

Report No. 82585-KH

A TECHNICAL WORKING PAPER

# CAMBODIA

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## STUDY ON ACCESS TO FINANCIAL SERVICES FOR SMALL AND MEDIUM AGRIBUSINESS ENTERPRISES IN CAMBODIA



THE WORLD BANK

Rural Development, Natural Resources,  
and Environment Sector Unit  
East Asia and Pacific Region



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**THE WORLD BANK**  
Washington, D.C.

## Currency and Equivalent Units

Exchange rate as of May 31, 2013

Currency Unit = Cambodia Riel

USD 1.00 = Riel 4,065

## Weights and Measures

Metric System

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## ABBREVIATIONS AND ACRONYMS

ACLEDA	Association of Cambodian Local Economic Development Agencies
AMRET	Formerly Ennathien Moulethan Tchonnebat” in Khmer. In English, it means “Local Rural Credit”
ANZ	Australia and New Zealand Banking Group Limited
ASEAN	Association of Southeast Asian Nations
CDRI	Cambodia Development Resource Institute
CIB	Cambodia Investment Board
CSES	Cambodia Socio-Economic Survey
EBA	Everything But Arm
EU	European Union
FAOSTAT	The Food and Agriculture Organization Corporate Statistical Database
FSAP	Financial Sector Assessment Program
GDP	Gross Domestic Product
GMS	Greater Mekong Subregion
Ha	Hectare
ICA	Investment Climate Assessment
IFC	International Finance Corporation
JICA	Japan International Cooperation Agency
LOC	Letter of Credit
MAFF	Ministry of Agriculture, Forestry and Fisheries
MEF	Ministry of Economy and Finance
M&E	Monitoring and Evaluation
MFI	Microfinance Institutes
MIME	Ministry of Industry, Mine and Energy
MoC	Ministry of Commerce
NBC	Natural Bank of Cambodia
RDB	Rural Development Bank
SME	Small and Medium Enterprises
SWIFT	Society for Worldwide Interbank Financial Telecommunication
USD	United States Dollar

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## EXECUTIVE SUMMARY

**The study sheds light on the nature and level of utilization of financial services by the agribusiness sector and their interface with the financial sector.** The primary aim of this diagnostic was to: (i) identify barriers to access to finance by the agribusiness sector; and (ii) highlight the findings to policymakers and financial institutions. The study identifies the gaps between supply and demand for financial services by studying the data on financial indicators, as well as the perceptions of financial services by financial institutions and agribusinesses. The key findings and recommendations, along with the policy implications, are presented at the end of the report.

**The primary source of information comes from the survey of 1,030 agribusinesses in Cambodia in thirteen provinces, which was collected in 2011.** These agribusinesses included all key actors in the agriculture value chain—input and farm machinery dealers, crop collectors and traders, processors and rice retailers, and wholesalers. Together these agribusinesses made up about 27 percent of total estimated agribusiness volumes in Cambodia. Rice is still a dominant crop in Cambodia and about 80 percent of surveyed enterprises were involved in rice related activities in one way or the other. The key findings of the survey are discussed below.

### *Characteristics of Cambodian Agribusinesses*

**Cambodian agribusinesses are mainly small and medium sized enterprises that are largely engaged in crop trading and retailing.** Value-added processing is limited and most crops are traded in their raw form. The minimum annual turnover of the firms in the sample was USD 5,000 and the maximum USD 31.5 million, with the sample mean of USD 1.34 million. However, there were significant variations depending on the type of business. Large firms with turnover over USD 2 million represented 15 percent of the sample while medium-sized (500,000 < turnover < 2 million) and small firms (50,000 < turnover < 500,000) made up 64 percent of the sample. At the other end of the spectrum, micro firms (turnover < 50,000) constituted 22 percent of the sample. Processors and crop collectors had the highest share of large firms while rice sellers and input dealers represented the highest share of small- and micro-sized enterprises (Table 1).

**Table 1. Enterprise Distribution by Enterprise Type and Turnover**

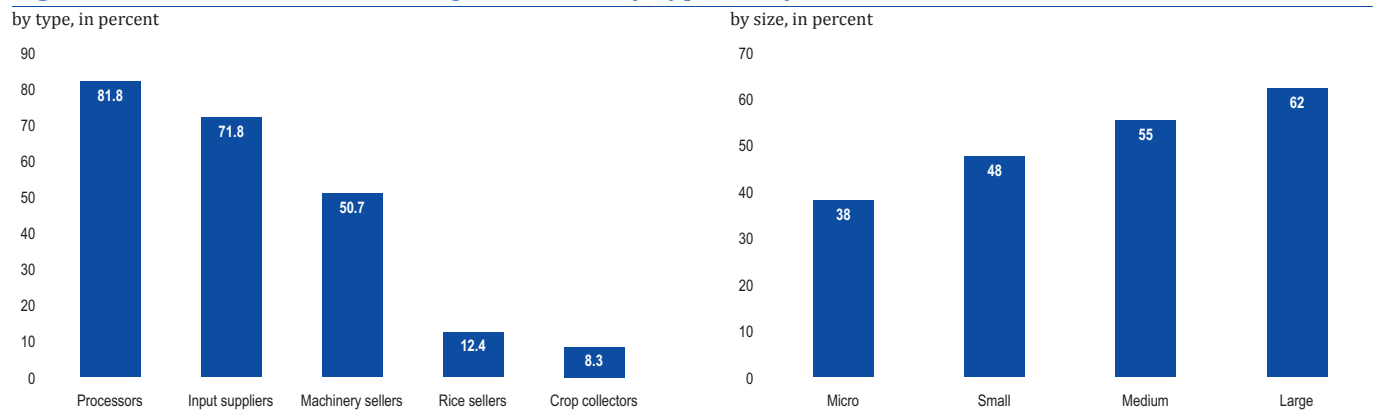
in percent

Turnover Classification (2011)	Processor	Input Supplier	Machinery Seller	Crop Collector	Rice Seller	Total
<\$50k	13	43	15	9	30	22
\$50k–\$500k	41	43	48	33	56	43
>\$500k–\$2M	28	10	18	30	11	21
>\$2M	19	5	19	28	3	15
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: Survey results.

**Informal structures are prevalent across all categories of agribusinesses.** Nearly half of the surveyed agribusinesses lacked any kind of registration with local or Central Government authorities. The type of enterprise activity was a more important determinant of the formality of enterprises than enterprise size. The formality was highest among processors while crop collectors had the lowest share of formal enterprises (Figure 1). Even the majority of those agribusinesses that are formally registered exhibit management structures that are largely informal. Furthermore, a significant part of the informality occurs voluntarily; almost 32 percent of the larger firms prefer to remain informal. This stems from efforts on the part of firms to conceal the true scale of their activities in order to avoid taxes and dealing with authorities. Consequently, these firms face self-imposed limits as they cannot grow their businesses beyond their own physical span-of-control, which forces them to avoid using financial leverage by way of borrowing. Furthermore, the prevalence of such informality among Cambodian agribusinesses makes it impossible for commercial banks to have proper credit monitoring even if they make loans to these enterprises. Consequently, much of the lending to such firms occurs as personal loans backed by personal property.

**Figure 1. Level of Formalization of Agribusinesses by Type and by Size**



Source: Survey results.

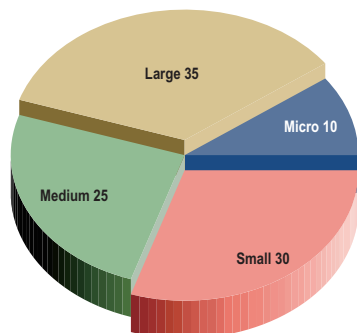
**Larger firms make a relatively higher contribution to sector growth and employment.** Although the Cambodian agribusiness sector is dominated by micro and small firms, these firms generate only seven percent of the total turnover. Large firms, on the other hand, generate about 77 percent of the total turnover and 36 percent of total employment, while making up only 15 percent of all enterprises. Large firms are also growing faster than other categories and contributed more to the overall growth rate of the sector between 2010 and 2011 (70 percent) (Figure 2). Processors, which had the highest degree of formalization (82 percent), contributed the largest share of full-time employment (47 percent) and 56 percent of annual turnover growth. However, while small traditional firms have limited contribution to sector growth and value-added, they are nevertheless important as providers of self-employment and employment of family members.

**Cambodian agribusinesses seem to suffer from low profitability which limits their ability and willingness to borrow.** The average gross margin of agribusiness was 11 percent, calculated as difference between the total purchases (USD 1.32 billion) and sales (USD 1.46 billion). This estimate seems to be insufficient to service debt obligation at the prevailing interest rates in 2011. However, there was a wide variability in gross margin estimates among agribusinesses. On one end of the spectrum are a few large modern operators who have comfortable gross margins, averaging around 20 percent, and on the other end are a large number of small family-owned enterprises (rice sellers, traders) whose gross margins are only about one or two percent.

**Figure 2. Enterprise Contribution to Employment and Growth by Size of Agro-Enterprises 2011**

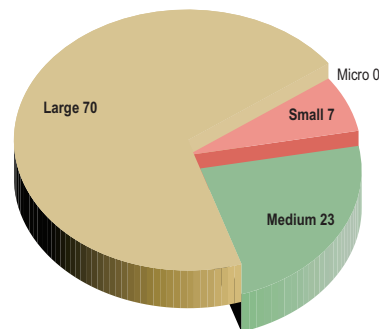
**Contribution to employment by size**

in percent



**Contribution to growth by size**

in percent



Source: Survey results.

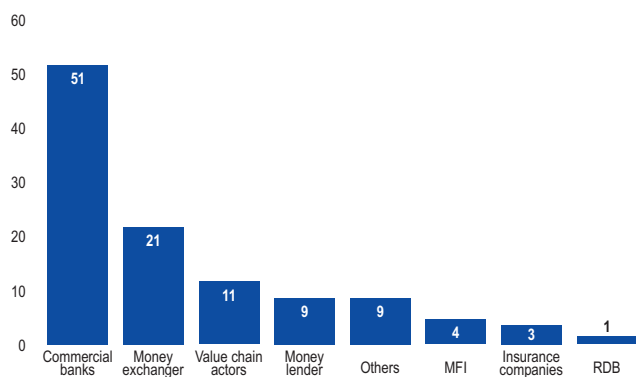
**Another factor which limits the agribusinesses' ability to borrow was their relatively low level of assets.** The mean value of fixed assets was USD 272,000 in 2011, when excluding the value of land. Machinery sellers and processors had the largest fixed assets while rice sellers and input dealers had lowest values. Most importantly, Cambodian agribusinesses are not able to leverage their raw material stocks, which are their most significant assets.

**Utilization of Financial Services and Linkages to Financial Institutions**

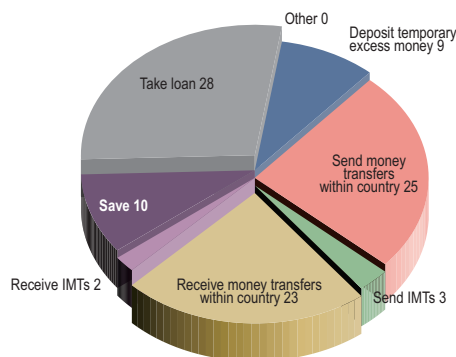
**Commercial banks were the most popular choice for financial services for Cambodian agribusinesses** (Figure 3). About half of agribusinesses have utilized some form of financial services provided by commercial banks. The level of utilization of banking services varied with the size of enterprises. About 85 percent of large enterprises used commercial banks but the level of utilization dropped to about 22 percent for micro enterprises.

**Figure 3. The Choice of Financial Institutions and Use of Banking Services by Agribusinesses**

in percent



in percent



Source: Survey results.

**Borrowing and money transfers are the most popular financial services among Cambodian agribusinesses.** About 64 percent of agribusinesses had taken loans at some point of time. This is substantially higher than the degree of formality in the sector, which indicates that many of these loans were in the form of personal loans. About

54 percent of agribusinesses had used money transfers. On the other hand, only one in five agribusinesses used financial services to deposit cash or used savings accounts (Figure 3).

**While there were significant differences in loan values across different size of enterprises, there was no evidence of the financial sector bias towards larger firms.** For example, the maximum loan size for large firms was about four times bigger than the maximum loan size for medium size firms. Yet, the maximum loan size for medium firms was only twice as much larger than the maximum loan size for small firms. The maximum loan values for large and medium firms were equivalent to their minimum revenue thresholds. However, small loans with a revenue threshold of USD 50,000 were able to obtain maximum loan values of USD 250,000, or five times over their revenues. The loan size for larger firms is, therefore, not relatively larger when compared to their turnover.

**The majority of agribusinesses considered interest rates as the most important criteria for their borrowing decisions, but not having a credible business plan, an accounting system and audited statements were also considered as important obstacles to accessing finance.** More than 90 percent of agribusinesses indicated the lack of proper accounting systems and audited financial statements, and more than half of the firms did not have proper business plans that could be submitted while applying for loans. Compared to these obstacles, lack of collateral was not viewed as a major handicap for borrowing. Also, while agribusinesses were generally aware of basic financial products such as collateralized loans, savings and deposits, and money transfers, their awareness levels were very low for services such as letters of credit, factoring and leasing.

**Access to finance was in general not viewed as the most important obstacle for further growth and development of agribusinesses.** Only 31 percent of surveyed businesses indicated that access to finance was their biggest constraint. However, there are subsets of agribusinesses, such as export oriented rice millers, which make use of finance heavily and consider the lack of credit as a significant constraint to their businesses. In fact, the impact of lack of finance on agribusinesses was either high or very high for those who considered access to finance as critical. The findings also showed that those agribusinesses that did use financial products, such as loans, had in average higher turnover and levels of working and investment capital compared to non-users. These differences between users and non-users of financial services increased as firms became larger.

### *Financing of Agribusiness Sector*

**The study confirmed financial institutions provide relatively low level credit to agribusiness sector when compared to the size of the sector transactions.** Extrapolating survey results to the entire country shows that the total value of purchases by the agribusiness sector in 2011 was USD 4.9 billion while the total value of sales was USD 5.4 billion. The extrapolated levels of working and investment capital of the entire agribusiness sector were USD 513 million and USD 190 million respectively. However, the estimated lending provided by the banks and microfinance institutions (MFIs) was only about USD 124 million for working capital and USD 21 million for the investments, which is a small fraction when compared to total financial levels of financial transactions. On the other hand, agribusinesses themselves provide a credit in the magnitude of one billion dollars to their value chain partners. These financial flows exceed substantially the financing offered by the financial institutions.

**While the majority of credit is provided through value chain financing, there is a significant trade credit gap in the sector.** This is because the majority of payments for purchases by agribusinesses are made on cash (about

92 percent), while a significant portion of sales involves some form of credit. The total consolidated credit gap provided within the value chain was about USD 700 million in 2011, which is equivalent to about 15 percent of total lending in the country. The gap is especially wide for processing firms, which make 82 percent of their purchases in cash but have 50 percent sales in credit terms.

**The financial sector in Cambodia is growing rapidly, both in terms of number of institutions and size, and it has potential to significantly increase lending to agribusiness sector in coming years.** Both deposits, lending and total assets of the sector have been expanding rapidly. However, the sector offers still very limited products and services (lending and non-lending) which go beyond traditional banking products. While interest rates and loan margins were quite high at the time of the survey in 2011 they have declined over the 2012–2013 period. This suggests that the financial sector exhibits significant inefficiencies, mainly due to large cash holdings. The relatively high share of non-performing loans is also an issue.

## *Key Conclusions*

**The study identified the three key parameters that would limit Cambodian agribusinesses' borrowing ability: a) the amount of liquidity available to service loans, b) the amount of assets that could be leveraged, and c) the level of lending interest rates.** Total gross margin of the surveyed enterprises was about 11 percent, which is equivalent to about USD 500 million for the entire sector based on 2011 figures. Effective lending rates, on the other hand, ranged from about 12 percent to 28 percent in 2011. These rates are high when compared to the average gross margins of agribusinesses as the marginal cost of borrowing could exceed the marginal benefits of borrowing for a large segment of Cambodian agribusinesses, except for larger processors. The data from the survey estimates total assets at about USD 280 million. Given that agribusinesses have already borrowed USD 145 million, they would only have about another USD 140 million additional borrowing capacity through leveraging their total assets. However, the actual capacity for additional borrowing could be higher than this as the fixed-asset estimates do not include land value or stocks. While the financial institutions appear to have the capacity to double the lending to agribusinesses over coming years, given their asset levels, this is not enough to meet the total estimated credit need by agribusinesses.

**The above findings point to the following key conclusions that would form the basis for policy recommendations:**

**First, there is large-scale prevalence of informality among Cambodian agribusinesses.** Informality prevents agribusinesses from applying for loans as the borrower of the record, which manifests their limited linkages with financial institutions. This lack of access to finance creates handicaps for growth and sector modernization. A considerable part of such informality among agribusinesses in Cambodia is voluntary, and is motivated by the desire to avoid interactions with authorities, such as licensing and tax authorities. There is also a lack of trust in banking institutions to honor the confidentiality of the financial information of the firms.

**Second, the modest levels of gross margins compared to interest rates, signals inherent inefficiencies in the agribusiness sector.** Such inefficiencies are usually due to problems related to technical and/or managerial problems in individual firms. They could affect the quality and efficiency of their operations which itself would have negative implications on gross margins. Consequently, the sector operates in a state of low level equilibrium

where firms survive as they are but the sector is not able to process a large share of primary production. As a result, significant in-country value-added opportunities are lost as it is more profitable to trade raw materials to neighboring countries.

**Third, high lending rates are the main consideration behind the decision of agribusinesses to not take loans and thus establish relationships with financial institutions.** While interest rates have been declining over 2012 and 2013, the structure of the agribusiness lending portfolio has not changed much. Banks that have seen a significant expansion in lending are largely lending to the same segment of agribusinesses that were borrowing before, and those businesses that did not borrow much are still not borrowing.

### *Policy Implications*

**The study findings and conclusions summarized above have important policy implications.** They point to inherent inefficiencies in the agribusiness and financial sectors. The policy options that aim to address these inefficiencies focus on three broad objectives:

#### **Encouraging Formalization of Agribusinesses**

**The widespread prevalence of informality in Cambodia is probably the most significant constraint for growth and modernization of agribusiness sector as it limits linkages with financial institutions and access to credit.** It is due to a number of factors. Some of them are common to other developing countries and are mainly related to the low institutional capacity of enterprises and/or burden of taxation and regulatory compliance. Others are more specific to Cambodia, such as prevalence of informality among larger firms. The following recommendations may help to overcome the enterprise choice of staying informal:

- Clarify privacy rules of financial information provided by enterprises and disseminate this information more widely among businesses.
- Develop regulations which enforce privacy of financial information and prevent the disclosure of financial information without court order to official entities.
- Adopt universal processes that define how client information is stored; and there should be clear definition of processes to access such information.
- Conduct training programs on privacy issues and carry out awareness campaigns among agribusinesses. The training should focus on the following stakeholders: a) training of their staff; b) training of financial sector supervisors; and c) training of judiciary.
- Review the enforcement methods and practices for tax and regulatory compliance. This would include clarifying the methodology and practice of tax enforcement and carrying out revisions where necessary.
- Review the methodology and practice of enforcement of various rules and regulations that govern the conduct of businesses (both central and local government levels) and revise these where necessary.
- Design and conduct training about the new policies among officials in tax and regulatory enforcement.



## Facilitation of Investments in Modernization of Agribusiness Sector

**Facilitating investments in modern, export oriented processing enterprises that are able to compete in international and regional markets is a good way to encourage gradual formalization of entire agribusiness sector.** Such enterprises would serve as a primary source of demand for lending and non-lending products from financial institutions, while being at the same time a significant source of credit to smaller and informal enterprises. However, Cambodian agribusinesses face a range of market failures and imperfections which limit such investments. Increased investments in modern business structures would thus require a combination of interventions concerning continued improvements in business environment and market failures while addressing issues related to incentive structure of agribusinesses. The main policy focus should be on establishing a level playing field for all types of enterprises—large and small, formal and informal, and domestic and foreign. The following specific actions could improve both business environment and investment climate in the Cambodia:

- Carry out information campaigns aimed at creating more transparent business environment, and address market imperfections arising from asymmetric information, through: a) enhancing financial institutions' knowledge about the opportunities in the agribusiness sector as well as the specific needs of the agribusinesses; b) enhancing business community knowledge about global best practices and market opportunities; and c) establishment of M&E systems to monitor the demand and supply of financing to agribusiness sector and the impact of financing for the performance of agribusiness sector.
- Support the establishment of well-designed and well-placed financial facilities that would not undermine the natural dynamics of financial sector development. These can include: a) targeted lines of credit aimed at achieving specific policy objectives such as financing investments and/or reducing the trade credit gap (e.g. trade credit, pre-shipment facilities, lending against export orders); b) targeted technical assistance programs to potential agribusinesses to prepare them for relationships with formal financial institutions (improving financial management systems, business plan development, etc.); and c) provision of technical assistance programs to domestic banks and MFIs to build their lending capacity to agribusinesses.
- Investigate the feasibility of establishing public-private partnerships in warehouse receipt systems, which is suitable with local regulatory and legal conditions. If implemented well a warehouse receipt system can unlock significant lending to agribusinesses using the commodity stocks as collateral. The financial institutions should be part of building such systems, through partnership with the Government and other private sector players.

## Increasing the Efficiency of the Financial Sector and Diversifying Financial Products and Services

**Besides the constraints related to the overall business environment noted above, the imperfections and inefficiencies within the financial sector has adverse impact on the level of investment in agribusiness sector.** The large amounts of liquidity that exist in the Cambodian financial system and non-performing loans are the main sources of inefficiencies in the financial sector. These inefficiencies are ultimately reflected in the intermediation margins and lending behavior of the financial institutions. While the Government needs to take the lead in addressing the inefficiencies of financial systems, financial institutions also need to take necessary steps to address these issues. The following recommendations summarize the key policies and actions:



- Establish liquidity management tools such as repos and reverse repos, interbank and money markets.
- Prepare necessary regulatory and legal environment which would encourage the broadening of the lending services by financial institutions and increase the value-added in the sector, without creating excessive regulatory burden. The proposed instruments would include tax incentives for leasing, factoring, pre-shipment facilities, LOCs, etc.
- Support development of appropriate non-lending services by financial institutions such as promotion of use of existing collateral registry, promotion of movable collateral-backed lending, and micro-insurance.
- Lowering costs and time associated with contract enforcement through training of commercial judges, boosting the capacity of commercial courts, and promoting secondary markets for assets and non-performing loans
- Improve loan appraisal and monitoring processes and capacity by financial institutions according to international standards through investments in staff skills and IT platforms for better credit monitoring systems.
- Improve prudential loan supervision practices by financial institutions, while simplifying the loan approval procedures to better meet the operational needs of agribusinesses.

**The matrix below summarizes the proposed actions that relate to the study findings and conclusions.** These actions require close coordination of various public and private entities, including banks and industry associations. Therefore, an administrative/institutional framework should also be set up to ensure smooth decision-making and policy implementation. Given the range and nature of the issues involved, the decision on appropriate policy instruments requires significant specialized expert knowledge. Donors have an opportunity to support this process by providing such advisory services through technical assistance programs.

### Summary Matrix of Proposed Policy Actions

Constraint/Policy Issue	Possible Solutions	Potential/Actual Responsibility	Expected Results
Widespread informality among agribusinesses limits linkages with financial institutions and imposes constraints for growth.	• Clarify the privacy rules of enterprise financial information and disseminate information to enterprises;	NBC, MEF, Ministry of Justice	Medium-term
	• Develop regulations which enforce privacy of financial information and prevent the disclosure of financial information without court order to official entities;	NBC, Financial institutions	Medium-term
	• Adopt universal and clear procedures on storing and access to client information by financial institutions;	NBC, Financial institutions	Medium-term
	• Conduct training on privacy issues and carry out awareness campaigns for agribusinesses;	NBC, Financial institutions	Medium-term
	• Review the enforcement methods and practices for tax and regulatory compliance;	MEF	Short-term
	• Review the methodology and practice of enforcement of rules and regulations that govern the conduct of businesses and revise these where necessary;	MEF, Ministry of Commerce (MOC)	Short-term
	• Design and conduct training about the new policies among officials in tax and regulatory enforcement.	MEF, Industry Associations	Medium-term

Constraint/Policy Issue	Possible Solutions	Potential/Actual Responsibility	Expected Results
Cambodian agribusinesses face a range of market failures and imperfections which limits investments into modern agribusiness structures and practices.	Establish level playing field among agribusinesses:		
	• Enforcement of rule of law and existing regulations which govern agribusiness sector;	Judiciary	Medium-term
	• Enforce the independence of court systems;	Judiciary	Medium-term
	• Improve governance systems which enhance the transparency of regulatory system.	Judiciary	Medium-term
	Establish financial facilities:		
	• Provide targeted lines of credit aimed at achieving specific policy objectives such as financing investments and trade credit;	MEF	Short-term
	• Provide targeted technical assistance programs to agribusinesses to prepare them for relationships with formal financial institutions (improving financial management systems, business plan development, etc.);	MEF, Financial Institutions	Short-term
	• Provide technical assistance programs to domestic banks and MFIs to build their lending capacity to agribusinesses.	MEF, Banks Association, NBC	Short-term
	Support information campaigns and address market imperfections arising from asymmetric information:		
	• Enhance financial institutions' knowledge about the opportunities in the agribusiness sector and the specific needs of the agribusinesses;	MEF, Ministry of Agriculture, Forestry and Fisheries (MAFF), MOC, Industry Associations	Medium-term
• Enhance business community knowledge about global best practices and market opportunities;	Industry Associations	Medium-term	
• Build capacity of business and trade associations;	Banking and Industry Associations	Short-term	
• Develop an information exchange platform between financial institutions and business associations;	MEF, MOC, Industry Associations	Medium-term	
• Establish M&E systems to monitor the demand and supply of financing to agribusiness sector and the impact of financing for the performance of agribusiness sector;	MEF, MAFF, MOC, Financial Institutions	Medium-term	
• Investigate the feasibility of establishing public-private partnerships in warehouse receipt systems.	MEF	Medium-term	

Constraint/Policy Issue	Possible Solutions	Potential/Actual Responsibility	Expected Results
High intermediation margins and sub-optimal lending behavior of banks and MFIs caused by financial sector inefficiencies.	<ul style="list-style-type: none"> <li>Establish liquidity management tools such as repos and reverse repos, interbank and money markets;</li> </ul>	NBC, MEF	Short-term
	<ul style="list-style-type: none"> <li>Prepare the regulatory and legal environment to encourage the broadening of the lending services (eg. tax incentives for leasing, factoring, pre-shipment facilities, LOCs, etc.);</li> </ul>	MEF, NBC, Financial Institutions	Medium-term
	<ul style="list-style-type: none"> <li>Support development of appropriate non-lending services by financial institutions (eg. use of collateral registry, movable collateral-backed lending, and micro-insurance);</li> </ul>	NBC, MEF	Short-term
	<ul style="list-style-type: none"> <li>Lowering costs and time associated with contract enforcement through training of commercial judges, and boosting the capacity of commercial courts;</li> </ul>	Ministry of Justice	Medium-term
	<ul style="list-style-type: none"> <li>Promoting secondary markets for assets and non-performing loans;</li> </ul>	Financial Institutions, NBC	Short-term
	<ul style="list-style-type: none"> <li>Improve loan appraisal and monitoring processes and capacity by financial institutions through investments in skills and IT platforms;</li> </ul>	Financial Institutions, NBC, Industry Associations	Short-term
	<ul style="list-style-type: none"> <li>Improve prudential loan supervision practices by financial institutions;</li> </ul>	NBC	Short-term
	<ul style="list-style-type: none"> <li>Simplifying the loan approval procedures to better meet the needs of the agribusinesses.</li> </ul>	Financial Institutions	Short-term



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# 1. INTRODUCTION

## 1.1 Background and Context

**Agriculture has been a mainstay of the Cambodian economy.** It has seen significant growth throughout the 2000s and showed a significant resilience against external shocks during the 2008/09 economic and financial crisis. The sector's performance has contributed to the growth of agribusiness enterprises as more raw materials become available for trading and value-added processing. While the Cambodian agribusiness sector is still largely traditional when compared to its regional peers, it has shown some promise as demonstrated by rapid export growth of milled rice.

**Agribusiness enterprises do not operate in isolation from the rest of the economy.** The state of production of agricultural raw materials, the state of the financial sector, and the nature of the financial sector's engagement with the real sector activities, as well as broader issues that affect private sector development all impact the development of the agribusiness sector. The current study seeks to analyze some of these linkages. It will focus specifically on the role the financial sector has played in the growth and development of the agribusiness sector.

**The study builds on the existing analytical work on agricultural and small and medium enterprise (SME) finance in Cambodia.** It seeks to explain the complex web of issues related to access to finance and how these relate to broader private sector development issues in Cambodia through the lens of new data and analytics.

**The study was carried out in three major phases.** The first phase was to determine a methodology to gather new information on linkages between agribusinesses and financial institutions. The second phase involved a survey of financial institutions (banks, microfinance institutions, and insurance companies) and 1,011 agribusinesses in Cambodia. The third phase emphasized analyzing the data and compiling a report that highlighted the key findings for the target audience. The sections below provide the broader context of the sector issues related to access to finance by agribusinesses, and review the previous available analytical work.

### 1.1.1 Agricultural Production and Processing

**Cambodia's agricultural sector has emerged as a key driver of the country's economic growth over the past ten years.** The sector is also a socially important one, employing about 70 percent of the country's labor force. There is thus a clear link between improving the value-added of the agricultural sector and alleviating poverty in Cambodia, which is recognized by the priority given to agriculture in government strategic documents and spending programs.

**Cambodia has performed remarkably well in maintaining high agricultural growth rates over the last decade and has the potential to continue doing so given its relative abundance of agricultural land and water.** The average annual sector value-added growth rate was 4.6 percent over the 2001–2011 period. This was driven primarily by the crop sectors where paddy production makes up about one-fourth of agricultural GDP composition.

The annual growth rate of crop value-added was 6.7 percent from 2001–2011, compared to 3.3 percent in the livestock sector and 2.7 percent in the fisheries sector.

**Cambodia’s rice harvests have been rising significantly since the early 2000s, powered by improved and expanded irrigation and attractive farmgate prices.** The total production in 2012 was estimated at about 9.3 million tons. The production gains have fueled a burgeoning exportable surplus that is informally shipped to Thailand and Vietnam by well-financed traders who buy paddy. It has been estimated that the exportable surplus of paddy may have reached about four million tons in 2012. Typically, about one-third of the surplus paddy flows west to Thailand and the balance east to Vietnam.

**While rice still dominates the crop sub-sector, there has been significant growth in the production of upland crops** (maize, cassava, soya), which relates to the transformative changes shown in Table 2. Like paddy rice, most of these crops are exported to neighboring countries as raw materials because domestic processing is limited beyond rice. In addition to agricultural commodities, various agricultural inputs (fertilizer, seed, and pesticides) and machinery are imported. A rich network of Cambodian traders who have established long-term relationships with their cross-border buyers dominates the cross-border trade with Vietnam and Thailand. The trade benefits from the higher prices of agricultural commodities paid by Thai and Vietnamese buyers. This type of trade also opens up possibilities of arbitrage between different currencies for Cambodian traders.

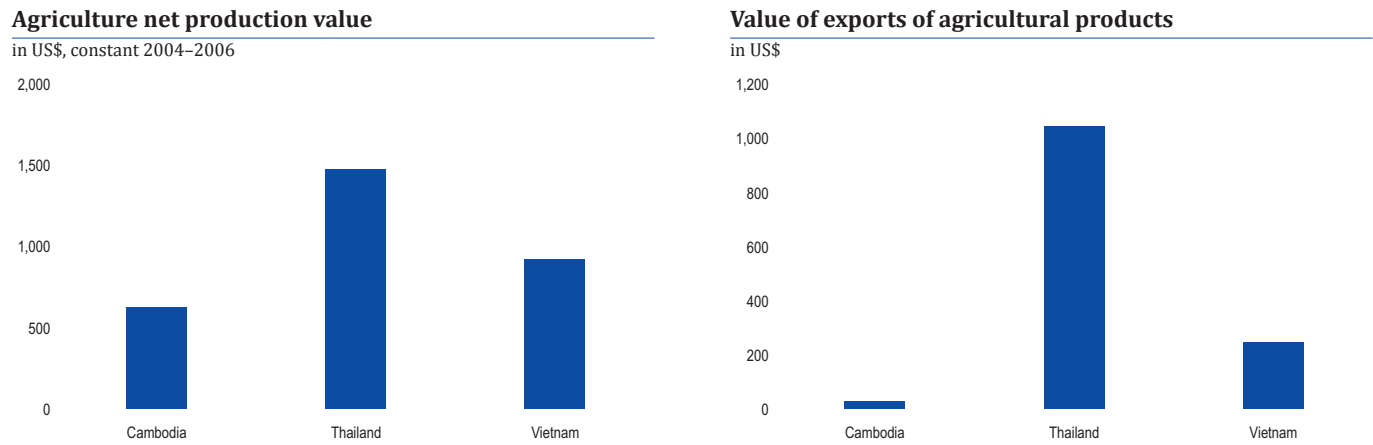
**Table 2. Production Trends of Selected Crops (2001–2011)**

in tons						
	2001	2004	2006	2008	2010	Annual growth 2001–2011 (%)
Rice	4,099,016	4,170,284	6,264,123	7,175,473	8,249,452	7.2
Maize	185,589	256,665	365,836	611,865	773,269	15.3
Cassava	142,262	362,050	2,200,280	3,676,232	4,248,942	40.0
Soyabean	24,658	110,305	100,100	108,449	156,589	20.3
Mung bean	17,153	45,041	60,954	38,600	71,526	15.3
Sesame	8,957	54,954	34,946	27,286	29,916	12.8
Sugar cane	169,302	130,363	176,740	385,238	365,555	8.0
Rubber	-	-	36,400	37,050	42,247	3.0

Source: Ministry of Agriculture, Forestry and Fisheries (MAFF).

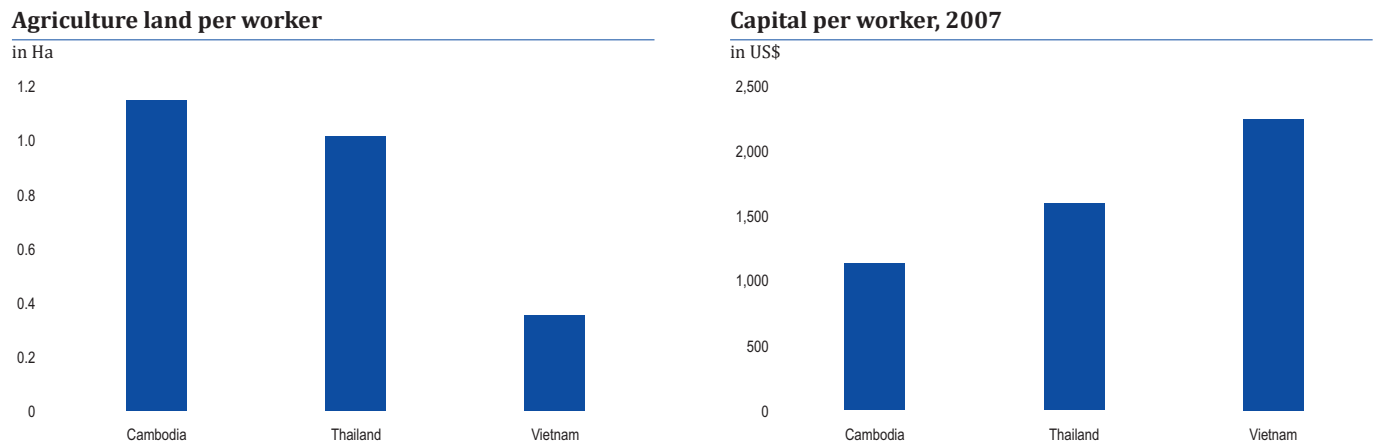
**Despite the high growth rates the value-added of the agriculture sector has remained limited when compared to neighboring countries.** While agriculture net production value per worker has been catching up with Vietnam, the value of formal agricultural exports per worker has remained miniscule (Figure 4). Low levels of capitalization of agricultural production systems (for example, investments in irrigation, land improvement, farming structures and equipment, etc.) limit the utilization of the country’s land and water abundance, especially in upland areas where population densities are generally lower and opportunities for expansion largest (Figure 2). In fact, according to data from FAOSTAT, the annual growth rate of capital stock per hectare of agriculture land was essentially zero over the 2001–2007 period compared to 1.4 percent annual growth in Thailand and 1.9 percent annual growth in Vietnam over the same time period. This reinforces the notion that the sector has been largely a low value raw material supplier to neighboring countries.

**Figure 4. Despite High Growth Rates, Agricultural Production Value and Exports per Worker are Among Lowest in the Region**



Source: FAOSTAT.

**Figure 5. Cambodia Agriculture is Characterized by Land Abundance but Capital Shortage, including Irrigation Infrastructure**



Source: FAOSTAT.

**Cambodia's agribusiness sector is largely traditional in nature and dominated by small informal family enterprises.** However, the sector is being impacted by a host of transformative changes that are expected to shape the structure of the industry. These changes include: (i) productivity improvements which continue to generate increasing surpluses and diversity of raw materials available for domestic value added processing; (ii) emergence of rice milling industry as a leader for domestic agricultural export growth, which could pave the way to the entry of other commodities into regional and world markets; and (iii) increasing regional integration through economic and logistics corridors. In the Greater Mekong Subregion (GMS), a number of initiatives are expected to influence the development of Cambodia's agribusiness sector. These initiatives include strengthening regional integration through infrastructure development in the East-West and North-South corridors, logistics improvements, and supporting trade measures such as integration of customs and Sanitary and Phytosanitary measures and food safety systems. This regional integration could potentially improve Cambodia's link to major ports in the region and facilitate development activities in its own port infrastructure.

**As a consequence of these trends, there are several visible manifestations of structural transformation in the agriculture and agribusiness sectors.** These include modernization and professionalization of farm and business management systems and production processes, access to increasingly sophisticated higher value markets, an increasing willingness by industry leaders to innovate and adopt new technological solutions, increasing access to credit, and an increasing interest from foreign investors to invest in Cambodia's agribusiness sectors, either through joint ventures or alone. The rice milling industry is the manifestation of these changes. This sub-sector has seen major investments in modern rice mills and polishing factories. For example, the milling capacity of the larger mills nearly quadrupled between 2009 and 2012, reaching an estimated 350 tons/hr by mid-2012. It is expected that the subsector's capacity will have doubled by the end of 2013. Not only has the overall capacity of the milling sector risen dramatically, so has the size of the new mills. In 2009, only two rice milling companies had a capacity of 20 tons/hr or higher, while most of the larger companies had capacities of 10–12 tons/hr. Today, there are seven firms that have a capacity of at least 20 tons/hr, including three that are capable of milling 30 tons of paddy in a single hour, and these numbers are increasing rapidly. The capacity of older mills, however, is quite small.

**As a result of investments in the milling sector, formal exports of milled rice from Cambodia have been growing at a steady pace since 2009 after EU granted duty-free imports for its rice under Everything But Arms (EBA) agreement.** It is expected that its rice exports, which averaged less than 6,000 tons annually from 2000–2009, will reach about 350,000–400,000 tons by the end of 2013. These exports are driven by about 20 larger rice mills/polishers, with the top five firms accounting for about 60 percent of total exports in 2012 and top 10 for about 80 percent of exports. The rest are about 1,000 commercial mills, which produce mainly for domestic markets, although a few may be involved in exports as sub-contractors to larger mills and polishers.

## Agricultural Policy Environment

**Macroeconomic conditions and sector policies in Cambodia have had a positive impact on growth rates.** Cambodia has maintained a conducive and relatively distortion free policy environment, which has encouraged growth of private sector investments. The neutral policy environment could indicate that: (a) the agriculture sector in Cambodia, especially when supported by the development of agro-processing industry, may have the potential to yield high returns on investments; and (b) public investments in the agriculture sector, while still limited when compared to neighboring countries, may have been relatively efficient and, as such, more public spending could contribute to higher growth.

**An open trade policy has fueled the growth in sale of production of various crops through informal cross-border trade.** This cross-border trade has provided incentives to farmers who have been able to sell their surplus production to Thai and Vietnamese buyers, while the agribusiness sector has been developing its own processing and export capacities. Cambodian agricultural exports to the region are expected to further increase as ASEAN is liberalizing agricultural trade, including sensitive products such as rice. In order to capture these opportunities the Government has been investing in road and rail infrastructure to improve regional connectivity and is exploring options to reduce transport costs through river logistics.

**In 2010, the Government approved the policy on the promotion of paddy production and exports.** The policy identifies three levels of action and investment, including short- (quick wins) medium- and long-term measures, and covers a wide range of issues—institutional development, a regulatory and legal framework, and trade facilitation



for specific investments. The policy is based on a two-pronged strategy: (i) revert informal paddy exports to formal rice exports (without banning paddy exports); and (ii) enhance competitiveness along the value chain.

**Related to the policy environment are rapid changes in food consumption habits.** For example, there is some evidence that per capita annual rice consumption in Cambodia may have peaked and is now on a declining trend. Data from the Cambodia Socio-Economic Survey (CSES) show that average annual per capita rice consumption declined from 150 kg in 2004 to 141 kg in 2009 (six percent). This indicates that Cambodians have started to diversify their diets away from rice and this trend is expected to accelerate with increasing incomes fueled by high GDP growth. The important implication of this trend is that domestic surpluses of paddy that are available for exports are expected to continue to grow in coming years.

**While the current policy environment is largely focused on rice, the Government has recognized that Cambodian agriculture would need to undergo dramatic transformation into modern, diversified agriculture in order to take advantage of emerging trade opportunities<sup>1</sup>.** The speed of such transformation would depend on how Cambodia would be able to address emerging competitive pressures on the agriculture sector. Some of these pressures, which are related to factor dynamics, include increasing scarcity and cost of labor, and increasing pressure and conflicts over land and water resources. Land will continue to remain the key development issue in Cambodia as development of modern farming systems and access to raw materials available for agro-processing will depend on smallholder land holdings that are conducive for mechanization and scale.

### **1.1.2 Financial Sector Background and Issues**

**Cambodia's financial sector has experienced significant growth over the last decade.** As of end 2012, there were about 70 financial institutions, up from 41 in 2007, licensed by the National Bank of Cambodia (NBC), of which 32 are MFIs and 31 are commercial banks; the remaining seven institutions are classified as specialized finance institutions. The financial system has been growing considerably as total assets of the banking sector increased about 80 percent during the period between 2009 and 2012, reaching about USD 9 billion. In parallel to these trends, both lending and deposits have recorded impressive growth rates. Deposits nearly doubled during the period between 2009 and 2012, reaching about USD 6 billion. Lending also doubled and reached about USD 5 billion during the same period. Despite these changes, the sector is still dominated by the top five banks that control about 80 percent of total banking assets. Furthermore, the system is highly dollarized. About 96 percent of deposits and virtually all lending is denominated in dollars. There is a large pool of liquidity in the financial sector as about almost 40 percent of banking assets are in the form of cash and quasi-cash assets, which earn little return.

**MFI sector in Cambodia is also vibrant and some MFIs have recently been allowed to take deposits.** Following this, MFIs started to attract considerable amount of deposits and their lending increased spectacularly. Total MFI lending was equal to about 15 percent of total bank lending in 2012. Today, ACLEDA Bank (a former MFI) and a number of licensed microfinance institutions are driving a robust expansion of the financial access frontier in

1 It should be noted that while the diversification goal is commendable, there is nothing wrong with continuing to focus also on rice, where Cambodia seems to have a comparative advantage. Rice played an important role in igniting the export-oriented sector development process in Thailand in the 1960 and 1970s, and in Vietnam in the 1990s, as it does in Cambodia today. Both countries are still major exporters of rice today, while having also diversified simultaneously into high value agricultural products exports.

Cambodia. The geographic spread of the microfinance industry branch network is particularly impressive. The combined industry network (ACLEDA and the MFIs/MDIs) today reaches almost all of the villages in Cambodia. MFIs make credit available mainly through solidarity group loans and individual loan products. They have very similar margin structures and have operations that are similarly focused on the lower end of the market, with little diversification into larger loan sizes. Recently, however, some of the bigger MFIs/MDIs have developed lending products in the USD 10,000–USD 50,000 range; these are targeted to agribusinesses.

**Cambodia has recorded impressive gains in terms of financial inclusion.** The total number of account holders increased about ten-fold in the period between 2004 and 2011 and reached about 1.5 million. While not as spectacular as the increase in number of account holders, the increase in number of borrowers has also been significant. The number of borrowers doubled between 2005 and 2012 and reached about 300,000.

**The financial system has started to provide affordable transactional services such as no fee deposit accounts, and money transfer services are provided with nominal fees.** The geographical footprint of branch networks of the banking system covers all provinces and towns of the country. Given the high population densities around major urban centers, virtually the entire population of Cambodia now lives in close proximity of some bank branch.

**Despite significant improvements in the financial sector, Cambodia’s financial market shows a large ‘missing middle’, that is, a gap between large formal firms accessing corporate finance and informal micro-firms accessing micro-credit.** In part, this ‘missing middle’ is explained by the characteristics of the market itself. The Cambodian small- and medium-enterprises (SME) market is dominated by informal micro-enterprises. The majority of business establishments in Cambodia have fewer than 10 employees, a common technical definition of a ‘microenterprise’<sup>2</sup>. Around 70 percent of firms are owner-operated. The 2009 survey by IFC found that fewer than 30 percent of firms register locally (and only half at the national level), and fewer than five percent pay taxes. Such SMEs are ill equipped to satisfy the banks’ prudent underwriting and collateral requirements. Many SME firms struggle to produce credible business plans and financial statements; very few are independently audited and a few have registered land titles or other fixed assets to offer as collateral.

**Limited product offerings and banks’ preference for land collateral further limits their linkages with SMEs.** The products that are typically used to finance SME firms in other markets—such as leasing, factoring, inventory or accounts receivable financing, or loans backed by movable property (such as equipment)—are rarely available, if at all, in Cambodia. Banks rely almost exclusively on land collateral, and loan-to-value ratios are typically around 30 percent. Financial institutions have not been actively using the recently created movable property registry. Bank managers express doubts that courts would understand secured transactions on movable property, that they would enforce contracts, and that the cost of processing claims could be recovered.<sup>3</sup>

**At the same time, some improvements and innovations are being introduced that will help to increase the outreach of financial services.** Mobile payments services are evolving rapidly and hold the potential to greatly extend access to financial services to the rural and agricultural sectors. The National Bank of Cambodia has developed

2 Two different business establishment surveys provide similar views of the business sector in Cambodia. The 2009 *Nation-wide Establishment Listing of Cambodia* by the NIS surveyed 376,761 businesses, and the 2008 *Listing of Business Establishments in Cambodia’s Provincial Towns and Selected Urban Areas* by IFC identified 63,500 establishments.

3 Views of bank managers are taken from discussions during the March 2010 Financial Sector Assessment mission.

an enabling regulatory and supervision regime for microfinance over the past ten years. The MFI licenses create an opportunity for the best of MFIs to grow with an expanded range of financial services; they allow for organic growth of the sector even as new capital requirements increase for commercial and specialized banks. The Government also launched a private sector based credit bureau in 2011. The credit bureau could offer an efficient vehicle for the banking industry to check the credit history of potential customers.

### **1.1.3 Private Sector Development and Issues**

**Private sector enterprises in Cambodia are generally small and the sector is highly fragmented.** According to a survey by the Cambodian Investment Board in cooperation with Japan International Cooperation Agency (JICA), there were about 503,000 business establishments in Cambodia in 2011 with average annual revenue of about USD 27,000. About 40 percent of the revenue generated by all businesses is generated by establishments employing two people or less. Yet, the private sector enterprises have become an important source of export revenues and employment for the country. For example, textiles, garments and the leather industry, which is the largest source of exports, generate employment for about ninety percent of 600,000 people employed by the manufacturing sector. An estimated 165,000 people are employed by hotels and restaurants, which is about nine percent of total employment in business establishments.

**The agribusiness sector represents a significant component of SMEs.** It was estimated that about 32 percent of SMEs were engaged in agriculture and agribusiness, followed by those engaged in services (20 percent of SMEs surveyed), manufacturing (18 percent), hospitality (16 percent), retail sales (eight percent), and wholesale (seven percent)<sup>4</sup>. A survey by JICA in six major provinces also found that a significant number of SMEs (about 40 percent of the sample) were in the agribusiness sector<sup>5</sup>. Of the agribusiness SMEs surveyed by IFC, a significant majority were micro-enterprises (79 percent) with fewer than 10 employees. Thirty four percent of agricultural enterprises had annual turnovers of less than USD 120,000, and 36 percent had turnovers of between USD 120,000 and USD 600,000.

**While several factors constrain the competitiveness of agribusinesses in Cambodia, limited access to finance is one of the biggest constraints.** Agribusiness firms have greater and more varied financing needs than other SMEs. They need large amounts of working capital to purchase raw materials during harvest times, and they need term capital to upgrade or expand their processing equipment. While agribusinesses make up about one-third of all SMEs in Cambodia, their financing needs are about half of total financing needs of SMEs. The survey of 124 agribusinesses in Cambodia in 2009/10<sup>6</sup> showed that their demand for bank finance was about USD 215,000 per enterprise, of which about two-thirds was needed for long-term loans.

**While banks have been facing high levels of liquidity they have been reluctant to lend to agribusinesses in general due to weak financial systems, which makes enforcing loan agreements and liquidating collateral very uncertain.** The IFC survey found that only 59 percent of enterprises prepare financial records, which is consistent with the JICA survey that found the ratio to be 50 percent. Of the enterprises that prepare financial records (59 percent), the majority (84 percent) have informal financial records that consist of profit and loss

4 IFC. "Understanding the SME Sector in Cambodia and their Need for Financial Services and Products." 2010.

5 JICA. "The Preparatory Survey on the SME Two-Step Loan Project in Kingdom of Cambodia," March 2010.

6 This survey covered less than one percent of all agribusiness SMEs in Cambodia.

statements only. The lack of financial information resulting from weak accounting standards and the absence of a credit information sharing system make it difficult for banks to evaluate the credit-worthiness of the borrowers.

**While the country has been trying to diversify economic activities, there remains a set of private sector issues that are related to overall business environment.** The survey of Doing Business conducted by the World Bank, ranks Cambodia 133 out of 185 countries in 2013, up from 141 in 2012. The Doing Business survey indicates serious problems in various key areas such as starting businesses, obtaining permits, enforcing contracts, resolution of insolvency, and trading across borders. The recent Investment Climate Assessment (ICA) indicates that constraints related to the institutional underpinnings of the business environment are viewed as either major or severe. Anti-competitive environment, regulatory issues and corrupt practices are placed far ahead of important business needs such as access to finance, access to land, and skills. These perceptions are fairly robust across all types of businesses (for example, formal, informal, small, micro, etc.) and all sectors including agricultural processing.

## 1.2 Objectives of Study

**Given the importance of and the potential of agribusinesses in Cambodia, the sector will continue to attract attention.** In order to take full advantage of prospective opportunities the sectoral dynamics must be well understood. The nature of agribusinesses and their financing are key elements of this dynamic. Despite a large volume of work on the agricultural sector in Cambodia, there is no comprehensive data and information about the characteristics of agribusinesses and their linkages with the financial sector.

**The study sheds light on the nature and level of utilization of financial services by the agribusiness sector and their interface with the financial sector.** The primary aim of this diagnostic was to: (i) identify barriers to access to finance by the agribusiness sector; and (ii) highlight the findings to policymakers and financial institutions. The study will provide additional value to already existing analytical work on Cambodia in the areas of agriculture value chain and SME development.

### 1.2.1 Design Features of the Study

**Financial sector linkages with agriculture related economic activities have several important dimensions.** These range from lending to agriculture related activities to utilization of various financial services such as deposits, transactional services, and foreign exchange services. Unfortunately, information on these aspects is not readily available. Financial institutions and the Central Bank simply report aggregate credit to primary sectors. Credit to agriculture related activities is captured within different sectoral categories. For example, credit to rice mills is usually reported within the credit to the manufacturing sector. Similarly, credit to input providers or crop collectors is classified as credit to the trading sector. Data on deposit holders, money transfers and foreign exchange services does not identify whether clients of these services are part of the agricultural value chain. These difficulties complicate the identification of the magnitude of financial sector involvement in the agribusiness sector from the publicly available reports of financial institutions and the Central Bank. Furthermore, information from other sources such as government and trade associations is limited and does not convey much in this regard either.

**Given the lack of information that could be used to assess the financial sector's involvement in the agribusiness sector of Cambodia, the study opted for a comprehensive enterprise survey as a primary source of information.** The survey was designed to answer a wide range of questions on the financial linkages of agribusinesses, including: (a) better interpretation of data reported by financial institutions; (b) identification of gaps between supply and demand for financial products and services; and (c) a view of perceptions on both sides about each other. Given these considerations, two distinct questionnaires, one for agribusinesses and the other for financial institutions, were prepared.

**There is a high degree of concentration within the banking sector in Cambodia.** Thus, surveying just the top five banks would give almost the entire picture with respect to the supply side. All these banks are located in Phnom Penh. On the other hand, the demand side survey aimed to cover the wide range of types of agribusinesses across the country. Agribusinesses were separated in terms of their main business line, such as millers, crop collectors, traders, input suppliers, and equipment sellers, and survey localities were identified. Such coverage made it possible to have location specific results that provide important information regarding general access to finance issues.

**The survey was structured to begin with a series of questions termed as identifiers (for example, form, size, activities).** These were followed with questions about the place of the surveyed business within the agricultural value chain and its relation with the other agribusinesses. These questions also intended to capture any financial relationship within the agribusinesses such as credit sales (for example, sale of equipment or seeds and fertilizers on credit) and advance payments (for example, payments by crop collectors or millers to farmers for cultivation) within the value chain. The next set of questions was specially targeted at utilization of various financial services (deposits, loans, money transfers, etc.) and any future plans to use these services (such as financing of an expansion of business). Finally, a series of questions were asked to understand the perceptions of agribusinesses about financial institutions, such as ease of doing business and cost of financial services.

**On the other hand, the questionnaire for financial institutions was aimed at: (a) understanding the state and development pattern of the financial sector; and (b) getting financial institutions to identify their agribusiness clients and provide the aggregate data for these clients.** In addition, the survey also had questions related to money transfers to and from Phnom Penh and foreign exchange purchases and sales. These questions were asked to determine whether transaction volumes coincide with agricultural cycles.

### **1.2.2 Survey Implementation**

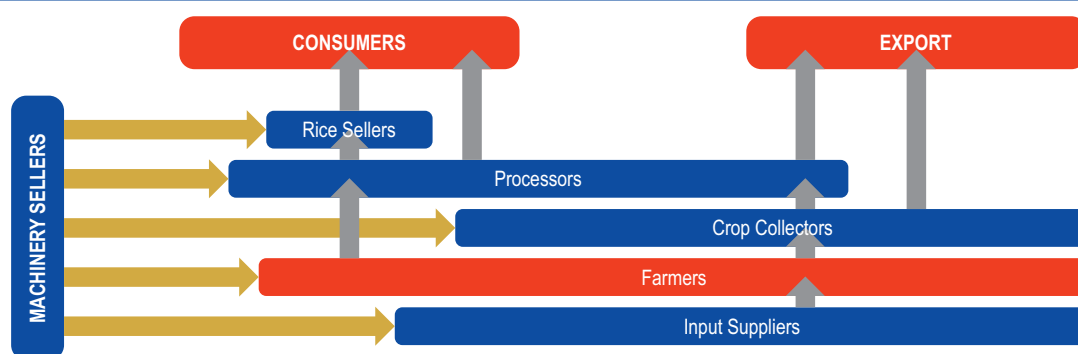
**Implementation of the agribusiness survey took place from October 2011 to January 2012.** Converting of data to digital form and compilation lasted about three months. The supply side survey, which was prepared after consultation with the commercial banks, was shared with the top banks, MFIs and insurance firms. Only five financial institutions responded to the survey. However, having responses from the two largest banks in Cambodia with good presence in rural areas was comforting. Thus, the data from the supply survey, together with the data obtained from National Bank of Cambodia (NBC) made it possible to get a good picture of financial services as presented in Annex A.

### 1.2.3 Sample Size, Typology and Locations

The demand side survey is based on a sample size of 1,030 agribusinesses. According to 2011 data from the Ministry of Industry, Mine and Energy (MIME), there were around 13,809 formally registered agro-processing enterprises in Cambodia that received operating licenses from the Ministry. This gives a minimum acceptable sample size of 1,011 enterprises for the sample to be sufficiently representative of all agro-processing enterprises in Cambodia, by applying 99 percent confidence level and accepting three percent margin of error. The estimation of the whole universe of agribusinesses in Cambodia is complicated by widespread informality which excludes such firms from public databases. Notwithstanding this qualification, extensive consultations in the field with key stakeholders and experts indicate that a sample size of about 1,000 enterprises provides satisfactory representation of the nature and financial needs of the agribusiness sector.

Given their very different nature and financing needs from agribusinesses, the survey did not include primary agricultural producers. The overall range of Cambodian agribusiness activities is rather limited. For example, processing is virtually limited to rice milling. Trading also largely revolves around paddy, and rice traders will generally trade in several different crops around the year and according to season. Paddy is being traded both for domestic markets and to neighboring markets through cross-border trade. Crops other than paddy, such as soybeans, cassava, maize, and cashew are mainly traded in raw form through cross-border trade to neighboring countries. Rice sellers operating in domestic markets (wholesale and retail) make up a significant share of the sample. Thus, the survey included four categories of agribusinesses: a) input suppliers (that is, fertilizer, pesticide, seed sellers); b) crop collectors (for example, traders); c) farm machinery sellers (for example, sellers of tractors, power tillers, water pumping machines, harvested machines, etc.); d) processors (rice mills and animal feed processors); and e) rice sellers (for example, retail and wholesale sellers). The basic typology of agribusinesses in the sample is depicted in Figure 5.

Figure 6. Typical Actors in Cambodia Agribusiness Value Chain



The volume of transactions by various value chain actors recorded in the survey represents a substantial proportion of the total national production. For example, the total quantity of paddy purchased by the interviewed processors (1.24 million tons) represents 16 percent of the national paddy production. For other products, transactions recorded by the crop collectors in the sample account for 25 percent (229,000 tons) of national maize production, 85 percent (229,000 tons) of national groundnut production, and 11 percent (360,000 tons) of total national cassava production. The survey captured the sale of about 226,597 tons of fertilizer and 16,785 tons of pesticides, which make up about 80 percent of total national sales of these agro-inputs.



In total, 1,030 enterprises were interviewed, which makes this the most comprehensive survey of agribusiness SMEs in Cambodia<sup>7</sup>. The composition of the sample is presented in Table 3 and Annex B. Processors are the largest category, comprising about one-third of the total sample. About 80 percent of surveyed enterprises were involved in rice related activities.

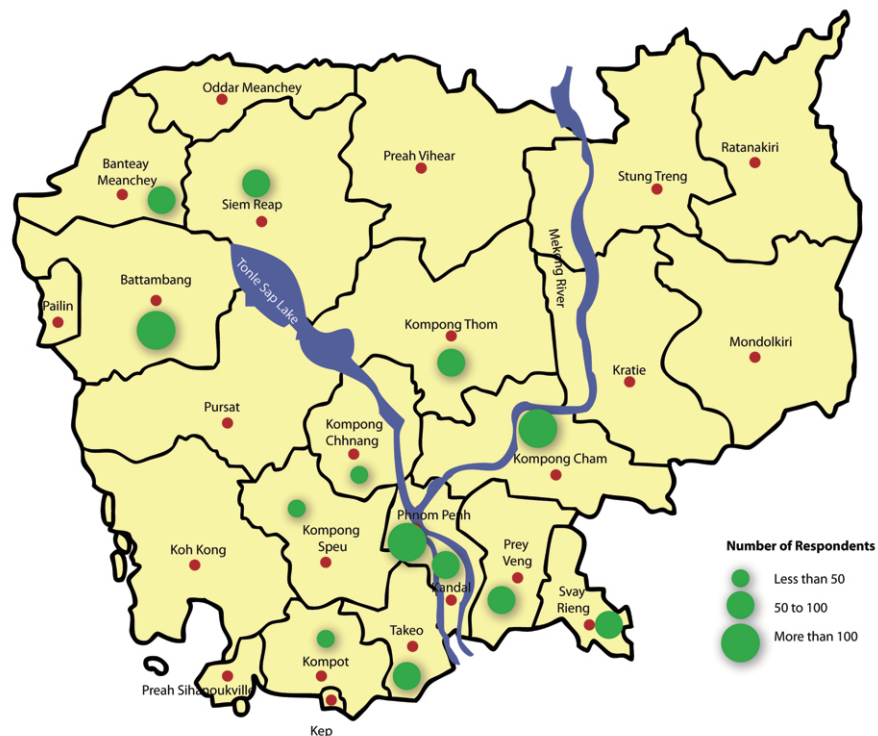
Geographically, the survey identified thirteen provinces out of twenty-four provinces of Cambodia. The provinces were selected based on population size, total crop production volumes, number of SMEs, main border crossing points, and nature of economic activities related to agriculture and agro-processing (Figure 8, see also Annex C for the data on geographical distribution of enterprises). These thirteen provinces cover all major strategic locations for agribusiness enterprises in Cambodia. Altogether, they account for 86 percent of the total population and 89 percent of crop production (rice, maize, cassava, and soybean) and 83 percent of agribusiness SMEs in Cambodia (from MIME database).

**Table 3. Sample Distribution of Agro-Enterprises**

Type of business	Number of sampled units	Percent in terms of sample size
Processors	330	32.0
Input sellers	227	22.0
Machinery sellers	67	6.5
Crop collectors	228	17.3
Rice retailers	178	17.4
<b>Total</b>	<b>1,030</b>	<b>100.0</b>

Source: Survey results.

**Figure 7. Map of Survey Locations**



Source: Generated by BDLINK.

7 The study by IFC 2010, "Understanding Cambodian Small and Medium Enterprise Needs for Financial Services and Products," is based on a survey of 504 SMEs of which 161 are agriculture related. In the IFC 2010 study, "Prospects for Cambodia's Cashew Sub-sector," 80 value chain stakeholders were interviewed. In Goletti 2010, "Emerging Dynamics in the Rice Sector in Cambodia and Implications for Vietnam," a questionnaire was administered to 47 respondents in cross-border trade. In the agro storage survey conducted during the Emerging Food Assistance Project (see ACI and NIRAS 2011 "Emergency Food Assistance Project and Strengthening Institutional Capacity for Emergency Response to Food Crisis and Improving Food Security"), a questionnaire was administered to 127 respondents.

**The geographical distribution of the sample by target provinces was determined based on distribution of agro-processing firms by MIME (2011) and National Institute of Statistics Economic Census of Cambodia (2010) databases.** The geographical distribution of surveyed enterprises reflects largely the distribution of crop production patterns and population of different provinces. The distribution within the provinces also takes into account prior information regarding the concentration of certain actors in certain provinces. So, for example, a large concentration of processors (for example, rice mills) and crop collectors is located in Battambang and Kampong Cham because these are the provinces with higher crop production volumes. Similarly, most rice and machinery sellers are located in Phnom Penh, whereas input suppliers are more evenly distributed across main production centers.

**In addition to challenges created by the informality of agribusinesses in Cambodia, the additional complicating factor was incomplete enterprise contact details in MIME and other public databases.** To address this, the study opted to use the ‘snowball’ survey technique. Under this technique the survey implementation in target provinces started by contacting local authorities and business associations to obtain most up-to-date lists of agricultural enterprises. Processors were normally the starting point for the interviews. Contact information of their trading partners was collected and used to identify and locate subsequent agribusiness enterprises. The same process was then applied to each value chain actor and repeated until the target number of respondents was reached by location.

### 1.3 Organization of the Study

**Survey results related to characteristics of surveyed agribusinesses are presented in Chapter 2.** These findings are presented in a comparative format where similarities and differences are explored across business categories as well as across different size of enterprises. Chapter 3 provides results related to the financial state of surveyed agribusinesses. Key financial measures—such as annual sales, the levels of working capital and fixed assets—are provided in this chapter. Chapter 4 looks at access to finance issues. Findings related to types and volumes of financial services utilized by agribusinesses, types of providers of financial services and their charges are also summarized, as well as perceptions and opinions of agribusiness sector about financial service providers. Chapter 5 extrapolates the survey findings to the entire agribusiness sector in an effort to determine the overall state of financing of agribusiness activities. Key issues related to the general state of the agribusiness sector that affect growth prospects of the sector are also identified and discussed. Finally, a summary of key findings and conclusions, and resulting policy recommendations, are presented in Chapter 6.



## 2. CHARACTERISTICS OF AGRIBUSINESSES AND VALUE CHAIN LINKAGES

**This chapter discusses the key characteristics of Cambodian agribusinesses.** We used the amount of turnover to classify agribusinesses in terms of their size. Annual turnover is also consistent with the classification of agribusinesses by banks and microfinance organizations. Cutoff points of two million (large), 500,000 (medium) and 50,000 (small) dollars were used to classify firms by their size. Other commonly employed measures such as number of employees and total assets were also considered, but they were found not suitable. In the case of employees, data showed limited variation among agribusinesses. On the other hand, agribusinesses in general do not have many assets, which would make it difficult for an asset-based classification.

**Cambodian agribusinesses are mainly small and medium enterprises.** The minimum annual turnover in the sample was USD 5,000 and the maximum USD 31.5 million, with a sample mean of USD 1.34 million. However, there were significant variations from this general description depending on the type of business. Large firms with turnover over USD 2 million represented 15 percent of the sample while medium-sized (500,000 < turnover < 2 million) and small firms (50,000 < turnover < 500,000) made up 64 percent of the sample. At the other end of the spectrum, micro firms (turnover < 50,000) constituted 22 percent of the sample (Table 4 and Figure 8).

**Table 4. Enterprise Distribution by Enterprise Type and Turnover**

in percent

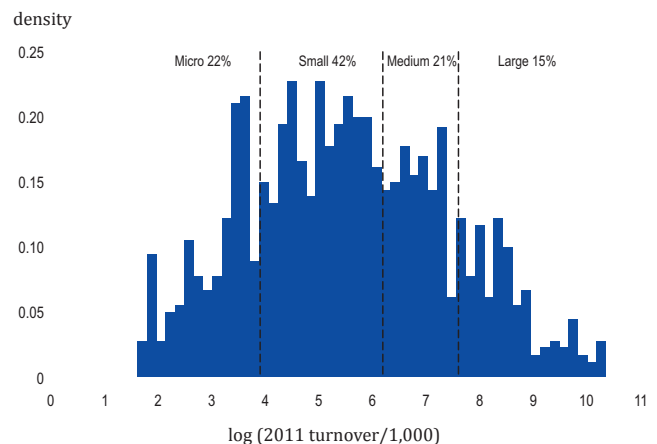
Turnover Classification (2011)	Processor	Input Supplier	Machine. Seller	Crop Collector	Rice Seller	Total
<\$50k	13	43	15	9	30	22
\$50k-\$500k	41	43	48	33	56	43
>\$500k-\$2M	28	10	18	30	11	21
>\$2M	19	5	19	28	3	15
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: Survey results.

**The above classification recognizes the relatively small size of Cambodian agribusinesses—about 85 percent of the sample consisted of firms with annual revenues of less than USD 2 million.** Moreover, the turnover cut-off for large firms was also far less than internationally recognized turnover levels for SMEs<sup>8</sup>.

**Figure 8. Distribution of Agro-Enterprise Sample by Firm Size**

### A. Overall



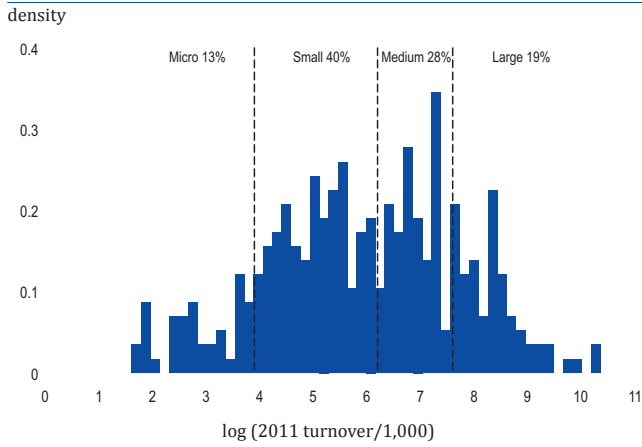
Source: Survey results.

Note: log transformation was used to better visualization purposes.

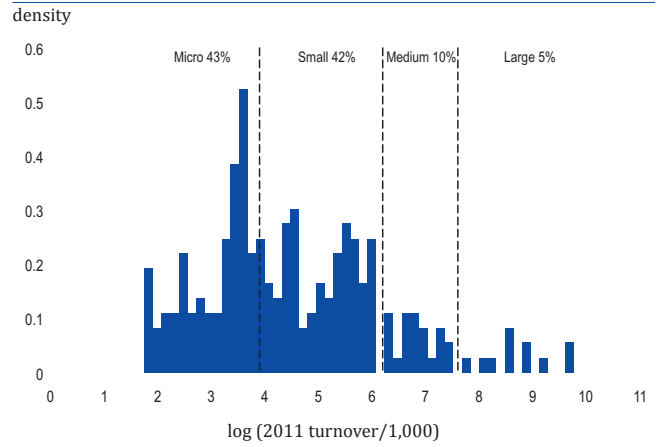
<sup>8</sup> IFC uses 14 million annual turnover as a cut off between SMEs and large firms. In the context of the Cambodian agribusiness sector, this cut-off point is not suitable as there were very few firms that would have qualified as large enterprises.

**Figure 9. Distribution of Agribusiness Categories by Size**

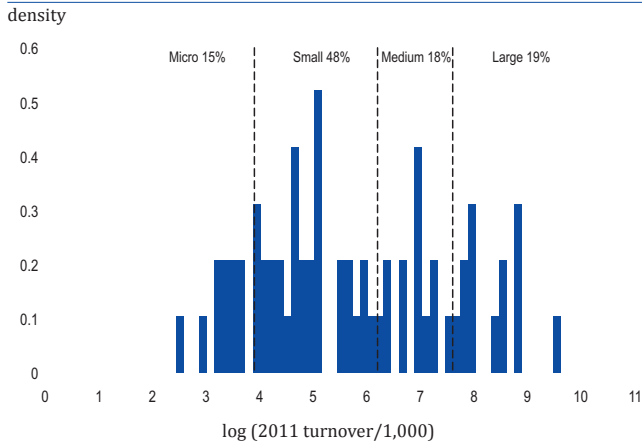
**B. Processors**



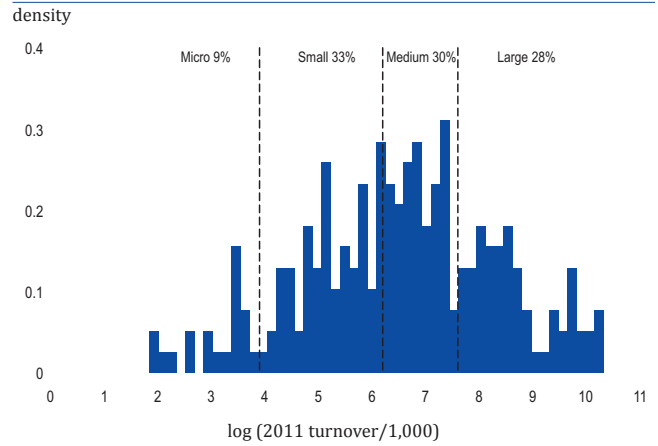
**C. Input Suppliers**



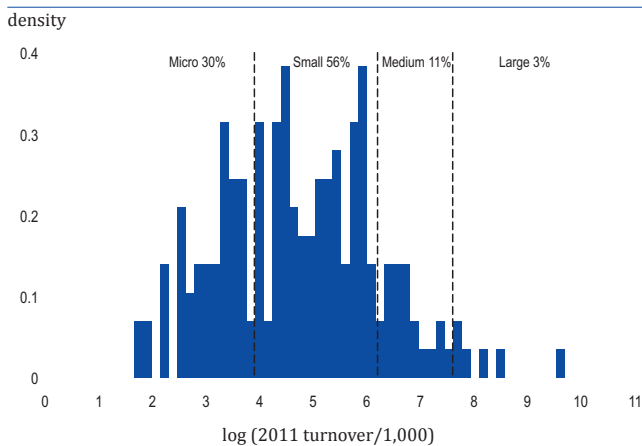
**D. Machinery Sellers**



**E. Crop Collectors**



**F. Rice Sellers**



Source: Survey results.

**There were significant variations in size between different types of agribusiness enterprises.** Processors and crop collectors had the highest share of large firms (19 percent and 28 percent, respectively). These categories also had the least amount of micro firms with 13 percent and 9 percent for processors and crop collectors respectively.

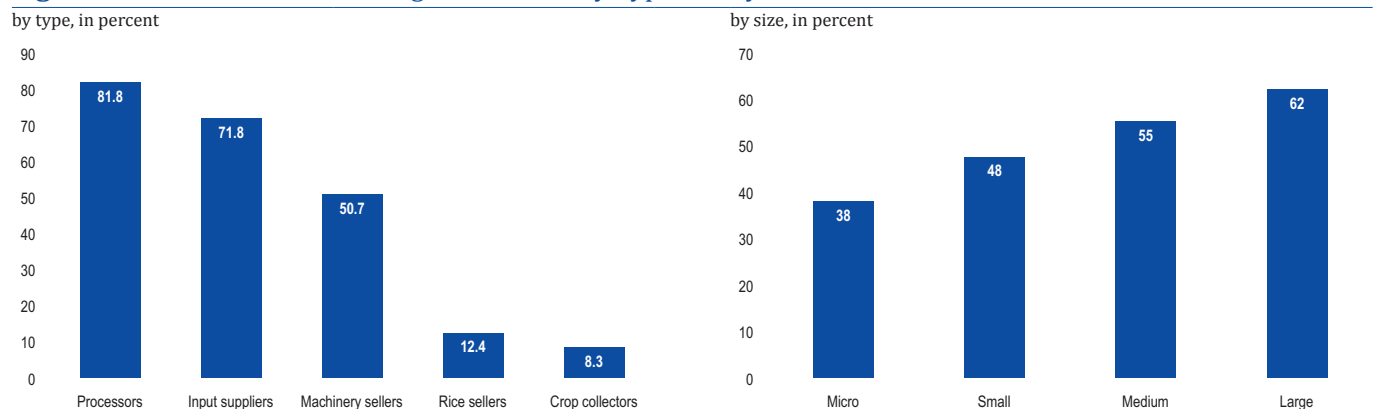
However, it should be noted that aside from revenue size, most other attributes of crop collectors were similar to those of small and micro firms, such as lack of formal corporate management structures; this was because the crop collecting business involves relatively large and very rapid turnover volumes.

**Rice sellers and input suppliers had a relatively higher share of small and micro firms and very few large firms.** In fact, micro and small firms dominated both rice seller and input supplier categories. Eighty six percent of rice sellers and 85 percent of input suppliers were small and micro firms. Only three percent of rice sellers and five percent of input suppliers were classified as large businesses. Machinery sellers exhibited a distribution much closer to the entire sample (Figure 9).

**Almost 90 percent of all agribusinesses were family-owned and informal structures were prevalent across all categories of agribusinesses in Cambodia.** Nearly half of the surveyed agribusinesses lacked any kind of registration with local or Central Government authorities. Although the survey results indicate that larger enterprises tend to be formally established businesses, closer examination of the findings shows that the enterprise size is not the main determinant of whether an agribusiness would formalize itself. The type of activity appears to be the more important determinant of formality. For example, the degree of formality among the crop collectors is the lowest even if this category has more large- and medium scale firms than any other category. In fact, rice sellers that have more micro and small firms than any other category of agribusinesses have about fifty percent more formality (as defined by registration) than crop collectors. Hence, crop collectors, despite having relatively bigger turnovers, have more in common with small and micro scale firms when judged by their employment levels and enterprise management structures.

**Processors have the highest degree of formalization with about 82 percent, followed by the input suppliers with about 72 percent.** Formalization increases with enterprise size. It is particularly high among large agro-processors (e.g. rice mills). Nearly all larger processors (about 98 percent) are registered enterprises. Even small processors have a relatively large level of formality as about 62 percent of them have some sort of registration with either Central or local authorities (Figure 10).

**Figure 10. The Share of Formal Agribusinesses by Type and by Size**



Source: Survey results.

**Size is also a strong determinant of formality for machinery sellers.** About 85 percent of large machinery sellers are registered enterprises. The nature of registration of both machinery sellers and input suppliers is significantly different than processors. These enterprises are mostly registered with either the Ministry of Commerce (MOC)

or local and municipal authorities. About half of the machinery sellers and input suppliers are registered with MOC. The increased commercialization of the agriculture sector makes it difficult to import and market agricultural inputs through informal channels.

**It should be noted that if informality were to be defined more broadly by lack of formal governance and financial systems rather than by registration with MIME or with other Government entities, then the number of informal enterprises would be even higher as most firms are family or sole-trader businesses.** This issue will be revisited later when presenting results related to the financing of the agribusiness sector.

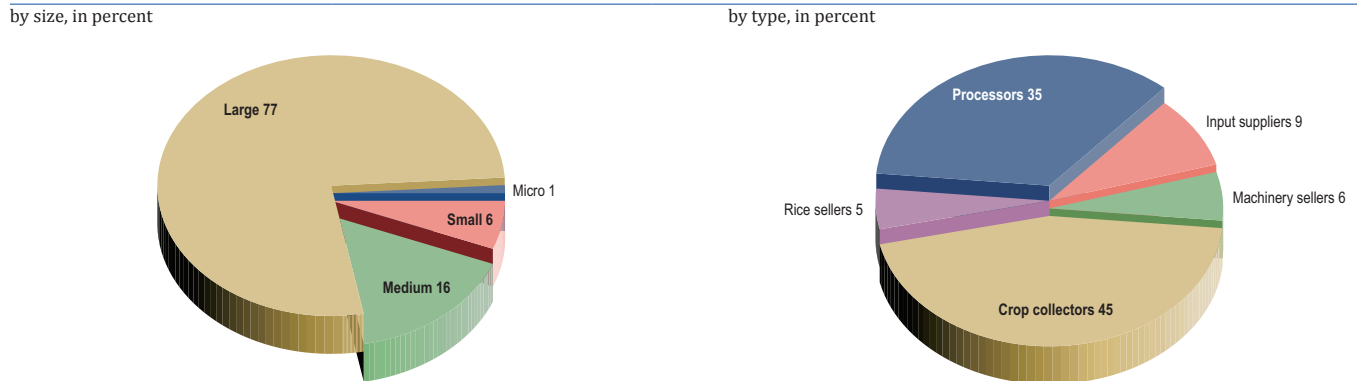
**Importantly, a significant part of informality among Cambodian agribusinesses occurs voluntarily.** Interviews with agribusinesses indicate that they see more disadvantages than advantages in formalizing their businesses. Businesses believe that their tax burdens would be too high compared to their relatively low profit margins, hence the lack of documentation of their expenses, and rapid and large seasonal cash flows. They tend to under-report a significant amount of their annual sale volumes (sometimes as much as by half) in order to minimize tax burden. For example, many agribusiness consider that one percent monthly turnover tax would make them uncompetitive considering of already low gross margins. Their mobility across the country and mostly seasonal activities also help them evade any official monitoring and control, especially for tax purposes.

**For example, the study team noted during interviews that several businesses, which have relatively modern machinery, annual turnover in the range of USD 8–10 million, and substantial amount of international trade transactions, have basically informal structures.** Interviews with these firms noted that firms are mainly trying to conceal the scale of their activities. Some of them even avoid keeping any electronic records of their businesses. Consequently, these businesses face self-imposed limits as they cannot grow their businesses beyond their own physical span-of-control and they avoid using financial leverage by way of borrowing. The latter is due to the desire not to disclose any information during the normal loan application process or lack of any proper accounting to present true financial standing, or both.

**Notwithstanding these factors, such prevalence of informality among Cambodian agribusinesses makes it difficult for commercial banks to have proper credit monitoring even if they make loans to these enterprises.** Consequently, lending to such firms takes place without much regard to the state of businesses and occurs as personal loans backed by usually personal property—hard land title in the majority of cases and, sometimes, immovable assets.

**While micro and small firms dominate the sector, these firms generate only seven percent of the total turnover of the entire sample.** Large firms, on the other hand, generate about 77 percent of the total turnover (Figure 11). On average, a large enterprise generates 277 times more turnover than a micro enterprise and 34 times more than a small enterprise. Crop collectors account for 45 percent of the annual turnover, followed by processors (35 percent), and input suppliers (nine percent). The respective turnovers of rice sellers and machinery sellers are five percent and six percent, as shown in Figure 11. Crop collectors and processors together account for 80 percent of total turnover of the sample. The large revenue share of crop collectors is an indication of low levels of value-added generated within the value chain, given that virtually all non-paddy crops are traded in raw form and a substantial part of paddy is sold to merchants in neighboring countries.

**Figure 11. Contribution to 2011 Turnover by Size and Type of Business**



Source: Survey results.

The dominance of large firms in revenue generation is visible in all categories except for rice sellers (see Table 5). For example, micro and small processors represent 53 percent of the total processors in the sample but they generate only 5.5 percent of the processors’ turnover; large processor units (19 percent of the sample) generate 74 percent of the turnover. For machinery sellers, the 19 percent larger enterprises generate 78 percent of the turnover. The same pattern also occurs for input suppliers with even higher level of concentration at the top where the largest units (less than five percent of the sample) generate 66 percent of the total turnover. On the other hand, distribution of agro-enterprises by turnover seems to be most equal among rice sellers where large firms do not seem to dominate the sample.

**Table 5. Percentage Contribution to Turnover 2011 by Enterprise Type and Size of Enterprise**

Size of Business	Processor	Input Suppliers	Machinery Sellers	Crop Collectors	Rice Sellers	Sample average
Micro	0.2	2.0	0.3	0.1	1.9	0.4
Small	5.3	14.4	6.6	3.0	27.4	6.3
Medium	20.6	17.2	14.8	11.9	25.4	16.3
Large	73.8	66.4	78.3	85.1	45.3	77.0
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

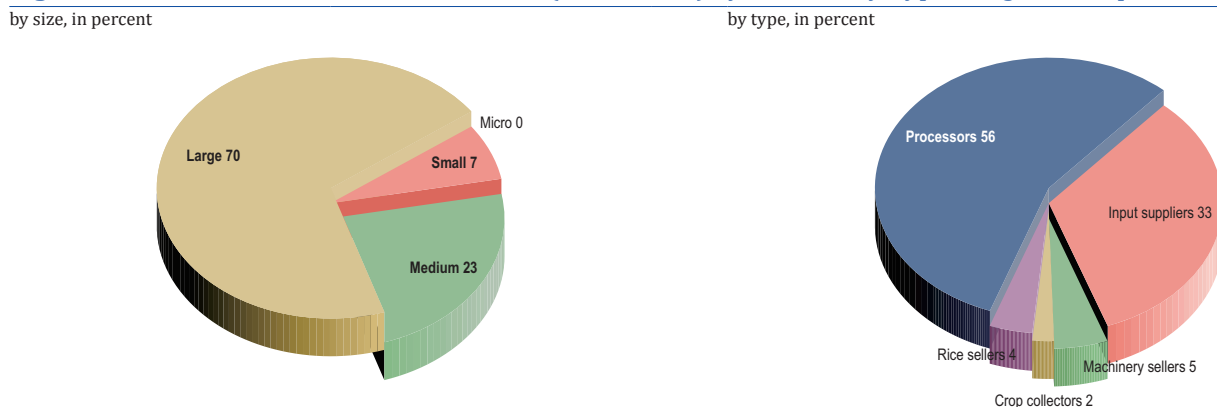
Source: Survey results.

**Large firms and processors are growing faster than other categories and contribute more to the overall growth rate of the sector.** Large enterprises contributed 70 percent of overall growth in the sector. By business type, processors account for about 56 percent of the overall turnover growth (see Figure 12). Input suppliers also have a strong contribution to the growth of the sector as they account for about 33 percent of the growth. Traditional and largely informal agribusiness segments (crop collectors and rice sellers) have hardly had any contribution to the growth of the sector.

**Table 5 provides a more detailed account of growth in turnover by enterprise type and size.** Overall, there has been strongest growth in turnover among medium sized firms. One of the most interesting figures is the decline of microprocessors and relatively small growth among smaller processors. For example, microprocessor units present a drop of 12.6 percent in their turnover while large processor units show an increase of 11 percent. These figures suggest increasing market share of larger processors. However, when the breakdown of the change in turnover of

the entire industry is analyzed, then all processors account for 56 percent of the change (with the disparities within the type of enterprises), while input suppliers are responsible for 33 percent of the growth.

**Figure 12. Contribution to Turnover Growth (2010–2011) by Size and by Type of Agro-Enterprises**



Source: Survey results.

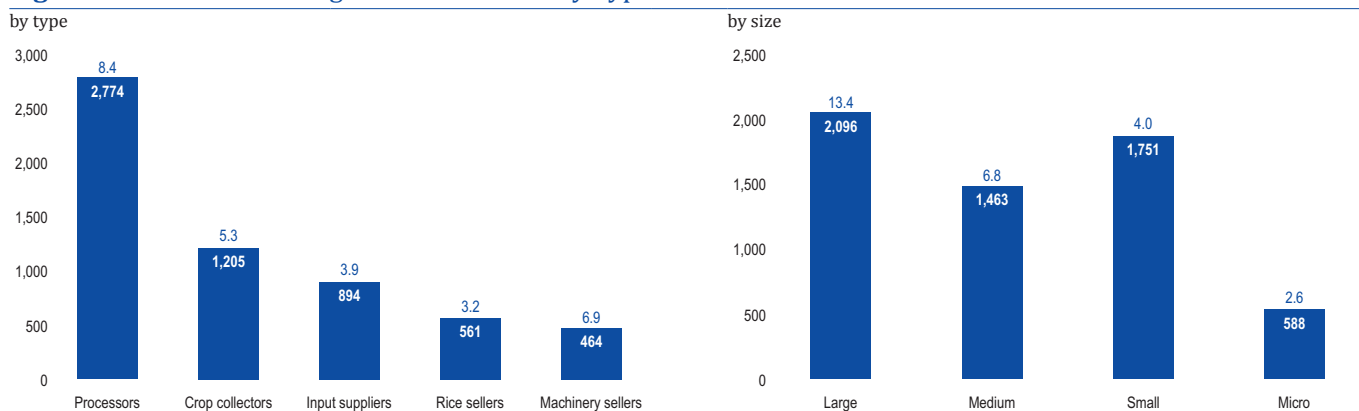
**Table 6. Growth in Percentage of Agro-Enterprises by Size and Type Over 2010/11**

Size of Business	Processor	Input Suppliers	Machinery Sellers	Crop Collectors	Rice Sellers	Sample average
Micro	-12.6	6.5	2.6	19.8	1.7	1.8
Small	4.6	15.2	8.5	1.7	7.6	6.9
Medium	13.0	9.2	7.9	2.0	23.7	9.2
Large	11.0	40.9	4.3	-0.6	-2.2	5.8
<b>Total</b>	<b>11.0</b>	<b>29.4</b>	<b>5.1</b>	<b>-0.3</b>	<b>6.2</b>	<b>6.4</b>

Source: Survey results.

The surveyed enterprises reported a relatively small number of full-time staff when compared to other enterprises. The average full time employment even in large firms was only 13 people versus the sample average of about six (Figure 13). However, given that agribusinesses make up a significant share of all enterprises in Cambodia, both formal and informal, their total contribution to employment is still significant and increasing as the number of large processing enterprises is increasing rapidly.

**Figure 13. Total and Average Number of Staff by Type and Size**

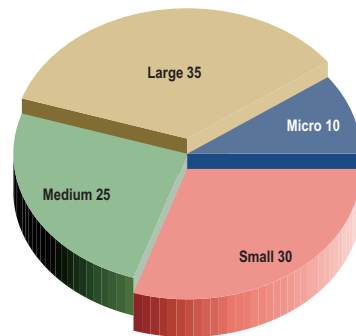


Source: Survey results.

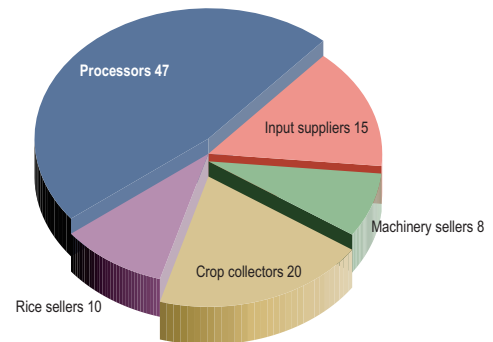
**Medium and large firms as a group together contributed some 60 percent of the total employment, but they made up of 26 percent of all firms in the survey.** Processors generated the majority of full-time jobs in the agribusiness industry (in addition to a significant number of part-time jobs). While they made up only 32 percent of the sample, they generated 47 percent of all full time jobs captured by the survey (Figure 14).

**Figure 14. Contribution to Employment by Size and Type of Enterprises**

by size, in percent



by type, in percent



Source: Survey results.

**These figures may underreport the actual employment generated by agribusinesses.** It is likely that some respondents, including larger processors, employ workers on an informal basis and they would not be forthcoming about their actual numbers of employees in order to conceal the size of their operations. Furthermore, the survey did not properly account for seasonal and temporary workers.

**These results should be interpreted within the general context of non-farm employment in the country.** The bulk of the employment in Cambodia is transient and many businesses provide no more than self-employment for families and their immediate members. A study done by the Economic Institute of Cambodia for the World Bank, as a background paper of the Country Economic Memorandum<sup>9</sup>, reports that about 39 percent of all employed people are classified as “own account workers,” and about 36 percent of employed people are classified as “unpaid family workers.” Hence, about 75 percent of all employment occurs in the form of either “self-employed” or “informal family worker.”

**Comparing these figures to general non-farm employment level of about 3.5 million indicates that less than one million people work in the formal sector.** This figure is consistent with the previously mentioned Cambodian Investment Board–JICA survey, which estimates the total employment in business establishments, including owners and all informal workers, at around 1.8 million. If we assume that the total number of formal and informal agribusinesses in Cambodia is about 26,000 and using the average employment of six persons from the survey, the total full time employment generated by the agribusiness sector could be in the range of 150,000–160,000 people,

9 “Cambodia’s Labor Market and Employment.” Background Paper prepared for the World Bank, December 2008 (<http://siteresources.worldbank.org/INTDEBTDEPT/Resources/468980-1218567884549/5289593-1224797529767/CambodiaDFSG02.pdf>)



out of which about 50 percent work in the processing sector<sup>10</sup>. Total employment in manufacturing activities, other than garments and leather processing, is only about 100,000 according to the Cambodian Investment Board (CIB)-JICA survey<sup>11</sup>. Therefore, employment in the agricultural processing sector, which should be included in this number, could be in the range of about 80,000 people or about 13 percent from total manufacturing jobs. Agribusinesses other than processors are mainly trading activities, which are part of the services sector, and their employment is reported in the services category. According to recent official figures, the services sector employs about one million people<sup>12</sup>. Of this figure, nearly 200,000 work in hotels and restaurants according to CIB-JICA. Thus, the employment generated by ‘service type’ agribusinesses is within the remaining 800,000 or about another 70–80,000 people when using above assumptions or about eight percent from total service sector jobs.

**Cambodian agribusinesses have limited linkages with other value chain actors.** This reflects the relative underdevelopment of the agribusiness sector in Cambodia and the enabling business environment more broadly. The survey findings show that agribusiness enterprises have generally limited linkages with financial institutions, farmer organizations, and with their own peers (see Figure 15 - Total). The limited linkages with farmer organizations reflect largely the weaknesses of such groups in Cambodia<sup>13</sup>. Weak association among peers, even in the more developed processing segment, could be due to lack of trust. Such limited business linkages among value chain actors become an important constraint for the pursuit of increased value-added, economies of scale, information dissemination and deepening of markets.

**Processors appear to have better developed value chain linkages than other business types** (Figure 15 - Processors). Processors have stronger linkages to farmers and crop collectors. About 90 percent of processors have worked directly with farmers and nearly 80 percent of them are linked with crop collectors. However, processors prefer to work with individual farmers rather than farmer organizations. A large proportion of processors (about 60 to 70 percent) are also linked to wholesalers and retailers. The nature of these linkages is relatively simple—processors purchase raw materials from farmers and collectors, and then sell milled rice to wholesalers and retailers. Processors are also linked better with financial institutions as about 65 percent of them indicated some sort of linkages with commercial banks. On the other hand, while 95 percent of input suppliers sell their products directly to farmers; only two percent of them are linked to farmer organizations (Figure 15 - Input Suppliers). Therefore, hardly any bulk purchase of inputs is made through farmers’ organizations. Business linkages for machinery sellers (Figure 15 - Machinery Sellers) are similar to input suppliers (see also Box 1).

**The limited linkages between agribusinesses and various industry organizations are another indication of the embryotic nature of the agribusiness sector.** Only 23 percent of processors are linked to rice miller

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- 10 The 2008 “Listing of Business Establishments in Cambodia’s Provincial Towns and Selected Urban Areas” by IFC identified 63,500 business establishments. The 2009 SME market segmentation study by IFC, which surveyed about 500 SMEs across 10 major provinces found that 32 percent of the SMEs were engaged in agriculture and agribusiness. The random sampling of 289 SMEs conducted by JICA for the Preparatory Survey on the SME Two-Step Loan Project in six major provinces also found that a significant number of SMEs (about 40 percent of the sample) were in the agriculture sector.
- 11 The survey reports 600,000 manufacturing jobs. According to official figures, garments, textiles, leather goods, and shoes employ nearly half million people.
- 12 Most recent labor survey indicates a total workforce of about 7.9 million of which 55 percent work in primary agricultural production. Services sector employs around 28 percent. It should be noted that textiles, garments, shoes, leather goods, construction, and public employees (including military, police and teachers) account for almost two-thirds of total non-farm employment.
- 13 CDRI (2012). “Impact Assessment of Farmer Organisation on Food Security for Rural Poor.” Report prepared for the World Bank.

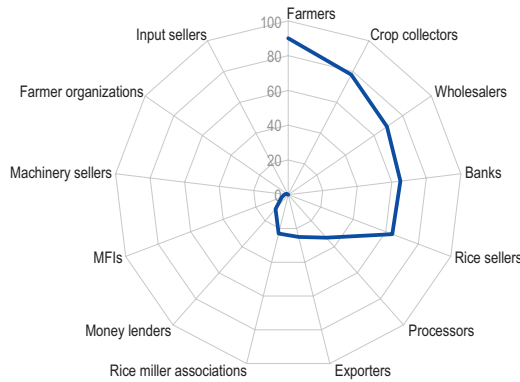


associations; some of these are only motivated by easier ways of getting loans or expectations of lower interest rates<sup>14</sup>.

**Figure 15. Business Linkages by Type of Business**

**Processors**

in percent



**Input Suppliers**

in percent



**Machinery Sellers**

in percent



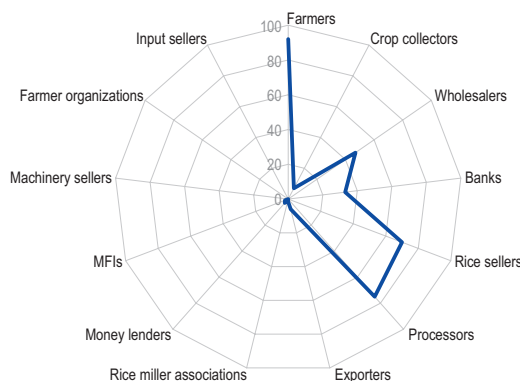
**Crop Collectors**

in percent



**Rice Sellers**

in percent



**Total**

in percent



Source: Survey results.

14 Over the last three years, 18 processors received loans from rice miller associations, for a total amount of 1,350,000. These enterprises comprise five large, six medium and seven small units. They are mostly located in Battambang, Kampong Cham, Svay Rieng, and Takeo provinces.

**Box 1. Case Study of Value Chain Linkages between Agribusinesses and Farmers**

The study team had a discussion with a private trading company based in Phnom Penh, which provides seeds, technical advice and fertilizer to farmers in return for purchases of their paddy for their milling operations. The trading company does not provide fertilizer to farmers but facilitates the purchase of aggregated order and delivery fertilizer to farmers. Farmers pay back the fertilizer themselves at harvest time and the interest cost is embedded in the cost paid by farmers. Due to the bulk purchase the total price paid by farmers (principal and interest) is not much different from market price. The trading company provides seeds and gets the cost of seeds repaid at harvest. The company grows seeds by itself, usually about 150 tons per year.

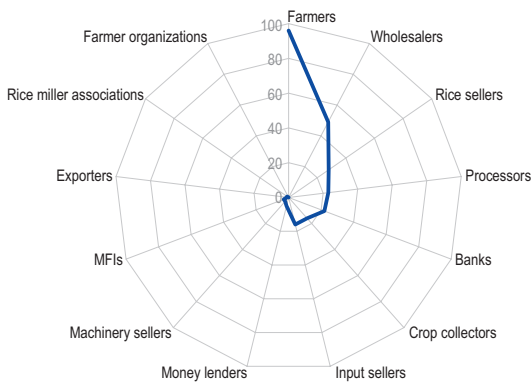
Inputs are provided are enough to recover 8,000 tons of paddy production, but at the time of the interview, the company only recovered 1,000 tons. This was in part due to difficulties in competing against Vietnamese traders who were offering higher prices to farmers, engaging effectively in side buying, but the company counters this by field measuring the yields a day before harvest and having their field staff on site during harvesting. The main reason for recovering only 1,000 tons was difficulty in obtaining enough working capital to purchase the crop. Farmers also tend to hand over wet the harvest and sell heavier bags with higher moisture content, which increases costs and reduces paddy quality. The trading company checks for moisture content with its equipment and farmers who are caught cheating are excluded from the scheme in the following season. The trading company estimates that it needs to recover 1,500 tons of paddy to break even its contract farming operation with farmers.

*Findings from inception report of the study team.*

**Figure 16. Business Linkages by Size of Business**

**Micro**

in percent



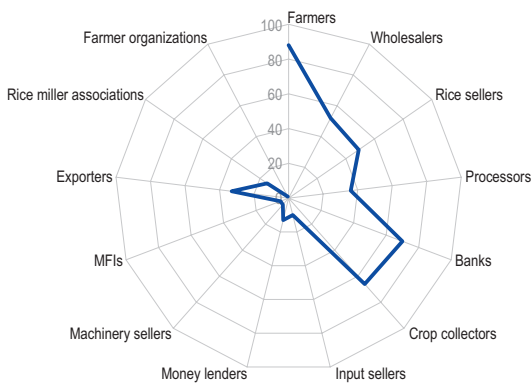
**Small**

in percent



**Medium**

in percent



**Large**

in percent



Source: Survey results.

**The analysis of value chain linkages by size of enterprises is shown in Figure 16.** The number of value chain linkages increases with the size of the business. Almost all surveyed large enterprises are linked with commercial banks and a significant proportion of them are also linked with farmers, crop collectors, exporters, and wholesalers. On the other hand, micro enterprises have closer linkages with farmers, but less so with wholesalers and rice sellers, and almost no linkages with other value chain actors.

### 3. COMMERCIAL TRANSACTIONS AND BUSINESS VOLUMES OF AGRIBUSINESS SECTOR

**The survey collected information on the issues related to the nature of commercial activities of agribusinesses.** The purpose was to better understand the overall volume of business, gross margins and level of investments in working capital and fixed assets. The information obtained from these questions was then used to estimate the overall size of the agribusiness sector, and the level and type of finance utilized by the sector. The information also provided insight into the overall value-added in the sector and the constraints for growth as discussed later in Chapter 5.

#### 3.1 Transactional Volumes

**The survey contained questions to determine the total volumes of both purchases and sales of agribusinesses as well as the main components of these transactions.** The total purchase and sales volumes give a good idea of the business volume both in terms of physical and monetary measures. On the other hand, the components of purchases and sales provide information on the nature of primary activities of agribusinesses, and thus the level of value-adding processing that takes place within the agribusiness sector.

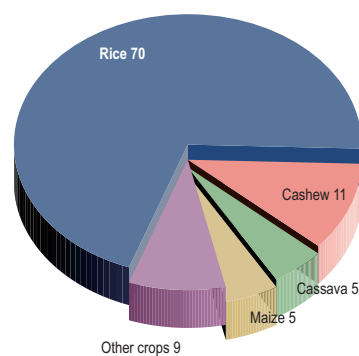
##### 3.1.1 Purchases

**The surveyed agribusinesses made collective purchases of various items in the amount of USD 1.32 billion in 2011.** About 86 percent of this amount (approximately USD 1.14 billion) was spent on purchasing various agricultural crops in raw form. Purchases of inputs were about USD 118 million, which correspond to nine percent of the total amount. The remaining five percent of total purchases, about USD 67 million, was spent on purchasing materials and equipment.

**Paddy made up the vast majority of crop purchases with 70 percent of total purchase volumes and 61 percent of the value of purchased crops** (Figure 17). Other significant crops were cashews (with total purchases of USD 129 million), cassava USD 62 million, and maize USD 52 million. As noted earlier, the agro-processing industry in Cambodia is still in its infancy and the share of these agricultural commodities being processed is only 36 percent of the total volume of all types of crops. In fact, only in the case of rice, about half of the products purchased go through processing,

**Figure 17. Crop Purchases by Agro-Enterprises**

in percent



Source: Survey results.

whereas the rest are traded in unprocessed form. For other products, most of the products are purchased in unprocessed form and traded to neighboring countries through informal cross-border trade. As such, agribusiness enterprises are still largely dominated by trading with only limited value addition.

**Purchases of agricultural inputs were dominated by fertilizers amounting to USD 117 million in 2011, or about 99 percent of all fertilizer sales in Cambodia; almost all fertilizers were purchased by input sellers (91 percent) and crop collectors (nine percent).** The total value of pesticide purchases was just below USD 1 million. Surprisingly, over 90 percent of seed purchases go through crop collectors rather than through input suppliers. For example, crop collectors often provide farmers with seed varieties for dry season irrigated cropping cycle, which they source from their Vietnamese trading partners. Most of this crop will be subsequently traded back to Vietnam through informal cross-border trade. As for farm machinery sellers, tractors were the dominant purchase item (53 percent).

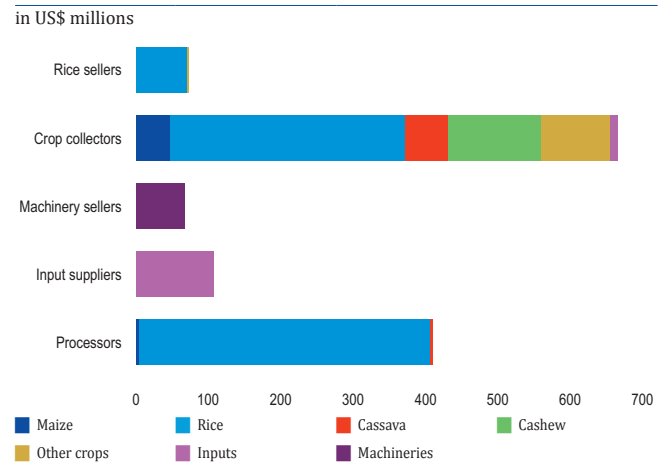
### 3.1.2 Sales

**Total sales by surveyed businesses were about USD 1.46 billion.** The composition of sales mirrored the composition of purchases made by agribusinesses. Sales of crops and crop products amounted to 86 percent of total sales, or approximately USD 1.26 billion. Sales of inputs totaled USD 129 million, or nine percent of total sales. The remaining five percent of sales, about USD 71 million, was materials and machinery (Figure 18).

**The sales exceed purchases in average by 11 percent, which reflects essentially the gross margins.**

Caution should be exercised when interpreting this estimate as it does not include production cost, which means that actual gross margins may be lower. This estimate is consistent with gross margins estimates from more detailed recent value chain studies<sup>15</sup>. Rice again makes up the major share of crop sales (70 percent). Similar patterns apply also to inputs sales, which are dominated by fertilizer (99 percent); farm machinery with tractors makes up 54 percent of total sales. Most entrepreneurs specialize in one agricultural commodity (for example, rice, cassava, products), except crop collectors who are engaged in a number of crops. However, rice still dominates the crop collectors' activities by generating about half of their revenue.

**Figure 18. Sales of Agricultural Products/Inputs/ Machineries by Type of Business and by Crop**



15 The 2012 World Bank study called "Turning Rice Into White Gold" (unpublished working paper) analyzed gross margins of a wide spectrum of rice mills in main rice production areas. The study found that gross margins are heavily dependent on the type of rice processed—mills which processed larger share of aromatics had higher gross margins. The gross margins of large mills that processed primarily mixed and IRR1 varieties ranged between four to five percent, while gross margins for mills that focused primarily on aromatic varieties ranged from 10-15 percent.

**There are significant differences in sales volumes between large and micro enterprises across all agribusiness types.** The sales also vary significantly across different business types. For example, large processors generate, on average, about 100 times more sales revenue than micro-processors (495,000 versus 4,850). This difference increases up to 250 times for input sellers but declines to 40 times among machinery sellers. The difference is 110 times for crop collectors and 70 times for rice sellers.

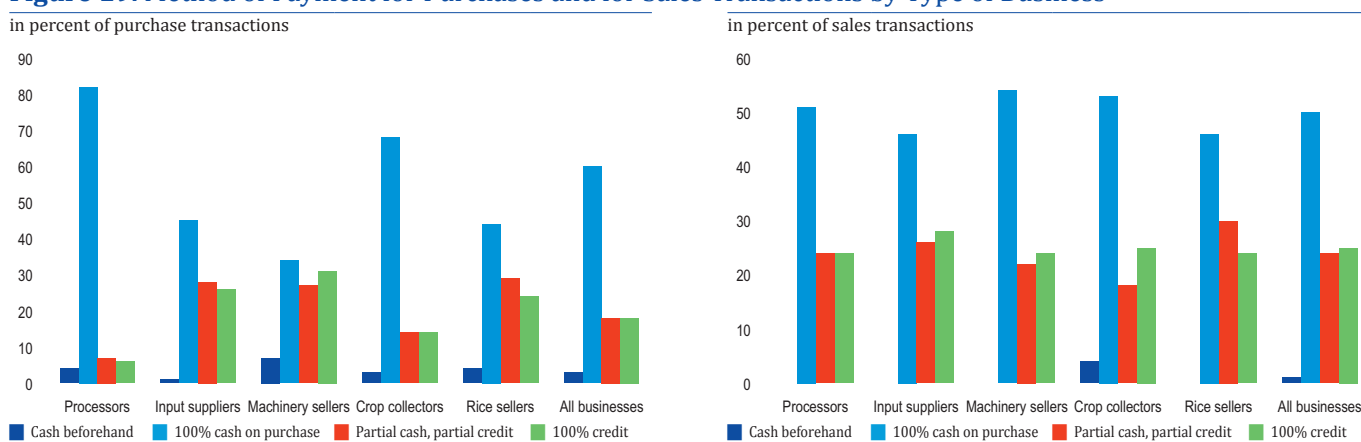
### 3.2 Financial Terms of Commercial Transactions

**The survey collected data on the following key aspects of the commercial transactions: payment terms of purchases and sales and the choice of currency.** This information gives a good idea as to the liquidity needs of agribusinesses as well as the level of trade credit generated within the agricultural value chain. The information on the choice of currency in commercial transactions, on the other hand, provides important insights into the use of local currency in the sector, given the high dollarization of the economy.

#### 3.2.1 Payment Terms

**The majority of payments for purchases of products by agribusiness enterprises are made on cash.** Only 18 percent (238 million) of purchases are based on full credit, followed by partial cash and partial credit arrangements (see Figure 19). Crop purchases are largely made with cash as both processors and crop collectors make the bulk of their purchases in cash. On the other hand, machinery sellers make more advance payments and partial cash and partial credit purchases as they buy their stock either directly from suppliers outside of Cambodia or from large distributors of foreign manufacturers.

**Figure 19. Method of Payment for Purchases and for Sales Transactions by Type of Business**



Source: Survey results.

**While most purchases are made with cash, a significant portion of sales of agribusinesses involves some form of credit.** All categories, except machinery sellers, have more credit sales than credit purchases. For example, processors who buy about 82 percent of their material in cash sell only about 50 percent of their products in cash.

In fact, they sell about 25 percent of their products entirely on credit. The situation is about the same for crop collectors. Input suppliers sell more on credit terms than any other category because about 55 percent of their sales include some credit. Nearly 30 percent of input sales are entirely on credit.

### 3.2.2 Currency Choice

**The Cambodian economy is highly dollarized and the financial sector is virtually entirely dollar denominated.** However, the survey found significant local currency use by agribusinesses. In fact, the majority of crop purchases are made in Riel (55 percent), followed by USD (24 percent) and Thai Baht (20 percent). The type of business influences the choice of currency for transactions, while the size of businesses matters less. Input suppliers and machinery sellers rely more on the use of USD (with 87 percent and 73 percent of total number of transactions respectively), followed by Thai Baht (12 percent and 11 percent respectively). In contrast, crop collectors, rice sellers, and processors often use Riels (more than 65 percent of their purchases).

**The total sales transactions are dominated by Riel (71 percent), followed by USD and Vietnam Dong (13 percent each), and the remaining in Thai Baht.** However, in provinces bordering Thailand, such as Battambang and Beanteay Meanchey, Thai Baht is still the main currency for transactions, accounting for up to 75 percent of total sales values. The same pattern is not observed in provinces bordering Vietnam, such as Svay Rieng and Takeo; Vietnamese Dong is being used only for 20 percent of sales transactions in these provinces.

## 3.3 Fixed Assets

**The survey collected data on fixed assets such as buildings, machinery, vehicles, and equipment, but excluded land due to the difficulty in collecting reliable information about land values, especially in provinces.** Total fixed assets of surveyed agro-processing enterprises amounted to USD 280 million in 2011 (see Table 7). Not surprisingly, processors and large enterprises have the largest share of total assets, 55 percent and 59 percent total assets respectively. Rice sellers have the least amount of assets with only about five percent of total assets of the sector.

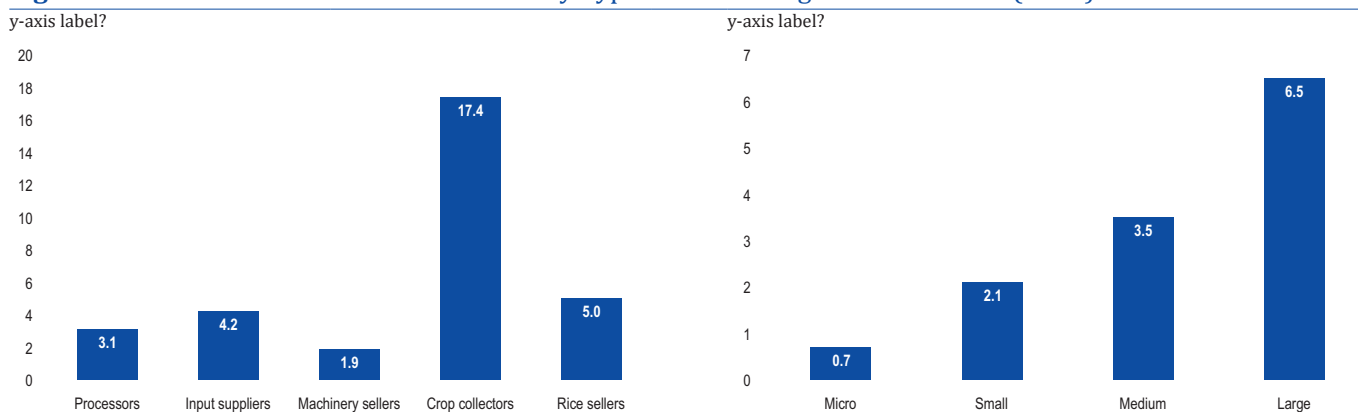
**The differences in agribusinesses become even more apparent from turnover/asset ratios** (see Figure 20). Those businesses that primarily engage in seasonal trade with very low asset levels are quite high. On average, traditional value chain actors that have high turnaround speed (crop collectors and

**Table 7. Size of Fixed Assets by Type and Size (2011)**

Type	Mean (USD)	Total (USD)	Share (%)
Processors	468,203	155,000,000	55.4
Input Sellers	131,228	29,800,000	10.6
Machinery Sellers	689,548	46,200,000	16.5
Crop Collectors	155,716	35,500,000	12.7
Rice Sellers	79,309	14,100,000	5.0
<b>Total</b>	<b>271,957</b>	<b>280,000,000</b>	<b>100.0</b>
Size	Mean (USD)	Total (USD)	Share (%)
Micro	38,880	8,670,181	3.1
Small	95,390	41,600,000	14.9
Medium	300,541	64,300,000	23.0
Large	1,054,394	166,000,000	59.3
<b>Total</b>	<b>271,957</b>	<b>280,000,000</b>	<b>100.0</b>

Source: Survey results.

**Figure 20. Ratio of Turnover to Fixed Assets by Type and Size of Agribusiness SMEs (2011)**

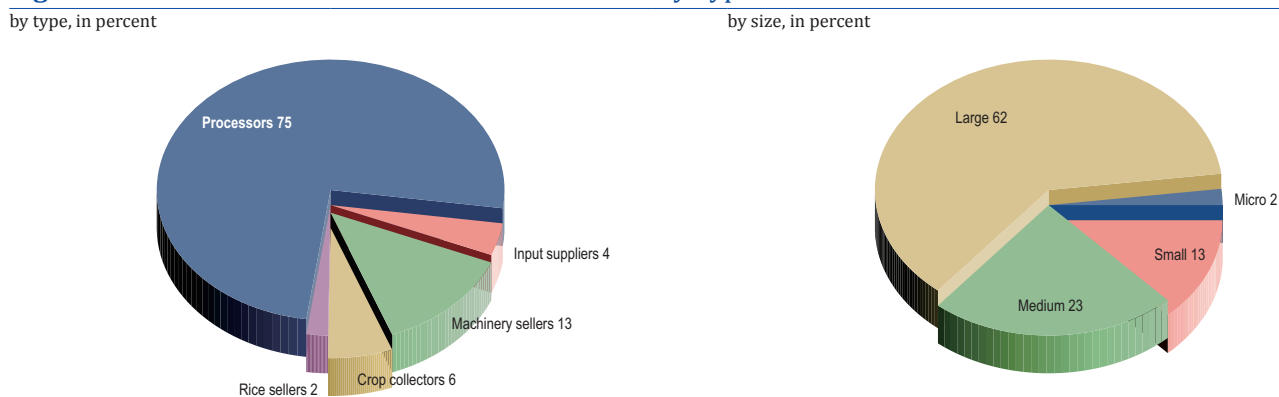


Source: Survey results.

rice sellers) have a higher turnover to asset ratio than modern value chain actors (processor, input sellers, and machinery sellers).

**The level of investment captured by the survey is consistent with the reported levels of fixed assets.** Surveyed enterprises reported that they have made about USD 48 million of investments over the 2009–2011 period. The average size of investments in fixed assets was USD 103,000. The majority of investments were made by processors (75 percent) and large agro-enterprises (62 percent). It is also interesting that 85 percent of funding for these investments was self-financed by agribusinesses themselves (See Figure 21; see also Annex D for the data on investments in fixed assets).

**Figure 21. Contribution to Investment in Fixed Assets by Type and Size of Firms**



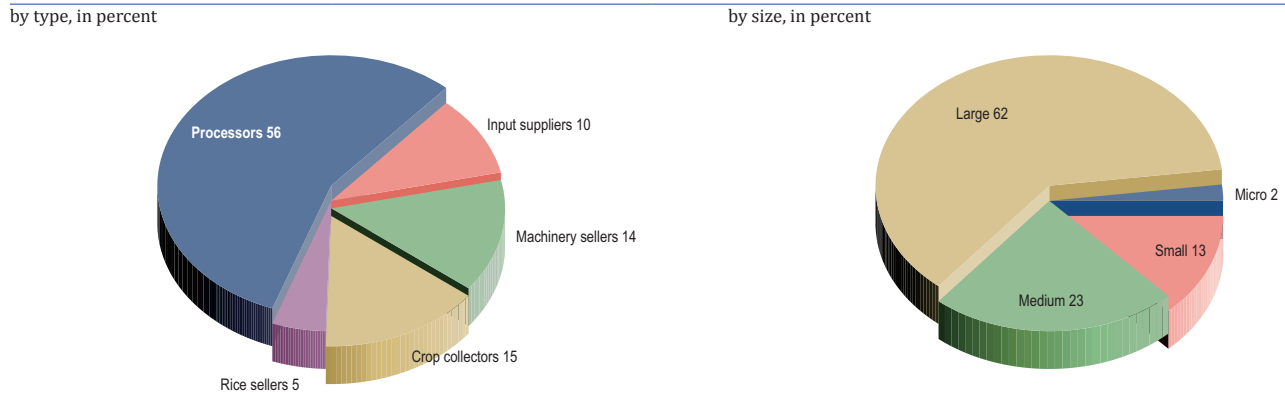
Source: Survey results.

### 3.4 Working Capital

**Processors and large firms maintain a relatively higher level of working capital.** However, agribusinesses that are engaged mainly in trading activities, such as crop collectors, also maintain relatively more working capital compared to their share in total assets of the agribusiness sector. This is not surprising as most of the purchasing done by these firms is in cash. Processors make up the largest share of working capital use (56 percent), followed by

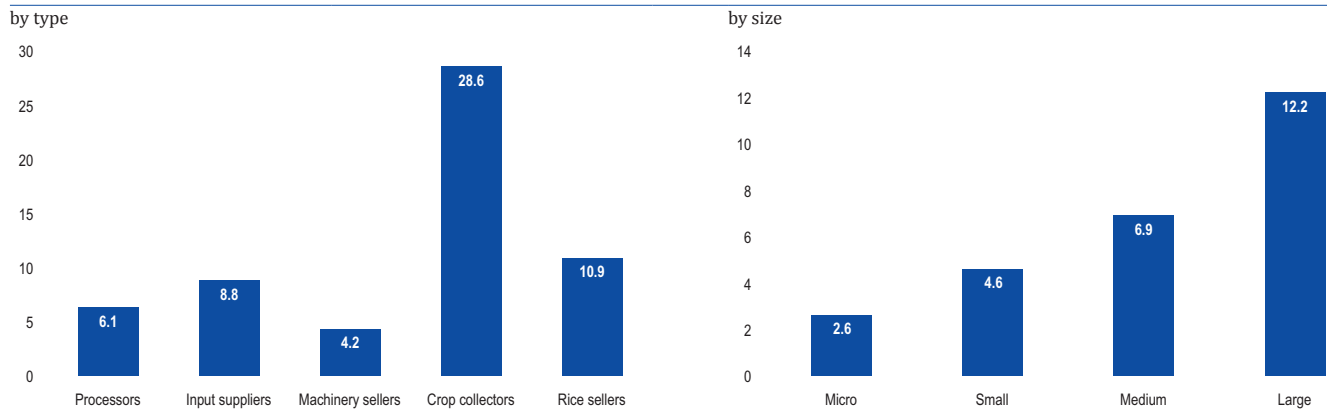


**Figure 22. Contribution to Total Working Capital by Type and Size of Enterprises**



Source: Survey results.

**Figure 23. Turnover to Working Capital Ratio by Type and Size of Agro-Enterprises (2011)**



Source: Survey results.

crop collectors (15 percent) and machinery sellers (14 percent). Large and medium size enterprises jointly account for about 85 percent of total working capital of the sector (Figure 22). As in the case of turnover/fixed assets ratio, traditional traders have higher working capital turnover. The ratio is lowest for the machinery sellers (Figure 23).

**Agribusinesses were generally having difficulties in projecting their investment and working capital requirements for the next five years.** About 80 percent of survey respondents (60 percent of processors) were not able to determine their future financing needs. The reason for such a low response rate may be difficulties for agribusinesses in estimating their future investment needs due to uncertainties faced in their operations, their limited forward looking business planning habits, or due to a lack of business and financial planning among enterprises. This is not surprising given the limited use of formal accounting systems and lack of familiarity with financial control methods.

### 3.5 Seasonality of Financing Requirements

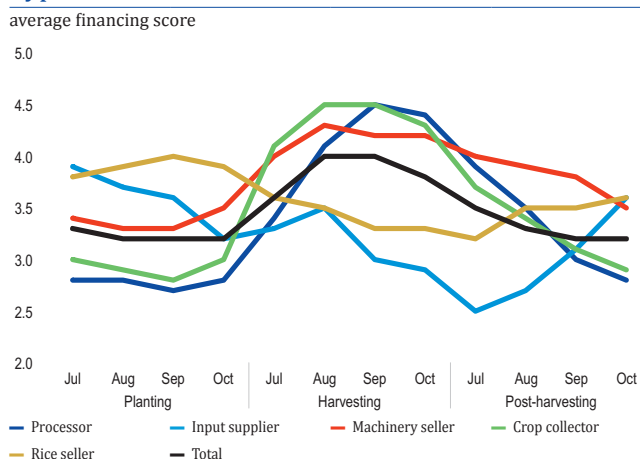
Figure 24 shows the average financing requirement (scored from 1=low need to 5=very high need) for each month of the year, disaggregated by business type. The average score ranges from 3.2 to 4 throughout the year, with the highest financing requirements occurring right after the wet season rice harvest from November to February<sup>16</sup>. However, the overall results mask differences by type of business activity.

The financing requirements are similar for processors and crop collectors whose needs are highest from October to March. This is not surprising given that their activities occur mainly after the wet season harvest (with slight increase after dry season harvest), while their financing needs are relatively modest during the planting season. The financing requirements of farm machinery sellers are lowest during the planting season and start rising during the harvest season from October, while declining subsequently after harvest.

Since the purchase of machineries requires relatively large investments, these enterprises have to replenish their stocks just before the harvest season when the likelihood of farmers buying equipment is highest.

The financing needs of input suppliers are lowest among all enterprise types and also exhibit very different patterns (Figure 24). The needs increase gradually during the months preceding the planting season and peak in July, which is consistent with the nature of their business of selling fertilizers, pesticides and seeds. Finally, the financing needs of rice sellers do not show much variation throughout the year.

Figure 24. Seasonal Need for Finance by Business Type



Source: Survey results.  
 Notes: Seasons are based on rice-growing seasons (since rice is Cambodia's dominant crop). Average Financing Score based on respondent ratings on need for finance: 1 = Low need for finance; 2 = Some need for finance; 3 = Moderate need for finance; 4 = Substantial need for finance; 5 = Very large need for finance.

<sup>16</sup> Seasons refer to the rice-growing seasons, due to the dominance of the rice crop in Cambodia.

## 4. ACCESS TO FINANCE

As discussed in Chapter 2, Cambodian agribusinesses have a limited relationship with the financial sector, for reasons mainly to do with the nature of the agribusiness sector rather than impediments stemming from the current state of the Cambodian financial sector. In this chapter we analyze broader issues related to access to finance in the agribusiness sector, and factors that affect access to finance.

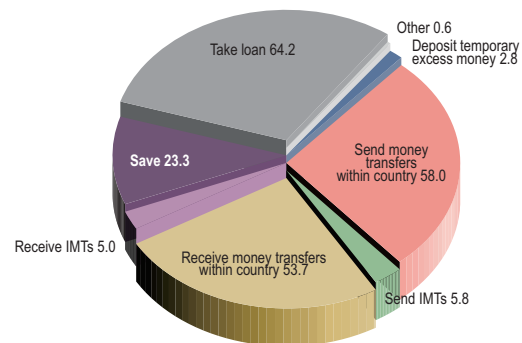
### 4.1 Utilization Level of Financial Services and Products

**Borrowing and money transfer services are the most popular financial services in the agribusiness sector.** However, depositing excess cash or using savings accounts is a relatively underutilized service (see Figure 25).

As seen in Table 8, the use of various financial services varies across the agribusiness sector. These differences are consistent with the nature of agribusinesses. For example, the use of financial services by processors is more varied and intense compared to other types of agribusinesses. This is not surprising given the range of activities carried out by processors (purchasing paddy, selling rice, purchasing machinery, employing more people, etc.). Expectedly, international money transfers are used mostly by machinery sellers who import all their merchandise from abroad. Rice sellers, who are mostly small local traders, use less financial services compared to others. However, their relatively high level of sending money transfers abroad suggests they are involved in some sort of import activities.

**Figure 25.** Use of Various Financial Services by Agribusinesses

in percent



Source: Survey results.

**Table 8.** Uses of Banking Services by Enterprises

percentage of users

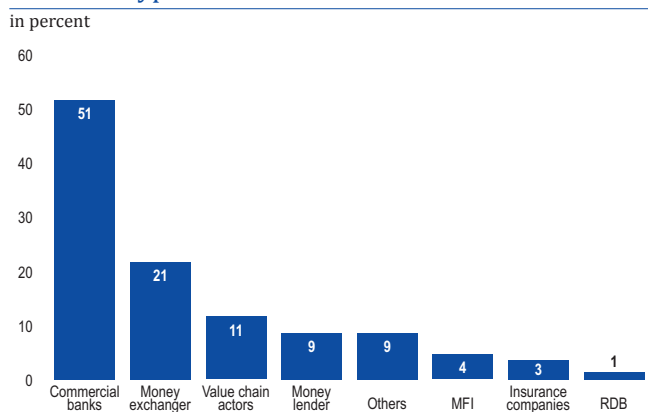
Use of Banking Service	Processors	Input Suppliers	Machinery Sellers	Crop Collectors	Rice Sellers	Total
Deposit temporary excess money	28.4	14.2	14.9	19.4	13.3	20.8
Send money transfers within country	59.0	65.7	71.6	46.9	50.7	58.0
Send international money transfers	3.6	8.2	21.6	0.6	5.3	5.8
Receive money transfers within country	59.7	43.3	59.5	56.3	38.7	53.7
Receive international money transfers	6.5	5.2	10.8	1.3	1.3	5.0
Save	25.5	20.9	33.8	15.0	26.7	23.3
Take loan	76.3	47.8	44.6	74.4	46.7	64.2
Other	0.7	0.7	1.4	0.0	0.0	0.6

Source: Survey results.

## 4.2 Providers of Financial Services

**Agribusinesses reported using various financial service providers, ranging from commercial banks to informal moneylenders.** Commercial banks were the most popular choice in the sector—about 51 percent of

**Figure 26. Percentage of Respondents Using Different Types of Financial Service Providers**

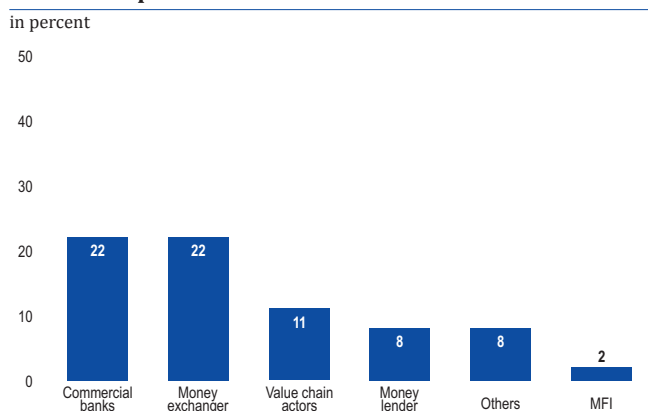


Source: Survey results.

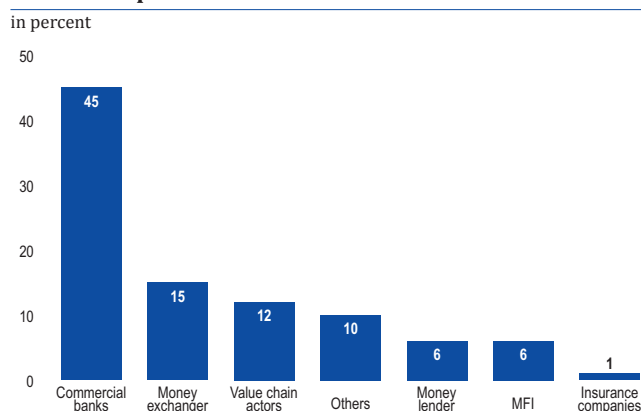
agribusinesses reported working with commercial banks (see Figure 26). The level of utilization of banking services was closely correlated with the size of enterprises (see Figure 27). About 85 percent of large enterprises used commercial banks but the level of utilization dropped to about 22 percent for micro enterprises. Processors and machinery sellers used banking services more than any other category of agribusinesses. About 65 percent of both processors and machinery sellers used commercial banks. Rice sellers used the least amount of banking services with only about 33 percent reporting use of bank services (Figure 27).

**Figure 27. Use of Financial Services by Size of Business**

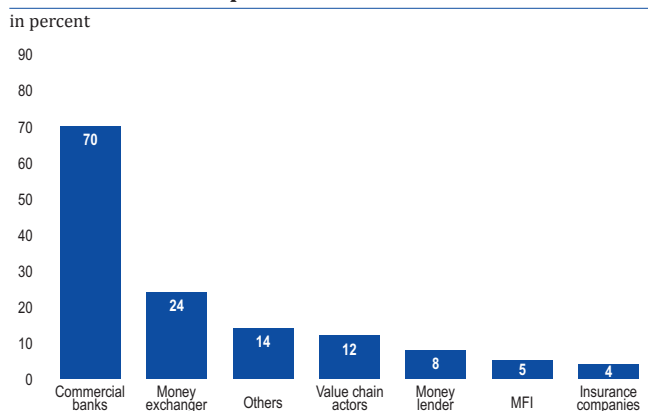
### Micro enterprises



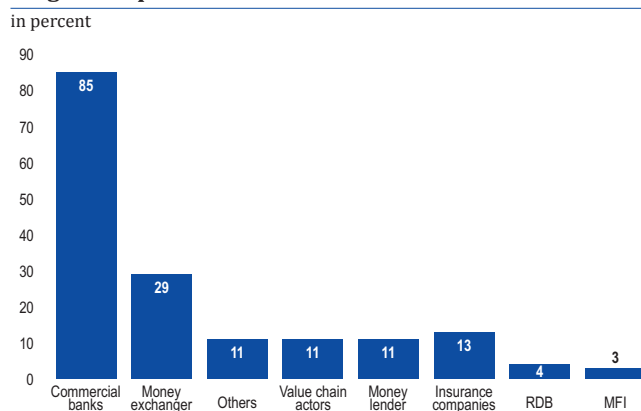
### Small enterprises



### Medium-sized enterprises



### Large enterprises



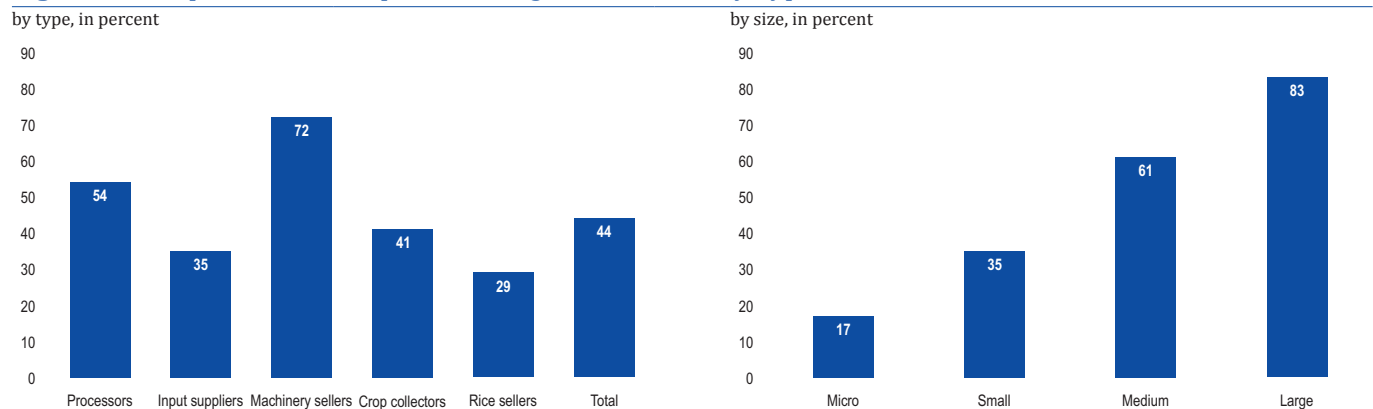
Source: Survey results.

**Money exchangers were the second most used financial service providers.** About 21 percent of respondents reported using money exchangers on a regular basis. This is not surprising given the high level of dollarization in the economy and use of currencies from neighboring countries. Only about 9 percent of agribusinesses reported using moneylenders. Firms of all sizes indicated having had some engagement with moneylenders, with large firms using their services the most. About 11 percent of larger units and 14 percent of medium size units reported using moneylenders, whereas only eight percent of micro units and six percent of small units had worked with moneylenders.

**Microfinance institutions (MFIs) are not used much by agribusinesses**—survey data show less than five percent of respondents using MFIs, which is less than all other providers of financial services except insurance and Rural Development Bank (RDB).

**Only 46 percent of agribusinesses kept deposit accounts with commercial banks on a regular basis.** No agribusiness reported having an account with an MFI. The number of bank accounts was quite low but generally consistent with the findings regarding the level of informality present in the sector; about 51 percent of agribusinesses did not have any registration with any authority, local or central government (Figure 28).

**Figure 28. Proportion of Enterprises Having Bank Account by Type and Size of Business**



Source: Survey results.

**Size appeared to be the most important factor in determining whether an enterprise had a bank account—about 83 percent of large firms maintained bank accounts.** Although this is a relatively high number, 17 percent of large firms still did not have bank accounts. This is another indication of preferred informality in the sector. Among the business categories, machinery sellers had a particularly high number of bank accounts. Rice sellers—who had the most number of small and micro firms—had the lowest number of bank accounts. The crop collector category, which included the most number of large firms as measured by annual turnover, had relatively few bank accounts too. This is consistent with the observation made earlier about crop collectors who have more common attributes with small and micro firms than large firms, largely due to the informal nature of their businesses.

**As for the choice of commercial banks, 94 percent of all accounts were with three banks (ACLEDA, Canadia and ANZ).** ACLEDA was by far the most popular choice. About 70 percent of all agribusinesses kept their accounts at ACLEDA. The share of accounts with ACLEDA increased to 90 percent among rice sellers. This is consistent with the structure of the financial sector (see Annex A) where the top three banks control about 80 percent of the sector, and ACLEDA has the most extensive branch network in the country.

### 4.3 Borrowing by Agribusinesses

**The main source of loans for agribusinesses is commercial banks.** Commercial banks provided 77 percent of total borrowing by the surveyed agribusinesses. MFIs provided nine percent and RDB provided five percent of all loans. Informal lenders provided the remaining amount.

**About 64 percent of agribusinesses reported borrowing from commercial banks and MFIs.** This is substantially higher than the degree of formality in the sector as well as the level of having a bank account, which indicates that many of these loans are in the form of personal loans (in the eyes of agribusiness owners there is no difference between business and personal needs). In fact, interviews with the banking sector confirm that the bulk of lending to the business sector takes place in the form of personal loans and some loans are taken even if businesses do not have bank accounts. However, the actual motivation behind decisions to take loans could be sometimes quite elusive (Box 2).

#### Box 2. Different Motivations for Taking (or not Taking) Loans

While the study team did find quite a few of the interviewed firms with loans with financial institutions, the size of the loans was vastly out of proportion with the size of their businesses. Two examples are worth expanding on to illustrate the enormity of the problem and, more importantly, the evasiveness or plausibility of the answers.

Trader A had an overdraft facility of USD 200,000 (at 12 percent interest per annum and fully repayable after four months). While Trader A didn't indicate the size of his business, just a rough calculation of his stock on hand and stated volumes would indicate at least a USD 10 million annual turnover. Trader B indicated that his working capital requirements were around USD 1 million while his overdraft facility was only USD 100,000 (at 12 percent interest per annum, USD 25,000 quarterly repayments over two years).

In both these cases it was clear that the traders didn't need the loans as they had more than enough cash to fund their own working capital. When asked why he took a loan, Trader A said that he took the loan because: (i) it made it appear to his neighbors that he was just as poor and struggling as they were (that is, social reasons), and (ii) if the tax department ever came around he could point to his overdraft and claim that at a maximum he only had a USD 200,000 business. Trader B was asked the same question and gave the opposite answer. According to him: (i) he was a businessman, so why would he voluntarily pay 12 percent interest rate per annum to the banks if he didn't need the loan, and (ii) the authorities never came to visit him in any case.

*Findings from Inception Report of the Study Team.*

**The survey captured a total of 438 loans taken by agribusiness in 2010 and 2011.** The total value of these loans was about USD 40.5 million. Individual loans showed wide variation both within category of business and across categories. The differences between mean values of loans reached almost six-fold between categories (see Table 8). Processors had the highest mean value of loans with about USD 147,719, while the smallest mean value of loans was for rice sellers, only about USD 25,450. There was variation in loan sizes also among the processing category with loan values ranging from as little as USD 250 to USD 2 million.

**Survey findings indicate that the financial sector is not biased towards larger firms.** Table 9 shows that there are significant differences in loan values across different size of enterprises. The maximum loan size for large firms is about four times bigger than the maximum loan size for medium size firms. Yet, the maximum loan size for

medium firms is only twice as much larger than the maximum loan size for small firms. These figures also show that maximum loan values for large and medium firms are equivalent to the minimum revenue threshold for the classification (that is, USD 2 million for large firms and USD 500,000 for medium size firms). However, small loans with revenue threshold of USD 50,000 were able to obtain maximum loan values of USD 250,000 or five times over their revenues. As for micro firms, the maximum loan size is closer to the maximum revenue threshold for micro enterprises. These results indicate that the loan size for larger firms is not relatively larger when compared to their turnover.

**Processors and large agribusinesses are generally the largest borrowers.** Processors received about 74 percent of total borrowing captured by the survey. In terms of firm size, large firms received 63 percent of total lending of about USD 30 million (see Table 9). Rice sellers, who include more small and micro firms than any other category, received the least amount of loans with only about two percent of total loan value. It is also interesting to note that the maximum single loan value of crop collectors, who have proportionately more large firms than any other category, is equivalent to the maximum single loan value of medium size firms. This is another indication that most of the attributes of crop collectors are more in line with small and medium firms.

**Table 9.** Loans Amount (USD) in 2010 and 2011 by Type and Size

By enterprise type	Minimum	Mean	Maximum	Total value of loans	% total value	Number of loans	% loans
Processors	250	147,719	2,000,000	29,839,270	74	202	46
Input suppliers	500	32,463	200,000	1,947,800	5	60	14
Machinery sellers	2,000	163,342	1,500,000	3,103,500	8	19	4
Crop collectors	250	38,775	500,000	4,924,433	12	127	29
Rice sellers	1,500	25,450	150,000	763,500	2	30	7
<b>Total</b>	<b>250</b>	<b>92,645</b>	<b>2,000,000</b>	<b>40,578,503</b>	<b>100</b>	<b>438</b>	<b>100</b>

By enterprise size	Minimum	Mean	Maximum	Total value of loans	% total value	Number of loans	% loans
Micro	250	7,875	35,000	283,500	1	36	8
Small	250	27,147	250,000	4,289,170	11	158	36
Medium	2,000	83,828	500,000	10,478,500	26	125	29
Large	4,000	214,515	2,000,000	25,527,333	63	119	27
<b>Total</b>	<b>250</b>	<b>92,645</b>	<b>2,000,000</b>	<b>40,578,503</b>	<b>100</b>	<b>438</b>	<b>100</b>

Source: Survey results.

## 4.4 Lending Terms

**Interest rates charged by various sources of credit ranged from 2.3 percent per month<sup>17</sup> charged by moneylenders, to 0.7 percent per month charged by the Rice Millers Association.** Commercial banks charged about 1.2 percent per month whereas MFIs charged 1.9 percent per month. Annual interest rates for overdraft

17 Interest rates, usually quoted in monthly terms in Cambodia, and annual rates are simple rates of monthly quoted rates (that is, 12 times the monthly rates).



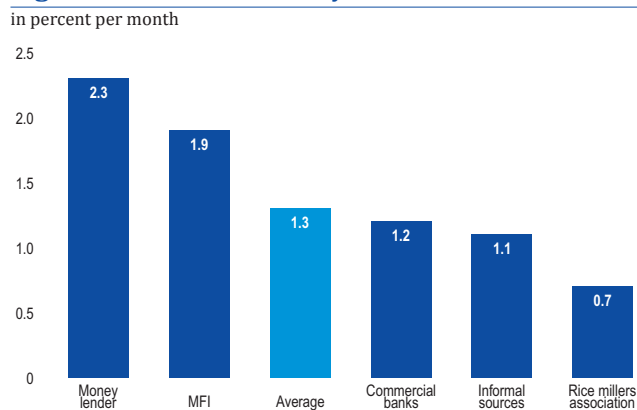
facilities, usually for formal enterprises, ranged from 9.5 percent to 12 percent (see Figure 29). In addition to interest charges, most lending also included fees in various forms. These fees averaged about 1.4 percent of loan amount. Fees, although they vary from one bank to another, are mostly applied to small and medium loans, usually in declining scale.

**Generally, the average monthly interest rate from commercial banks and MFIs declines with the loan size.**

For commercial banks, loans for all agribusiness types which are less than USD 10,000 have an average monthly interest rate of 1.6 percent, which decreases to 1.2 percent for loans between USD 10,000 and USD 100,000, and to 0.9 percent for loans between USD 100,000 and USD 500,000, and even lower for loans over USD 500,000. The average monthly interest rate of MFIs is two percent for loans below USD 10,000, and decreases to 1.5 percent for loans between USD 10,000 and USD 100,000. For moneylenders, there seem to be no significant differences in rates charged across different loan sizes. The median interest rate

for loans below USD 10,000 is 2.2 percent and this increases to 2.3 percent for loans between USD 10,000 and USD 100,000. There appear to be no significant differences in the rates charged by business type.

**Figure 29. Interest Rates by Providers of Funds**



Source: Survey results.

**The average maturity of agribusiness loans is about one year.** However, the range of loan maturity is quite large. There are loans with maturity as short as two weeks and as long as 15 years. In a separate question, the survey asked about preferred loan maturity for working capital and investment purposes. The median preferred maturity for working capital loans was one year, which is consistent for the current bank practices. Preferred loan maturity for processors and machinery sellers was three years. Crop collectors and rice sellers indicated that two-year loans would be sufficient for investment purposes. These responses were also consistent with the nature of each category. Both processors and machinery sellers need more complex and expensive installations and equipment. Furthermore, their turnover ratios are smaller than enterprises that usually engage in seasonal trading activities.

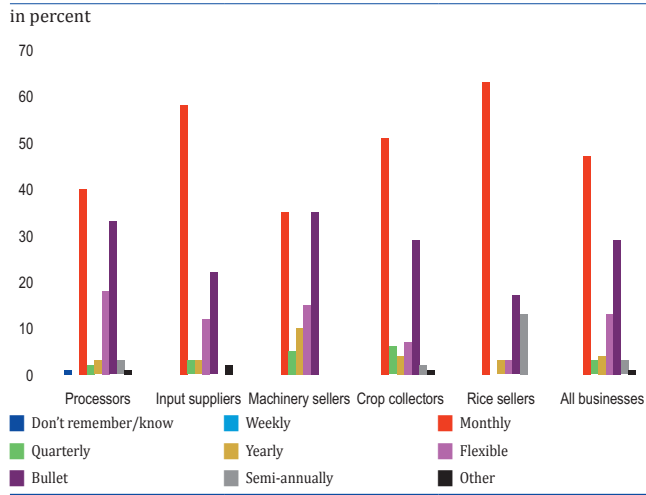
**Nearly half of all loans in the survey involved monthly repayments of interest and principal.** About 29 percent of loans were 'bullet' loans, which require enterprises to make only monthly interest payments, while the entire principal amount is repaid at the end of the loan period (see Figure 30). Bullet loans and flexible repayment terms are equally common for all business types. Processors repay 51 percent of their loans through flexible repayment terms. Machinery sellers follow a similar pattern. Rice sellers and crop collectors, on the other hand, use very little flexible loan repayment terms.

**Loan servicing terms are important considerations for enterprises in their decisions to take loans.**

Processors generally consider that monthly repayments of interest and principal are not suitable for them, given the seasonality of their cash flows. Bullet loans are considered more suitable loan products for agribusiness needs and have therefore gained popularity in recent years. It should be noted that bullet loans are fairly recent loan product in Cambodia, as there were essentially no such products available in 2008 when the last comprehensive survey of SMEs was conducted in the country. The recent introduction of these new loan products that are more suitable



**Figure 30. Loan Repayment Frequency by Type of Business**



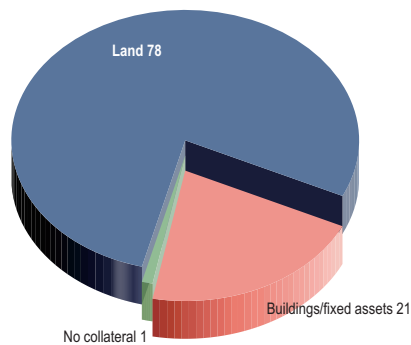
to agribusinesses indicates that the financial sector is trying to respond to the needs of the sector. It also signals the financial institutions to better appraise the market.

**All formal financial institutions require some form of collateral for their loans** (see Figure 30). Commercial banks use a mix of land and buildings/ fixed assets, whereas microfinance institutions rely almost exclusively on land. Banks generally provide loans up to 40 percent of the value of collateral. By contrast, informal lenders (for example, moneylenders, and friends, family, business partners) usually do not require collateral for most of their loans, although moneylenders may sometimes use land as collateral.

**Figure 31. Collateral Requirements by Type of Lenders**

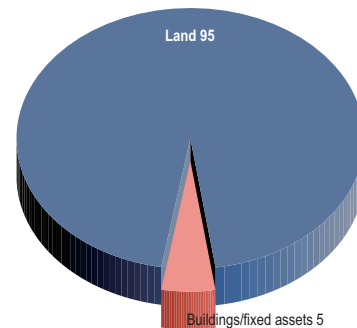
**Commercial banks**

in percent



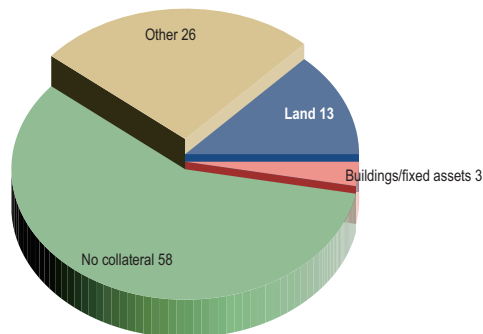
**Microfine institutions**

in percent



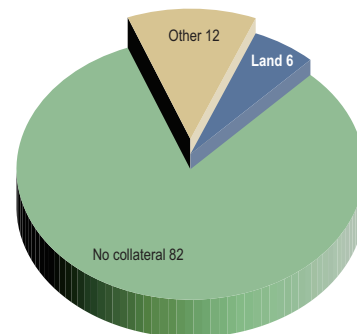
**Money lenders**

in percent



**Friends, relatives, business partners**

in percent



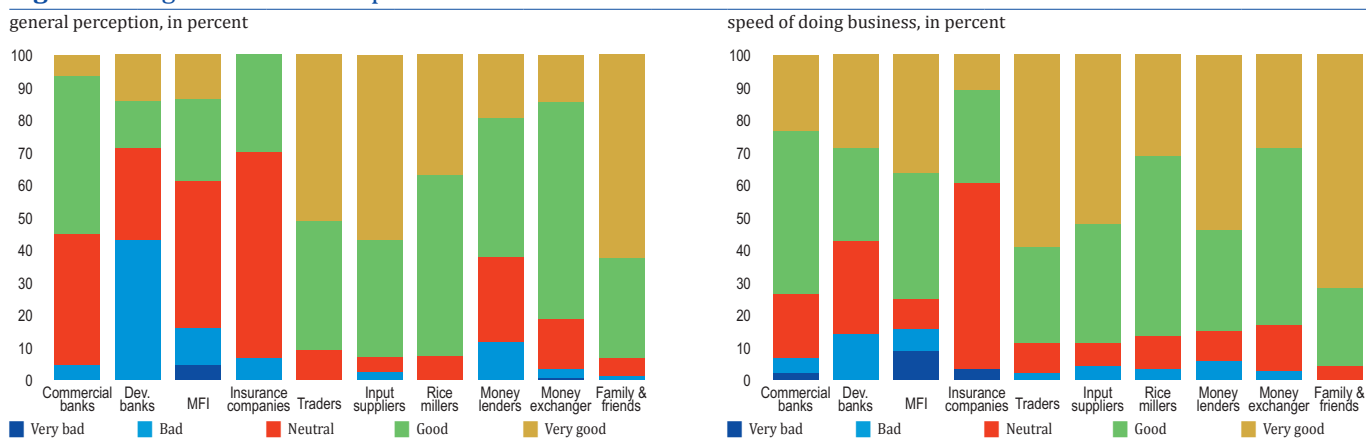
Source: Survey results.

Commercial banks typically require hard land titles (74 percent) but also accept soft land titles recognized at the district level (26 percent)<sup>18</sup>. Microfinance institutions do not have a preference over the type of land title. There are also some differences in the collateral use depending on the type of business. Machinery sellers and rice sellers are more likely to use buildings and other fixed assets as collateral compared to other businesses (see Figure 31).

## 4.5 Agribusiness Perceptions about Financial Institutions and Financial Products

Cambodian agribusinesses generally have a favorable opinion about the various financial service providers. Commercial banks have the most favorable rating after family and friends. The Rural Development Bank (RDB) was rated lowest. Perceptions of agribusinesses about financial service providers are based on the assessment of a number of dimensions, including quality of their staff, awareness of agribusiness needs and speed of doing business. Overall perceptions are positive although formal financial institutions receive, in general, less favorable ratings than informal institutions (see Figure 32 and Annex E, which presents the detailed data on agribusinesses perceptions towards financial service providers).

**Figure 32. Agribusiness Perceptions about Financial Service Providers and Their Staff**



Source: Survey results.

Value chain credit providers, such as traders, input suppliers and processors have the most positive perceptions among agribusinesses. Ninety-two percent of agribusinesses view them favorably or very favorably. Money exchangers and family and friends also receive high favorable ratings.

Among formal financial institutions, commercial banks received the highest positive ratings—about 55 percent of respondents see them favorably or very favorably. On the other end of the spectrum, agribusinesses hold most negative views towards RDB with 46 percent of respondents rating this organization negatively or very negatively. This is a very high negative, especially when compared to commercial banks. No agribusiness

<sup>18</sup> Hard land titles are recognised at the national level while soft land titles are recognised at the district/province level.

enterprise rated commercial banks very negatively and only four percent viewed them negatively. A very high percentage of neutral responses for insurance companies (about 65 percent) can be interpreted as the result of a very limited use of insurance products by agribusiness firms. It should be noted that these findings are consistent with the findings of a recent Gallup Poll conducted in April 2013, which found that about 87 percent of Cambodians have confidence in their commercial banks<sup>19</sup>.

**Access to finance is in general not viewed as the most important obstacle for further growth and development of business<sup>20</sup>.** As seen in Table 10, only about 31 percent of surveyed businesses indicated that access to finance was their biggest constraint. It must be noted that this finding does not mean that agribusinesses would not benefit from additional financial resources. There are important subsets of agribusinesses, such as large export oriented rice millers, which make use of finance heavily and consider the lack of it detrimental to their business. In fact, the impact of lack of finance on agribusinesses is either high or very high for those who considered access to finance as critical (see Figure 33).

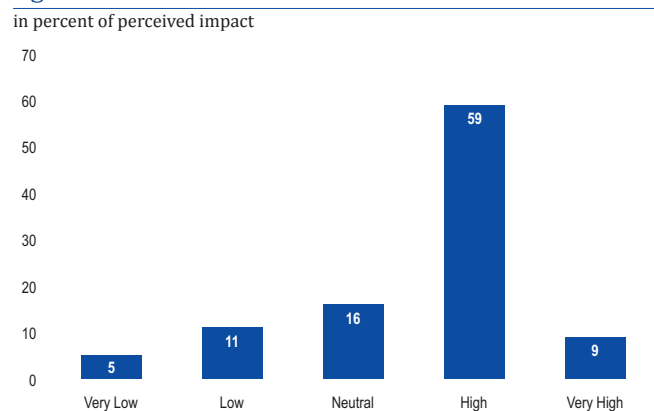
**In fact, the analysis of users and non-users of financial services shows that agribusinesses that use financial products are better off than those that do not use financial products.** Users of financial services had in average higher turnover and higher levels of working and investment capital compared to non-users (see Table 11). In addition, the relative difference between users and non-users increased as firms became larger. For example, for micro-enterprises, the average turnover of users was about 1.8 times higher than for non-users of financial services. This ratio, however, increased to 3.2 times for large enterprises.

**Table 10.** Selected Responses to Some Key Access to Finance Questions

<i>Access to finance is the largest constraints to my business</i>	
Dont' know	35
Strongly disagree or disagree	25
Neutral	8
Agree or strongly agree	31
<i>My business would be bigger if I could access finance</i>	
Dont' know	66
Strongly disagree or disagree	5
Neutral	8
Agree or strongly agree	22
<i>My business cannot afford high interest rate</i>	
Dont' know	37
Strongly disagree or disagree	20
Neutral	11
Agree or strongly agree	31
<i>My constraints to bank loan is lack of collateral</i>	
Dont' know	66
Strongly disagree or disagree	20
Neutral	5
Agree or strongly agree	8

Source: Survey results.

**Figure 33.** Impact of Lack of Access of Finance on Agribusinesses



Source: Survey results.

19 The results of this poll reported in *Phnom Penh Post* on May 27, 2013 in article by Sarah Thust.

20 This particular result seems to be consistent with the findings of the recent ICA of Cambodia SMEs and Doing Business Surveys.

**Table 11. Turnover, Working Capital and Investment by Users of Financial Services (amount in USD)**

		Turnover 2011		Working capital	Investment
		Average	Median		
Micro	Non-users	32,648	22,000	8,213	2,817
	Users	59,371	30,000	13,043	8,689
	Total	38,880	25,000	9,339	4,186
Small	Non-users	82,407	50,000	34,571	9,458
	Users	109,107	67,500	53,136	18,745
	Total	95,390	55,000	43,598	13,974
Medium	Non-users	148,171	100,000	72,992	35,184
	Users	361,290	200,000	185,592	58,377
	Total	300,541	160,000	153,495	51,766
Large	Non-users	358,214	220,000	209,143	37,024
	Users	1,161,892	542,500	610,502	215,419
	Total	1,054,394	500,000	556,817	191,557
Overall	Non-users	85,122	40,000	37,721	11,581
	Users	433,115	140,000	223,087	77,133
	Total	271,957	70,000	137,243	46,775

Source: Survey results.

**The large number of no-response or “don’t know” to the question of whether having access to finance would help business grow indicates there is significant uncertainty about the future.** Unfortunately, the survey did not include questions to further probe this sentiment and bring out the causes of this uncertainty. Therefore, it is only possible to speculate on this result. The usual risk factors related to the agriculture sector, such as agricultural commodity prices, weather conditions and other factors that may impact production and supply (such as input prices and availability, infrastructure related problems), would come to mind first. These results would also indicate that the majority of agribusinesses do not know, or cannot know, how to handle these risks and mitigate them. One could also speculate that small agribusinesses that do not have very many global linkages are significantly handicapped to manage these risks, and thus become uncertain about the future.

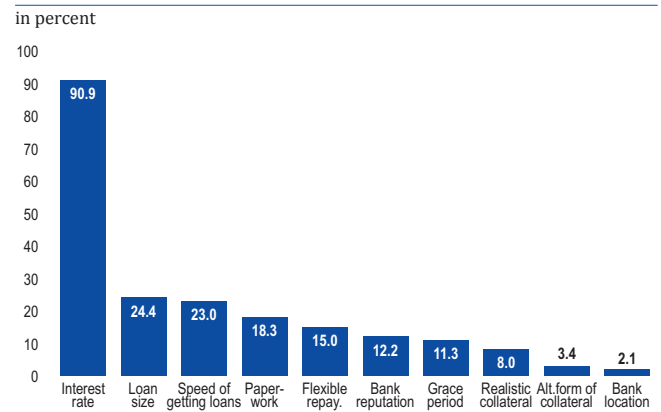
**Having a business plan, an accounting system and audited statements were considered very significant obstacles to access finance.** More than 90 percent of agribusinesses indicated the lack of proper accounting systems and audited financial statements. More than half the firms did not have proper business plans that could be submitted while applying for loans. Compared to these obstacles the lack of collateral or assets were not viewed as a major handicap for borrowing. The lack of accounting systems and business plans is obviously the result of a large degree of informality in the sector.

**Table 12.** Percentage of Agribusiness Entrepreneurs on Some Constraints to Access Loans

		Don't know	Not at all	Almost not at all	Neutral	Fulfill Somewhat	Fulfill Completely
Ownership of land title	Non-Users	1	0	4	5	31	60
	Users	0	0	1	2	20	77
Ownership of fixed assets	Non-Users	1	9	8	10	47	25
	Users	0	4	8	10	42	35
Awareness of good credit history	Non-Users	1	60	14	8	16	1
	Users	1	15	13	19	40	12
Existence of business plan	Non-Users	1	56	20	18	5	0
	Users	0	47	25	16	10	1
Existence of informal accounting system	Non-Users	2	13	24	40	18	3
	Users	1	10	17	29	35	9
Existence formal accounting systems	Non-Users	2	95	3	0	0	0
	Users	0	84	10	2	3	1
Audited accounts	Non-Users	2	96	1	0	0	0
	Users	0	95	3	1	1	0

Source: Survey results.

**Interest rates are the most important criteria for borrowing decisions made by agribusinesses.** About 91 percent of agribusinesses indicated that the level of interest rates was the single most important criteria when borrowing. All other factors rated less than 25 percent among surveyed businesses (see Figure 34). Loan size was also critical for about a quarter of businesses, which indicates that interest rate sensitivity could be overcome if agribusinesses could borrow the needed amounts. Slow loan processing procedures could be also discouraging for agribusinesses to do business with banks. It is also interesting that collateral related considerations were not viewed as important factors. These results contain important information for financial institutions. For example, faster loan processing and flexibility in terms of loan size could be appealing for potential new customers who would be more flexible with loan terms and collateral requirements.

**Figure 34.** Factors Influencing Borrowing Decisions

Source: Survey results.

**While interest rates are considered the most important criteria in loan decisions, agribusinesses generally find the prevailing levels of interest rates fair.** However, opinions regarding specific providers of finance vary significantly and exhibit a pattern independent of the level of interest rates (see Figure 35). For example, the rates charged by RDB, whose rates are one of the lowest available to agribusinesses, had one of the highest negative ratings. In fact, RDB's interest rate had more negative ratings than moneylenders whose interest rates are probably highest among financial service providers. Negative opinions on the rates of commercial banks were also low. These ratings indicate that the respondents did not just look at the level of interest rates but rated each provider's interest

charges based on their value judgment. For example, high negatives on RDB interest rates indicate that the respondents expect lower rates than commercial levels from this public financial institution which receives its funds at relatively lower cost than commercial banks.

**MFIs also received significant negative ratings on their interest rates.** In fact, negative ratings of MFIs were almost the same as those for moneylenders. This also reinforces general views towards MFIs by the agribusiness sector. Not surprisingly, family and friends had the highest positive and lowest negative ratings. Value chain actors were also viewed in a positive manner.

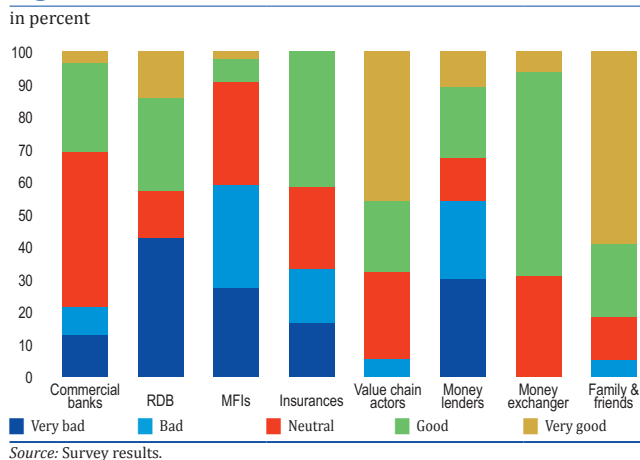
**Perceptions on loan repayment terms were also found generally positive across all financial service providers.** As expected, informal providers were found to be the most flexible. Satisfaction levels for repayment terms of commercial banks were quite high with 64 percent of respondents rating them favorably, while this share was 50 percent for MFIs. However, commercial banks also received the second highest dissatisfaction rating, with 12 percent of agribusinesses rating their loan repayment terms negatively. Only MFIs did worse in this respect with 18 percent receiving negative ratings.

#### 4.6 Awareness of Various Financial Products and Services

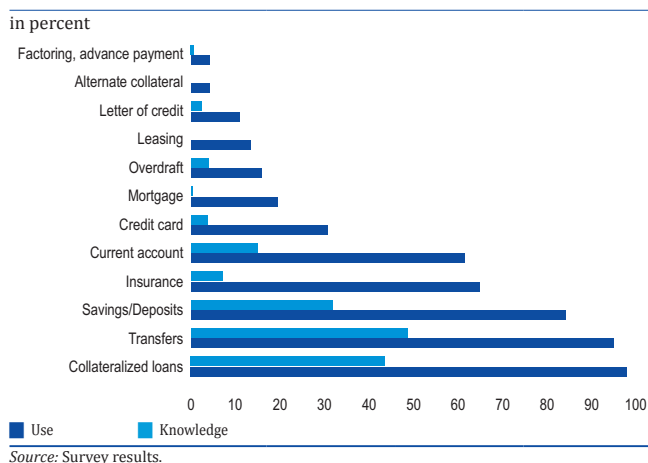
**The survey found considerable degree of awareness among agribusinesses of basic financial products such as collateralized loans, savings and deposits, and money transfers.** The awareness levels were very low for non-bank type of services such as factoring and leasing. It should be noted that these services have very limited presence in the country, and the results should not thus be surprising (see Figure 36).

**The survey also found considerable degree of awareness of insurance products but their level of utilization was quite low.** This of course raises questions such as whether the insurance products are compatible with the needs of consumers or priced at affordable levels, or both.

**Figure 35. Views about Interest Rates**



**Figure 36. Agribusiness Awareness of Financial Products**



## 5. FINANCING OF AGRIBUSINESS SECTOR

**Surveys conducted in this study provide important information about the amount of financing available for agribusinesses in Cambodia.** The total turnover of surveyed enterprises was about 27 percent of the estimated total size of the agribusiness sector, including value of primary production. Such a large sampling, which covers all major types agribusiness, would allow us to extend these findings to the entire agribusiness sector in Cambodia. We are thus able to use the information about trade credit generated within the value chain and financing decisions of working capital and investment needs to extrapolate the survey results to the entire sector.

### 5.1 Available Credit from Financial Institutions

**The analysis of aggregate financial flows showed that financial institutions provided relatively low level credit to agribusinesses compared to the size of the sector transactions, and working and investment capital levels.** The extrapolation of survey data to the entire agribusiness sector showed that the total value of purchases by the agribusiness sector in 2011 was USD 4.9 billion while the total value of sales was USD 5.4 billion (see Table 13). These numbers were estimated based on the size of the industry from various data inputs such as the total crop production of the country and the quantity of agricultural commodities captured by the survey.

**Table 13. Estimated Size of Agribusiness Sector**

in USD		
	Value of Purchases	Value of Sales
Total Processors	1,797,576,228	2,157,091,473
Total Crop collectors	2,027,015,555	2,137,955,354
Total Rice retailers	791,813,431	807,649,699
Total Input sellers	147,101,626	160,923,463
Total Machinery Sellers	143,516,000	152,110,969
<b>Total</b>	<b>4,907,022,839</b>	<b>5,415,730,958</b>

Source: Survey results.

**For input sellers, data from MIME on total import of fertilizers and pesticides was used.** The volume of input transfers was computed by using data on actual imports (it should be noted that the survey covered about 82 percent of the total input imports). The estimates for trading and processing (first three rows of Table 13) were computed by using actual production tonnage for paddy, milled rice, cassava, cashew, sesame, maize, and soybean and the price data obtained from the survey. The purchase and sales volumes were then computed by employing gross margin figures obtained from the survey for respective crops. The figures for the machinery segment were computed by assuming that the survey captured about 50 percent of machinery sellers. Interviews with the key players suggested that the total transaction volume of machinery business could be as high as USD 200 million. To be on the safe side, we relied on the median estimates that were obtained from survey data. These estimates could be considered as conservative lower bound estimates of the actual figures, due to possible underreporting of machinery sellers, exclusion of the largest rice mills from the survey, and for the tendency of agribusinesses to understate their actual business volumes.



Next, we could extrapolate the total working capital and investment levels for in the entire agribusiness sector using the working capital and total investment ratios (for example, current ratio of working and investment capital) obtained from the survey data (see Table 14).

**Table 14. Estimated Total Working Capital and Investment in Agribusinesses**

in USD		
	Working capital (using ratio from survey)	Investment (using ratio from survey)
Total Processors	352,405,620	161,270,369
Total Crop collectors	74,709,298	10,231,775
Total Rice retailers	28,222,732	3,865,230
Total Input sellers	17,547,349	2,456,878
Total Machinery Sellers	40,522,000	12,518,000
<b>Total</b>	<b>513,407,000</b>	<b>190,342,252</b>

Source: Survey results.

Based on the above figures, and applying external financing ratios for working capital and investments obtained from the sample (24 percent external funding for working capital and 11 percent external funding for investment purposes), we could estimate that the banks and MFIs provided USD 124 million to finance working capital and about USD 21 million for the investments in 2011. In other words, the total financing to the agribusiness sector provided by banks and MFIs in 2011 was about USD 145 million, which is a small fraction when compared to total financial levels of financial transactions.

## 5.2 Available Trade Credit within the Value Chain

In addition to the financing provided by banks and MFIs, the agribusinesses themselves provide financing to other enterprises within the value chain by way of trade relations. In fact, *what is provided within the value chain in terms of trade credit vastly exceeds the financing by financial institutions.* When estimating the difference between various forms of payments for purchases and sales, and extrapolating these to the entire sector shows that agribusinesses themselves provide credit in the magnitude of USD 1 billion (see Table 15). In these calculations, the credit received by agribusinesses is defined as total purchases made on either full or partial credit terms, plus any advance payments received for sales. Credit extended, on the other hand, is total sales made on either full or partial credit terms, plus any advance payment that was made for purchases.

**Table 15. Estimated Trade Credit in Agribusiness Chain**

in USD			
	Credit Received	Credit Extended	Credit Gap
Processors	233,684,910	1,107,306,956	(873,622,047)
Crop Collectors	1,094,588,400	1,174,766,047	(80,177,647)
Rice Retailers	459,251,790	426,945,802	32,305,988
Input Suppliers	47,625,394	73,610,138	(25,984,744)
Machinery sellers	76,063,480	87,880,563	(11,817,083)
<b>Total Agribusinesses</b>	<b>1,911,213,973</b>	<b>2,870,509,506</b>	<b>(959,295,533)</b>

Source: Survey results.

These results suggest that there is a significant trade credit mismatch in the system. The mismatch results from the difference between credit received and credit extended. About 91 percent of this mismatch is due to



the differences between credit received and credit extended by the processors. As noted earlier, purchases made by processors are 82 percent in cash, in addition to four percent of purchases made by advance payments. However, only about half of the sales by processors are in cash. Thus, the trade credit gap for processors is very significant compared to their business volume as shown in Table 16. The total mismatch in trade credit for processors is equivalent to about 40 percent of total sales of processors. Thus, processors will have to close this gap by either using their own funds or by borrowing. On the other hand, trade credit mismatch compared to sales is rather small for crop collectors, and rice sellers actually receive more trade credit than they extend.

**Table 16. Estimated Trade Credit Gap in Percentage in Agribusiness Value Chain**

	Trade-Credit Gap with respect to Sales
Processors	-40.50
Crop Collectors	-3.75
Rice Retailers	4.00
Input Suppliers	-16.15
Machinery sellers	-7.77
<b>Total Agribusinesses</b>	<b>-17.71</b>

Source: Survey results.

### 5.3 Total Available Credit

**The above estimations confirm that the agribusiness sector in Cambodia functions largely without external financing.** The total consolidated credit gap when combining external credit and trade credit provided within value chain was about USD 700 million in 2011, assuming that credit for working capital, which has a mean maturity of one year, can be turned over twice until it reaches maturity. This is a substantial gap and equivalent to about 15 percent of total lending in the country. (see Annex A).

**In comparison, the primary agriculture production received about USD 388 million from commercial banks and another USD 264 million from MFIs according to NBC figures (see Annex A).** Therefore, the total credit provided by banks and MFIs to primary production was almost about five times of the total estimated credit (about USD 652 million vs USD 144 million) to agribusinesses in 2011<sup>21</sup>. As such, the primary production sector seems to be getting more support from financial institutions than the agribusiness sector. In fact, this support has been expanding as the share of agriculture lending in total commercial bank lending has nearly doubled over the past five years, and reached almost nine percent of total lending. No other sector has experienced such an increase. Primary production is the main beneficiary of MFI lending as about 40 percent of MFI lending goes to agricultural activities (see Annex A).

**Given the growth of the financial system and high liquidity, the financial institutions would be able to provide additional three percent of total current credit to leverage agribusiness assets within the next two to three years, assuming that current growth trends will sustain.** This would imply that the financial system has

21 The Chairman of ACLEDA, the biggest bank in the country, also confirmed this point when he indicated in a press briefing that lending to primary production activities reached 19 percent of the Bank's lending in 2012, and lending to rice millers was 16 million. He stressed that lending to rice millers was classified separately (see *Phnom Penh Post* May, 2013).

the capacity to approximately double the current level of lending to agribusinesses. However, the system as it stands now, does not have financial resources that would meet the total credit need by agribusinesses, which is about 15 percent of the total credit in the country. Thus, the first priority should be using the existing lending capacity before eyeing the whole trade-credit gap. However, having such relatively large unused capacity of the banks can be interpreted as a signal for the presence of structural problems. In order to create the conditions to tap into this existing capacity requires addressing the structural problems which hold back lending by financial institutions. Some of these problems are identified below.

## 5.4 Borrowing Limits

**The above discussion points to low level of credit utilization and significant credit gap in the agribusiness sector.** Although there is a general ambivalence towards borrowing as explained in previous chapters, the question of whether Cambodian agribusinesses have the capacity to borrow more is relevant. There are of course many factors that would define the limits of borrowing ability of any business.

**There are three key parameters that could indicate the limits of the borrowing ability of Cambodian agribusinesses: the amount of liquidity available to service loans, the amount of assets that could be leveraged, and the level of lending interest rates.** The total gross margin of surveyed enterprises was about 11 percent, which is equivalent to about USD 500 million for the entire sector based on 2011 figures. This is the source of liquidity to service any debt financing. However, the effective lending rates ranged from about 12 percent to 28 percent in 2011. These rates were obviously very high when compared to the overall gross margin of 11 percent. Processors had the highest gross margin of about 20 percent, while collectors and retailers had the lowest margins of about three percent. Thus, the marginal cost of borrowing could exceed the marginal benefits of borrowing for a large segment of Cambodian agribusinesses, except for some large processors. Hence, in the case of crop collectors and retailers, borrowing does not make sense at all given their low gross margins<sup>22</sup>.

**The survey data on distribution of loans confirm these points.** About 74 percent of all lending captured by the survey went to processors and only two percent went to rice retailers. These results indicate that it would be prudent on the part of some segments of agribusinesses not to expose themselves to credit risk. It is equally prudent on the part of banks and MFIs not to take such risks. Therefore, relatively low levels of bank financing could be also attributed to a rational behavior on the part of all players.

<sup>22</sup> It should be pointed out that interest rates and associated lending margins have declined after the completion of the survey in 2012, amid increasing competition among banks. In fact, according to data collected by IFC, lending margins in Cambodia dropped from five to six percent as of January 2009 to approximately four percent in mid-2011, and further down to approximately two percent in early 2013, with effective interest rates reaching nine percent and less for prime banking customers. This could provide additional room to manage borrowing costs. However, this additional comfort is mainly for agribusinesses that borrow from the banking sector. Especially large export-oriented rice millers should be the main beneficiaries of this development as they already have sufficient margin to borrow, while its impact on the borrowing by other segments of agribusinesses is rather ambiguous and depends on many factors. The speed of turnover is one of the considerations in this respect, as well as the magnitude of other costs that are not included in our gross margin estimates. Therefore, those agribusinesses that have high turnover speeds and low operating costs would certainly benefit from the recent interest rate trends.

### Box 3. Potential Options for the Development of Warehouse Receipt Systems

There are three options for the development of warehouse receipt systems in Cambodia. The first option is collateral management. This could benefit the 10–20 or so largest, modern rice mills with large warehousing capacity. Such mills are unlikely to move their paddy to public warehouses, so if finance to this group is to be expanded, then the banks need to move into the millers' compounds, using an independent agent (the collateral manager) to take control over the physical inventory present at the millers' premises. There are currently no collateral managers in Cambodia, and it is uncertain whether any international firms wish to move into the country. The ideal manner to deal with this bottleneck would be for a consortium of local companies with an interest in expanding agricultural sector lending to create a new collateral management company. An established international firm can be brought in to bring expertise and systems, and in return can be given a sweat equity stake. This option would require only a small investment, and even if only a few of the large mills sign up for the services of the collateral manager, it can already become profitable.

The second option is to convert one or more existing 'excess' warehouses into public warehouses. Local mills that have such surplus capacity may make it available for public use. The physical infrastructure has to be good, and key equipment needs to be installed at the site—in particular, one or more driers, and a weighbridge. It is also essential to create legal and management distance between the public warehouse and the mill that owns it. A separate operator needs to be brought in to manage the warehouse and the mill's sole role should be as a landlord, receiving a regular rent but without any privileges when it comes to the warehouse. A proper solution for removing warehouse control from the ultimate beneficiaries of loans to an independent party needs to be implemented before it can become a successful tool for enhancing rice, and potentially also other crops, sector finance.

The third option is the development of an electronic warehouse receipt system. This system would act not only as a depository of warehouse receipts, but also as a tool to manage, trade and finance them. It is an essential component of each of the previous options and could be set up and managed as an internal system of the collateral manager, managed by an independent company which provides its services to all warehouse operators and their clients. The necessary software can be procured off the shelf and then adapted to local needs.

Source: World Bank (2012). "Review of Potential and Constraints for Warehouse Receipts Financing in Cambodia." Internal Report.

**Furthermore, data from the survey estimates the total assets of agribusinesses at about USD 280 million.** It would be thus unrealistic to expect lending to agribusinesses to exceed the value of assets. Given that agribusinesses have already borrowed USD 145 million, about half of their assets remain unleveraged. Hence, agribusinesses have about USD 140 million additional borrowing capacity given their asset levels. This additional room to borrow is only 20 percent of the trade credit-gap estimated above. Furthermore, nearly half of total gross margins could be wiped out, even if borrowing up to the trade-credit gap were possible. This implies that higher level of borrowing could be detrimental to the profitability of a large segment of agribusinesses at the level of gross margins estimated in this study. However, it should be emphasized that this observation does not apply to the entire sample, as there are segments of agribusinesses that do not have an affordability problem. Furthermore, the actual capacity for additional borrowing could be significantly higher than estimated above, as our fixed-asset estimates do not include the value of land.

**However, the biggest assets of agribusinesses in Cambodia are the stock of agricultural commodities, such as paddy.** These commodities are all tradables with well-established global price patterns. Unfortunately this biggest asset of the agricultural sector is out of consideration for financing purposes. In other words, the system is not able to leverage these commodities and obtain financial resources against them. Unlocking this potential will immediately increase the capacity to attract financing. Warehouse receipt systems are the most commonly used systems to leverage stocks of agricultural commodities and to expand the asset base of agribusinesses for financing

purposes. Establishment of effective warehouse receipt systems, however, requires close partnership between financial sector actors and the Government. Box 3 provides several options as to how to do this.

## 6. CONCLUSIONS AND POLICY IMPLICATIONS

### 6.1 Key Conclusions

**The preceding chapters and information in Annex A discuss the key findings of the study.** These results offer insights into the: a) state of agribusinesses in Cambodia and their recent evolution; b) the level of financial sector engagement with agribusinesses; c) the state of the financial sector; and d) the nature and extent of relationship between the financial sector and agribusinesses. Our analysis points to the following conclusions, which would form the basis for recommendations:

**First, the large-scale prevalence of informality in Cambodia creates significant handicaps for the growth and modernization of agribusinesses, which would limit its value-added potential.** Informality prevents agribusinesses from applying for loans as the borrower of the record. This lack of access to finance creates handicaps for growth and sector modernization. Furthermore, a considerable part of such informality among agribusinesses in Cambodia is voluntary, which points to the desire to avoid interactions with licensing and tax authorities, and lack of trust in banking institutions to honor the confidentiality of their financial information.

**Second, the modest levels of gross margins signal inefficiencies in agribusiness sector.** The inefficiencies are usually due to problems related to technical and/or managerial problems in individual firms. When inefficiencies become sector-wide problems, the structure of the sector itself comes into question. For example, smaller agro-processing firms may find it difficult to obtain and/or sustain sizable asset levels, leave alone invest in up-to-date technology. This would affect the quality and efficiency of their operations, which would have negative implication on gross margins. Consequently, the sector operates in a state of low level equilibrium where firms survive as they are but the system cannot handle processing of the entire primary production. As a result, significant in-country value-added opportunities are lost as it is more profitable to trade raw materials to neighboring countries.

**Third, high lending rates when compared to the gross margins of agribusinesses appear to be the one of the main reasons why agribusinesses prefer not take loans and establish relationships with financial institutions.** While interest rates have been declining over 2012 and 2013, the structure of the agribusiness lending portfolio has not changed much. The banks that have seen a significant expansion in lending are largely lending to the same segment of agribusinesses (e.g. higher-margin earning more modern agribusinesses) that were borrowing before, and those businesses that did not borrow much are still not borrowing.

### 6.2 Policy Implications

**The study findings and conclusions have important policy implications.** The prevailing inefficiencies in the financial system and agribusiness sector are the main bottlenecks for agribusiness development. The policy options that aim to address these inefficiencies must be consistent with the broader private sector and financial sector

development policies, and be easily implementable given the existing institutional capacity in the private and public sector. The policy options to achieve these objectives are thus classified into three broad categories: a) encouraging formation of formal business structures; b) increasing the efficiency of the financial system so it can offer more diversified products and services; and c) facilitation of investments in modern agro-processing enterprises.

### **6.2.1 Encouraging Formalization of Agribusinesses**

**The widespread prevalence of informality in Cambodia is probably the most significant constraint for growth and modernization of agribusiness sector as it limits linkages with financial institutions and access to credit.** It is due to a number of factors. Some of them are common to other developing countries and are mainly related to the low institutional capacity of enterprises and/or burden of taxation and regulatory compliance. These are especially valid for small firms. As the firms get bigger they realize the benefits of becoming formal. Relieving excessive tax or regulatory burdens on enterprises is the best way to encourage formalization of enterprises under these circumstances.

**Other factors are more specific to Cambodia and thus demand more focused policy attention.** An important issue is the prevalence of informality among larger firms. There may be various reasons for this, such as: a) enterprises do not want to disclose their financial situation to banks, and b) enterprises may be overwhelmed by the prospect of more formal engagement with official entities. They may also feel that they gain some competitive advantage over their competitors by staying informal. These perceptions, whether warranted or not, cannot be ignored and must be addressed effectively. The following recommendations may help to overcome the enterprise choice of staying informal:

- Clarify privacy rules of financial information provided by enterprises and disseminate this information more widely among businesses.
- Develop regulations which enforce privacy of financial information and prevent the disclosure of financial information without court order to official entities.
- Adopt universal processes that define how client information is stored; and there should be clear definition of processes to access such information.
- Conduct training programs on privacy issues and carry out awareness campaigns among agribusinesses. The training should focus on the following stakeholders: a) training of their staff; b) training of financial sector supervisors; and c) training of judiciary.
- Review the enforcement methods and practices for tax and regulatory compliance. This would include clarifying the methodology and practice of tax enforcement and carrying out revisions where necessary.
- Review the methodology and practice of enforcement of various rules and regulations that govern the conduct of businesses (both central and local government levels) and revise these where necessary.
- Design and conduct training about the new policies among officials in tax and regulatory enforcement.

## 6.2.2 Facilitation of Investments in Modernization of Agribusiness Sector.

**Facilitating investments in modern, export oriented processing enterprises that are able to compete in international and regional markets is a good way to encourage gradual formalization of entire agribusiness sector.** Such enterprises would serve as a primary source of demand for lending and non-lending products from financial institutions, while being at the same time a significant source of credit to smaller and informal enterprises. However, Cambodian agribusinesses face a range of market failures and imperfections which limit such investments. For example, the 2013 Doing Business survey of Cambodia indicates serious problems in various key areas such as starting businesses, obtaining permits, enforcing contracts, resolution of insolvency, and trading across borders. The preliminary survey results of the World Bank Investment Climate Assessment (ICA) indicate that firms view constraints related to the institutional underpinnings of the business environment as either major or severe. Anti-competitive environment, regulatory issues and corrupt practices are placed ahead of some important business needs such as access to finance, access to land and skills. These perceptions are robust across all types of businesses and sectors, including agro-processing.

**Increased investments in modern business structures would thus require a combination of interventions concerning continued improvements in business environment and market failures while addressing specific issues related to incentive structure of agribusinesses.** The main policy focus should be on establishing a level playing field for all types of enterprises—large and small, formal and informal, and domestic and foreign. This includes enforcement of the rule of law, including the independence of the court system, and improving regulatory environment and governance systems with the objective of reducing uncertainties to enterprises. The following actions could improve both business environment and investment climate in the Cambodia:

- Carry out information campaigns aimed at creating more transparent business environment, and address market imperfections arising from asymmetric information, through: a) enhancing financial institutions' knowledge about the opportunities in the agribusiness sector as well as the specific needs of the agribusinesses; b) enhancing business community knowledge about global best practices and market opportunities; and c) establishment of M&E systems to monitor the demand and supply of financing to agribusiness sector and the impact of financing for the performance of agribusiness sector.
- Support the establishment of well-designed and well-placed financial facilities that would not undermine the natural dynamics of financial sector development. These can include: a) targeted lines of credit aimed at achieving specific policy objectives such as financing investments and/or reducing the trade credit gap (e.g. trade credit, pre-shipment facilities, lending against export orders); b) targeted technical assistance programs to potential agribusinesses to prepare them for relationships with formal financial institutions (improving financial management systems, business plan development, etc.); and c) provision of technical assistance programs to domestic banks and MFIs to build their lending capacity to agribusinesses.
- Investigate the feasibility of establishing public-private partnerships in warehouse receipt systems, which is suitable with local regulatory and legal conditions. If implemented well a warehouse receipt system can unlock significant lending to agribusinesses using the commodity stocks as collateral. The financial institutions should be part of building such systems, through partnership with the Government and other private sector players.



### ***6.2.3 Increasing the Efficiency of the Financial Sector and Diversifying Financial Products and Services***

**Besides the constraints related to the overall business environment noted above, the imperfections and inefficiencies within the financial sector has adverse impact on the level of investment in agribusiness sector.** The large amounts of liquidity that exist in the Cambodian financial system and non-performing loans are the main sources of inefficiencies in the financial sector. These inefficiencies are ultimately reflected in the intermediation margins and lending behavior of the financial institutions.

**However, such inefficiencies are rather unavoidable in the current state of development of the financial system in Cambodia, given the lack of money market instruments that can be deployed to manage liquidity.** The issue of non-performing loans is more complex and can be attributed to several factors, including financial intelligence, deficiencies in the bank loan appraisal and monitoring process, difficulties in enforcing foreclosures and other legal collection and judiciary processes, and deficiencies in the prudential banking regime. All these deficiencies have been analyzed in detail in the Financial Sector Assessment Program (FSAP). The following recommendations, which draw on FSAP, highlight the areas of improvement particularly relevant to agribusiness access to finance in Cambodia:

- Establish liquidity management tools such as repos and reverse repos, interbank and money markets.
- Prepare necessary regulatory and legal environment which would encourage the broadening of the lending services by financial institutions and increase the value-added in the sector, without creating excessive regulatory burden. The proposed instruments would include tax incentives for leasing, factoring, pre-shipment facilities, LOCs, etc.
- Support development of appropriate non-lending services by financial institutions such as promotion of use of existing collateral registry, promotion of movable collateral-backed lending, and micro-insurance.
- Lowering costs and time associated with contract enforcement through training of commercial judges, boosting the capacity of commercial courts, and promoting secondary markets for assets and non-performing loans
- Improve loan appraisal and monitoring processes and capacity by financial institutions according to international standards through investments in staff skills and IT platforms for better credit monitoring systems.
- Improve prudential loan supervision practices by financial institutions, while simplifying the loan approval procedures to better meet the operational needs of agribusinesses.

**While there is an array of activities that can have an immediate positive impact on the efficiency of the financial system, diversification of financial products and services is a process that will naturally take time as its development requires a certain level of maturity and depth in the financial sector in terms of financial, technological and human resources.** There is an opportunity for donors to support the Government's efforts to implement the above suggestions through technical advisory programs for the financial institutions and National Bank of Cambodia. But financial institutions too need to take steps to address these issues, as suggested above. This may justify technical advisory programs for local banks.



The matrix below summarizes the proposed actions that relate to the study findings and conclusions. These actions require close coordination of various public and private entities, including banks and industry associations. Therefore, an administrative/institutional framework should also be set up to ensure smooth decision-making and policy implementation. Given the range and nature of the issues involved, the decision on appropriate policy instruments requires significant specialized expert knowledge. Donors have an opportunity to support this process by providing such advisory services through technical assistance programs.

### Summary Matrix of Proposed Policy Actions

Constraint/Policy Issue	Possible Solutions	Potential/Actual Responsibility	Expected Results
Widespread informality among agribusinesses limits linkages with financial institutions and imposes constraints for growth.	<ul style="list-style-type: none"> <li>Clarify the privacy rules of enterprise financial information and disseminate information to enterprises;</li> </ul>	NBC, MEF, Ministry of Justice	Medium-term
	<ul style="list-style-type: none"> <li>Develop regulations which enforce privacy of financial information and prevent the disclosure of financial information without court order to official entities;</li> </ul>	NBC, Financial institutions	Medium-term
	<ul style="list-style-type: none"> <li>Adopt universal and clear procedures on storing and access to client information by financial institutions;</li> </ul>	NBC, Financial institutions	Medium-term
	<ul style="list-style-type: none"> <li>Conduct training on privacy issues and carry out awareness campaigns for agribusinesses;</li> </ul>	NBC, Financial institutions	Medium-term
	<ul style="list-style-type: none"> <li>Review the enforcement methods and practices for tax and regulatory compliance;</li> </ul>	MEF	Short-term
	<ul style="list-style-type: none"> <li>Review the methodology and practice of enforcement of rules and regulations that govern the conduct of businesses and revise these where necessary;</li> </ul>	MEF, Ministry of Commerce (MOC)	Short-term
	<ul style="list-style-type: none"> <li>Design and conduct training about the new policies among officials in tax and regulatory enforcement.</li> </ul>	MEF, Industry Associations	Medium-term

Constraint/Policy Issue	Possible Solutions	Potential/Actual Responsibility	Expected Results
Cambodian agribusinesses face a range of market failures and imperfections which limits investments into modern agribusiness structures and practices.	Establish level playing field among agribusinesses:		
	• Enforcement of rule of law and existing regulations which govern agribusiness sector;	Judiciary	Medium-term
	• Enforce the independence of court systems;	Judiciary	Medium-term
	• Improve governance systems which enhance the transparency of regulatory system.	Judiciary	Medium-term
	Establish financial facilities:		
	• Provide targeted lines of credit aimed at achieving specific policy objectives such as financing investments and trade credit;	MEF	Short-term
	• Provide targeted technical assistance programs to agribusinesses to prepare them for relationships with formal financial institutions (improving financial management systems, business plan development, etc.);	MEF, Financial Institutions	Short-term
	• Provide technical assistance programs to domestic banks and MFIs to build their lending capacity to agribusinesses.	MEF, Banks Association, NBC	Short-term
	Support information campaigns and address market imperfections arising from asymmetric information:		
	• Enhance financial institutions' knowledge about the opportunities in the agribusiness sector and the specific needs of the agribusinesses;	MEF, Ministry of Agriculture, Forestry and Fisheries (MAFF), MOC, Industry Associations	Medium-term
• Enhance business community knowledge about global best practices and market opportunities;	Industry Associations	Medium-term	
• Build capacity of business and trade associations;	Banking and Industry Associations	Short-term	
• Develop an information exchange platform between financial institutions and business associations;	MEF, MOC, Industry Associations	Medium-term	
• Establish M&E systems to monitor the demand and supply of financing to agribusiness sector and the impact of financing for the performance of agribusiness sector;	MEF, MAFF, MOC, Financial Institutions	Medium-term	
• Investigate the feasibility of establishing public-private partnerships in warehouse receipt systems.	MEF	Medium-term	

Constraint/Policy Issue	Possible Solutions	Potential/Actual Responsibility	Expected Results
High intermediation margins and sub-optimal lending behavior of banks and MFIs caused by financial sector inefficiencies.	<ul style="list-style-type: none"> <li>Establish liquidity management tools such as repos and reverse repos, interbank and money markets;</li> </ul>	NBC, MEF	Short-term
	<ul style="list-style-type: none"> <li>Prepare the regulatory and legal environment to encourage the broadening of the lending services (eg. tax incentives for leasing, factoring, pre-shipment facilities, LOCs, etc.);</li> </ul>	MEF, NBC, Financial Institutions	Medium-term
	<ul style="list-style-type: none"> <li>Support development of appropriate non-lending services by financial institutions (eg. use of collateral registry, movable collateral-backed lending, and micro-insurance);</li> </ul>	NBC, MEF	Short-term
	<ul style="list-style-type: none"> <li>Lowering costs and time associated with contract enforcement through training of commercial judges, and boosting the capacity of commercial courts;</li> </ul>	Ministry of Justice	Medium-term
	<ul style="list-style-type: none"> <li>Promoting secondary markets for assets and non-performing loans;</li> </ul>	Financial Institutions, NBC	Short-term
	<ul style="list-style-type: none"> <li>Improve loan appraisal and monitoring processes and capacity by financial institutions through investments in skills and IT platforms;</li> </ul>	Financial Institutions, NBC, Industry Associations	Short-term
	<ul style="list-style-type: none"> <li>Improve prudential loan supervision practices by financial institutions;</li> </ul>	NBC	Short-term
	<ul style="list-style-type: none"> <li>Simplifying the loan approval procedures to better meet the needs of the agribusinesses.</li> </ul>	Financial Institutions	Short-term

## ANNEXES

### Annex A. State of Financial Sector

#### A.1 Introduction

**Cambodia's financial sector mainly consists of various types of banks and a few small insurance companies.** The National Bank of Cambodia regulates both banks and microfinance organizations. The insurance sector is regulated by the Ministry of Economy and Finance (MEF). Cambodia has three types of banking institutions: specialized banks, commercial banks, and microfinance institutions (MFIs). Specialized banks include a wide array of banks that range from state-owned banks such as the Rural Development Bank to local operations of international banks such as MayBank. MFIs are numerous and quite varied.

**The recent change in regulatory framework now makes it possible for microfinance organizations to take deposits.** Some of these institutions are operating in a manner that is no different than commercial banks by offering similar products and services. Hence, the distinction between various types of banking services is essentially a matter of regulatory distinction. Since such distinctions do not have any practical impact on farmers, agri-businesses or the public at large, the analysis presented here aggregates specialized banks and commercial banks to provide a better picture of the banking sector. For example, separation of ACLEDA, ANZ, Campubank, Canadia, and MayBank in different categories (as they fall into different regulatory classifications) would lead to an incorrect understating of banking assets in the country. The microfinance category is still a separate category despite some microfinance organizations being no different than small commercial banks. This is because the pricing structure and business practices of MFIs are significantly different than those commercial banks.

#### A.2 Structure and Depth of Banking Sector

**Cambodia's banking sector consists of about five big banks and numerous smaller banks.** The number of commercial banks and microfinance organizations has almost doubled between 2006 and 2011, increasing the total number of banking institutions to 70 in 2011 (Table A1). A substantial increase in the number of microfinance organizations took place in 2011—eleven new microfinance organizations were registered during that year alone. This increase coincided with the decision to allow microfinance organizations to take deposits and indications that the National Bank of Cambodia (NBC) will rigorously implement minimum capital requirements for commercial banks. This may suggest that relatively unregulated microfinance channel may have been used by some institutions to enter Cambodia banking sector.

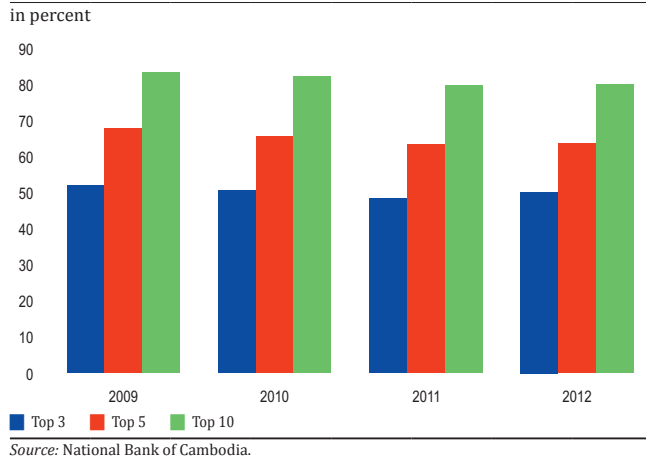
**Table A.1.** Number of Financial Institutions

	2007	2008	2009	2010	2011
Commercial Banks	17	24	27	27	31
Specialized Institutions	7	6	6	7	7
Micro Finance Organization	17	18	20	23	32
<b>Total</b>	<b>41</b>	<b>48</b>	<b>53</b>	<b>57</b>	<b>70</b>

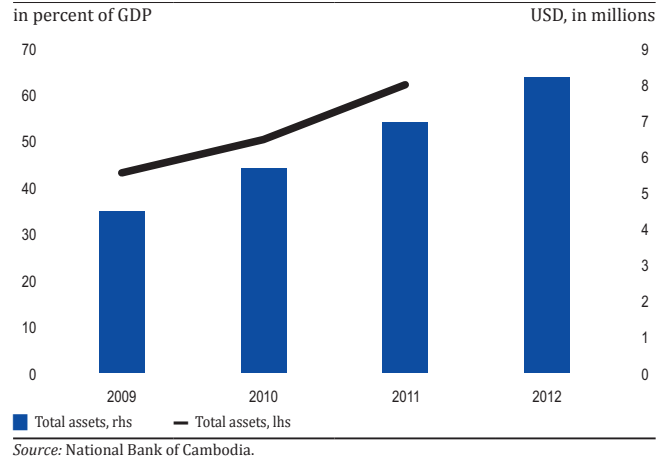
Source: National Bank of Cambodia.

**While there have been many new entrants into the Cambodia banking sector, the new entrants have not had much impact on the level of concentration within the sector.** Consequently, the structure of market shares of top banks has remained stable. The top three banks continue to hold about 50 percent of total banking assets. This figure goes up to 80 percent for the top ten banks (Figure A1). There are currently about 15 banks with less than two percent share of total banking assets in the country.

**Figure A.1. Market Shares of Top Banks in terms of Total Assets**



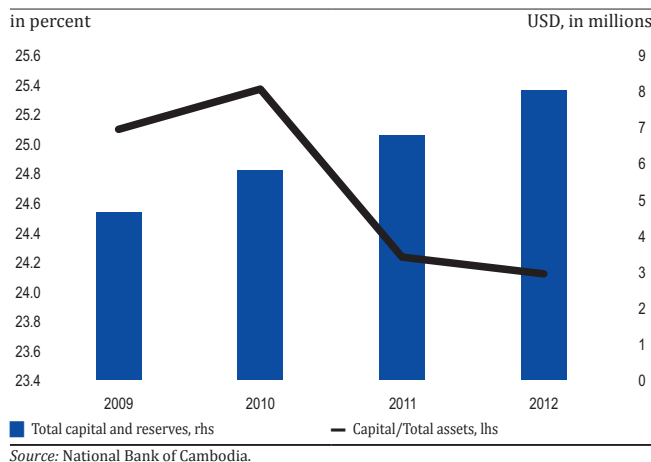
**Figure A.2. Financial Depth Indicators**



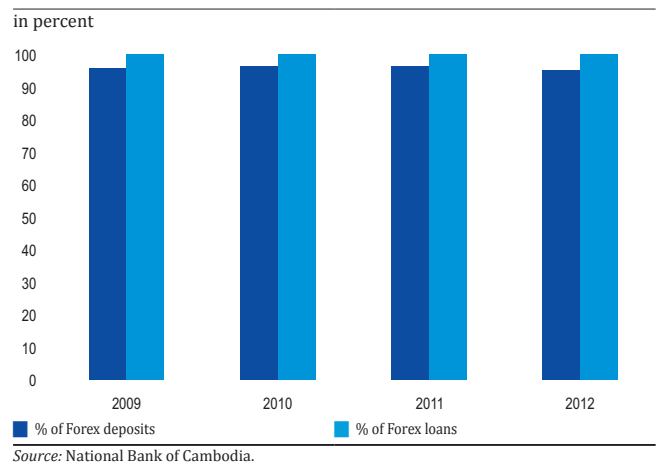
**Although the market shares remain stable, the banking system has considerably increased its total assets.** Total assets have increased about 80 percent from about USD 4.1 billion in 2009 to USD 8.1 billion in 2012 (current dollars). With the increased level of banking assets, financial depth has also increased (Figure A2).

**It should be also noted that Cambodian banks report a healthy capital position.** Total capital and reserves are about 25 percent of total assets (Figure A3).

**Figure A.3. Capital Levels of Cambodian Banks**



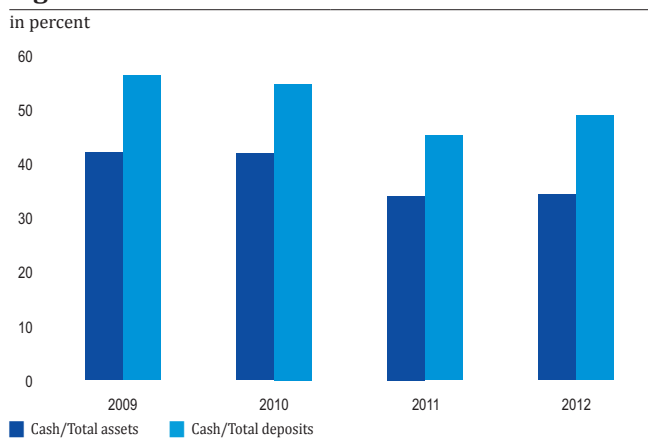
**Figure A.4. Foreign Exchanged Denominated Deposit and Loans**



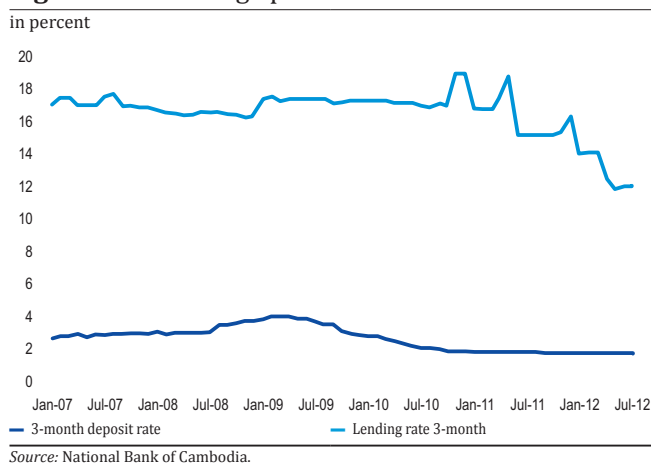
**The two most notable aspects of the Cambodian financial sector are US dollar domination of banking assets and liabilities, as well as rather large holdings of cash and quasi-cash assets.** Nearly the entire lending is denominated in US dollars and about 96 percent of deposits are in US dollars (Figure A4). Hence, the banking sector mirrors the high level of dollarization in the economy. Given that both assets and liabilities of the banking sector exhibit about the same level of dollarization, the system is not exposed to currency risks that may arise from denomination mis-match. Nonetheless, the system has to rely on a continuous supply of US dollars.

**Due to the high level of cash requirements of economic transactions, as well as the lack of financial instruments, the banking system holds very large amounts of cash and quasi-cash assets** (Figure A5). Nearly half of the deposits are held in cash and quasi-cash form (e.g. bills and deposits at NBC and other banks). Cash and quasi-cash holdings account for about one-third of total assets of the system.

**Figure A.5. Cash Position of Banks**



**Figure A.6. Lending Spreads**



**Although such large cash holdings provide strong risk mitigation abilities, they also impose significant inefficiencies.** One of the most visible aspects of these inefficiencies is the rather large lending spreads and their sticky nature. For example, lending spreads have declined in absolute terms with the declining interest rates (Figure A6). However, the decline in spreads is less than the decline in interest rates. In fact, the decline in spreads is only a recent phenomenon. The spreads were even increasing when the interest rates were falling until very recently. Hence, it remains to be seen whether the recent decline in spreads is a permanent trend.

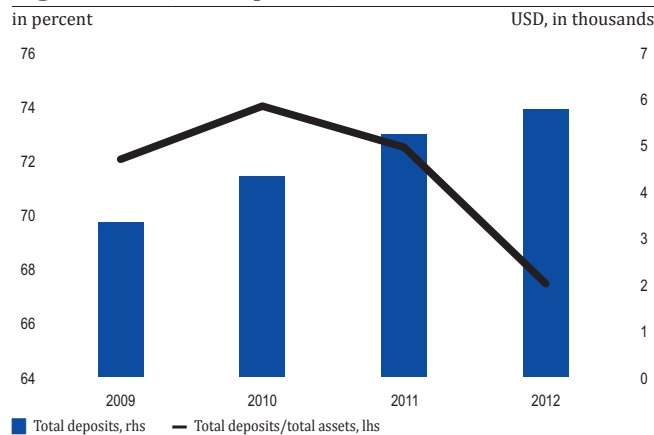
**The lending spreads are calculated from aggregate data as reported by NBC.** According to the survey of banks, the effective loan interest rates are higher than the spreads by at least two percentage points. Another interesting finding of the survey of banks is that there are a large number of loans that carry very high interest rates. For example, one of the biggest banks reported loans that carry annual interest rates close to 50 percent. In this respect, the picture for MFIs is no different. Typical effective MFI lending rates remained around 2.3 percent per month, or about 30 percent annual rates, over 2006–2011, which implies inherent inefficiencies of the banking system.

### A.3 Utilization of Banking Services

**The Cambodian banking sector primarily offers deposit and lending services.** In addition, the sector provides various payment services (domestic and international money transfers, check cashing, etc.) along with foreign exchange services. A brief summary of the deposit and lending services is presented below.

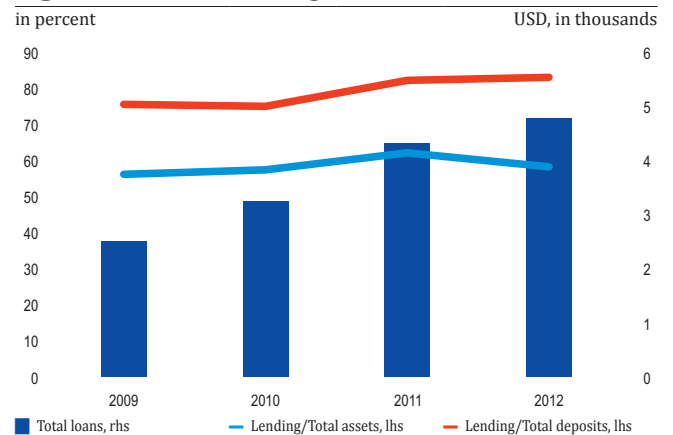
**Deposits.** In parallel to the increase in the number of banks and asset growth in the banking sector, the level of deposits in the system has also increased (Figure A7). Although the increase in the level of deposits was less than the increase in total assets of the sector, the increase in deposits between 2008 and 2011 has been impressive and was about 72 percent (compared to 82 percent asset growth). The ratio of total deposits to total assets has declined slightly as a result of slower deposit growth relative to the growth in total assets. Virtually all the deposits in the system are short-term and the system has limited long-term domestic funding sources.

**Figure A.7. Total Deposits**



Source: National Bank of Cambodia.

**Figure A.8. Total Lending**



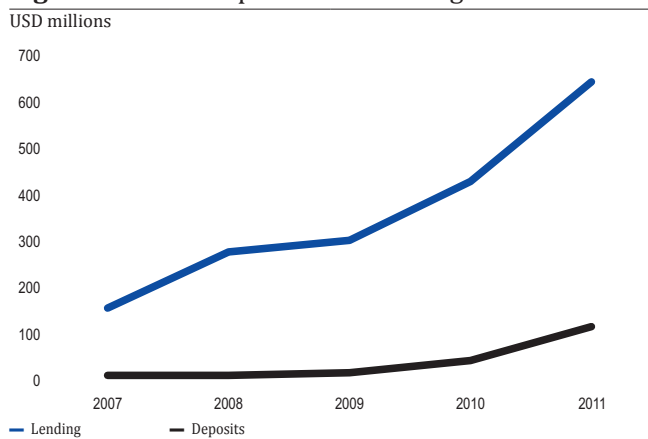
Source: National Bank of Cambodia.

**Lending.** Lending in Cambodia, as noted above, is almost entirely dollar denominated and virtually all lending is in the form of short-term lending. Longer term lending is achieved usually by rolling over overdraft facilities.

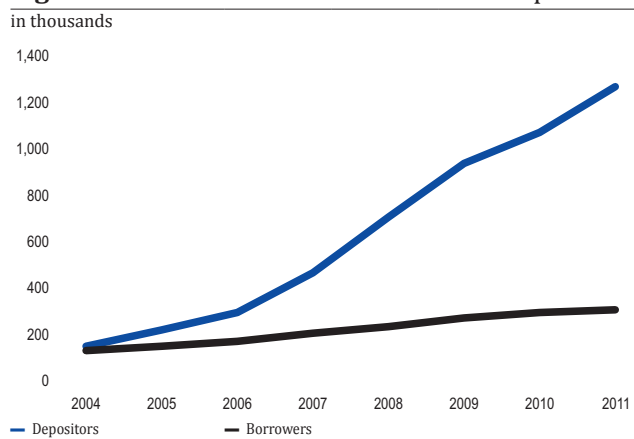
**Lending volumes have been increasing at remarkable rates** (Figure A8). In fact, the increase in total lending has surpassed the deposit growth rate as the level of loans and advances has doubled since 2009. Consequently, the ratio of lending to total deposits has also increased. However, the level of lending relative to total assets increased slightly as the level of asset growth was close to the rate of growth in lending.

**The recent policy of allowing microfinance organizations to take deposits has provided a significant amount of funding source for these organizations;** deposits at microfinance organizations grew to USD 114 million by the end of 2011, from a mere USD 5 million level in 2007 (Figure A9).

**The growth of lending by microfinance organizations has been rather spectacular as the lending volume more than quadrupled over the last five years.** In fact, total lending by microfinance organizations has now reached about 15 percent of total lending by the commercial banking sector.

**Figure A.9. MFI Deposits and Lending**

Source: National Bank of Cambodia.

**Figure A.10. Numbers of Borrowers and Depositors**

Source: National Bank of Cambodia.

**As volumes of both deposits and lending in the banking system have increased significantly, the numbers of depositors and borrowers have also increased.** The increase in number of depositors has been remarkable as it grew more than tenfold since 2004.

**The increase in number of borrowers has also been substantial.** The number of borrowers doubled since 2005 to reach about 300,000 in 2011. This is only about 20 percent of the total number of depositors (Figure A10). Hence, we see a rather asymmetric utilization of lending services. It is interesting to note that the numbers of depositors and borrowers were about the same ten years ago. The banking services were then confined to a very small segment of the population. The trend in utilization level of these basic services indicates that access to financial services has vastly improved and the indications are that it will improve further in the future.

**The bulk of loans by commercial and specialized banks primarily go to the trading sector.** About one-third of loans support the retail and wholesale trading sectors. Lending to these sectors is significantly higher compared to the lending for personal consumption and services.

**Lending to agriculture, forestry and fishing by commercial and specialized banks is about nine percent of total lending volume, which is roughly about the same level as the lending for manufacturing activities.** It should be noted that what is reported as lending for agriculture contains only lending for primary agricultural activities such as cultivation and planting. These figures do not include lending to processors and other agricultural related businesses. For example, lending to rice millers is often classified as lending to the manufacturing sector. Lending for wholesale, storage and transport sectors also includes a substantial amount of lending for agriculture related activities. In addition to these observations, the lending figures indicate that there has been a substantial increase in lending to primary agricultural activities. In fact, the share of lending to these activities in total lending by banks has almost doubled since 2008 (Table A2). No other sector has recorded such an increase.



**Table A.2. Lending To Sectors by Commercial Banks**

in percent

	2008	2009	2010	2011
Retail Trade	12.66	18.24	17.92	18.03
Wholesale Trade	16.46	12.83	17.52	14.39
Other Non-Financial Services	6.70	8.34	9.90	9.19
Manufacturing	10.00	8.73	8.70	9.17
Agriculture, Forestry and Fishing	5.25	6.73	6.68	8.88
Construction	7.87	8.58	7.04	7.45
Hotels and Restaurants	12.98	11.97	9.74	7.42
Mortgage, Owner-Occupied Housing Only	7.28	3.57	3.60	6.20
Personal Consumption	5.94	7.10	5.17	4.94
Real Estate and Public Utilities	7.50	6.29	4.64	3.19
Information Media and Telecommunication	2.49	2.92	2.69	2.99
Financial Institutions	1.38	1.37	1.34	1.83
Other	0.83	0.43	1.25	1.68
Rental and Operational Leasing Activities*	0.25	0.44	0.75	1.66
Transport and Storage	1.40	1.67	1.90	1.54
Utilities	0.78	0.53	0.55	1.18
Credit Cards	0.16	0.16	0.18	0.18
Mining and Quarrying	0.08	0.10	0.42	0.08

Source: National Bank of Cambodia.

**Table A.3. MFI Lending by Sectors**

in percent

	2007	2008	2009	2010	2011
Agriculture	45.17	43.81	42.19	42.35	41.16
Trade and Commerce	32.45	33.33	35.42	28.82	25.73
Household	8.35	7.72	7.52	10.77	14.38
Services	6.81	7.42	7.79	9.44	10.37
Transportation	3.76	3.98	3.57	3.66	2.95
Construction	1.84	1.80	2.34	2.58	2.84
Others	1.62	1.93	1.15	2.37	2.57

Source: National Bank of Cambodia.

**MFI lending figures indicate that about forty percent of total microfinance loans support primary agricultural activities** (Table A3). While lending levels to agriculture by MFIs remain relatively stable, there has been a notable increase in microfinance loans to households by MFIs. In fact, the level of lending to households by MFIs had increased by about 50 percent in 2011. This increase coincided with the sharp increase in MFI deposits after MFIs were allowed to take deposits.

## A.4 Affordability of Financial Services

### **Commercial banks maintain a pricing policy for their services in accordance with their target clientele.**

For example, some international commercial banks require rather large minimum balance requirements and/or monthly account maintenance fees. These fees and requirements are usually tiered in accordance with various account types. The range of minimum average monthly requirements starts around USD 500 in these banks, and they typically charge between USD 1 and USD 5 per month account service fees. As such, the great majority of the Cambodian population cannot afford to use the services of these banks. Fortunately, there are other institutions that offer fairly affordable basic deposit and payment services. Banks such as ACLEDA and microfinance organizations such as AMRET provide a range of deposit products that can be opened for a very small initial deposit of about USD 3. Some of these accounts do not have minimum balance requirements and often have very small monthly fees such as USD 1 or 2,000 riels.

### **The financial sector also offers affordable basic payment services such as transfers between accounts and transfers to other financial services including cross-border transfers.**

The population has a wide array of choices for these services. The fees for domestic intra-bank transfers is about USD 1 per transaction and transfers to other domestic institutions cost USD 2 to USD 5. As for international transfers, virtually all commercial banks use SWIFT and the fees are comparable to other countries in the region. In addition to these services, mobile banking services, such as using cellular phones to transfer funds, are also available.

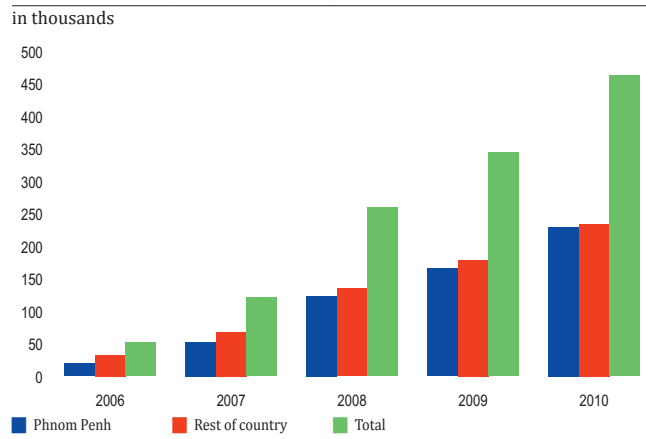
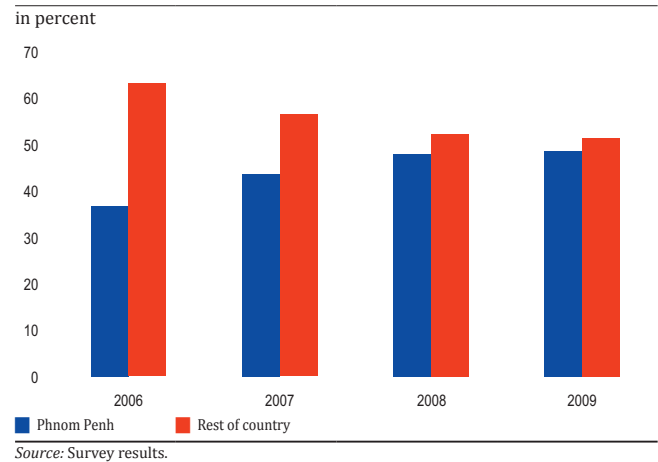
## A.5 Penetration of Financial Services.

**The penetration of basic financial services is relatively high in Cambodia** (Table A4). Virtually all of the deposit accounts outside of Phnom Penh are held by no more than three institutions. Furthermore, the overwhelming majority of these deposits is held by one institution. In fact, the number of deposit accounts in this one financial institution corresponds to about one-third of accounts in the entire system. Yet, about half of the deposits in this institution are in Phnom Penh. Hence, the total number of accounts outside Phnom Penh is not more than 15 percent of total deposits. Nonetheless, there has been significant growth in the number of deposit accounts across the country as shown in the chart below; the number of accounts increased by about nine times during the period 2006–2011 (Figure A11).

**Table A.4.** Service Penetration of Commercial Banks, Selected Countries

	ACLEDA	Other Cambodian Banks	Cambodia, total	Nicaragua	Uganda	Thailand
Branches (per 100k adults)	3.2	1.6	4.8	6.8	1.9	10.9
Deposit accounts (per 1000 adults)	83	50	134	198	154	1,498
Deposits/GDP (percent)	7	27	34	42	24	86
Loan accounts (per 1000 adults)	34.2	2.5	36.7	185.0	20.8	275.6
Portfolio/GDP (percent)	6	21	26	36	17	92

Source: FSAP Technical Notes.

**Figure A.11.** Numbers of Deposit Accou**Figure A.12.** Share of Deposit Accounts, Phnom Penh vs. Rest of the Country

**The increase in the number of accounts in the Phnom Penh region was about 12 times compared to 7 times increase in the rest of the country** (Figure A12). Consequently the share of the Phnom Penh region in number of accounts has increased from about 37 percent to almost 50 percent

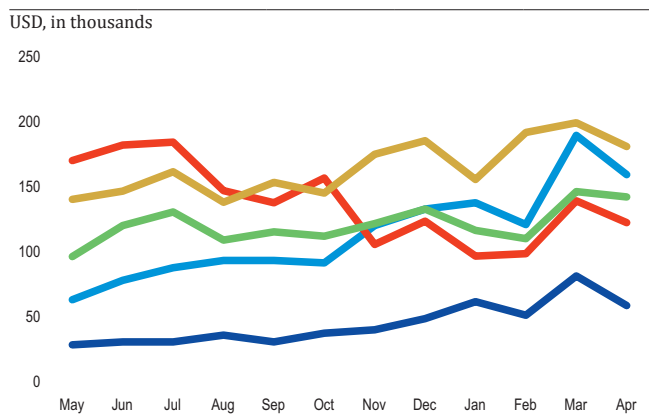
**The increase in number of accounts noted above indicates significant improvement in terms of financial inclusion.** For example, the average balance in deposit accounts has declined by about 30 percent during 2006-2009 period. This is due to the fact that new account holders were holding significantly less amounts and hence pulling down the average balance.

## A.6 Seasonal Factors

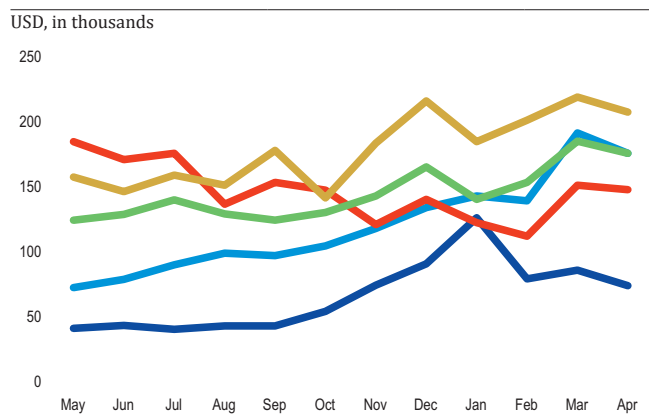
### A.6.1 Seasonality of Money Transfers

**As noted earlier, cash is the main form in which economic transactions take place in Cambodia.** The question of whether or not any seasonality is present in cash movement within the country, and the relationship between seasonal movements with main agricultural cycles, are important questions. In this respect, it would be worthwhile to look at four types of transactions: a) money transfers originating from Phnom Penh; b) money transfers destined to Phnom Penh; c) net money transfer position in Phnom Penh, and d) total volume of money transfers. We were able to gather data for a very large segment of these transactions. For example, the provincial data covers virtually all transactions. Given this data, we observed very prominent seasonal factors in money transfers. Money transfers start increasing after October and usually peak around December and March. Examination of net transfers at Phnom Penh (that is, transfers destined to Phnom Penh minus transfers originating from Phnom Penh) shows that during the peak season (that is, October to January) money transfers flows in favor of Phnom Penh. However, net transfers become negative from April until August. It should be noted that the period of low level of net transfer position at Phnom Penh also coincides with the period of low volumes of money transfer activities. In other words, increased activity in money transfers implies higher level of net transfer at Phnom Penh area (Figures A13, A14, A15, and A16).

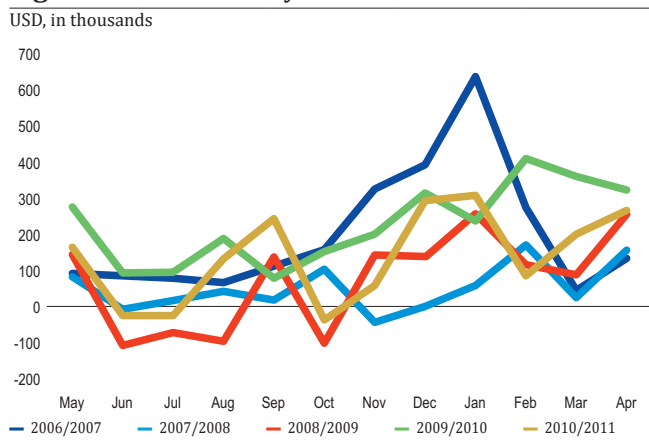
**Figure A.13. Money Transfers Originating from Phnom Penh**



**Figure A.14. Money Transfers Destined to Phnom Penh**

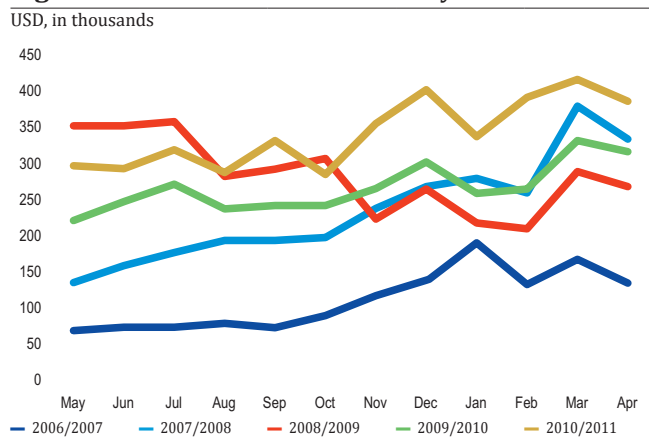


**Figure A.15. Net Money Transfers at Phnom Penh**



Source: Survey results.

**Figure A.16. Total Volumes of Money Transfers**



Source: Survey results.

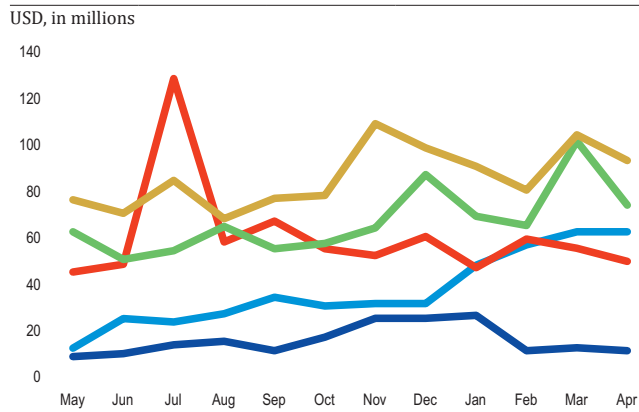
### A.6.2 Seasonality in Foreign Exchange Transactions

Another interesting thing to observe is whether foreign exchange purchases and sales are influenced by agricultural production cycles. One would intuitively think that there could be seasonality in foreign exchange purchases and sales given the presence of informal border trading, especially involving paddy sales to the merchants from neighboring countries. The information obtained from financial institutions sheds limited information on this issue. Although monthly purchases and sales of foreign exchange by some of the major actors that have a large presence in rural areas were obtained during the survey of financial institutions, the financial institutions that responded to the survey were not able to separate sales and purchases of foreign exchange in terms of different currencies. They reported only aggregate foreign exchange purchases and sales. Hence, the survey information could not provide an answer to the question of whether seasonality in foreign exchange sales and purchases in certain currencies such as Thai Baht and Vietnamese Dong exist.

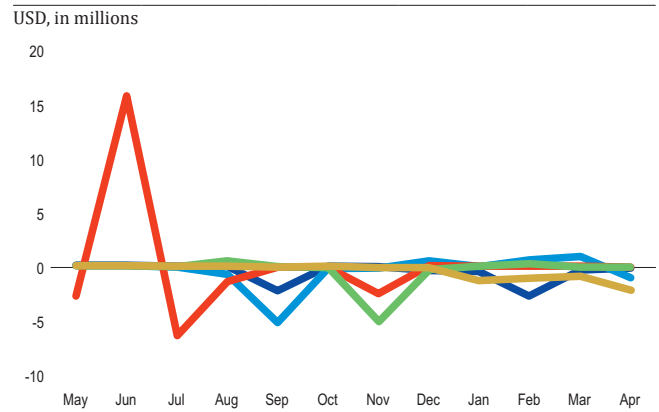
However, survey results did indicate weak seasonal patterns in aggregate foreign exchange buying and selling activities as well as money transfer movements between Phnom Penh and provinces according to data from May 2006 to May 2011. This pattern is not as strong enough as to conclude that the foreign exchange

activity is influenced by agricultural cycles. The charts A.17, A.18 and A. 19 show that foreign exchange buying and selling activity fluctuate throughout any given year and have several peaks and valleys in addition to the peak times of money transfer activity. Hence, the periodic highs and lows in foreign exchange are determined by the variation in general economic activity including agricultural cycles. This finding also underscores the role of foreign exchange in the Cambodian economy. Foreign exchange is heavily, if not entirely, the preferred medium of exchange in the economy and hence it would be very difficult, if not impossible, to attribute movements in foreign exchange transactions to a single factor. Nonetheless, the dominance of agricultural activities in certain periods is no doubt one of the biggest factors in volumes of foreign exchange activities.

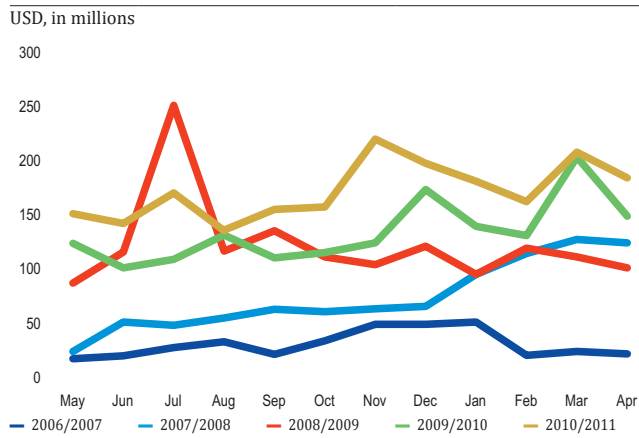
**Figure A.17. Foreign Exchange Purchases**



**Figure A.18. Net Foreign Exchange Sales**



**Figure A.19. Foreign Exchange Volume**



Source: Survey results.

## Annex B. Sample Size and Breakdown

### Numbers in the Sample

	Micro	Small	Medium	Large	Total
Processors	43	133	92	62	<b>330</b>
Input Suppliers	98	96	22	11	<b>227</b>
Machinery sellers	10	32	12	13	<b>67</b>
Crop collectors	20	76	69	63	<b>228</b>
Rice sellers	54	99	19	6	<b>178</b>
<b>Total</b>	<b>225</b>	<b>436</b>	<b>214</b>	<b>155</b>	<b>1,030</b>

### Shares in the Sample

	Micro	Small	Medium	Large	Total
Processors	13.0%	40.3%	27.9%	18.8%	<b>100.0%</b>
Input Suppliers	43.2%	42.3%	9.7%	4.8%	<b>100.0%</b>
Machinery sellers	14.9%	47.8%	17.9%	19.4%	<b>100.0%</b>
Crop collectors	8.8%	33.3%	30.3%	27.6%	<b>100.0%</b>
Rice sellers	30.3%	55.6%	10.7%	3.4%	<b>100.0%</b>
<b>Total</b>	<b>21.8%</b>	<b>42.3%</b>	<b>20.8%</b>	<b>15.0%</b>	<b>100.0%</b>

## Annex C. Geographical Distribution of Enterprises (by province)

Survey Location	Processors		Input Suppliers		Ag. Machinery Sellers		Crop Collectors		Rice Sellers		Total	
	No	% Prov	No	% Prov	No	% Prov	No	% Prov	No	% Prov	No	%
Banteay Meanchey	34	52.3%	9	13.8%	4	6.2%	18	27.7%	0	0.0%	65	<b>100%</b>
Battambang	75	46.3%	26	16.0%	5	3.1%	41	25.3%	15	9.3%	162	<b>100%</b>
Kampong Cham	71	45.8%	27	17.4%	13	8.4%	29	18.7%	15	9.7%	155	<b>100%</b>
Kampong Chhnang	9	18.8%	11	22.9%	3	6.2%	22	45.8%	3	6.2%	48	<b>100%</b>
Kampong Speu	12	27.3%	8	18.2%	0	0.0%	8	18.2%	16	36.4%	44	<b>100%</b>
Kampong Thom	13	18.8%	24	34.8%	2	2.9%	25	36.2%	5	7.2%	69	<b>100%</b>
Kampot	10	20.8%	17	35.4%	0	0.0%	15	31.2%	6	12.5%	48	<b>100%</b>
Kandal	35	39.8%	24	27.3%	2	2.3%	6	6.8%	21	23.9%	88	<b>100%</b>
Phnom Penh	5	5.0%	9	8.9%	21	20.8%	3	3.0%	63	62.4%	101	<b>100%</b>
Prey Veng	24	35.3%	18	26.5%	3	4.4%	12	17.6%	11	16.2%	68	<b>100%</b>
Siem Reap	32	47.1%	13	19.1%	4	5.9%	8	11.8%	11	16.2%	68	<b>100%</b>
Svay Rieng	9	17.0%	15	28.3%	5	9.4%	16	30.2%	8	15.1%	53	<b>100%</b>
Takeo	1	1.6%	26	42.6%	5	8.2%	25	41.0%	4	6.6%	61	<b>100%</b>
<b>Total</b>	<b>330</b>	<b>32.0%</b>	<b>227</b>	<b>22.0%</b>	<b>67</b>	<b>6.5%</b>	<b>228</b>	<b>22.1%</b>	<b>178</b>	<b>17.3%</b>	<b>1,030</b>	<b>100%</b>

## Annex D. Agribusiness Investments in Fixed Assets

By type	Mean (\$ '000)	Total (\$ '000)	Sources of Funding (%)				
			Own	Bank & MFI	Money Lenders	Others	Non Response
Processors	154	36,187	85	11	1	1	2
Input Sellers	28	1,968	95	3	0	2	0
Machinery Sellers	272	6,259	83	17	0	0	0
Crop Collectors	29	2,945	96	4	0	0	0
Rice Sellers	20	818	74	24	0	0	2
<b>Total</b>	<b>103</b>	<b>48,178</b>	<b>85</b>	<b>11</b>	<b>1</b>	<b>1</b>	<b>2</b>

By Size	Mean (\$ '000)	Total (\$ '000)	Sources of Funding (%)				
			Own	Bank & MFI	Money Lenders	Others	Non Response
Micro	14	944	92	7	0	0	0
Small	34	6,092	89	6	0	5	0
Medium	91	11,078	81	14	2	1	2
Large	298	30,065	86	11	0	1	2
<b>Total</b>	<b>103</b>	<b>48,178</b>	<b>85</b>	<b>11</b>	<b>1</b>	<b>1</b>	<b>2</b>

## Annex E. Perceptions of Agribusinesses towards Financial Service Providers

	Proportion including "Don't know"			Proportion among responses		
	Non-Users	Users	Total	Non-Users	Users	Total
<b><i>Access to finance is the largest constraints to my business</i></b>						
Don't Know	34%	35%	35%			
Strongly Disagree	7%	7%	7%	11%	11%	11%
Disagree	20%	16%	18%	31%	24%	27%
Neutral	8%	9%	8%	12%	14%	13%
Agree	23%	20%	21%	36%	30%	33%
Strongly Agree	7%	13%	10%	11%	20%	16%
<b><i>My business would be bigger if I could access finance</i></b>						
Don't Know	67%	65%	66%			
Strongly Disagree	1%	0%	1%	3%	1%	2%
Disagree	6%	3%	4%	18%	9%	13%
Neutral	8%	8%	8%	25%	22%	23%
Agree	11%	12%	12%	33%	35%	34%
Strongly Agree	7%	12%	10%	21%	33%	28%
<b><i>My business cannot afford high interest rate</i></b>						
Don't Know	38%	37%	37%			
Strongly Disagree	4%	4%	4%	6%	7%	6%
Disagree	12%	19%	16%	19%	30%	25%
Neutral	9%	13%	11%	15%	21%	18%
Agree	27%	15%	20%	43%	23%	33%
Strongly Agree	10%	12%	11%	16%	20%	18%
<b><i>My business will always use informal source</i></b>						
Don't Know	75%	79%	77%			
Strongly Disagree	1%	4%	3%	5%	20%	12%
Disagree	8%	8%	8%	30%	37%	33%
Neutral	6%	4%	5%	25%	18%	22%
Agree	6%	4%	5%	25%	18%	22%
Strongly Agree	4%	1%	3%	15%	7%	11%
<b><i>Getting bank credit is too time consuming</i></b>						
Don't Know	51%	37%	43%			
Strongly Disagree	2%	10%	6%	4%	15%	11%
Disagree	6%	23%	16%	13%	37%	27%
Neutral	10%	9%	10%	20%	14%	17%
Agree	20%	13%	16%	41%	20%	29%
Strongly Agree	10%	8%	9%	21%	13%	16%



	Proportion including "Don't know"			Proportion among responses		
	Non-Users	Users	Total	Non-Users	Users	Total
<b><i>My main constraints to bank loan is lack of collateral</i></b>						
Don't Know	68%	65%	66%			
Strongly Disagree	7%	7%	7%	21%	19%	20%
Disagree	13%	14%	13%	39%	41%	40%
Neutral	5%	5%	5%	15%	15%	15%
Agree	5%	4%	4%	17%	10%	13%
Strongly Agree	3%	5%	4%	8%	14%	12%
<b><i>Bank staff does not understand agribusiness needs</i></b>						
Don't Know	40%	46%	44%			
Strongly Disagree	5%	12%	9%	9%	23%	16%
Disagree	29%	22%	25%	48%	41%	44%
Neutral	5%	5%	5%	8%	10%	9%
Agree	17%	10%	13%	29%	19%	24%
Strongly Agree	3%	4%	4%	6%	7%	7%
<b><i>Taking loans from bank is a loss of face</i></b>						
Don't Know	68%	65%	66%			
Strongly Disagree	9%	16%	13%	26%	46%	37%
Disagree	13%	14%	14%	41%	40%	40%
Neutral	4%	2%	3%	13%	6%	9%
Agree	5%	2%	3%	15%	6%	10%
<b><i>I cannot take loans from other if my business is bigger</i></b>						
Don't Know	45%	50%	48%			
Strongly Disagree	9%	12%	11%	16%	25%	21%
Disagree	20%	13%	16%	36%	26%	31%
Neutral	13%	10%	11%	23%	19%	21%
Agree	11%	12%	12%	20%	25%	23%
Strongly Agree	2%	3%	2%	4%	5%	5%
<b><i>I rely on my business partners for some of my financing</i></b>						
Don't Know	71%	69%	70%			
Strongly Disagree	2%	6%	4%	6%	19%	14%
Disagree	9%	11%	10%	31%	36%	34%
Neutral	6%	5%	6%	21%	17%	19%
Agree	9%	7%	8%	31%	23%	26%
Strongly Agree	3%	2%	2%	11%	5%	8%

	Proportion including "Don't know"			Proportion among responses		
	Non-Users	Users	Total	Non-Users	Users	Total
<b><i>Due to seasonality, my business has trouble accessing loans</i></b>						
Don't Know	69%	66%	67%			
Strongly Disagree	3%	8%	6%	8%	25%	18%
Disagree	12%	13%	12%	37%	38%	37%
Neutral	8%	6%	7%	27%	19%	22%
Agree	7%	4%	5%	21%	12%	16%
Strongly Agree	2%	2%	2%	7%	6%	7%
<b><i>I can raise enough capital for myself but need loans for investment</i></b>						
Don't Know	70%	67%	68%			
Strongly Disagree	3%	10%	7%	10%	29%	21%
Disagree	9%	7%	8%	29%	22%	25%
Neutral	7%	7%	7%	24%	22%	23%
Agree	8%	7%	7%	26%	19%	22%
Strongly Agree	3%	3%	3%	10%	8%	9%



A TECHNICAL WORKING PAPER

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**STUDY ON ACCESS TO FINANCIAL SERVICES FOR SMALL AND MEDIUM AGRIBUSINESS ENTERPRISES IN CAMBODIA**