2009 vs. K 292 000 (USD 309) in 2011 (although it dropped in terms of Kyat per acre from K 64 000 (USD 68) to K 31 000 (USD 33)). Since 2011, the number of farmers receiving finance have decreased to about 3 000 and the total acres decreased from 60 000 in 2011 to around 20 000 in 2012 and will only be around 10 000 in 2013 (see Table 1 below). However, the loan amount per acre increased from K 18 000 (USD 19) in 2009 to K 125 000 (USD 132) per acre in 2012/2013 (or average loan per farmer of K 670 000 (USD 708)), which is on par with current amounts provided by MADB. Gold Delta's average plot sizes vary between 4 and 9 acres.

Year	No Of Farmers	Provided Area (Acre)	Total Financing (Kyats)	Average Loan (Kyats)	Loan per acre (Kyats)
2009 Monsoon Paddy	4 297	35 929	644 123 200	149 901	17 928
2010 Summer Paddy	1 849	8 573	548 672 000	296 740	64 000
2010 Monsoon Paddy	6 490	45 822	337 338 753	51 978	7 362
2011 Summer Paddy	3 024	28 566	884 184 000	292 389	30 952
2011 Monsoon Paddy	6 865	60 416	3 013 770 600	439 005	49 884
2012/2013 Other	2 971	20 467	614 010 000	206 668	30 000
2012/2013 Monsoon Paddy	3 311	17 809	2 226 125 000	672 342	125 000
2013/2014 Other	3 000	9 193		Downloaded from GD website ³⁹ (Nov2013)	
2013/2014 Monsoon Paddy	2 127	2 500		Received from Gold Delta (Nov2013)	

Table 1: Finance provision by Gold Delta 2009 to 2013

Source: Gold Delta website, Gold Delta interview, Author calculations

³⁸ <http://www.golddelta-ricemyanmar.com/Default.aspx>

³⁹ <http://www.golddelta-ricemyanmar.com/Default.aspx>

7.6. Agricultural input providers

Substantial reach of agricultural input credit. Industry consultation revealed large scale extension of inputs⁴⁰ on credit by agricultural input providers. Exact data on take-up is not currently recorded as these entities are not regulated for the provision of credit. However, one provider reported extending agricultural inputs on credit to approximately 1.5 million farmers, with a typical credit amount of K 50 000 (USD 53) per farmer. This would put loans disbursed in a year at around K 75 billion (USD 79.3 million). They focus on higher value crops⁴¹ and areas with less weather irregularities, but are currently also expanding provision to rice farmers. Farm sizes of their clients range between 5 and 10 acres, and inputs are provided to farmers who can prove that they own the land. They charge between 2.5% and 3% interest per month and the term is typically about 140 days, but varies between 120 (vegetables) and 180 days (rice) depending on the type of crop. As there are indications that it is likely that there are numerous companies providing agricultural inputs on credit, this could well be a sizeable segment of total agricultural credit provision. Given the absence of formal aggregated data, the scale of overall value chain credit is not clear. The apparent success of input providers compared to the failure of credit linked to agricultural processing warrants further investigation.

# agricultural input provider	N/A
# of clients	1.5 million plus
Products	Agricultural input credit
Regulated/Supervision	Unregulated

Table 7: Agricultural input providers at a glance

Source: Various

7.7. Unregulated providers

Extensive use of expensive credit from unregulated moneylenders. As can be seen from **Figure 10 on page 16**, both Farmers and Farm workers extensively use unregulated sources of credit, while both regulated and unregulated payments, insurance and savings is used to a more limited extent. In total, 25% of Farmers and 33% of Farm workers use unregulated credit, while the largest source of unregulated credit is from unregulated moneylenders, with 17% of Farmers and 18% of Farm workers using this source. Money-lenders include potential savers who opt to intermediate funds themselves by loaning out their excess capital to community members. Based on a conservative estimate of an average of 15 outstanding loans per money lender, FinScope take-up data⁴² would suggest that there are about 400 000 money lenders (constituting 1% of the adult population) operating in Myanmar⁴³. This is nearly 100 moneylenders for every 100 000 adults, which represents the largest distribution density of any credit provider in Myanmar. Qualitative research suggests that moneylenders charge interest rates of between 10% per month to as much as 40% per day. Sometimes, money lenders make use of unregulated ‘brokers’ who charge high fees (e.g. 10% of the interest) to introduce them to prospective clients.

Widespread risk management through unregulated societies. Unregulated risk mitigation “products” are available from community based self-help groups and include funeral services, health services, and general assistance from donation groups to those in need. Details on unregulated provision could only be extracted from qualitative research conducted. It was found that most individuals indicated that they would rely on collective structures to assist others if unforeseen or adverse events occurred. The

⁴⁰ Typical inputs include seeds, fertilizers and agrochemicals

⁴¹ Major crops are Rice, Pulses and Beans, Onion, Potato, Tomato, Ornamentals, Sesame, Groundnut, Melons, Corn, Sugarcane and Vegetables

⁴² Indicating 5.9 million adults with a loan from a money lender

⁴³ Even if a much higher estimate of 50 loans per money lender on average is used, the number of moneylenders in Myanmar would still be substantial at 117 000.

collective structures that emerged from the qualitative research were: ward-based funeral assistance groups, voluntary health assistance organisations and self-help medical assistance groups as well as need-based donation mobilization within communities (such as in the case of fire and natural disasters). Many of these structures are mobilized by monks and community leaders. In most cases, they rely on member contributions and donations and the benefits are not exclusive to members. The success of these collective structures can be attributed to the fact that community members are usually willing to donate money, as such actions result in merit which carries on to the next life in accordance with Buddhist beliefs. Some qualitative respondents mentioned examples such as: the Optical Charity Society, Free Funeral Society and Thuhka Charity Clinic. The latter two relied on donations while the first relied on member contributions which were made on a monthly basis. **Table 8** below describes some of the features of unregulated provision that emerged from the qualitative research.

Unregulated group/mechanism	Features of unregulated provision
Religious contributions/donations for disaster assistance	Monks mobilize relief for victims of fire, natural disasters, etc., by encouraging people to donate in cash or kind. People willingly donate for such causes, as it is believed to bring merit in this life and carries forward into their next life.
Ward-based funeral assistance groups	This typically takes place in a ward, though more than one of these systems could function within a ward. Details of the systems differ, but in principle everybody who can afford to, pays a small sum (e.g. K 1000/USD 1 once a month) towards funeral assistance; upon death, these contributions are then used towards covering the funeral costs.
Voluntary health assistance organizations	Monks and community leaders have founded voluntary health assistance organizations in urban areas. Blood donations, doctors' consultation fees, and pharmaceutical expenses were some of the services provided by these associations/organizations.
Self-help health assistance	Within small societies such as people who are from the same profession (teachers, alumni), from the same birth place (township association) and same community (ward). They seem to function under the guidance of a monk in a specific area. Anybody can contribute, but benefits are not exclusive to contributors.

Table 8: Unregulated groups/mitigation mechanisms that emerged from qualitative research.

Source: MAP qualitative demand-side research

Hundi network a pervasive provider of payments. *Hundis* are the only other active providers of payments in Myanmar besides commercial banks. *Hundis* are an unregulated network of citizens who offer unregulated payment services to clients for personal and business needs. *Hundi* networks are located throughout Myanmar as well as in certain countries to service the overseas diaspora⁴⁴. All *hundis* have a primary business that is not payment services and only do payments as an alternative revenue stream that most often leverages the nature of the primary business (e.g. shipping). *Hundis* use a variety of regulated and unregulated mechanisms to provide payment services to clients, often acting as a “payment broker” where regulated mechanisms are unavailable⁴⁵ or unsuitable. For more details on how *hundis* operate, please refer to the full Diagnostic Report. FinScope found that 18% of Farmers and 24% of Farm workers who received remittances did so through a *hundi*, while 10% of farmers who sent remittances did so through a *hundi*.

⁴⁴ *Hundis* are known to operate in neighbouring countries such as Thailand, China, and Bangladesh, as well as farther afield in the United Arab Emirates, the Philippines and Japan.

⁴⁵ For example when an individual cannot make it to the bank during operating hours they would use a *hundi*.

8. Indebtedness

Existing discourse on indebtedness. The issue of indebtedness has been raised during several supply side interviews; however, there does not seem to be a clear consensus on the topic and there is no unified evidence base to support discussions. Existing research on indebtedness produced widely varying figures (see LIFT, 2012; Haggblade et al., 2013 and UNDP, 2011); however, most sources do indicate indebtedness as a current and increasing concern. Most of these previous estimates only consider a nominal indebtedness measure, although some are tabulated against increasing landholding size which, as these studies also note, allows for increased ability to take on and service debt. Warnings have subsequently been raised about debt levels for some consumer segments in Myanmar and current levels of formal and informal debt may, therefore, exceed the debt capacity for some borrowers.

Interpreting debt relative to individual income, household income, or revenue generated. Analysis on the issue of indebtedness is complicated by the fact that it can be measured against more than one income stream. The first issue is whether debt levels should be considered relative to household or individual incomes. In a society with financial functioning which happens more at the household level and less at the individual level, measuring debt levels against personal income runs the risk of overstating indebtedness (i.e. if debt is repaid as a household, and household income is higher than personal income, the indebtedness ratio should be considered at the household level). The second issue is that for farmers and small business owners, it may also be misleading to state debt relative to reported income. For farmers, it would for example be more appropriate to evaluate debt relative to the farming revenue generated using the credit, which is likely to be different from personal income stated, which may only be the net yield from farming activities, after debt has been repaid and other costs covered.

Indications of indebtedness. Supply side interviews highlighted the possibility of households using new credit to repay existing credit, however, the issue of very low reported Non-Performing Loan (NPL) ratios across the board makes it difficult to verify levels of indebtedness using repayment rates (see main Diagnostic report for discussion on why NPLs may be underreported). There have, however, been reports of repayment problems with old agricultural loans delaying the disbursement of new loans (Thit Sar, 2013). Furthermore, qualitative research revealed that on average, Myanmar households in the areas covered dedicate 30% of monthly expenditure to interest payments. In addition, FinScope found that 2% of Farmers (168 000) and 1% of Farm workers (13 000) who currently owe money, borrowed in order to repay another loan. However, 7% of Farmers (800 000) and 3% of Farm workers (75 500) indicated that they plan on repaying their current loan by taking out a new loan.

Affordability of current debt of Farmers and Farm workers. FinScope allows us to shed more light on levels of indebtedness by looking at the affordability of monthly debt repayments. This is done by comparing the calculated monthly debt repayments⁴⁶ against stated personal monthly income. This provides a baseline comparison of ability to repay and service debt burden. In reality, the repayment burden will be higher as a large proportion of loans are taken over shorter terms and at higher interest rates. Although this does not allow us to come to a definitive conclusion on indebtedness (due to some of the issues highlighted above, and the limitations of the data), it does provide a sufficient basis for exploration of current relative debt levels for Farmers and Farm workers, and a comparison with adults who are not Farmers or Farm workers (see **Figure 15** below):

⁴⁶ For the purposes of comparison, only a best case scenario is calculated where it is assumed that all loans are taken over 12 months and at 8.5% interest per year. Although total interest repaid would be lower for shorter term loans, the total size of the monthly repayment decreases as the loan term increase. For the purpose of a best case monthly affordability assessment, a 12 month term is therefore used instead of a shorter term.

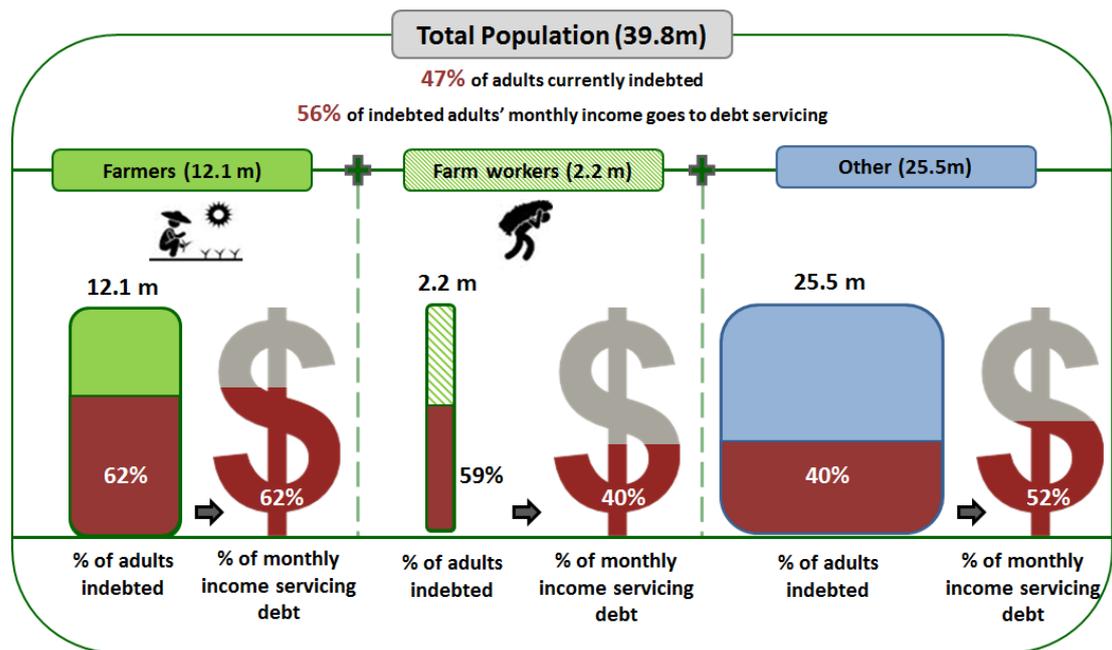


Figure 15: Indebtedness and debt servicing of Farmers and Farm workers

Source: FinScope 2013

Debt stress level highest for Farmers. Figure 15 shows that Farmers have the highest proportion of indebted adults at 62%, while on average 62% of indebted Farmers' income goes towards servicing their current debt (principle plus interest). While a similarly high proportion of Farm workers are indebted (59%), a smaller proportion of indebted Farm workers' income goes toward servicing their debt (only 40%). Indebted Farmers have average debt of K 641 234 (USD 678) per Farmer, while Indebted Farm workers only have outstanding debt of K 222 859 (USD 236) per worker. Farmer indebtedness could likely be overstated in this analysis because personal income and not farm revenue is used.

Indications of high indebtedness for low income segments. FinScope also allows a more detailed view of indebtedness, by looking at indebtedness levels over income. As is shown in Figure 16 below, there is a strong inverse relationship between indebtedness and level of income (using debt stress as a ratio of total outstanding debt over annual personal income as measure⁴⁷). For indebted Farmers earning less than USD 1 per day (lowest income group), total outstanding debt to annual income is the highest at 225%. This is followed by indebted Farmers earning between USD 1 and USD 2 a day at 96%. Farm workers have a much lower ratio of debt to income, with Farm workers earning less than USD 1 per day having a debt to income ratio of only 73%. However, whereas Farmers' ratio is likely to be overstated when measured against personal income, the ratio for Farm workers is not (as their main income source is wages, so personal income is likely to be their main source relied on to service debt). A 73% indebtedness ratio is therefore quite high.

⁴⁷ In a more diversified credit market it would be difficult to compare this measure across income groups as different groups would have loan products with different maturities. In the case of Myanmar all debt is short-term making this a more reasonable comparison.

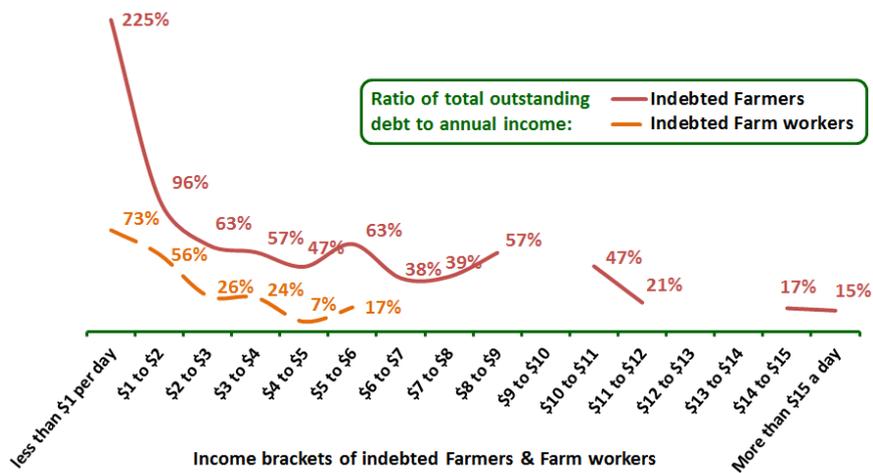


Figure 16: Outstanding debt to income ratio across income distribution

Source: FinScope 2013

Although FinScope does not provide revenue information, it is possible to construct a model of paddy farm revenue using an estimated range for yield per acre and a typical price for paddy. Assuming a price per basket of K 3 500 (USD 3.7)⁴⁸, and two yield scenarios: a comparatively low yield estimate of 30 baskets per acre and comparatively high yield estimate of 70 baskets per acre⁴⁹, farmers with a farm size of 1 acre would have revenue of between K 105 000 (USD 111) and K 245 000 (USD 259)⁵⁰ while farmers with a farm size of 10 acres or larger would have a revenue of between K 1.7 million (USD 1 797) and K 3.9 million (USD 4 123)⁵¹. Based on this revenue model, the following indebtedness ratios (total outstanding debt to revenue) can be calculated for indebted Farmers:

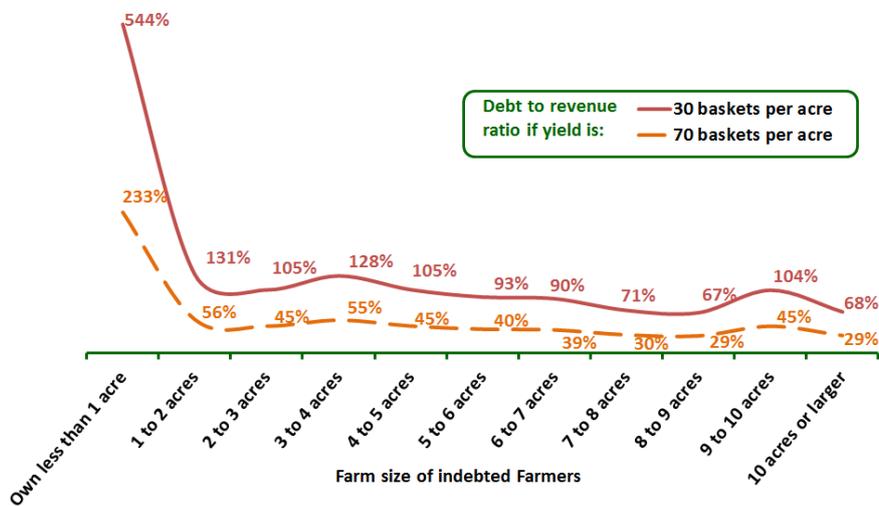


Figure 17: Debt to estimated revenue ratio of indebted farmers over farm size

Source: FinScope 2013, Author estimates⁵²

⁴⁸ Indicated as reasonable/typical in supply side interviews

⁴⁹ It is typical for Myanmar paddy farmers to have yields of between 30 and 70 baskets per acre.

⁵⁰ Due to the seasonal nature of crops as well as loans for crops, it is assumed that a farmer who has more than one crop cycle in a year, also have more than 1 loan cycle, with loans being repaid each season. Debt is therefore compared to revenue of one season only.

⁵¹ Based on a calculated average farm size of 16 acres for all Farmers with farms 10 acres or larger.

⁵² Please note: Debt to estimated revenue ratio in the main Diagnostic Report differs from the agricultural note as the base in the Diagnostic Report is all adults involved in farming (19.8 million). The figure above is only based on main income Farmers (12.1 million).

Debt to revenue analysis suggests challenges for smaller plot sizes. To evaluate debt relative to revenue, we assume that the debt is utilised to cover input costs of farming. Farming revenue should, therefore exceed debt levels by a sufficient margin to provide a sustainable income to the Farmer. As can be seen from **Figure 17** above, under low-yield conditions and current indebtedness levels, Farmers with farms less than 6 acres in size would have debt levels that exceed their harvest revenue (based on assumption of K 3 500 (USD 3.7) per basket). However, under higher yield conditions, current indebted farmers have debt ratios of only about half or lower of their harvest revenue. However, farmers with farms smaller than one acre would have debt levels which exceed that of their harvest revenue under both low and high yield conditions. Furthermore, this ratio remains above 100% for this segment even if price per basket assumptions are significantly adjusted upwards. This group therefore raises some questions on sustainability of debt consumption, which warrants further investigation.

9. Conclusions

This section sets out the findings from the MAP Myanmar Agricultural Finance Summary Note, as well as highlighting the gaps and opportunities for agricultural providers in terms of providing financial services to Farmers and Farm workers in Myanmar.

Agriculture as strategic development sector in Myanmar. Myanmar's agricultural sector plays an important role in its current economic and social environment, and is a strategic (if underdeveloped) asset which is being leveraged in achieving public policy objectives. Myanmar is endowed with rich and favourable natural agricultural resources and is strategically positioned in the region to be a major agricultural provider, yet productivity and exports are comparatively low. Nearly 70% of the population are living in rural areas and are largely dependent on agriculture for their livelihoods, but rural poverty remains an issue. Myanmar's economy remains highly dependent on agriculture to support production, employment and foreign exchange revenue through exports, and will remain so for the foreseeable future. Myanmar's physical infrastructure challenges, however, severely impact its rural and agricultural production capabilities. Infrastructure challenges also limit the expansion of financial services provision in rural areas.

Government has identified rural delivery as a key target market for financial inclusion. The Myanmar Government recognises rural poverty as an area that needs addressing and has set a goal to reduce poverty to 16% by 2015. Financial services have been identified as an important tool for achieving this goal. The Government's 8 development tasks also include a specific focus on agriculture and the rural population.

23 Million adults involved in agriculture. FinScope found that 23 million adults (58% of adults in Myanmar) are involved in agriculture. These adults either received their main income from farming themselves (12.1 million Farmers, or 30% of adults), from working on someone else's farm (2.2 million Farm workers, or 6% of adults), or receive secondary income from farming or farm work (8.7 million adults). This note only focused on Farmers and Farm workers, as those who derive secondary income from agricultural activities are dealt with under other target markets in the main Diagnostic Report.

Stark contrast in access and substantial needs remains unaddressed. Farmers reported the highest levels of access to regulated financial services of all target markets (43% of Farmers), driven mostly by regulated credit, particularly from MADB. On the other hand, Farm workers have the lowest take-up of regulated financial services of all income groups (12% of Farm workers). Although Farmers have the highest access to regulated credit, high levels of unregulated credit usage indicates demand for additional credit and credit products. Furthermore, this high use of regulated credit does not translate into high take-up of other regulated financial services, with Farmers reporting low levels of regulated savings, payments and insurance. Very few Farm workers, on the other hand, have access to financial services from regulated or unregulated financial services providers other than credit. It is therefore clear that much of agricultural financial services needs in Myanmar remain unaddressed or insufficiently addressed.

Farmers and Farm workers are thinly served, and usage is non-account based. While Farmers have the highest access to regulated financial services of all target markets, only 8% of Farmers make use of more than one regulated financial product class. Only 2% of Farm workers use more than one regulated financial product class. Adults that make use of more than one financial service are classified as **broadly served** and those who only make use of one financial service from a regulated provider as **thinly served**. Most Farmers and Farm workers are therefore considered to be **thinly served** and are still candidates

for financial inclusion. Of the **thinly served**, the majority only borrow from MADB or only use non-account based payment services from banks⁵³ (up 95% of the **thinly served** category for both Farmers and Farm workers).

Current rural provision driven by mandated capital and subsidised operations. The current high financial services usage by Farmers is driven almost exclusively by subsidised state and donor provision which are funded by mandated wholesale funding (i.e. MADB and PACT).⁵⁴ Agricultural co-operatives have started to increase credit to farmers, with the government planning to extend the reach of the co-operative sector dramatically. MFI's (excluding PACT and Proximity) on the other hand are unlikely to rapidly expand credit provision in general let alone to more challenging rural areas at any scale (see main Diagnostic Report for motivation). Furthermore, no purely commercial offering has achieved any significant scale and there is no evidence that any provider is poised to do so for the foreseeable future.

Regulatory constraints deter even mandated and subsidised operations from challenging rural markets. Even for mandated and subsidised models, rural delivery remains a challenge. Despite their mandate and subsidy, the current interest rate caps, loan size and capital regulations and the higher cost of rural provision are resulting in a withdrawal of certain NGO MFIs from more challenging low-income and particularly rural markets. This is particularly the case for smaller and newer entrants who have not yet achieved the level of scale and experience to be able to operate under these challenging conditions.

MADB well positioned for credit delivery to farmers. MADB is the largest provider of credit to the agricultural market and its portfolio has been consistently growing over the last 5 years. No other provider has yet been able to serve the target group to the same extent. MADB has the largest infrastructure outreach (of any single institution) in rural areas and current clients have a positive attitude towards MADB. MADB's systems seem to work well despite some deficiencies in management and the absence of an electronic MIS system. Through a combination of leveraging village committees as decentralised credit committees and a simple product that is able to be delivered through group guarantees, MADB has been able to manage its risks to date and reports low rates of non-performing loans. This mechanism works well for the simple group-based seasonal loans that make up the bulk of their portfolio. The same mechanism may not work well for more advanced or individualised loan products.

Agricultural credit product features not meeting the needs of its target market. Agricultural credit products in Myanmar show signs of not meeting all needs in the agricultural market. There are a number of features of agricultural credit products which exclude certain groups of farmers and/or limits the degree to which the product matches financing needs. As result, these farmers have to utilise high-cost unregulated credit to make up the gaps. These features include:

- **Size of farm:** In most cases, regulated financial institutions provide partial finance based on farm size. MADB provides a set rate of finance per acre for farmers with land of up to 10 acres. Co-operatives covers up to a maximum of 5 acres for farmers with up to 10 acres of land and a maximum of 50% of acres for farmers with over 10 acres. PACT restricts its credit to farms of up to a maximum of 5 acres in size. A large proportion of farmers have farms that are 10 acres or larger⁵⁵,

⁵³ Adults who report using only payments from a regulated financial services provider consists almost entirely of adults who indicated that they use a bank to send or receive remittances, but do not report having a bank account.

⁵⁴ Both government and donors have mandated the delivery of services to low-income and rural consumers.

⁵⁵ There are 2.1 million adults (698 000 households) involved in farming who indicated that they have farms that are 10 acres or larger.

with a large proportion of them also being relatively low income⁵⁶. Therefore, a large group of potential low-income retail credit clients are excluded (or partially excluded) from accessing regulated credit for agricultural production.

- **Size of loan:** MADB currently provides loans of up to K 100 000 (USD 106) per acre. There are differences of opinion about whether this addresses (or even exceeds) the full financing requirement per acre with estimated financing requirements ranging from K 120 000 (USD 127) to K 300 000 (USD 317) per acre to cover production costs. The financing requirement is highly dependent on the quality of seed used and the production method applied. If current loan amounts are insufficient to cover production costs, individuals would also be forced to supplement regulated credit with unregulated credit to meet their financing needs.
- **Restrictions on crop:** The bulk of MADB loans are earmarked for paddy production. As result, farmers who are not involved in paddy have much lower access to credit⁵⁷. Only 12% of farmers farming only beans and pulses (but who are not also involved in paddy or cereals) have MADB loans.
- **Disbursement and repayment timing:** Qualitative research respondents indicated that the MADB loan application process was lengthy, that loans are often disbursed late (due to administrative hurdles or difficulty in obtaining land title certificates), and that the repayment period was not suitable as it forced farmers to sell their produce right after harvest at low market prices in order to make the repayments.

Low savings mobilisation capability in rural areas. Currently, only commercial banks and state financial institutions (MADB & MEB) are permitted to mobilise voluntary savings, while MFIs and co-operatives can only raise compulsory savings linked to loans. FinScope finds that 72% of MADB (mostly credit) clients are more than 30 minutes away from their nearest branch. Conversely 71% of commercial bank (mostly savings) clients are within 30 minutes of their branch. Furthermore, the diagnostic analysis suggests that MEB and commercial banks are the most favoured for regulated savings. However, their distribution network is currently too limited to mobilise large-scale savings in rural areas. Although distribution capability may change in future with the implementation of certain key changes (see Diagnostic Report), savings mobilisation in rural areas will continue to be constrained over the short to medium term. The Diagnostic Report also found that migrating savings from outside of regulated institutions to regulated institutions will not happen unless households can save and withdraw small amounts regularly, conveniently and cheaply. Given the current limited branch infrastructure outside urban areas, this will not happen without remote electronic access. An upgraded and expanded payment system is therefore critical in the mobilisation of rural savings.

Lack of risk mitigation providers. There is a high degree of risk exposure amongst Farmers⁵⁸ which is currently being mitigated largely through credit, savings, and the sale of assets or reduced consumption. This diverts the intended use of these financial mechanisms from productive purposes to risk mitigation, and could also be aggravating instances of over-indebtedness. On an industry level, the demise of many specialised rice companies (all but one of RSCs have failed) is attributed to the severe 2011 floods which destroyed crops and thus the ability of farmers to repay debt. Insuring credit against disaster risk could mitigate this situation and stabilise credit providers operating in the agricultural market. However, Myanmar Insurance is not yet allowed to provide agricultural insurance, and neither are the newly licensed commercial providers. The Diagnostic Report describes various insurance related issues not

⁵⁶ 46.5% of these adults indicated that they earn less than USD 5 per day

⁵⁷ Only 12% of those who are not involved in paddy or cereals, but are involved in beans and pulses have MADB loans, while only 12.7% of those who are not involved in paddy or beans and pulses, but who are involved in cereals have MADB loans.

⁵⁸ Health risk was the largest identified risk for Farmers and Farm workers and agricultural risk was high for Farmers (See Section 7.2 Use cases).

covered in this document, but which would have an impact on provision to Farmers and Farm workers. These include unregulated providers, distribution issues, and innovation in the insurance market.

10. Opportunities to increase access to financial services

Enabling the sustainable delivery of appropriate financial services to rural markets remains a challenge in the most conducive of environments. In Myanmar, the combination of severely limited infrastructure and the underdeveloped nature of financial services models and products (particularly the absence of a payments system), makes rural delivery particularly challenging. Given the scarcity of capital (see the Synthesis note) and resources and the abundance of urban, high-income opportunities, resources, unless mandated otherwise, will not be channelled to rural and low-income markets.

Portfolio of financial services required: Improving access to financial services for Farmers and Farm workers is critical to meeting the broader public policy objective by government for increasing agricultural productivity and decreasing rural poverty. This will require not only the provision of credit, but indeed a portfolio of financial services (please see **Sections 10.1 to 10.4** below for detailed recommendations on each product category):

- Farmers are currently the best served target group in terms of **regulated credit**, but there is a definite need for more regulated credit, longer-term loans and a wider variety of credit products, including asset finance. The terms and conditions applicable to loans can also be improved.
- This target market has a huge unmet need for regulated risk mitigation products even though their awareness of **regulated insurance** is limited. The extent by which unregulated risk mitigation (42%) exceeds unregulated savings (29%) indicates that most of the unregulated risk mitigation consists of borrowing. Access to regulated insurance will therefore release more of farmers' funds for productive activities rather than risk mitigation purposes. The extension of agricultural insurance is likely to follow the extension of credit, potentially on a mandatory and subsidised basis through Myanmar Insurance, as in many other countries.
- Farmers are an aging group with low levels of **regulated savings** (6%). This does not bode well for provisioning for old age. Even if their children will take care of them according to Buddhist values, their regulated savings need to increase. It is also important for the country that they do.
- Farmers currently mostly use cash-based **payments**. This is not likely to change dramatically in the short term, but will in all likelihood follow the introduction of electronic payments in the delivery of other financial services.
- Farm workers are likely to continue using unregulated financial services to a large extent for the time being. MFIs, pawnshops and co-operatives are the regulated financial institutions most likely to serve this group in the medium term.
- There is the potential for **mobile money services** to reach both Farmers and Farm workers, provided new directives permit non-bank actors, namely mobile network operators, to offer this service.

Combination of financial services providers required. While the medium-term picture may favour state and community level institutions such as co-operatives and MADB and their decentralised model, the constraints faced by these entities limit the product offering that will be available to clients for whom these institutions are the primary source of regulated credit. These institutions will therefore have to go through modernisation and business evolution to better serve this market (longer-term investment finance). Such diversification will be risky without modernisation. It is not clear how or

whether such a modernisation process will unfold for MADB or whether it will be successful in adapting to the changing demands and environment. As result of the immediate situation of restricted products and the uncertainty on how MADB and co-operatives may evolve, there is space for others, including MFIs to play in this market (offering more complex products). There are also other restrictions that mean that MADB and co-operatives are not serving all farmers thus creating opportunities for other players. Some MFIs are extending their range of agricultural credit products (e.g. through agricultural leasing) but with limited reach.

10.1. Credit

To increase agricultural input credit at scale will require a concerted effort involving all the current providers. While MADB will play a central role given its current positioning, other input credit providers play an important, but more limited role:

MADB

Extend MADB coverage and improve quality and features. With its extensive rural footprint and proven community-based group loan methodology, **MADB** will remain the lead provider for some time to come. Leveraging the current well positioned distribution system could be the easiest mechanism for extending credit provision to currently excluded households. There is also scope to improve MADB's product features and delivery (eligibility criteria, size of loan, and timing of disbursement and repayment) in order to better serve the needs of farmers.

Extend wholesale funding to MADB through MEB. To increase its loan portfolio, MADB will require more funding. This is unlikely to come from deposits and will probably require increased wholesale funding from MEB which is trusted to hold deposits and can allocate these funds at the discretion of government.

Return to higher interest rates and shift MEB subsidy to modernising systems and improving service quality. MADB has the space to gradually increase interest rates to the more market-based levels it charged five years ago. Given the short-term nature of loans, the debt servicing relief from lower interest rates are quite low. For example, increasing the interest rate from the current 8.5% to 12% on a 6 month loan that is to be repaid in a lump sum at the end of the loan period, increases the payment by only 2%⁵⁹. The subsidy implicit in the reduced interest rate paid by MADB to MEB could then be directed towards modernising its internal systems and improving service delivery, without which it will not be able to diversify its product portfolio beyond the short term, group loan mediated by decentralised credit committees. In addition, resources can be invested to increase the productive impact of its loans by improving its service levels and adjusting the terms of loans to better suit the agricultural cycle.

Diversification requires modernisation. While MADB has done well on its particular portfolio of loans, and should continue to be leveraged for this purpose, any diversification outside of the parameters of its existing portfolio needs to be carefully considered as it is likely to require enhanced MIS systems to manage and monitor risks. It is not clear how or whether such a modernisation process will unfold for MADB or whether it will be successful in adapting to the changing demands and environment. As a result, there is space for others, including MFIs to play in this market and potentially offer more complex

⁵⁹ Calculated on a principal of K 1 million (USD 1 057) at 8.5% and 12% interest per month over 6 months. Total repayment under 8.5% is K 1 043 260 (USD 1 103) and under 12% is K 1 061 520 (USD 1 122), a difference of less than 2%.

products. Some MFIs are extending their range of agricultural credit products (e.g. through agricultural leasing) but with limited reach to date.

Other providers

Better understanding of agricultural input credit required to consider their position in the regulated credit market. **Agricultural companies** offer small value input credit to at least 1.5 million Farmers, but are vulnerable to crop risks which have also contributed to the demise of the RSCs. They will continue to provide unsecured supplier credit provided they are not exposed to catastrophic losses. Credit-linked crop insurance can play a major role to mitigate this risk (see **Section 10.4** below). Agricultural input providers currently fall outside of the regulated credit market. Given the potentially important role of these companies, it would be important to gain a better understanding of their products and performance and consider their position in the regulated space.

Improve information on agricultural co-operatives and consider their place in the regulated market. Given the limited information available at the time of this research, the role of **agricultural co-operatives** remains uncertain, but they can meet part of the need provided they have access to capital and their credit processes are not too cumbersome. Early indications are that the extension of input credit by agricultural co-operatives has grown rapidly and could play a substantial role. With the exception of agricultural input companies, all credit providers in this market rely on wholesale funding to extend credit and currently suffer capital constraints. Given the potentially important role of these co-operatives, it would be important to gain a better understanding of their products and performance.

Monitor rapid expansion of co-operatives. Given the substantial and rapid increase in the number and value of loans extended by agricultural co-operatives, careful monitoring is required to ensure that the expansion can be managed by the co-operatives and accompanied by appropriate supervision.

Beyond PACT, MFIs are likely to play limited but important role and could be expanded if regulatory hurdles are addressed. **MFIs** may not play a major role in the provision of input credit in the near term. **PACT** is currently the only MFI with substantial rural reach and does provide agricultural loans (among others). In the future, however, other organizations could have the potential to increase their reach. The cap on interest rates makes it difficult to undertake expensive rural distribution. **PACT** is the only provider that can significantly contribute to this opportunity under the current regulatory environment. An increase in the interest rate ceiling can open the opportunity for more providers. Given that MFIs have longer-term wholesale funding and are installing MIS systems, it is possible that they could in future evolve to fulfil the need for more advanced credit products along-side **MADB's** simpler credit products.

Issues:

While further extension of credit is called for, the following issues need to be considered and mitigated. The unrestrained extension of credit to farmers may result in over-indebtedness and potentially land loss for farmers, many of whom are in the process of obtaining titles to their land for the first time:

- **Signals of indebtedness.** Various signals suggest that debt is a problem for at least some groups of farmers (see **Section 8**). The analysis presented in this document concluded that farm yield will be a key determinant of whether current debt levels are problematic or not. At lower yield assumptions, current debt levels seem problematic for a broad range of farmers. At higher yield

assumptions, the situation improves but remains concerning for farmers on plots of lower than 6 acres. It requires further investigation before substantial increases in credit should be extended.

- **Empowering farmers to retain a larger part of production surplus.** Farming surpluses (and the benefits of increased credit extension) may be going to informal lenders and agricultural value chain players rather than the farmer. One of the key reasons is that farmers sell crops at harvest time when the prices are at their lowest.
- **Addressing agricultural productivity.** The constrained market environment also means that any increase in credit extension has to go hand-in-hand with strengthening the agricultural value chain, improving agricultural productivity, and developing land tenure policies that promote long-term investment.
- **Mitigating macro-economic impacts.** At a macroeconomic level it will be important to manage the impact of Dutch disease (mostly as a result of petrochemical exports) and other macro-economic variables that can potentially undermine the viability of farming.
- **Impact of landlessness to be assessed.** FinScope found that 15% of Farmers do not own the land they farm on. Supply side interviews revealed fears that growing indebtedness was leading to landlessness, but clear evidence for this remains lacking. Further extension of credit should therefore be accompanied by a better understanding of the link between indebtedness and landlessness.

10.2. Savings

Explore the use of village level savings associations to extend MADBs footprint and enable voluntary savings. To overcome proximity challenges, MADB can consider revisiting the use of village level savings associations or equivalent structures. MADB used these in the 1990s, but limited information is available on their performance. Currently, several MFIs report to be using community or village based associations as a vehicle to extend their footprint. While savings mobilised in this manner are unlikely to provide a substantial funding source to MADB, they could offer value to rural consumers.

10.3. Payments

Efficient electronic payments required to enable transactions and savings. The future development of regulated financial services (especially in rural areas) depends on the introduction of accessible, low cost, electronic payments. Migrating savings from outside of regulated institutions to regulated institutions will not happen unless households can save and withdraw small amounts regularly, conveniently and cheaply. Given the current limited branch infrastructure outside urban areas, this will not happen without remote electronic access. Similarly, the extension of low-value credit and the collection of small insurance premiums become commercially viable on the back of low-cost electronic payments.

10.4. Insurance

Enable agricultural insurance and explore delivery through Myanmar Insurance. Whilst the introduction of crop and livestock insurance is complex and in most cases requires subsidies, a narrower focus on the provision of insurance for agricultural input credit is more achievable. Myanmar Insurance does not offer agricultural input credit insurance and the new commercial insurers are not permitted to offer this cover either. Given the numerous other opportunities that the new commercial insurers will explore, this product (when allowed) will in all likelihood be offered by Myanmar Insurance only and most likely on a subsidised basis. It will, however, enable the government to achieve some of its priority objectives for rural poverty alleviation.

Enable and develop health and funeral (life) insurance. There is currently no regulated health insurance product available in Myanmar, and insurance legislation does not currently permit insurers to offer health insurance, yet this is the largest risk identified by agricultural households. An amendment will thus be required to offer this product. Similarly, there is no funeral insurance product. Funeral insurance is an anchor product for many emerging retail insurance markets. Such insurance is not constrained to funding the cost of the funeral but can provide financial assistance for the family to deal with other expenses, debts and the potential loss of income. The extensive use of informal funeral assistance mechanisms suggests that it is no different in Myanmar and that an opportunity exists to offer this to Farmers and Farm workers as well, provided distribution challenges in rural areas can be solved.

Bibliography

- ADB. 2012. Myanmar in Transition: Opportunities and Challenges. Manila: Asian Development Bank. Available: <http://www.adb.org/sites/default/files/publication/29942/myanmar-transition.pdf> [Accessed 02/12/2014].
- CBM. 2012. Annual Report 2011-2012. Myanmar: pp. 1-55 [Online] Available at: <https://www.cbm.gov.mm/sites/default/files/cbmanualreport20112012.pdf> [Accessed: 20/12/13].
- Dapice, D.O. 2011. Myanmar Agriculture in 2011: Old Problems and New Challenges. Ash Centre for Democratic Government and Innovation - Harvard Kennedy School
- Deloitte. 2013. Myanmar: The Next Asian Telecommunications Greenfield. [Online] Available at: <http://www.deloitte.com/assets/Dcom-Guam/Local%20Assets/Documents/Technology,%20Media%20and%20Telecommunications/TMT%20Myanmar.pdf> [Accessed 16/04/2014].
- Eleven. 2014. Myanmar's Mobile Penetration Rate Expected to Reach 80% by 2015-16. [Online] Available at: http://elevenmyanmar.com/index.php?option=com_content&view=article&id=5017:myanmar-s-mobile-penetration-rate-expected-to-reach-80-percent-by-2015-16&catid=44&Itemid=384 [Accessed 16/04/2014].
- Fujita, K. 2013. Agricultural Finance in Myanmar: Problems and suggestions for development. Unpublished JICA presentation. [Accessed: 12/09/2013].
- Haggblade, S. et al. 2013. A Strategic Agricultural Sector and Food Security Diagnostic for Myanmar. USAID. Michigan State University (MSU) and the Myanmar Development Resource Institute's Center for Economic and Social Development (MDRI/CESD). Prepared for USAID/Burma. Available at: http://fsg.afre.msu.edu/Myanmar/myanmar_agricultural_sector_diagnostic_july_2013.pdf [Accessed: 01/07/2014]
- Hall, A. 2012. Myanmar and Migration workers; Briefing and recommendations. Mahidol Migration Centre: Institute for population and social research. [Online] Available at: http://oppenheimer.mcgill.ca/IMG/pdf/Myanmar_and_Migrant_Workers_-_Briefing_and_Recommendations.pdf [Accessed: 16/01/2014].
- Horn, M. 2013. Myanmar insurance update: market opening expected in "one to two years". [Online] Available at: <http://www.clydeco.com/insight/updates/myanmar-insurance-update-market-opening-expected-in-one-to-two-years> [Accessed: 16/03/2014].
- Kudo, T. et al. 2013. Agriculture Plus Plus: growth strategy for Myanmar agriculture. Institute of Development Economics (IDE) Discussion Paper no. 421. Available at: <http://www.ide.go.jp/English/Publish/Download/Dp/pdf/421.pdf> [Accessed: 22/08/2013].
- Kyung-Ryang, K & Abafita, J. 2012. Agricultural development in Myanmar, lessons from the Korean experience. Journal of the Korean Society of International Agriculture, col. 24, no. 2, pp. 136-151. Available at: [http://www.intagrijournal.org/pdf/24\(2\)-05.pdf](http://www.intagrijournal.org/pdf/24(2)-05.pdf) [Accessed: 01/07/2014]
- LIFT. 2012. Tat Lan Program Document: Rakhine Sustainable Livelihoods and Food Security Program 2012-2015. Available at: <http://archive.lift-fund.net/> [Received directly from LIFT]

McKinsey & Company. 2013. Myanmar's moment unique opportunities major challenges. [Online] Available at: http://www.mckinsey.com/insights/asia-pacific/myanmars_moment [Accessed: 10/04/2014].

MMSE and CCS. 2013. The institutional landscape directly relevant to agricultural production. [Received directly from MMSE and CCS]

MADB. 2012. The Annual Report for the Financial Year 2011-12. The Ministry of Agriculture and Irrigation.

MFWG. 2013. Presentation at the Emerging Microfinance Sector in Myanmar: Regional Lessons on Selected Issues held 09 – 10 May. [Received directly from MFWG].

Open Technology Fund. 2013. Internet Access and Openness: Myanmar 2012. Radio Free Asia. [Online] Available at: https://www.opentechfund.org/files/reports/otf_myanmar_access_openness_public.pdf [Accessed 10/04/2014]

President U Thein Sein, 2011. www.president-office.gov.mm/en. [Online] Available at: <http://www.president-office.gov.mm/en/?q=briefing-room/speeches-and-remarks/2011/05/20/id-203> [Accessed 11/09/ 2013].

The State Law and Order Restoration Council. 1990. The Myanmar Agricultural and Rural Development Bank Law. The State Law and Order Restoration Council Law No. 17/90.

Thit Sar, S.G. 2013. Old debts delay agriculture loans in delta. Myanmar Times. [Online] Available at: <http://www.mmtimes.com/index.php/national-news/7623-old-debts-delay-agriculture-loans-in-delta.html>

UNDP Myanmar. 2007. Integrated Household Living Conditions Survey – Poverty Profile.

UNDP Myanmar. 2011. Integrated Household Living Conditions Survey – Poverty Profile.

Wong, L.C.Y and Aye Wai, E.M. 2013. Rapid Value Chain Assessment: Structure and Dynamics of the Rice Value Chain in Myanmar. Background Paper No.6. Michigan State University.

World Bank, 2013. Myanmar Economic Monitor. [Online] Available at: http://www.worldbank.org/content/dam/Worldbank/document/EAP/Myanmar/Myanmar_Economic_Monitor_October_2013.pdf [Accessed 10/04/2014].

Annex A: Comparison of landlessness findings

Previous findings on landlessness in Myanmar seem to vary greatly⁶⁰, but most of the variation might be explained by differences in the definition of landlessness, and therefore differences in the denomination group used. For instance, landlessness can either be measured as a percentage of the rural population, or as a percentage of the agricultural population. Yet another denominator would be the rural agricultural population/households. How one defines agricultural population will also define the degree of landlessness. For information on the main previous findings on landlessness in Myanmar, please see **Box 8** below.

FinScope can provide comparable measures on most of these definitions, although the primary measure of landlessness will be adults whose households are involved in farming (farming is defined as farming for your own benefit, and not necessarily including farm work, although some farmers might also be involved with farm work) but who do not “own” land for farming. According to FinScope there are 19.8 million adults who are involved in farming, and a further 3.2 million who are not involved in farming but who are involved in farm work (adding up to a total of 23 million adults involved in agriculture). There are a total of 17.9 million adults who indicated that they own farm land. Of those who are involved in farming (19.8 million), only 2.9 million (14.5%) indicated that they do not own land for farming. Of everyone who is involved with agriculture (23 million), 5.8 million do not own land (25.4%).

When looking only at the rural population, the number of adults involved in farming reduces to 18 million although those that are not involved in farming but are involved in farm work remains 3 million. The percentage of rural households involved in farming who are landless and rural households who are involved in agriculture (farming and farm work) who are landless is comparable to that of the total population at 13.1% and 24.5% (vs. 14.5% and 25.4% for the total population, see paragraph above). However, the total number of landless households in rural areas (adults who do not own land but resides in rural areas) is 11.1 million, or 40.3% of the rural adult population.

Looking at landlessness from FinScope on these various levels reveals landlessness figures that are largely consistent with previous estimates (see **Box 8** below):

Box 8: Main previous findings of landlessness in Myanmar

Integrated Household Living Conditions Survey (IHLCS) defines landlessness as “those whose primary economic activity is agriculture” but who do not own any agricultural land⁶¹ and finds that 24% of these households are landless (UNDP, 2011)). This figure has decreased from 26% in 2004/2005, but poor households in agriculture have a much higher rate of landlessness (at 34%) vs. non poor households (19%) and the bottom consumption decile (of households in agriculture) actually experienced an increase in landlessness from 2004/2005 to 2009/2010 (from 34% to 38%). Landlessness varied across regions from as high as 41% (Bago) to as low as 6.6% (Shan).

Haggblade et al. (2013) define landlessness as “rural households without tillage rights to farmland”. They hold that some landless households have non-agricultural businesses, but that “most earn their living as wage labourers, working primarily in the fields of neighbouring farmers who hold tillage

⁶⁰ Haggblade et al. (2013) also mentions some other studies/reviews which found varying landlessness rates, but these might again differ because of the definition and denomination group used. These studies and their landlessness rates are: Okamoto (2008): between 30% and 50% during the 1990s.

An FAO team conducting the UNDP agricultural sector review of 2005: 30%

A World Bank team visiting Myanmar in late 2012: 55%

⁶¹ “Landless persons include casual workers, employees, contract farmers, etc” (UNDP, 2011)

rights". They estimate landlessness at "roughly 50% of rural households", with regional variations. This estimate is based on "preponderance of available evidence" and they describe it as a "rough ballpark estimate". Essentially they divide the number of rural households (based on 2003 FAOSTAT figures of 6.48 million rural households, average household size of 5 and total rural population of 32.42 million), by the difference between number of rural households and total agricultural holdings⁶² (3.46 million farm holdings and a difference of 3.02 million, resulting in 47%). The calculation is based on 2003 figures, and could be outdated. However, they hold that "this 50% estimate accords with our general observations during our village visits" as well as the LIFT baseline study estimate of 50% (or 53% if they – Haggblade et al. 2013 – weight the LIFT data according to what seems to be their field visit population weights).

LIFT's Baseline survey seems to define landlessness (implicitly) as the percentage of rural households who do not own land (assumed that their survey is representative of the rural population). They find that 49.9% of households in their survey do not own land, and this varies from 26.1% for the Hilly region to 72.1% for the Delta/Coastal region. The difference between this figure and IHLCS might be at least in part due to the larger denominator (rural households versus agricultural households).

⁶² They define this as "households with access to over 0.1 acres of farmland", and states that: Myanmar's Agricultural Census defines an agricultural holding as, "an economic unit of agricultural production"... "raising crops on at least 1/10 (0.10) acre of land which is approximately 4,356 sq. ft., or raising of at least 4 heads of small livestock, or 2 heads of large livestock, or at least 30 heads of chicken or ducks, regardless of the area of the land."