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USAGE OF GUARANTY SYSTEM FOR AGRIBUSINESS CREDITING IN REPUBLIC OF MACEDONIA

Abstract

Finance, as driving force is critical to increasing efficiency, improving product quality, and raising the productivity and income of agribusiness actors. Without access to finance, small and medium size agribusiness enterprises will continue to make little investment, have low-return production systems, and be unable to use their farm resources optimally. Similarly, financial constraints may prevent agro-food processors from expanding their capacities, thus limiting the amount of produce they can sell in the market. However, as a notoriously risky business, agribusiness is not in the central interest of commercial banks, especially in economies such as Macedonian. Solution for such a condition are development banks, through which State perform certain financial services which commercial banks avoid, due to the high credit risk. This paper examines crediting as source of financing in agribusiness, focused on the risk, as limiting factor. The main purpose of this paper is to emphasize the role that state has in overcoming the mismatch of the demand and supply of money in agribusiness and the importance of ACDF's operations in expanding the outreach and accelerating economic welfare of agribusinesses in the Republic of Macedonia.

Key words: agribusiness, crediting, state development banks

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1. CHARACTERISTIC OF MACEDONIAN AGRIBUSINESS

Agriculture is a heterogeneous economic activity that besides cultivation of plant and livestock products includes many types of agribusiness production, processing, finishing, storage, exchange and distribution of agricultural production-food products to consumers. According to Davis and Goldberg, agribusiness should not be interpreted too limited, as a very large businesses or conglomerates in agriculture, but as a total sum of all operations involved in the production and distribution of agricultural equipment; manufacturing operations on the farm; storage, processing and distribution of agricultural - food products and articles made from them.¹

Agribusiness is a broad term that includes all businesses and management activities that companies takes to purchase inputs for production of agricultural and food products, to organize and implement agricultural production and/or process, transport, finance, store or sell food products.²

Agribusiness is also particular from organizational and size aspect. Among the agribusinesses legal entities can be found enterprises with one employee, without particular organizational scheme in place, up to big size multinational companies, with multilevel organizational schemes. In agribusiness theory, following organizational forms can be found:³

- Individual agricultural holdings (farms)
- Agricultural cooperatives
- Agricultural associations
- Agricultural business entities

¹ J. Davis., Goldberg R, "Concept of agribusiness", Boston Masechuset: Department of Research "Harvard Business School", 1957 (taken from D. Kramer, K. Jensen, Sautgejt D., "Economics of agriculture and agribusiness", Project on Government translation of 1,000 vocational books Ars Lamina, Skopje, 2012, p.9)

² USAD: Employment in Agriculture and Agrobusiness Occupations; ERS 570, August 1974 (taken from Gjorgevski Gj. Daniloska N., "Introduction to economics of agriculture", Institute of Economics, Skopje, 2008, p.29)

³ Murarcaliev A., Nov priod kon ekonomikata na agrarot, Ekonomski institut-Skopje, 1999, p. 22

Generally, agribusiness in the Republic of Macedonia is represented by individual agricultural holdings (enterprises) and their economic activities are focused on local or regional markets. Almost all enterprises for primary agricultural production are located in rural areas. Because of the proximity to raw materials, Macedonian food processing industry is also located in the rural zone, except some beverage industry, meat processing and slaughterhouses.

According the last agricultural census, in the Republic of Macedonia in 2007, there were 192.675 agricultural holdings registered,⁴ where 99% were individual agricultural holdings and 1% (297) agricultural business entities. In 2016 the number of farm has decreased to 178.125, where 177.845 are individual agricultural holdings and the number of agricultural business entities has increased to 280.⁵ Based upon national economic classification, more than half or 58.2% of the agribusinesses are classified in the lowest first class enterprises with incomes up to 2.000,00 Euros.⁶ About half of existing agribusinesses are specialized in producing crops or mixed production (crop and livestock).

2. CREDITING AS SOURCE OF FINANCING IN AGRIBUSINESS

Financing in agribusiness is complex process, therefore the lack of access to finance is one of the many challenges that agribusiness managers are facing. Development of agribusiness sector is determinate by the need of liable sources of funding, that in this sector are very limited. Managers can provide finance to run business by savings, landing and realized income-profit. Outside the legal entity itself, in agribusiness the financing is implemented on two levels: state-through the program for financial support of agriculture and rural development and commercial banks-through crediting.⁷

⁴ Individual agricultural holdings grouped by total available land, by regions <http://www.stat.gov.mk/Publikacii/PopisNaZemjodelstvo2007/KnigaIII.pdf>, 31.1.2017

⁵ Farm Structure Survey, 2016 <http://www.stat.gov.mk/pdf/2017/5.1.17.01.pdf> 31.1.2017

⁶ Annual Report for Agriculture and Rural Development, 2016

⁷ Proekt: Kreditiranje vo zemjodelstvoto-sostojbi i perspektivi, CEA, FFRM, Skopje, 2013

Credit as a financial tool is of primary importance for sustainable development of agriculture and has crucial role in the establishment of profitable production units and conducting their business activities. Crediting provides additional accumulation of capital needed to invest in the consolidation of agricultural holdings, purchase of new equipment and mechanization, modernization of production and productivity increase. This vast variety of developmental needs of agribusinesses implies on having variety of credit types. In this sense, classification of agricultural credits can be done on the basis of time, purpose, security, lender and borrower, as follows:⁸

- Time classification has three groups: short, medium and long term. The short-term credits are generally intended for meeting annual recurring purchases such as, seed, feed, fertilizers, hired labour expenses, pesticides, weedicides, hired machinery charges, etc. Medium-term credits are usually borrowed for purchase of longer lived assets such as machinery, diesel engine, wells, irrigation structure, shelters, meat and milch animals, dairy/poultry etc., while long-term credits are related to the long lived assets such as heavy machinery, land and its reclamation, construction or purchase of buildings, construction of permanent-drainage or irrigation system, etc. which require large sums of money for initial investment.
- Purpose classification is based on purpose of the credit-crop loan, poultry/dairy/piggery credit, organic agriculture, irrigation credit, machinery and equipment credit etc. These credits signify the close relationship between time and use as well as rate of return (or profitability).
- Security classification of agribusiness credits is connected with the security offered/obtained in the time of money borrowing. Secured credits are further classified on the basis of type of security e.g. mortgage loans, where legal mortgage of some property such as land is offered to the lender, i.e., loans for intangible property such as land improvement, irrigation infrastructures, etc. and hypothecated loans, where legal ownership of the asset financed remains with the lender though physical possession with the borrowers i.e. credits for tangible property such as tractor, machinery and equipments.

⁸ World Bank, Agriculture investment sourcebook, Washington, DC, 2004, pp. 21-24

- Lender classification is made on the basis of the type of the lender such as (a) Institutional or formal credit e.g. co-operative credits, commercial bank credits and government credits; (b) non-institutional or non-formal credit e.g. relatives and friends, developmental funds, civil society organizations etc.
- Borrower classification, done upon the type of borrowers (i.e., production or business activity as well as size of business) such as crop producers, livestock and dairy producers, poultry producers, glass and greenhouse producers, hill agricultural producers, various suppliers etc. For such a classification, the agrobusiness equity needs to be taken into consideration.

2.1 Risks as limiting factor of agribusiness crediting

Financial institutions, due to the nature of their work, have a high rate of exposure to credit risk because their main role is to provide credit and to carry out transactions. Credit risk means the risk of loss for the financial institution because of the impossibility of its client to settle obligation towards in the agreed terms and the agreed deadlines. In fact, the credit risk is the current or prospective risk which will cause negative effects on equity of the financial institution, because the credit debtor can't fulfill contractual terms and obligations for credit. Financial institutions face credit risks when crediting any economic activity, but it is a bit higher for agribusinesses. Agribusiness is beset by a series of specific risks because the credit requirements for this sector have additional weight unlike other sectors of the economy. These specific risks can be:⁹

- Production risks are uncontrollable events (extreme temperatures, droughts, floods, pests, diseases, poor diversification) that cause instability in production and yields.
- Market risks result from the price volatility of raw materials and final products.
- Legal and institutional risks - arising from changes in policies and regulations affecting agriculture and agro-industry.
- Risks of human factors that are unpredictable because they arise from subjectivity behavior, low income and poorly established system of management factor labor.

⁹ Michael Boehlje and David A. Lins-Risks and Risk Management in an Industrialized Agriculture; *Agricultural Finance Review* 58, 1998, p. 4

- Technical risks (risks of funds) which include the possibility of theft, fire, damage to crops, equipment and facilities or the death of livestock.
- Financial risks that increase the cost of borrowing, reduce capital available, reduce the ability to timely satisfy the cash and the ability to retain and increase capital.
- Macroeconomic and political risks arising as a result of the general situation in the country (inflation, exchange rates, political instability), but also because of political and social sensitivity of agriculture in which state intervention in terms of prices and markets are very common.

All these risks as part of agribusiness in a certain way could endanger the return on investment. Previous experience of financial institutions for crediting of projects in the agribusiness shows that the credit risk is higher for projects of primary agricultural production and individual producers than among legal entities engaged in production and processing of food.

3. ANALYSES OF CREDITING IN AGRIBUSINESS IN THE REPUBLIC OF MACEDONIA

Macedonian agriculture and its related agribusiness, is one of the leading country sectors, participating 10% in the national GDP (together with agro-processing industry over 16%) and employing 13% of the workforce.¹⁰ However, credits intended for agribusinesses, for the last 10 years were not included in the usual credit offers of the commercial bank in the Republic of Macedonia.

For the Republic of Macedonia, there is no precise information about credit volume per asset category in agriculture. The main providers of credit to Macedonian agribusinesses are commercial banks and sellers' inputs supplies. More specifically,¹¹

¹⁰ State Statistical Office, SSO 2007, Agricultural Census, 2007, viewed 10 January 2013, p. 10

¹¹ Bojnec S., Agricultural and Rural Capital Markets in the EU Candidate Countries: Croatia, The Former Yugoslav Republic of Macedonia and Turkey, Factor Markets, Working paper, 2011 http://aei.pitt.edu/58511/1/Factor_Markets_8.pdf 3.2.2017

- 40 % of credit to agriculture is provided by commercial banks for different categories of investments in land, buildings, equipment and machinery, and inventory assets
- 30% is provided by sellers of input supplies such as machinery, either by credits or leasing, sellers of seeds and fertilizers, and other input for primary agricultural production and
- 30% comes from the government in the form of governmental credit institutes, but not subsidies.

This situation was mainly due the fact that Macedonian agribusinesses are operating in highly risky environment with narrow margin and because of their exposure to specific risks elaborated previously. There was an immanent need to involve the formal financial sector in provision of agricultural credits through establishment of refinancing scheme and offering incentives, to integrate the rural population in the banking system and develop appropriate credit products. Faced with the mismatch of the demand and supply of money and in order to overcome the gap, Government of the Republic of Macedonia in 2002, within the Ministry of Finance, established Agricultural Credit Discount Fund (ACDF), amounted on EUR 6.2 mill.¹²

Principal objective for such a decision was to provide commercial banks in Macedonia with lower-cost lending funds and by this encourage them to lend to the agribusinesses, despite the relatively higher inherent risk and uncertainty. Main intention of Macedonian ACDF was to enable sustainable agricultural financial services which are commercially viable and yet appropriate and affordable by the target groups. Its primary purpose was financial administration of Agricultural Financial Services Project (AFSP) or Second Loan Intervention of the International Fund for Agricultural Development (IFAD) in Macedonia (IFAD Loan 545-MK or IFAD II).¹³ As a result of ACDF's increased crediting activities, the Macedonian Government capitalized the Fund with EUR 0.8 mill. in

¹² Official Gazette of the Republic of Macedonia No. 107: Law on Borrowing from the International Fund for Agriculture Development for implementation of Agricultural Financial Services Project 2000.

¹³ International Fund for Agriculture Development, IFAD in The Former Yugoslav Republic of Macedonia (<https://operations.ifad.org/web/ifad/operations/country/home/tags/macedonia>)-accessed on 05.03.2017

2005, EUR 21.2 mill. in 2007 and EUR 17.3 mill. in 2008. These capitalizations resulted on the paramount of its operations at the end of 2008, ACDF revolving fund to be worth EUR 45.5 mill. of which EUR 15.5 mill. liquid funds and EUR 30.0 mill. receivables. As of mid-2010, ACDF has been transferred to the state owned Macedonian Bank for Development Promotion (MBDP), that is a state-owned development bank of the Republic of Macedonia established by law.¹⁴

Agricultural Credit and Discount Fund (ACDF) is responsible for payment of credit applications and is based on an agreement/memorandum of understanding between the Government and financial institutions. The financing is 20% of the financial institutions and 80% of the assets of ACDF which are formed by IFAD 1 and IFAD 2, PSDL, EIB loan arrangements. Macedonian ACDF is targeted to In the Republic of Macedonia, through ACDF are financed following credit categories:¹⁵

- I Category: Primary Agricultural Production credits - up to 100.000 EUR per borrower¹⁶, with annual interest rate for the final borrower: 4% for credits disbursed through the participating commercial banks and 6% for credits disbursed through the participating savings houses. This credits are intended for all sub-sectors in primary agricultural production (farming, fruit growing, viticulture, seed and nursery plants production, stock-breeding, breeding and selection of purebred animals) for purchasing of:
 - fixed assets (agricultural machinery, equipment, primary agricultural production facilities, rich land, livestock and long-standing plantations, etc.);
 - working capital (seed, animal feed, fertilizer, pesticides, etc.);
 - services for introduction of standards and trademark in primary agricultural production;

¹⁴ Law on Establishing Macedonian Bank for Development Promotion, Official Gazette of the Republic of Macedonia No. 24/1998

¹⁵ Annual Report for 2014, <http://www.mbdp.com.mk/index.php/en/financial-reports/annual-reports>, 2.2.2017

¹⁶ *The limit of the investment loans financed by the IPARD Programme 2007-2013 (Measure 101), is set in accordance with the amount of the total accepted investment value defined with the Financial Support Agreement made with the Agency for Financial Support in Agriculture and Rural Development.*

- investments supported by IPARD Programme (Measure 101).
- **II Category: Credits for Agricultural Products Processing** - up to 300,000 EUR per borrower¹⁷, with annual interest rate for the final borrower: 5% for credits disbursed through the participating commercial banks and 6.5% for credits disbursed through the participating savings houses. Purpose of credits:
 - purchasing fixed assets (equipment, production plants, special transport vehicles, etc.);
 - financing working capital (purchasing raw materials, packing material, etc.);
 - providing services for introduction of standards and trademark for the processing plants;
 - investments supported by IPARD Programme (Measure 103 and 302).
- **III Category: Credits for Export of Primary Agricultural Products and Primary Agricultural Processed Products** - up to EUR 300,000 per borrower, with annual interest rate for the final borrower: 5% for credits disbursed through the participating commercial banks and 6.5% for credits disbursed through the participating savings houses, with purpose for:
 - purchasing fixed assets (cold stores, sorting equipment, plants, etc.)
 - financing working capital (purchasing primary and processed agricultural products, packing, etc.)

In 2011, ACDF Policy Committee adopted a Decision for modification of the criteria for refinancing from ACDF credit line, in order to improve the final beneficiaries' accessibility to funds. The modifications were in direction of:

- full compliance of the criteria for refinancing from ACDF credit line with the criteria for financing investments supported by the IPARD Programme 2007 – 2013,
- increasing the credit limit from EUR 200,000 to EUR 300,000 for financing processing facilities of cereal crops (mills) within the second credit category,

¹⁷ Ibid

- diversifying the purpose of the third credit category, besides export of primary agricultural products with export of processed agricultural products,
- increasing the credit limit of the third credit category (purchase of agricultural products for export) from EUR 200,000 to EUR 300,000,
- extension of the term from 30 to 90 days for refinancing of credits extended for previously carried out investments by the final beneficiaries, and credits already disbursed by the intermediary financial institution to final beneficiaries.

Crediting target group is performed through selected Participating Financial Institutions (PFI), which the Ministry of Finance has signed a Sub-loan agreements (11 banks and 2 savings banks) and credit activity constitutes co-financing credits to final borrowers in ratio: 80% assets of the Fund and 20% funds from PFI.¹⁸ Credit risk is entirely borne by the second, without any fiscal implications for the budget. Thus is enhancing seriousness in crediting and motive of the PFI to insist on timely repayment of outstanding liabilities. Other credit requirements (required documents, repayment period, grace period, collateral, etc.) are defined by the financial institution individually, according to their existing credit policy, type and purpose of the investment, credit amount, production conditions, etc.

Generally, the repayment period for approved credits for fixed assets ranged to 7 years and a grace period of 3 years, while current assets is moving to 3 years and a grace period of up to 1 year. For security, the most common are the guarantors for 43% of approved loans continue to monitor mortgaged property in town and a mortgage of agricultural land by 14% mortgage on a property in the countryside (11%), pledge of equipment and machinery (10%), required deposit (6%), guarantee fund (1%) and restriction of transferability of insurance policy (1%). One-time fee for processing the loan applications ranging from 0.5% to 3% depending on the PFI.

¹⁸ Ibidem

Table 1. Value structure of approved ACDF credits in the Republic of Macedonia, in the period 2010-2014 (in million EURO)

	2010	%	2011	%	2012	%	2013	%	2014	%
Credits for primary production	2,2	58	4.7	51	2.4	47	2,3	56	2.2	66
Credits for processing of agricultural products	1,4	38	3.8	42	1.9	38	1,3	33	0.9	25
Credits for agricultural exports	0,3	4	0,6	7	0.8	15	0,5	11	0.3	9
Total approved refinancing	3,8	100	9,1	100	5.1	100	4,1	100	3,4	100

Source: Annual Reports for 2010, 2011, 2012, 2013 and 2014 year, <http://www.mbdp.com.mk/index.php/en/financial-reports/annual-reports>, 2.2.2017

As seen in Table 1, in 2014, structure by value of total distributed agricultural credits shows that majority participation of 66% had primary agricultural production. Credits for processing agricultural products followed with 25% and credits for export of agricultural products with

9%. Value structure of 2013 shows that, again, dominant with EUR 2.3 million or 56%, were credits for primary agricultural production, followed by the credits for processing agricultural products with EUR 1.3 million (33%) and credits for export of agricultural products with EUR 0.5 million (11%). Same structure by value can be noticed for 2012. Namely, majority participation of EUR 2.4 million or 47% of total disbursed funds had credits for primary agricultural production, second are credits for processing agricultural products with EUR 1.9 million (38%) and then credits for export of agricultural products with EUR 0.8 million (15%). For the year 2011 structure by value is EUR 4.7 million or 51% for primary agricultural production credits, EUR 3.8 million (42%) credits for processing agricultural products, followed by credits for export of agricultural products with EUR 0.6 million (7%). In 2010 the structure by value shows that the participation of the primary agricultural production credits is the highest EUR 2,2 million or 58% of the total disbursed funds. Follows credits for agricultural products processing 1,4 million (38%) and credits for agricultural products export in amount of EUR 0,2 million (4%). From presented value structure, it can be clearly noticed that in the analyzed period, except for 2011, the amount of total approved refinancing funds from ACDF through MBDP towards PFI has decreased, while structure by value has not change, i.e. highest participation had credits for primary production, followed by credits for processing agricultural products, and participation of credits for agricultural export was significantly lower. Increased dynamics in the course of 2011, most probably is due to the above mentioned Decision for modification of the criteria for refinancing from ACDF credit line.

Table 2. Number of distributed credits from ACDF in the Republic of Macedonia, in the period 2010-2014

	2010	%	2011	%	2012	%	2013	%	2014	%
Credits for primary production	362	94	320	83	253	86	187	83	*	87
Credits for processing of agricultural products	19	5	54	14	29	10	29	13		9
Credits for agricultural exports	4	1	12	3	12	4	9	4		4
Total approved refinancing	385	100	386	100	294	100	225	100		100

Source: Annual Reports for 2010, 2011, 2012, 2013 and 2014 year,

*total number of approved credits is not published in the report from 2014

<http://www.mbdp.com.mk/index.php/mk/finansiski-izveshtai/godishni-izveshtai>, 2.2.2017

In Table 2, we can see the total number of distributed ACDF credits by year, for the period 2010-2014. As shown in Table 2, out of the total number of disbursed credits in 2010, 94% were credits for primary production, up to EUR 100,000, 5% were credits up to EUR 300,000 and

were approved for agricultural products processing and 1% were credits for export of agricultural products, up to EUR 200,000. During 2011, from EUR 9.1 million ACDF funds, total number of 386 credits were disbursed, with average amount of credit of EUR 29,483. In the course of 2011, 83% of the total disbursed ACDF credits were for primary agricultural production, 14% were credits for small and medium sized enterprises for processing agricultural products, whereas 3% were for export of agricultural products. Compared to the previous year (EUR 3.8 million) number of extended credits exceeds 139%. Total number of 294 credits, with average amount of EUR 21,723, were distributed in the course of 2012. Out of this total number, 86% were for primary agricultural production, 10% were credits for small and medium sized enterprises for processing agricultural products, whereas 4% were for export of agricultural products. Compared to the previous year, the extended credits diminished for 42%. During 2013, 225 credits were disbursed, and the average credit amount was EUR 22,918. In the course of 2013, out of the total disbursed ACDF loans, 83% were for primary agricultural production, 13% were loans for small and medium sized enterprises for processing agricultural products, whereas 4% were for export of agricultural products. Unfortunately, total number of distributed credits for 2014 is not published in the related annual report, but the structure shows that, out of the total disbursed ACDF credits, 87% were for primary agricultural production, 9% were credits for small and medium sized enterprises for processing agricultural products, whereas 4% were for export of agricultural products.

As can be clearly seen both from the Table 1 and Table 2, there is continuous decline in crediting agribusiness in Macedonia. This is particularly noticeable in the agribusiness involved in primary agricultural production, which is quite negative, since that holds back the entire sector. Difficulties in the financing of these entities are usually result of lack of ownership over the assets that could potentially be taken as collateral (house, land and other facilities), or they are not willing to use them as a collateral because they are considered vital to their existence. Another factor limiting crediting agriculture is the credit histories of borrowers that are scarce and do not provide adequate information leading to their asymmetry, hampering the preparation of quality crediting agriculture is high risk and low profitability.

Conclusions

Agribusiness sector in the Republic of Macedonia have a potential to increase agricultural productivity and production, thus contributing to economic growth and increased well-being of the people. Its heterogeneous structure by economic activity and size, complemented with its vast variety of developmental needs, emphasizes the importance of agribusiness crediting. Establishment of Macedonian ACDF confirms importance of agricultural production for economy in Macedonia. No doubt that ACDF is one of the most favorable credit lines on Macedonian capital market that made agribusinesses connected to the formal financial sector on a systematic and commercially viable basis. Its operation provided easier access to agricultural assets, contributed for improvement of standard of living of agricultural producers and had positive impact to the rural economy.

Apart from the success expressed as a total amount and number of distributed credits, ACDF, it is very important to point out positive impact that ACDF had on Macedonian financial institutions. Namely, participating financial institutions (PFIs) have noticed the financial potential of agriculture and microlending. As a result, the PFIs agribusiness credit portfolio has dramatically expanded. Thus, it is expected that competition among PFIs will grow and for sure will result with more favorable credit terms for agribusinesses (interest rates, repayment periods, collateral requirements, fees etc.).

However, Macedonian agribusinesses will still be under permanent pressure to survive in the ever changing economic environment and increased need for increased investment. Among the challenge facing agribusiness entrepreneurs in accessing credits is the determinations of the best combination of financial products with favorable conditions that will make them benefit from the investments while at the same time repay their liabilities. There is a need to identify and evaluate different sources of finance that will be used by entrepreneurs in selecting profitable agribusiness credit products.

Direct financing and government support for crediting agribusiness in the Republic of Macedonia in the current economical conditions are the key issues as far as a level of development of agriculture in the country is concerned. Credit guarantee system through state development bank is for sure one of the less risky ways of crediting agribusiness. Yet, guarantee funds have a cost, which is paid

through the fees charged and/or subsidized by the government. Questions that should be addressed when using this state support is the cost versus the benefits when a subsidy is needed, and more importantly, the value added of guarantee funds in reducing interest rates or the risks to crediting agribusiness. Having all these in mind, we emphasize the necessity for providing additional funds in order to diversify the ACDF funds for continuous functioning in future and providing finance to Macedonian agribusiness. One of directions to move might be in using guarantee system investment to attract finance and investment towards target groups and agrobusiness, especially small and medium size ones that are too risky for adequate financing without applying some risk-sharing incentive.

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