

# Agricultural and rural capital markets in Turkey, Croatia and the FYR of Macedonia

ŠTEFAN BOJNEC

*Faculty of Management, University of Primorska, Koper, Slovenia*

**Abstract:** This paper analyses the agricultural and rural capital factor markets in the three European Union (EU) candidate countries: Turkey, Croatia and the Former Yugoslav Republic (FYR) of Macedonia. Agricultural and rural capital markets share similarities with the general capital market developments, but agricultural and rural capital markets are facing specific credit constraints related to agricultural assets and rural fixed asset specificities, which constrain their mortgages and collateral use. Credit constraints form a limited access to the investment credits necessary for the restructuring of small-scale individual farms. Government transfers are used to differing extents in the different candidate countries, but generally they tend to increase over time. Remittances and donor funds have also played an important role in the agricultural and rural economy investments.

**Key words:** agriculture and rural areas, candidate countries, capital market, European Union

Agricultural and rural capital markets in the three EU candidate countries, i.e. Turkey, Croatia and the Former Yugoslav Republic (FYR) of Macedonia have been determined by the internal domestic banking and financial sector developments and the external inflows of the workers' remittances and donor funds. Historical developments also play an important role, particularly the sharecropping arrangements in Turkey between the land owners and tenants.

Different factors can determine the development of agricultural and rural capital markets, and the level of farm credit may depend on various forms of farm ownership, profitability and other farm characteristics. Petrick and Latruffe (2003) investigated the credit access and borrowing costs in Poland's agricultural credit market using a hedonic pricing method. Latruffe (2005) investigated the impact of the credit market imperfections on farm investment in Poland, where the small-scale family farms prevail, and finds that the farmers with more tangible assets and with more own land were less credit constrained than others. Ciaian and Swinnen (2009) analysed the credit market imperfections and the associated distribution of the policy rents. Smaller rural credit constraints are also identified for some new EU member states such as Hungary (Bakucs et al. 2009) and Slovenia (Bojnec and Latruffe 2011). Ciaian and Pokrivcak (2011) estimated the impact of subsidies from the EU Common Agricultural Policy on the farm bank loans and found that the subsidies influence farm loans in a non-linear and indirect fashion.

There is almost no available scientific literature on the agricultural and rural capital market developments

in Turkey, Croatia and the FYR of Macedonia (Bojnec 2011). Only a few studies have to some extent analysed different aspects of agriculture, agribusiness and rural capital markets in these three candidate countries. Among such studies, there is one on the importance of the family farm inheritance for rural factor markets in Croatia (Žutinić and Grgić 2010). Moreover, few studies have been conducted on agribusiness in the Turkish economy (Demirbaş 2007). The FYR of Macedonia has so far been the subject of even fewer studies on the agricultural and rural capital markets. Angelova and Bojnec (2011) studied agricultural and rural capital markets in the FYR of Macedonia as a country case study using the available national statistics on the special micro-finance and banking system credits, as well as the subsidies for investment into working capital, such as agricultural inputs and fixed capital investments.

In this paper, we focus on the analysis of the key statistical data on the capital market developments and provide comparisons between Turkey, Croatia and the FYR of Macedonia. In the next two sections, the main aggregates of the capital market developments are analysed and the determinants of the agricultural and rural capital market developments are presented. The final section derives the main conclusions and policy implications.

## CAPITAL MARKETS DEVELOPMENTS

Our focus is on the empirical evidence on the capital markets in Turkey, Croatia and the FYR of Macedonia. The cross-country empirical evidence for agricultural

Table 1. Structure of the value added to the gross domestic product (GDP) in %

	Croatia			FYR of Macedonia			Turkey		
	agriculture	industry	services	agriculture	industry	services	agriculture	industry	services
1990	10.9	35.8	53.4	8.5	44.5	47.0	18.1	32.2	49.8
1993	13.9	36.1	50.0	11.8	35.0	53.1	16.1	31.1	52.8
1996	9.3	30.5	60.2	13.2	29.6	57.2	17.4	31.6	51.0
2001	8.4	28.2	63.4	11.8	32.1	56.1	9.9	30.2	59.8
2005	6.5	28.3	65.2	12.8	29.6	57.6	10.8	28.5	60.7
2007	6.1			11.0			8.7		
2009	6.7	27.1	66.1	11.3	36.3	52.3	9.3	25.8	64.9

Source: World Bank (2011)

and rural capital markets for these three candidate countries is limited. Separate evidence in the international statistics on capital markets for agriculture and for rural economy is not available, while in the available national statistics on the agricultural and rural capital markets, the evidence on the analysed three candidate countries is also rather sparse. We therefore present some macro-economic evidence on capital markets in Turkey, Croatia and the FYR of Macedonia. According to the national experts' evidence, there is also no substantial difference in the functioning of the banking sector for agriculture and the rural economy from its general functioning and operation. However, agriculture and the rural economy might face more severe capital market imperfections and credit constraints with the rent differentiation due to the asset and production specificities, which limit the access to credit for restructuring and the further development of agriculture and the rural economy. In addition, due to a greater economy of scale in urban areas, there are greater positive externalities for investment in urban than in the rural areas. Yet, rural areas also face a lower level of the infrastructure development and higher transportation costs, which hinder the competitiveness of the rural economy and make the possible alternative investments less attractive.

### Structure of the economy

The structure of the economy is presented as the structure of the value added to the gross domestic product (GDP) by agriculture, industry and services. The role of agriculture and industry has declined in each of the three candidate countries. The role of services has increased to more than two-thirds of the economy for Croatia and close to this share for

Turkey. In the FYR of Macedonia, the role of services in the value added to GDP varies in the individual years, but at the level above 52% (Table 1). Banking and financial services are included in the service sector, as are similar services for agriculture and rural economy development.

### Inflation and interest rates

Each of the three candidate countries experienced very high rates of inflation or even hyperinflation during the 1990s. In the recent years, the rates of inflation as measured by consumer prices have been reduced substantially, with even deflation in the FYR of Macedonia in 2009 (Table 2). The inflation rate in Croatia is close to the EU-27 level, while the annual inflation rate in Turkey is still above the EU-27 level (Eurostat 2011).

Lending interest rates, the interest rate spread, and the real interest rates in the three candidate countries are relatively high (Table 3). The reasons for this could be higher investment risks and probably less competitive banking and financial sectors. On the other hand, the deposit interest rate is the lowest in Croatia and the highest in Turkey. The interest rate spread as a differential between the lending rate and the deposit rate is most recently higher in Croatia

Table 2. Inflation, consumer prices (annual %)

	Croatia	FYR of Macedonia	Turkey
1995	4.0	16.4	88.1
2000	4.6	6.6	54.9
2005	3.3	0.2	10.1
2009	2.4	-0.3	6.3

Source: World Bank (2011)

Table 3. Interest rates (%)

	Deposit interest rate			Lending interest rate			Real interest rate		
	Croatia	FYR of Macedonia	Turkey	Croatia	FYR of Macedonia	Turkey	Croatia	FYR of Macedonia	Turkey
1995	5.5	24.1	76.0	20.2	45.9		-2.9	24.6	
2000	3.7	11.2	47.2	12.1	18.9		7.2	9.9	
2005	1.7	5.2	20.4	11.2	12.1		7.6	8.0	
2009	2.8*	5.9*	22.9	11.6	10.1		8.0	7.1	

\*2008 data

Source: World Bank (2011)

Table 4. Domestic credits (% of GDP)

	Domestic credits provided by banking sector			Domestic credits to private sector		
	Croatia	FYR of Macedonia	Turkey	Croatia	FYR of Macedonia	Turkey
1995	41.5	25.7	29.1	26.5	23.1	19.5
2000	40.8	14.4	39.3	32.3	17.8	18.4
2005	64.2	20.0	46.9	53.0	25.1	22.8
2008	75.1	42.7	52.5	64.9	43.8	32.6

Source: World Bank (2011)

than in the FYR of Macedonia. The real interest rate, which is the lending interest rate adjusted for inflation as measured by the GDP deflator, has declined considerably for the FYR of Macedonia, while for Croatia it has increased a slightly. These findings cannot be confirmed for Turkey due to the unavailable evidence, which was noted by the World Bank (2011) dataset.

In Croatia, the percentage of domestic credit provided by the banking sector is around three quarters of the GDP and the majority of domestic credits are allocated to the private sector (Table 4). The findings for the FYR of Macedonia and for Turkey are mixed. Both the percentages of the domestic credit provided by the banking sector and the domestic credit allocated to the private sector in the GDP have

increased. In Turkey, the domestic credits provided by the banking sector are more than 50% of the GDP, but the domestic credits allocated to the private sector are still around one third of the GDP. The empirical evidence clearly indicates the increasing role of the banking sector and their domestic credits provided to the private sector in the three candidate countries.

Subsidies and other transfers as a percentage of the expenditure have increased over time (Table 5). This macro-economic evidence explores variations by the individual years, and particularly during the more recent years of the economic and financial instabilities and recession. The percentage of subsidies and other transfers of the government expenditure is the highest for Croatia, but a rapid increase is also seen for the FYR of Macedonia.

Table 5. Subsidies and other transfers (% of expense)

	Croatia	FYR of Macedonia	Turkey
1995	31.7		
2000	43.3		
2005	54.1	39.3	40.0*
2008	53.6	49.1	41.1

\*2006 data

Source: World Bank (2011)

### Bank performance

In general, before the economic and financial recession that followed 2008, bank performance in the three candidate countries was rather favourable. The percentage of the non-performing bank loans to the total gross loans declined in each of the three candidate countries over the last decade (Table 6).

The percentage of the bank capital to the assets ratio oscillated in the individual years, but it seemed

Table 6. Bank performance

	Non-performing bank loans to the total gross loans (%)			Bank capital to assets ratio (%)			Bank liquid reserves to bank assets ratio (%)		
	Croatia	FYR of Macedonia	Turkey	Croatia	FYR of Macedonia	Turkey	Croatia	FYR of Macedonia	Turkey
1970									15.6
1980									19.7
1993							1.9	0.7	8.0
1996							7.3	1.8	6.0
2000	9.5		9.2	11.9		6.1	10.7	7.9	4.2
2005	6.2	15.0	4.8	9.0		12.9	19.6	9.8	10.5
2008	4.9	6.8	3.6	13.5		11.7	12.6	11.9	10.9

Source: World Bank (2011)

to increase slightly over time. The percentage of the bank liquid reserves to the bank assets ratio indicates different patterns between the three candidate countries. For the FYR of Macedonia, it tends to increase over time from a relatively low initial level. This increasing pattern is also seen for Croatia, albeit at a higher relative level, with a slight decline more recently. However, it remains at a slightly higher level than in the other two candidate countries. During the last decade, Turkey increased its percentage of the bank liquid reserves to the bank assets ratio, which has also been associated with relatively high rates of economic growth in the country.

### Foreign direct investment

Foreign direct investments (FDI) can play an important role in the internationalization of economies, including the agro-food sector and the development of rural areas (Dries and Swinnen 2004). The three analysed candidate countries gained the first experiences with the FDI inflows during the 1970s and 1980s. Most frequently, they were in a form of joint ventures. During the last two decades, they have

experienced greater net inflows than net outflows of the FDI. Table 7 presents the FDI net outflows as a percentage of the GDP, and the FDI net inflows as a percentage of the GDP. This evidence confirms that the FDI net inflows have been greater than the FDI outflows. While the FDI net inflows and the FDI net outflows tend to increase over time, there have been significant variations over time, particularly in the FDI net inflows, which largely depends on the FDI opportunities in the candidate countries. Food processing enterprises in the candidate countries have been also an important niche for the FDI flows.

### Workers' remittances

The World Bank (2011) data also indicate a considerable inflow of the workers' remittances in each of the three candidate countries analysed. The outflow of labour from rural areas to countries abroad, particularly to Germany and some other Western European countries, mainly took place during the 1960s and the 1970s. In return, a significant part of these workers' remittances flows back to rural areas in the three candidate countries.

Table 7. Foreign direct investment (% of GDP)

	Croatia		FYR of Macedonia		Turkey	
	net outflows	net inflows	net outflows	net inflows	net outflows	net inflows
1993	0.19	1.32			0.01	0.35
1996	0.11	2.29		0.25	0.06	0.40
2001	0.81	6.92	0.03	13.01	0.25	1.71
2005	0.53	4.02	0.05	1.67	0.22	2.08
2009	2.07	4.61	0.14	2.69	0.25	1.28

Source: World Bank (2011)

Table 8. Workers' remittances (% of GDP)

	Croatia	FYR of Macedonia	Turkey
1974			4.01
1993	2.11		1.62
1996	2.86	1.53	1.95
2001	3.27	2.14	1.42
2005	2.75	3.90	0.18
2009	2.34	4.13	0.16

Source: World Bank (2011)

The migration of workers abroad, particularly to Western Europe, has been significant in each of the three candidate countries. Consequently, the workers' remittances have made up an important share of the GDP. In the mid-1970s, workers' remittances in Turkey represented more than 4% of the GDP (Table 8). Later, for Turkey there was a decline in the percentage of remittances in the GDP, for three main reasons. First, after the intensive outflow of labour during the 1960s and in the early 1970s, Western European countries imposed limitations on new employment from abroad. Second, there have been switches in the migration flows among the emigrated workers from the temporary to the permanent migration with family members, and thus fewer remittances were sent back to the country of origin. Third, Turkey has experienced a faster growth of the domestic GDP than the inflows in workers' remittances; particularly fast growth rates have been recorded in the recent years.

The outflow of labour to Western Europe during the second half of 1960s and the beginning of 1970s was also important for Croatia and the FYR of Macedonia, but the accurate data on the inflow of workers' remittances are not available as both these countries were at that time part of the Former Socialist Federal Republic of Yugoslavia (FSFRY). Since the country's independence from the former Yugoslavia, the workers' remittances as a percentage of the GDP have increased for the FYR of Macedonia, but declined slightly for Croatia over the last decade. Again, these patterns in the workers' remittance flows as a percentage of the GDP indicate the intensity of the workers' flows abroad, with the related backward inflow of the workers' remittances as well as a the development in the domestic GDP. As can be seen, the FYR of Macedonia is far more dependent on the workers' remittance inflows than the more economically developed Croatia. It is worth mentioning that several outflow labour migrations were from rural areas and thus the inflows of workers' remittances largely went back to rural areas.

These inflows of workers' remittances are important for the rural population's well-being as well as for the mitigation of rural poverty. To some extent, they are also important for the investment activities in agricultural households and in rural areas.

### Donors' funds

Donations from different funds have been granted to each of the three candidate countries. Among these donations, development agencies also support the agricultural and farm sector restructuring and modernisation in the three candidate countries. The inflows of the donors' funds is presented on the basis of the aggregated evidence of the net official development assistance (ODA), which consists of loan disbursements made on concessional terms (net of repayments of the principal) and grants by official agencies of the members of the Development Assistance Committee (DAC), by multilateral institutions, and by the non-DAC countries to promote economic development and welfare in countries and territories in the DAC list of the ODA recipients. It includes loans with a grant element of at least 25% (calculated at a 10% rate of discount). The ODA inflows to the three candidate countries in Table 9 are presented by two indicators. First, the net ODA received as a percentage of the gross capital formation. Second, the net ODA received as a percentage of the central government expense.

At different stages of economic development, the three candidate countries received development assistance (Table 9). During the 1960s, 70s and 80s, development assistance was important for Turkey, but in more recent years, Turkey has also become important as a driver of economic development and other assistance abroad. For Croatia, the inflows of development assistance increased during the first half of the 1990s, after the end of the war in Croatia, which followed after the announced declaration of independence from the FSFRY. Development assistance has recovered again with the Croatian economy adjustments towards the EU membership. Development assistance has been particularly important for the FYR of Macedonia. For example, at the beginning of the millennium, the net ODA represented more than one-third of the gross capital formation in the country. During the last decade it has declined, but it has remained important for both the gross capital formation and the central government expenditure. Development assistance has been particularly targeted towards agricultural and rural areas (Angelova and Bojnec 2011).

Table 9. Net official development assistance

	% of gross capital formation			% of central government expense		
	Croatia	FYR of Macedonia	Turkey	Croatia	FYR of Macedonia	Turkey
1960			9.8			
1970			7.0			
1980			7.6			
1992	0.0	0.8 <sup>a</sup>	0.7	0.0		
1996	2.9	11.9	0.6	1.6		
2001	2.6	37.7	0.6	1.4		
2005	1.1	18.8	0.4	0.8	12.6	0.5 <sup>b</sup>
2008	1.9	8.4	1.3	1.7	7.4	1.2

<sup>a</sup>1993 data, <sup>b</sup>2006 data

Source: World Bank (2011)

## DETERMINANTS OF AGRICULTURAL AND RURAL CAPITAL MARKET DEVELOPMENTS

Lagerkvist et al. (2011) conducted a written questionnaire survey on the institutional framework of the market for agricultural credit. However, the most requested specific data on rural capital markets are difficult to obtain for Turkey, Croatia and the FYR of Macedonia, particularly due to the lack of information and missing data for Turkey and Croatia, more examples are presented for the FYR of Macedonia.

### Institutional framework for agricultural and rural capital markets

For Croatia, commercial banks are not giving out any data on interest rates for business credits. In addition, interest rates for credits vary according to the individual investment projects. Yet, in Croatia, there is no agricultural bank present to provide specialised credits for agriculture. There is in fact only one Croatian-owned and operated bank; all other banks in the country are foreign-owned and operated. They also provide credits for agriculture and rural development under the similar, market-driven interest rates as for the rest of the Croatian economy. The evidence on credits for small individual farms is not known, while the largest agricultural concern took a credit at the interest rate of 10.5%. This interest rate is at a level close to the reported macro-economic lending interest rates for Croatia, in Table 3.

In Turkey, there are both domestic and foreign-owned and operated banks, which provide commercial credits to agriculture and other rural economy activities. There is no easily available evidence on

the total value of credits and their use by activities in agriculture and in the rural economy. In addition, a special agricultural bank provides credits for agriculture and rural areas under the conditions that are slightly more favourable than those from the commercial banks.

Unlike in Croatia and the FYR of Macedonia, sharecropping in Turkey plays a significant role in the agricultural investment activities and the businesses between the landowners and tenants and is also important for the agricultural and rural credit and loans markets.

For the FYR of Macedonia, there is no precise information about the credit volume per asset category in agriculture, either. Among the main providers of credit to the farm primary production operation, there are commercial banks and the sellers of inputs. More specifically, 40% of credits to agriculture are provided by commercial banks for different categories of investments in land, buildings, equipment and machinery, and inventory assets; 30% are provided by the sellers of inputs such as machinery, either by credits or leasing, the sellers of seeds and fertilizers, and other inputs for primary agricultural production. The remaining 30% come from the government in the form of the governmental credit institutes, but not subsidies. Finally, in the FYR of Macedonia, there are no mortgage institutions or farmers' cooperative banks. Among the governmental credit institutions to provide credits to agricultural operations, there is an important government agency that provides subsidised government loans to farmers, private banks that supply government subsidised loans, market funded and private banks that transfer subsidised government loans and receive commission fees from the government.

For the FYR of Macedonia, the number of creditors, their lending volume and the share in the total volume of credits to agricultural operations has increased over the last decade among the following institutions: commercial banks, government credit institutes, and sellers of inputs for the primary agricultural production such as seeds, fertilizers and other chemicals for agricultural production. These are active providers of credit for the primary agricultural production. On the other hand, during the last decade, there are no mortgage institutes, or farmers' cooperative banks or any other informal banking or financial institutes for the primary agricultural production.

### **Authorised agricultural and rural credit market institutions**

In the FYR of Macedonia, as in the two other candidate countries analysed, there are no authorised institutions and/or authorities that regulate or supervise the agricultural credit market. However, the Ministry of Agriculture, Forestry and Water Economy (MAFWE) in the FYR of Macedonia monitors interest rates and other subsidies given to farmers (Angelova and Bojnec 2011). In addition, the Agency for Financial Support in Agriculture and Rural Development in the FYR of Macedonia is authorised to implement financing of the agricultural and rural development activities from the government budget, and it is particularly responsible for the distribution of the Instrument for Pre-Accession Assistance (IPA) of the EU funds. The IPA of EU funds is also important in Croatia and Turkey.

### **Reasons for credit constraints in agriculture**

Among the reasons often given for the rejection of the farmers' investment proposals in the FYR of Macedonia, there are the lack of appropriate farming or management experience, an insufficient farm business income, a poor credit history of the applicant, the lack of the collateral and an insufficient business plan. So far the credit to agriculture was largely allocated to agricultural enterprises, but less often to the individual small scale family farms, which predominate among the farming structures. Individual family farms face credit constraints due to the unsettled legal ownership of assets and thus collateral problems (Angelova and Bojnec 2011). In the latter case, the government should solve the settlement of legal ownership. Sometimes the reasons given for the rejection of an agricultural credit application

are the lack of the appropriate farming or management education, particularly by the individual family farms, an insufficient household income and a weak previous relationship with the creditor.

In none of the candidate countries, there exists a functioning mezzanine credit market that would cover the potential gap between the borrowers' equity and the lending amount agreed by the primary lender.

### **Credit project risk assessment**

The method of carrying out risk assessment related to the credit evaluation of a farming investment proposal varies between Turkey, Croatia and the FYR of Macedonia. For example, in the FYR of Macedonia, the estimated farm business profit (cash flow) makes up around 55% of the weight of risk assessment, followed by the available business collateral (30%) in a typical credit evaluation of a farming investment proposal in new buildings and equipment or for some type of livestock production. To a lesser extent, some other characteristics of the project proposals are also important, such as the available household income of the applicant (5%), the available non-farm assets for use as a collateral (5%), the credit history of the applicant and his/her family (2%), the appropriate farming or management education (1%), the appropriate farming or management experience (1%), and the extent of any previous relationship with the creditor (1%). When a farmer applies for a loan to finance an investment, more weight is given to the estimated economic outcome than to the personal relationship between the bank and the loan applicant.

### **Government support**

Different means of the government support are available in the agricultural credit market in Turkey, Croatia and the FYR of Macedonia. For example, in the FYR of Macedonia, principal loans from the government are the most important (50% of the government support for investment), followed by investment allowances as a part of the investment costs, which is recovered as a subsidy (40%), and payback guarantees (10%).

### **Factors to obtain credit or extend loans**

In the FYR of Macedonia, the possibilities for a farmer to obtain credit for a larger farm investment are somewhat greater than for the smaller rural firms.

So far the credit to agriculture has been largely allocated to a small number of agricultural enterprises, while a large number of the individual family farms have been excluded from the agricultural and rural capital market due to the credit constraints they have faced (Angelova and Bojnec 2011).

The most relevant factor for extending an already existing loan regarding the importance of the available collateral versus the expected cash-flow generation from the loan for the FYR of Macedonia is a higher cash flow than the asset-based lending, while only the asset-based lending seems to be the least important, if there is enough collateral property that can be easily liquidated in the case of default.

## **CONCLUSIONS AND POLICY IMPLICATIONS**

Our focus has been on the agricultural and rural capital markets in three EU candidate countries: Turkey, Croatia and the FYR of Macedonia. We have analysed the aggregate capital market indicators and factors driving the agricultural and rural capital markets. While there are some specific agricultural and rural capital market policies, in general the agricultural and rural capital markets show similarities with the general capital market developments in all three candidate countries. In addition, Turkey has experienced a historical evolution in sharecropping arrangements, which are partly explained by the different regional and historical-cultural traditions in this large country.

Each of the three candidate countries has experienced a considerable outflow of labour from the agricultural and rural areas, particularly to Western European countries, since the 1960s. The backward inflows of the workers' remittances and pensions from abroad to rural areas seem still to be important for the agricultural and rural economy investment and welfare in each of the three candidate countries considered.

Each of the three candidate countries has also gained from the donors' funds, but at different times. Donors' funds have assisted in agriculture and in rural areas by a greater use of capital equipment and more capital intensive technologies as well as in the adjustments to the international agro-food and other development standards, the EU policies and practices. Agricultural and rural development policies and environmental regulations are the issues where national policies and the pre-accession support can help to promote the farm, agricultural and rural development.

In Turkey, Croatia and the FYR of Macedonia, these policies are likely to be typically short-lived and weak, both in the analytical power, particularly economics, and the implementation capacity. There is a need to improve the information and to promote effective linkages to markets and the access to public goods and services, particularly for the prevailing small-scale individual farms. Local organisations and producers' associations can help to manage the problems of moral hazard and the adverse selection because of their informational advantages. They can also overcome the economy-of-scale problems of small, individual, family farms that prevail in each of the three candidate countries. They can also link production more efficiently in local areas with a greater access to the national and international markets and the diversified sources of risk in terms of profitability and the investment climate. On the other hand, the agricultural rural development is needed to attack and reduce the heterogeneous types of rural poverty, which have been mitigated by the government subsidies and social transfers and by the inflows of the workers' remittances from abroad. However, it is necessary to assure the access to capital and other assets for the small-scale individual family farms and the use of these assets to sustainable growth to incorporate large segments of the rural population.

Finally, it is important to solve the settlement of legal ownership of assets and to develop the rural demand-led project-making and project-designing capacities. This has been identified as an important credit constraint for the small-scale individual family farms in the FYR of Macedonia, but is probably also important in Turkey and the Croatia. The problem with credit constraints could partly be solved by the provision of education in agricultural practices to increase productivity and by stimulating the organization of producer associations to reduce the adverse selection and lower risks for lenders. Several rural development policies and projects in the EU are based on an effective participatory policy and project-making process that can continuously address the need for design, reforms and the implementation of policy and projects, which are also supported by the EU structural cohesion and rural development policies.

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## REFERENCES

- Angelova B., Bojnec Š. (2011): Agricultural and Rural Capital Market Developments in the Republic of Macedonia, Factor Markets Working Paper No. 9. Centre for European Policy Studies, Brussels.
- Bakucs L.Z., Fertő I., Fogarasi J. (2009): Investment and financial constraints in Hungarian agriculture. *Economics Letters*, 104: 122–124.
- Bojnec Š. (2011): Agricultural and Rural Capital Markets in the EU Candidate Countries: Croatia, the Former Yugoslav Republic of Macedonia and Turkey, Factor Markets Working Paper No. 8. Centre for European Policy Studies, Brussels.
- Bojnec Š., Latruffe L. (2011): Financing availability and investment decisions of Slovenian farms during the transition to a market economy. *Journal of Applied Economics*, 14: 297–317.
- Ciaian P., Swinnen J.F.M. (2009): Credit market imperfections and the distribution of policy rents. *American Journal of Agricultural Economics*, 91: 1124–1139.
- Ciaian P., Pokrivcak J. (2011): Do Agricultural Subsidies Crowd Out or Stimulate Rural Credit Institutions? The Case of CAP Payments, Factor Markets Working Paper No. 4. Centre for European Policy Studies, Brussels.
- Demirbaş N. (2007): Agribusiness in the Turkish economy. *Agricultural Economics – Czech*, 53: 224–229.
- Dries L., Swinnen J.F.M. (2004): Foreign direct investment, vertical integration and local suppliers: evidence from the Polish dairy sector. *World Development*, 32: 1525–1544.
- Eurostat (2011): Available at <http://epp.eurostat.ec.europa.eu> (accessed January 2011).
- Lagerkvist C.J., Rabinowicz E., Thór S., Huisman C.J. (2011): Institutional Framework of the Market for Agricultural Credit: A Survey Conducted by the SLU-team, Factor Markets Project. Centre for European Policy Studies, Mimeo, Brussels.
- Latruffe L. (2005): The impact of credit market imperfections on farm investment in Poland. *Post-Communist Economies*, 17: 349–362.
- Petrick M., Latruffe L. (2003): Credit Access and Borrowing Costs in Poland's Agricultural Credit Market: A Hedonic Pricing Approach. IAMO Discussion Paper No. 14905. Institute of Agricultural Development in Central and Eastern Europe, Halle (Saale).
- World Bank (2011): World Development Indicators. World Bank, Washington, D.C. Available at <http://data.worldbank.org/indicator> 2011
- Žutinić Đ., Grgić I. (2010): Family farm inheritance in Slavonia Region, Croatia. *Agricultural Economics – Czech*, 56: 522–531.

Arrived on 7<sup>th</sup> November 2011

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### Contact address:

Štefan Bojnec, Faculty of Management, University of Primorska, SI-6104 Koper, Slovenia  
e-mail: [stefan.bojnec@fm-kp.si](mailto:stefan.bojnec@fm-kp.si); [stefan.bojnec@siol.net](mailto:stefan.bojnec@siol.net)

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