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IMPROVING ACCESS TO FINANCE FOR AGRICULTURAL HOLDINDS AS A FACTOR FOR THE SUSTAINABILITY OF AGRICULTURAL FINANCING IN BULGARIA

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ABSTRACT

The article analyzes the demand for finance and the supply of financial services. The assessment is that access to finance is a significant difficulty for Bulgarian farmers. Bulgarian farmers value their problems with access to finance at least twice as much as those of average European farmers. The main difficulties experienced by Bulgarian farmers and reflected in the demand for finance are determined by their needs for working capital, modernization of agricultural enterprises, and the purchase of agricultural land. The supply of agricultural loans is growing. The state of lending to the agricultural sector in the period after the country's accession to the European Union in 2007 is studied. In recent years, the supply of credit has increased. The main problems in the credit market are the concentration of the banking sector, the high levels of indebtedness, difficulties related to loan collateral. Lending is closely linked to financial support under CAP schemes. The development of financial support in combination with the improvement of the supply of agricultural finance is an important factor for achieving sustainable financing of agriculture in Bulgaria in the coming years. The need to improve the tools for improving the value chain in agriculture is highlighted.

Key words: access to finance; agriculture; demand of finance; supply of finance; financial support; financing of agriculture

INTRODUCTION

After Bulgaria's accession to the European Union, Bulgarian agriculture has continued to transform, with the main structural transformations being in the direction of ageing employment, low gross capital formation, rising indebtedness, etc. Farmers now have access to EU funds for rural development, but the sector's competitiveness problems continue to worsen.

Currently, gross value added is growing steadily, with the agricultural sector generating almost 4.5% and accounting for around 5.6% of employment. At the same time, there is a strong polarization in the organizational structure of farms, with over 82% being small family farms of less than 2 ha, and large farms with 100 ha of utilized agricultural area representing less than 2% of farms specializing in intensive crop production (cereals and oilseeds). The average farm size in Bulgaria has increased from 6.2 ha in 2007 to 18 ha in 2017 due to structural transformation, land renting, land purchase and farmland consolidation over the years. Total agricultural production in 2019 reached 3.8 billion, with the main share coming from crop production at 70.5%, while livestock production shrank to only 22.5% of agricultural production. There has been a serious ageing of the agricultural workforce, with young farmers under the age of 40 accounting for only 14%. Although farmers' income has more than doubled in the last decade, it remains one of the lowest in the country, with a concomitant significant increase in labor and rental costs. The export potential of the agricultural sector continues to

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evolve towards mainly cereal and oilseed supplies.
In this situation, the need for financial resources for farmers is mainly determined by financial means for the acquisition of working capital for raw materials and inputs, for investments in tangible assets, for the purchase of land and for the establishment of young farmers' farms.

The main objective of the article is to explore the access to finance for Bulgarian farmers by examining the demand and supply of finance to ensure their sustainability in securing finance.

It is argued that access to finance is a key driver of the development of finance for farmers related to the provision of funds for working capital and for investment in modernization and agricultural land. The availability of effective access to financial services for farmers is critical to achieving sustainability in farm finance in Bulgaria. At the same time, agricultural policy has an important role to play in sustaining farm businesses, farmers' incomes and in stimulating demand for capital for current needs and for investment.

MATERIALS AND METHODS

The objects of the study are to identify the main drivers of the financing gap and to explore the supply and demand mechanisms of finance for farmers.

The study covers farmers in the country and experts from financial institutions. The data are compatible with the results of studies carried out in other European countries by the European Commission and the European Investment Bank.

The methodology of the survey on demand for finance for farmers includes: identification of the main elements of the demand for finance; assessment of the main difficulties for farmers to access capital; an assessment of the impact of the Common Agricultural Policy on farm investment activity.

The methodology of the farmer finance supply survey includes: identifying the key elements of the supply of finance; assessment of the main suppliers of finance; analysis of credit extended to farmers by type and tenure; assessment of the financing gap.
Important determinants of the financing gap for both the demand and supply side of the agricultural finance market are identified. Assessed the need to develop new financial instruments to support farmers and their needs for increased technical assistance.

RESULTS

Access to finance and financing gap factors for Bulgarian farmers

Access to finance for farmers is seen in the literature (1-2) as a key factor for business start-up and development, especially for small and medium-sized enterprises (SMEs), which have different needs and face different challenges in terms of financing compared to large enterprises. Larger agribusinesses have access to equity capital markets that are not available to SMEs. The lack of sufficient equity capital for small farmers makes them more dependent on funding sources linked to banks and non-bank financial institutions. In this sense, the nature of access to finance should be perceived: the ability of farmers to have sufficient access to financial services to carry out their production and reduce their risk; sufficiently developed financial markets that provide a variety of financial services to farmers (credit, savings, insurance, guarantees, etc.); sufficient conditions exist to facilitate economic growth for farms through better access to finance.

In countries with developed financial markets, access to finance is determined by the degree of development of financial services and financial infrastructure (2-3). Access to finance (2, 4, 5) is seen as an element for successful economic development, given the importance of capital in achieving growth in production and trade.

Access to a variety of financial services is key to sustained increases in agricultural productivity and farm economic development. Without access to finance, productivity and access to markets suffer from related constraints: with the acquisition of working capital to finance production costs as well as to manage the risk associated with climate variability; the acquisition of investment capital for the renewal of machinery and technological innovations for production and processing and for the purchase of land; commercial credit facilities to support the logistical delivery of agricultural produce to consumers.

Innovations in financial services and new technologies have enabled financial services to overcome historical barriers to reach further and deeper into supply and value chains. Government involvement to create an investment climate, to address crises and to support agricultural production is becoming increasingly important to overcome the financial barriers to securing finance and to improve activity in the agricultural value chain. Some current examples of supply/value chain finance from public/private partnerships include: input financing for supplier credit or through producer associations; trade finance; factoring/reverse factoring; warehouse receipt finance; leasing; procurement finance; and e-banking.

In a survey by the European Commission and the European Investment Bank (6, 7), Bulgarian farmers recognize the need to strengthen their competitiveness in the single market, but this does not always translate into increased investment, given that gross capital formation in Bulgarian agriculture is one of the lowest in the EU, despite the favorable financial environment of recent years. The demand for short-term capital is crucial for farmers. In addition, there is a significant increase in indebtedness, given that the growth rate of liabilities is higher than that of assets. The main drivers of finance in the Bulgarian agricultural sector are:

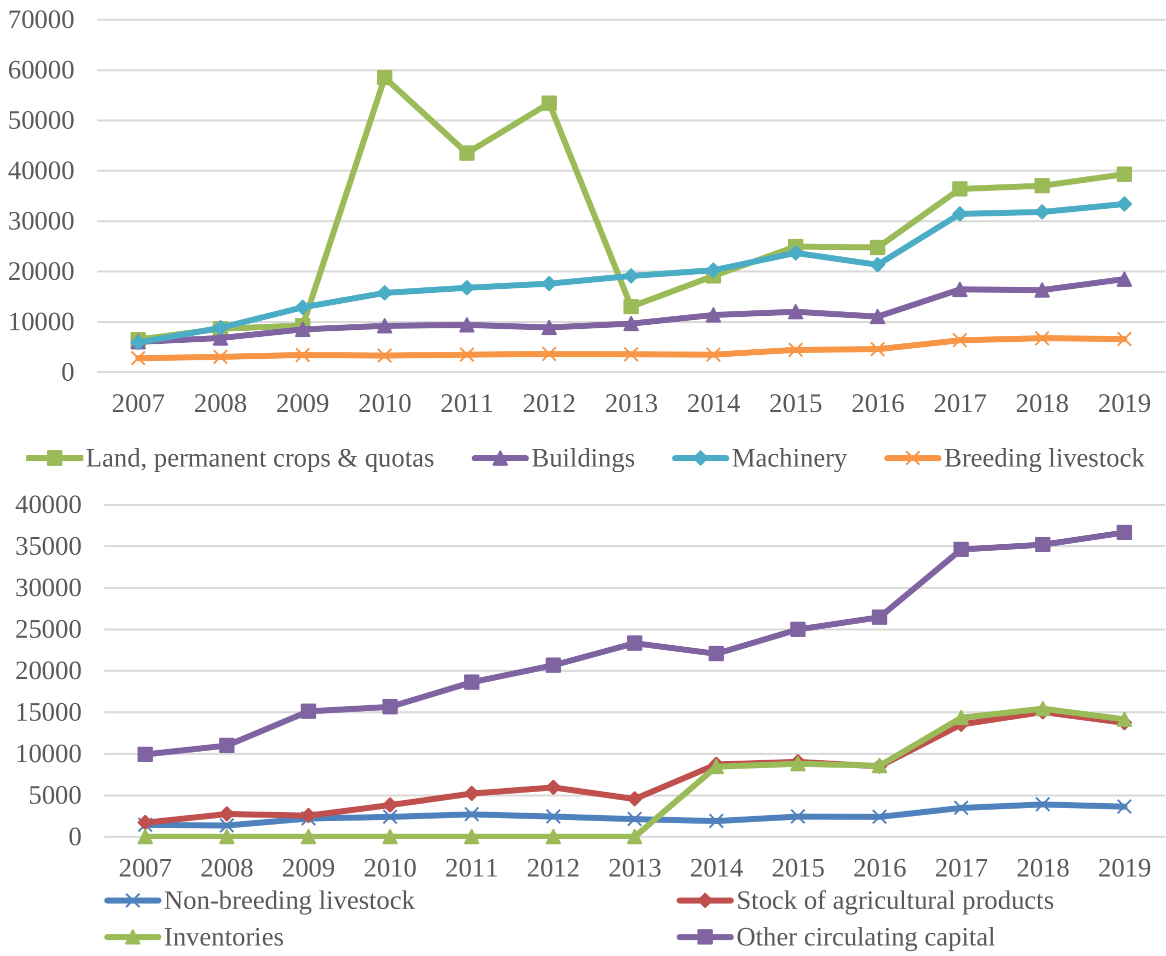
- ✓ Working capital needs, such as inputs for agricultural production and rental of agricultural land.
- ✓ Modernization of agricultural enterprises, especially for small and medium-sized farms seeking finance for machinery and equipment, and with a choice of investments depending on the sub-sector in which they operate.
- ✓ The purchase of arable land for large farms in the cereals and oilseeds sub-sectors, as land available for sale is scarce and expensive in the northern regions where most of these farms are located.
- ✓ Young farmers (under 40 years of age) and new entrants to the industry in need of investment in land, fixed assets and infrastructure. This group rely heavily on support measures under the Rural Development Programme (RDP). In this sense, access to investment support from the RDP plays an important role in boosting demand for investment.

Elements of demand for finance for agricultural enterprises

In the period since 2007, there have been dynamics in the growth of farm assets at different rates. The level of fixed assets grows intensively after 2007 until 2012, after which a decline follows and their level grows again after 2016 to reach in 2019 an average of 102 thousand BGN per farm. Over the whole period analyzed, the level of fixed assets increases about 5 times. Over the whole period, the level of current assets increased at a relatively constant rate, from BGN 13 thousand in 2007 to BGN 54 thousand in 2019 on average per holding. Although, according to FADN data, gross fixed capital formation in Bulgarian agriculture has a continuous upward trend and its size has increased more than 5 times, it is still the lowest in the EU-28 as a share of value added.

Further analysis of the composition and structure of the assets presented in **Figure 1** shows that in the structure of fixed assets the largest share of assets is land and permanent crops, followed by machinery and equipment, buildings. The problems in the development of livestock farming in the period under analysis also affected the number of productive animals, which accounted for the lowest share in the asset structure. In the composition and structure of current assets, other working capital has the largest share, followed by inventories and stocks of goods, while fattening animals have the smallest share.

The asset structure of farms also indicates the extent to which there is a demand for finance, which also depends on the structure of production. It is mainly determined by the need for working capital, investment in modernization and the purchase of land. At the same time, the liabilities of Bulgarian farms are growing faster than the assets, as farmers use more loans than savings to cover their financial needs. Particularly sensitive in obtaining financing are small farms (less than 20 ha), which often feel discouraged to apply in order not to be rejected. As for young farmers (under the age of 40), they face various obstacles in seeking funding, including a reduction in extension activities.

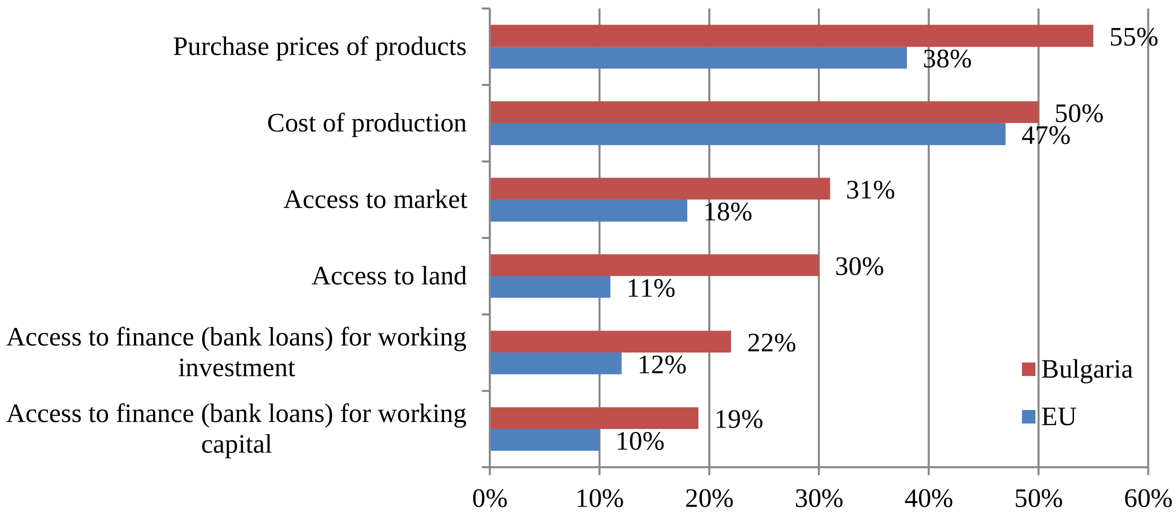


Source: FADN

Figure 1. Composition of assets - fixed (top) and current (bottom) by type, 2007-2019 (average per holding, in BGN)

The EC and EIB report (6) estimate the gap in agricultural financing at between €289 million and €863 million, identifying the greatest need for funding for small farms (under 20 ha), which face the most frequent and greatest difficulties in accessing finance. The financing gap is identified as being greatest for long-term loans. The study of unsatisfied agricultural financing and is rather due to the following problems: banks are reluctant to lend to farmers and perceive the sector as high risk, leading them to apply restrictive and unfavorable lending conditions; low transparency of banks' lending policies, where banks can change conditions unilaterally, which discourages farmers from applying for finance; strong collateral requirements imposed by banks and the lack of suitable assets owned by farmers, especially urban real estate, which is sometimes sought; the lack of credit history and accounting records on farms; and the farmers' lack of financial literacy and inexperience in submitting business plans to apply for funding or in preparing Rural Development Programme (RDP) project documents.

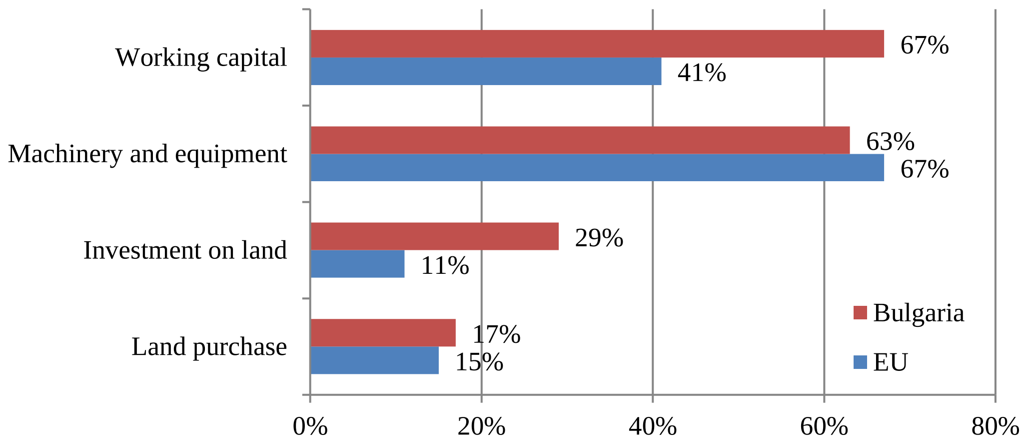
Compared to the EU-28, Bulgarian farmers had more problems in all topics surveyed. More than half of them (55%) expressed concerns about the (low) farm gate prices of their produce and the other half had difficulties with (high) production costs **(Figure 2)**. Approximately one-third (30%) also saw access to land as a significant challenge. In terms of loans for investment or working capital, nearly twice as many farmers in Bulgaria have problems accessing finance compared to the EU-28 average.



Source: fi-compass, 2020 (7)

Figure 2. Difficulties for farmers to access capital

The difficulties experienced by Bulgarian farmers are reflected in their demand for finance, which is determined by the following main aspects: working capital needs (67%); modernization of agricultural enterprises (construction of buildings, purchase of machinery and equipment) (63%); purchase of additional (arable) land (29%); implementation of technological improvements in land use (17%). A comparison of the direction of demand for financing in Bulgaria and the EU is presented in **Figure 3**. Farm business succession has also played an important role in the investment needs and financing decisions of farms over the last decade.



Source: fi-compass, 2020 (7)

Figure 3. Guidelines for the demand for capital for agricultural holdings in Bulgaria and the EU

The majority of farmers require finance to meet their working capital needs, with the highest demand for land rent (€6,868 on average per farm), followed by demand for finance to cover material costs (€5,908 on average per farm), labor costs (€4,754 on average per farm) and other costs (€4,128 on average per farm). The least demand for funds is for interest payments, at EUR 753 on average per farm.

The second most important element of the demand for finance is investment in farm modernization, including machinery and equipment, and in the construction of buildings and facilities. This is strongly supported by the growing number of successful projects funded under the Rural Development Programme (RDP). The greatest demand for finance, irrespective of sub-sector, is seen in investments used in the construction of buildings and structures, machinery and equipment being the second most important reason.

The third key element in the search for finance relates to the purchase of land in order to increase production capacity, but plots of good size and location are currently hard to find. Between 2007 and 2019, the average price of land quadrupled and land rents more than doubled. The ratio between land price and land rent reached 19.8 in 2019. Significant demand for land followed by rising prices (especially in areas of Northern Bulgaria) have predetermined the need to expand financing in land purchase. Not infrequently, in order to develop, farmers cultivate land in different territories, which leads to an increase in both the cost of production and the production process in general. This is a major barrier to entry for new entrants into the sector, especially for young farmers and livestock farms. Demand for land has led to an increase in arable land in the country and direct payments have further stimulated investment in land.

The Common Agricultural Policy is essential for Bulgarian agriculture, as direct payments (Pillar I) and rural development funds (Pillar II) play an important role in sustaining farm businesses, farmers' incomes and in stimulating demand for investment, leading to higher financial needs. Farmers' incomes are boosted by direct payments. Banks use farmers' access to direct payments as a guarantee for loans of similar amounts. Direct payments are used as collateral by medium and large farms to modernize their enterprises and cover some running costs. But many farmers (especially smaller ones) remain outside the support framework. When this is combined with the restrictive and rather risk-averse policies applied by commercial banks providing credit to agriculture, it can be concluded that the development of agriculture in Bulgaria has been significantly slowed down by a lack of sufficient capital for financing. Moreover, it is difficult to find cases where bank financing to farmers has been given on favorable terms. This problem is holding back growth and may have negative medium- and long-term effects as the demand for finance will continue to grow (even before the COVID-19 crisis).

According to EC and EIB data (7), over 42% of farms have sought finance, with 16.9% from banks (13.2% in EU), 13.9% from private sources (non-banks, relatives and friends) (11.4 in EU) and 5.2% from mixed sources (3.4% in EU).

Applying for bank loans is more popular than using private finance, yet almost 20% of the sector relies on private sources of finance. In recent years, there has been a steady growth in the deposits and loans that farmers use to cover their financial needs, while the liabilities of Bulgarian farms are growing at the same rate as their assets (23% relative to assets). The main reason why Bulgarian farmers do not apply for bank financing is that they consider their own funds to be sufficient. This is the case for about 60% of farmers, compared to 75% for the EU-28. Farmers' concerns are that bank loans are expensive and involve complicated procedures, while at the same time, about 60% of farmers in the country (75% in the EU) are self-financed. The main reasons why farmers do not apply for loans can be found in the following areas: lack of transparency in banks' lending policies towards agriculture - 65% of the group of young farmers (who received loans) said that bank policies could be changed unilaterally; lack of collateral - banks prefer other assets to secure loans, such as urban apartments or houses; unattractive loan terms - 33% of the young farmer group indicated more attractive loan terms in the future; fear of rejection - 25% said they had not applied for finance due to fear of the bank rejecting their application; no business plan - 42% of young farmers noted that banks required them to have a business plan when applying for loans. This is something they usually lack support in developing or for which they have to rely on expensive consultants. Lack of financial literacy - 15% of young farmers said their lack of financial literacy was a significant barrier to applying for bank loans.

Rejection of loan applications by financial institutions is a key reason for the high unmet demand, with small farms having the highest absolute number of rejected applications. Reasons cited by banks can be traced to: the high risk of their investment (96% of farmers had their application rejected for this reason); bank policy restrictions (81%); the economic unviability of the farm (12%); and lack of collateral (10%). Other reasons for refusal of financing by banks can be found in the following circumstances: banks view lending to the agricultural sector as too risky; banks' marketing strategy is not focused on farmers as the segment is considered unimportant and unattractive; farmers' lack of credit or accounting history; farmers often have inadequate business plans; increasing indebtedness in the sector.

Elements of the supply of finance for agricultural enterprises

Research on the supply of financial services to the Bulgarian agricultural sector implies a study of the financial environment and financial service providers. Although financial institutions continue to view the agricultural sector as risky, as a result of access to EU financial resources and national support, banks have become more active in financing agriculture. Since 2014, lending to the agricultural sector has been increasing, reaching a gross loan portfolio of €6 billion in 2020. Currently, the level of financing provided by credit organizations is almost equal to the level of government support.

In recent years, agricultural lending has been dominated by three main banks - UniCredit Bulbank, Raiffeisenbank (Bulgaria) and ProCredit Bank (Bulgaria), which together have a market share of over 65%, defining the agricultural credit sector as significantly consolidated. At the same time, banks offering agricultural loans can also work with the National Guarantee Fund (NGF). The main products provided are short-term loans for working capital and long-term loans for investment in machinery, equipment and land. For the three main banks, the most common loan size is between EUR 12 500 and EUR 25 000, with loans mainly provided to small farms. The main support instruments to promote investment activity among farmers, and especially for young farmers, are those of the RDP. Since 2014, there has been an expansion in the supply of both medium and long-term loans. Competition between lenders is increasing to some extent, despite limited market competition.

Analyzing the more important issues limiting the supply of finance for farmers, it is noteworthy: significant market concentration in the banking sector; apart from the three main banks serving the sector, other banks do not have tailored loan products and lack a deep understanding of the agricultural sector; high levels of non-performing loans which make it difficult for banks to further increase their exposure to the sector; many Bulgarian farmers do not have the necessary collateral needed to secure a loan; bank lending is closely linked to the financial support of RDP measures, with loans only being approved when the farmer has agreed investment support.

According to Bulgarian National Bank (BNB), the financial sector in Bulgaria includes a large number of financial providers, including 26 commercial banks, 26 credit cooperatives, 208 non-bank financial institutions and 1 guarantee fund. Commercial banks are the main providers of credit for agricultural development, with half of them offering credit products to farms.

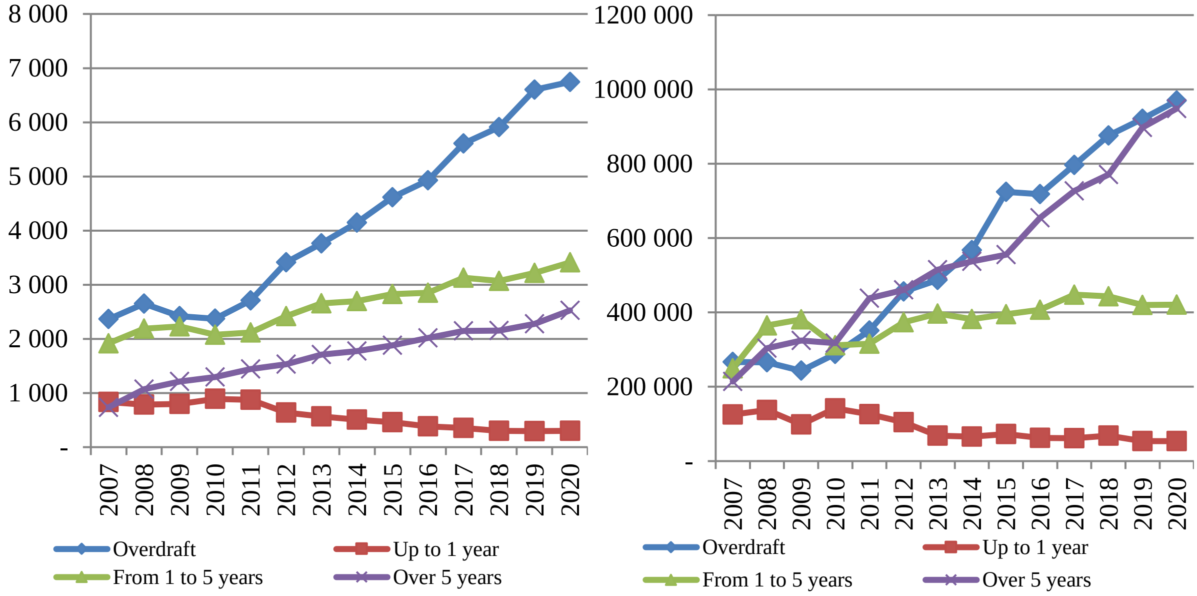
The banks that provide the highest percentage of their total credit resources for agriculture are ProCredit Bank (11.8% of the bank's total credit resources), followed by DSK Bank (10.5%) and UniCredit Bulbank (10.5%). Banks mainly provide long-term loans, which are used to cover the investment costs of farms, and short-term consumer loans, which are used for working capital. Non-bank financial institutions and credit cooperatives specialize in offering low-interest loans to their members, which are used for investments in land and agricultural machinery. Non-bank financial institutions mostly offer short-term credit of up to EUR 500, but mostly against very high interest rates, short repayment periods and high penalties for late repayment; loans from credit cooperatives are usually up to a maximum of EUR 50 000 - 100 000, with a short maturity and are used to finance working capital and investments in machinery and stock.

Given the structure of agricultural production, banks are mainly focused on offering credit products to grain and oilseed farmers, grape and wine producers and, to a lesser extent, vegetable and livestock producers. Some of the commercial banks also offer products for young farmers to start and develop their agribusiness, provided that they have negotiated a grant under the RDP, which reduces the risk for the banks in lending to them.

Trade credit is also used to provide finance to farmers, especially in processing sectors, which creates better conditions for finance within the value chain.
Since 2008, the National Guarantee Fund, has also been operating in the country, issuing guarantees that complement the collateral required by commercial banks to approve loans for Bulgarian businesses, including agriculture the guarantee covers up to 50% of loans, with an approximate ceiling of EUR 1.5 million (BGN 3 million) per loan (8).

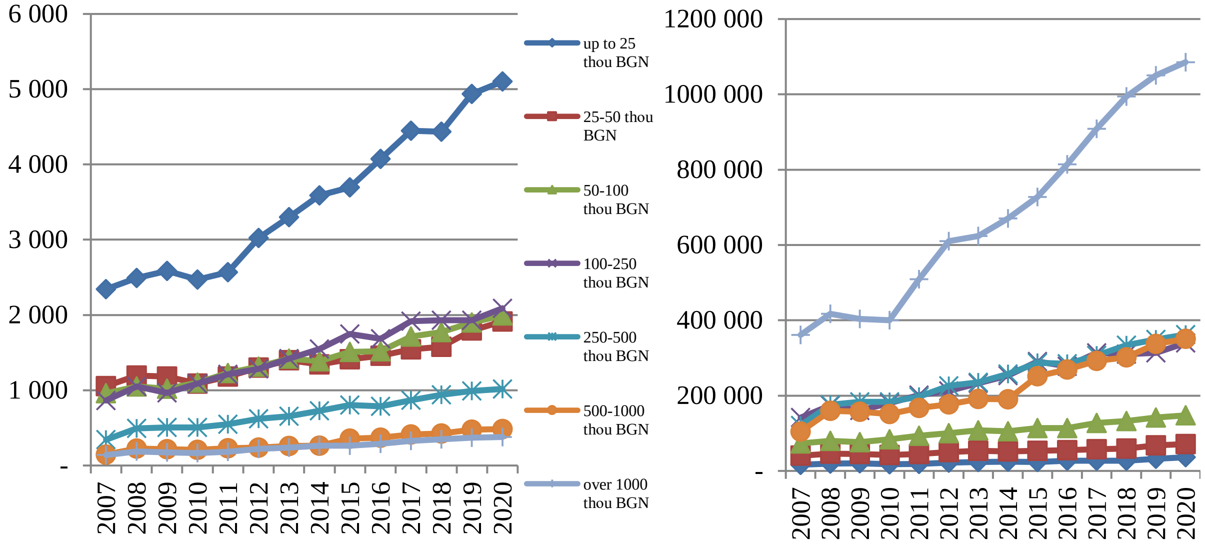
A contemporary problem associated with the provision of finance by commercial banks to farmers is the high level of loan arrears by farmers. Since 2016, there has been a deterioration in the quality of banks' agricultural loan portfolio. Based on data from the three banks, which are the main providers of loans in the sector, the share of non-performing or defaulted loans in agriculture has increased from 13.5 percent in 2016 to 21.1 percent in 2019. This is due to lower profits of farmers, competition in the banking sector led by the low interest rate environment has expanded credit expansion where banks are trying to sell as many loans as possible. The main drivers underpinning the increase in credit supply are the growing number of new larger players in the agricultural sector, as well as the increasing popularity of RDP measures and CAP payments (9). Farmers who do not benefit from RDP investment support are often perceived as risky and thus banks are more cautious.
According to BNB data (BNB Statistics), the relative share of agricultural credit in total lending has been increasing over the period 2007-2020. In 2020, the number of loans to farms reaches 9.3% of total loans to non-financial enterprises (6.6% of total loans to non-financial enterprises). In total lending in the country, the share of agricultural credit is 0.4% of total credit (3.6% of total credit in the country). In 2020, credit reaches 59.1% of the level of output of the agricultural sector, compared to 30.4% in 2007. The data show a steady development of agricultural credit after 2007 in Bulgaria, which increased from BGN 531 million in 2007 to BGN 2,393 million in 2020.

The dynamics of the number of farm loans by type for the period 2007-2020 is shown in **Figure 4** (left). The increase in long-term loans is a consequence of the increased investment activity of farms implementing RDP investments. Thus, long-term credit is a major factor in the financing of farm investments, including land acquisition investments. Structurally, long-term loans maintain a relative share in the number of loans of around 46%, while the share of loans over 5 years increases from 12.6% in 2007 to 19.5% in 2020.



Source: Bulgarian National Bank, Statistic
Figure 4. Loans disbursed to the agricultural sector in the period 2007-2020 by type and maturity, by number (left) and by value in BGN thousand (right)

Changes in the number of loans by type also affect their value. The dynamics of farm credit by type in value over the period 2007-2020 is presented in **Figure 4** (right). Loans over 5 years show the largest growth, increasing from 25.2% in 2007 to 39.6% in 2020.
The analysis of the number of loans granted to the agricultural sector by size shows that loans up to BGN 25 thousand increase at the fastest pace in the period 2007-2020, followed by loans between BGN 100-250 thousand and those between BGN 50-100 thousand **(Figure 5,** left). Small sized loans are traditionally sought by small farms. The trend towards an increase in the number of loans above BGN 100 thousand is in the direction of an increase in the size of farms in Bulgaria and with an increase in investment activity in the sector mainly by larger farms.



Source: Bulgarian National Bank, Statistic
Figure 5. Loans disbursed to the agricultural sector for the period 2007-2020 by size, by number (left) and by value in thousands of BGN (right)

The analysis of loans to the agricultural sector by value shows that the largest increase in 2020 compared to 2007 was observed in large loans over 250 thousand BGN, with loans over 1 million BGN increasing 2.7 times, loans between 500-1000 thousand BGN increasing 3.3 times, and loans between 250-500 thousand BGN increasing 2.9 times (Figure 5, right). It can be summarized that the dynamics of lending to the agricultural sector is in the direction of an increase in large loans, which are mainly of an investment nature for companies and are targeted at larger agricultural holdings of the grain production type in structural terms, in 2020, the main share in the credit stock is accounted for by loans above BGN 1 million. If in 2020 the share of loans above BGN 1 million is only 2.9% of the total, they account for 45.4% of the total loans. At the same time, loans up to BGN 25 thousand account for 39.3% of the total, but form only 1.5% of the total loan value.

A factor for the increase of credit is the reduction of the cost of credit. Nominal interest rates in BGN are decreasing from 8.8% at the beginning of 2007 to 2.80% at the end of 2020 (the decrease is 3 times). Nominal interest rates in euros decrease from 8.6% at the beginning of 2007 to 2.15% at the end of 2020. There is a strong correlation between the decrease in the level of interest rates in the economy and the expansion of credit activity for the agricultural sector.

Bank lending to farms in Bulgaria has shown steady growth in recent years. It is largely driven by the creation of production and the expansion of assets in the sector (physical and land), but is directly linked to the policy support to the sector. Previous studies have shown the impact of subsidies on farm loans (10), but the effects of subsidies are indirect and non-linear in nature.

CONCLUSIONS

In conclusion, it can be summarized that the main drivers of the Bulgarian agricultural sector's finances are working capital needs,

followed by long-term investment needs in assets and in agricultural land. Farmers are facing rising production costs, which increases their demands on financial security - including rising costs of land rent, materials and labor.
Self-financing continues to be the main source of finance, given concerns from farmers that bank loans are expensive and complicated. However, about 40% of financing is through borrowed funds. Bulgarian farmers cover their financing needs through bank loans, savings and relying on friends.

Several reasons have been identified for differences in farmers' demand and supply for finance. Young farmers and new entrants who need long-term finance to buy land and farm infrastructure to start their businesses face particular difficulties in accessing finance.
In order to improve access to finance for Bulgarian farmers, there is a need to expand technical support for loan provision, which will reduce producers' distrust of commercial banks and improve their performance in terms of business planning. At the same time, the challenge for commercial banks to expand their lending products (11), improve their credit services and increase their credibility in the agricultural sector is increasing, not only in the context of CAP support.

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