

F. Possible strategies and instruments for agricultural insurance development in Ukraine

The agricultural insurance system in Ukraine needs major redesign to make it actuarially sound and user-friendly. The government should consider the type of the system it wants to establish in the country and to make decision on the future government support of the agricultural insurance program. At the present time the programs are drafted by MAP after the state budget has been approved providing limited time to the insurance companies to undertake the reasonable marketing and products' sale campaign. The amount of the government support is not known for the future periods and MAP does not have a strategic plan for agricultural insurance system perspective development. Neither MAP nor the insurance community have the vision of which system they want to create and what benefits the producers would get from the establishment of the agricultural insurance and risks management system. The description on the possible strategies and activities for all interested institutions is provided below segmented to the areas of responsibility of each type of institutions. All the suggested strategies fall in the green and yellow boxes of the WTO program and have non-distortion production features.

The present government practice of providing financial support to the farmers who suffered from natural calamities is based on hectare or livestock unit allowance. It is widely accepted that it should be stopped and abandoned. This ad hoc government support removes incentives to the farmers to insure their production. Additionally, the ad hoc payments usually equal the same amount of sum per unit for all farmers which is considered to be the inefficient budget expenditure without development effect to the sector. The decision on the ad hoc payments is often taken on political reasons and it undermines the basics for successful agricultural insurance practice in the country.

The government might consider bundling insurance subsidies with the financial ones. This approach was declared in the law on the State Support of Agricultural Sector but found no implementation until this time. It is advisable that the farmers should insure their crops or livestock in case they get subsidized credit. This strategy would provide additional stimulus to agricultural insurance development while the banks and the farmers would get supplementary effective risk management instrument to secure credit repayment.

The Government of Ukraine

The Government of Ukraine is advised to develop a **strategic plan** for establishment of the agricultural insurance system. This plan should be introduced at least for the period of 5 or better for more years. The document should indicate the timeframe within which the Government intends to support agricultural insurance. In case the government undertakes to provide continuous assistance, it should define its functions and the type and the level of such assistance. It is not reasonable to start a program for less than 10 years as only the insurance products design and their introduction might take from 3 to 8 years¹. The international practice displays that the products require constant supervision and modifications depending on the development of the agricultural sector and the change of weather patterns.

The government can choose one of three strategies that are currently used internationally:

¹ Information provided by the insurance professionals (Australia, Spain, Canada). The same concept is represented in the informational materials by RMA, USA.

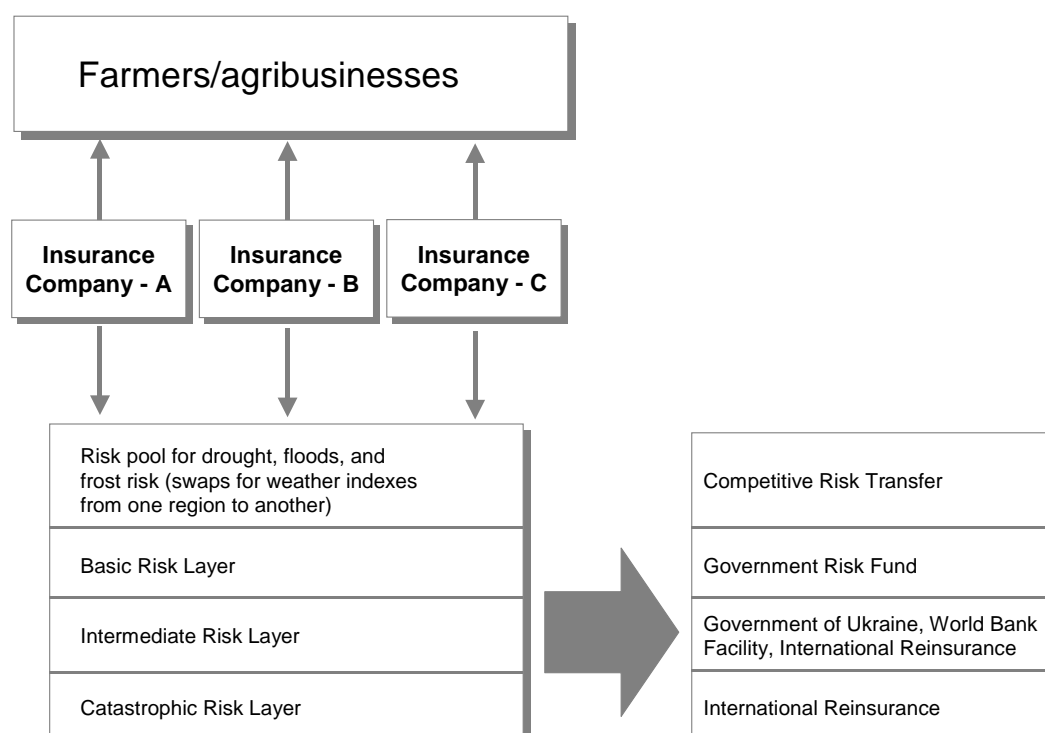
- (1) No government involvement allowing private insurance companies to work independently. In this case the government does not provide insurance subsidies and allocates exceptional circumstances financial support to the farmers when the catastrophic weather events take place. This is the cheapest strategy though the set of commercial insurance products can be limited and offered at high premium rates (e.g. Australia, New Zealand);
- (2) The government can define a list of insurance products that will be subsidized and it can provide premium subsidies to the producers that insure their crops or livestock. The insurers need to qualify with the requirements for the government supported insurance products although they should be capable to self-maintain soundness of their risk portfolio and to reinsure it independently. This strategy requires allocation of substantial government funds for insurance subsidies and this cost can be difficult to project for the future periods introducing additional budgetary constrains. This strategy is currently used in Ukraine but it should be considerably modified. The experience of other countries choosing the same strategy (e.g. Italy, Russia, etc.) provides that the insurers offer a limited list of agricultural insurance products favoring simple named-peril ones and being reluctant to work with sound MPCCI programs. It should be indicated that even with the government subsidized products the private insurers might need to look for alternative products that help to reduce administrative costs and combat moral hazard problem which undermines the quality of agricultural risk portfolio (e.g. India where private insurers successfully introduced weather index insurance in 2003-2005, while the inefficient subsidized MPCCI program existed for more than 10 years);
- (3) Establishment of a special government agency that would supervise and lead the development of agricultural insurance system. Although this strategy is a costly initiative, requiring budget financial support for years, the insurance and risk agency can help to develop the insurance system faster providing sectoral and institutional benefits. The similar agencies in other countries (USA, Spain) operate as a coordinating institution between the producers, policy makers and private insurance sector. Through the special agency, the government is capable to control the direction in which the insurance system would go and to ensure that the long-term objectives achieved. The producers will benefit of better risk management services provided to them and the insurers will be able to establish the necessary insurance program in shorter time.

Agricultural Risk Management Agency (ARMA) – can be founded by the Ukrainian Government as an independent institution working under the guidance of the Cabinet of Ministers of Ukraine. The alternative options might be to found it as a special unit under jurisdiction of the Ministry of Agrarian Policy or the State Commission for Regulation of the Financial Services Markets (the Regulator). It is considered that the agency would better have an independent status to be free from the ad hoc influence of other government institutions. The agency might have a supervisory board comprising the representatives from the relevant government institutions (MAP, the Regulator, Ministry of Finance, etc.) though working according to the long-term activity program as should be approved by the Parliament or the

Cabinet of Ministers of Ukraine. MAP should put forward a clear set of objectives that the agency should achieve. The Regulator might provide prudential supervision of the introduced programs and sound insurance practice by the private insurance companies.

The functions of the agency can include: (1) development of insurance program and products; (2) actuarial calculations for the government supported products; (3) training of the insurance specialists; (4) supervision on the insurance programs; (5) arbitration of disputable cases; (6) training of the farmers; (7) informational and educational activities; (8) design of new products; (9) coordination of reinsurance strategies; (10) data collection and analysis; (11) providing information to the government institutions on the situation in the agricultural sector; (12) advising the government finance agencies on the subsidy funds requirements for the future periods; (13) supervision of the subsidy allocation; (14) accumulation of the insurance statistics; (15) development of loss adjustment and underwriting procedures to be used by all participating private insurance companies.

The agency can operate as the coordinator of the reinsurance fund that can be founded together by the government and the private insurance companies. This reinsurance fund should be used exclusively for covering extremely high crop or livestock losses. The fund must establish clear provisions how and when the funds can be withdrawn and shouldn't depend on the possible political decisions taken by the other Ukrainian government agencies. The fund should make payouts according to the statistically verified losses (field surveys, weather indexes, satellite data, etc.) and only after the insurance companies will completely use their own risk reserves. The fund should be able to cover losses happening once in 10-30 years providing semi-catastrophic coverage to the private insurers. More voluminous risks, happening once in 30-100 years should be reinsured at the international markets which can be easier done through the government agency as the private insurers have usually problems in placing agricultural risks with the top-quality international reinsurance companies. The possible structure of the agricultural insurance and reinsurance scheme is provided below (source: ITF, World Bank, 2003-2005)



The success of the ARMA, if it was established, would depend on the legislative mandate, organizational structure and the staff employed. The international specialists (AFSC, Canada, ITF-WB) considered that the agency or the similar government institution should involve the best possible specialists. There are not so many agricultural insurance specialists in the world and the agency should target in training its own specialists within short time. It might be possible to involve top domestic and international specialists on the contract base during the period when the agency will be organized. The agency might request assistance from the international community in training its staff on the basics of the US, Canadian and Spanish systems.

Government support – the Government of Ukraine might consider extending its support to the agricultural insurance going beyond the subsidies allocation as it is done currently. The government support can be financial, institutional and infrastructural. The financial support can be offered for (1) making actuarial calculations, (2) design of new insurance products, (3) training of farmers and insurance specialists, (4) providing informational and educational activities, (5) allocation of start-up capital for establishment of the national catastrophic reinsurance fund, etc. The institutional support can be provided through the better cooperation between the government agencies (Ukrainian Hydrometeorological Center, The State Statistics Committee, the state veterinarian and quarantine inspections). The insurance companies are unable to develop new products for the agricultural sector due to the high cost of statistical and specialized data as currently offered. Provision of the necessary data to the ARMA might help to develop a set of standard and specialized insurance products either subsidized or not by the government. This will minimize the product design expenses to the private insurance companies but will stimulate them to work actively with the agricultural sector. The infrastructural government support will assist in the establishment of the integrated systems servicing the needs of different sectors of the national economy. The infrastructural investments can include the following possible initiatives:

- expansion of the national weather survey system. The number of the existing state weather stations is not sufficient for the needs of the country and UHC needs financial support for modernization of the stations and establishment of the new weather-recording locations;
- foundation of the ARMA will create a national task-force capable of regulating the agricultural insurance sector and development of the agribusiness risk management system. This strategy should result in the delivery of a wide range of the risk management instruments available to the farmers who will be able to better manage their farm risks and to assure financial stability within the years;
- development of the national commodity exchange marketing system. While the insurance sector can offer products targeted at the management of the production risks, the farmers and the insurers need a reliable price indication system to be able to manage the price risk. Introduction of reliable commodities price indicators (forward and futures prices) would assist farmers to better manage their marketing and price risks and would stimulate insurers to design revenue insurance products that are not currently possible in Ukraine, etc.

The Ukrainian Hydrometeorological Center (UHC)

The UHC has a special department on agricultural meteorology in its structure. This department collects various types of information important to the agricultural products. UHC possesses extensive professional knowledge of the crop vegetation cycles and weather impact of yield formation. This data can be used for the development of the new insurance products and modification of the existing ones. While UHC is offering a range of public products for agricultural applications (weather forecasts, reports on the crops condition and weather monitors, assessment of crop losses), specific services are provided on paid basis. Design of the new insurance products is a costly process requiring from 50,000 to 200,000 USD investments per nation-wide program (yield index, weather index, MPCCI products). Most insurance companies are unable to find such financial resources. Cooperation of UHC with the other government agencies (like the proposed ARMA) would stimulate the development of agricultural insurance system.

The State Statistics Committee (SSC)

The SSC collects a wide range of statistical data. The agricultural statistical reports provide a variety of information on the agricultural sector however this data is not easy to apply for insurance purposes and it is considered that SSC should provide specific reports that the government agencies and the private insurance companies can use. Some this work can be done by the insurance related agencies (the Regulator, MAP, etc.) on the basis of the existing statistical databases though these agencies are currently unavailable to make thorough analysis due to lack of manpower and time constraints. ARMA might cooperate with the SSC to produce special statistical data for agricultural insurance needs.

The national veterinarian, quarantine and crop protection inspections

These agencies work on the specific issues related to the agricultural production risk area. The data from these agencies might help to design better structure of the insurance products. The agencies can help insurers in monitoring the situation in the regions and issuing risk-alert reports necessary to quality loss regulation. Cooperation of insurers with the veterinarian and quarantine inspections is very important for introduction and monitoring of the livestock insurance products.

Agricultural insurance products – the government should make decision on the insurance products to be supported by the state. The private insurers are offering a set of products to the agricultural sector though the government supports only MPCCI scheme. While some named-peril products can (and probably should) be offered by the private insurance companies without government subsidies (hail, storm, fire), the more complex products might be considered for government support. The current MPCCI scheme is not structured and the producers get 50% premium subsidy when the premium rate is below or equal 5%. This provision is considered to be questionable as the actuarially sound MPCCI premium rates for some regions can be as high as 8-14%. The subsidy should consider the level of coverage and deductible when the producers should get subsidy for the catastrophic loss levels (60% coverage and 40-50% deductible) with lower subsidy to be issued at less critical levels. This principle is used in other insurance systems (USA, Canada, Spain) and probably should be replicated for Ukraine.

It is advised to keep the agricultural insurance voluntary for producers who might accept it as additional tax otherwise. The mandatory requirements should be installed for the participating insurance companies that should service any producer qualified for the program. The insurers currently prefer to work with the large farms where they can get larger premium sums and save administrative costs. The subsidized insurance system must provide equal access to the insurance programs to any farmer willing to insure his/her crop or livestock.

It is proposed to set levels for coverage on the subsidized products with 5-10% step. The international practice provides that the products with coverage level below 60% are usually not effective and they provide loss compensation only at very catastrophic level. The proposed coverage levels might be at 60%, 70 and 80% with the subsidy allowance reducing for higher levels. An example of the subsidy distribution in the USA on MPCCI products is provided in the table below:

	Coverage levels			
	50%	60%	70%	80%
State crop insurance subsidy before 2000	55%	38%	32%	17%
State crop insurance subsidy after 2000	67%	64%	59%	38%

Many jurisdictions do not use deductible for agricultural insurance products. It is considered that deductible does not clearly reflect the real cost of insurance service, makes the contract bulky and less understandable for the farmers. Calculation of the payout sum at different loss levels is also difficult. It is advised to abandon deductible and use the products only with coverage for agricultural applications.

MPCCI program – the current program should be redesigned and standardized. The insurance companies use different coverage and deductible levels and apply various approaches to establish the insurance sum. This practice impedes with analysis of the program performance and does not allow making reasonable assessment of the program performance. The statistical data

on the winter crop insurance campaign (2005) displays considerable deviations of the basic indicators and program parameters (insurance sum per hectare, premium per hectare, number of farms insured in each administrative region). The program provides coverage on selected field crops limiting the opportunity to apply MPCCI on wider range of crops. The field survey and loss adjustment procedures vary among the insurance companies.

It is suggested that the government supported program should be modified or, better, redesigned in the following way:

- application of the unified coverage/deductible levels and actuarially sound premiums rates for all areas;
- identification of the reasonable deadlines for all phases of the product life (signing dates, field surveys, claim procedures, loss regulation, payout dates, etc.;
- application of the established list of risk to be insured against;
- development of supplementary clauses – re-seeding, late harvest, wild-life damage, premium payment schedules and structures;
- introduction of the unified procedures for yield measurement and harvested production reports;
- timely announcement of the future program terms (at least 6 months in advance);
- development of clear qualification requirements and terms for insurance subsidy allocation.
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The MPCCI program should be applied for wider list of crops and with the perspective to cover most crops cultivated in the country.

Named-perils insurance products – these products can be developed and successfully offered by the private insurance companies for most simple risks without government assistance. Hail endorsement can be applied to MPCCI program through in this case the hail insurance product might lose its commercial attractiveness to the companies. The government can provide assistance with the development of named-peril products for some period of time advising that these products should exist and be offered by the private insurers on commercial basis. The government assistance can be provided in a form of statistical data, training of the insurance staff, working out the unified loss adjustment and other procedural regulations. The government might consider subsidizing these products though this type of insurance should be offered at sound premium rates to avoid formal insurance or subsidy abuse.

Yield index insurance products – these products are suitable for all crops where reliable long-term yield statistics is available. This index product is based on the average yield date for the administrative rayon. The product can be used as an alternative to ad hoc catastrophic payments per hectare. The same product might be designed for livestock applications. This product is simple and cheap to administer as the insurers don't need to make loss adjustment at each insured field. Yield index can be used by the small farmers or beginners who don't have crop harvest data and farm records. The variation of the product can be revenue index insurance (similar product GRIP is used in the USA). The yield and revenue index products are suitable to farmers whose yields or revenues are close to the regional indexes. The problem features of the yield index products are basis risk and deferred payment of the payout that is reliant on the State

statistical reports publication which is usually done at the beginning of the year next after harvest one.

The yield insurance product was introduced in Ukraine in 2003 but the private insurers can not expand this program without additional assistance. The government can provide informational and educational assistance and advise the SSC to provide yield data reports as soon as possible. It is not necessary to subsidize yield index product as it is less costly to administer in comparison to MPCCI program though the government can provide subsidy as it does now.

Weather-based index insurance products were introduced in Ukraine in 2005 when one insurance company sold two drought-protection contracts in Kherson oblast. The weather index products are most objective insurance contracts being designed on the weather statistical data. These products are capable to establish if the weather parameters had critical values and if the crop damage could occur. The weather index products are applicable for insurance against such catastrophic risk events as drought, spring and autumn frost, excessive rainfall, lack of heat units or critical low temperatures during winter time. The product minimizes the impact of subjective factors (farm management, quality of inputs and seeds, timing of seeding and cultivation procedures, etc.). The product is free from moral hazard problems as the weather parameters are recorded by the independent institution and can be easily verified. The weather index provides the fastest payouts in the case of losses happening from the insured risk. The payout usually can be performed during 15-45 days from the contract end-date and depend on the report provided by the national weather service (UHC).

The weather index products don't require government subsidies though the government might subsidize during the introduction phase. The private insurers need assistance in getting access to historical weather and yield data which necessary for product design. This data, especially the weather one, is expensive in Ukraine and prevents insurers from development of new weather index products. Infrastructural investments, like expansion of the weather network, use of satellite images and actuarial calculations (advice, training) are more important for development of the weather index insurance program than the premium subsidies².

The government can use weather index products to reinsure the national catastrophic fund or it can use weather indexes to establish the severity of the weather risk events and to measure their impact in various administrative regions. The weather indexes are more objective indicator of the crop loss than the currently used political decisions. The catastrophic assistance can be distributed among the regions based on the weather index allocating fare allowances to the suffered farmers. Still, it is advised to use weather index and other insurance instruments for risk management practices that should substitute ineffective ad hoc government support program.

² A private insurance company (together with a Canadian investor) introduced the agricultural weather index insurance program in India in 2003. This country has a long established subsidized MPCCI program administered by the state insurance company. The farmers saw the benefits of the weather index program immediately (easy procedures, clear terms of insurance, objective calculation of the index that can be verified, absence of loss adjustment and fast payouts). While in 2003 the company sold 160 weather index contracts (drought protection for peanuts), they managed to sell approximately 2500 contracts in 2004 and about 25,000 contracts in 2005. At the present time four private insurance companies design and offer weather index products that successfully compete with the subsidized MPCCI program.

Catastrophic insurance product (CAT) – the Government of Ukraine can consider using CAT insurance product instead of ad hoc allocations to farmers (per hectare or per cattle head). Such product can provide catastrophic financial assistance to the insured farmers for catastrophic losses from weather or epidemics events. The coverage might be at 50% coverage yield level and at 60% of the average (multi-year) selling price. Only the insured farmers should get payouts though the entry requirements for farmer might be very simple. The similar products are used in the USA when for a modest premium of 100 or 200 USD per insured crop culture/ livestock type the farmer get CAT protection. The program should ask producers to provide crop production reports and to allow farm surveys to be done by the insurance and/or independent surveyors. The product would help both the private insurers and the government agencies to accumulate better data on the agricultural production in the country that can be used for modification of the existing insurance products and improvement of other government programs. The government agency can use weather or yield indexes to establish the occurrence of the risk events and the volume of the payout necessary to apply.