

The Radiography of Romanian agricultural insurance market at the moment of adhesion in European Union

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Abstract

Member states of the World Trade Organization are compelled to decrease agricultural subsidies as stated at the Uruguay round, in 1993. In the European Union there is a strong debate about creating a frame which will give farmers adequate support, in contrast with the USA where agricultural insurance is strongly subsidized by the government. In many EU member countries whether natural disasters arise, farmers depend heavily on aids from the government, but this aid covers only part of the damage, comes with a delay and involves huge administrative costs.

What is to be done? A strong partnership between agriculture, government, insurance industry in both sectors of agricultural insurance: plants and livestock farming is highly needed. What is the role of the private insurance industry? Its role as a main actor is supported by its know-how in risk-assessing, premium computation, damage assessing.

Why a research topic in agriculture? First of all, agriculture is very important to any market and even highly industrialized countries depend on a efficient agriculture. Why risks and risk management, agricultural insurance and other alternatives to agricultural risk management? The agriculture is strongly exposed to risks. The price risks are expanding due to liberalization, globalization and the increase of requirements in quality.

This evolution has led to a very strong competition in the market and a decrease in prices which have destabilized the revenues of farmers and increased the uncertainty about their economic future. The increase in the mobility of the people, of livestock and farm products can lead to an increase in the incidence of some catastrophic diseases increasing the production risks. The same is true for plants. Changes in climate, higher frequencies and intensities of some extreme weather events have a major impact on production risk, greatly challenging the very existence of farms.

Keywords: agricultural insurance, common agricultural policy, innovation, public-private partnership, price risk, production risk.

Introduction

Between 2005 and 2006, with an arable surface of 9 million hectares, Romania had an insurance coverage ratio of just 10%. The losses incurred in agriculture during this period were huge : in 2005, those 6 waves of floods between april and september affected 550.000 hectares of plotted land and the losses amounted to 200 million euros ; in 2006,

the bird flu breakout losses reached 70 million euros while this year, the drought brought losses of more than 1.5 billion euros.

Romania's agriculture output ratio in the Gross Domestic Product (GDP) in 2006 was 8%, a decrease from 21% in 1993. Our agriculture is divided in 4.500.000 small individual land plots, with an average surface of 1.8 hectares and 23.000 agricultural associations, companies, public administration assemblies having an average surface of 282 hectares.

The percent of the total population working in agriculture is 30%, 7 times above the EU average of 3.95%.

Romania's agricultural insurance market.

Whether at the beginning of the 90's there were only two insurers - ASIROM and ASTRA- willing to subscribe agricultural insurance policies - those two insurers occurred after the division of the former state owned company ADAS -in the beginning of 2007 there were 22 insurers subscribing agricultural insurance policies. Thinking globally, more than 50% of the total number of 41 insurers acting on the Romanian insurance market are interested in the agricultural insurance segment.

Which insurers are interested in the agricultural insurance segment and for how long have they been acting on the Romanian insurance market?

Table 1: Insurers operating in the agricultural insurance sector - market entry

1.1. Between: 1990-1995

1. ASIROM 2. ASTRA 3. UNITA (03.09.1990)		1. RAI 2. AGRAS (10.09.1992) 3. ARDAF (01.11.1992)	1. Generali 2. Alpha Insurance	1. ASIT 2. ASITRANS 3. SAR Transilvania 4. AIG Romania	1. Omniasig
1990	1991	1992	1993	1994	1995

1.2. Between: 1996-2001

1. ASIBAN 2. IRASIG 3. ATLASSIB	1. GARANTA (Alpha Insurance)	1. CITY INSURANCE 2. Delta Addendum (PETROAS)		1. EUROASIG	1. ALLIANZ - ŢIRIAC (ASIT) 2. BCR Asigurări
1996	1997	1998	1999	2000	2001

1.3. Between: 2002-2006

		1. BT Asigurări (SAR Transilvania) 2. Carpatica Asig (ATLASSIB)		1. FATA Asigurări Agricole 2. CLAL Romania Asigurări - Reasigurări
2002	2003	2004	2005	2006

As the above table shows, between 1992-1994, 9 insurers entered the Romanian insurance market. Starting 2005, the new type of insurers - bancassurance - entered this insurance segment: BCR Asigurări, BT Transilvania Asigurări. As for foreign capital insurance companies entering the market we can easily see that:

- The German group Allianz bought in 2001 the insurance-reinsurance company ASIT, creating Allianz-Țiriac.
- The Austrian group Vienna Insurance Group, has majority or significant stakes in AGRAS, Omniasig, Unita and ASIROM (the second general insurance Romanian company).
- The Italian group Assicurazioni Generali operates through 2 companies: Generali Asigurari (1993) and FATA Asigurari Agricole (since October 2006). Also, another insurer, CITY INSURANCE, has majority Italian capital stake.
- The American group AIG Inc. through the Romanian AIG Romania subsidiary operates on the Romanian insurance market.
- The Greek group ETHNIKI General Insurance Company, leader on the Greek insurance market has a majority stake in GARANTA, company that in 2007 bought NBG Asigurari which also bought Alpha Insurance.
- The Israeli group CLAL Insurance Enterprises Holdings in December 2006 established the Romanian subsidiary CLAL România Asigurări - Reasigurări.

What are the results of agricultural insurance subscription?

We will characterize the agricultural insurance market evolution in the last 4 years by using the statistics compiled by the Insurance Supervisory Commission (CSA).

Table 2: Gross Written Premiums (GWP) - general insurance, agricultural insurance 2003-2006

Year	GWP General insurance (euro)	Annual growth (%)	GWP Agricultural insurance (euro)	Annual growth (%)	Percent of agricultural insurance in general insurance (%)
2003	499.521.900	-	11.734.198	-	2,35
2004	688.429.690	37,82	12.946.803	10,33	1,88
2005	918.976.910	33,49	18.858.793	45,66	2,05
2006	1.357.601.700	47,73	50.128.633	165,81	3,69

Table 3: Payments made - Indemnities (I) - general insurance, agricultural insurance 2003-2006

year	I General insurance (euro)	Annual growth (%)	I Agricultural insurance (euro)	Annual growth (%)	Percent of agricultural insurance in general insurance (%)
2003	189.646.320	-	2.456.106	-	1,30
2004	311.776.340	64,40	4.968.587	102,30	1,59
2005	451.812.540	44,92	4.889.409	-1,59	1,08
2006	733.938.840	62,44	8.819.593	80,38	1,20

Source of Tables: Author's compilation based on CSA Reports <http://www.csa-isc.ro/Rapoarte/> and National Bank of Romania statistics (BNR), <http://www.bnro.ro/Statistici/>

As the above table shows, while the written premiums in the case of general insurance have increased annually with an average of 39.68%, for the agricultural insurance written premiums the increase marked a spectacular 165% in 2006 compared with 2005.

All the catastrophic events that occurred, floods in 2005, bird flu in 2006 generated an escalating demand for this kind of insurance policies and are a possible explanation for the spectacular increase in written premiums in 2006. Moreover, the Ministry of Agriculture demanded that only those insured are to receive state subsidies in case of calamities. Also, the subsidies for written premiums increased from 20% to 50%.

The evolution of the indemnities shows a high degree of volatility, from an increase of 102.3% in 2004 compared with 2003 to -1.59 in 2005 compared with 2004 and an upside of 80.38% in 2006 compared with 2005. The evolution is explained by the dependence on weather vagaries.

Overall, if the percent of total agricultural insurance written premiums compared with general insurance premiums reaches an average of 2.5%, with a tendency to rise in 2006 to 3.69%, the percent of indemnities paid in agricultural insurance compared to general insurance policies is 1.29%, half the number recorded for written premiums, showing an equilibrium.

Which insurers fight for the first positions in this market?

We will discuss the evolution of the first 5 insurers on the market between 2004-2006.

Table 4: Top 5 - written premiums (PBS), agricultural insurance, 2004-2006

2004			2005			2006		
Crt. No.	Insurer	Market share	Crt. No.	Insurer	Market share	Crt. No.	Insurer	Market share
1.	AGRAS	23,79%	1.	ASIROM	20,62%	1.	AIG Romania	25,92%
2.	ASIROM	21,15%	2.	AGRAS	12,43%	2.	ALLIANZ	21,45%
3.	GENERALI	17,14%	3.	GENERALI	14%	3.	AGRAS	12,75%
4.	ALLIANZ	12,72%	4.	ALLIANZ	12,43%	4.	GENERALI	11,82%
5.	AIG Romania	6,32%	5.	AIG Romania	10,38%	5.	ASIROM	9,70%
	Top 5	81,12%		Top 5	75,86%		Top 5	81,64%

Source: Author's compilation based on CSA Reports <http://www.csa-isc.ro/Rapoarte/>

We can easily see that there is a certain degree of concentration in the market as the first 3 insurers cover 50% of the market, and the first 5 insurance companies cover more than 75% in the market. Moreover, the market share is a very dynamic and disputed one, the first positions in the top change every year.

The most reliable indicator is the indemnity rate, determined as the division between indemnities paid and written premiums. The analysis reveals the following values for the indemnity rate, for each insurer and for the total market:

Table 5: **Indemnity rate - agricultural insurance, 2004-2006.**

2004			2005			2006		
Crt. No.	Insurer	Indemnity Rate	Crt. No.	Insurer	Indemnity Rate	Crt. No.	Insurer	Indemnity Rate
1.	ASTRA	247,80%	1.	Carpatica	81%	1.	OMNIASIG	43,22%
2.	OMNIASIG	61,71%	2.	AGRAS	47,76%	2.	AGRAS	41,68%
3.	AGRAS	57,28%	3.	ASIBAN	38,41%	3.	NBG	31,83%
4.	ALLIANZ	49,87%	4.	ASIROM	35,87%	4.	ALLIANZ	26,62%
5.	ASIROM	45,20%	5.	OMNIASIG	32,71%	5.	ASIROM	25,84%
						6.	ARDAF	24,35%
						7.	ASIBAN	19,43%
Average		38,38%	Average		25,93%	Average		17,60%

Source: Author's compilation based on CSA Reports <http://www.csa-isc.ro/Rapoarte/>

The insurer is negatively affected whether the indemnity rate crosses over 60%, especially if the rate is recorded consequetively, annually.

There were 2 cases in 2004 when the indemnity rate was above 60% for ASTRA and OmniaSIG, one in 2005 for Carpatica Asig while in 2006 there were no incidences.

There are 3 categories of insurers operating on the agricultural insurance market:

- 1 Mature insurance companies, active both on the written premium segment and on the indemnities segment: AGRAS, ALLIANZ-ȚIRIAC, ASIROM, GENERALI, ARDAF, OMNIASIG, ASTRA, ASIBAN, UNITA, GARANTA.
- 2 Bancassurance insurance type companies - operating through major financial holdings: BCR Asigurări, BT Asigurări Transilvania, Carpatica Asig; they subscribe these type of policies as following their credit expansion policies in the agricultural sector.
- 3 Insurance companies „for the moment” type: AIG România, FATA Asigurări Agricole, CLAL România Asigurări-Reasigurări, IRASIG, ASITRANS, EUROASIG, RAI, CITY INSURANCE, Delta Addendum, insurers that together with the second type pay attention to the written premiums and the risks subscribed so that the indemnity rate goes toward 0. An indemnity rate of „0” is explainable given those insurers that just entered the market: FATA Asigurări Agricole and CLAL România Asigurări-Reasigurări.

Regulations regarding the indemnities paid for natural calamities.

Regarding the agricultural insurance market, an indemnity rate below 60% is explainable given the fact that the insurance companies select the risks they take and they only cover risks such as:

- hail;
- hoarfrost/rime;
- heavy rain;
- tunderstorm, hurricane, storms;
- land slides;
- fire ocured as a consequence of thunders, lightning.

No indemnities are being paid for losses incurred as a consequence of floods, drought, long-term rain or pest. Considered as natural calamities these risks are regulated by the law nr. 328/2002.

The indemnities are being paid to the farmers by the state for crops, livestock (poultry, fish, bee families), whether the risks presented above occurred.

The conditions imposed through regulations in order to get the government subsidies are:

- 1 the livestock, crops, bee families and fish to be insured by an insurance company.
- 2 for crops, the maximum level of indemnity is 70% of the total costs incurred and only for losses above 30% of the total production.
- 3 for livestock, bee families and fish the indemnity reaches maximum 80% from the insured amount less the recovered amount.

Even though the government subsidies in 2006 reached 50% of the written premiums compared to 20% the previous year and although the insurance coverage ratio in 2007 is 25%, the farmers are unhappy:

- on one hand they require that the Law no. 382/2002 be modified so as those uninsured but affected from natural calamities should benefit from state compensations or subsidies.
- on the other hand, the standard level of costs as reflected from the indemnities' calculation worksheets and estimates is below the real cost and differences arise between regions and producers.
- the mechanism for compensation and subsidies allocation is difficult.

In 2007, the latest forecasts done by the Ministry of Agriculture regarding losses incurred due to the drought show that 1.700.000 hectares were affected in 34 counties out of which only 720.000 hectares were insured. Indemnities calculated reached a total amount of 160 million euros, approximately 222 euro/ha. Given that total losses amounted to 1.500 million euros, the indemnity degree supported by the government is 10.67% (at the time of the article). The government subsidies for the written premiums and the indemnities paid will lead to an increase in the government budget deficit from 2.6% to 2.8%.

How are the officials reacting to this?

- 1 The Ministry of Finance, trying to fulfill the goal of diminishing the costs incurred by the government with agricultural insurance losses, supports the idea of constraining the insurers through the law to bear the risks of drought and floods.
- 2 Some officials support the idea of making the agricultural insurance policies compulsory.

Both solutions are regraded as abusive though.

Although the state tries to convince the insurers to accept subscribing a large array of risks, the insurance company can not subscribe to huge risks such as the drought. Given that the level of total losses in 2007 reached 1.500 million euros, all the written premiums for

general insurance policies amounting to 1.357,6 million euros would not cover it up.

What is to be done? New tendencies in risk management.

There is a growing debate over the necessity of reforming the agricultural insurance sector, there are a number of conferences that deal with this issue, for example „*Management of Climate Risks in Agriculture*“ Conference held in Berlin, in 6-7th of July 2007, having in mind its disadvantages:

- for the government, high administrative costs;
- for insurers, the informational asymetry;
- for the farmers, lack fo financial resources and insurers' risk selection.

There are 3 insurance systems that we will deal with through a comparative analysis:

Private System	Public System	Public-private system
<ul style="list-style-type: none"> • The insurance policy is sold by private insurance companies; • The insurance policy is limited to a number of products and risks; • There are no subsidies for written premiums. <p>Specific to countries such as: <i>Germany, Austria, Italy, Holland.</i></p>	<ul style="list-style-type: none"> • The insurance policy is sold by public insurance companies (organizations); • The insurance policy is compulsory; • The insurance policy covers a large array of risks and products; • The private sector's role is limited. <p>The country that applies it is Greece.</p>	<ul style="list-style-type: none"> • The insurance policy is sold by the public-private partnership; • The insurance policy covers a large array of risks and products; • The governemnt subsidizes the insurance premiums. <p>Specific to countries such as: <i>Spain, Portugal.</i></p>

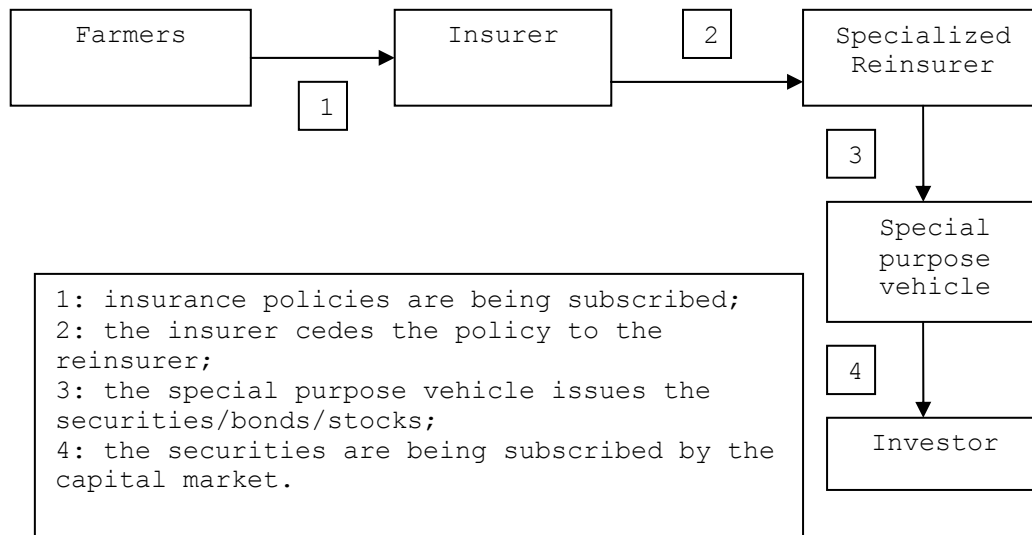
One of the possible ways of reforming the agricultural insurance system is through alternative techniques and diversification of instruments used. Besides traditional instruments such as the classical insurance of output, rentability, turnover, profit new instruments can be used such as: CAT Bonds, weather derivatives, indices linked insurance policies.

Munich Re, one of the global leaders in reinsurance advances the idea of a future „partnership“ regarding the management of risks as an instrument for the common agricultural policy in the EU.

We will suggest 3 scenarios using the alternative risk transfer solutions in risk management, solutions that depend upon the capital

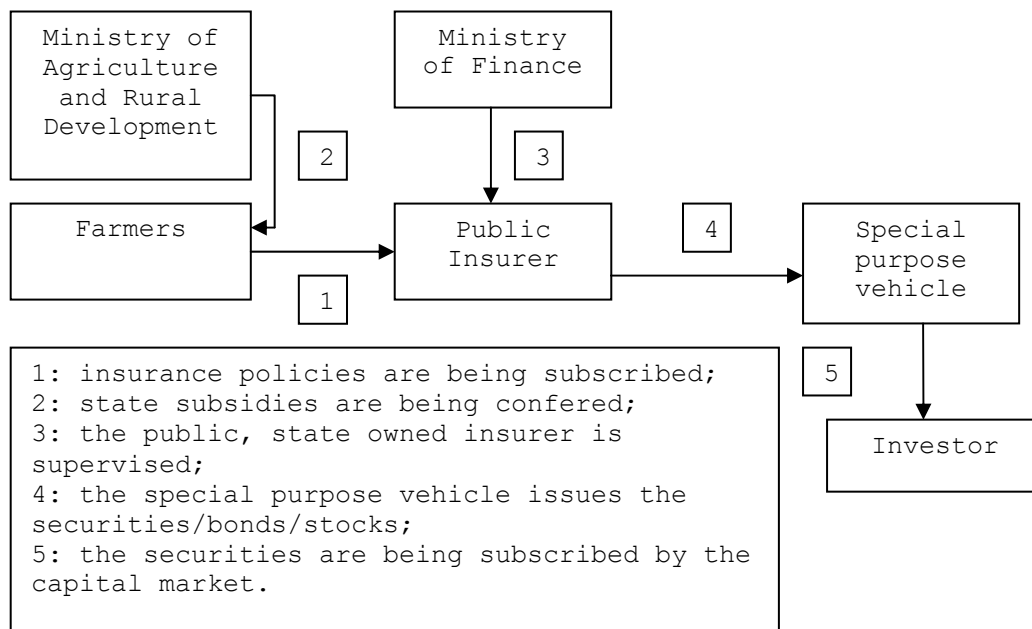
market and upon the use of a Special Purpose Vehicle, mechanism managed and run by insurers.

Figure 1: **The relevance of the new solutions in the private insurance system.**



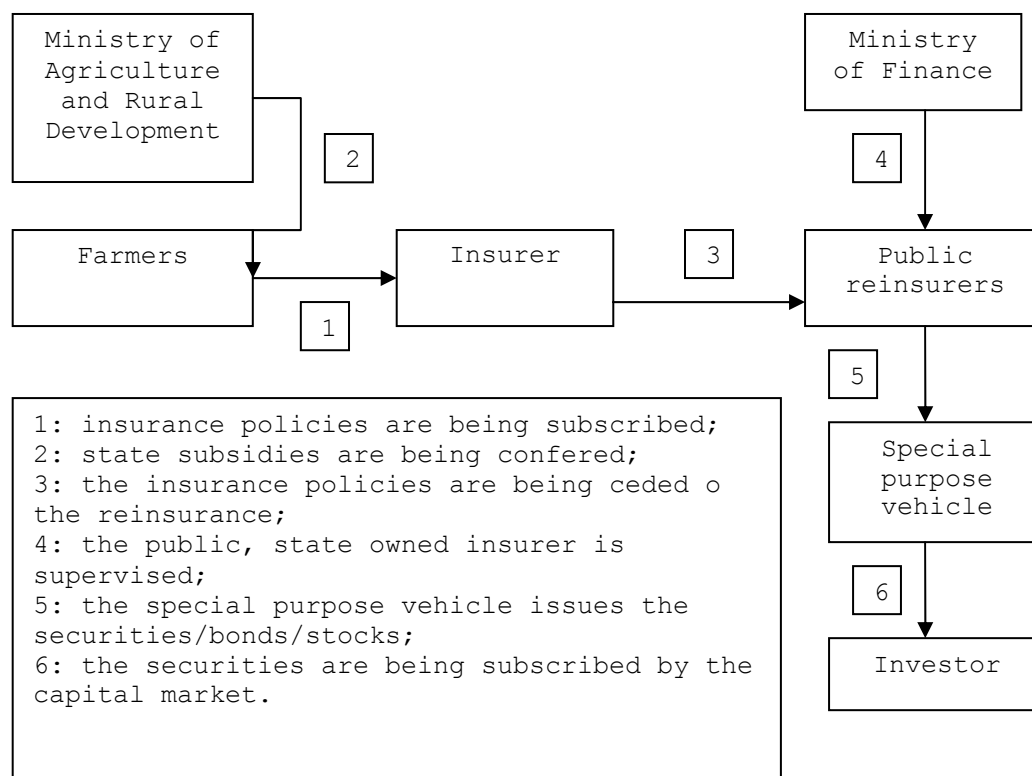
Source: Author's compilation.

Figure 2: **The relevance of the new insurance alternatives in the public system.**



Source: Author's compilation.

Figure 3. The relevance of the new insurance alternatives and the public-private insurance system.



Source: Author's compilation.

What does alternative risk tranfer solution through capital markets mean?

Advantages:	Disadvantages:
<ul style="list-style-type: none"> • Alternative for traditional uninsurable risks; • Diminishing the government's costs with ad-hoc insurance state programs; • Weather vagaries do not correlate with other stocks or equities, thus creating atractivity for invetors searching for a portfolio diversification; • Reinsurers can use their accumulated know-how; • The insurers, besides collecting the written premiums, operativity in the payment of indemnities they offer consultancy for farmers in using the alternative risk transfer techniques. 	<ul style="list-style-type: none"> • The statistics should reflect reality and should be transparent; • Technological investments in meteorological operations units, satellites, IT specific programs; • Keeping up with the latest progress and research done in alternative insurance techniques; • Teaming up specialists and research bodies.

There are no such alternative risk transfer instruments available for emerging markets due to the lack of legal and economical infrastructure.

Conclusions

Romania's agriculture is splitted in small land plots and a concentration of land and farms is needed. Farmers should join associations that could best represent their interest in order to benefit from projects and EU funds. The projects should yield for:

- higher productivity and higher living standard for the rural regions;
- development of a financial rural infrastructure;
- particularly, financing prevention and protection techniques to certain risks. Is needful to carrying out the irrigation systems, to embank the waterways, to efect the afforestations, to consolidate the lands.

As there is still a lack of understanding regarding the need and benefits that an insurance policy could bring, the government should continue to subsidize the written premiums. Regarding the alternative risk transfer solutions, we will need specialits in reinsurance that would bridge the gap with the international reinsurers. Academia would play an important role whether such an opportunity would arise.

References

- Baez, M.S., 2007, „Insurance in emerging markets: sound development; greenfield for agricultural insurance“, Swiss RE *Sigma* N°1/2007, Swiss Re Economic Research&Consulting <http://www.swissre.com/Sigma/>
- Ciumaş, C., 2007, „General Insurances“, Scientific Book House Publishing, Cluj-Napoca, 123-160.
- CSA, 2006, 2005, 2004, „The Annual Reports“, <http://www.csa-isc.ro/Rapoarte>, Insurance Supervision Commission.
- Duncan, J., 2000, „Crop Insurance under Catastrophic Risk“, *American Journal of Agricultural Economics*, Vol. 82, Issue 4, 842-855.
- EC, 2001, „Risk Management Tools for EU Agriculture with a special focus on insurance“, European Commission, Agricultural Directorate General.
- Glauber, J., 2004, „Crop Insurance Reconsidered“, *American Journal of Agricultural Economics*, Vol. 86, Issue , 318-335.
- Innes, R., 2003, „Crop Insurance in a Political Economy: An Alternative Perspective on Agricultural Policy“, *American Journal of Agricultural Economics*, Vol. 85, Issue 3, 842-855.
- Mahul, O., 2005, „The Financing of Agricultural Production Risks“, The Geneva Association, *Insurance Economics*, N° 52, 1-8.

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