AGRICULTURAL INSURANCE IN ROMANIA

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Production risks, meaning weather and climate related risks, affecting agricultural activities could be managed through agricultural insurance. First, the paper presents the specific production risk in agriculture and the tools that are used to manage it in other countries. Next, the paper presents the agricultural insurance scheme for catastrophic risks in Romania and, also, the principal agricultural insurance policies offered by local insurers. The paper emphasizes the lack of some new products of insurance, like index insurance products, which are desired for production risk protection.

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Agriculture is a risky activity sector, therefore it can have large negative impacts on agricultural income, on food security, and on the capacity of the sector to develop and invest in order to compete on the market.

Agricultural enterprises face risks that can affect their profitability and viability:

- *production or yield risk*, for which the weather is responsible most of the time, but also includes risks like plant and animal diseases. Yield risk is measured by yield variability. However, yield variability for a given crop differs from region to region, being determinate by the soil type, the climate and the production method. Weather risks are a major source of uncertainty for farms. Climatic risks are more important for crops and sanitary risks are more important for livestock, but none of them are exclusive;
- *market risk*, known also as *price risk*, which is referring to uncertainties about prices that producers will receive for commodities or prices that they must pay for inputs;
- *asset risk* is referring to the potential loss or damage to physical buildings, equipment, vehicles, and implements due to fire, theft, water damage, or accidents;
- *institutional risk* refers to policy changes which intervene with agricultural issues (referring to taxes, environmental protection, employment rules, workplace conditions, price or income supports, support payments, other subsidies, property confiscation) and that can have a negative impact on farm revenue;
- *operational risk*, referring to uncertainties in scheduling or using equipment at critical times, making or receiving shipments of critical inputs/outputs, and handling of labor disputes;
- *financial risk*, referring to rising costs of capital, exchange rate movements, insufficient liquidity to meet liabilities, loss of equity, and the prospect of loans being called by lenders;
- personal risk refers to uncertainties and risks connected to health and personal relations such as accidents, illness, death, and divorce.

One of the main risks is the production risk that arises because agriculture production closely relies to natural resources, which are not controlled by farmers. Moreover, climate has indirect impacts. Then, agriculture is a sector very dependent on climate.

There is also an important classification of risks which arises in agriculture:

- systemic risks, which affect an entire area or a group of people in entirely;
- syncretic risks, which affect areas, sectors or individuals in a heterogeneous way, meaning that a person or a certain geographical area is affected in a different way than the others.

So, risk management in agriculture is important, and likely to become more so in the future. There are two main risk management strategies that are used by agricultural enterprises:

- on-farm strategies, which are based on growing products with low risk exposure or short production cycles, diversification of the production programs, off-farm employment. These reflect the concern to reduce the period of time within the risk can affect the incomes of the farmer or to reduce dependence of farmers on agriculture as a source of income. These strategies could be used only for syncretic risks, not in systemic ones.
- off farm strategies, which cover insurance, participation in mutual funds, future markets, contracts. Off farm strategies could address both syncretic risks, and systemic risks. These strategies are based on principle of risk sharing. As we can notice, insurance is just one tool for risk management in agriculture. It can be noticed that in most of the countries, the systemic risk is covered even partially by the state.

Agricultural insurance can be developed on a commercial basis or on a mutual basis.

The commercial insurance means that a specialized organization collects money as premiums and assumes the responsibility to compensate the loss suffered by the insured from a risk covered by insurance policy.

Mutual insurance schemes are a special case of insurance. The participants own mutual funds. In the case of a member incurring a loss, the loss will be fully or partially compensated through the collected money already available in the fund and an additional collection among participants.

When it comes to Romania's situation, the agricultural insurance market presently covers 0.91% from the total subscribed gross insurance policy. Also, the number of insurers involved in the field of agricultural insurances is relatively low, only 10 companies from 42 insurers. In TOP 5 of market share in 2008 are clasified F.A.T.A Asigurari (31.03%), ASIROM (18.56%), ALLIANZ-TIRIAC (16.46%), OMNIASIG (11.02%) and ARDAF (9.63%)

As for the insurance of the crops, it covers an area of 4.3 million hectares for the 2007-2008 agricultural years, which represents approximately 45% of the plough land, or 30.5% of the agricultural area.

The causes which determined this situation are divers and take the form of the landed propriety's disintegration, the large number of non-performing autonomous producers, the abandonment of agricultural enterprises and of optimum agricultural food production facilities, the unfavorable environment factors, which have caused in the last years significant financial losses for the agricultural producers.

The agricultural insurance market needs fair products and a balance between the price of the policy paid by the insured and the risk taken by the insurer, which has been growing in the last years, especially for crops.

An important aspect is that at world-wide level, the insurance rate for crops represents approximately 4-5% from the sum insured, based on the area and on the risks undertaken in the insurance, according to the catalogues settled for the insurance conditions, which were written on the basis of technical and economical studies and of the statistics in the last 50 years.

But on the Romanian agricultural insurance market, because of the unfair and even unprofessional competition, 1–1.5% rate quotation are being practiced, which actually don't cover the acquisition and administration expenses paid by the insurer. This leads to a situation where for a damage rate of over 70% substantial losses are recorded for the insurance companies which offer agricultural insurance contracts.

Table no. 1

Market share for Agricultural insurance in Romania[118]

No.	Company	GROSS WRITTEN PREMIUM					Nominal change in EUR	Real change in RON	PAID CLAIMS				Market share
		Weight in the own insurance portofolio	2008		2007				2008		2007		
			EUR m.	RON m.	EUR m.	RON m.			EUR m.	RON m.	EUR m.	RON m.	2008
1.	F.A.T.A. Asigurări	39,78	6,79	25,02	6,75	22,54	0,59	2,93	4,34	15,97	4,41	14,7	31,03
2.	ASIROM	2	4,06	14,97	5,09	17	-20,23	-18,38					18,56
3.	ALLIANZ-ŢIRIAC	0,96	3,6	13,27	2,4	8	50,31	53,8	2,28	8,39	4,8	16,01	16,46
4.	OMNIASIG	0,75	2,41	8,89	1,32	4,41	82,78	87,02	1,7	6,26	0,34	1,13	11,02
5.	ARDAF	2,2	2,11	7,76	1,72	5,76	22,25	25,08	1,83	6,73	0,36	1,21	9,63
6.	GENERALI	1,15	1,31	4,81	1,31	4,39	-0,65	1,65	0,64	2,34	0,89	2,97	5,96
7.	ASTRA	0,44	0,78	2,89	1	3,34	-21,55	-19,73	0,32	1,19	0,33	1,11	3,58
8.	EUROINS	1,82	0,75	2,78	0,06	0,21			0,22	0,8			3,45
9.	CARPATICA Asig.	0,17	0,04	0,15	0,04	0,12	14,22	16,87	0,08	0,3			0,19
10.	GARANTA	0,08	0,03	0,09	0,02	0,07	22,12	24,95					0,12
11.	AGRAS	100	0	0	0	0,01	-96,25	-96,16				0,01	
12.	ASIBAN				0,33	1,11					0,01	0,04	
13.	BCR Asigurări				0,24	0,82					0,06	0,22	
TOTAL		**0,91**	**21,88**	**80,63**	**20,28**	**67,83**	**7,83**	**10,33**	**11.40**	**41,98**	**11,21**	**37,40**	**100,00**

118 Insurance Profile, no1/2009, march 2009.

In Romania, the agricultural insurance products have known a pretty significant dynamic lately, so that, beside the classic insurance for crops and for animals have appeared products like: the optional forest insurance, the optional fowl insurance, the optional bees insurance, the optional fish insurance, the optional snails insurance, etc.

The main insurable risks for crops are usually: fire, hail, storm, rainfalls, landslides, landfalls, early autumn frost and late spring frost; while the main risks for animals are: diseases (some companies exclude infectious-contagious diseases) and accidents (including natural calamities like: storm, frost, earthquake, fire, lightning, landslide).

The money insured for crops is the value declared by the insured and accepted by the insurer, depending on the production direct technological expenses taken from the technological device on crops; or depending on the value of the estimated production, determined by multiplying the average production achievable in that area with the preliminary capitalization price, while the insured money for animals is usually the one declared by the insured, without exceeding the animal's real value.

As we noticed, in many countries the government is involved in the agricultural insurance field, generally targeting the partial or total undertaking of the disaster risks. The same situation is in Romania. So, the insurers don't insure the disaster risks, whose regulation has been done only in 2002, once Law no. 381/2002 regarding the granting of compensations for natural calamities was issued.

According to this law, natural calamities are the quantitative and qualitative crop losses, the death-rate and/or the necessary sticking of animals because of destructive natural phenomena and diseases on large areas.

The stimulant introduced by the law refers to the fact the compensations payment for agricultural producers, private individuals or corporate bodies, for natural disasters caused by natural phenomenon and diseases are done only for the crops, livestock, birds, bees and fish which were insured for Standard risks by the (re)insurance companies accepted by the Agriculture Ministry. Licensing the insurance companies which can make agricultural insurance is done annually by the Agriculture, Forests and Rural Development Ministry and by the Insurance Supervision Commission.

Another stipulation of the law says that in order to stimulate insurances and decrease the financial effort of the producers, the government gives subsidies for insurance rates for a value of 20%[119] from the one established by the (re)insurance company for cattle, as well as for the following crops: Autumn wheat for consumption and for seed; Sun-flower for consumption and for seed; Soya; Sugar beet; Noble grape-vines; Intensive meadows.

In the case of government subsidies for insurance rates, the final term for closing the insurance contracts is December 15 for crops sowed in autumn, and May 31 for crops sowed in spring and for plantations.

The same law established that compensations are granted to producers as follows:

- for crops and plantations affected by natural disasters, only for damages that go beyond 30% of the production, the maximum level of compensations is 70% of the expenses registered till the date of the disaster;
- for livestock, birds, bees and fish, the compensation represents 80% of the insurance value, diminished by the value of the resulted sub-products, which can be capitalized according to the legal regulations.

The level of the granted compensations on area units for crops and plantations affected by natural disasters, which registered damages of over 30%, is settled by applying the damage percent to the value of the expenses made until the day of the disaster, but no more than 70% of their value. The

119 this value was increased to 50% in year 2006-2007 and starting with august 2007 was eliminated.

compensated expenses are: seed, chemical fertilizers, pesticides, mechanical and manual jobs, irrigations.
Establishing the damage percent for the affected crops is done by proportioning the production expressed in physical units, destroyed by natural disasters, with the production expressed in physical units, written on the insurance policy signed with the (re)insurance companies.
In order to set the expenses level for the affected crops and plantations, the producer must prove these jobs have been done.
Another legislative norm is the Government Emergency Decree no. 157/2002, which changes the law regarding leasing, according to which the insurance of leased agricultural goods becomes mandatory. According to this regulation, the sides of the leasing contract have the obligation to include in this contract the insurance clause for leased goods in order to recover the damages caused by natural disasters. Although the regulation doesn't stipulate a sanction for not obeying it, the risk of not complying is undertook by the tenant farmer, together with the obligation to cover the possible damages caused by a natural calamity.
The coherent functioning of these legislations in our country hasn't been possible because of the following reasons: the tendency to underestimate the risk by the potential insurance policies buyers, or the development by the potential insured of a behavior specific to "charitable hazard", defined by the tendency of the person who is facing a risk to not turn to insurances or other ways to finance the risk, as a result of the belief he/she will receive help through emergency government programs. It's important to underline that if a big part of the people involved in agricultural activities run subsistence agriculture, the development of such behavior has been stimulated by the public authorities themselves, who, under the pressure of the population or because of political reasons, have supported both the insured citizens and the uninsured citizens after a natural calamity occurred.
The insurance method for crops that is massively subsidized by governments is expensive and arguable. Romania must avoid the introduction of traditional insurance charts for crops, which need large financial resources and (in a world with limited fiscal resources) obtain resources from risk management instruments which will be more efficient and better adjusted to the structural features of agriculture and its population.
The insurance products based on climate indexes have attractive characteristics:
- The insurance mechanisms based on indexes allow the risk's stratifying and facilitates the risks' transfers, including the CAT risks (losses with less probable important consequences) through market instruments.
- These policies eliminate many of the problems existent in traditional crops insurance (high correlated risks, asymmetric information and big transaction costs), making them more viable and less dependent on the public subsidies.
- Compensations are paid on the basis of a variable's recording at the weather stations. The basic variable mustn't be the production itself, but one of its basic indicators, like: precipitations – the most important climate indicator for agriculture, temperature; winds – especially in areas with an arid climate/semi-arid and light soils; vegetation indexes (satellite recordings); minimum requirements of solarization; powerful storms (hurricanes).
For example, the parametric insurance product based on climate indicators, through which the maize crops can be insured, will protect the three growing phases, and the index reflects the dependency that the maize production has for precipitations, from sowing to maturity.
The market of the insurances based on climate factors can support and complete the governmental measures to stimulate agricultural insurances.
In some markets the insurance industry has developed new innovative forms of risk transfer thus allowing an increase in the financial capacity of the market. Alternatives to transferring the risk to reinsurers or to the state, as insurer of last resort, include 'catastrophe bonds' (cat bonds). Cat bonds are securities that (re)insurance companies use to transfer natural catastrophe insurance risk

to institutional investors in the form of bonds. As such, they help the (re)insurer to spread the peak exposures caused by extreme natural catastrophes by transferring the risk to the capital market.

Conclusions

Climate change is a global challenge. Addressing it will require an inclusive and coordinated approach across a wide range of policy areas. All members of society need to take responsibility as complacency is limiting the necessary risk reduction measures.

Insurers have expertise in the identification and analysis of risk, developing sustainable financial solutions and encouraging risk-reducing behavior by both individuals and businesses. The reinsurance industry wishes to play a full and proactive part in the climate change debate since it shares a common purpose with politicians and other stakeholders to limit the economic consequences of climate change.

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