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POLICY DEPARTMENT
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Agriculture and Rural Development

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**RESEARCH FOR AGRI COMMITTEE -
STATE OF PLAY OF RISK
MANAGEMENT TOOLS IMPLEMENTED
BY MEMBER STATES DURING THE
PERIOD 2014-2020: NATIONAL AND
EUROPEAN FRAMEWORKS**

STUDY



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POLICY DEPARTMENT B: STRUCTURAL AND COHESION POLICIES

AGRICULTURE AND RURAL DEVELOPMENT

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Abstract

The study aims at reviewing the implementing arrangements adopted recently by the EU Member States with regard to the risk management provisions in the agricultural sector. The study develops a general overview of the state of play of risk management in 2014/2020 Rural Development Programmes submitted by Member States (or Regions); examines similarities and differences in risk management tools implemented in order to gain a better understanding of their scope, their design, their limits and their potential efficiency; and suggests future CAP developments related to risk management in order to deal more effectively with income uncertainties and market volatility.

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LIST OF ABBREVIATIONS

AAFC	Agriculture and Agri-Food Canada
ABER	Agricultural Block Exemption Regulation
AMS	Aggregate Measurement of Support
ANS	Allowable Nate Sales
AoA	Agreement on Agriculture
APOs	Associations of Producer Organizations
CAP	Common Agricultural Policy
CCS	Consortio de Compensación de Seguros
CMO	Common Market Organization
CNGRA	Comité National de Gestion des Risques en Agriculture
CPM	Crisis Prevention and Management measures
DPA	Dotation pour Aléas
EAFRD	European Agricultural Fund for Rural Development
EAMO	European Agricultural Market Observatory
EC	European Commission
ECA	European Court of Auditors
ENESA	Entidad Estatal de Seguros Agrarios
EP	European Parliament
EU	European Union
EuroMMO	European Milk Market Observatory
EUSF	European Union Solidarity Fund
F&V	Fruits and vegetables
FAO	Food and Agriculture Organisation of the United Nations

FMSE	Fonds national agricole de Mutualisation Sanitaire et Environnementale
FNGRA	Fonds National de Gestion des Risques en Agriculture
FNVA	Farm Net Value Added
FSN	Fondo di Solidarietà Nazionale in Agricoltura
ICTSD	International Centre for Trade and Sustainable Development
INPS	The Istituto Nazionale della Previdenza Sociale
IST	Income Stabilization Tool
MFF	Multiannual Financial Framework
MS	Member State
NSPs	National Support Programmes
OECD	Organisation for Economic Co-operation and Development
PNGRAT	Programme National de Gestion des Risques et Assistance Technique 2014-2020
POs	Producer Organizations
RDP	Rural Development Programme
RM	Risk Management
TFEU	Treaty on the Functioning of the European Union
WTO	World Trade Organisation

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EXECUTIVE SUMMARY

Introduction and Objectives of the Study

There is wide consensus in the academic and political environments that EU agriculture faces important levels of uncertainties and insecurities in all relevant fronts. The risks farmers must cope with are often perceived differently from Member States (MS) to MS, which has led MS to develop their own risk management approaches. The 2013 CAP reform inaugurated a new era for the EU with respect to the development and implementation of alternative risk management tools. It had to strike a balance between pursuing common policy goals and allowing each MS to keep what it worked with respect to their own risk management approaches.

The purpose of the study is to review the implementing arrangements adopted by the MS with regard to the risk management provisions of Regulation (EU) No 1305/2013, which were submitted to the Commission in 2014. Specifically the **goals** are:

- 1) To develop a general overview of the state of play of risk management in 2014/2020 Rural Development Programmes submitted by Member States (or Regions);
- 2) To examine similarities and differences in risk management tools implemented in order to gain a better understanding of their scope, their design, their limits and their potential efficiency.
- 3) To suggest future CAP developments related to risk management in order to deal more effectively with income uncertainties and market volatility.

The document is structured into six chapters, including the introductory one. Chapter 2 proposes a mapping of main risk management instruments according to 15 different factors and includes a final section where reinsurance needs are discussed. Chapter 3 analyses the rules of the World Trade Organisation (WTO) and the institutional framework (CAP and State aids) to support agricultural risk management before and after 2014. Chapter 4 compiles detailed information about the implementation of risk management tools by Member States, both for the period 2007-2013 and 2014-2020. Chapter 5 develops some perspectives for supporting risk management in agriculture. Finally, chapter 6 includes some conclusions and recommendations. The document has also an Annex with an accompanying collection of fiches for those MS from which information could be collected and analysed.

Risk Management Instruments

As any other business, farming is a risky activity. There are risks that are idiosyncratic to the farm, while others are specifically related to the grown crops, raised animals, specific geographical location and specific markets where relevant prices are formed. Permitting farmers manage efficiently their risks enables them to make right investment choices and produce the commodities for which they have some comparative advantage. Currently, farmers have different types of risk management instruments at their disposal: insurances, mutual funds, saving accounts, ad-hoc payments, and fiscal measures.

An **insurance policy** is based on a contract in which an insurer (farmer) pays a premium and receives compensation against losses caused by specific risks from an insurance company. In order to make premiums affordable, the insurance company has to be able to compensate risk through pooling farmers with different risk profiles. The most extended type of insurance is the single peril crop insurance that covers specific risk, mainly hail or frost. Income and revenue insurances are less developed, except in the US and Canada, but they have attracted increasing attention in the last years.

Mutual funds are based on the establishment of financial reserves, built up through **participants' contributions**, which can be withdrawn by members in the event of severe income losses, according to predefined rules. The basic idea, common to the principle of insurance, is to spread the risk within a pool of members, with the additional effect that, by long-term commitments, mutual funds may also provide effective risk pooling also over time. The establishment of mutual funds can be encouraged by different kinds of **public support**, among them: i) contribution to start-up capital; ii) governmental allowances to annual contributions to the fund; iii) compensation of payments made to farmers; iv) fiscal incentives to the deposits of funds. One fundamental difference between mutual funds and insurance is that, while mutual funds group farmers according their production and region, revenue and income insurance are managed by governments or insurers and addressed to all kinds of farmers.

A main difficulty for Income Stabilization Tool (IST), either mutual fund or revenue/income insurance, is measuring the expected/guaranteed and actual revenue/income. It can be done either directly through tax and accounting records or through indices. At the moment, index insurance is not developed in the EU, mainly because of the heterogeneity of productions and climates. In these conditions, creating a crop index common to farmers of a same region appears difficult. Also, no overcompensation is admitted by the current EU regulation and this possibility may not be completely ruled out using indexes.

Saving accounts are a risk management tool based in the risk compensation (offset) along time, not among farms or farmers. Each year, farmers can make a deposit (part of their annual income) on a special account, which provides interest payments. In case of need, deposits, part or totally, can be withdrawn. In order to encourage the establishment of saving accounts, some **public support** can be envisaged: i) tax exemptions upon withdrawal; ii) subsidize savings by increasing interest rates; iii) governmental contributions to the deposits; iv) compensation of payments or withdrawals caused by production or income losses. One of the main advantages of savings accounts is that funds are kept by farmers and not transferred to an insurance company, which may incite farmers to use such instrument.

Fiscal and tax measures can also provide some revenue stabilization effect. If farmers are allowed to average out income during various years, they can reduce the tax receipts and compensating bad with good years. Taxes can also be reduced for farms that are hit by climatic hazards, and market and sanitary taxes.

Ad-hoc payments provide farmers some economic relief after suffering severe losses. In general, most Member States have some provisions to provide payments under catastrophes. Most of the times, ad-hoc payments serve the purpose of helping farmers **rebuild their lost capital (buildings, roads, machinery, tree plantations...)** or the herds, when available insurance cannot provide coverage for the suffered losses.

Reinsurance is a particular form of insurance. Reinsurance covers are provided to insurers which pay premiums and receive indemnities if their portfolio is at-risk. There are two main methods of reinsurance: facultative reinsurance and treaty reinsurance. Also, two types of reinsurance arrangements: proportional contracts and non-proportional contracts. Reinsurers are part of the solution for large risks. Compared to insurers, their larger size makes them able to perform a geographical diversification. They have also a facilitated access to financial markets and investors. Some instruments may require public reinsurance support, but with time and counting on sufficiently large stabilisation reserves, instruments may not need public reinsurance.

The Support to Agricultural Risk Management in Agriculture

As direct public support to agriculture has been declining, other instruments with lesser distorting effects on trade have been developed. Insurance subsidies are qualified in the Uruguay Agreement on Agriculture (AoA) as distorting measures and included in Amber Box, unless they comply with the criteria set out in the Annex 2 of the Agreement. The conditions imposed in Annex 2 for qualifying insurance support as a green box policy are very severe. In fact, almost all notifications to WTO on insurance support are classified as amber box and most countries notify it as non-product-specific subsidies, at least until 2012.

The EU disposes of a flexible regulatory framework to support risk management instruments, which allows for coping with very diverse and heterogeneous agricultural risks faced across MS. This framework is delineated by the CAP and by the rules applicable to State aids in the agricultural sector.

Within the **CAP**, prior to the last reform for the period 2014/2020, the possibility to support risk management instruments was envisioned in Pillar 1. The first possibility was established in 2007 with the reform of sectoral regulations, starting with the fruit and vegetables (F&V) sector, followed by the wine sector, which allowed for introducing mechanisms of prevention and crisis management, including support to crop insurance or setting up mutual funds. More ambitiously, in 2008, the Health Check reform extended the possibility to support risk management instruments for all sectors through the use up to 10% of their national ceilings devoted to the single payment scheme (Article 68 of the Regulation (EC) No 73/2009).

During the period 2007-2013, **State aids** occupied a fundamental role in risk and crisis management. State aids are national government support granted to farms or companies. As they can hinder the competition their use has to comply with the EU regulation according to Articles 107, 108 and 109 of the Treaty on the Functioning of the European Union. The general rule is that granting State aids is prohibited unless a) the Commission authorizes them on the basis of concluding that they are compatible with the internal market, b) the aid be exempted of the notification process or c) not constitute a State aid. In the first case, the authorization of State aids had to fulfil the **Community Guidelines for State aids** in the agricultural sector. Besides the guidelines, **the Agricultural Block Exemption Regulation (ABER)**¹ determines the aids that are exempted from the notification procedure simplifying it and enabling the Commission to declare compatible some categories of aids. The main difference between the use of the Guidelines and the use of the Agricultural Block Exemption Regulation is that in the first case aid is required to be notified to the Commission that declares its compatibility or rejects it, while with ABER the MS is only required to communicate it 10 days before its entry into force, remaining afterwards responsible for demonstrating its compatibility. Finally, the last possibility is that the aid not be considered a State aid. In this case, the aid does not require that it be notified and only the Member State can ask the Commission for clearance. These aids are regulated by the **"de minimis" Regulation**², concerning aids granted to undertakings active in the primary production.

The reform of the CAP of 2014 represented an important change regarding the framework to support risk management instruments. The provisions on crisis prevention and management (CPM) for fruit and vegetables and wine sectors were kept in the new Common Market Organization (CMO). However, the main risk management tools, existing

¹ Commission Regulation (EC) No 1857/2006 of 17 December 2006

² Commission Regulation (EU) No 1408/2013 of 18 December 2013

so far in the direct payments scheme, were shifted to Pillar 2 within the Regulation on support for Rural Development³, with the possible inclusion of various measures in Rural Development Programmes (RDP) drawn up by MS. The support for risk management under Pillar II is considered through financial contributions to insurance premiums, mutual funds, and an income stabilisation tool (IST). The EU, recognizing the increased exposure to market risks and considering the importance of risk management instruments for the new circumstances, introduced this new IST instrument, albeit not in the form of insurance, rather as a mutual fund.

The measures included in the Rural Development Regulation have **three major weaknesses**: (1) they must strictly adhere to the criteria imposed by the WTO green box; (2) the ample margin of flexibility and optionality permitted in Pillar II might lead to an uneven implementation, not only among MS but also within MS; and (3) the inception of new risk management measures in the limited budget of Pillar 2 would imply a reduction on the budget allocated to other important measures traditionally included in the RDP. Otherwise, the inclusion of support to risk management tools in the new CAP, even in Pillar 2, presents also some advantages. It is a first timid but important step, while it opens the door to a possible design of a new European risk management policy with flexible co-financing; respectful with the budget distribution, and adapted to the characteristics and needs of different MS.

The rules applicable to State aid have also been updated in 2013 as part of Commission's State aid Modernization initiative, going hand in hand with the new Rural Development policy. The rules regarding the conditions under which a State aid can be considered compatible with the internal market are in the Guidelines for State aid in the agricultural and forestry sectors and in rural areas for 2014 – 2020⁴. These Guidelines do not consider specifically aids to support market risks. However, taking into account that all aids included in the CAP are compatible with the internal market by definition, the IST could be supported under State aid framework in the same conditions specified in the Regulation (EU) No 1305/2013. As in the previous 2007-2013 period, the aids exempted of the notification process are included in the Agricultural Block Exemption Regulation ("ABER")⁵. The regulatory framework for State aid is characterized by its flexibility under a common and increasingly detailed outline. It should also be noted that the loosening of the need to meet the criteria for the green box, including all the support granted under the new Guidelines inside the amber box, make its implementation easier.

Implementation of Risk Management Tools by Member States

The **EU does not count with a harmonised EU-wide agricultural risk management scheme**. The types and extent to which risk management tools have been adopted differ widely within MS. Also, the level of coverage and subsidization vary widely from MS to MS with programs down to regional level in some EU MS. All this complexity, together with the fact that few or no figures at all can be found in standard statistical sources, make it extremely difficult to collect information on the situation of risk management tools in the EU. In the present study, data has been collected from various data sources: online databases, literature review, and expert consultations when possible. Special emphasis has been put on collecting information about government spending on the implementation of risk management tools in the agricultural sector in the 28 EU MS.

3 Regulation (EU) No 1305/2013

4 European Union Guidelines for State aid in the agricultural and forestry sectors and in rural areas 2014 to 2020. (2014/C 204/01)

5 Commission Regulation (EU) No 702/2014 of 25 June 2014

The findings of the study reveal that the risk management instruments supported by the CAP during **2007-2013 have not been very successful**. First, the use of crisis prevention and management measures under Pillar I in the **F&V and wine sectors** has been very low (only EUR 173.47 million). General reasons behind this are the small size of many POs, the limited amount of financial resources, and the considerable amount of red tape involved. Although it seems to be a consensus for keeping CPM measures alive, available data for 2014-2020 suggest that harvest insurance and mutual funds will probably continue to have little role in the new single CMO. Second, provisions under **Article 68** did get more attention, the EU spent EUR 761 million from 2010-2013. However, only a few MS used these provisions (France, Italy, Hungary and the Netherlands) and mainly in connection with crop/animal/plant insurance. In general, the implementation of mutual funds has been very limited, which may be explained by the inner complexity of this type of measure and the narrow scope of the EU financial support, oriented only toward covering the administrative costs of setting up mutual funds, that limits their practical use.

For the period **2014-2020**, the CAP offers the opportunity to fund risk management measures under Rural Development in Pillar II. Forecast amounts reveal that Pillar II expenditure on CPM measures will be **higher than previous Pillar I expenditure under Article 68**. Total public spending committed for the three risk management instruments available (insurance, mutual funds, and IST) is EUR 2699.6 million, with over EUR 1,700.7 million (63%) coming over CAP Pillar II budget. However, although the CAP support to agricultural risk management has increased, the share of CAP funds being spent on CPM measures continue to be very low, **over less than 2% of the Pillar II funds and 0.4% of the total 2014-2020 CAP budget**. Looking at the take-up of measures by MS, it is noticed that all MS that used Pillar I Article 68 funding during 2007-2013 will be using new Pillar II rural development measures on risk prevention and management. Additionally, eight MS (five at the national level and three regionally) that were not previously using Article 68 will also be adopting risk management measures under Pillar II. The estimated number of EU holdings participating in risk management measures is 635,000, most of which are concentrated in France (some 495,000). As expected, 'insurance' is fairly the most extended measure. On the contrary, the implementation of mutual funds and, in particular, IST has been very low. At the moment, only two MS and one region have decided to apply the new IST.

All EU MS use State aids to respond to crisis situations. In fact, the bulk of MS is basing their public aids exclusively on State aids (*ex-post* measures devoted to crisis management), which reveal a clear under-use of *ex-ante* (risk) management measures. As expected, those MS which agriculture is highly exposed to risk, occupy the top of the ranking in terms of absolute public expenditure. **Spain's public aid is the biggest in absolute terms**, followed by Italy, France, United Kingdom, Greece, Poland and Germany. When considering the amount of public support to risk management in relative terms, that is, in relation to the value of the agricultural output, Cyprus appears as the most publicly-supported risk management system, followed by Slovenia and Greece. In Greece and Cyprus insurance is public and compulsory. Thus, these results evidence that the level of development of **agricultural insurance in a MS is linked also to the economic support given by each MS** to the insurance systems.

Perspectives for supporting risk management in agriculture. Role of public policy

Governments have a responsibility to bridge the gaps left out by the private sector, and develop an enabling environment for the development of privately offered risk management instruments. Public policy is enabled through: (a) regulatory action; (b) financial support to various instruments; (c) overseeing and monitoring; (d) reinsurance; (e) policy targeting. All of the instruments implemented in the EU have to be done under the umbrella of national legislation and **regulatory frameworks**. It is necessary to ensure that the different legislations do not bring market distortions or tilt the playing field in favour of some farmers.

Some instruments can be supported at European or national level using various mechanisms, each requiring different granting and monitoring requirements. The **financial cost of risk management instruments for governments is contingent upon farmers' contracting of different products and coverage options**. Governments could allocate *ex-post* the budget available for different instruments, depending on farmers' **relative acceptance** and demand. But being insurance and risk management products difficult to sell, the fact that the subsidy to a given premium would be contingent on the final budget available to subsidise it would add a critical complexity factor to farmers. Therefore, governments must provide for flexibility in offering support mechanisms, and would benefit from transferring part of the risks to public or private reinsurance providers.

Insurance cannot be legally offered without charging for adequate provisions, reserves and **reinsurance**. It is often claimed that in agro-insurance, reinsurance needs are large because risks are systemic. However, this is a technical question that depends on whether risks are sufficiently diversified; the extent of risk-pooling; the existence of coinsurance schemes exist, amongst other aspects. A last question relates to the role of the EU in **providing reinsurance jointly with, or independently of, the Member States' participation in national reinsurance regimes**. Based on the immature and disparate stages of development of agro-insurance and mutual funds across MS, it is a possibility that would require significant technical and legal analysis and is not available at the moment. Furthermore, the value added for the EU to engage in any reinsurance scheme for insurance and mutual funds is **unclear**.

To prevent financial defaults and bankruptcy, malpractice and abuses, governments should set up strong **inspection and overseeing agencies**. Farmers must be assured that the products they contract are adequately priced and damage correctly assessed. There is role of governments to complement the agronomic, climatologist and veterinary knowledge of the insurance inspection and regulatory branches of the administration.

The theoretical ground for **targeting** is the different risk exposure according to production, type of farm/farmer or farming area. Presently, different productions or different farming areas (e.g. farming mountain areas) may have and really have different levels of risk exposure and thus this type of targeting makes sense. Despite that, targeting could still make some sense from a political or social point of views to support some types of farms or farmers, granting some extra support to the target farms/farmers that subscribe crop or animal insurance or set up a mutual fund.

A Layering Model of Agricultural Risk Management

Farmers face different kinds of risks that may be summarized as: 1) production risk due to climate variability, animal diseases and plant pests and 2) market risk due to changes in market conditions, including price variations and increasing volatility.

Within these two kinds of risks we may consider **different levels of damages** from the lowest to the highest: non-severe “normal” losses (less than 30% of yield or revenue/income) and severe losses (more than 30% of yield or revenue/income). It could be expected that the size and scope of losses would be negatively correlated i.e. larger losses would affect less farmers. But this is not always the case as, for instance, in some MS the risk of drought can be high and, when a prolonged drought period sets in, the scope can be wide and the number of farmers affected very large (systemic risk). In general terms market risks or severe contagious animal diseases are more systemic than yield risk. For this reason **revenue or income insurances are more risky and less attractive for insurance companies.**

The layering system for agricultural risk management is based on the principle that different levels of risk (layers) should be managed by different actors with different instruments and financing. The most important prerequisite for layer-based risk management system is to ensure the balance and consistency of the whole system through the compatibility between the different layers (i.e. between the different actors involved and the instruments used in each layer) and the consistency with other policy measures to avoid disincentives to the concerned actors for managing the correspondent layer.

The first two layers can be defined as **normal risk** as they should be **managed by farmers**. The **first** of them corresponds to the lowest level of risk and should be managed **on-farm**. The **second layer** corresponds to a higher level of risk and should be managed by producer organizations, cooperatives or other form of collective action. In the case of market risks (low prices or low incomes, resulting increased input prices), the main instrument should be **supply management** (e.g. production withdrawal and private storage). This layer should be considered as a crisis prevention instrument in the hands of Producer Organizations (POs). These first and second layers should be managed privately and without direct public support.

The **third layer** would correspond to higher yield risks and should be managed through **crop insurances or mutual funds**: in the case of non-severe yield losses (less than 30%) without or with public support (State aids), whereas in the case of severe yield losses (more than 30%) with State aids or CAP premium subsidies (Pillar 2) as they would be green box compatible.

The **fourth layer** would correspond to higher **revenue or income risk** and should be managed through insurance, mutual funds, or saving accounts. Non-severe risks (losses of revenue or income lesser than 30%) could be managed through insurance or mutual funds with support of State aids or CAP (not currently available). In the case of severe risks (losses of revenue or income greater than 30%) could be also supported by CAP or State aids, and classified as green box. Saving accounts in both cases would be based on tax benefits and thus financed by Member States.

The **fifth layer** corresponds to highest level of risk i.e. income **crisis** due to production crisis (climate or animal health and plant pests), market crises or both. Crisis often results in severe and massive revenue/income losses for the farmers of a specific sector or region. The crisis should be managed through public intervention and financing as the last resort for the agricultural risk management. It could include in the EU: the crisis reserve; the CAP

safety nets (intervention buying, financed private storage or withdraws); the ad-hoc payments and the veterinary fund. To afford farmers a sound risk management, especially in the third and fourth layers, it is essential to setup clear and transparent rules for EU public intervention in the fifth layer (crisis management).

According to our proposal, layers 1 and 2 (normal risks) should be managed and financed mainly privately by individual farmers or farmers organizations; layers 3 and 4 (marketable risks) should be managed and financed by farmers with public support (private-public partnership); and layer 5 should be managed and financed mainly by public sector (crisis management though *ex-post* interventions).

All the actions and support to crisis and risk management should be considered in a coordinated way under a common comprehensive and coherent framework. However, currently **constraints and barriers** can be identified in each layer, preventing the proper functioning of crisis and risk management mechanisms. The lack of knowledge and professional qualification and insufficient management capacity of farmers, the low investment support and the role of direct payments altering farmers' risk attitude and behaviour against risk, are the main barriers identified to more and effective **on-farm risk management**.

Effective and efficient **crisis prevention** and management tools should be extremely helpful. They would limit the economic and environmental consequences of crises. However current EU regulation does not provide accurate tools to implement effective market crisis **prevention measures as there are impediments to Producers' organisations** (POs) and their associations (APOs) can adjust production to demand in terms of quantity and quality, unless they are explicitly allowed by the Commission and for a limited period of time. Effective rules are needed and possible and preventive action should be explicitly allowed by the CMO and monitored by the competent authorities, in order to avoid any abuse of dominant position.

Until now, the European agricultural policy has enabled means to support instruments to cover production risks through a **flexible framework**, counting on CAP measures or State aids. This framework has permitted developing viable and operational agro-insurance models in some MS, adapted to their characteristics, and responding effectively to their **farmers' demands**. It is thus neither necessary nor advisable to introduce changes in this framework or to propose new mechanisms for risk coverage that entail constraints for, or prevent the correct functioning of the existing models.

However, the increasing exposure of farm holdings to increasing agricultural markets volatility provides a rationale for strengthening the cover mechanisms for market risks. This inevitably belongs in the general debate about the future of the regime of the direct payments, especially the basic payment which is linked to the goal of income support. **While the direct payment regime was not designed to stabilize farmers' income, the payments afford significant stabilization effects despite its complete decoupling with farmers' income drops**. Some arguments rooted on equity and legitimacy questions undermine the logic of the direct payment regime threatening its continuation, especially at the time when a new EU budget will be debated.

Considering, in addition, the unequal distribution among MS, regions, sectors and farm holdings, pressures will grow in the coming years to reform the direct payments regime. In this scenario, the **potential role of instruments to manage market risks gains relevance**. A few aspects should be considered.

Firstly, **the strengthening of the instruments should evolve progressively** from the current CAP measures. It has already been stated that the consideration of market risk management instruments under Pillar 2 should be qualified as a relative success. The eligibility and extension to all sectors for the first time of these programmes is a notably step, but Pillar 2 does not provide the most adequate mechanisms. The support of these instruments should be integrated in the CAP in coordination with the instruments devoted to prevent, manage and mitigate the market crises, within a transparent framework featuring automatic responses among others.

Secondly, the substitution of the current direct payment scheme with support to income stabilization schemes, either through insurances, mutual funds or savings accounts, **should benefit all farmers, instead of only those eligible for the basic direct payment**. This would be a step to further CAP's market orientation, and would stimulate the co-responsibility of risk management of all farm holdings. This should be implemented gradually, beginning with the substitution of all or part of the entitlements to the basic payments with a common menu of options to contract income stabilization tools eligible to all farmers. This scenario splits in **two types of reforms**: a gradual one and radical transformation.

Option A: Gradual reform

Under this scenario, a wide set of options will be implemented for the new tools. It would be a system similar to the one envisioned with Article 68 during the period 2007/2013. Those MS that wish to start implementing income stabilization tools could do on account of, or using part of their direct payments, or else using State aids. This would permit advancing in the right direction, and contrast the efficacy and validity of the instruments.

This also would enable setting up national design and management systems, and avoid the massive and immediate redistribution of European funds. It also has the advantages of taking into account the existence of various models for agro-insurance among MS, and of **the efficiency gains in generating the databases needed to evaluate farms' losses, and the control systems and checks required to combat frauds (asymmetric information)**.

Option B: Radical reform

The starting point of this scenario is the possibility that the EU institute a policy to reduce the 'basic payment'. It should be remarked that 'basic payments are already affected by (internal and external) convergence processes and that a possible EU future 'flat rate' implies, in fact, a decrease of this 'basic payment'. In any case, other 'direct payments' and especially the greening payment will remain under this scenario.

The implementation of income stabilization tools will evolve jointly with the reduction of the payment; the funds resulting from it will form a budget specific for each MS to support a **wide menu of income stabilization tools**, including a national mutual fund to cope with crisis situations. The menu would include different instruments that could be adapted to the characteristics of the risk management models implemented in each MS and, in particular insurances, mutual funds and saving accounts. To this regard, it is important to notice that, as the support to some instruments implies the implementation of fiscal measures, substantial changes on the EU financial rules would be needed. One possibility is to consider an equivalent amount of fiscal and tax measures as national co-financing support (following the current State aid regime where tax measures are recognized as State aids calculating its equivalent amount) and include it, within the framework of the possible co-financing measures.

Initially, only the recipients of the direct payments will be beneficiaries of the tools. However, small farmers could be excluded of the measure as the implementation of risk management instruments requires knowledge and keeping production records and account balances, which are not available or affordable in many cases in small farms. Progressively, as the basic direct payments are phased-out, the tools will become available to other farmers. A variation of this scenario would be issuing each direct payment recipient a '*voucher*' of equal amount to the reduction of the payment. During the period of payments' dismantling, the farmer would use this voucher to subscribe any of the tools included in the menu.

An effective and efficient **crisis management** by the EC requires some elements. The first is the **strengthened of transparency of markets and more statistical information** on the structure of the industry. The second is to dispose of **sufficient and flexible budget** not provided by the current Crisis Reserve, and finally transparent and automatic mechanisms of triggering the EC actions.

Conclusions

- 1) **It is essential that risks be structured in different layers**, based on different levels of severity, systemic nature and along the normal-catastrophic risk axis. This will permit positioning each instrument within the pyramid of layers, and establishing the communication conduits, through which risk can be transferred, shared and pooled. Clarity in defining the layer borders will give a sounder base to the pyramid, enabling the private and public sectors build effective partnerships. It will also pave the way to the private sector to fill and create market niches for offering risk managing tools of value to the producers.
- 2) **The European Union (EU) does not count with a harmonised EU-wide agricultural risk management scheme.** The types and extent to which risk management tools have been adopted differ widely within Member States (MS). Also, the level of coverage and subsidization vary widely from one MS to another with programs down to regional level in some of them.
- 3) Each MS has adopted a specific strategy in combining the financial support options considered in the CAP and prioritising some instruments over others. This responds to the accumulated experience each MS has using some instruments, the culture and traditions among farmers and the competitiveness and innovation of the private sector – banking, insuring and financing – in promoting them. Any possible approach for **a new CAP reform should permit MS to rely on their own systems and instruments, helping MS improve them and broaden them**, and never put at risk the systems that work and have provided valuable services to the farmers.
- 4) It is desirable that **the insurable market risk should be covered by privately provided instruments.** These can be subsidised or offered at market prices by financial institutions or insurance companies. It is expected that insurance companies add covers, policies and reduced deductibles, all charged at market prices, to the guarantees sold at subsidised rates (respectful of the Green box prerequisites). There is ample room for the private sector to innovate and offer guarantees and covers, nested to or in association to other products.
- 5) So far, **CAP 2014-2020 has only defined an Income Stabilization Tool (IST)**, along with the principles of a mutual fund, to provide compensations against income losses beyond 30%. In the upcoming reform, market risks may be also covered and supported with subsidised revenue or income insurance.

- 6) There are significant challenges associated to broadening the covers to include market risks, which in the absence of representative futures and option markets, can only be based on the **individual farmers' accounting records or income indices**.
- 7) **Reinsurance needs can be large and expensive**. Public agency (reinsurance public company or calamities funds) may need to underwrite or assume the most severe crises, catastrophes or systemic risks. There is room to define effective and co-insurance-reinsurance public-private partnerships. The participation of governments with occasional budgetary outlays may be significantly reduced by: (a) generating **sufficiently large stabilisation reserves built up by farmers' directly or via insurance surcharges**; (b) making the contributions compulsory of farmers or insurance companies to stabilisation reserves, reducing significantly adverse selection; and (c) creating sections specific to different sectors or types of risks, within the structure of the reserves, therefore establishing powerful co-insuring and pooling effects.
- 8) Unless the mutual funds and IST build up significant reserves, and even if they do it, **they will need reinsurance services or some other ways to transfer the risks associated to compensations resulting severe from market or sanitary crisis**. It is thus desirable that instruments have the broadest base and attract diverse farmers from different regions. This complicates the management of the instruments, but significantly reduces reinsurance needs.
- 9) Because they offer protection against income losses, **both IST and income insurance represent a significant departure from the experience among MS and pose serious challenges for being implemented**. One particular challenge, that affects existing crop insurance policies, results from the difficulty of enlarging the covers to include **both inputs' and outputs' price variability and ensuring that the robustness of premia calculation, loss adjustment and reinsurance mechanisms is not threatened**.
- 10) In view of the decision to move on offering deeper and broader risk management tools, **there is a need to develop early warning systems for agricultural markets to prevent, manage and cope with market crises**. The new single CMO regulation gives a large margin of manoeuvre to the Commission and therefore provides enough flexibility to potentially respond to any specific and relevant concern.
- 11) **Fiscal and tax measures can also provide some revenue stabilization effect**. If farmers are allowed to average out income during various years, they can reduce the tax receipts, compensating bad with good years. At the opposite, an unbalanced national fiscal system, which for instance is systematically more favourable to investments than to savings, can in good years promote excessive investments and reduce farmers' resilience in bad years.
- 12) There is a significant challenge for many MS and a significant proportion of EU farms to **define robust income or revenue indices**, based on which ISTs and some other revenue or income insurance could be developed. The experience accumulated by the MS is insufficient to draw conclusions about best practice and recommend specific designing principles.
- 13) While ad-hoc payments still represent significant amounts in some MS. And yet, it is desirable that (a) **any insurable risk should never be compensated with ad-hoc payments**; and (b) that eligibility to ad-hoc payments, in case insurance or any other available instrument were not available for farmers, be **conditioned on farmers' previous participation on mutual funds, ISTs or insurance programmes**. This would enhance the co-responsibility and farmers' self-reliance.
- 14) **Producers' organisations (POs) and their associations (APOs) should be allowed to implement effective crisis prevention**. The current Regulation 1308/2013 does not provide timely and adequate tools to implement effective market

crisis prevention measures. The major concerns are related to the effective POs and APOs empowerment to ensure production is adjusted to demand in terms of quantity and quality. Current rules are, in practice, major impediments to implement real crisis prevention to take place.

- 15) The current **crisis reserve** does not achieve effectively its objective. Agricultural markets crises are generally unpredictable, although it can reasonably be expected that they will not be experienced all years. Inside the budget, the Annuality Rule does not provide the required flexibility. Outside the budget, the **saving made one year could be helpful another year of the programming period if needed**.

RECOMMENDATIONS

- 1) There is a lack of common regulation to define the functioning of the new ISTs, agro-insurance and mutual funds. Presently, all these instruments and initiatives are regulated by national legislation, so there is non-negligible possibility that they give rise to mal-practice, indirect subsidisation to the instrument providers or developers, and potentially to market distortions. It is therefore recommended that the **EC should coordinate and harmonise with the formulation of a Recommendation and with regulatory and overseeing national bodies common standards for regulating the use of publicly supported risk management instruments**.
- 2) **A European Agricultural Market Observatory (EAMO) should be created**, taking advantage on one hand of the positive experience of the European Milk Market Observatory and on the other of the agricultural market dashboard regularly published by the Commission. The EAMO should provide up to date relevant market information therefore increasing significantly market transparency.
- 3) **An early warning system should be implemented** with the objective of triggering actions and measures included in the crisis management in an automatic and transparent way. It should be based on objective criteria, taking into account the evolution of imports (and exports) or of market prices as compared with a reference periods. This should be followed by Joint Agreement between the Council, the Commission and the European Parliament negotiated to define how the Commission should act and react when the alert is activated, including the financial rules applicable. The Commission should present regular reports on the functioning of the alert system.
- 4) **Statistical information on the structure of the whole industry is needed**. Until now, even if under budget pressure, there is a regular European agricultural structural survey. But the statistical information on the other actors of the industry is limited. Detail studies and information of the structure of the whole chain are needed for the design of a comprehensive risk management policy.
- 5) **Producers' organisations (and their associations) should be allowed to effectively "ensure production is adjusted to demand, in terms of quantity and quality"** in order to offer reasonable prices to consumers and a fair standard of living to their members. They should be allowed to withdraw production from the market, in a coordinated way and under well determined conditions, to store or to stimulate their members to decrease their production. It is recommended that competent authorities oversee this kind of market responses to ensure that competition is not curtailed and consumers' interests preserved. Checking market prices in real time should help competence authorities oversee prices behaviour and detect excessive market control.
- 6) One way to implement a transition way from CAP 2014-2020 to the subsequent CAP, in the event that it is decided to reduce direct payments and use the released part to finance income stabilisation tools or revenue insurance, would be **to grant farmers vouchers that could be used for contracting risk management instruments**

(mutual funds, ISTs, Insurance). Each farmer's direct payments will be reduced by a given percentage, which will be given to the farmer in the form of a voucher to be used in selected and approved risks management tools. However, this deserves further consideration and analysis to be applicable in practical terms and solutions.

- 7) A **crisis reserve outside the budget** (as proposed by the Commission and supported by the European Parliament) should be implemented in order to be able to face unexpected events. This should be done in the next financial perspectives or, even better, in the mid-term review of the current one.
- 8) **Member States should be obliged to communicate their fiscal and tax provisions** and adjustments on a regular basis to the Commission which should publish a summary with European reports of the reported measures and provisions. It is also recommended that the Commission should organize an exchange of information, experiences and best fiscal practices amongst the Member States, adopting Recommendations with this aim. This could pave the way for taking account of fiscal and tax provisions and fulfilling the co-financing requirements of MS.
- 9) The EC should put out tenders to **evaluate the efficacy, functioning and penetration of the instruments implemented by MS** in the 2007-2013 and 2014-2020 periods. These studies should permit broadening the experiences and help MS, and the EC, EP and Council, get a sense of what works better and how can the existing instruments be improved.
- 10) **Capacity building and training programmes**, including some professional qualifications for carrying out risks assessments, should be considered **specifically in the Rural Development Programmes of Pillar 2 and in the programmes supported by the European Social Fund**, with a view to strengthen the qualifications and capacity of farmers in the field of risks management.
- 11) All measures devoted to risk and crisis management should be defined with an **integrated and coordinated manner, under a coherent framework within CAP**.

1 INTRODUCTION: SCOPE AND OBJECTIVES

When the new Common Agricultural Policy (CAP) was being negotiated, there was wide consensus in the academic and political environments that EU agriculture would need to face unknown levels of uncertainties in all relevant fronts. While discussions about the need to create new instruments and strengthen those already available had initiated with the 2001 Communication of the Commission on Risk Management (European Commission, 2001), it was not until the 2008 Midterm reform when the Commission substantiated the policy goal with specific measures and approaches.

As this report will clearly show, the CAP 2014-2020 has inaugurated a new era in the EU for developing and implementing alternative risk management tools, each receiving a somewhat similar level of support. However, **each Member State (MS) has perceived differently the risks their farmers must cope with**, and taken a different approach to support them or rely on solutions offered in the market place. Therefore, CAP 2014-2020 had to strike a balance between pursuing common policy goals and means of delivery and support, and allowing each MS to keep what it works and develop their own systems.

On top of it, of course, CAP retained some discretionary manoeuvrability in managing market measures and cope with unexpected crises. By imposing the three-crop diversification scheme to be eligible to the green payment, it may have stimulated farmers to diversify their income, although most medium- and large-farms were already following three or more crops rotations.

In terms of the sanitary risks for plants and animals, it is clear that the risks for all EU farmers have increased because border controls cannot prevent EU agriculture from receiving weeds, pests, vectors, pathogens, or viruses from other regions. Many of them develop quick resistance to treatments, while Thematic Strategy on the Sustainable use of Pesticides (COM(2006) 372 final) and the EC Regulation 1107/2009 which regulates the approval of active substances and plant protection products, makes increasingly more difficult approve new products.

EU project Income Stabilisation made clear that **EU farms risk exposure differs widely across MS and types of farms** (Meuwissen et al., 2008). In general, strongly capitalized animal farms have the largest relative risk exposure, whereas less productive farms relying on rainfed systems are the least risk exposed. Furthermore, and by way of illustrating the **differences, the level of tolerance and risk perception of "extreme" market volatility implies** price changes above 25% from week to week to fresh tomato producers, 20% for dairy farmers, and 10% for wheat growers (Assefa et al., 2016). Strategies vary significantly across sectors too: farmers tend focus on survival strategies, through output and cost reduction; wholesalers and processors focus on adaptive strategies to stabilise margins, and retailers care to secure a continuous supply of quality produce for their customers (*ibid.*).

It is thus clear that EU agriculture encompasses a wide variability of farms, farmers, sectors, natural conditions and national/regional governments, which interact with CAP approaches and regulations. In the light of the above, it is worth asking in 2016 which risk management mechanisms should form part of the CAP model as from 2017 (under a possible Mid-Term Review) or 2020 (after the end of the current Multiannual Framework 2014/2020).

The **purpose of this study** is to review the implementing arrangements adopted by the Member States with regard to the risk management provisions of Regulation (EU) No 1305/2013, which were submitted to the Commission in 2014.

Specifically the **goals** are:

- 1) To develop a general overview of the state of play of risk management in 2014/2020 Rural Development Programmes submitted by Member States (or Regions);
- 2) To examine similarities and differences in risk management tools implemented in order to gain a better understanding of their scope, their design, their limits and their potential efficiency.
- 3) To suggest future CAP developments related to risk management in order to deal more effectively with income uncertainties and market volatility.

The approach of the study is described together with the structure of the report, which consists of six chapters, including the introductory one.

Chapter 2 first proposes a mapping of main risk management instruments according to 15 different factors, and then reviews with some detail the following: Insurances, Mutual Funds, Saving Accounts, Ad-Hoc payments, and Fiscal measures. A final section of the chapter is devoted to review the role and challenges of reinsurance needs and approaches to support some instruments.

Chapter 3 first analyses the rules of the World Trade Organisation (WTO), reviewing the conditions that support measures must fulfil to be considered 'green box'. This is followed by two sections offering first a "Historical vision: The institutional framework before 2014" and then the new institutional framework to support agricultural risk management.

Chapter 4 compiles detailed information about the implementation of risk management tools by Member States, both for the period 2007-2013 and 2014-2020. This chapter has an accompanying collection of fiches for those MS from which information could be collected and analysed (Annex).

Chapter 5 synthesizes the contents of the previous chapters, and develops some perspectives for supporting risk management in agriculture. The chapter then focuses on some topics that impinge of the perspectives, looking at the role and rationale of public policy; the needs of regulation; the financial support of various instruments; reinsurance needs; overseeing and monitoring; a model of risk layering; barriers to develop effective on-farm risk management; the relevance of an effective and efficient crisis prevention; perspectives for risk management tools in EU, options for targeting of risk management instruments; the challenges for a proper and predictable crisis management role for the EC and lastly, policy consistency.

Chapter 6 includes conclusions and recommendations.

The document has also an Annex with an accompanying collection of fiches for those MS from which information could be collected and analysed.

2 RISK MANAGEMENT INSTRUMENTS

KEY FINDINGS

- Among the considered instruments in the CAP 2014-2020, each has its own characteristics, potential effects and regulatory needs.
- Some instruments may require public reinsurance support, but with time and counting on sufficiently large stabilisation reserves, instruments may not need public reinsurance.
- There is a need to coordinate and perhaps harmonise the national regulatory framework of the new instruments.
- **The Income Stabilization Tool (IST) requires that farms' income be measured, either directly through tax and accounting records or through indices. Generally, EU agriculture is not ready to develop IST based on direct farms' income measures.**
- Reinsurance needs have not been assessed, but the wider and broader the risks and geographical scope of a given instrument, the lower the reinsurance cost per unit of risk exposure and risk premium.

2.1 Mapping risk management instruments

As any other business activity, farming is a risky activity. Farmers are aware of this and are accustomed to retaining and managing part of their risks. Farming involves continuous decisions under uncertainty, with the final goal of maximizing profits and trying to make a living from it. While it is theoretically possible to build a risk assessment model that considers all sources of risk and their correlations for a given farm, very few farmers conduct formal risk assessments and revise their risk exposure and profile. Such tasks require professional skills, advanced numerical literacy and abundant data. Even if these conditions are met, and proper risk assessments are performed, there exists the possibility that an unexpected event with large negative consequences may occur.

There are risks that are idiosyncratic to the farm, while others are specifically related to the grown crops, raised animals, specific geographical location and specific markets where relevant prices are formed. Enabling farmers manage efficiently their risks enables them to make right investment choices and produce the commodities for which they have some comparative advantage.

European farmers now have seen significant growth and broadening of the types of risk management instruments at their disposal. It is thus useful to define instruments along **various designing features:**

- i. Provide protection against named perils **vs** against crop yield variations or **general farms' income losses**
- ii. Involve risk transfer or risk-sharing schemes, or both
- iii. Provide limited coverage or unlimited coverage to extreme losses
- iv. Include scalable covers or single covers
- v. Require public reinsurance or private reinsurance, or mixed arrangements
- vi. Permit horizontal risk pooling or just income flow smoothing based on individual accounts
- vii. Incorporate market risks or just production risks
- viii. Require measuring yield or production losses onsite or just indices
- ix. Require actuarial and statistical analyses or can be developed without long and detailed databases

- x. Permit risk-layering and segmenting or not
- xi. Require a large amount of subscribers/users to benefit from risk pooling or can be developed on an individual and piecemeal process

In **Table 1**, all families of instruments considered within CAP or potentially used by Member States are defined based on several policies, agricultural and farms type features. In next sections, each instrument is presented with more detail, identifying its intrinsic difficulties and potential benefits.

Table 1. Conceptual framework for defining risk management tools

	Crop Insurance	Revenue Insurance	Mutual Funds	Ad-hoc payments	Savings accounts	Fiscal / Tax measures
1. Subsidies						
• To farmer	Indirectly	Indirectly	Yes	Yes	Yes	Yes
• To intermediary	Yes	Yes	Yes	No	No	No
2. Role of National Governments						
• Instrument provider	Partially	Partially	No	Yes	No	Yes
• Reinsurance	Yes	Yes	No	No	No	No
• Regulatory	Yes	Yes	Yes	Yes	Yes	Yes
• Last-resort reinsurer	Yes	Yes	No	Yes	No	No
3. Role of European Commission						
• Active provider	No	No	No	No	No	No
• Reinsurance	No	No	No	No	No	No
• Regulatory	Yes	Yes	Yes	Yes	No	No
• Last-resort reinsurer	Possible	Possible	Possible	Yes, catast	No	No
4. Role of Private Sector						
• Instrument developer	Yes	Yes	Yes	No	Yes	No
• Instrument provider	Yes	Yes	Yes	No	Yes	No
• Risk-transferring	Yes	Yes	Weak	No	No	No
5. Implementation difficulty	Strong	Very strong	Moderate	Low	Low	Low
6. Covers extreme losses?	Potentially	Potentially	Unlikely		No	No
7. Market distortive	Weak	Weak	No		No	No
8. Compatible with:	Savings accounts Mutual Funds Tax Futures...	Tax Futures...	Insurance	Insurance	Insurance	
9. Facility to harmonise within the EU	Yes	Potentially	Potentially	Potentially	Difficult	Difficult
10. WTO compatible	Yes, with restrictions	Yes, with restrictions	Yes, with restrictions	Yes, with restrictions	Yes	Yes
11. Sector-specific	Yes	Yes	Possibly	No	No	No
12. Region-specific	Yes	Yes	Yes	No	No	No
13. Farmer Types specific	Yes	Yes	Yes	No	No	Yes
14. Farmers' understanding	Strong	Weak	Weak	Strong	Very strong	Strong
15. Asymmetric information	Strong	Strong	Moderate	Moderate	No	Moderate

Source: Own elaboration

2.2 Main instruments: Insurances, Mutual Funds, Saving Accounts, Ad-Hoc payments, Fiscal measures

2.2.1 Insurances

An insurance policy is based on a contract in which an insurer (farmer) pays a premium and receives compensation against losses caused by specific risks from an insurance company. In order to make premiums affordable, the insurance company has to be able to compensate risk through pooling farmers with different risk profiles. But properly priced premium should be based on the expected damages of the individual farmer. Insurance allows farmers to transfer part of their farm risks to a third party.

Some conditions have to be met for a risk to be insurable: (a) independence across insured individuals and covered risks; (b) losses should not be catastrophic or so huge that any company could not afford the indemnities; (c) losses must be measurable, and accidental or unintentional; and, (d) premiums should be affordable (OECD, 2011). Some of these conditions are required to combat the problems of asymmetric information: adverse selection (only high-risk farmers buy an insurance) or moral hazard (taking into account on the protection insurance provides, farmers may reduce their effort to avoid the damage). Companies must develop techniques and strategies to mitigate such behaviours, but the history of agro-insurance shows it is not easy.

The most extended type of insurance is the single peril crop insurance that covers specific risk, mainly hail or frost. This type of insurance has fewer problems of moral hazard or adverse selection. Crop yield insurance covers all yield risk but faces larger development difficulties because of larger information asymmetries, systemic nature (i.e. many farmers may be affected at the same time) and transaction costs (Bielza et al, 2008; OECD, 2011).

Crop-insurance has been developed and implemented following various **formats**:

- Requiring onsite assessments, based on zonal yields or on indices
- Covering losses at plot level or for the entire farm (compensating bad with good results of the different plots)
- With and without deductibles, or minimum indemnifiable losses
- With single-, multi-peril covers or covering yields losses caused by any climate hazard
- Compensating quality and quantity losses or just reduced physical yields

Income and revenue insurances are less developed, except in the US and Canada, but they have attracted increasing attention in the last years. As with yield insurances, the development of commercial insurances covering production and price risks is constrained by the systemic nature of market risks, especially the existence of decreasing trends of prices.

Due to the negative correlation between prices and quantities (higher yield and production usually drive to lower prices), revenue insurance may be useful when both risks are high. An additional advantage of this correlation is that these insurances may be more cost effective than yield insurance. But the correlation between prices and production may also be positive, if depressed local production cannot influence the global price level. It can also be erratic due to regional specificities not taken into account by the market, financial bubbles and crises (disconnection between prices and fundamental production) as well as global trends (stocks, which are retained production). For this reason, insurers need to have a precise understanding of yield and price-setting. Because yields and prices are linked, insurers have to understand the price-elasticity of each production to set up their

premiums. They also need to observe future selling prices on the markets in order to anticipate future effective prices. Another reason that would tend to reduce premiums for income/revenue insurances is that in most cases farmers cultivate several crops and/or breed several animals (and they even have various occupations outside the farm). According to financial theory, a "portfolio" of activities mechanically leads to a reduction in risks borne by the farmer: decreasing revenue in one activity may be compensated by increasing revenue in another activity. Again, this diversification should lead to smaller premiums than considering separate insurance policies for each production (Bielza and Garrido, 2009).

Among **insurances covering market risks** (production and price risks simultaneously), the following can be distinguished:

- **Revenue insurance:** it hedges the expected value of sales (expected yield and price). An indemnity is paid if the effective revenue (computed as the product of a sold quantity by its price) falls below a guaranteed threshold, either due to a drop of yield or of price. The sources of risk are basically climatic and the evolution of price depends on world markets between harvest and planting time.
- **Income or Margin insurance:** it covers against drops of income or margins (computed as the value of revenue minus operating expenses). Article 39 of Regulation (EU) No 1305/2013 proposes the following definition: "*Income (...) shall refer to the sum of revenues the farmer receives from the market, including any form of public support, deducting input costs*". Such definition of income may be similar to a gross margin. These insurances are more difficult to design because of the additional uncertainty on operating expenses. Moreover, information asymmetries may be exacerbated, as revenues and incomes depend on farm management.

The introduction of revenue/income insurance presents immediate **advantages** compared with crop insurances:

- Income/revenue insurance may appear more attractive for farmers because it protects the whole farm income/revenue while current crop insurance policies only hedge specific commodities and livestock. It affords better protection against yield and price risks than insurance contracts devoted to separate crops because it takes into account an intra-farm diversification. Consequently, income/revenue insurance takes into account a 'natural' pooling effect of yields among the farm productions, which has some implication in the computation of premiums. However, by definition, this hedging tool does not take into account off-farm diversification (e.g. other sources of income), which are more related to the farmer's behaviour.
- Risk pooling within each farm and among farmers is also supposed to diversify the portfolio of the insurance companies by eliminating the individual risk associated to each producer. At an aggregated scale, income pooling in the insurers' portfolio may also reduce inequalities among farmers (Finger and El Benni, 2014).
- From a public policy perspective, revenue/income insurance has the capacity to replace previously used stabilization tools that are progressively disappearing. This is particularly the case of price stabilization tools such as quotas, direct payments or agricultural input subsidies. A rapid introduction of such contracts may provide a substitute to these previous supports. However, as US and Canada examples show (compared to EU), insurance policies can be more difficult to implement inside a system of multilevel governance (EU/MS/regions), notably due to financial issues.

As underlined by Cordier (2014), the design of insurance policies requires precise data. Cutting edge insurance schemes that have been developed over years in some MS (France, Italy, and Spain) pave the way to future improvements, because insurers have already collected some precise information from farmers already insured. Launching

income/revenue insurance will be possible if insurers move a step beyond. In particular, they have to obtain more precise data from their customers such as their effective income/revenue and gather information related to the correlation of losses among produces. Insurers also have to merge these individual yield data with global price trends to deal with global uncertainty. In that context, methods applied for "big data" processing will allow to target precise premiums and indemnities.

The implementation of income insurance presents important challenges that are shared by other instruments (including mutual funds).

2.2.2 Mutual Funds

Traditional mutual funds are based on the establishment of financial reserves, built up through **participants' contributions, which can be withdrawn by members in the event of** severe income losses, according to predefined rules. The basic idea, common to the principle of insurance, is to spread the risk within a pool of members, with the additional effect that, by long-term commitments, mutual funds may also provide effective risk pooling also over time.

To all intents and purposes, a mutual fund can be seen as a form of organized, joint precautionary savings fund to be used to smooth incomes over time. As compared to traditional insurance in agriculture, the scope for moral hazard is strongly limited by the nature of the mutual agreement, where the participating group is bounded by a principle of solidarity, and by the long-term nature of the commitment. The shared knowledge of individual exposure to risk of participating farmers, on the other hand, would mitigate adverse selection problems.

The establishment of mutual funds can be encouraged by **different kinds of public support**, among them: i) contribution to start-up capital; ii) governmental allowances to annual contributions to the fund; iii) compensation of payments made to farmers; iv) fiscal incentives to the deposits of funds. Similar problems regarding the support to the start-up capital or to the compensations made to farmers, present in the saving account, can be mentioned also here. If the support is made through the compensations triggered in case of losses, some uncertainties with regard to the size and timing of spending emerge as not only the number of possible beneficiaries is unknown but also the probability of occurrence of the adverse event.

Instead, if the support is made through proportional and annual allowances to the fund, then large amounts of capital can be immobilized if the adverse event does not occur and flexible conditions of withdrawal are not implemented.

However, in the EU the support to mutual funds both for adverse climatic events, animal and plant diseases, pest infestations and environmental incidents or income stabilization tool is **limited to the administrative cost of setting up mutual funds and the amounts paid as financial contributions to farmers**, specifying that no contributions by public fund shall be made to initial capital stock⁶. According to this, as part of the support will be done after the loss has occurred, limits or conditions have to be established in order to control the public expenditure.

The effectiveness of a mutual fund depends on the accumulation of sufficient reserves on which farmers can count in case of losses. The funds can be provided by savings in the years in which farm returns are higher.

⁶ Articles 38 and 39 of Regulation (EU) No 1305/2013

However, reliance on the fund's capital could be hindered by the systemic character of the risk, especially if this option must be seen as an instrument to reduce the need of ad hoc disaster assistance. When severe and diffused damages are caused by adverse climatic events, a large number of members of the mutual fund would be hurt, especially if the scope of the fund is limited to the producer of a given product or to those residing in a given region. The systemic character of risks can be particularly problematic at the **beginning of a mutual fund's activity, when the built up capital can be insufficient to cover losses incurred by many participants at once.** One possible solution to this problem can be publicly provided reinsurance offered by a Member States, particularly at the beginning of the fund activities. **Reinsurance could cover losses in excess of the fund's accumulated capital, so that, with the growth of the fund's capital, reinsurance coverage might be gradually reduced.** No reinsurance would be necessary when the capital fund has reached the maximum level.

In addition to using internal reserves, a mutual fund could access credit in case of **necessity. To the extent that the fund's members are able to jointly provide higher guarantee to the lending institution, mutual funds could contribute to increase access to and reducing the cost of credit relative to what individual member could achieve.**

In the discussion so far, the hypothesis has been made that the fund fully retains the **exposure to risk. However, the possibility of transferring part of the fund's risk exposure to others might greatly increase the risk management potential of mutual funds, especially in the context of natural disaster risk management, when the potentially large intensity of the damage is associated to the systemic nature of the risk.** The transfer of risk, as usual, might be achieved either by insurance or by securitization, for which the presence of **mutual funds might grant sizeable advantages relative to individual farmers' action.**

The fund might buy commercial insurance coverage against the risks that are more likely to threaten a large number of its members. Compared to individually contracted coverage, a mutual fund would have greater bargaining power when facing the insurance companies (thus contributing to the reduction of some of the distributional inefficiency linked to presence of insurance subsidies we mentioned in the previous section) and, by internalizing monitoring costs, it could sensibly lower the premiums by, for example, accepting higher deductibles.

Another potential form of transferring the fund's risk is **securitization of the fund's exposure** through specific contracts that could be sold on the over-the-counter markets for financial derivatives, much in the tradition of the already mentioned CAT-bonds. While the potential for farmers to use financial markets to hedge their risk is very high, currently the most relevant obstacles appear to be the minimum size needed to efficiently access such markets and the professional skills required to profitably exploit them. Acquisition of the professional abilities required to operate on the financial markets is probably beyond a **single farmer's ability, and their risk exposure might not be sufficient to justify securitization.** In this sense, mutuality might be a very effective mean to justify both the acquisition of the required professional services and to reach the critical dimension needed for securitization.

Sectoral and/or regional mutual funds could play a fundamental role in collecting individual member's risks, packaging and placing them on the wider financial market by means of insurance companies, brokers and other intermediaries. In this respect, other **forms of public support to farmers' organizations** with the objective of increasing their hedging ability beyond that allowed for by traditional instruments, such as forward and futures contracts, might be highly beneficial. They might take the form of:

- Creation of the institutional setting **necessary for farmers’ organizations to operate** on the financial markets;
- Financial contribution toward the creation of risk management units within existing **or newly formed producers’ associations; and**
- Provision of required training opportunities.

A major problem for the institution of mutual funds could be the lack of sufficient incentives **to induce farmer’s participation, especially where tradition and experiences of mutuality are** poor. These tools have to rely on trust among their members. Trust can be considered as an externality produced by long-term relationships between members of a Community. Nevertheless, incentives might be needed to motivate farmers in depositing funds in the mutual fund rather than in personal savings account. The risk sharing character of the mutual fund might not be a sufficient incentive, even if partially enhanced by public reinsurance. A more effective incentive could be provided by a premium on the interest rates earned on deposits made in the fund.

Mutuals have some tradition in The Netherlands since the 1990s, mainly related with extreme weather events and animal diseases and their experience can be useful to establish the challenges of their implementation in the EU, in special to identify the factors that explain the farmer's participation. Meuwissen et al. (2013) identify as a common problem for the success of the mutual funds the difficulties to attract a critical mass of members, and the importance of non-financial issues to explain that. The low perception of risk, partially explained by the existence of government risk prevention program, and the lack of trust in the financial robustness of the mutual funds are identified as important in determining their success in The Netherlands.

One difference between mutual funds and insurance is that, while mutual funds group farmers according their production and region, insurance are managed by governments or insurers and addressed to all kinds of farmers.

In this line, it is worth mentioning the **French FMSE (*Fonds national agricole de Mutualisation Sanitaire et Environnementale*)**, which is the only official French mutual fund that aims at providing compensation to farmers affected by environmental and sanitary crises, mainly animal diseases and plant pests. Its creation was made possible after changes in EU regulation regarding mutual funds and the compensation of sanitary losses in agriculture. The FMSE has a common section to all farmers and sector-specific sections, and therefore permits targeting risks that are specific of a given sector with account sections that are built by contributions from specialized farmers. Interestingly, up to 65% of compensation expenses may be refunded by the French government (25%) and by the EU (75%) following current regulations. Participating in FMSE is compulsory, which permits a broad risk pooling and avoids adverse selection effects, and as a consequence permits to reducing premiums (see **Box 1**).

Box 1. French mutual fund for health and environmental risks in agriculture (FMSE)

FMSE (*Fonds national agricole de Mutualisation Sanitaire et Environnementale*) is the only official French mutual fund that aims at providing compensation to farmers affected by environmental and sanitary crises, mainly animal diseases and plant pests. Its creation was made possible after changes in EU regulation regarding mutual funds and the compensation of sanitary losses in agriculture.

Adhesion to the **FMSE is compulsory for all farms involved in agricultural productions** (cattle, animal breeding, milking, beekeeping, crops), which allows for a maximum pooling among farmers and avoids any information asymmetries. However, some activities such as farm work, forestry, aquaculture, horseback riding, pets breeding, hunting and fishing are not concerned by the FMSE.

FMSE is structured into "sections":

- A section common to all farmers. This section compensates general or emerging losses that do not concern a sectorial section. It can also contribute to the financing of specialized sections.
- Several specialized sections for some production sectors. These sections cover risks associated to their specific production, and provide compensation to affected farmers. Each section manages its own budget so as to compensate its own subscribers. It also prescribes requirements specifications to fight against diseases, reduce their occurrence and optimize recovery.

Risks that may be covered by FMSE include:

- Disease risks referred to in official EU lists: Council Decision 2000/29/EC on protective measures against the introduction into the Community of organisms harmful to plants and Council Decision 2009/470/CE on expenditure in the veterinary field.
- Environmental risks resulting from contaminations, accidental releases of pollutants, fires.

It is funded firstly by farmers following these rules:

- **All farmers have to pay 20 euros a year, this amount being levied by the 'Mutualité Sociale Agricole' in charge of farmers' social security.**
- Specialized sections raise additional contributions according to the farm size and specialization.

Then, up to 65% of compensation expenses may be refunded by the French government (25%) and by the EU (75%) following current regulations. In practice, these amounts are granted by FNGRA.

The compulsory participation into FMSE allows a wide pooling, which avoids adverse selection effects and permits to reduce premiums paid by all farmers.

2.2.3 Saving Accounts

Saving accounts can complement insurance, and they may be even considered as an alternative (Ramirez and Colson, 2013). The principle is the following: a farmer can bear by himself all or part of his risk using precautionary savings. Each year, farmers can make a deposit (part of their annual income) on a special account, which provides interest payments. In case of need, deposits, part or totally, can be withdrawn. Saving accounts are a risk management tool based in the risk compensation (offset) along time, not among farms or farmers.

In order to encourage the establishment of saving accounts, **some public support can be envisaged**: i) tax exemptions upon withdrawal; ii) subsidize savings by increasing interest rates; iii) governmental contributions to the deposits; iv) compensation of payments or withdrawals caused by production or income losses.

There is a controversial issue arising from the option that the governmental contribution is made at the time of making the deposit or else when the compensations are triggered. In the first case, farmers know in advance the governmental contribution each year and may take decisions in more efficient way but if the withdrawal conditions are not flexible, large amounts of capital may remain in the accounts, lessening its role as stabilization income tool. In this case also, conditions related with the maximum supported contribution each year are needed. If instead the governmental contribution is made at the time of compensation of losses, then the uncertainties about the amount and timing of public spending increase, decreasing also the incentives to the participation.

Other challenges arise concerning the financial cost of the support. Because farm revenues may be volatile, individual savings may be volatile and therefore the governmental costs may vary over years.

Also, there is a need to include savings in the general framework of risk management. Because insurance premiums and precautionary savings may be in competition at the farm scale, there is a need to define these strategies as complements in case of a disaster. An option would be to reserve precautionary savings to hedging small losses and insurance to hedging of high losses. In all cases, the issue of compulsory payments has to be discussed, especially for farms planning investments or for those facing difficulties.

The encouragement of precautionary savings deserves special attention. At the moment, an experiment exists in some MS (e.g. France), but it is not popular due to its rigid characteristics (not compulsory, limited flexibility), to the existence of alternatives and the non-integration with traditional crop insurance.

One of the **main advantages** of savings accounts is that funds are kept by farmers and not transferred to an insurance company which delivers an indemnity only if some conditions are fulfilled. This argument may incite farmers to use such instrument, especially if they estimate the cost of insurance too high compared to potential benefits. It can also replace insurance policies when conditions for insurability are not met (specific markets, difficulties to compute a premium, correlation of losses). Saving accounts encourage a long-term vision of risk management compared to insurance policies which have to be renewed each year.

The mechanism of savings accounts provides a solution towards information asymmetries, **especially moral hazard. Indeed, in case of emergency, unlocked funds are the farmer's** ones. A farmer is therefore strongly stimulated to take care of his farm so as to avoid any additional cost related to a disaster because he is risking his own money. But farmers at-risk may not choose this way of risk hedging unless it is compulsory. This can be done in practice by forcing farmers to have specific savings when they insure their crops or when they contract a loan. Special attention must be given to young and newly installed farmers as well as old (retiring) farmers, whose production trajectories and financial situations are different from other farmers.

If the government decides to force farmers to put money aside, the problem to assess is whether a farm has enough income to do so, or if he can afford it by modifying his cost of production structure. Such savings systems must not add risk to traditional operating risks. The annual payments by the farmer must also take into account the riskiness of his

business, i.e. the potential dispersion of losses and the occurrence of such risk. All things being equal, farmers at-risk need to save more money than farmers less risky.

Withdrawal conditions and balance limits

The trigger of the withdrawal of funds can be similar to those of income insurance policies and in accordance with the **Green Box WTO requirements**. This requires establishing a threshold for income drop superior to 30% of the average annual income of the previous three years and payments compensations for less than 70% of the income loss. This design provides a hedge against severe drop in incomes but it can diminish the attractiveness of the programme as the probability of occurrence is small and the need to unlock own capital will not be perceived.

Another possibility is considering the support of saving accounts to hedge against small income losses complemented with other instruments implemented to cover major drops. In this case, some flexibility of the conditions of withdrawal is needed, even if they do not comply with the Green Box WTO requirements.

In order to avoid large amounts of capital held in the funds, contributions may be blocked if the funds reach a ceiling. Or else mandatory withdrawals can be established once the balance reach determined levels or be enough to cover at most one year maximal loss. Conditions to force the funds to be used in case of necessity may be also fixed.

Saving accounts have been supported in **Canada** for many years and are conceived as cost-shared programmes between federal and provincial governments. Under the Growing Forward 2 framework in force until 2018, the AgrInvest programme provides protection against small margin declines since it is intended to cover fluctuations between 85% to 100% of reference margins. It works as an individual account where the individual participations are limited each year to 1.5 % of the Allowable Net Sales (ANS), receiving the same amount from the government. For purpose of the programme there are limits on the total ANS, limiting in this way the governmental contributions. There are also limits on the account balance that can be held in order to avoid large amounts of capital be **immobilized. Producers' deposits are exempt of taxes** upon withdrawal. The last programme has increased the flexibility of withdrawals and there are not triggers required to access the funds, they can be made at any time and used also to support on-farm investments (Antón et al., 2011).

2.2.4 Fiscal/tax measures

Fiscal and tax measures can also provide some revenue stabilization effect. If farmers are allowed to average out income during various years, they can reduce the tax receipts and compensating bad with good years. Taxes can also be reduced for farms that are hit by climatic hazards, and market and sanitary taxes.

In France, agricultural taxation offers farmers an alternative way to overcome the consequences of variations in incomes and yields. *'Dotation pour Aléas'* (DPA) is a mechanism that allows farmers to manage a precautionary savings account mainly usable to manage low-level risks. In practice, farmers set aside a tax-deductible part of their revenues. A maximum ceiling of 27,000 euros/year and 150,000 maximum was introduced in 2012. Saved amounts are capitalized over time and they can be used during the next 7 years after they have been put apart to smooth the farm's revenue. Farmers can also use DPA to pay for their crop insurance premiums or to book damage waiver. Some restrictions of DPA, mainly its low flexibility, have made its use not popular among farmers despite many reforms.

To the extent that fiscal/tax measures involve reduced tax receipts, they should be accounted as a government-supported measure involving indirect subsidies. Presently, these measures are neither considered under WTO disciplines nor the **EU State aids regime**.

2.2.5 Ad-Hoc payments

By definition, ad-hoc payments provide farmers some economic relief after suffering severe losses. In general, most Member States have some provisions to provide ad-hoc payments under catastrophes.

Most of the times, ad-hoc payments serve the purpose of helping farmers rebuild their lost **capital (buildings, roads, machinery, tree plantations...)** or the herds, when available insurance could not provide coverage for the suffered losses. Ad-hoc payments have been substituted with privileged loans, tax exemptions, or reduced social security contributions. The EU has very strict intervention rules to provide Member States funding for ad-hoc payments under catastrophes (Bielza et al., 2008). Difficulties to correctly assessing **farmers' income and revenues**

2.3 Difficulties to correctly assessing farmers' income and revenues

A main difficulty for revenue/income insurance and stabilisation tools in general is measuring the expected/guaranteed and actual revenue/income. This can be made at regional level (county level as in the US with the margin and revenue protection programme) or at farm level.

If the assessment is made at regional level, the problem of moral hazard can be minimized. However, a farm can be exposed to idiosyncratic yield damage that does not coincide with drop in the regional incomes or margins. In this case, an additional coverage with an individual revenue or crop protection should be needed.

At farm level, the expected income can be calculated from historical farm data. While expected yields may be based on historical trends (such information exists in MS where yield insurance has been developed over time), the expected costs need crop budgets. Prices can hardly be predicted and the estimations usually are taken from relevant future markets. The establishment of actual income depends on a great measure on data provided by the farmer⁷. In this situation, information asymmetries may be relevant because the farmer may decide the level of information he is willing to reveal to the insurer, considering that this information may change over time. For instance, crop rotation is an annual decision which may evolve according to the selling prices. The farmer may also be willing to influence the reference revenue or income using variations in inventories or accounting figures such as amortizations.

Use of indices

Lack of data to compute farm losses can be solved through the use of indices. Article 37 of Regulation (EU) No 1305/2013, devoted to the support of crop insurances, opens the possibility of using indexes to measure the extent of loss, and specifically biological indexes (quantity of biomass loss) or equivalent yield loss indexes established at farm, local, regional or national level, or weather indexes (including quantity of rainfall and temperature) established at local, regional or national level. In Article 38, regarding mutual funds, also envisages the use of indices to calculate the annual productions of the farmer.

⁷ Problems related with income data, in particular with the lack of high quality information from each individual farm and on whole-farm income instability are also signaled by Hill and Bradley (2015).

The method of measurement must also comply with the WTO requirements. In this regard, paragraph 8 of Annex 2 of the WTO Agreement on Agriculture establishes that public support can be used **only to compensate for the actual loss of an individual farmer**. Therefore, index-based systems may qualify as WTO green-box compatible only if the index reflects an adequate and satisfying proxy of the actual individual production losses and it is not linked to market trends.

Indices permit loss assessment using a common index for a given area, to set up triggers and indemnities according to the losses suffered against the reference index. It provides a cheaper alternative to farm and field assessments. They are useful for systemic risk and are well suited for homogeneous areas.

The archetype of instruments disconnected from individual farm yields and prices is area-yield insurance, which relies on an aggregated index, which cannot be influenced by any farmer. The farmer only declares acreage (surface and production) so as to pay a premium and receive an indemnity if the area index falls below a given threshold. The same principle applies for area-income insurance. The main challenge is to connect the potential indemnity to the effective damage so as to limit any basis risk. At the moment, index insurance is not developed in the EU, mainly because of the heterogeneity of productions and climates. In these conditions, creating a crop index common to farmers of a same region appears difficult. Also, no overcompensation is admitted by the current EU regulation and this possibility may not be completely ruled out using indexes.

Because decoupled EU payments are based on an objective measure as acreage, it may be possible to subsidize insurance policies in the same way. This would avoid distortions in the WTO sense (see above). However, the subsidization should be associated to the subscription of insurance for the considered area as well as a close monitoring of the correlation between acreage and losses.

The design of the index should also take into account both absolute and relative losses. For instance, a climatic event may lead to the destruction of all the production (e.g. case of fruit production). In that case, the harvest is lost and the farmer needs immediate compensation. In the case production is not completely destroyed, a farmer can sell the remaining part of his production and receive a compensation. In case the activity can be restarted again during the season (e.g. case of livestock) the farmer should receive a compensation only for the duration of the business interruption. This amount could include interest expenses that a farmer cannot afford without any sales.

Production Costs with the French 'Contratsocle' (basic insurance)

The '*contrat socle*' is a kind of baseline crop insurance recently launched in France (see **Box 2**). In order to evaluate the minimum cover, which seeks to compensate farmers for the production cost of the last production (as opposed to market value, which is regularly compensated with standard insurance), a scoring grid is used. This grid is fixed each year by Chambers of Agriculture and experts, and validated by the National Agriculture Risk Management Committee (CNGRA, *Comité National de Gestion des Risques en Agriculture*). This is one approach that permits overcoming the difficulties of measuring directly the cost component of a farmer in implementing insurance.

Box 2. French insurance '*contrat socle*'

The '*contrat socle*' is a kind of baseline crop insurance. The new policy should replace in fine the current multi-peril crop insurance that hedges the consequences of unfavourable weather conditions. It should also reduce the action of the FNGRA.

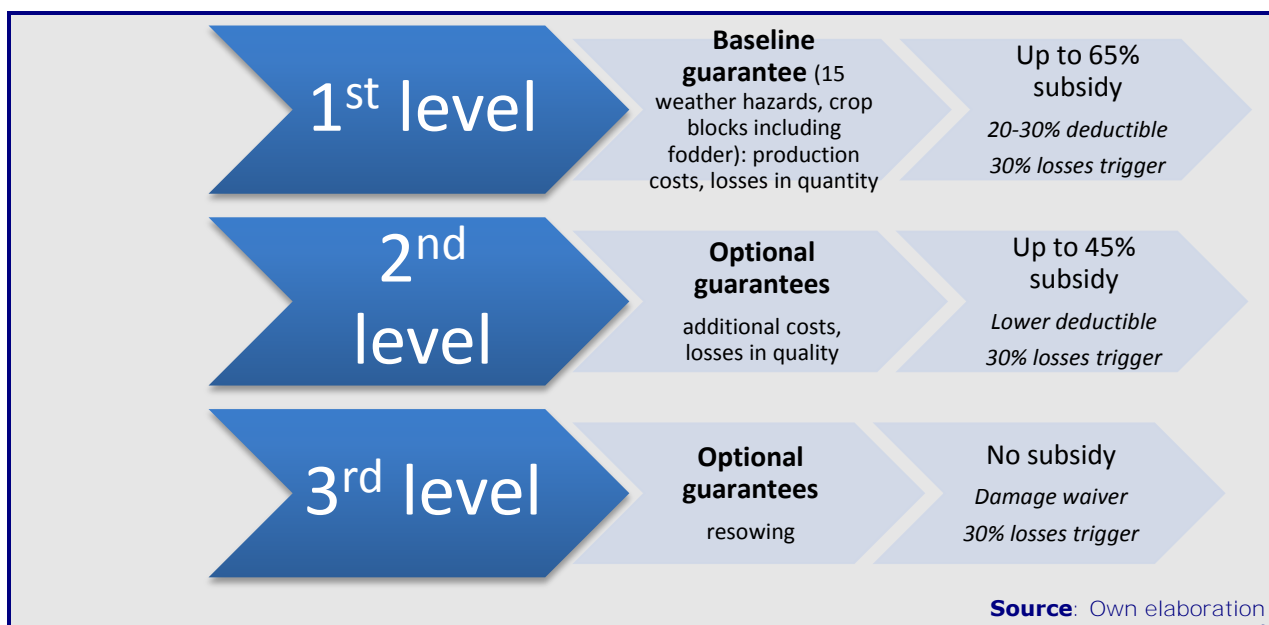
The standard structure of a '*contrat socle*' is the following:

- A first level hedges only against production losses (fixed and variable expenses) at the crop scale. The trigger amounts to 30% of losses while the deductible is equal to 30% of losses (except for prairies, 25%, see below). If all productions are insured, then the deductible may drop to 20%. Following the EU regulation, this first level is subsidized at a 65% rate.
- A second level hedges against yield losses at the farm or at the crop scale, by complementing the first level, e.g. with a deductible rate decreased to 25%. This level can be customized but subsidies are capped at a 45% rate.
- A non-subsidised third level proposes additional guarantees, such as variations in prices and quality losses.

The main features of a '*contrat socle*' are the following:

- 15 weather hazards are hedged: hail, frost, low temperatures, excessive temperatures, drought, heat stroke, sunburn, lack of radiation, excess precipitations, heavy rains, excessive moisture, storm, whirlwind, wind sand, weight of snow and glaze. All productions are concerned, including for the first time prairies in order to hedge against fodder losses (see below).
- Insured capital is computed as the product between the acreage, the Olympic or the three last years average yield and a unitary price. This price corresponds to total production costs such as operating expenses (e.g. chemical inputs) and fixed expenses (e.g. mechanization costs). The value of insured capital can be strategically increased to cancel the consequences of the 30% deductible.
- Production costs follow a scoring grid, which is fixed each year by Chambers of Agriculture and experts, and validated by the CNGRA. Insured price cannot exceed this price. No guarantee is then provided on yields and selling prices with the first level.
- Crops blocks are simultaneously insured, such as field crops, fruit production and wine-growing.
- Some advantages are provided to subscribers: a discount up to 50% for young farmers and the ability to use the DPA (tax-deductible portion of their revenues).
- According to Groupama's advertising material, the premium of an insurance policy in field crops would amount to approximately 28 euros per hectare without subsidization, as opposed to 36 euros per hectare today with a standard multi-peril crop insurance (-22%). The cost would amount to about 10 euros per hectare after subsidization.

Figure 1. Summary of the structure and features of the 'contrat socle'



The activation of IST in Italy

The CAP reform of 2014 introduced the possibility to support coverage market risks with an IST in form of mutual fund. IST implementation poses important challenges and the income assessment is not the minor. Until now, very few MS have considered its application, Italy among them. Its activation requires a specific regulatory action, to impose direct obligations of accounting and documentation on its members that allow the determination of business income. The obligations will of course be simplified as much as possible, exploiting information technology where it can be used where the keeping of accounts and communication with the fund is concerned.

In order to minimize misconduct, or otherwise opportunistic behaviour in relation to income statements made by farms on the basis of accounting documents and the rules governing the fund, participants should be subject to a general control system. This will permit identifying anomalous cases on which to direct any checks. There is a need to identify appropriate benchmarks for the verification of information, in addition to any acquisition of **the necessary documentation to support the farms' statements.**

In operational terms, it is necessary to control the individual items constituting income for the member farms adhering to the stabilization measure, as defined by the Commission in Article 39 of the Regulation (**Box 3**). In detail, the variables subject to analysis are represented by the revenues, EU payments, stocks and costs for the purchase of raw materials. Therefore, it is necessary to draw attention to the manner with which these are determined and on the possible elements to be cross-checked in the declarations made by the farm on these economic variables.

It should be considered, however, that the spirit of the IST is to stabilize the incomes of individual farms acting solely for the benefit of those who experience a substantial loss. Therefore it is not possible to reconstruct income records using standardized data or otherwise bind the companies to precision with regard to the benchmarks, around which it is desirable that there should be a certain amount of freedom to incorporate the extreme variability that characterizes the agricultural sector. In addition to the controls described above, which can be activated at the micro level, that is to say the reporting of data by the farms themselves, it is also possible to hypothesize more general controls operating as "alerts".

In particular, for weather events, checks can refer to the meteorological indicators for each area (as already takes place for insurance), in order to gauge the frequency and magnitude of adverse events and predict the potential impacts in terms of contraction of income for the farms involved. A similar approach can be adopted for health crises, making use of the extensive information contained in the bulletins of the various Regions with regard to plant disease and animal health. Yet again, for market crises, surveys of institutions such as ISMEA can be used, with useful references in terms of commodity prices and costs of major inputs. Finally, elements for the latter type of events (injury / death) could come from social security institutions (INPS, The *Istituto Nazionale della Previdenza Sociale*, Italy's National Social Security Institute, INAIL, *The Istituto Nazionale Infortuni sul Lavoro*, the National Health and Safety at Work body and ENPAIA, *the Ente Nazionale di Previdenza per gli Addetti e per gli Impiegati in Agricoltura*, the body governing social security provision in the agriculture sector).

The information derived from the comparison benchmarks for the statements of individual farms, and "alerts" with regard to events that represent possible generators of income reduction across particular areas and sectors, could permit the identification of a control sample for annual review based on a risk assessment, which could be subject to verification, including field visits, by the fund.

Box 3: Regulatory framework needed for the establishment of Income Stabilization Tool (IST)

The implementation of the IST in Italy has considered the need to set up a regulatory framework in order to allow its functioning. Following Regulation (EU) No 1305/2013, the availability of the fund may consist of:

- a) payment of the contributions of individual members;
- b) amounts disbursed by banks in the form of mortgages or other loans secured by the Fund for the clearance of the compensatory payments;
- c) contributions from any private entities;
- d) contributions referred to in Article 36, paragraph 1, letters b) and c) of Regulation (EU) No 1305/2013;
- e) insurance compensation;
- f) financial income from the financial management of the paid-up capital.

Each fund must adopt a statute necessarily indicating:

- 1) the social purposes of the management of mutual funds;
- 2) the procedures governing the establishment of Mutual funds and organs that have the representation of the same;
- 3) the objective of the Mutual Fund with the expressed indication that the same non - profit organization;
- 4) the duration of the mutual fund should be no less than five years.

Moreover, the management of the single Fund, ex ante, and for the purpose of recognition by the competent authorities, needs to adopt appropriate regulations, which may include:

- a) mode of participation in the Fund of individual members and the reference to the eligibility requirements;
- b) methods of management and administration of the Fund with specific reference to the requirement of separate accounts for the Mutual Fund with respect to any other activities of the managing and reporting of financial movements in and out;
- c) identification of the bodies that manage the mutual fund;
- d) the obligation to return, by farmers, of any compensation unduly paid together with interest rates with effect from the date of receipt of compensation;
- e) indication of the bank account holder of the farmers deposit;
- f) term of the Fund, however, not less than five years;

- g) minimum membership to the Fund, e.g. not less than three years to avoid the possibility that negative current income would enter in the Olympic average of next year, in a way to depress the 'average net' income, decreasing the incentive for the following years;
- h) method and timing of payment of the annual membership fee;
- i) general criteria for determining the economic losses or drastic drops in income and the resulting amount of compensation payable to farmers belonging, with express reference, for the same purposes, the detailed rules governing access to the benefits of which Article 36, paragraph 1, letters b) and c) of Regulation (EU) No 1305/2013;
- j) limitations and causes of exclusion for granting compensation;
- k) disclosure obligation on the part of individual members in relation to the settlement in their favour of any further compensation received on the basis of other legal provisions or transactions derived from private insurance;
- l) methods and timing of fulfilment, by the Manager of the Fund, the obligation of reporting;
- m) banning the sale of the individual member of the Membership Agreement and the Agreement covering mutual annual;
- n) procedures and timing relating to cases of succession in the relationship between farmer and mutual fund, and termination clause that provides for the termination of the relationship in the event of loss of the member, or in the case of non-fulfilment on the part of the member or unfaithful to the disclosure requirements in the hands of the same under the contract in accordance with these provisions.

2.4 Reinsurance

Reinsurance is a particular form of insurance. There are many kinds of reinsurance contracts, which have been developed over the years by a solid reinsurance industry operating worldwide with a profound footprint and influence in the agricultural sector. There cannot be agricultural insurance without reinsurance, and this is one way to make agricultural insurance follow standards and best practice.

Reinsurance markets will necessarily have a profound influence in the extent to which agricultural insurance and mutual funds can grow in EU agriculture in this and the next Multiannual Financial Framework (MFF) period. Reinsurance covers are provided to insurers which pay premiums and receive indemnities if their portfolio is at-risk. Insurers can also securitize their portfolio on financial markets, but this technique showed some limitations following the financial crisis (counterparty risk).

At the moment, **only few EU MS offer public reinsurance to insurers operating on their territory**. This situation is understandable by considering the involvement it represents for governments. A public reinsurance may indeed insure all losses of an insurer over a given threshold. In the current context, with strong budgetary constraints, this risk is not easily bearable by national governments while it would represent a strong incentive for insurers to launch new products such as revenue/income insurance.

Some systems, including the Spanish (**Box 4**), Turkish and Korean have, in addition to reinsurance, **co-insurance pools**. *'A pool is a cooperation agreement between a number of companies operating in a specific market,..., with the idea to obtain a balance in the results of the business originating from the pool's members'* (p. 21, Fundación Mapfre, 2013). In a coinsurance pool, members underwrite the agreed risks within the structure of the pool. Members cede the risks to the pool, and in return receive a share in all the business arranged by the pool accordingly with a system of apportionment. Pools are created to exhaust a market's or a country's capacity related to the risks than can produce

large and widespread claims. In general, coinsurance reduces the need to cede risks to reinsurers, and if the pool members have a significant weight in the market it can introduce professional and mitigate the risk of service quality deterioration due to excessive competition.

Box 4: Spanish Reinsurance Scheme in Agricultural insurance

Spain's *Consortio de Compensación de Seguros* (CCS) is a public reinsurance Company. It has a special section for agricultural insurance, and provides reinsurance to the co-insurance scheme in which all (23) insurance companies offering subsidised policies are integrated. It took CCS almost 15 years since the Law of Agricultural Insurance was passed in 1978 to become self-sufficient, and avoid the need of extraordinary occasional contributions from the government's budget. Since 1993, it has developed a stabilisation reserve which already provides sufficient reinsurance capacity to the whole national system of agricultural insurance. The agricultural section of the CCS has retroceded to international reinsurance markets part of its risks occasionally, but it has not done so in the last 8 years. 2012 was worst year of the history of agricultural insurance with more than €800 million worth of indemnities, and the system could easily cover all compensations, withdrawing from the stabilisation reserve about €120 that had reached a maximum in 2011 at €850 million. The reserve has been built up by a compulsory reinsurance premium surcharge applicable to all sold policies included in the subsidised scheme. When the reserve of the CCS reached certain levels, the premium surcharge was reduced. Right now the reinsurance premium paid through the compulsory surcharge of all subsidises premium is €36 mill, approximately 5% of all sold commercial subsidised premia.

Spanish agricultural insurance has now a self-autonomous and self-reliant public reinsurance, which is supported by the farmers' paid policies, but required occasional capital injections from the government's budget during its first two decades of operation.

Correlation of losses is a factor that limits the possibilities of risk pooling. This is traditionally the case of natural disasters which may affect all farmers of a given area (e.g. storm or flood). But liberalization of commodity markets is undoubtedly increasing the size of the problem in case reinsurance begins underwriting revenue insurance policies. Price variations affect all farmers, and consequently their insurers, at the same time, thus generating a kind of "systemic risk". An insurer is not able to hedge properly risks he cannot pool. The consequence is to pass risk to farmers (no coverage), partly share it with other insurers (coinsurance pool) or to reinsurers.

Reinsurers are part of the solution for large risks. Compared to insurers, their larger size makes them able to perform a geographical diversification. For instance, reinsurers may pool various EU risks. They can also pool EU agricultural risks with American or Asiatic ones. Reinsurers have also a facilitated access to financial markets and investors.

There are two main methods of reinsurance:

- **Facultative Reinsurance**, which is negotiated separately for each insurance policy that is reinsured and is normally purchased by ceding companies for individual risks not covered, or insufficiently covered, by their reinsurance treaties. It is more expensive but easier to price.
- **Treaty Reinsurance** means that the ceding company and the reinsurer negotiate and execute a reinsurance contract under which the reinsurer covers the specified share of all the insurance policies issued by the ceding company:
 - Obligatory(reinsurance of all contracts within the scope)
 - Facultative-obligatory(all insurance company elects which risks to be reinsured)

With respect to the way in which risk is shared, **there are two types of** reinsurance arrangements:

- **Proportional contracts**, whereby the reinsurer assumes an agreed percentage of both premiums and claims. A common form of this reinsurance is "quota-share". In this case, the insurer and the reinsurer fix a percentage so as to share the coverage, including premiums and indemnities. Usually, reinsurers cap their intervention level to protect themselves against high losses. To overpass this limitation, the insurer has to find another reinsurer; otherwise he remains fully exposed to losses above a threshold.
- **Non proportional contracts; Reinsurer assumes part of the ceding's claims only if a particular threshold is reached (often based on the loss ratio).** "Stop loss" reinsurance takes in charge claims that exceed a certain amount borne by the insurer. Such intervention protects the insurer against large losses, until a cap negotiated with the insurer.

Reinsurers themselves may fail to cover large risks if the extent of losses is too high. The reasons are twofold. First, reinsurers are usually private companies which need to protect their business and their shareholders against large losses. Second, if reinsurers propose extended guarantees, premiums may become unaffordable for insurers. Consequently, very large losses cannot be hedged using reinsurance. The issue would then pass to financial markets, in a so-called securitization process, provided investors are interested in the reinsurers' portfolios.

Therefore, it appears that a public reinsurance might be a key factor to develop of crop insurance policies. As "*insurers of last resort*", governments remain the only one able to provide a safety net to the whole system, from farmers to reinsurers. In turn, such mechanism supposes:

- Specific regulation process in order to control the sustainability of the system and to avoid a chain of information asymmetries that would lead to the often use of the public reinsurance. An EU safety net may be set up to protect governments forced to bear huge losses. Let us recall that insurance premiums are paid by farmers to insurers and by insurers to reinsurers before each season to avoid information asymmetries, which excludes any other source of private financing in case of catastrophic losses. In that case, only a public solidarity through taxpayers can apply. Although agricultural losses may not be as high as bank losses observed recently, their impact might be severe for the insurers and then for governments in charge of the coverage. The current banking structural reform in the EU could then be used as an example of what can be done: setting up of a fund devoted to disaster farm losses and monitoring of insurers in charge of agricultural risk management.
- Additional spending to set up the system. Two options arise. In the first one, the national governments may provide a reinsurance at no cost for private (re)insurance companies. In that case, the cost of excess losses is borne by taxpayers if necessary. As a direct consequence, the amount of insurance premiums paid by farmers should be reduced significantly by not including any consequences of a systemic risk. In the second option, farmers and therefore private (re)insurance companies have to contribute to a public reinsurance through an extra-premium. This additional cost may represent a strong disincentive to insurance, which would be counterproductive. In all cases, this issue is crucial, even with current crop insurance systems that cover only yields, because it conditions the launching of innovative insurance products by insurance companies.

3 THE SUPPORT TO AGRICULTURAL RISK MANAGEMENT IN AGRICULTURE

KEY FINDINGS

- The EU disposes of a flexible regulatory framework to support risk management instruments, which allows for coping with very diverse and heterogeneous agricultural risks faced across Member states. This framework is delineated by the CAP and by the rules applicable to State aids in the agricultural sector
- For the 2014/2020 period the possibilities to support risk management instruments are considered in Pillar 1 only for fruit and vegetables and wine, and in Pillar 2 or State aids for all sectors.
- There is a major difference between support based in Pillar 2 or in State aids. In the first case, support has to be classified as green box policy under WTO rules, while the State aids framework allows for amber box type of support.
- Currently, the only possibility to support coverage against market risks in the EU is through mutual funds. This represents a significant limitation, because it rules out other options, like income/revenue insurance or savings accounts with proven results in Canada and US, to provide market risks covers.
- The inclusion of risk management instruments in Pillar 2 poses some constraints to its implementation derived from the limited budget and uneven execution. This does not contribute to develop a comprehensive and consistent crisis and risk management policy, with instruments included in both Pillars.

3.1 The WTO rules

As direct public support to agriculture has been declining, other instruments with lesser distorting effects on trade have been developed. This is the case of insurance, which has experienced significant growth in recent times in many countries, and particularly in the US (Glauber, 2015; ICTSD, 2015). Since substantial support has underlined the growth insurance throughout the world, it is subject to the discipline of the Uruguay Agreement on Agriculture (AoA).

Insurance subsidies are qualified in AoA as distorting measures and included in Amber Box if they do not comply with the criteria set out in Annex 2 of the Agreement allowing measures to be included in the Green Box to be considered as not trade distorting. There are two paragraphs in Annex 2, related to insurance: paragraph 7, devoted to income insurance and income safety net programmes, and paragraph 8 to natural disaster assistance, including crop insurances.

For **income insurance and income safety programmes** there are three criteria to be included in the Green Box:

- a) Income loss has to be superior to 30 per cent of average gross income or the equivalent in net income terms (excluding any payments from the same or similar schemes) in the preceding three-year period or an Olympic five year average*
- b) The amount of such payments shall compensate for less than 70 per cent of the producer's income loss in the year the producer becomes eligible to receive this assistance.*
- c) The amount of any such payments shall relate solely to income; it shall neither relate to the type or volume of production (including livestock units)*

undertaken by the producer; nor to the prices, domestic or international, applying to such production; or to the factors of production employed.

In the case of government financial participation in crop insurance schemes for relief from natural disasters, the conditions are:

- a) *It is necessary that government authorities formally recognize that a natural or like disaster has occurred or is occurring*
- b) *The losses have to exceed 30 per cent of the average of production in the preceding three-year period or an Olympic five year average.*
- c) *Payments shall be applied only in respect of losses of income, livestock, land or other production factors due to the natural disaster in question.*
- d) *Payments shall compensate for not more than the total cost of replacing such losses and shall neither require nor specify the type or quantity of future production.*

Furthermore, when a producer receives in the same year payments under income insurance, income safety-net programmes and natural disaster assistance, including crop insurances, the total of such payments shall be less than 100 per cent of the producer's total loss.

These conditions impose **severe constraints for qualifying insurance support as a green box policy**. In fact, almost all notifications to WTO on insurance support are classified as amber box and most countries notify it as non-product-specific subsidies at least until 2012⁸⁹. This notification permits considering the support *de minimis*, in case it does not surpass 5% of the total value of a country's agricultural production is not taken into account in the calculation of the Aggregate Measurement of Support (AMS), the total amount subject to reduction commitments (Smith and Glauber, 2012).

Under negotiation in the Doha Development Round negotiations, some proposals have been made with the objective of loosening up the constraints. The Revised Draft Modalities for Agriculture (WTO, 2008) constitutes the last base document to review the AoA and to reach new commitments. With regard to insurance support, the only modification is considered in paragraph 8, related to crop insurance. The proposals include the need of formal recognition of catastrophe only for direct payments related to disasters, and the substitution of the period to assess losses to a *period demonstrated to be actuarially appropriate*, although the threshold of 30% losses is maintained. In any case, it was not a very ambitious proposal with little chance of being adopted in the short and medium term, and in the last Tenth Ministerial Conference held in Nairobi on 19 December (WTO, 2015) any reference was made to the current framework.

All this means that, although theoretically the AoA encourages the use of less trade-distorting measures like insurances, the constraints imposed in Annex 2 to be considered green box policies appear to be poorly adapted to most modern insurance programs (Glauber, 2015).

3.2 Historical vision: The institutional framework before 2014

In the European Union, concern about the support mechanisms for risk management and agricultural insurance became evident with the reform of the Common Agricultural Policy

⁸ The last EU, USA and Canada domestic support notifications in 2011 and 2012 are the following: WTO notifications [G/AG/N/EU/26](#) and [G/AG/N/EU/20](#) (EU); WTO notifications [G/AG/N/USA/100](#) and [AG/N/USA/93](#) (USA); and WTO notifications [G/AG/N/CAN/104](#) and [G/AG/N/CAN/105](#) (Canada)

⁹ The United States began notifying crop insurance subsidies on a product-specific basis in 2012 (Glauber, 2015)

(CAP) of 2003, when a Council Agreement mandated that the Commission should study specific measures to address risks, crises and natural disasters that agriculture may face.

Previously and under the preparatory work of the Reform, in January 2001, the European Commission published a **working document on risk management tools for agriculture**, with a special focus on insurance¹⁰, addressing the potential of applying risk management policies at EU level. The document concluded that the insurance solutions to cope with increasing production and price risks should be developed at Member State level. The recommendation was grounded on the variations in the farmers' needs among MS and regions and the diversity in existing agricultural systems regarding coverage, complexity and state involvement. The document highlighted the importance of the CAP direct payments on farmers' risk, and the State aids framework to allow Member States to develop responses to help farmers cope with increasing risks. However, the document highlighted also the need to investigate the adequacy of a more intense EU involvement in the implementation of an insurance system under two conditions: a) the instruments should have to fit within the CAP framework; and b) sufficient financial funds should be available.

Following the Council mandate of 2003, in 2005 a **Communication¹¹ from the Commission to the Council on risk and crisis management in agriculture** discussed different instruments that could be implemented in the CAP. It covered support for insurance against natural disasters, mutual funds and tools providing basic coverage against income crises. Without opting for any instrument, and indicating that the introduction of a new instrument should not undermine the functioning of existing instruments in some Member States such as crop insurance, it was stated that any tool should be compatible with WTO rules and not distort the competition among Member States.

Probably due to the diversity and heterogeneity of the agricultural risks faced in the Member States and the difficulties of choosing a common tool for managing risks, the document opted from the outset for a common flexible framework that permitted MS granting optional support to certain risk management instruments. Thus, the legal framework governing public aid to these instruments is **delimited by the CAP and the Community rules applicable to State aid in the agricultural sector**.

Within the CAP, prior to the last reform for the period 2014/2020, the possibility to support risk management instruments was envisioned in Pillar 1. The first possibility was established in 2007 with the reform of sectoral regulations, starting with the sector **fruit and vegetables**, followed by the **wine** sector, which allowed for introducing mechanisms of prevention and crisis management, including support to crop insurance or setting up mutual funds.

More ambitiously, in 2008, the Health Check reform extended the possibility to support risk management instruments for all sectors through the use up to 10% of their national ceilings devoted to the single payment scheme. According to **Article 68 of the Regulation (EC) No 73/2009** this amount could be allocated to different measures, including:

- (a) in the form of contributions to crop, animal and plant insurance premiums in accordance with the conditions set out in Article 70;*

¹⁰ EC (2001) Risk management tools for EU agriculture, with special focus on insurance. Working Document, Brussels.

¹¹ Communication from the Commission to the Council on risk and crisis management in agriculture - COM(2005) 74 final.

(b) by way of mutual funds for animal and plant diseases and environmental incidents in accordance with the conditions set out in Article 71.

Article 70 set out the conditions to grant financial support to insurance premiums to cover losses caused by adverse climatic events animal or plant diseases or pest infestation. Thus, the support may only be granted for loss caused by events which destroy more than 30% of the average annual production of the farmer in the preceding three-year period or a three-year average based on the preceding five year period and not exceeding 65% of the insurance premium, being 75% co-financed by the EU and 25% by the Member state.

In the same way Article 71 established the conditions to support mutual funds designed to cover losses caused by the outbreak of an animal or plant disease or an environmental incident. The financial contribution shall not exceed 65 % of the cost referred to *(a) the administrative costs of setting up the mutual fund, spread over a maximum of three years; (b) the repayment of the capital and interest on commercial loans taken out by the mutual fund for the purpose of paying financial compensation to farmers; or (c) the amounts paid by the mutual fund from its capital stock as financial compensation to farmers.* Like the insurance premiums, the financial contribution to support mutual funds was co-financed between Member state (25%) and EU (75%).

According to that, the Health Check was an opportunity to design the characteristics of a common risk management policy supported by CAP even though **the outcome was very limited** (Cordier, 2014; ECA, 2013).

The State aids Framework for the 2007/2013 period

An alternative framework to CAP to support risk management tools was enabled by the State aids rules. State aids are national government support granted to farms or companies. As they can hinder the competence their use has to comply with the EU regulation according Articles 107, 108 and 109 of the Treaty on the Functioning of the European Union (TFEU)¹².

Article 107 defines State aid as *"any aid granted by a Member State or through State resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods shall, in so far as it affects trade between Member States"*, establishing their incompatibility with the internal market. However, the same article specifies the grounds on which the State aids can be considered compatible with the internal market. Among them: a) aid to make good the damage caused by natural disasters or exceptional occurrences; b) aid to facilitate the development of certain economic activities or of certain economic areas, where such aid does not adversely affect trading conditions to an extent contrary to the common interest. Article 108 sets out the procedure to declare their compatibility with the internal market and to ensure the compliance of rules by Member States. Article 109 rules that Council, on a proposal from Commission and after consulting European Parliament, may adopt regulations for the application of Articles 107 and 108.

The authorization of State aids had to fulfil the **Community Guidelines for State aids** in the agricultural sector, that for the 2007/2013 period¹³, considered that losses caused by adverse weather conditions may be assimilated to natural disaster once the level of damages has reach the 30% on normal production. Moreover, in these guidelines the importance of insurances as risk management tool is recognized, establishing that *"farmers should be encouraged to take out insurance wherever possible. Therefore, from a certain*

¹² Previously art 87, 88 and 89 of EC Treaty

¹³ Community guidelines for State aid in the agriculture and forestry sector 2007 to 2013. (2006/C 319/01)

moment in the future onwards, bad weather compensation should be reduced in respect of farmers who have not taken out insurance for the product concerned. Only if a Member State can convincingly show that, despite all reasonable efforts, affordable insurance for a given type of event or product is not available, should the Commission waive this requirement". The guidelines set up also the compatibility of aids in case of animal and plant diseases, and subsidies to insurance premiums in favour of primary production (farmers). Under this regulatory framework the subsidy could not exceed 80% or 50% of the cost of insurance, corresponding to the highest loss coverage comparable to natural disasters, and indemnities should not compensate more than 100% of the loss of income.

Besides the guidelines and according to the Article 109, **the Agricultural Block Exemption Regulation (ABER)**¹⁴ determines the aids that are exempted from the notification procedure simplifying it and enabling the Commission to declare compatible some categories of aids. Among them those granted in favour of making good the damage caused by natural disaster are included, as well as aids towards the payment of insurance premium under the same conditions as the guidelines.

Table 2 summarizes the possibilities for supporting the various risk management instruments in the regulatory framework before 2014.

Table 2. EU support to risk management before 2014

		Crop, animal and plant insurances		Mutual Funds	
		Intensity of support (%)	Losses (%)	Intensity of support (%)	Losses (%)
Pillar 1	Fruit &Vegetables	80 ⁽¹⁾	>30	10/8/4 % ⁽³⁾	
		50 ⁽²⁾	<30	5/4/2 % ⁽⁴⁾	
	Wine	80 ⁽¹⁾	>30		
		50 ⁽²⁾	<30		
Article 68	65	>30	65	>30	
Guidelines for State aids		80 ⁽¹⁾	>30		
		50 ⁽²⁾	<30		
Regulation ABER		80 ⁽¹⁾	>30		
		50 ⁽²⁾	<30		

(1): Adverse climatic events assimilated to natural disaster

(2): Other losses caused by climatic events, animal or plant diseases, and plant infestations

(3): Proportion of the contribution of the producer organization to the mutual fund in the first, second and third year of its operation for MS joining EU after 2003

(4): Proportion of the contribution of the producer organization to the mutual fund in the first, second and third year of its operation for the rest of MS.

Source: Own elaboration

3.3 The new institutional framework to support agricultural risk management

The CAP for 2014/2020 period

The reform of the CAP of 2014 represents an important change regarding the framework to support risk management instruments, eliminating the possibility of supporting the risk management tool from Pillar 1, although the provisions foreseen for the sectors of fruit and vegetables and wine were kept in the Common Market Organization (CMO)¹⁵. The main risk management tools, existing so far in the direct payments scheme, have been shifted to

¹⁴ Regulation (EU) No 1857/2006

¹⁵ Regulation (EU) No 1308/2013

Pillar 2 within the Regulation on support for Rural Development¹⁶, with the possible inclusion of various measures in **Rural Development Programmes** (RDP) drawn up by Member States. This shift has significant consequences for the development of risk management policies within CAP. Even though **their use remains facultative** for the Member States, **the financing rules and the budgetary constraints of Pillar 2 limit their implementation.**

The support for risk management is developed through the Articles 36 to 39 of the Regulation. Article 36 considers three possibilities for support:

- a) *financial contributions to premiums for crop, animal and plant insurance against economic losses to farmers caused by adverse climatic events, animal or plant diseases, pest infestation, or an environmental incident;*
- b) *financial contributions to mutual funds to pay financial compensations to farmers, for economic losses caused by adverse climatic events or by the outbreak of an animal or plant disease or pest infestation or an environmental incident;*
- c) *an income stabilisation tool, in the form of financial contributions to mutual funds, providing compensation to farmers for a severe drop in their income.*

Article 37 sets out the conditions to support **crop, animal and plant insurances**. Thus, the aid is limited to 65% of the cost of the policy and losses superior to 30 % of the average annual production of the farmer in the preceding three-year period (or an Olympic five year average). As a novelty, the use of indices, with biological or climatic bases to quantify the losses and to determine the actual loss of each individual farmer in a given year, shall be permitted.

The support to **mutual funds** is included the Article 38 where it is specified that the *financial contributions may only relate to: (a) the administrative costs of setting up the mutual fund, spread over a maximum of three years in a degressive manner; (b) the amounts paid by the mutual fund as financial compensation to farmers. In addition, the financial contribution may relate to interest on commercial loans taken out by the mutual fund for the purpose of paying the financial compensation to farmers in case of crisis.* It should be noted that public funds cannot be used to setting up the initial capital of the fund. The aid is also limited to 65% of the eligible costs and the losses superior to the 30% of the average annual production of farmer. A novelty of the new regulation is to widen the scope of mutual funds to provide coverage against adverse climatic events and not only for animal and plant diseases and environmental incidents.

A novelty was also the possibility to support an **Income Stabilization Tool** (IST), developed in the Article 39. The EU, recognizing the increased exposure to market risks and considering the importance of risk management instruments for the new circumstances, introduced this instrument, albeit not in the form of insurance, rather as a mutual fund. In the similar way as insurances and mutual funds, support is only granted when the drop of income *exceeds 30% of the average annual income of the individual farmer in the preceding three-year period (or an Olympic five year average) and payments shall compensate for less than 70 % of the income lost in the year the producer becomes eligible to receive this assistance.* Income is defined as the sum of revenues, including any form of public support, deducing input costs. The financial compensation may be only related to: *(a) the administrative costs of setting up the mutual fund, spread over a maximum of three years in a degressive manner; (b) the amounts paid by the mutual fund as financial*

¹⁶ Regulation (EU) No 1305/2013

compensation to farmers. In addition, the financial contribution may relate to interest on commercial loans taken out by the mutual fund for the purpose of paying the financial compensation to farmers in case of crisis. No contribution by public funds shall be made to initial capital stock. The aid is also limited to 65% of the eligible costs.

The possibility of support risk management tools for the sectors of fruit and vegetables and wine is kept in the new Common Market Organization. For **fruit and vegetables**, measures to support the administrative costs of setting up mutual funds and harvest insurances to cover losses caused by natural disasters, adverse climatic events, diseases or pest infestations can be included in the operational programmes implemented by the Producer Organizations (POs). As in the previous period, the support for insurances must not exceed 80% of the premium in case of losses resulting from adverse climatic events which can be assimilated to natural disasters and 50% in other cases. For mutual funds, EU funding is available in the first 3 years of the mutual fund's operation, covering 10%, 8% y 4% respectively in MS joining EU after 2003, and 5%, 4% and 2% in the rest.

For the **wine sector**, risk management measures can be included in the support programmes developed by producer Member states. In the case of mutual funds, Article 48 sets out that their aim has to be providing assistance to producers seeking to insure themselves against market fluctuations, which includes price risks, not just production variability. However, any indication is included in the Commission Delegated Regulation¹⁷. The support may be granted in the form of temporary and degressive aid to cover the administrative costs of the funds. In the case of insurances, Article 49 specifies that they should cover losses consequence of natural disasters, adverse climatic events, diseases or pest infestations. The support must not exceed 80% of the premium in case of losses resulting from adverse climatic events which can be assimilated to natural disasters and 50% in other cases.

The new State aids Framework

The rules applicable to State aid have also been updated in 2013 as part of Commission's State aid Modernization initiative, going hand in hand with the new Rural Development policy.

As for the 2007-2013 period and according to the Treaty on the Functioning of the European Union, the general rule is that granting State aids is prohibited unless a) the Commission authorizes them on the basis of concluding that they are compatible with the internal market, b) the aid be exempted of the notification process or c) not constitute a State aid.

The rules regarding the conditions under which a State aids can be considered compatible with the internal market are in the **Guidelines for State aid in the agricultural and forestry sectors and in rural areas for 2014 – 2020**¹⁸. Contrary to the new CAP, the new Guidelines provide more detailed regulations and provisions to support to the risk management. So, these guidelines include aids to support risk and crisis management, considering:

¹⁷ COMMISSION DELEGATED REGULATION (EU) No 612/2014 of 11 March 2014 supplementing Regulation (EU) No 1308/2013 of the European Parliament and of the Council by amending Commission Regulation (EC) No 555/2008 as regards new measures under the national support programmes in the wine sector.

¹⁸ European Union Guidelines for State aid in the agricultural and forestry sectors and in rural areas 2014 to 2020. (2014/C 204/01)

- a) **Aid to make good the damage caused by natural disasters or exceptional occurrences.** Among the conditions to be considered for being compatible with the TFEU are that the event be formally recognized as natural disaster or as exceptional occurrence and that there is a direct causal link between the event and the damage. The aid, including all aids received and payments under insurance policies must be limited to 100% of the eligible costs. The eligible costs may include the material damage to assets and the loss of income resulting from the full or partial destruction of the agricultural production and the means of production.
- b) **Aid to compensate for damage caused by adverse climatic event which can be assimilated to a natural disaster.** The same conditions that the previous aids have to be fulfilled to be considered compatible with the TFEU a) the need that the event be formally recognized as adverse climatic occurrence similarly to a natural disaster and b) the existence of a direct link between the adverse event and the damage caused. The aid must be limited to 80% of the eligible cost, which may be increased to 90% in areas facing natural constraints. Moreover, the aids granted must be reduced *"by 50% unless it is given to beneficiaries who have taken out insurance covering at least 50 % of their average annual production or production-related income and the statistically most frequent climatic risks in the Member State or region concerned for which insurance coverage is provided. Derogation from this condition is only possible if a Member State can convincingly show that, despite all reasonable efforts, affordable insurance covering the statistically most frequent climatic risks in the Member State or region concerned was not available at the time the damage occurred"*.
- c) **Aid for the costs of the prevention, control and eradication of animal diseases and plant pests and aid to make good the damage caused by animal diseases and plant pests.** These aids are authorized *"as part of a public programme for the prevention, control or eradication of the animal disease or the plant pest concerned; or as emergency measures imposed by the competent public authority; or as measures to eradicate or contain a plant pest implemented in accordance with Council Directive 2000/29/EC of 8 May 2000 on protective measures against the introduction into the Community of organisms harmful to plants or plant products and against their spread within the Community"*. The intensity of the aid (including all the payments received by the beneficiary) is limited to 100 % of the eligible costs.
- d) **Aid for fallen stocks.** In this case, the aid has to be up to 100% of the cost for the removal of fallen stock and 75% of the cost for its destruction. In case of aid be financed through fees or compulsory contributions, or there is an obligation to perform TSE test, the aid can be at a rate of 100% of the cost for the removal and destruction
- e) **Aid to compensate for the damage caused by protected animals.** The aid may be granted up to 100% of the eligible costs.
- f) **Aid for the payment of insurance premiums.** It includes the cost of insurance premiums to cover damage caused by natural disasters or exceptional occurrences, adverse climatic events, animal diseases and plant pests, environmental incidents, removal and destruction of fallen stock and damage caused by protected animals. The aid intensity must be less than 65% of the cost of insurance premium, with the exception of the removal and destruction of fallen stock, where the aid intensity must not exceed 100 %, and the removal of fallen stock, where the maximum is the 75 % of the cost of the insurance premium. Unlike the previous Guidelines, there is no

condition regarding the threshold of losses in relation to production to be compensated, including such support in the Amber Box.

- g) Aid for financial contributions to mutual funds.** It considers mutual funds constituted to compensate for the damage caused by adverse climatic events which can be assimilated to a natural disaster, animal diseases and plant pests and/or for the damage caused by environmental incidents. The financial contributions may only relate to the amounts paid by the mutual fund as financial compensation and the aid must be limited to 65 % of the eligible costs. In the same way than for insurances, there is no condition regarding the threshold of losses in relation to production to be compensated, including such support in the Amber Box.

If one Member State wishes to grant some of the previous aids, it has to notify its intention to the Commission and wait for an authorization before putting them into effect.

Besides this, all aids included in the CAP are compatible with the internal market by definition. Accordingly, even though one aid is not specifically considered in the Guidelines, one MS could implement it following the same procedure. Consequently, the IST could be supported under State aids framework in the same conditions specified in the Regulation (EU) No 1305/2013.

The aids exempted of the notification process are included in the **Agricultural Block Exemption Regulation ("ABER")**¹⁹, which declares certain categories of aid in the agricultural and forestry sectors and in rural areas compatible with the internal market. Among them are included: a) Aid to compensate for damage caused by adverse climatic event which can be assimilated to a natural disaster, b) Aid for the costs of the prevention, control and eradication of animal diseases and plant pests and aid to make good the damage caused by animal diseases and plant pests and c) Aid for the payment of insurance premiums, under the same conditions that the Guidelines for State aid. However, this Regulation does not consider the aid for financial contributions to mutual funds.

The main difference between the use of the Guidelines and the use of the Agricultural Block Exemption Regulation is that in the first case aid is required to be notified to the Commission that declares its compatibility or rejects it, while with ABER the Member State is only required to communicate it 10 days before its entry into force, remaining afterwards responsible for demonstrating its compatibility.

Finally, another possibility is that the aid not be considered a State aid. In this case, the aid does not require that it be notified and only the Member State can ask the Commission for clearance. These aids are regulated by the **"de minimis" Regulation**²⁰, concerning aids granted to undertakings active in the primary production. The maximum amount of aid, for the 2014/2020 period, is limited to 15,000 EUR per beneficiary over any period of three fiscal years, and the cumulative amount to a national cap equivalent to 1% of the annual output of the Member State. These limits constrain its use to support risk management measures, even though it has been occasionally applied to compensate the insufficiency of financial funds initially provided. This is the case of France in 2014, where the initial budget allocated to crop insurance was insufficient compared to the needs, and the French government decided to add a **"de minimis"** payment to cover the difference²¹.

¹⁹ Commission Regulation (EU) No 702/2014 of 25 June 2014.

²⁰ Commission Regulation (EU) No 1408/2013 of 18 December 2013.

²¹ <http://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000031276523>.

Table 2 summarizes the possibilities for supporting the various risk management instruments in the regulatory framework for the 2014/2020 period. As we can see there is one major difference between support based in Pillar 2 or State aids. In the first case, the subsidies can be classified as green box policies while the State aids can be also amber box.

Table 3. The support to risk management in the period 2014/2020

		Crop, animal and plant insurances		Mutual Funds		Income Stabilization Tool	
		Intensity of support (%)	Losses (%)	Intensity of support (%)	Losses (%)	Intensity of support (%)	Losses (%)
Pillar 1	Fruit &Vegetables	80 ⁽¹⁾	>30	10/8/4 % ⁽³⁾	-	-	-
		50 ⁽²⁾	<30	5/4/2 % ⁽⁴⁾			
	Wine	80 ⁽¹⁾	>30				
		50 ⁽²⁾	<30				
Pillar 2		65	>30	65	>30	65	>30
Guidelines for State aids		65	-	65	>30	65	>30
Regulation ABER		65	-	-	-	-	-

(1): Adverse climatic events assimilated to natural disaster

(2): Other losses caused by climatic events, animal or plant diseases, and plant infestations

(3): Proportion of the contribution of the producer organization to the mutual fund in the first, second and third year of its operation for MS joining EU after 2003

(4): Proportion of the contribution of the producer organization to the mutual fund in the first, second and third year of its operation for the rest of MS.

Source: Own elaboration

Strengths and weaknesses of the new regulatory framework

The new EU regulatory framework for public support for risk management tools provides a set of options, either through the CAP or State aid framework, with the potential to be adapted to specific conditions of each Member state.

However, some weaknesses pose severe constraints to the implementation of a coherent risk management policy adapted to the new market conditions. The new measures included in the Rural Development Regulation have **two major weaknesses**. First, they must strictly adhere to the criteria imposed by the **WTO green box**. This significantly restricts its implementation to include only coverage against severe losses that can be considered catastrophic for a farm. Moreover, the importance given to compliance with these conditions, considering the wide room for manoeuvring that the EU has in this sense, casts doubt on the real intentions of the EU commitment to an effective common framework for agricultural risk management, particularly market risks. We have to take into account that until 2007, the EU AMS was 17% of the overall ceiling (Butault et al., 2012) and it is likely that subsequent reforms have set this figure even lower.

The second weakness relates to its **inclusion in the Pillar 2** with an ample margin of flexibility and optionality in their implementation. The inclusion of the risk management measures in the Rural Development Programmes (RDP), which in many cases, depends on regional governments each with its own financial capacity, would lead to an uneven implementation, not only among Member states but also within Member state, creating conditions highly differentiated. Moreover, taking into account the reduction in the overall budget of Pillar 2, the inception of new risk management measures would imply a reduction on the budget allocated to other measures traditionally included in the RDP. On the other

hand, their inclusion in the Pillar 2 does neither contribute to a comprehensive and consistent European crisis and risk management policy, with market instruments as prevention measures, safety nets and crisis actions included in Pillar 1 and instruments addressed to manage production and market risks in Pillar 2.

Otherwise, the inclusion of support to risk management tools in the new CAP, even in Pillar 2, presents also some advantages. It is **a first timid but important step**, while it opens the door to a possible design of a new European risk management policy with flexible co-financing; respectful with the budget distribution, and adapted to the characteristics and needs of different MS. The regulatory framework for State aids is characterized by its flexibility under a common and increasingly detailed outline. It should also be noted that the loosening of the need to meet the criteria for the green box, including all the support granted under the new Guidelines inside the amber box, make its implementation easier. However, it still lacks the potential to provide coverage to market risks, especially through insurance.

4 IMPLEMENTATION OF RISK MANAGEMENT TOOLS BY MEMBER STATES

KEY FINDINGS

- The EU does not count with a harmonised EU-wide agricultural risk management scheme. The types and extent to which risk management tools have been adopted differ widely from across MS with programs down to the regional level in some EU MS.
- The risk management instruments supported by the CAP during 2007-2013 have not been very successful. The use of CPM measures under Pillar 1 in the F&V and wine sectors has been very low. Provisions under Article 68 did get more attention, but only in a few MS and in connection mainly with crop/animal/plant insurance. In general, the implementation of mutual funds has been very limited.
- For the period 2014-2020, the CAP offers the opportunity to fund risk management measures under Rural Development in Pillar 2. Planned amounts reveal that Pillar 2 expenditure on CPM measures will be higher than previous Pillar 1 expenditure under Article 68. However, the share of CAP funds being spent on CPM measures remains negligible, over 0.4% of the total 2014-2020 CAP budget. Also, the take-up **of the new 'income stabilization' tool available under CAP Pillar 2 is foreseen to be very limited**, with only two EU MS and one region having decided to use it.
- All EU Member States use State aids to respond to crisis situations. In fact, most MS are basing their public aids exclusively on State aids (*ex-post* measures devoted to crisis management), which reveal a clear under-use of *ex-ante* (risk) management measures. As expected, MS in which agriculture is highly exposed to risk occupy the top of the ranking in terms of absolute public expenditure.

4.1 Implementation of risk management tools in 2007-2013

Given the many differences observed in EU Member States (MS), not only in their agricultural risks but also in their legal and economic backgrounds, **the EU does not count with a harmonised EU-wide agricultural risk management scheme**. National programs, developed within the broad limits defined by the State aid regulation in the agricultural sector, exist together with other tools horizontally implemented within the CAP. The types and extent to which risk management tools have been adopted differ widely within EU MS. Also, the level of coverage and subsidization can vary widely from MS to MS with programs down to regional level in some European MS (Bielza et al., 2008). All this complexity, together with the fact that few or no figures at all can be found in standard statistical sources, make it extremely difficult to collect information on the situation of risk management tools in the EU. In the present study, data have been collected from various data sources: online databases, literature review, and expert consultations when possible. Special emphasis has been put on collecting information about government spending on the implementation of risk management tools in the agricultural sector in the 28 EU MS. This section presents the main findings obtained for the **period 2007-2013**. It includes a breakdown between risk management tools implemented under the CAP and risk management tools applied using State aids.

4.1.1 Within the CAP

During the period 2007-2013, the CAP envisioned the possibility to support risk management instruments under Pillar 1. The new Common Market Organizations (CMOs) for fruit and vegetables and wine introduced mechanisms of prevention and crisis management, including harvest insurance and support for the setting up of mutual funds. Also, under Pillar 1, the application of the Article 68 of the Regulation (EC) No 73/2009 allowed MS to grant direct payments to farmers in the form of contributions to crop, animal and plant insurance, and to mutual funds for combating animal and plant diseases, and environmental incidents.

4.1.1.1 Pillar 1: Common Market Organization

Fruit and vegetables sector

Market challenges faced by the fresh fruits and vegetables (F&V) industry have always been a source of concern due to the limited storability of these perishable products and the high crop price variability observed at the farm gate. The 2007 Common Market Organization (CMO) reform for fruits and vegetables (F&V)²² was the first in introducing measures for direct management of market crises in the operational programs of Producer Organizations (POs). The objective was to increase attractiveness of POs to producers and reducing price and marketing risks through the pooling of sales across time, space and market outlets (Petriccione et al., 2011). POs applying crisis prevention and management measures (CPM) can receive up to 4.6% of the value of the marketed production from EU contribution, that is 0.5% more than what POs usually receive. The CPM measures that POs are allowed to carry out are as follows:

- market withdrawals;
- green harvesting or non-harvesting of fruit and vegetables;
- promotion and communication;
- training measures;
- harvest insurance;
- support for the administrative costs of setting up mutual funds.

To make these measures applicable and operative, national authorities must adopt detailed rules and introduce them in their national strategy for sustainable operational programs. According to the recently published EC report on the implementation of the provisions concerning producer organizations, operational funds and operational programs in the fruit and vegetables sector since the 2007 reform (European Commission, 2014a), **the use of CPM measures has been very low** (EUR 35.6 million; 2.8% of total average annual expenditure), in connection mainly with harvest insurance (average annual expenditure of EUR 13.9 million in 67 OPs), promotion and communication (EUR 11.9 million in 60 OPs) and product withdrawal (EUR 8.3 million in 73 OPs). The report contains data mostly from 2010 and is therefore of limited use for analysing the effects of the 2007 reform. However, the data presented reveal that CPM measures have not been sufficiently used.

Data collected from the MS's reports of the evaluation of their national strategies for sustainable operational programs tend to confirm these findings. **Table 4**, which includes the expenditure incurred on harvest insurance and mutual funds in the F&V and wine sectors for the period 2007-2013, shows that only eight EU MS (Belgium, Czech Republic, Germany, Italy, Cyprus, Netherlands, Austria and the United Kingdom) used CAP funds for supporting CPM measures in the F&V sector, and that the corresponding total expenditure was very low, in the order of EUR 36.44 million from 2008 to 2011.

²² Regulation (EC) No 1182/2007 of 26 September 2007 and Regulation (EC) No 1234/2007 of 22 October 2007

Table 4. Expenditure on harvest insurance and mutual funds in the fruit and vegetables and wine sectors (2007-2013).

EU MS	Value (€ million)		
	Fruits & vegetables ^[1]	Wine ^[2]	Total
Belgium	4.87	-	4.87
Bulgaria	-	3.26	3.26
Czech Republic	0.25	-	0.25
Germany	11.44	6.86	18.31
France	0.00	1.18	1.18
Italy	11.90	115.13	127.04
Cyprus	0.29	0.59	0.88
Netherlands	7.00	-	7.00
Austria	0.32	-	0.32
Portugal	-	7.81	7.81
Romania	0.00	1.49	1.49
Slovakia	-	0.72	0.72
United Kingdom	0.36	-	0.36
Total	36.44	137.04	173.47

Note: The table includes only the MS with positive expenditure. The symbol "-" means non-available data.

Source: Own elaboration from European Commission data, [1] DG for Agriculture and Rural Development, Fruit and vegetables country files (2008-2011) and [2] DG Agri-Wine Units statistics (2009-2013).

It is worth noting that, in all MS, **mutual funds did not get very much attention** because (1) their access and content seem to be not clearly stated and (2) the narrow scope of the EU financial support, oriented only toward covering the administrative costs of setting up mutual funds, limits their practical use. Thus, in reality, the total EU expenditure of EUR 36.44 million corresponds entirely to harvest insurance. As seen in **Table 4**, Italy and Germany have been the most active users, in financial terms, with an expenditure of EUR 11.9 million and EUR 11.4 million, respectively. Some POs in France, Romania, Austria, Czech Republic or Cyprus have made use of harvest insurance programs, but their value can be considered negligible. Other MS with a highly developed insurance system, like Spain, did not even introduce harvest insurance in its National Strategy for sustainable operational programs. In the case of Spain, public support for crop insurance is provided through State aids.

Wine sector

Giving continuity to the changes initiated in the F&V sector, the Council of Ministers adopted in April 2008 a thorough reform of the EU wine market²³. Crisis prevention and management measures were introduced in the National Support Programs (NSPs) to encourage a responsible approach to crisis situations. They comprise permanent measures of support (promotion, green harvesting, mutual funds, and harvest insurance) and temporary measures (crisis distillation). The analysis carried out by Sardone et al. (2012) concludes that a **limited amount of resources has been assigned** to CPM measures in the wine sector (EUR 1016.6 million from 2009 to 2013). The most relevant measure has been the support to promotion, with EUR 708.4 million (70% of the total expenditure). The rest of the CPM measures have had a little role in NSPs (harvest insurance, green harvesting, and crisis distillation) or were not implemented at all (mutual funds).

²³ Regulation (EC) No 479/2008 of 29 April 2008.

Table 4 shows the expenses on mutual funds and harvest insurance incurred by EU member MS in 2009-2013 in the framework of the wine sector. Data have been obtained from the financial execution of wine CMO through national support programs compiled by the DG AGRI-Wine Units Statistics. As it can be seen from **Table 4**, the total EU expenditure on CPM measures amounted to EUR 137.04 million, of which 115.13 million (i.e. 85% of the total expenditure) went to Italy. Italy can be considered an exceptional case, as it decided to apply all the market intervention measures that the CMO had to offer, except mutual funds, with particular focus on the South of Italy (Gaeta and Corsinovi, 2014). Other MS, like Bulgaria, Germany, France, Cyprus, Portugal, Romania, and Slovakia, also adopted CPM measures, but the amount of support used, in financial terms, was very low. Thus, except for Italy, the general perception is that CPM did not get much attention in the wine sector, similarly to what happened for F&V. No MS has assigned, till 2013, funds to support the establishment of mutual funds. And crop insurance has experienced a growing interest from 2007 to 2013; however, it has had a limited role.

4.1.1.2 Article 68 of the Regulation (EC) No 73/2009

The Health Check of the CAP in 2008²⁴ introduced the possibility to extend the application of CPM measures to all sectors. As explained in Chapter 3, Article 68 allows MS using up to 10% of their direct payment envelopes in risk management measures, including contributions to crop, animal and plant insurance (in accordance with the conditions laid down in Article 70), and to mutual funds for animal diseases, plant diseases and environmental incidents (in accordance with the conditions laid down in Article 71).

Table 5 summarizes the expenditures incurred by MS on the funding of insurances and mutual funds under Article 68 during 2010-2013. Data have been obtained from the European Court of Auditors (ECA, 2013). Apart from this report, no documentation is available to permit a thorough understanding of the expenditures made or an evaluation of their effectiveness.

Table 5. Expenditure on insurance and mutual funds under Article 68 (2010-2013).

EU MS	Value (€ million)		
	Insurance	Mutual funds	Total
France	350	84	434
Italy	280	0	280
Hungary	15	0	15
Netherlands	32	0	32
Total	677	84	761

Note: The table includes only the MS with positive expenditure.

Source: Own elaboration, based on data from the European Court of Auditors (ECA, 2013).

As seen in **Table 5**, the EU spent EUR 761 million from 2010-2013 in provisions for insurance and mutual funds under Article 68. Only a few MS have used these provisions: France, Italy, Hungary and the Netherlands. Among them, France is the MS with the highest expenditure level, EUR 434 million (i.e. 57% of the total EU expenditure), followed by Italy, with an expenditure of EUR 280 million (37%).

²⁴ Regulation (EC) No 73/2009 of 19 January 2009.

Looking at the type of measures applied (insurances and mutual funds), it is noticed that **payments for insurances have been used much more than payments for mutual funds**. While contributions to insurances reached EUR 677 million in the EU-28 (89% of the total), contributions to mutual funds were only EUR 84 million (11%).

Again, France has been the MS which has made most use of financial contributions to the payment of crop insurance premiums and the only one to have implemented mutual funds under Article 68. In France, Article 68 replaced an equivalent national insurance measure, almost doubling its contribution. The report from ECA (2013), however, indicates that the high level of aid used by France for insurance measures did have little impact in real terms, with a very little rise in both the percentage of land insured and the number of contracts. This can be associated to the high administrative workload linked to the implementation of these measures. Also, it has to be considered that the aid rate was fix at 65 % of the eligible part of the premium (which is the maximum permitted under EU legislation), but it was limited to crop insurance premiums (plants).

In Italy, a yearly budget of about EUR 70 million from 2010 to 2013 has been allocated to support insurances under Article 68. This can be considered a significant amount, as it comprises 30% of the annual public contribution to the supported agricultural insurance market in Italy (Dell'Aquila and Cimino, 2012). In spite of its strength, ECA (2013) notices some important dysfunctions in the Italian system. They relate mainly to (1) the poor checking system, done through intermediaries (e.g., OPs) with no verification of insurers or final beneficiaries, (2) the fact that insured values are set by the beneficiaries with no reference to past production values or any form of justification, and (3) the need to carry out recoveries due to the fact that aid was paid before the beneficiary had paid the insurance premium. In general, more efforts should be done to promote the coexistence of traditional insurance products with the development of mutual funds (ECA, 2013). A proper national legislation allowing support to the establishment and operation of mutual funds is still lacking in most of the EU MS.

4.1.2 State aids in the agricultural sector

Another way of supporting the application of risk management tools is using the State aids provisions in the agricultural sector. State aids are payments granted by governments to particular farms or industries on the basis of specific rules set out in Articles 107, 108 and 109 of the Treaty on the Functioning of the European Union (TFEU). Basically, State aids must ensure free competition, an efficient allocation of resources, and a well-functioning internal market (i.e. that they do not affect trading conditions to an extent contrary to the common interest). The conditions and criteria under which aid for the agricultural sector is considered to be compatible with the TFEU rules are defined in the Community Guidelines on State aid in the agriculture and forestry sectors. Among the accepted forms of aid are aid to offset losses caused by natural disasters or exceptional circumstances, adverse 'ordinary' climatic or weather events, animal and plant diseases, and aid towards the payment of insurance premiums.

Table 6 shows State aid expenditure on risk and management measures from 2007 to 2013. The table includes data for the 28 EU MS and the four categories of aid mentioned above: (1) aid to compensate for losses caused by natural disasters, (2) adverse climatic and weather events, (3) animal and plant diseases, and (4) the payment of insurance premiums. Data have been obtained from the DG Competition, in particular, from the statistics on State aid expenditure related to the agricultural sector.

Table 6. State aid expenditure on crisis and risk management measures (2007-2013).

EU MS	Value (€ million)				Total
	Natural disasters	Adverse weather events	Animal and plant diseases	Insurance premiums	
Belgium	-	22.4	163.2	-	185.6
Bulgaria	10.5	19.3	2.0	1.1	32.9
Czech Republic	18.2	0.4	131.7	78.7	229
Denmark	-	-	61.0	-	61
Germany	233.3	16.2	557.9	0.9	808.3
Estonia	0	-	4.9	0.0	4.9
Ireland	100.3	4.0	206.9	-	311.2
Greece	152.9	991.1	-	-	1144
Spain	29.5	225.0	283.9	2123.0	2661.4
France	610.9	934.3	396.7	66.4	2008.3
Croatia ^[1]	-	-	-	-	
Italy	60.5	414.8	232.6	941.0	1648.9
Cyprus	42.6	68.2	15.5	28.7	155
Latvia	-	0.6	2.4	3.6	6.6
Lithuania	2.7	43.9	2.2	40.4	89.2
Luxembourg	-	10.3	3.3	8.6	22.2
Hungary	30.1	91.1	112.2	-	233.4
Malta ^[2]	-	-	-	0.0	
Netherlands	0.2	14.8	195.4	0.5	210.9
Austria	10.7	2.5	28.8	250.2	292.2
Poland	148.5	189.4	395.4	203.3	936.6
Portugal	0.1	117.7	-	0.0	117.8
Romania	609.8	0.7	30.5	16.2	657.2
Slovenia	11.9	12.8	62.7	46.6	134
Slovakia	5.6	3.9	8.7	9.3	27.5
Finland	0.3	16.3	10.5	-	27.1
Sweden	185.1	-	112.5	-	297.6
United Kingdom	2.7	1.0	1241.6	-	1245.3
Total (EU-28)	2266.4	3200.7	4262.5	3818.5	13548.1

Note: The symbol "-" means non-available data. [1] [2] Data for Croatia and Malta not found.

Source: Own elaboration from European Commission data, DG Competition (last update 01.12.2015).

As shown in **Table 6**, most EU MS make use of State aids to support risk crisis management measures in the agricultural sector. Total expenditure of all EU MS amounts to EUR 13548.1 million during the period 2007-2013. This expenditure is **concentrated in a few MS**. Only eight MS (Germany, Greece, Spain, France, Italy, Poland, Romania, and United Kingdom) account for 82% of total expenditure. Among them, Spain, Italy, and France are the MS that give more aids with 20%, 15%, and 12% of total expenditure, respectively.

Looking at the categories of aid, **Table 6** indicates that aids to compensate for losses caused by animal, plant and pest diseases are the most important, in monetary terms, with a total EU expenditure of EUR 4262.5 million, followed by payments for insurance premiums (EUR 3818.5 million), and aids against adverse climatic and weather events (EUR 3200.7 million).

Provisions to compensate losses from natural disasters (e.g. earthquakes, avalanches, landslides, and floods) amounted to EUR 2266.4 million (only 17% of total EU State aid expenditure). Romania and France are the MS that have used most State aids to compensate farmers for damages suffered by natural disasters, EUR 625.2 million and EUR 609.8 million, respectively. Romania is known for being one of the most flood-prone MS in Europe. Heavy rain in the spring and summer of 2005 and 2006 caused the worst floods in 50 years in Romania, with human victims and considerable damages over thousands of hectares of agricultural land. This may explain the high amount of State aid used by **Romania in 2007, EUR 617.7 million under 'natural disasters or exceptional occurrences'**. Also France suffers from floods almost every year. From 2009 to 2011, France granted EUR 453.5 million to cope with localized flash flooding, mainly in the south-east of France. It is worth noting that, in 2013, some MS assigned additional compensations to make good the damages caused by natural disasters. This was the case of Germany, which provided EUR 128.3 million of State aids to cope with the floods in the region of Sachsen-Anhalt. The floods of 2013 and the extent of the resulting damage were classified in Germany and other neighbouring MS, like Austria, Hungary, Italy, and the Czech Republic, as a natural disaster.

With respect to aids to offset losses from animal and plant diseases, **Table 6** shows that the United Kingdom is the MS that has made most use of this type of aid (EUR 1241.6 million, all of them concentrated in provisions against animal diseases). The reason behind is associated to the bovine spongiform encephalopathy crisis experienced in the United Kingdom and extended to the whole EU between 1986 and 1996. Since 2001, United Kingdom has been allocating EU State aids to small and medium-sized enterprises active in the production of cattle, sheep and goats to compensate them for the losses caused by animal diseases, i.e. the compulsory slaughter of flock/herds affected by Transmissible Spongiform Encephalopathies. Germany, France, Poland and Spain have also made use of State aids to compensate farmers hit by animal or plant diseases, although to a lesser extent than the United Kingdom. In all these MS, provisions to fight against animal diseases comprise the bulk of the aids. Aids to cover losses arising from plant diseases only represent 6% of the total expenditure within this category of aids.

Regarding the category 'payment for insurance premiums' and looking at the figures in **Table 6**, it is worth noting that Spain and Italy are by far the MS with the largest State aid expenditure, EUR 2123 million and EUR 941 million, respectively. Only Spain accounts for 56% of the total EU expenditure on insurance premiums. Spain has a very well developed insurance system with a strong public support (Bielza and Garrido, 2009). It is therefore not surprising that the amount of State aids provided by Spain to support insurance premiums was very high, in the order of EUR 300 million per year. Italy also counts with a highly subsidized insurance system, supported by the '*Fondo di Solidarietà Nazionale in Agricoltura*' (FSN). However, the Italian State aid contributions to the payment of insurance systems during 2007-2013 have not been very regular, ranging from EUR 12.7 million in 2007 to EUR 212.4 million in 2008.

Finally, in the category 'aids against adverse climatic and weather events', Greece, France and Italy concentrate most of the expenditure, with EUR 991.1 million (31% of total expenditure), EUR 934.3 million (29%), and EUR 414.8 million (13%), respectively (see **Table 6**). The three mentioned MS are Mediterranean MS with a high level of exposure and vulnerability to climatic risks, which explains their frequent use of State aids to cover income losses from adverse 'ordinary' climatic and weather events.

Table 7 summarizes the total EU State aid expenditure on risk and crisis management measures from 2007 to 2013. In general, it can be perceived that EU State aids on risk and

crisis management in agriculture have been slightly reduced from 2007 onwards, coinciding with the outbreak of the global financial crisis.

Table 7. Total EU State aid expenditure on risk and crisis management measures (2007-2013)

Measure	Value (€ million)							Total
	2007	2008	2009	2010	2011	2012	2013	
Natural disaster	849.7	195.3	365.9	283	172.4	113.9	295.8	2276
Adverse weather events	637.2	809.0	743.6	173.6	387.9	368.2	81.2	3200.7
Animal & plant diseases	742.7	709.4	682.9	667.2	524.8	482.3	453.2	4262.5
Insurance premiums	387.1	683.5	531.3	611.2	553.2	538.5	513.7	3818.5
Total	2616.7	2397.2	2323.7	1735	1638.3	1502.9	1343.9	13557.7

Source: Own elaboration from European Commission data, DG Competition (last update 01.12.2015).

Table 7 shows that the amount of State aids granted at the EU level was reduced from EUR 2616.7 million in 2007 to EUR 1343.9 million in 2013, that is by approximately 50%. The decline in aid levels has been noticeable in all the risk and crisis management measures considered, except for insurance premiums. It was however the most significant in the case of 'aids to compensate for losses caused by adverse weather conditions' (-90%).

4.1.3 Member States typology

This section analyses the progress achieved in the implementation of public-subsidized risk and crisis management measures in the EU-28's agricultural sector for the period 2007-2013. Data collected have been summarized in **Figure 2** and **Table 8**. **Figure 2** classifies MS according to the type of public support used for financing risk and crisis management measures: CAP support and State aids. CAP support is further broken down into support in the framework of the Common Market Organizations for fruit and vegetables and wine sectors and support under Article 68. State aids are also broken down into two categories: **ex-ante aid measures**, basically payments of insurance premiums, and **ex-post aid measures**, that is compensations to mitigate the negative effects of natural disasters, adverse weather events, and animal and plant diseases.

Figure 2. Type of public funds (CAP support or State aids) used by Member States in agricultural risk and crisis management during 2007-2013.

STATE AIDS		MS	CAP SUPPORT		No
			Yes		
			<i>Ex-ante</i> CMO (F&V, wine) (insurance, mutual funds)	<i>Ex-ante</i> Article 68 (insurance, mutual funds)	
Yes	<i>Ex-ante</i> (Insurance)	BG, CZ, DE, FR, IT, CY, NL, AT, RO, SK	FR, IT, NL	ES, LV, LT, LU, PL, SI	
	<i>Ex-post</i> (Natural disasters, adverse weather and diseases)	BE, BG, CZ, DE, FR, IT, CY, NL, AT, PT, RO, SK, UK	FR, IT, HU, NL	IE, EL, ES, LV, LT, LU, PL, SI, FI, SE	
Minimal use	<i>Ex-post</i> (only diseases)			DK, EE	

Note 1: BE: Belgium, BG: Bulgaria, CZ: Czech Republic, DK: Denmark, DE: Germany, EE: Estonia, IE: Ireland, EL: Greece, ES: Spain, FR: France, IT: Italy, CY: Cyprus, LV: Latvia, LT: Lithuania, LU: Luxembourg, HU: Hungary, NL: Netherlands, AT: Austria, PL: Poland, PT: Portugal, RO: Romania, SI: Slovenia, SK: Slovakia, FI: Finland, SE: Sweden, UK: United Kingdom. Croatia (HR) and Malta (MT) are not included in the figure because data have not been found.

Note 2: Yellow colour means use of CAP aids only; Light pink, use of *ex-ante* State aids plus CAP aids; Dark pink, use of *ex-post* State aids plus CAP aids; Light blue colour, use of *ex-ante* State aids but no CAP aids; Dark blue, use of *ex-post* State aids but no CAP aids; Green colour, no CAP aids and very little use of State aids.

Source: Own elaboration

Table 8 shows the public expenditure incurred by Member States on agricultural crisis and risk management measures in the period 2007-2013. It includes all 28 EU MS and all types of *ex-post* and *ex-ante* measures.

Table 8. Public expenditure on agricultural crisis and risk management measures in the EU-28 from 2007 to 2013.

EU MS	<i>Ex-post</i>	<i>Ex-ante</i>			Total	
	Crisis managem.	Risk management			Value (€ million)	%
	Compensations ^[1]	Insurance		Mutual funds		
	State aids (€ million)	CAP (€ million)	State aids (€ million)	CAP (€ million)		
Belgium	185,6	4,87	-	0	190,47	1,3
Bulgaria	31,8	3,26	1,1	0	36,16	0,2
Czech Republic	150,3	0,25	78,7	0	229,25	1,6
Denmark	61	0	-	0	61	0,4
Germany	807,4	18,3	0,9	0	826,6	5,7
Estonia	4,9	-	0	0	4,9	0,0
Ireland	311,2	-	-	0	311,2	2,1
Greece	1144	-	-	0	1144	7,9
Spain	538,4	0	2123	0	2661,4	18,4
France	1941,9	351,18	66,4	84	2443,48	16,9
Croatia ^[2]	-	-	-	-	0	0,0
Italy	707,9	407,03	941	0	2055,93	14,2
Cyprus	126,3	0,88	28,7	0	155,88	1,1
Latvia	3	-	3,6	0	6,6	0,0
Lithuania	48,8	-	40,4	0	89,2	0,6
Luxembourg	13,6	-	8,6	0	22,2	0,2
Hungary	233,4	15	-	0	248,4	1,7
Malta ^[3]	-	-	0	-	0	0,0
Netherlands	210,4	39	0,5	0	249,9	1,7
Austria	42	0,32	250,2	0	292,52	2,0
Poland	733,3	-	203,3	0	936,6	6,5
Portugal	117,8	7,81	0	0	125,61	0,9
Romania	641	1,49	16,2	0	658,69	4,5
Slovenia	87,4	-	46,6	0	134	0,9
Slovakia	18,2	0,72	9,3	0	28,22	0,2
Finland	27,1	0	-	0	27,1	0,2
Sweden	297,6	0	-	0	297,6	2,1
United Kingdom	1245,3	0,36	-	0	1245,66	8,6
Total (EU-28)	9729,6	850,48	3818,5	84	14482,58	100

Note: The symbol "-" means non-available data. [1] Compensation payments for losses caused by natural disasters, adverse weather, and plant and animal diseases. [2][3] Data for Croatia and Malta not found.

Source: Own elaboration from European Commission data.

4.1.3.1 Member States using ex-post crisis management measures

Table 8, all EU MS have ever used public ex-post compensation payments (State aids) to make good the damage caused by natural disasters, adverse weather events or plant and animal diseases between 2007 and 2013. Thus far, the EC has very few instruments to face crises with direct aids²⁵. This, together with budget shortfalls, has meant that most MS have resorted to State aids to respond to crisis situations.

²⁵ Since 2002, the EU disposes of the European Union Solidarity Fund (EUSF) from Regional Policy. It has been used in 24 MS for 70 disasters covering different catastrophic events including floods, forest fires,

Table 8 shows that the EU has spent EUR 9729.6 million in *ex-post* crisis management measures, making up some 67% of total EU expenditure on risk and crisis management from 2007 to 2013. Some MS, like Denmark, Estonia, Ireland, Greece, Finland, and Sweden, in dark blue and green boxes in **Figure 2**, have used only public support to fund *ex-post* crisis management measures. Among them, Denmark and Estonia are noted for having used a very low amount of public support during the period considered, EUR 61 million and EUR 4.9 million, respectively, all targeted to compensate producers for losses caused by animal diseases. Greece, the fifth MS with the largest expenditure on agricultural risk and crisis management measures (almost 8% of the total), spent EUR 1144 million in compensations for natural disasters and adverse weather events. Sweden divided its public support (EUR 297.6 million) in payments to deal with natural disasters and diseases. Ireland and Finland applied EUR 311.2 million and EUR 27.1 million, respectively, in all three crisis management measures considered (natural disasters, adverse weather events, and animal and plant diseases).

4.1.3.2 Member States using *ex-post* (crisis) and *ex-ante* (risk) management measures

- **With targeted *ex-ante* support for the fruit and vegetable and wine sectors**

As seen in **Figure 2** (left dark pink box), thirteen EU MS, namely, Belgium, Bulgaria, Czech Republic, Germany, France, Italy, Cyprus, the Netherlands, Austria, Portugal, Romania, Slovakia and the United Kingdom, combined *ex-post* crisis management measures with targeted *ex-ante* risk management measures for the fruit and vegetables and wine sectors. Belgium, Czech Republic, the Netherlands, Austria, and the United Kingdom supported insurance premiums in the F&V sectors, while Bulgaria, France, Portugal, Romania, and Slovakia did so in the wine sector. Germany, Italy, and Cyprus funded insurance premiums both in the F&V and wine sectors.

As explained above, in **Section 4.1.1.1**, the amount of public support given to the implementation of risk management measures under the CMO of F&V and wine sectors has been very low (EUR 173.47 million in the UE from 2007 to 2013). That is why, in order to ensure wider coverage, most EU MS using targeted measures for the F&V and wine sectors, regularly apply additional *ex-ante* risk management measures under Article 68 or State aids. Only Belgium, Portugal, and the United Kingdom have subsidized insurance premiums using exclusively CAP support for the F&V and wine sectors. However, in these three MS, the expenditure related to insurance programs is very low compared with the expenditure on crisis management measures. In the United Kingdom, the fourth MS with the largest expenditure on risk and crisis management measures (8.6% of the total, see **Table 8**), most aids are directed to compensate producers for losses caused by animal diseases.

- **With limited *ex-ante* support for all sectors**

The right dark pink box in **Figure 2** includes the MS that have chosen to extend the support for risk management measures to all agricultural sectors under Article 68. These are France, Italy, Hungary, and the Netherlands.

As seen in **Section 4.1.1.2**, France and Italy have been by far the most active users of Article 68 risk management provisions, being France the only MS to have implemented mutual funds. Looking at **Table 8**, it can be noticed that France and Italy are also one of

the most significant MS in terms of absolute public expenditure. Over the period considered (2007-2013), France ranks second in total EU expenditure and Italy third, with EUR 2443.48 million (almost 17% of the total) and EUR 2055.93 million (14.2%), respectively.

- **With wide ex-ante support**

This category comprises all MS using State aids to support the implementation of insurance premiums. These MS are included in the boxes with light pink and light blue colours in **Figure 2**.

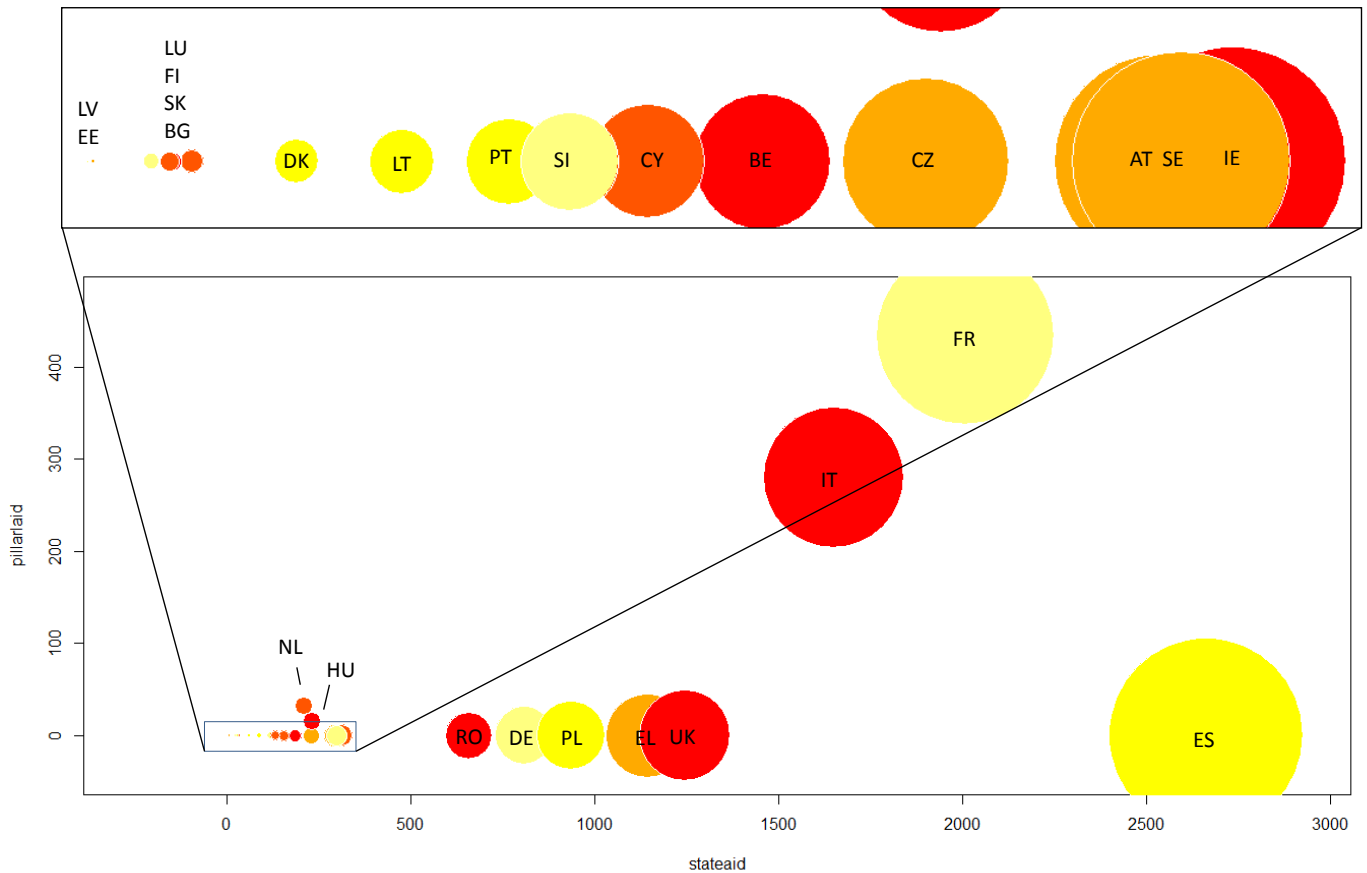
Spain, Latvia, Lithuania, Luxembourg, Poland and Slovenia (in the light blue box of **Figure 2**) have used both *ex-ante* State aids (payments for insurance premiums) and *ex-post* State aids (compensations for adverse weather conditions and animal and plant diseases) to support the implementation of risk management measures without the added help of any kind of CAP support. Among them, Spain and Poland are the most significant MS in terms of public support shows that, over the period considered (2007-2013), Spain has used EUR 2661.4 million (18.4% of total) and Poland EUR 936.6 million (6.5%), ranking first and six in terms of absolute EU public expenditure. In the case of Spain, the lion's share of expenditure goes on insurance premiums. Poland's expenditure on risk management measures is however more equally divided among compensations for animal and plant diseases, adverse weather events and payments for insurance premiums.

The rest of MS included in this category (Bulgaria, Czech Republic, Germany, France, Italy, Cyprus, the Netherlands, Austria, Romania, and Slovakia, within the boxes in light pink colour in Figure 2), are also included in previous categories for having made use of CAP support together with *ex-post* and *ex-ante* State aids.

Finally, it is worth noting that, according to **Figure 2** (boxes in yellow colour), there is no a single MS that uses only CAP aids (either CMOs or Article 68 funds) to support the implementation of agricultural risk management measures. All European MS using CAP support make also use of some sort of State aids (*ex-ante* or *ex-post*).

In order to complete the picture of public aids support, the authors elaborate a quantitative analysis of risk-management-aids distribution. The analysis is shown in Figure 3 and shows the relative aids in relation to the agricultural output by MS. Data on agricultural output have been obtained from Eurostat, output of the agricultural industry for 2013 at basic prices.

Figure 3. Absolute risk-management aids distribution by MS (million €) in 2007-2013. Pillar 1 Aids in the vertical axis and State Aids in the horizontal axis

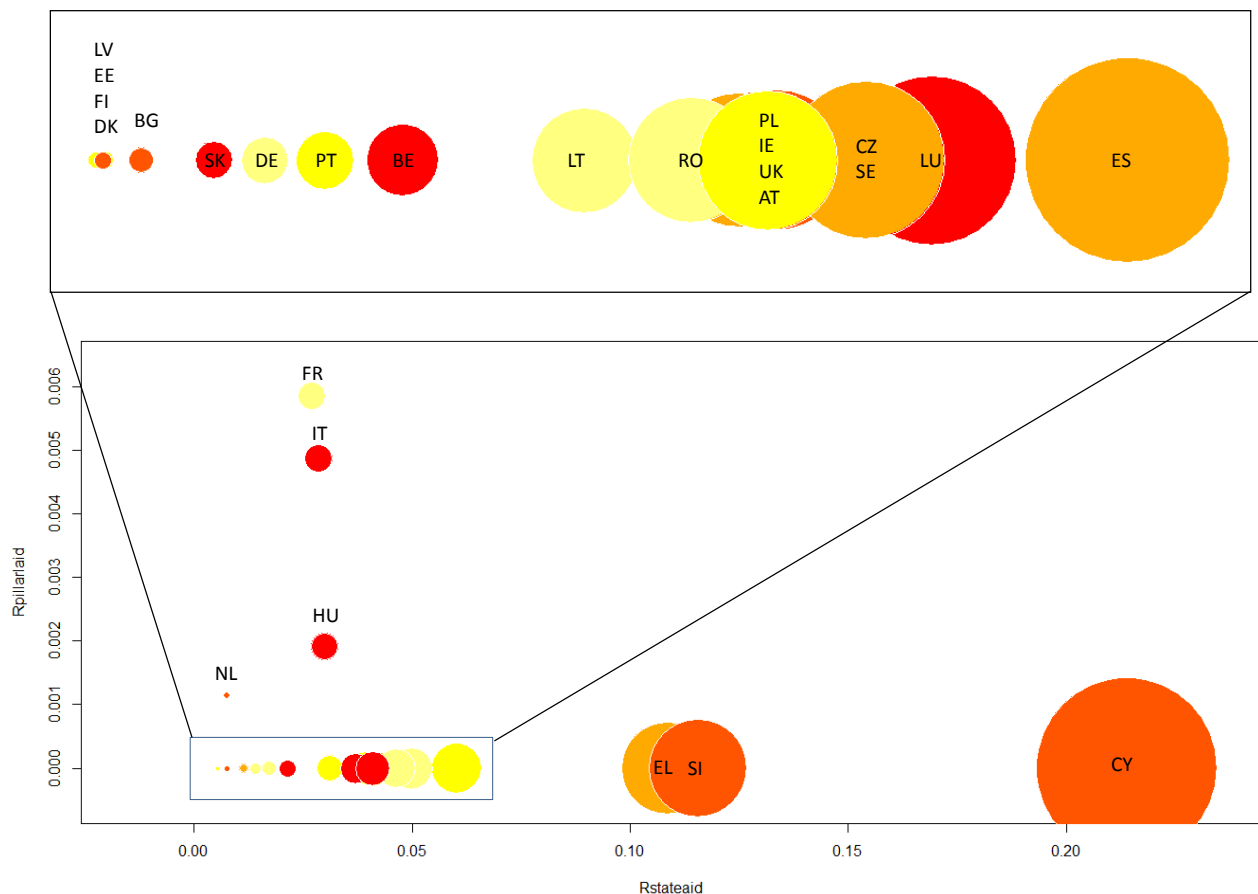


Note: The figure excludes data in CMO support measures due to lack of homogenous data availability; BE:Belgium, BG:Bulgaria, CZ:Czech Republic, DK:Denmark, DE:Germany, EE:Estonia, IE:Ireland, EL:Greece, ES:Spain, FR:France, IT:Italy, CY:Cyprus, LV:Latvia, LT:Lithuania, LU:Luxembourg, HU:Hungary, NL:Netherlands, AT:Austria, PL:Poland, PT:Portugal, RO:Romania, SI:Slovenia, SK:Slovakia, FI:Finland, SE:Sweden, UK:United Kingdom. Croatia (HR) and Malta (MT) are not included in the figure because data have not been found.

Source: Own elaboration from European Commission (DG Competition, DG for Agriculture and Rural Development) and Eurostat data.

From **Figure 3** we observe that there is a group of MS (integrated by France and Italy) where risk management public aids are supported by Pillar 1 measures (Article 68). Hungary and the Netherlands lean slightly on the Pillar 1 measures. However, the bulk of MS is basing their public aids to risk management exclusively on State aids (Spain, United Kingdom, Greece, Poland, Germany and Austria, most remarkably). Regarding absolute volumes, **Spain’s public aid is the biggest in absolute terms, followed by Italy, France, United Kingdom, Greece, Poland and Germany.** Mediterranean MS face a higher variability of climatic risks, yield and income than central Europe MS, where risk appears low. According to Bielza et al. (2008), this is one of the major reasons why Spain, Italy and France usually occupy the top of the ranking in terms of risk and crisis management expenditure.

Figure 4. Relative risk-management aids distribution by MS. In relation to output to the agricultural sector at basic prices. Pillar 1 Aids in the vertical axis and State Aids in the horizontal axis



Note: The figure excludes data in CMO support measures due to lack of homogenous data availability; BE: Belgium, BG: Bulgaria, CZ: Czech Republic, DK: Denmark, DE: Germany, EE: Estonia, IE: Ireland, EL: Greece, ES: Spain, FR: France, IT: Italy, CY: Cyprus, LV: Latvia, LT: Lithuania, LU: Luxembourg, HU: Hungary, NL: Netherlands, AT: Austria, PL: Poland, PT: Portugal, RO: Romania, SI: Slovenia, SK: Slovakia, FI: Finland, SE: Sweden, UK: United Kingdom. Croatia (HR) and Malta (MT) are not included in the figure because data have not been found.

Source: Own elaboration from European Commission (DG Competition, DG for Agriculture and Rural Development) and Eurostat data.

In **Figure 3**, when considering the amount of public support to risk management in relative terms, that is, considering the public aids in relation to the value of the agricultural output, we observe the diminished importance in relative terms of the Pillar 1 measures, and the increase of State aid measures. Furthermore, now the most supported risk management systems are those corresponding to: Cyprus (15.52%), and Slovenia (10.54%). The weight of the public support in the following MS is: Greece (9.43%), Spain (5.97%), Luxembourg (4.99%), Czech Republic (4.53%), United Kingdom (4.10%), Austria (4.06%), Italy and Poland (both 3.33%), Lithuania (3.03%), Hungary (2.8%), Ireland (2.73%), France (2.47%), Belgium (2.15%), Sweden (1.75%), Portugal (1.73%) and Germany (1.23%). Slovakia, Netherlands, Denmark, Finland, Estonia, Bulgaria, Latvia and Romania stand below the 1% of agricultural output value for public support of risk management measures. In Greece and Cyprus insurance is public and compulsory, which stand in the first and third position of public aid in CPM per euro of agricultural production. Then, the results evidence that the level of development of agricultural insurance in each MS is linked also to the economic support given by each Member State to the insurance systems (Bielza et al., 2008).

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4.2 Foreseen implementation of risk management tools for the period 2014-2020

4.2.1 Within the CAP

4.2.1.1 Pillar 1: Common Market Organization

Fruit and vegetable sector

The possibility of supporting crisis prevention and management measures under EU funding in the fruit and vegetables and wine sectors are maintained in the new CMO, adopted in 2013²⁶. Crop insurance and support for the setting up of mutual funds may continue being part of the operational programs of the POs. The features and functions of these measures, exposed in section 3, remained also unchanged. **Table 9** shows the programmed expenditure on harvest insurance and mutual funds in the fruit vegetables and wine sectors for the period 2014-2020.

Table 9. Programmed expenditure on harvest insurance and mutual funds in the fruit and vegetables and wine sectors (2014-2020).

EU MS	Value (€ million)	
	Fruits & vegetables	Wine ^[1]
Germany	-	5.11
Italy	0	110.14
Cyprus	-	0.96
Portugal	-	28.42
Romania	-	1.53
Slovakia	-	0.92
Total	-	147.08

Note: The table includes only the MS with expected measures. The symbol "-" means non-available data

Source: Own elaboration from European Commission data, [1] Data: 2014-2018, extracted from DG for Agriculture and Rural Development, Wine statistics and data.

²⁶ Regulation (EU) No 1308/2013 of 17 December 2013.

As seen in Table 9, the reported budgetary commitments for harvest insurance and mutual funds under Pillar 1 in the F&V sector are not complete. It is very difficult to know which specific measures have been planned by POs for 2014-2020, because information is released once the reporting period is expired. Only Italy, in its RDP 2014-2020, has announced that no funds will be allocated to cover insurance premiums and support the setting-up of mutual funds. Petriccione et al. (2011) indicate that most POs are in favour of keeping CPM measures within operational programs, which are seen as an essential mechanism to guarantee the competitiveness and growing of the F&V sector. However, as was already the case during the last CAP period (2007-2013), the implementation of these CPM measures is expected to be very low, even null in the case of mutual funds.

The EC report on the implementation of the provisions concerning producer organizations, operational funds and operational programs in the fruit and vegetables sector since the 2007 reform (European Commission, 2014a) notes that a possible reason for the very low use of the CPM measures is the small size of many POs. The low volumes of products covered by these small POs and the limited financial means put at their disposal make current CPM measures *'ineffective or simply not attractive'*. Other reason for the low use of CPM is the considerable amount of red tape involved, which makes the procedure and adoption of CPM measures extremely difficult and complex. Petriccione et al. (2011) points out that operators of the F&V industry and POs recognize the utility and the necessity to keep CPM measures alive, however, they are sceptical about their effectiveness. Most POs complain about the increasing complexity of CPM measures and the inadequate level of EU support. In particular, they ask for further and more powerful instruments to create an effective safety net (including revenue or income stabilization programs), support for improving the concentration of the F&V supply, and larger financial availability of funds for the set of measures.

Melo (2015) criticizes the underuse of the CPM measures in a sector such as the F&V where market crisis are recurring, and alerts the EC to the fact that the current CPM scheme may be insufficient to manage large-scale crises coming up from sanitary problems (such as the 2011 *E. coli crisis*) and political tensions (such as the Russian embargo). Actually, the program for emergency market measures for perishable fruit and vegetables, adopted by the Commission in the wake of the Russian ban in August 2014 and extended until the end of 2016²⁷, confirms that an improvement in the CPM measures is necessary. Taking into account that the availability of resources within the operational funds of POs is very limited and that it is possible to finance insurance with other CAP measure, Petriccione et al. (2011) recommend narrowing the support to insurance only to the coverage of POs' risks related to the reduction of product marketed by their members. Besides that, Petriccione et al. (2011) advise to relax financial limits allowing for an intertemporal variation of the CPM endowment in the operational fund, according to the real needs of intervention, and to study the possibility of introducing security funds within POs, with an approach similar to the AgriStability program implemented in Canada²⁸. The latter could be particularly useful for transferring risk and making financial resources more stable overtime.

Wine sector

Data extracted from the European Commission's Directorate-General for Agriculture and Rural Development, Wine statistics, reveal that the application of harvest insurance and mutual funds in the wine sector from 2014 to 2020 is expected to be very low and concentrated only in a few MS, namely Italy, Portugal, Romania, Germany, Cyprus, and

²⁷ http://ec.europa.eu/agriculture/newsroom/219_en.htm.

²⁸ The AgriStability program in Canada is a margin-based program that provides income support when a producer experiences larger income losses. For more information about the functioning of this program see AAFC (2012), Antón et al. (2011), OECD (2011), and <http://www.agr.gc.ca/eng/?id=1291990433266>

Slovakia (see **Table 9**). Italy stands out with higher levels of expenditure for wine in harvest insurance measure (EUR 110 million, expected for 2014-2018). Data from the EC (European Commission, 2014b) reveal that Italy has already spent EUR 30.2 million in crop insurance for wine in 2014. Gaeta and Corsinovi (2014) analyse the EU budgetary prevision for 2014-2018, communicated to the EC (DG-Agri) in early August 2013, and confirm that the committed budget for CPM measures remains very limited and virtually unchanged. EU provision for crop insurance is planned to be around EUR 29.503 million per year (i.e. EUR 147.515 million from 2014 to 2018), while no MS have planned to distribute resources for mutual funds.

The reasons that explain this low implementation of CPM measures (particularly, crop insurance and mutual funds) are also similar to those exposed for the F&V sector: limited amount of resources and the possibility to finance these CPM measures with other CAP schemes. Unless a rethinking of their functions and features would be undertaken, crop insurance and mutual funds will probably continue to have little role in the CMO. Strengthening the link to the operation of POs (e.g., providing incentives to POs implementing risk management measures) could be a way to keep these CPM measures alive. Sardone et al., (2012) also propose the implementation of market intelligence activities to help in anticipating possible crisis and intervening in a timely and efficient manner.

4.2.1.2 Pillar 2: Regulation on support for Rural Development

Known as the “second pillar” of the CAP, the Rural Development Programme (RDP) is oriented to help *“the rural areas of the EU to meet the wide range of challenges and opportunities that face them in the 21st century”*²⁹. As further explained in **Section 3**, the risk management instruments moved to Pillar 2, and therefore in Regulation (EU) No 1305/2013, placing risk management under rural development. The particular risk management (RM) policies are implemented at national and/or regional level; and their implementation is optional for MS. Three different instruments available for RM are (1) ‘crop, animal and plant insurances’, (2) ‘mutual funds’, and (3) an ‘income stabilisation tool’ (under regulations 36 to 39 - substituting Article 68 in Regulation (EC) No 73/2009-. See **Section 3** for a detailed description).

The novelty of the instruments available is the introduction of an income stabilization tool. The EC proposed an income stabilization tool given the concerns about increasing farm income volatility after 2013 CAP reforms (Meuwissen et al., 2011). These same authors preview problems in the implementation, related to information asymmetry and the existence of other instruments not fully explored. While it is true that information about the expected expenditure on RM is not completely available, the use of the income stabilization tool is low-used.

Table 10 gathers the available information relating to risk management measures under RDP for the period 2014-2020. Data is difficult to get due to the fact that the process of approval of MS RDP is long and information is not easy to gather, and to the fact that the data obtained are expected expenditure.

²⁹ http://ec.europa.eu/agriculture/rural-development-2014-2020/index_en.htm

Table 10. Programmed expenditure on risk management measures under Rural Development Programs (2014-2020).

	Insurance premium	Mutual funds	Income stabilisation tool	TOTAL (€ million)	EU contribution (%)
Belgium - <i>Flanders</i>	5.1	0	0	5.1	63
Spain - <i>Castilla y León</i>	0	0	14	14	53
France	540.7	60	0	600.7	97.85
Croatia	57	0	0	57	85
Italy	1396.8	97	97	1590.8	45
Latvia	10	0	0	10	68
Lithuania	17	0	0	17	85
Hungary	76.3	0	19	95.3	82
Malta	2.5	0	0	2.5	75
Netherlands	54	0	0	54	27
Portugal					
- Mainland	50	0	0	50	82
- Azores	2.4	0	0	2.4	85
- Madeira	0.8	0	0	0.8	82
Romania	0	200	0	200	85
Total	2212.6	357	130	2699.6	63

Note: The table includes only the MS with expected measures.

Source: Own elaboration from European Commission data, DG for Agriculture and Rural Development, Rural Development 2014-2020 country files (last update 20.01.2016)

As shown in **Table 10**, 12 MS apply the CPM measures, 9 at national level (IT, FR, RO, HU, HR, NL, LT, LV and MT), and 3 MS regionally (PT-Mainland, ES-Castilla y León, BE-Flanders, PT-Azores, and PT-Madeira). From the data obtained, it is clear that Italy and France have the biggest expected expenditures (EUR 1591 million and EUR 600 million, respectively). The level of programmed expenditure is followed by Romania (EUR 200 million), and afar off by Hungary, Portugal, Croatia and the Netherlands (expenditure between EUR 95 and 54 millions). Using a very little amount, Lithuania, Spain (in the Castilla y León region), Latvia, Flanders (Belgium) and Malta follow with levels of expenditure between 17 and 2.5 EUR millions approx. Greece and Bulgaria dropped out the risk management measures (Kantor Group, 2015). In particular, for the period 2014-2020 France took the opportunity given by the EU Commission to transfer credits associated to risk management from the 1st to the 2nd pillar. This choice was motivated by higher flexibility and selection of measures offered in this new framework (crop insurance, mutual funds). 2nd pillar allows for pluri-annual planning, which grants more visibility to risk management instruments, while not changing the fundamentals of instruments already existing such as crop insurance.

The annual EAFRD allocation addressed to support risk management in France is expected to decrease from 2015 to 2020 (2015, EUR 120.13 million; 2016, EUR 112,8 million; 2017, EUR 100,12 million; 2018, EUR 100,12 million; 2019, EUR 87.45 million; 2020, EUR 80,13 million)³⁰, while needs are supposed to increase. Planned amounts may then be insufficient

³⁰ French program of risk management and technical assistance. EAFRD and French Ministry of Agriculture. Available at <http://agriculture.gouv.fr>

to provide the maximum subsidization level of 65% for crop insurance policies as well as all the other commitments of FNGRA. In that context, year 2017 may represent an opportunity to transfer additional credits from the 1st to the 2nd pillar.

The distribution of risk and management measures has a preference for the insurance (namely measure 17.1 in the RDP). From the 12 MS supporting Pillar 2 risk prevention and management, 10 MS use it with the exception of Spain and Romania. Spain already holds a highly developed insurance system based upon State aids measures. The extended use of the insurance measure is due, among others, to the fact that it continues being the most used instrument as continuation of the previous period.

The mutual funds instrument (also known as measure 17.2) has been chosen by Romania, Italy and France. Romania has the highest expenditure (EUR 200 million), being Italy and France below the EUR 100 million of expenditure for the period.

For the income stabilization fund (measure 17.3), three MS apply it: Italy (near EUR 100 million), Hungary (EUR 19 million) and the Spanish region Castilla y León (EUR 14 million). Initially in Castilla y León, the measure was addressed exclusively to milk-producing cows. But, after consultation with DG AGRI, it appeared that it was extended to other sectors (Kantor Group, 2015). Italy is the only MS that is going to divide its Pillar risk management amongst the three measures (17.1, 17.2, and 17.3).

Total public spending committed for the three tools (insurance, mutual funds, and IST) is EUR 2699.6 million, with over EUR 1700.7 million (63%) coming over CAP Pillar 2 budget. These EUR 1700.7 million represent less than 2% of the Pillar 2 funds and 0.4% of the total 2014-2020 CAP budget, which means that CAP support to agricultural risk management continues to be very low.

Table 11 shows the number of agricultural holdings supported by EU risk management instruments under RDP (2014-2020). Furthermore, it gives a number of the percentage of farms covered by risk management measures.

Table 11. Number of agricultural holdings and % of farms supported by EU risk management instruments under Pillar 2 (2014-2020).

	Estimated number of participating holdings			TOTAL	% of farms covered
	Insurance premium	Mutual funds	Income stabilisation tool		
Belgium - <i>Flanders</i>	1300	0	0	1300	5
Spain - <i>Castilla y León</i>	0	0	950	950	0.97
France	97000	398000	0	495000	95.91
Croatia	8300	0	0	8300	3.54
Italy	80000	5000	5000	90000	5.55
Latvia	4000	0	0	4000	4.92
Lithuania	1450	0	0	1450	0.75
Hungary	10500	0	4500	15000	3.10
Malta	1500	0	0	1500	11.97
Netherlands	1300	0	0	1300	1.8
Portugal					
- Mainland	785	0	0	785	0.28
- Azores	150	0	0	150	1.11
- Madeira	350	0	0	350	2.57
Romania	0	15000	0	15000	0.39
Total	206635	418000	10450	635085	

Note: The table includes only the MS with expected measures.

Source: Own elaboration based on European Commission data, Member states' 2014-2020 rural development programmes.

As seen in **Table 11**, the expected number of agricultural holdings supported by EU risk management instruments under Pillar 2 is of approximately 635,000 for the whole EU. The French mutual funds (398,000), French also insurance system (97,000) and Italian insurance (80,000) are the highest measures with higher impact on number of agricultural holdings supported. It is followed by Romanian mutual funds (15,000) and insurance measures from Hungary (10,500).

Regarding the number of farms supported, the differences among MS are high. From the almost 96% of French farmers supported by the Pillar 2 risk measures to the 0.28% of mainland Portugal, the distance in between is huge. France distance to the following MS is also very high. The following MS with a higher percentage of supported farms is Malta, approaching 12%. The high number of French farmers may be due to the fact that mutual fund measure is mandatory for all farmers and all main agricultural organisations are part of the mutual funds (Kantor Group, 2015).

4.2.2 State aids in the agricultural sector

The use of State aids for supporting the application of risk management tools will likely continue during the period 2014-2020. **Table 12** includes data for the 28 EU MS on State aid expenditure in 2014 in (1) compensations for losses caused by natural disasters, (2) adverse climatic and weather events, (3) animal and plant diseases, and (4) payments of insurance premiums. Data have been obtained from the DG Competition, in particular, from

the statistics on State aid expenditure related to the agricultural sector (agriculture aid by objective).

Table 12. State aid expenditure on risk and crisis management measures (year 2014).

EU MS	Value (€ million)				Total
	Natural disasters	Adverse weather events	Animal and plant diseases	Insurance premiums	
Belgium	-	0	14.5	-	14.5
Bulgaria	0	2	1.8	0.3	4.1
Czech Republic	0	-	2.2	11.7	13.9
Denmark	0	-	12.8	-	12.8
Germany	80.3	0	104	-	184.3
Estonia	-	-	0	0	0
Ireland	0	-	23.9	-	23.9
Greece	4	1.7	-	-	5.7
Spain	0	0	3.5	219.7	223.2
France	46.1	10.5	1	0.1	57.7
Croatia ^[1]	-	-	-	-	-
Italy	18.2	20	27.1	123.8	189.1
Cyprus	1.3	-	1.4	3.8	6.5
Latvia	-	-	0	-	0
Lithuania	-	-	1.8	2.1	3.9
Luxembourg	-	0	0.1	1.5	1.6
Hungary	8.5	0.6	19.5	-	28.6
Malta ^[2]	-	-	-	-	-
Netherlands	0	-	19.7	0.4	20.1
Austria	0.7	17.7	4.2	41.9	64.5
Poland	1.8	3.6	72.1	38.6	116.1
Portugal	-	0	-	0	0
Romania	-	-	0	7	7
Slovenia	0	5.3	6.3	3	14.6
Slovakia	0	0	2	0	2
Finland	0	1.4	0.2	-	1.6
Sweden	-	-	10.3	-	10.3
United Kingdom	-	0.2	151.5	-	151.7
Total (EU-28)	160.9	63	479.9	453.9	1157.7

Note: The symbol "-" means non-available data. [1] [2] Data for Croatia and Malta not found.

Source: Own elaboration from European Commission data, DG Competition (last update 28.02.2016).

As shown in **Table 12**, most of EU MS continued to make use of State aids in 2014 to support risk and crisis management measures in the agricultural sector. Total State aid expenditure of all EU MS in 2014 amounts to EUR 1157.7 million, which is less than the expenditure made in the previous year (EUR 1343.9 million in 2013, see **Table 7**). This confirms the downward movement in State aid expenditure on risk and crisis management measures initiated in 2007-2008 with the outbreak of the financial crisis. The 2015 State Aid Scoreboard³¹ also corroborates that EU agriculture-related State aid fell every year. While in 2014 the total equated to EUR 7600 million, the 2008 total was EUR 10875 million. State aids on risk and management measures for agriculture in 2014 (EUR 1157.7 million) only represent

³¹ http://ec.europa.eu/competition/state_aid/scoreboard/index_en.html

15% of the total EUR 7600 million of State aids spent on farming and rural development, and 0.01% of EU Gross Domestic Product.

Only three MS (Estonia, Latvia and Portugal) did not use State aids to apply ex-ante or ex-post risk measures in 2014. The rest of the 28 EU MS did use State aid provisions, in particular Spain, Italy, Germany, United Kingdom, Poland, France and Austria, which accounted for 85% of total expenditure. So, as happened in the previous period (2007-2013), State aid expenditure in 2014 was concentrated in a few MS. Spain, Italy, and Germany are the MS that have made the most active use of State aids in 2014 with 19.3%, 16.5% and 16% of total expenditure, respectively. In the case of Italy, State aids in 2014 (EUR 189.1 million) were much lower than the previous year 2013 (EUR 250 million). This reduction in State aids expenditure is expected to continue over the period 2014-2020, basically because most of the funds for crisis and risk management in agriculture in 2014-2020 have been budgeted under Pillar 2 (EUR 1590.8 million). Premised on the assumption that total expenditure in 2014-2020 (under CAP and State aids) will foreseeably remain the same than in the period 2007-2013, in the order of EUR 2000 million, little room is left for State aids³². Also, it is worth noting that France is no more in the top three of MS with the highest State aid expenditure, which can be explained by the fact that France is trying to focus on prevention measures within the new CAP and trying to avoid using too much State aids. However, there are some critical issues that can push France to increase the use of State aids from 2014 to 2020:

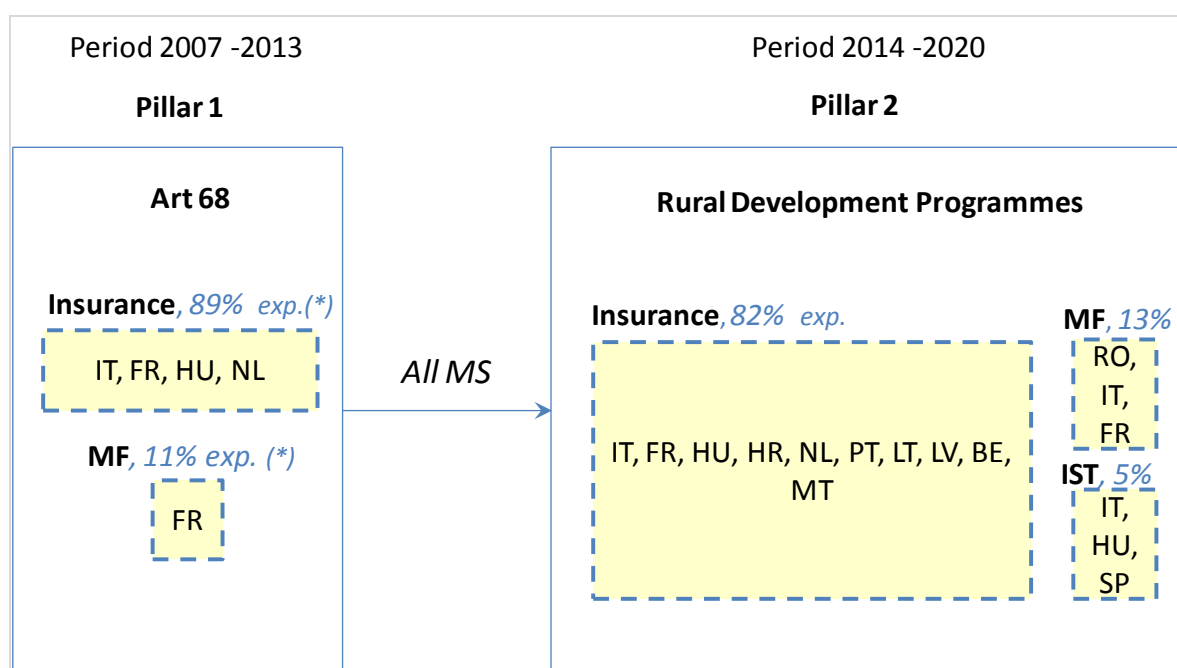
- France wants to increase the scope of crop insurance in order to reduce the extent of "non insurable" risks whose compensation requires State aids. However, the budget for crop insurance subsidies forecast within Pillar 2 is limited (EUR 540 million for the period 2014-2020, see **Table 10**) and France has already spent EUR 113 million in 2014 (1/5 of the total amount budgeted for 7 years). This suggests that the amount of State aids will increase as long as strong budgetary constraints exist. Also, some funds might be transferred from Pillar 1 to Pillar 2 after 2017 in order to increase CAP payments for insurance subsidization.
- The EU regulation does only allow subsidizing 'administrative cost of setting up mutual funds and the amounts paid as financial contributions to farmers'. Consequently, State aids may prevail to finance ex-post major crises (such as pandemia) that could not be afforded by mutual funds. This is a major issue for France because the extent of the FMSE is increasing (more and more productions/hazards are concerned), the EU contribution is weak (EUR 60 million for the period) and there is no feedback on a long period.

Looking at the categories of aid, **Table 12** indicates that aids to compensate for losses caused by animal, plant and pest diseases are the most important, in monetary terms, with a total EU expenditure of EUR 479.9 million in 2014, closely followed by the payments for insurance premiums (EUR 453.9 million), and at some distance by aids against natural disasters (EUR 160.9 million) and adverse climatic and weather events (EUR 63 million). These results are similar to those found for the previous period (2007-2013). In relation to aids to offset losses from animal and plant diseases, the United Kingdom continues to be the MS that uses most this type of aid (EUR 151.5 million in 2014), followed by Germany (EUR 104 million). Regarding the category 'payment for insurance premiums', Spain and Italy are by far the MS with the largest State aid expenditure, EUR 219.7 million and EUR 123.8 million, respectively in 2014. As regards provisions to compensate losses from

³² For the period 2014-2020, Italy has budgeted EUR 110.14 million under Pillar 1 and EUR 1590.8 under Pillar 2, mainly in the form of insurance premiums although the new IST is gaining increasing attention. Considering a total expenditure of EUR 2000 million for the whole period 2014-2020, only EUR 300 million are left for State aids. Of the EUR 300 million of State aids, EUR 189.1 million have already been spent in 2014.

natural disasters, Germany and France are the MS that have compensated farmers most for damages suffered by storms and light earthquakes in 2014, with EUR 80.3 million and EUR 46.1 million, respectively. Finally, in the category 'aids against adverse climatic and weather events', Italy and Austria concentrated most of the expenditure, with EUR 20 million and 17.7 million, respectively.

Figure 5. Transfer from expenditure on agricultural risk management measures from Pillar 1 – Article 68 (2007-2013) to Pillar 2 - Rural Development Programmes (2014-2020).



Note: MS stands for member states; MF, 'mutual fund'; and IST, for 'income stabilization tool'. BE:Belgium, SP:Spain, FR:France, HR: Croatia, IT:Italy, LV:Latvia, LT:Lithuania, HU:Hungary, MT: Malta, NL:Netherlands, PT:Portugal, RO:Romania. MS ordered by level of expenditure. The table includes only the MS with expected measures. (*) Accounted with available data, from 2010 to 2013.

Source: Own elaboration

4.2.3 Changes in Member States typology

We concentrate on the transfers on risk management measures from Pillar 1 – Article 68 (2007-2013) to Pillar 2- Rural Development Programs (2014-2020). We do not comment on the Pillar 1 F&V and wine CMO risk management measures. The reason is the very low F&V and wine expenditure and the fact that the functioning and uptake of CMO risk management measures during 2014-2020 remain virtually unchanged. While it is true that Pillar 1 F&V and wine CMO risk measures continue, the total expenditure is minor (total EUR 173, 47 million for 2007-2013). **Figure 5** shows changes in MS typology looking at transfers from risk management expenditure from Article 68 (Pillar 1) to Rural Development Programs (Pillar 2).

4.2.3.1 MS that used Article 68 (Pillar 1) in 2007-2013 period

Regarding the MS typology for the period 2014-2020, we observe that all the MS that used Pillar 1 Article 68 funding during 2007-2013 (Italy, France, Hungary and the Netherlands) will be using new Pillar 2 Rural Development Programmes measures on crisis prevention and management. That means a continuation in the *ex-ante* policies for risk management in the (4) MS. The quantity of the expenditure increases significantly, mainly due to Italy

and France (Italy expenditure increases from EUR 280 million to EUR 1590.8 million, and France from EUR 434 million to EUR 600.7 million). While in Article 68 only France used the mutual funds instrument, in Pillar 2 both France and Italy consider its use. As far as 'Income Stabilization Tool' (IST), Italy and Hungary include this new instrument in their Rural Development Programs.

The amount of expenditure of the (4) MS accounts for the 87% of the total Pillar 2 - CPM expenditure.

4.2.3.2 MS that do not used Article 68 (Pillar 1) in 2007-2013 period

Furthermore, other MS that were not previously using Article 68 will be using the CPM measures under RDPs. As seen in Figure 5, the new MS to be using the CMP measures are Romania (EUR 200 million), Croatia (EUR 57 million), Portugal (for the mainland, and Azores and Madeira regions, gathering a programmed expenditure of EUR 53 million), Lithuania (EUR 17 million), the Castilla y León region (Spain) (EUR 14 million), Latvia (EUR 10 million), Belgium (only in the Flanders region, with an expected expenditure of EUR 5.7 million), and finally, Malta (EUR 2.5 million). The sum of their expenditures represents the remaining 13% of the total. Romania has by far designed the highest expenditure in risk management of the group.

Significantly, Romania is the newest to **enter in the 'mutual funds' measure**. In Romania, the new instrument will focus on losses caused by common adverse climate events, which are not covered by insurance companies (drought, winter frost and floods). Another new comer, but with a lower expenditure, is Castilla y León (Spain), which opts for the income stabilization fund instrument.

4.2.3.3 Use and distribution amongst instruments

For the moment, comparing the expected CPM measures under Pillar 2 (*ex-ante*) with State aids (*ex-post*) of the previous period, it reflects that Pillar 2 expenditure remains much lower than *ex-post* measures. Only Italy spends more on CPM measures under Pillar 2 than on *ex-post* State aids measures. However, when comparing Pillar 1 – Article 68 expenditure, the expected expenditure on Pillar 2 CPM measures is going to be much higher. While the expenditure under Article 68 summed EUR 761 million from 2010 to 2013, the expected expenditure on Pillar 2 CPM measures is more than 200% higher under Pillar 2.

As far as CPM instruments and as in the previous period, the **'crop, animal and plant insurance premium'** is fairly the most extended measure. From the MS adopting risk management instruments in their RDP, only Spain (who possesses a highly developed insurance system based on State aids) and Romania do not support the insurance premiums.

'Mutual funds' gather the interest of Romania, Italy and France. It is significant the entry of Romania with EUR 200 million of expenditure on mutual funds. It is followed by less than the half of its budget by Italy and France. Only France had already devoted previous support to mutual funds.

A similar situation is found for the **'income stabilization fund' instrument**. At the time of writing, the 'Income Stabilization Tool' (IST) will be used by Italy (EUR 97 million), Hungary (EUR 19 million) and the Castilla y León region (Spain) with EUR 14 million. Other MS for the moment may decide to postpone the adoption of this kind of measures. For example, the French Ministry of Agriculture considers introducing an income stabilization

tool may lead to several issues according to the '*Programme National de Gestion des Risques et Assistance Technique 2014-2020*' (PNGRAT):

- Overlapping existing tools, such as crop insurance and mutual funds.
- Long delay in assessing income/revenue losses, and thus providing indemnities.
- Strong risk of moral hazard.
- High budgetary impact: according to the EU Commission in 2011, indemnities that would be paid with income stabilization tools would account to 500-600 million euros a year. This amount corresponds approximately to the total value of EU subsidies devoted to risk management systems until 2020.
- In addition to this amount, the value of indemnities appears non predictable and very volatile. It may cause budgetary management issues for insurers that would then raise the problem of a public reinsurance.

For France, the question of the stabilization of farm income may be reconsidered in the future according to the evolution of the regulation and financial resources.

5 PERSPECTIVES FOR SUPPORTING RISK MANAGEMENT IN AGRICULTURE

KEY FINDINGS

- The development of risk management instruments needs, in addition to direct support, the establishment of regulatory frameworks that avoid market distortions.
- Governments must provide for flexibility in offering support mechanisms, and would benefit from transferring part of the risk to public or private reinsurance providers. The value added for the EU to engage in any reinsurance scheme for insurance and mutual funds is unclear.
- The risks face farmers can be structured in different layers according to levels of severity and systemic nature. Each layer should be managed with different instruments and financing.
- Direct payments reduce variability of income, increase total farm income, and reduce the level of risk altering farmers' attitude and behaviour against risk. They work as a disincentive for a more effective on-farm risk management.
- Current rules for crisis prevention are neither efficient nor effective. Actions taken by producers' organizations should be allowed by the single CMO and monitored by the competence authorities. It should be automatic, flexible, market oriented, on time and without any cost for the EU or national budgets.
- The implementation of new market risk management instruments should be gradual and compatible with the existent insurance models in the MS. It requires flexible budgets important technical studies previous to its implementation. Even though their design and management is more efficient at national level an important EU regulatory framework is needed.
- The crisis management role for the EU should be clearly specified through the provision of efficient instruments and rules of action transparent and automatic. The design of an alert system based on objective criterions could serve to trigger different actions.

5.1 Role of public policy

In Bielza et al. (2008) EU Member States were grouped in two: those that support intensely agricultural insurance and those whose agro-insurance markets are strictly private but relied on ad-hoc payments to compensate farmers in the event of large losses and crisis (e.g. disease outbreaks, droughts or floods...). **Either way governments undertake the responsibility to help farmers undergoing and coping with serious crop damage or suffering animal disease outbreaks.** There seemed to be in the EU just two ways to face climatic hazards or disease outbreaks. Nowadays, while there is agreement about the notion that ad-hoc payments should be the exception rather than the rule, there is also consensus about the need to increase preparedness and strengthen more pro-active strategies.

Governments have a responsibility to bridge the gaps left out by the private sector, and develop an enabling environment for the development of privately offered risk management instruments. CAP regulation just defines minimum provisions about the instruments MS can support and establishes the parameters that trigger financial compensations and subsidization regimes.

Public policy is enabled through: (a) regulatory action; (b) financial support to various instruments; (c) overseeing and monitoring; (d) reinsurance; (e) Policy targeting.

5.1.1 Rationale for public intervention

Public intervention in developing risk management instruments has been given support on two grounds: the existence of market failure and large entry costs on one hand and the initial lack of sufficient risk pooling on the other³³. A third more recent argument would be **based on the view that governments should 'nudge' economic agents** – farmers – to protect themselves and avoid cognitive flaws in understanding probabilities and risks. By creating default options which favour pro-active and prudent decisions, it is expected that farmers propensity to develop responsible self-defence strategies will increase. Two examples would be automatic renewal of insurance policies or the obligation to purchase insurance to gain eligibility to ad-hoc payments for damages not included in the policies. The private sector would see more interest in develop more risk-management products, which can complement those provided or supported by the government.

An obvious way to stimulate an industry is to subsidise it selectively, on the basis that the government should not engage in developing and selling its services. But there are other ways that are discussed below.

Market failure and large entry costs

Risk management instruments cannot be provided without strong and reliable risk-transfer mechanisms. By definition, any contingent payment resulting from a random process must be matched by a contingent budget that is made available in a short time. Irrespectively of whether a public agency or a private company releases the payment, the funds to provide the compensation must be found somewhere.

The fact that agro-insurance branch is small and limited in MS that do not subsidise the premia is an indication that the only way to make it bigger and broader is to support it **through direct or indirect government's participation and subsidies.**

However, the cost of having a large sum of contingency payments ready can be significantly reduced with strong risk-pooling and efficient risk transfer mechanisms. Both require that instruments have a broad base, risk premia be correctly priced and contractual mechanisms be drafted following insurance and financial industry standards.

Thus, in order to reach a critical mass for an industry to offer insurance and financial services in the agricultural sector, **the role of government supporting it via subsidies. Providing a favourable environment and collecting statistical data might be essential.** Some degree of specialized training among actuaries; financial and bank specialists; functionaries about agronomic and natural aspects and agronomists and climatologists about actuarial notions, must be provided. Farmers and their organizations must also be trained to understand the products and help them make the right choices. There is a key role for vocational training and tertiary education.

³³ A discussion of arguments supporting public action in response to risk and uncertainty in agriculture can be found in Gohin (2012)

Box 5. French mutual fund for health and environmental risks in agriculture (FMSE)

FMSE (Fonds national agricole de Mutualisation Sanitaire et Environnementale) is the only official French mutual fund that aims at providing compensation to farmers affected by environmental and sanitary crises, mainly animal diseases and plant pests. Its creation was made possible after changes in EU regulation regarding mutual funds and the compensation of sanitary losses in agriculture.

Adhesion to the **FMSE is compulsory for all farms involved in agricultural productions** (cattle, animal breeding, milking, beekeeping, crops), which allows for a maximum pooling among farmers and avoids any information asymmetries. However, some activities such as farm work, forestry, aquaculture, horseback riding, pets breeding, hunting and fishing are not concerned by the FMSE.

FMSE is structured into "sections":

- A section common to all farmers. This section compensates general or emerging losses that do not concern a sectorial section. It can also contribute to the financing of specialized sections.
- Several specialized sections for some production sectors. These sections cover risks associated to their specific production, and provide compensation to affected farmers. Each section manages its own budget so as to compensate its own subscribers. It also prescribes requirements specifications to fight against diseases, reduce their occurrence and optimize recovery.

Risks that may be covered by FMSE include:

- Disease risks referred to in official EU lists: Council Decision 2000/29/EC on protective measures against the introduction into the Community of organisms harmful to plants and Council Decision 2009/470/CE on expenditure in the veterinary field.
- Environmental risks resulting from contaminations, accidental releases of pollutants, fires.

It is funded firstly by farmers following these rules:

- All farmers have to pay 20 euros a year, this amount being levied by the Mutualité Sociale Agricole in charge of farmers' social security.
- Specialized sections raise additional contributions according to the farm size and specialization.

Then, up to 65% of compensation expenses may be refunded by the French government (25%) and by the EU (75%) following current regulations. In practice, these amounts are granted by FNGRA.

The compulsory participation into FMSE allows a wide pooling, which avoids adverse selection effects and permits to reduce premiums paid by all farmers.

Lack of sufficient risk-pooling

Risk-pooling is enhanced by adding to a common system more uncorrelated risks. This can be achieved by broadening the set of insurable risks, requiring thorough technical assessments and solid statistical services. By adding also the sectors and covers that are eligible for subsidies, insurance and reinsurance companies pool more risks and reduce the costs of the premia. Enhanced risk-pooling can be combined with compulsory schemes, examples of which are the obligation of Spanish insurers to charge a reinsurance surcharge for the public reinsurance (*Consortio de Compensación de Seguros*, See **Box 4**) and the French FMSE (*Fonds national agricole de Mutualisation Sanitaire et Environnementale*) (See **Box 5**).

5.1.2 Regulatory Action

All of the instruments considered in CAP 2014-2020 have to be implemented under the umbrella of national legislation and regulatory frameworks. This applies to savings accounts, mutual funds, insurance and fiscal and tax measures. Each Member State has its own legislation based on which the risk management instruments, included the IST can be developed. It is thus necessary to ensure that the different legislations do not bring market distortions or tilt the playing field in favour of some farmers.

The insurance industry, even considering the small agricultural branch, is well structured in Europe to ensure that all national initiatives follow equivalent support schemes. But nothing has been ruled about the role of public reinsurance, a fact that could potentially generate market distortions in the industry.

Should agro-insurance grow with a European perspective, as opposed to merely national scale, there will be a **need to harmonise some aspects**. For instance, while the regulation states that insurance policies can be subsidised by a given percentage, it does not detail whether that includes all premium components (premium, reinsurance, acquisition costs, retails margin,..). This, for instance, gave rise to a recent ruling by the Spanish Competence Authority upon reviewing the structure and subsidies of the public agro-insurance system.

The Spanish Markets' and Competitive Commission reviewed in 2013 various aspects related to the regulatory framework and institutional setup of the agricultural insurance systems. The fact that all insurance companies must sell all equivalent subsidised policies to a given farmer at the same price called the attention of the Commission. After thoroughly reviewing the co-insurance framework of the companies, the role of the public reinsurance company (see **Box 4**) and the rights and duties of farmers and insurance companies, it ruled and recommended: (a) that the system has large benefits resulting from the wide risk-pooling effect, which could be threatened by allowing companies to compete via policy prices; (b) that there exists a significant solidarity and income **smoothing effects across farmers, sectors and regions**; (c) that **all farmers' damage are assessed independently and fairly well by very specialised and trained loss adjusters**; (d) **that the Government's branch ENESA (Spanish Entity of Agricultural Insurance) and the farmers' association ensures that private component of the system (the companies and the co-insurance scheme) is properly checked and controlled**; (d) and that breaking the equilibrium of the system, adding more price competition among the insurance companies, would compromise the universality of the system across regions, production areas and sectors, and with that the broad risk pooling effect already achieved. However, the Commission requested that subsidies should be applied strictly on components of the fair and reinsurance premia and security charges, leaving the other components – administration, acquisition costs, and margins – open for competition among the companies. This implies that companies do not compete through different policies design and rating, which is carried out by Agroseguro and ENESA (under the supervision of the General Directorate of Insurance and the CCS, the public reinsurance), but on the other components that add up to the commercial premium.

5.1.3 Financial support to various instruments

Some instruments can be supported at European or national level using various mechanisms, each requiring different granting and monitoring requirements. **Agro-insurance** can be subsidised via introducing rebates to the commercial premium and reimbursing the companies for selling then net of the subsidy. This requires **co-sharing databases between insurance companies and governments including the farmer's**

characteristics. It also requires that insurance retailers' access, check and acquire the documentation that entitles a farmer to one or various premium subsidies. In many cases, various premium subsidies could be applicable to a single insurance policy holder (young farmer, women, collective underwriting...). Insurers can also receive reinsurance support either subsidising the reinsurance premia or being able to transfer risks to a public reinsurer.

Mutual funds can receive subsidies to cover the costs of establishment or even resort to public programmes to charge part or all the compensations resulting from losses. As seen in **Section 4**, there are significant differences in financing different instruments and budgets.

The financial cost of risk management instruments for governments is contingent upon **farmers' contracting of different products and coverage options**. Governments could allocate **ex-post the budget available for different instruments, depending on farmers' relative acceptance and demand**. But being insurance and risk management products difficult to sell, the fact that the subsidy to a given premium would be contingent on the final budget available to subsidise it would add a critical complexity factor to farmers. This **applies also to governments' contribution to fund losses of mutualists**. If mutual funds cannot know in advance the budget governments will make available in case of losses, the room for inadequate provisions, malpractice and default is too ample.

Therefore, governments must provide for flexibility in offering support mechanisms, and would benefit from transferring part of the risks to public or private reinsurance providers.

5.1.4 Targeting of risk management instruments

The theoretical ground for targeting is the different risk exposure according to production, type of farm/farmer or farming area. Presently, different productions or different farming areas (e.g. farming mountain areas) may have and really have different levels of risk exposure and thus this type of targeting makes sense. Despite that, targeting could still make some sense from a political or social point of views to support some types of farms or farmers, granting some extra support to the target farms/farmers that subscribe crop or animal insurance or set up a mutual fund³⁴.

The possibilities of targeting depend on the risk management instruments. Some instruments like crop/animal or revenue insurance and mutual funds can be specific for productions, sub-sectors or farming areas while others like saving accounts should not be specific. Fiscal and tax measures can be specific according to the type of farms/farmers and using future markets is always commodity specific (see **Table 1** in **Section 2**).

Targeting by production/subsector

In the case of insurance and mutual funds the debate about targeting according to specific crops or animals depends on the kind of risk covered. If the risk covered is production risk targeting to specific crops or animals makes sense and is recommended. But if the risk covered is market risk or a combination of yield and price risk i.e. significant losses of revenues then it is not clear the preference for targeting to specific crops or animals.

³⁴ For instance, the Spanish insurance system grants incentives for subscription of collective insurance

The different risk exposure of production sector³⁵ justifies uneven and targeted implementation of risk management instruments, so incentives to participate in coverage systems in sectors facing greater risks should be greater (Bureau and Mahé, 2015). This possibility is provided under current CAP for fruit and vegetables and wine (see **Section 3**). The particularly high price volatility in the fruit and vegetables sector, difficulties of storage and less public support (CAP) for this sector are the three main arguments to justify stronger instruments in that sub-sector than in sub-sectors where storage is feasible and natural fluctuations of output and price volatility are less dramatic. Such an argument does not fully apply to the wine sector because it is not subject to extreme yield fluctuations and it can be stored (Bureau and Mahé, 2015).

In case of market risks, one advantage of targeting to crops or animals the insurance or mutual funds covering revenue losses is the simplicity for building the data bases necessary to calculate the insurance premium or the contributions to the mutual fund and for operating the insurance or mutual funds. The disadvantage of targeting instruments for farm revenue risk management may be its low cost effectiveness. For a given farmer, the cost of total farm revenue insurance or mutual fund is lower than the sum of the cost of the revenue insurance or mutual funds for every animal or/and crop grown in the farm. This is due to the risk reduction effect afforded through crop diversification (portfolio choice theory). But the complexity for designing and operating revenue insurance or mutual funds at farm level (i.e. for a combination of different crops and animals) should not be underestimated. In addition, targeting offers more freedom and flexibility to the farmers to manage market risk (revenue insurance or mutual funds).

In the case of farm income risk management, sometimes it is not possible to target the insurance or mutual funds by productions because of the difficulties to assign the operational cost to the different crops or animal grown in the farm. Therefore this instrument must be applied at farm level which in turn adds complexity to the design and implementation of this instrument.

Targeting by farming area

Targeting insurance or mutual funds according to farming areas is an interesting and feasible option as some farming areas have higher risk exposure than others due to particular ecological and weather conditions (e.g. farming mountain areas). The farmers located in these farming areas could have a higher support for risk management in addition to the allowances received by these farmers.

Targeting by type of farm or farmer

Targeting insurance or mutual funds according to the size/nature of farms (small holding farms and medium/large professional farms) is technically possible but it is difficult to implement as it requires defining and monitoring the target farms and it would run some risk of miss-targeting (e.g. how to define small holding farmers or medium/large professional farms). In addition to the rationale for targeting according to this type of farms, it is not always clear not just from a risk management perspective but also from a political point of view.

Targeting support to income insurance or mutual funds for small holding farmers to help them manage market risk could be an option. However, using this social criterion could work against the non-small/professional farmers. Opposite reasons could also be posed, i.e.

³⁵ Cordier (2014) has estimated the value at risk (threshold of low returns with a 5% probability) for selected farm orientations and found that it differs considerably across farming sectors, e.g. €14,000 in fruit and vegetable crops and €16,900 in main crops.

targeting support of revenue or income insurance or mutual funds for medium-large/professional farmers as an alternative to the current basic payment. Moreover, the influence of farm size on potential indemnification of the IST is not clear, as very few studies have been carried to draw conclusions. El Benni et al. (2015) point that increasing farm size in Switzerland might reduce relative income risk and it is expected that bigger farms are less likely exposed to severe income losses. Other authors, Vrolijk and Poppe (2008) showed that the volatility of farm incomes is affected by the financial structure of the farm. In general, more capitalised and relative larger Northern European farms are more exposed to financial distress and risks than smaller and less intensive farms of Southern Europe. This is because the latter farms are more exposed to climate impacts and their farmers are more prudent to become indebted than the former. Using FADN data these authors concluded that 'there is no strong link between the size of the farm and the extent to which a farm can cope with an external crisis' (Vrolijk and Poppe p.51).

It is also possible to target the risk management instruments to young farmers even though older farmers are better able to prevent severe losses (El Benni et al., 2015) and targeting is not based on differences of risk exposure but on political criteria. The same can be said on targeting accordingly with the type of farms as cooperatives and other types of farm/farmers where targeting is based on efficiency criteria (lower cost of collective than individual insurance)³⁶.

5.1.5 Reinsurance

A major challenge to support risk management instruments, including insurance, mutual funds and ISTs, is that government support is contingent on the uptake of the instruments and that compensations are uncertain. Insurance cannot be legally offered without charging for adequate provisions, reserves and reinsurance. It is often claimed that in agro-insurance, reinsurance needs are large because risks are systemic. However, this is a technical question that depends on whether risks are sufficiently diversified; the extent of risk-pooling; the existence of coinsurance schemes exist, amongst other aspects.

In most countries where agro-insurance has expanded to a certain level (US, Canada, Spain, France, Italy, Korea, Mexico), the public sector either provides reinsurance services in full (US) or offers guarantees for some of the risk layers (Spain).

Providing public reinsurance should help insurers and other private companies in developing new instruments but it is desirable to consider the following premises:

- Public reinsurance should cover the most extreme risk layer, on top of regular private coinsurance and reinsurance;
- Stabilisation accounts or reserves should be built up by insurers to reduce or eliminate entirely the need of public reinsurance;
- Public reinsurance should perhaps be phased-out following a pre-arranged plan counting on built-up reserves and other stabilisation mechanisms in place.

A last question relates to the role of the EU in providing reinsurance jointly with, or **independently of, the Member States' participation in national reinsurance regimes. Based** on the immature and disparate stages of development of agro-insurance and mutual funds across MS, it is a possibility that would require significant technical and legal analysis and is not available at the moment.

³⁶ As mentioned (Footnote 35) the Spanish insurance regime grant incentives for subscription of collective insurance

Furthermore, the value added for the EU to engage in any reinsurance scheme for insurance and mutual funds is unclear.

5.1.6 Overseeing and monitoring

To prevent financial defaults and bankruptcy, malpractice and abuses, governments should set up strong inspection and overseeing agencies. Farmers must be assured that the products they contract are adequately priced and damage correctly assessed. There is role of governments to complement the agronomic, climatologist and veterinary knowledge of the insurance inspection and regulatory branches of the administration.

Furthermore, monitoring and analysing the effects and functions of the ISTs or mutual funds is also essential to improve them. This should go beyond the logical interest of the private organisation to evaluate their products, having the government the interest also to draw conclusions about the value for farmers and risk-management potential of the subsidised products.

Lastly, mutual funds, ISTs and insurance products are in some MS supervised and overviewed by different regulatory bodies. But if farmers are to be given different choices, they should be able to compare them and be given the same confidence in terms of solvency, liquidity, overseeing, anti-fraud checks and proper information. Crop and animal damages should be assessed following equivalent criteria and procedures.

5.2 A layering model of agricultural risk management

Farmers face different kinds of risks that may be summarized as: 1) production risk due to climate variability, animal diseases and plant pests and 2) market risk due to changes in market conditions, including price variations and increasing volatility.

Within these two kinds of risks we may consider different levels of damages from the lowest to the highest: non-severe "normal" losses (less than 30% of yield or revenue/income) that in the case of yield losses can be covered by State aids and severe losses (more than 30% of yield or revenue/income) which can be also potentially supported by CAP measures.

The risks can also be classified according to their scope as systemic (affecting most of the farmers or regions) or non-systemic (affecting just some farmers or sites).

The following Table 14 shows the different EU options to support non-severe and severe production and market risks. Nevertheless, currently there is no CAP or State aids to support non-severe revenues/income risk management.

Table 13. Options to support agricultural risks.

	Production risk	Market risk
Non-severe "normal" loss (less 30% of income)	State aids	Not available
Severe losses (more 30% of income)	CAP State aids	CAP State aids

Source: Own elaboration

Table 13 shows the different EU options to support non-severe and severe production and market risks. Nevertheless, currently there is no CAP or State aids to support non-severe revenues/income risk management.

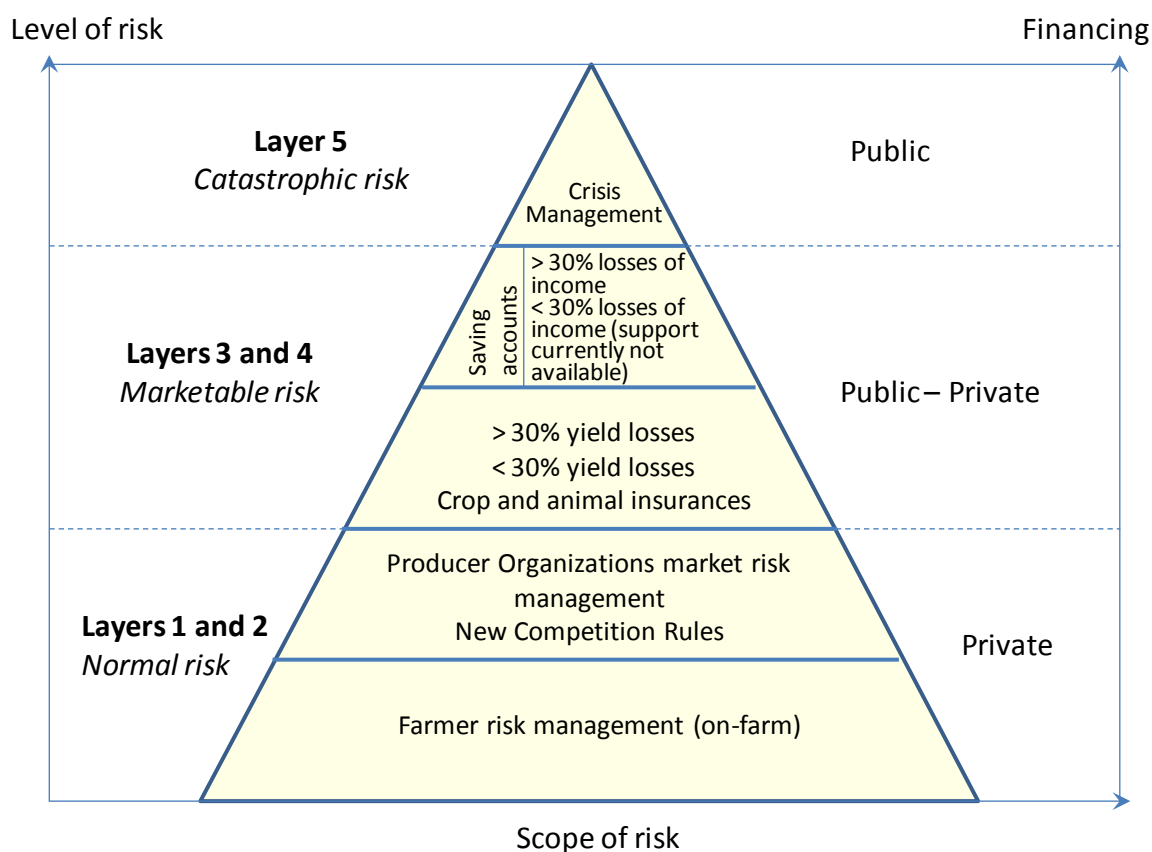
Table 14. Options to support agricultural risks.

	Production risk	Market risk
Non-severe "normal" loss (less 30% of income)	State aids	Not available
Severe losses (more 30% of income)	CAP State aids	CAP State aids

Source: Own elaboration

It could be expected that the size and scope of losses would be negatively correlated i.e. larger losses would affect less farmers. But this is not always the case as, for instance, in some MS the risk of drought can be high and, when a prolonged drought period sets in, the scope can be wide and the number of farmers affected very large (systemic risk). In general terms market risks or severe contagious animal diseases are more systemic than yield risk. For this reason revenue or income insurances are more risky and less attractive for insurance companies.

The layering system for agricultural risk management is based on the principle that different levels of risk (layers) should be managed by different actors with different instruments and financing. The most important prerequisite for layer-based risk management system is to ensure the balance and consistency of the whole system through the compatibility between the different layers (i.e. between the different actors involved and the instruments used in each layer) and the consistency with other policy measures to avoid disincentives to the concerned actors for managing the correspondent layer. The layering system is depicted in **Figure 6**.

Figure 6. Layering model of agricultural risk management

Source: Own elaboration

The **first two layers** can be defined as normal risk as they should be managed by farmers³⁷. The first of them corresponds to the lowest level of risk and should be managed on-farm through retention, adaptation and diversification of crops and animal productions; contracts with processors; marketing strategies and future and option markets.

The **second layer** corresponds to a higher level of risk and should be managed by producer organizations, cooperatives or other form of collective action. In the case of market risks (low prices or low incomes, resulting increased input prices), the main instrument should be supply management (e.g. production withdrawal and private storage). This layer is very important as it should be considered as a crisis prevention instrument in the hands of Producer Organizations (POs) to prevent extreme price volatility. The first challenge to implement it is the interpretation and application of the competition regulation and rules (see section 5.4).

These first and second layers should be managed privately and with none or indirect public support, for instance private storage facilities financed by the Pillar 2. In addition, to ensure an effective and efficient risk management it would be necessary to render the markets more transparent. This should be achieved by developing a European Observatory for market prices and a better structural knowledge of the industry, from the farmers to the retailers.

³⁷ OECD (2011), *Management Risk in Agriculture. Policy Assessment and Design*, defines three layers of risks: Normal risk, defined as frequent but not causing large losses and that can be managed by farmers; marketable or insurable risks, for which market instruments can be developed and catastrophic risk, associated to low frequency and large damage or overall losses for a country or region.

The **third layer** would correspond to higher yield risks and should be managed through crop insurances or mutual funds: in the case of non-severe yield losses (less than 30%) without or with public support (State aids), whereas in the case of severe yield losses (more than 30%) with State aids or CAP premium subsidies (Pillar 2) as they would be green box compatible.

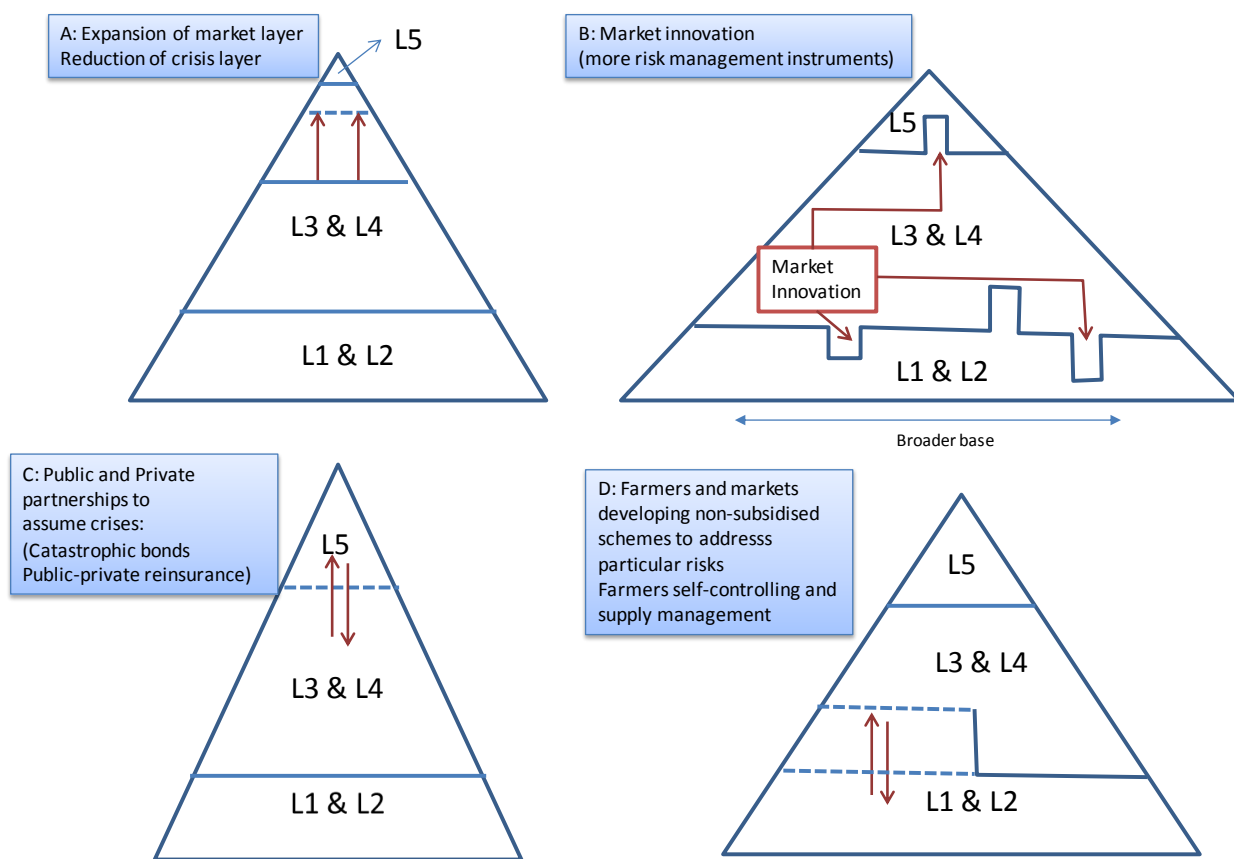
The **fourth layer** would correspond to higher revenue or income risk and should be managed through insurance, mutual funds, or saving accounts. Non-severe risks (losses of revenue or income lesser than 30%) could be managed through insurance or mutual funds with support of State aids or CAP (not currently available). In the case of severe risks (losses of revenue or income greater than 30%) could be also supported by CAP or State aids, and classified as green box. Saving accounts in both cases would be based on tax benefits and thus financed by Member States. The issue of taxation rules for saving accounts contributions and withdrawals is addressed in section 2. These third and fourth layers should be based on a public-private partnership with private and public financing (public-private risk sharing).

The **fifth layer** corresponds to highest level of risk i.e. income crisis due to production crisis (climate or animal health and plant pests), market crises or both. Crisis often results in severe and massive revenue/income losses for the farmers of a specific sector or region. The crisis should be managed through public intervention and financing as the last resort for the agricultural risk management. It includes the crisis reserve; the EU safety nets (intervention purchases, financed private storage or withdraws); the ad-hoc payments and the veterinary fund. To afford farmers a sound risk management, especially in the third and fourth layers, it is essential to setup clear and transparent rules for EU public intervention in the fifth layer (crisis management).

According to our proposal, layers 1 and 2 (normal risks) should be managed and financed mainly privately by individual farmers or farmers organizations; layers 3 and 4 (marketable risks) should be managed and financed by farmers with public support (private-public partnership); and layer 5 should be managed and financed mainly by public sector (crisis management through ex-post interventions).

A final note about the shape and structure of the risk-layering pyramid should be made. **The relative size of the pyramid's** internal blocks can be altered over time in various ways:

- (a) The base of the pyramid can grow. Farms tend to be more capital intensive and increasingly specialised. Therefore, the risk exposure can increase;
- (b) The frontier between the top layers can move upwards, implying that layers 3 and 4 can almost completely cover the domain of layer 5, if sufficient risk-pooling and risk-transfer mechanisms enable the instruments developed in layers 3 and 4 to underwrite risks that could be initially covered in layer 5;
- (c) The shape and structure of the pyramid should be seen as a dynamic process, in which its features can change through time. **Figure 7** provides a sketch of possible modifications of the risk-layering model. In situation A the frontier between Layers 3 and 4 goes up, reducing the domain of Layer 5. In Situation B, market innovation both in the top and in the bottom, permits developing richer and broader covers and instruments. In Situation C, market crises are assumed or underwritten with public-private schemes (e.g. catastrophic bonds co-financed by public and private reinsurers). In Situation D, farmers and their organisations develop jointly with market firms different products at their expense or resort to self-imposed market supply controls.

Figure 7. Potential modification of the risk-layering model

Source: Own elaboration

5.3 Barriers to more effective on-farm risk management

The first layer for agricultural risk management is farmer based. He should implement strategies for on-farm risk mitigation and management e.g. growing the adequate crops and animals according to the ecological conditions; diversifying the animals or crops grown (portfolio choice theory); engaging in contractual mechanism along the food chain; using derivative contracts (future and options), over-the-counter contracts and forward contracts³⁸.

We have identified at least **three important barriers** to more effective on-farm risk agricultural management.

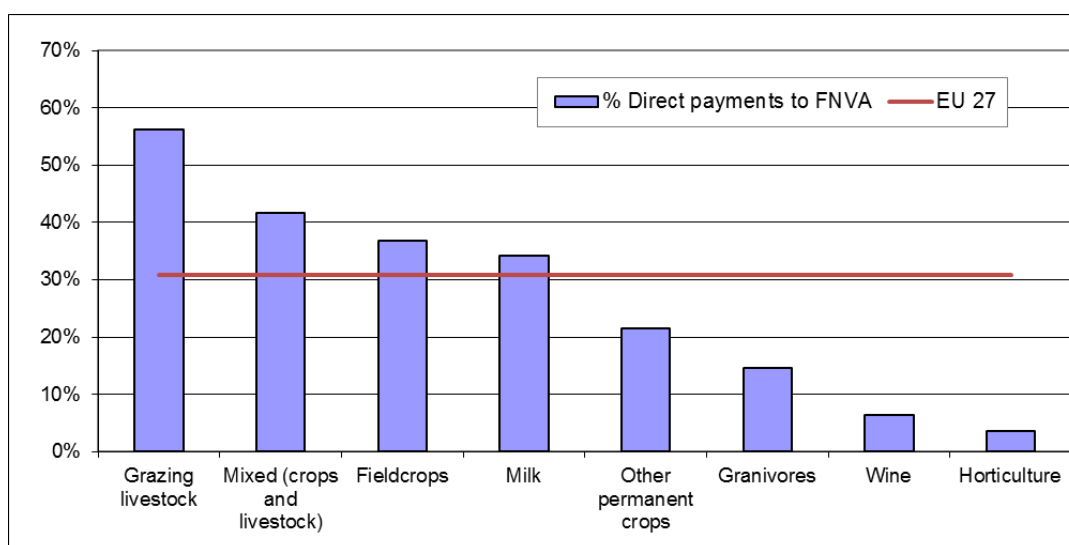
1. The first one is the lack of knowledge and professional qualification of farmers. This is particularly the case for commodity derivative markets and complex contractual mechanisms. The proposals to overcome this barrier would be transferring knowledge through training and professional qualification activities on risk management (Pillar 2).
2. The second one is that diversification increase farm management complexity and often required on farm, storage and processing investments. Overcoming these barriers requires strengthening the management capacity of farmers and investment support (again Pillar 2).
3. The third is rooted in the current direct payments scheme (Pillar 1). This can sound surprising because one of the most important effects of direct payments is its

³⁸ Ferenczi (2016) describes the main types of grain marketing contracts available to farmers in France: pool price contract, spot price contract, forward contract and specific outlet contract

contribution to farm income stabilization (Hill and Bradley, 2015). This is especially the case in MS and types of farms in which the direct payments amount to a high share of total farm income. According to the EC (European Commission, 2015b), direct payments accounted for nearly 31 % of FNVA³⁹ in the EU-27. The proportion of direct payments to FNVA was highest in Finland (72 %) and Slovakia (71 %). However, direct payments accounted for only 12 % of FNVA in the Netherlands, showing that Dutch agriculture is more focused on the more profitable sectors that are less dependent on direct payments, such as horticulture, milk and pig and poultry production.

More importantly, the proportion of direct payments to agricultural income fluctuated markedly with the type of farming as we can see in the **Figure 8**. In particular, direct payments represent a substantial part of FNVA (56-42 %) in grazing livestock (56%), mixed and field crop farms (42%) as a result of the historical orientation of the CAP. On the contrary, subsidies account for only a very limited part of total revenue in wine (6%) and horticulture holdings (4 %). That figures contribute to explain why the single CMO (Pillar 1) grants support for risk management only to these two sub-sectors.

Figure 8. Proportion of direct payments in agricultural income.



Source: (European Commission, 2015b) based on 2012 FADN data

Direct payments were not conceived as a risk management tool and in fact they are not efficient as they are decoupled from production and depend on the number of hectares. They work as a disincentive for a more effective on-farm risk management.

As the variability of income and thus the level of risk will be reduced, less risk-averse farmers will tend to reduce diversification and increase specialization with negative environmental impacts. The decoupled direct payments are not depending on yields and market prices (i.e. is a fixed amount of income that is added to the market-driven farm income), thus increasing the total farm income (wealth effect) and therefore altering **farmers' risk attitude and behaviour against risk**.

Lowering the level of risk implies less incentives to adopt on-farm risk management strategies (e.g. less incentive for diversification, forward contracts etc.) and increases investment and production⁴⁰.

³⁹ Farm Net Value Added (FNVA) is one of the FADN main farm income indicator

⁴⁰ This is one of the reasons why some authors (Bureau and Gohin, 2009; Skully, 2009) consider that the current direct payments are not fully decoupled from production.

5.4 The relevance of an effective and efficient crisis prevention inside the CMO

In the future, European agricultural sector will be confronted to more uncertain and extreme climatic regimes and market crises. The latter will be a consequence of the increased **interlinks between European and world agricultural markets**, on one hand, and the **spill-over effects of agricultural and commodities and energy markets**, on the other.

Effective and efficient crisis prevention and management tools should be extremely helpful. They would limit the economic and environmental consequences of those crises. Insurance schemes and mutual funds economically would be more accessible to farmers, manageable for the insurance companies and acceptable for the public authorities if there is some kind of public financing or public reinsurance scheme.

The current Regulation (EU) No 1308/2013 is the result of several compromises after a long process of negotiation and does not provide accurate tools to implement effective market crisis prevention measures. The major concerns are related to Articles 152 and 222 of the Regulation (EU) No 1308/2013 establishing a **Common Organisation of the Markets (CMO)** in agricultural products⁴¹.

Article 152

Article 152 considers that one of the aims of the producers organisations can be *"ensuring production is adjusted to demand, in terms of quantity and quality"*. This could be a good starting point for a real crisis prevention policy. This article comes from the former regulation applicable to the fruit and vegetable sector and has been extended to all agricultural sectors in the CAP 2014-2020.

From the competition policy point of view, the only existing official analysis of the fruit and vegetable regulation is the opinion of the French competition authority of 7 May 2008⁴², which concluded that it was *"a large derogation to the common competition rules"*. The French *"Conseil de la concurrence"* stated that it *'encourages fruit and vegetable producers to organize themselves in order to strengthen their market power against distributors and reduce the offer's uncertain nature, on condition that they keep a real autonomy in their pricing policy'*.

It continues explaining that *"The (French) Minister for Agriculture and Fishing is willing to adapt the industry national organisation scheme in order to strengthen the producers' position on the market. The envisaged system provides for two types of APO: marketing APO would concentrate supply and governing APO would strengthen the piloting of actions by product (promotion campaign, products maturity date, volume estimates, etc.)... The common market organisation certainly authorizes information exchanges on volumes and prices in order to limit the supply's uncertain nature due to the sector's specificities (production highly dependent on weather conditions, absence of stock due to the perishable nature of goods)."*

This means that, in the opinion of the French competition authorities, *"information exchanges on volumes and prices between producers' organisations"* and inside the *"governing APO"* are compatible with the 2008 fruit and vegetable regulation which is the origin of the new Article 152 of the single CMO.

⁴¹ <http://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:32013R1308>

⁴² http://www.autoritedelaconcurrence.fr/user/standard.php?id_rub=255&id_article=904

This possibility has to be read in addition to the explicitly foreseen possibility (even with EU financing under certain conditions and limits) for producers' organisations and their Associations to withdraw produce from the market in order to try to maintain some balance in the markets.

It could, therefore, be understood that **producers organisations (and/or their associations) could implement private storage, market withdraws or information exchanges on prices and volumes.**

The limit is also explicit for the French Competition Authority: *"The (French) Conseil could not authorize practices consisting in directly handling prices, which would be anticompetitive."* But even this issue is far from been crystal clear. This is why the French "Cour de Cassation" put forward a "question pre-judicielle" to the European Court of Justice after its session on 8 December 2015 in order to clarify the extension of the derogation to the general competition rules which can be covered by the wording *"ensuring production is adjusted to demand, in terms of quantity and quality"* (Cour de Cassation, 2015).

Article 222

Article 152 can be seen as standing in contradiction with Article 222, despite the fact that, whereas clause #131 explicitly stated that the regulation aims at *"contributing to strengthening the position of producers in the food chain"*. Article 222 empowers the Commission to allow producer organizations and their associations to intervene in the market but only *"during periods of severe imbalance in markets"*. Two of the main conditions required by the regulator are, first, that the Commission has to adopt an implementing act and, second, that it could apply *"only if the Commission has already adopted measures"* such as market intervention, private storage or market withdraws.

This could mean that the producers' organisations and their associations cannot, as a general rule, implement market intervention, unless they are explicitly allowed by the Commission and for a limited period of time. This provision has been developed by the Commission on its Guidelines on the application of the specific rules set out in Articles 169, 170 and 171 of the CMO Regulation for the olive oil, beef and veal and arable crops sector⁴³.

The Commission communication of 1990

Some years ago, the position of the Commission was more open on private management schemes. In its Communication of 26 October 1990 (CEC, 1990) to the Council on Organisations and agreements linking different branches within the agricultural sector, it clearly stated:

"More recently, in the Explanatory Memoranda attached to its proposals for the 1987/88 prices, the Commission stated that "the aim of the introduction of more flexible institutional instruments for market support is not to replace order by anarchy but to stimulate the establishment of new structures, in the preparation and operation of which farmers and their organizations will play a more active role".

The Commission stated its preparedness in certain circumstances to facilitate a developing trend on contractual relationships between farming and processing, in particular in the form of inter-branch agreements. It stressed that the aim was not to build something out of nothing, as there were already good models in the Community, but there was a need to make a start in this direction.

⁴³ http://eur-lex.europa.eu/legal-content/en/TXT/PDF/?uri=OJ:JOC_2015_431_R_0001

As institutional market support instruments are rendered more flexible, the Commission reaffirms its view that in some sectors, flexible machinery for concerted discussion and cooperation between the various types of firms involved in production, processing and marketing of agricultural products must also be developed.

Such a structure should help correct the dispersion of supply which is endemic in certain agricultural product sectors. The establishment of producer groups has for some sectors and in some regions, brought good results. However, the trend towards the concentration of marketing and processing activities, together with the imbalances between supply and demand which now prevail in certain markets, suggest that the policy on producer groups should be pursued by action in support of voluntary Interbranch cooperation in case existing Instruments are insufficient to achieve the objectives of Article 39 of the Treaty".

The European Parliament position

On the same line, De Castro (2010), who was the President of COMAGRI during the negotiation of CAP 2014-20, argued in favour of private prevention management market instrument as "calming market instruments".

As underlined by Olper (2014), "the idea (supported by the COMAGRI and the plenary of the European Parliament) of Mr. Dantin was so to develop and reinforce instruments based on private supply management to increase the coordination of the various operators, and giving them the option of withdrawing a product during bad marketing conditions". See also Matthews (2012) and Olper and Pacca (2015).

This is not the ending result of the co-decision process, despite the original mandate of the EP (European Parliament, 2013). In addition to the highly political sensitivity of any subject related to competition rules, this disappointing result can also partly be explained by its **technical complexity and by the "asymmetries in the levels of in-house resources"**, underlined by Knops and Garrone (2015), at the prejudice of the European Parliament and its capacity to play fully its role in the co-decision process.

Effective rules are needed and possible

Therefore, current rules are not foreseen for crisis prevention but only to reinforce crisis management actions already adopted by the Commission. Obviously, a safeguard is needed in order to ensure, for instance, that one of the CAP objectives, to ensure reasonable prices to consumers, is also taken into account (Monti, 2003) as it has been done in the past in similar cases in California.

In the US Marketing orders, created under the Agricultural Marketing Act of 1937, "**...are initiated by industry to help provide stable markets for dairy products, fruits, vegetables and specialty crops. Each order and agreement is tailored to the individual industry's needs. Marketing Orders are a binding regulation for the entire industry in the specified geographical area, once it is approved by the producers and the Secretary of Agriculture. Marketing Agreements are only binding for those handlers that sign the agreement**". Marketing orders can be suspended by the Federal Government temporarily or permanently **if they damage the consumers' interests or are found to be unnecessary**⁴⁴. It thus appears that supply control of marketing orders is permitted, but under the strong threat of suspension by the Federal Government.

⁴⁴ See the Suspension of Marketing Order Provisions: Irish Potatoes Grown in Southeastern States <http://www.regulations.gov/#!documentDetail;D=AMS-FV-11-0027-0003>

As we have seen, current rules are bureaucratic and neither efficient nor effective. An illustrative example of an alternative scheme could be the following:

A group of cereal producers, cooperatives and traders could agree that, if market prices move below a certain target (for instance 130% of the wheat intervention price), to jointly start a private storage up to (10) million tons. When prices would recover to (160%) of the same intervention price, they would have to start putting the harvest in the market. The announcement of the agreement would, per se, reduce the excessive speculation and volatility on the market. If implemented, it would smooth the consequences of the (often very rapid) changes in market prices, stabilizing the income of the cereal and the meat producers on one hand and the consumers on other.

We have seen in January 2016 that the Europe's largest dairy cooperative, Friesland Campina, has provided until mid-February an incentive for members not to increase milk production. As Agra-Europe informed *"farmers received a compensation of €2.00 per 100 kilograms for deliveries less or equal to the volume they supplied during the week December 13-17 - the equivalent of a 5% income bonus – said the co-op. The move follows a 3.9% increase in milk deliveries throughout the EU in the 10 months to the end of October, compared to the same period a year earlier."*⁴⁵⁴⁶ Why not allowing a similar and enlarged coordinated initiative between the major European milk buyers? At the opposite of what some critics said, a scheme like this would increase the farmers' market orientation allowing them to adjust, within some clearly defined limits, their production.

The action should be explicitly allowed by the single CMO and monitored by the competent authorities, in order to avoid any abuse of 'dominant position'. It would be automatic, **flexible, market oriented, on time to "calm down the markets" and without any cost for the EU or national budgets.** This would be another tool provided to the producers and their organisations which would make them more responsible and responsive to the market price changes, if they wish to take advantage of it.

5.5 Perspectives for risk management tools in European Union

Amongst publically supported risk management instruments (insurances, mutual funds and savings accounts), a distinction should be made between those that provide production risk covers and those that meant to cover market risks. **Until now, the European policy has enabled means to support instruments to cover production risks through a flexible framework, counting on CAP measures or State aids.** This framework has permitted developing viable and operational agro-insurance models in some MS, adapted to their characteristics, and responding effectively to their farmers' demands. **It is thus neither necessary nor advisable to introduce changes in this framework or to propose new mechanisms for risk coverage that entail constraints for, or prevent the correct functioning of the existing models.**

However, the increasing exposure of farm holdings to increasing agricultural markets volatility (Garrido et al., 2016; OECD-FAO, 2015) provides a rationale for strengthening the cover mechanisms for market risks. This inevitably belongs in the general debate about the

⁴⁵ <http://www.agra-net.com/agra-europe/meat-livestock/dairy/cut-back-eus-biggest-dairy-co-op-urges-farmers-502634.htm?CTR=DNART>

⁴⁶ As a result of the prolonged crises in the dairy and pigmeat sectors, France has recently promoted a memorandum with possible new EU market support measures aimed at helping dairy and pig farmers for the exceedingly low prices of their products. Some of the new proposed market support measures include a **private storage aid scheme for pig meat and the implementation of an EU 'export credit' mechanism.** These measures will be debated at the next Farm Council meeting in mid-March 2016. For more information on the French memorandum see http://www.euroconsulting.be/wp-content/uploads/2016/02/ST_5892_2016_INIT_EN.pdf

future of the regime of the direct payments, especially the **'basic payment'** which is linked to the goal of income support. While the direct payment regime was not designed to **stabilize farmers' income, the payments afford significant stabilization** effects despite its complete decoupling with **farmers' income drops** (Bureau and Witzke, 2010). Some arguments rooted on equity and legitimacy questions undermine the logic of the direct payment regime threatening its continuation, especially at the time when a new EU budget will be debated.

Considering, in addition, the unequal distribution among MS, regions, sectors and farm holdings, **pressures will grow in the coming years to reform the direct payments regime**. In this scenario, the potential role of instruments to manage market risks gains relevance. A **few aspects should be considered**.

Firstly, the strengthening of the **instruments should evolve progressively** from the current CAP measures. It has already been stated that the consideration of market risk management instruments under Pillar 2 should be qualified as a relative success⁴⁷. The eligibility and extension to all sectors for the first time of these programmes is a notably step, but Pillar 2 does not provide the most adequate mechanisms. The support of these instruments should be integrated in the CAP in coordination with the instruments devoted to prevent, manage and mitigate the market crises, within a transparent framework featuring automatic responses among others.

Secondly, the substitution of the current direct payment scheme with support to income stabilization schemes, either through insurances, mutual funds or savings accounts, **should benefit all farmers**, instead of only those eligible for the basic direct payment. This would be a **step to further CAP's market orientation, and would stimulate the co-responsibility** of risk management of all farm holdings. This should be implemented gradually, beginning with the substitution of all or part of the entitlements to the basic payments with a common menu of options to contract income stabilization tools eligible to all farmers. This scenario splits in two types of reforms: a gradual one and radical transformation.

Option A: Gradual reform

Under this scenario, a wide set of options will be implemented for the new tools. It would be a system similar to the one envisioned with Article 68 during the period 2007/2013. This scenario is based on the same menu approach followed in the most recent CAP reforms and, in particular, in the CAP posts 2104 reform. Those MS that wish to start implementing income stabilization tools could do so on account of, or using part of their direct payments, or else using State aids. This would permit advancing in the right direction, and contrast the efficacy and validity of the instruments.

This also would enable setting up national design and management systems, and avoid the massive and immediate redistribution of European funds. It also has the advantages of taking into account the existence of various models for agro-insurance among MS, and of **the efficiency gains in generating the databases needed to evaluate farms' losses, and the control systems and checks required to combat frauds** (asymmetric information).

⁴⁷ See <http://www.farm-europe.eu/travaux/how-to-tackle-price-and-income-volatility-for-farmers-an-overview-of-international-agricultural-policies-and-instruments/#.Vpzgit2M0R4> and <http://www.parliament.uk/business/committees/committees-a-z/lords-select/eu-energy-environment-subcommittee/inquiries/parliament-2015/price-volatility-agricultural-resilience/?platform=hootsuite>

Option B: Radical reform

The starting point of this scenario is the possibility that the EU institutes a policy to reduce the 'basic payment'. It should be remarked that 'basic payments are already affected by (internal and external) convergence processes and that a possible EU future 'flat rate' implies, in fact, a decrease of this 'basic payment'. In any case, other 'direct payments' and especially the greening payment will remain under this scenario.

The implementation of income stabilization tools will evolve jointly with the reduction of the payment; the funds resulting from it will form a budget specific for each MS to support a **wide menu of income stabilization tools**, including a national mutual fund to cope with crisis situations. The menu would include different instruments that could be adapted to the characteristics of the risk management models implemented in each MS and, in particular insurances, mutual funds and saving accounts. To this regard, it is important to notice that, as the support to some instruments implies the implementation of fiscal measures, substantial changes on the EU financial rules would be needed. One possibility is to consider an equivalent amount of fiscal and tax measures as national co-financing support (following the current State aid regime where tax measures are recognized as State aids calculating its equivalent amount) and include it, within the framework of the possible co-financing measures.

Initially, only the recipients of the direct payments will be beneficiaries of the tools. However, small farmers could be excluded of the measure as the implementation of risk management instruments requires knowledge and keeping production records and account balances, which are not available or affordable in many cases in small farms. Progressively, as the basic direct payments are phased-out, the tools will become available to other farmers. A variation of this scenario would be issuing each direct payment recipient a "**voucher**" of equal amount to the reduction of the payment. **During the period of payments'** dismantling, the farmer would use this voucher to subscribe any of the tools included in the menu.

Either way, the implementation of income stabilization tools requires more flexible budgets. **They must take into account the prevailing market conditions and farmers' expected demand** of the instruments. Therefore, the possibility of co-financing or of making them compatible to the framework of State aids should be considered.

In any case, either reform approach requires a **large measure of gradualism and experimentation**. The implementation requires that a number of key aspects should be fine-tuned and put in place: means to assess income losses; creating detailed data bases; tax provisions for some of the tools; means of controls and checks to avoid opportunistic behaviour and fraud; and new studies and pilot programmes. Not the least important would also be fitting the new tools within existing insurance systems, which already operate supported on many detailed technical systems and count on delicate actuarial balances. These in turn often count on co-insurance schemes and private and public reinsurance mechanisms. Although most of these technical questions should be dealt with by national governments, there is a need to develop an EU regulatory framework.

5.6 The challenges for a proper and predictable crisis management role for the EC

As explained by the Commission, *"the new CAP also offers more responsive safety net measures and strengthens the EU's capacity for crisis management. This will be achieved by more efficient market measures to deal with potential threats of market disturbances and more flexible exceptional measures. A new crisis reserve (of EUR 400 million per year*

in 2011 prices) is established to secure the financial resources needed in case of crisis, through deductions from direct payments, with unused amounts reimbursed to farmers in the consecutive budget years" (European Commission, 2013).

The analysis of the effectiveness of the current crisis management mechanisms therefore needs to be focused in the measures included in CMO and in the possibilities of the crisis reserve.

5.6.1 CMO

The Regulation (EU) No 1308/2013, establishing a Common Organization of the Markets in agricultural products, includes the following most relevant articles, regarding crisis management:

- Reference thresholds (Article 7)
- Public intervention and aid for private storage (Articles 8 to 21)
- Measures against market disturbance (Article 219)
- Measures concerning animal diseases and loss of consumer confidence due to public, animal or plant health risks (Article 220)
- Measures to resolve specific problems (Article 221)

With this regulation, the Commission is empowered *"to react efficiently and effectively against threats of market disturbance" and to take "necessary and justifiable emergency measures to resolve specific problems."* The safeguards are that the measures shall remain in force, depending of the article on which they are based *"for the time necessary" or "for a period of no more than 12 months"*.

Article 219 could be activated against *"threats of market disturbance caused by significant prices rises or fall... and circumstances significantly disturbing or threatening to disturb the market where the situation ... is likely to continue or to deteriorate"*. Article 221 is focused on *"situation likely to cause a rapid deterioration of production and market conditions"*.

The additional reference to *"duly justified imperative grounds of urgency"* shows that the legislator has been willing to make crisis prevention and speedy crisis management possible.

Another positive developing in this context is the move towards higher market transparency which started with the European Milk Market Observatory⁴⁸ (EuroMMO) and its dashboard⁴⁹ updated several times a week, which will be followed up with others dashboard for other products. The private crisis prevention tool proposed in **Section 5.4** requires not only changes in the single CMO regulation but also publically available and reliable market information (Deloitte Conseil, 2012). OECD (2011) has strongly underlined this issue. A **European Agricultural Market Observatory (EAMO)** would be the logical ending result of this process.

The remaining question is whether the Commission has still today enough qualified human resources and internal flexibility to fully play its role on market crisis prevention and management.

⁴⁸ http://ec.europa.eu/agriculture/milk-market-observatory/index_en.htm

⁴⁹ http://ec.europa.eu/agriculture/milk-market-observatory/pdf/dashboard-dairy_en.pdf

In cases of major crisis, such as the *E-coli* and the Russian embargo, the answer based on the past events should be positive if the technical and management Commission capacities are maintained.

In cases of minor crisis, the Commission internal procedures do not allow enough, flexible and rapid actions. This is one of the reasons why the private crisis prevention measures proposed in section 5.4 need to be properly considered.

Last, but not least, **statistical information** on the structure of the industry is needed. Until now, there is a regular European agricultural structural survey. But the statistical information on the other actors of the industry is limited. On request of the European Parliament, the Commission published in 2012 a comprehensive study on agricultural cooperatives⁵⁰ which would deserve to be updated on a regular basis. Nothing similar exists for the food industry or the retailers.

5.6.2. The crisis reserve

The new crisis reserve (of EUR 400 million per year in 2011 prices) has been publicized as a tool to *“secure the financial resources needed in case of crisis”*⁵¹. It is fed *“through deductions from direct payments, with unused amounts reimbursed to farmers in the consecutive budget years”*.

This was neither the proposal of the Commission nor the position of the European Parliament (Lyon, 2010). In line with what proposed Chatellier (2011) in his report to the European Parliament, the aim was not *“to question the principle of the multiannual financial framework but to have some freedom (“security budgetary reserve”) to tackle any crisis situations in the best possible way”*. This is why the Commission proposed the creation of a “reserve for the management of agricultural crises” of EUR 500 million **outside the budget**. This would make more flexible the annuity budget rule whereby the money not used in a given year by the Union has to be given back to Member States.

Agricultural market crises are generally unpredictable but it can reasonably be expected that all years will be marked by one of them. In this case, if the reserve is outside the budget, the saving made one year could be helpful another year of the programming period if needed. The same reasoning was developed in the Commission proposal for the Globalisation Fund (Bureau and Mahé, 2015) but with more success.

The final decision on the European budget issue was taken by the Heads of States and Governments (Little et al., 2013), including:

- With regard to the first pillar of the CAP, a reduction for the entire period of almost € 4 billion.
- As it was decided not to reduce direct payments envelop, the adjustment has been made on market expenditure. They represented 5.3% of the Pillar 1 in 2013 and will be only 3% of an envelope already in decline, even in nominal terms.
- The proposal of creating a crisis reserve outside the budget was rejected and replaced by a reserve fuelled by a percentage of direct payments budget. In case it is not fully

⁵⁰ http://ec.europa.eu/agriculture/external-studies/2012/support-farmers-coop/fulltext_en.pdf

⁵¹ Besides that, the European Commission disposes of instruments to cope with sanitary crisis, through financial support to eradicate, control and prevent various animal diseases
http://ec.europa.eu/dgs/health_food-safety/funding/cff/animal_health/emerg_measures_en.htm

used, the remaining amounts would be returned to direct payments beneficiaries in subsequent years⁵².

This Budget Agreement left little margin for European Commission to cope with unexpected events. Furthermore the reduction in the market management budget of Pillar 1 makes more probable the use of the crisis reserve. Even more, its existence can be used in the annual budget negotiation by some MS to justify additional cuts in the market management budget, during the annual budgetary negotiations. As the Member States share in the market expenditure financed by the crisis reserve should normally be different from the **direct payment share, resistances from the "donors" member States can be expected, in particular if they are already net contributors to the budget of the Union.**

This decision, as underlined by De Castro and Di Mambro (2015), "does not take into account the very nature of modern market crisis, which can be heavily influenced by geopolitical factors. The farming sector is not always directly responsible for the crisis". This was the case, for instance, of the Russian embargo.

What was conceived as an additional tool to increase budget capacity to cope with agricultural market crisis has become not only an additional threat to a proper European crisis management, but also is pushing Member States to use, when possible, State aids as an alternative tool. We do not need to argue that this renationalization of the crisis management is an additional threat to a European economic and social cohesion.

5.6.2 Unpredictability of public interventions

The single CMO regulation foresees public intervention⁵³ and private storage⁵⁴. Public intervention is only foreseen for some products and some periods. It "shall" be open only for wheat, butter and skimmed milk powder and "may" be so for other products. In addition, buying-in can be done at a fixed price or by tendering procedures. As far as private storage is concerned, aid "may" be granted to some other products and its amount decided on a case by case basis.

At the same time, Article 219 empowers the Commission to react *"efficiently and effectively against threats of market disturbance caused by significant price rises or falls on internal or external markets or other events and circumstances significantly disturbing or threatening to disturb the market, where that situation, or its effects on the market, is likely to continue or deteriorate"*. *The Commission can adopt delegated acts ... to take the measures necessary to address that market situation, while respecting any obligations resulting from international agreements concluded in accordance with the TFEU and provided that any other measures available under this Regulation appear to be insufficient... Such measures may to the extent and for the time necessary to address the market disturbance"*.

⁵² For instance, in November 2015, the Commission published a regulation to reimburse € 410 million to European farmers deducted from farmers' CAP Direct Payments for the 2015 budget year in order to create this year's agricultural crisis reserve. http://ec.europa.eu/agriculture/newsroom/238_en.htm

⁵³ Articles 11 to 16

⁵⁴ Articles 17 and 18

The new regulation grants a large margin of manoeuvre to the Commission and is foreseen to provide enough flexibility to potentially answer to any specific and relevant concern. Bureau and Mahé (2015) underline rightly *“the Commission’s lack of independence from political pressures in the market management”* and that this *“unpredictable behaviour”* is a major obstacle to the development of any Income Stabilisation Tool. To resolve this difficulty, the same authors support *“the proposal that crises be managed by an independent agency with a written mandate. A basic element of such a mandate would be an objective definition of exceptional market disturbances which would dictate the use of the reserve in a predictable manner”*.

This proposal is attractive and there is the precedent of the European Central Bank. But it is not a realistic proposal. It will be first extremely difficult to achieve an agreement on an *“objective definition of exceptional market disturbances”*. Secondly, Member State Ministers and their representatives will always like to have some margin of manoeuvre and flexibility in order to be able to respond to any unexpected event and budget managers will always like to have some control on expenditures.

An alternative would be the **design of an alert system** with some objective criterions⁵⁵ based on the dashboards that the Commission already published now on a regular basis. On the other hand, the negotiation of a joint agreement of the Council, the Commission and the European Parliament on how the Commission should act and react when the alert is activated, including the financial rules applicable. The Commission could be committed to present regular reports on the functioning of this alert system.

5.7 Policy consistency

As underlined by the European Commission, *«“better Regulation” means designing EU policies and laws so that they achieve their objectives at minimum cost...This is necessary to ensure that the Union’s interventions respect the overarching principles of subsidiarity and proportionality i.e. acting only where necessary and in a way that does not go beyond what is needed to resolve the problem”* (European Commission, 2015a).

Any new proposal for an EU action has therefore first to respect those principles, which means to demonstrate that an EU action is the most efficient and effective way to achieve the objectives foreseen.

As far as the objectives are concerned, they have to be consistent and coherent with the general objectives of the European Union and, in the specific case of agricultural proposals, to be consistent with the objectives of the Common Agricultural Policy (CAP). This is why the *“consistency issue”* is so relevant.

This is why any new EU initiative should strongly contribute to increase competitiveness, create jobs and generate sustainable growth as the Commission has underlined when presenting its circular economy package⁵⁶. As far as the CAP is concerned, the first objective presented by the Commission in its Communication presenting the CAP towards 2020 (European Commission, 2010) is *“to preserve the food production potential on a sustainable basis throughout the EU”*.

There is no doubt that any new farm income stabilisation tool or policy would have a positive impact on *“preserving food production potential”*. But it is less evident that it would

⁵⁵ For instance, evolution of imports (and exports) as compared with a 5 year olympic average or percentage of price decrease (and increase) compared to a 5 year Olympic average

⁵⁶ http://europa.eu/rapid/press-release_IP-15-6203_en.htm

in all cases contribute to “*promoting a more sustainable Europe farm system*”, due to the potential change to more risky farmers’ behaviour which could be induced if the new tool is publically supported. This potential risk should be minimized.

At the same time, positive environmental practices such as integrated pest management or organic farming contribute to a more sustainable and resilient agricultural system in a medium and long term perspective. But they can be more risky in short term or at least it is the perception that many farmers have (Gent et al., 2011). Today in Spain, the organic producers and collective insurance contracts are eligible to a higher public support rate. The CAP 2014-2020 foresees a specific treatment for young farmers. In order to build a consistent tool, a positive discrimination could be envisaged. This is one way of using a targeting mechanism for environmental purposes, thus reinforcing the sustainability goal of the CAP.

6 CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

- 1) It is essential that **risks be structured in different layers**, based on different levels of severity, systemic nature and along the normal-catastrophic risk axis. This will permit positioning each instrument within the pyramid of layers, and establishing the communication conduits, through which risk can be transferred, shared and pooled. Clarity in defining the layer borders will give a sounder base to the pyramid, enabling the private and public sectors build effective partnerships. It will also pave the way to the private sector to fill and create market niches for offering risk managing tools of value to the producers.
- 2) The **European Union (EU) does not count with a harmonised EU-wide agricultural risk management scheme**. The types and extent to which risk management tools have been adopted differ widely within Member States (MS). Also, the level of coverage and subsidization vary widely from one MS to another with programs down to regional level in some of them.
- 3) Each MS has adopted a specific strategy in combining the financial support options considered in the CAP and prioritising some instruments over others. This responds to the accumulated experience each MS has using some instruments, the culture and traditions among farmers and the competitiveness and innovation of the private sector – banking, insuring and financing – in promoting them. Any possible approach for a **new CAP reform should permit MS to rely on their own systems and instruments**, helping MS improve them and broaden them, and never put at risk the systems that work and have provided valuable services to the farmers.
- 4) It is desirable that the insurable market risk should be covered by privately provided instruments. These can be subsidised or offered at market prices by financial institutions or insurance companies. It is expected that insurance companies add covers, policies and reduced deductibles, all charged at market prices, to the guarantees sold at subsidised rates (respectful of the Green box prerequisites). **There is ample room for the private sector** to innovate and offer guarantees and covers, nested to or in association to other products.
- 5) So far, CAP 2014-2020 has only defined an Income Stabilization Tool (IST), along with the principles of a mutual fund, to provide compensations against income losses beyond 30%. **In the upcoming reform, market risks may be also covered and supported with subsidised revenue or income insurance**.
- 6) There are significant challenges associated to broadening the covers to include market risks, which in the absence of representative futures and option markets, can only be **based on the individual farmers' accounting records or income indices**.
- 7) Reinsurance needs can be large and expensive. Public agency (reinsurance public company or calamities funds) may need to underwrite or assume the most severe crises, catastrophes or systemic risks. **There is room to define effective and co-insurance-reinsurance public-private partnerships**. The participation of governments with occasional budgetary outlays may be significantly reduced by: (a) **generating sufficiently large stabilisation reserves built up by farmers' directly or via insurance surcharges**; (b) making the contributions compulsory of farmers or insurance companies to stabilisation reserves, reducing significantly adverse selection; and (c) creating sections specific to different sectors or types of risks, within the structure of the reserves, therefore establishing powerful co-insuring and pooling effects.

- 8) Unless the mutual funds and IST build up significant reserves, and even if they do it, they will **need reinsurance services or some other ways to transfer the risks associated to compensations** resulting severe from market or sanitary crisis. It is thus desirable that instruments have the broadest base and attract diverse farmers from different regions. This complicates the management of the instruments, but significantly reduces reinsurance needs.
- 9) Because they offer protection against income losses, **both IST and income insurance** represent a significant departure from the experience among MS and **pose serious challenges for being implemented**. One particular challenge, that affects existing crop insurance policies, results from the difficulty of enlarging the covers to include both **inputs' and outputs' price variability and ensuring that the robustness of premia calculation, loss adjustment and reinsurance mechanisms is not threatened**.
- 10) In view of the decision to move on offering deeper and broader risk management tools, there is a need to **develop early warning systems** for agricultural markets to prevent, manage and cope with market crises. The new single CMO regulation gives a large margin of manoeuvre to the Commission and therefore provides enough flexibility to potentially respond to any specific and relevant concern.
- 11) **Fiscal and tax measures** can also provide some revenue stabilization effect. If farmers are allowed to average out income during various years, they can reduce the tax receipts, compensating bad with good years. At the opposite, an unbalanced national fiscal system, which for instance is systematically more favourable to investments than to savings, can in good years promote excessive investments and reduce farmers' resilience in bad years.
- 12) There is a significant challenge for many MS and a significant proportion of EU farms to define robust **income or revenue indices**, based on which ISTs and some other revenue or income insurance could be developed. The experience accumulated by the MS is insufficient to draw conclusions about best practice and recommend specific designing principles.
- 13) While ad-hoc payments still represent significant amounts in some MS. And yet, it is desirable that (a) any insurable risk should never be compensated with **ad-hoc payments**; and (b) that eligibility to ad-hoc payments, in case insurance or any other available instrument were not available for farmers, be conditioned on farmers' previous participation on mutual funds, ISTs or insurance programmes. This would enhance the **co-responsibility and farmers' self-reliance**.
- 14) **Producers' organisations (POs) and their associations (APOs)** should be allowed to implement effective crisis prevention. The current Regulation 1308/2013 does not provide timely and adequate tools to implement effective market crisis prevention measures. The major concerns are related to the effective POs and APOs empowerment to ensure production is adjust to demand in terms of quantity and quality. Current rules are, in practice, major impediments to implement real crisis prevention to take place.
- 15) The **current crisis reserve does not achieve effectively its objective**. Agricultural markets crises are generally unpredictable, although it can reasonably be expected that they will not be experienced all years. Inside the budget, the **Annuality Rule does not provide the required flexibility**. Outside the budget, the saving made one year could be helpful another year of the programming period if needed.

6.2 Recommendations

- 1) There is a lack of common regulation to define the functioning of the new ISTs, agro-insurance and mutual funds. Presently, all these instruments and initiatives are regulated by national legislation, so there is non-negligible possibility that they give rise to mal-practice, indirect subsidisation to the instrument providers or developers, and potentially to market distortions. It is therefore recommended that the **EC should coordinate and harmonise with the formulation of a Recommendation and with regulatory and overseeing national bodies common standards for regulating the use of publicly supported risk management instruments.**
- 2) A **European Agricultural Market Observatory (EAMO) should be created**, taking advantage on one hand of the positive experience of the European Milk Market Observatory and on the other of the agricultural market dashboard regularly published by the Commission. The EAMO should provide up to date relevant market information therefore increasing significantly market transparency.
- 3) An **early warning system should be implemented** with the objective of triggering actions and measures included in the crisis management in an automatic and transparent way. It should be based on objective criteria, taking into account the evolution of imports (and exports) or of market prices as compared with a reference periods. This should be followed by Joint Agreement between the Council, the Commission and the European Parliament negotiated to define how the Commission should act and react when the alert is activated, including the financial rules applicable. The Commission should present regular reports on the functioning of the alert system.
- 4) **Statistical information on the structure of the whole industry is needed.** Until now, even if under budget pressure, there is a regular European agricultural structural survey. But the statistical information on the other actors of the industry is limited. Detail studies and information of the structure of the whole chain are needed for the design of a comprehensive risk management policy.
- 5) **Producers' organisations (and their associations) should be allowed to effectively "ensure production is adjusted to demand, in terms of quantity and quality"** in order to offer reasonable prices to consumers and a fair standard of living to their members. They should be allowed to withdraw production from the market, in a coordinated way and under well determined conditions, to store or to stimulate their members to decrease their production. It is recommended that competent authorities oversee this kind of market responses to ensure that competition is not curtailed and **consumers' interests preserved.** Checking market prices in real time should help competence authorities oversee prices behaviour and detect excessive market control.
- 6) One way to implement a transition way from CAP 2014-2020 to the subsequent CAP, in the event that it is decided to reduce direct payments and use the released part to finance income stabilisation tools or revenue insurance, would be to grant **farmers vouchers that could be used for contracting risk management instruments (mutual funds, ISTs, Insurance).** Each farmer's direct payments will be reduced by a given percentage, which will be given to the farmer in the form of a voucher to be used in selected and approved risks management tools. However, this deserves further consideration and analysis to be applicable in practical terms and solutions.
- 7) A **crisis reserve outside the budget** (as proposed by the Commission and supported by the European Parliament) should be implemented in order to be able to face unexpected events. This should be done in the next financial perspectives or, even better, in the mid-term review of the current one.

- 8) **Member States should be obliged to communicate their fiscal and tax provisions** and adjustments on a regular basis to the Commission which should publish a summary with European reports of the reported measures and provisions. It is also recommended that the Commission should organize an exchange of information, experiences and best fiscal practices amongst the Member States, adopting Recommendations with this aim. This could pave the way for taking account of fiscal and tax provisions and fulfilling the co-financing requirements of MS.
- 9) The EC should put out tenders to evaluate the efficacy, functioning and penetration of the instruments implemented by MS in the 2007-2013 and 2014-2020 periods. These **studies should permit broadening the experiences and help MS, and the EC, EP and Council**, get a sense of what works better and how can the existing instruments be improved.
- 10) **Capacity building and training programmes**, including some professional qualifications for carrying out risks assessments, should be considered specifically in the Rural Development Programmes of Pillar 2 and in the programmes supported by the European Social Fund, with a view to strengthen the qualifications and capacity of farmers in the field of risks management.
- 11) All measures devoted to risk and crisis management should be **defined with an** integrated and coordinated manner, under a coherent framework within CAP.

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ANNEXES

BELGIUM

Regional support

Flanders and Wallonia Regions

Risk Management Support

AGRICULTURE AID, Million € (at prices of the previous year)
 % GDP

2007-2013		2007	2008	2009	2010	2011	2012	2013
<i>€ million</i>								
Pillar I	4.87							
Fruits & vegetables	4.87							
<i>FLANDERS - Crop insurance</i>				1.54	1.77	1.57		
Wine	0							
<i>Harvest Insurance</i>								
Art. 68	0							
<i>Insurance</i>								
<i>Mutual Funds</i>								
Other Agricultural Aid (State Aid)	186							
Art. 107 6 108								
<i>measures</i>								
De minimis								
<i>measures</i>								
Unclassified								
Selected unclassified	186	27.7	36.4	44	27	16.5	18.5	15.5
<i>Natural disasters or exceptional occurrences</i>	0	:	:	:	:	:	:	:
<i>Compensation of damages caused by natural disaster</i>	0	:	:	:	:	:	:	:
<i>Adverse climatic events</i>	19.7	:	2.3	15.5	1.4	0.5	0	0
<i>Adverse weather conditions</i>	2.7	0	0	0	0	0	0	2.7
<i>Animal diseases</i>	162	27.6	34	28.4	25.4	15.9	18.4	12.7
<i>Plant diseases and pest infestations</i>	0.8	0.1	0.1	0.1	0.2	0.1	0.1	0.1
<i>Insurance premiums</i>	0	:	:	:	:	:	:	:

AGRICULTURE AID, Million €
 % GDP

2014-2020		2014	2015	2016	2017	2018	2019	2020
Pillar I								
Fruits & vegetables								
<i>measures</i>								
Wine								
<i>measures</i>								
Pillar II - RDP (Art-1305/2013)	5.1							
<i>17.1. Crop, animal and plant insurance premium</i>								
<i>Region - FLANDERS</i>						5.14		
<i>% of farms supported</i>						5%		
<i>17.2. Mutual Funds</i>								
<i>17.3. Income stabilisation tool</i>								
Other Agricultural Aid (State Aid)								
ABER (Art.702/2014)								
<i>measures</i>								
De minimis (Art.1408/2013)								
<i>measures</i>								
Unclassified								
Selected unclassified	14.5							
<i>Natural disasters or exceptional occurrences</i>	:							
<i>Compensation of damages caused by natural disaster</i>	:							
<i>Adverse climatic events</i>	0							
<i>Adverse weather conditions</i>	0							
<i>Animal diseases</i>	14.4							
<i>Plant diseases and pest infestations</i>	0.1							
<i>Insurance premiums</i>	:							

BULGARIA

Risk Management Support

National support

AGRICULTURE AID, Million € (at prices of the previous year)
% GDP

2007-2013							
€ million	2007	2008	2009	2010	2011	2012	2013
Pillar I	3.3						
Fruits & vegetables <i>measures</i>							
Wine	3.3						
<i>Harvest insurance</i>			0.53	0.57	0.55	0.65	0.97
Art. 68 <i>measures</i>							
Other Agricultural Aid (State Aid)	33						
Art. 107 6 108 <i>measures</i>							
De minimis <i>measures</i>							
Unclassified							
Selected unclassified	33	5.1	13.6	0	0.9	0.9	2.6
<i>Natural disasters or exceptional occurrences</i>	11	0	0	0	0	0.6	2
<i>Compensation of damages caused by natural disaster</i>	:	:	:	:	:	:	:
<i>Adverse climatic events</i>	0	:	:	:	:	:	:
<i>Adverse weather conditions</i>	19	5.1	13.6	0	0.6	:	:
<i>Animal diseases</i>	0.3	:	:	:	:	:	0.3
<i>Plant diseases and pest infestations</i>	1.7	:	:	:	:	0.4	1.3
<i>Insurance premiums</i>	1.1	:	:	0.3	0.3	0.2	0.3

AGRICULTURE AID, Million €
% GDP

2014-2020							
	2014	2015	2016	2017	2018	2019	2020
Pillar I							
Fruits & vegetables <i>measures</i>							
Wine							
<i>Harvest insurance</i>							
Pillar II - RDP (Art-1305/2013)							
17.1. <i>Crop, animal and plant insurance premium</i>							
17.2. <i>Mutual Funds</i>							
17.3. <i>Income stabilisation tool</i>							
Other Agricultural Aid (State Aid)							
ABER (Art.702/2014) <i>measures</i>							
De minimis (Art.1408/2013) <i>measures</i>							
Unclassified							
Selected unclassified	4.1						
<i>Natural disasters or exceptional occurrences</i>	0						
<i>Compensation of damages caused by natural disaster</i>	:						
<i>Adverse climatic events</i>	:						
<i>Adverse weather conditions</i>	2						
<i>Animal diseases</i>	0.2						
<i>Plant diseases and pest infestations</i>	1.6						
<i>Insurance premiums</i>	0.3						

CZECH REPUBLIC

National support

Risk Management Support
AGRICULTURE AID, Million € (at prices of the previous year)
 % GDP

2007-2013							
€ million	2007	2008	2009	2010	2011	2012	2013
Pillar I	0.25						
Fruits & vegetables	0.25						
<i>Crop insurance</i>			0.02	0.03	0.2		
Wine							
<i>measures</i>							
Art. 68							
<i>measures</i>							
Other Agricultural Aid (State Aid)	229						
Art. 107 6 108							
<i>measures</i>							
De minimis							
<i>measures</i>							
Unclassified							
Selected unclassified	229	20.6	14.6	28.8	32.3	45	37.6
<i>Natural disasters or exceptional occurrences</i>	5.5	0.2	:	:	1.3	4	:
<i>Compensation of damages caused by natural disaster</i>	13	:	:	:	:	:	12.7
<i>Adverse climatic events</i>	0	:	:	:	:	:	:
<i>Adverse weather conditions</i>	0.4	0.4	:	:	:	:	:
<i>Animal diseases</i>	111	11.8	9.9	8.9	10.3	19.8	25.1
<i>Plant diseases and pest infestations</i>	21	8.2	4.7	2.6	1.9	1.5	1.3
<i>Insurance premiums</i>	79	:	:	17.3	18.8	19.7	11.2

AGRICULTURE AID, Million €
 % GDP

2014-2020							
	2014	2015	2016	2017	2018	2019	2020
Pillar I							
Fruits & vegetables							
<i>measures</i>							
Wine							
<i>measures</i>							
Pillar II - RDP (Art-1305/2013)							
17.1. <i>Crop, animal and plant insurance premium</i>							
17.2. <i>Mutual Funds</i>							
17.3. <i>Income stabilisation tool</i>							
Other Agricultural Aid (State Aid)							
ABER (Art.702/2014)							
<i>measures</i>							
De minimis (Art.1408/2013)							
<i>measures</i>							
Unclassified							
Selected unclassified	13.9						
<i>Natural disasters or exceptional occurrences</i>	:						
<i>Compensation of damages caused by natural disaster</i>	0						
<i>Adverse climatic events</i>	:						
<i>Adverse weather conditions</i>	:						
<i>Animal diseases</i>	1.6						
<i>Plant diseases and pest infestations</i>	0.6						
<i>Insurance premiums</i>	11.7						

DENMARK

Risk Management Support

National support

AGRICULTURE AID, Million € (at prices of the previous year)
% GDP

2007-2013							
€ million	2007	2008	2009	2010	2011	2012	2013
Pillar I							
Fruits & vegetables <i>measures</i>							
Wine <i>measures</i>							
Art. 68 <i>measures</i>							
Other Agricultural Aid (State Aid)	61						
Art. 107 6 108 <i>measures</i>							
De minimis <i>measures</i>							
Unclassified							
Selected unclassified	61	3	1.6	15.9	10.8	9.2	9.9
<i>Natural disasters or exceptional occurrences</i>	0	:	:	:	:	:	:
<i>Compensation of damages caused by natural disaster</i>	0	:	:	:	:	:	:
<i>Adverse climatic events</i>	0	:	:	:	:	:	:
<i>Adverse weather conditions</i>	0	:	:	:	:	:	:
<i>Animal diseases</i>	61	3	1.6	15.9	10.8	9.2	9.9
<i>Plant diseases and pest infestations</i>	0	:	:	:	:	:	:
<i>Insurance premiums</i>	0	:	:	:	:	:	:

AGRICULTURE AID, Million €
% GDP

2014-2020							
	2014	2015	2016	2017	2018	2019	2020
Pillar I							
Fruits & vegetables <i>measures</i>							
Wine <i>measures</i>							
Pillar II - RDP (Art-1305/2013)							
<i>17.1. Crop, animal and plant insurance premium</i>							
<i>17.2. Mutual Funds</i>							
<i>17.3. Income stabilisation tool</i>							
Other Agricultural Aid (State Aid)							
ABER (Art.702/2014) <i>measures</i>							
De minimis (Art.1408/2013) <i>measures</i>							
Unclassified							
Selected unclassified	12.8						
<i>Natural disasters or exceptional occurrences</i>	0						
<i>Compensation of damages caused by natural disaster</i>	:						
<i>Adverse climatic events</i>	:						
<i>Adverse weather conditions</i>	:						
<i>Animal diseases</i>	12.8						
<i>Plant diseases and pest infestations</i>	0						
<i>Insurance premiums</i>	:						

GERMANY

Nat. + Reg. support

Risk Management Support

National, and regions: Baden-Württemberg, Bavaria, Berlin and Brandenburg, Hesse, Lower Saxony and Bremen, Mecklenburg-Vorpommern, North Rhine-Westphalia, Rhineland-Palatinate, Saarland, Saxony, Saxony-Anhalt, Schleswig-Holstein, Thuringia

AGRICULTURE AID, Million € (at prices of the previous year)
 % GDP

2007-2013								
€ million		2007	2008	2009	2010	2011	2012	2013
Pillar I	18.31							
Fruits & vegetables	11.44							
<i>Harvest insurance</i>		11.44						
Wine	6.863							
<i>Harvest insurance</i>				0.08	1.86	2.2	1.75	0.97
Art. 68								
<i>measures</i>								
Other Agricultural Aid (State Aid)	808.3							
Art. 107 6 108								
<i>measures</i>								
De minimis								
<i>measures</i>								
Unclassified								
Selected unclassified	808.3	85.4	130	115	113	97.6	72.8	195
<i>Natural disasters or exceptional occurrences</i>	105	27.5	32.4	5.9	24.7	10.7	2.8	1
<i>Compensation of damages caused by natural disaster</i>	128.3	:	:	:	:	:	:	128
<i>Adverse climatic events</i>	16.2	3.4	0	0	0.1	8.7	2.4	1.6
<i>Adverse weather conditions</i>	0	0	0	0	0	:	:	:
<i>Animal diseases</i>	556	54.5	97.6	107	87.5	77.7	67.6	64.2
<i>Plant diseases and pest infestations</i>	1.9	0	0	1.9	0	0	0	0
<i>Insurance premiums</i>	0.9	:	:	:	0.4	0.5	:	:

AGRICULTURE AID, Million €
 % GDP

2014-2020								
		2014	2015	2016	2017	2018	2019	2020
Pillar I	5.11							
Fruits & vegetables								
<i>measures</i>								
Wine	5.11							
<i>Harvest Insurance</i>		0.2	0.12	1.6	1.6	1.6		
Pillar II - RDP (Art-1305/2013)								
17.1. <i>Crop, animal and plant insurance premium</i>								
17.2. <i>Mutual Funds</i>								
17.3. <i>Income stabilisation tool</i>								
Other Agricultural Aid (State Aid)								
ABER (Art.702/2014)								
<i>measures</i>								
De minimis (Art.1408/2013)								
<i>measures</i>								
Unclassified								
Selected unclassified	184.3							
<i>Natural disasters or exceptional occurrences</i>	2							
<i>Compensation of damages caused by natural disaster</i>	78.3							
<i>Adverse climatic events</i>	0							
<i>Adverse weather conditions</i>	:							
<i>Animal diseases</i>	104							
<i>Plant diseases and pest infestations</i>	0							
<i>Insurance premiums</i>	:							

ESTONIA

Risk Management Support

National support

AGRICULTURE AID, Million € (at prices of the previous year)
% GDP

2007-2013							
€ million	2007	2008	2009	2010	2011	2012	2013
Pillar I							
Fruits & vegetables <i>measures</i>							
Wine <i>measures</i>							
Art. 68 <i>measures</i>							
Other Agricultural Aid (State Aid)	4.9						
Art. 107 6 108 <i>measures</i>							
De minimis <i>measures</i>							
Unclassified							
Selected unclassified	4.9	1.3	1.2	0.9	0.8	0	0
<i>Natural disasters or exceptional occurrences</i>	0	0	:	:	:	:	:
<i>Compensation of damages caused by natural disaster</i>	0	:	:	:	:	:	:
<i>Adverse climatic events</i>	0	:	:	:	:	:	:
<i>Adverse weather conditions</i>	0	:	:	:	:	:	:
<i>Animal diseases</i>	4.2	1.3	1.2	0.9	0.8	0	:
<i>Plant diseases and pest infestations</i>	0.7	0	0	0	0	0	0.7
<i>Insurance premiums</i>	0	0	0	0	0	0	0

AGRICULTURE AID, Million €
% GDP

2014-2020							
	2014	2015	2016	2017	2018	2019	2020
Pillar I							
Fruits & vegetables <i>measures</i>							
Wine <i>measures</i>							
Pillar II - RDP (Art-1305/2013)							
<i>17.1. Crop, animal and plant insurance premium</i>							
<i>17.2. Mutual Funds</i>							
<i>17.3. Income stabilisation tool</i>							
Other Agricultural Aid (State Aid)							
ABER (Art.702/2014) <i>measures</i>							
De minimis (Art.1408/2013) <i>measures</i>							
Unclassified							
Selected unclassified	0						
<i>Natural disasters or exceptional occurrences</i>	:						
<i>Compensation of damages caused by natural disaster</i>	:						
<i>Adverse climatic events</i>	:						
<i>Adverse weather conditions</i>	:						
<i>Animal diseases</i>	:						
<i>Plant diseases and pest infestations</i>	0						
<i>Insurance premiums</i>	0						

IRELAND

National support

Risk Management Support
AGRICULTURE AID, Million € (at prices of the previous year)
 % GDP

2007-2013							
€ million	2007	2008	2009	2010	2011	2012	2013
Pillar I							
Fruits & vegetables <i>measures</i>							
Wine <i>measures</i>							
Art. 68 <i>measures</i>							
Other Agricultural Aid (State Aid)	311.2						
Art. 107 6 108 <i>measures</i>							
De minimis <i>measures</i>							
Unclassified							
Selected unclassified	311.2	29.9	74.2	83.4	47.2	30.2	25.7
<i>Natural disasters or exceptional occurrences</i>	100	0	33.4	47.4	16.3	3	0.2
<i>Compensation of damages caused by natural disaster</i>	0	:	:	:	:	:	:
<i>Adverse climatic events</i>	4	:	:	:	4	0	:
<i>Adverse weather conditions</i>	0	:	:	:	:	:	:
<i>Animal diseases</i>	207	29.9	40.8	36	26.9	27.2	25.5
<i>Plant diseases and pest infestations</i>	0	:	:	:	:	:	:
<i>Insurance premiums</i>	0	:	:	:	:	:	:

AGRICULTURE AID, Million €
 % GDP

2014-2020							
	2014	2015	2016	2017	2018	2019	2020
Pillar I							
Fruits & vegetables <i>measures</i>							
Wine <i>measures</i>							
Pillar II - RDP (Art-1305/2013)							
<i>17.1. Crop, animal and plant insurance premium</i>							
<i>17.2. Mutual Funds</i>							
<i>17.3. Income stabilisation tool</i>							
Other Agricultural Aid (State Aid)							
ABER (Art.702/2014) <i>measures</i>							
De minimis (Art.1408/2013) <i>measures</i>							
Unclassified							
Selected unclassified	23.9						
<i>Natural disasters or exceptional occurrences</i>	0						
<i>Compensation of damages caused by natural disaster</i>	:						
<i>Adverse climatic events</i>	:						
<i>Adverse weather conditions</i>	:						
<i>Animal diseases</i>	23.9						
<i>Plant diseases and pest infestations</i>	:						
<i>Insurance premiums</i>	:						

GREECE

Risk Management Support

National support

AGRICULTURE AID, Million € (at prices of the previous year)
% GDP

2007-2013								
€ million	2007	2008	2009	2010	2011	2012	2013	
Pillar I								
Fruits & vegetables <i>measures</i>								
Wine <i>measures</i>								
Art. 68 <i>measures</i>								
Other Agricultural Aid (State Aid)	1144							
Art. 107 6 108 <i>measures</i>								
De minimis <i>measures</i>								
Unclassified								
Selected unclassified	1144	129	444	490	35.5	32.1	9.3	5.3
<i>Natural disasters or exceptional occurrences</i>	153	16.3	24	63.8	23.5	22	2.6	0.6
<i>Compensation of damages caused by natural disaster</i>	0.1	:	:	:	:	:	0	0.1
<i>Adverse climatic events</i>	0	:	:	:	:	:	:	:
<i>Adverse weather conditions</i>	991	112	420	426	12	10.1	6.7	4.6
<i>Animal diseases</i>	0	:	:	:	:	:	:	:
<i>Plant diseases and pest infestations</i>	0	:	:	:	:	:	:	:
<i>Insurance premiums</i>	0	:	:	:	:	:	:	:

AGRICULTURE AID, Million €
% GDP

2014-2020									
	2014	2015	2016	2017	2018	2019	2020		
Pillar I									
Fruits & vegetables <i>measures</i>									
Wine <i>measures</i>									
Pillar II - RDP (Art-1305/2013)	0								
<i>17.1. Crop, animal and plant insurance premium</i>									
<i>17.2. Mutual Funds</i>									
<i>17.3. Income stabilisation tool</i>									
Other Agricultural Aid (State Aid)									
ABER (Art.702/2014) <i>measures</i>									
De minimis (Art.1408/2013) <i>measures</i>									
Unclassified									
Selected unclassified	5.7								
<i>Natural disasters or exceptional occurrences</i>	0								
<i>Compensation of damages caused by natural disaster</i>	4								
<i>Adverse climatic events</i>	:								
<i>Adverse weather conditions</i>	1.7								
<i>Animal diseases</i>	:								
<i>Plant diseases and pest infestations</i>	:								
<i>Insurance premiums</i>	:								

SPAIN

Nat. + Reg. support

Risk Management Support

National, and regions: Andalucía, Aragon, Asturias, Basque Country, Canary Islands, Cantabria, Castilla y León, Cataluña, Comunidad Valenciana, Murcia, La Rioja

AGRICULTURE AID, Million € (at prices of the previous year)
 % GDP

2007-2013								
€ million	2007	2008	2009	2010	2011	2012	2013	
Pillar I								
Fruits & vegetables								
<i>measures</i>								
Wine								
<i>measures</i>								
Art. 68								
<i>measures</i>								
Other Agricultural Aid (State Aid)	2661.4							
Art. 107 6 108								
<i>measures</i>								
De minimis								
<i>measures</i>								
Unclassified								
Selected unclassified	2661.4	491	486	392	363	331	317	280
<i>Natural disasters or exceptional occurrences</i>	29.5	12.8	6.1	7.5	0.4	1.9	0.8	0
<i>Compensation of damages caused by natural disaster</i>	0	:	:	:	:	:	:	:
<i>Adverse climatic events</i>	134.3	46.5	56.5	26	0.9	2.1	2	0.3
<i>Adverse weather conditions</i>	90.7	53.1	18.9	9.5	8.8	0.4	0	0
<i>Animal diseases</i>	203.5	41	37.6	33.5	41.4	24.8	15	10.2
<i>Plant diseases and pest infestations</i>	80.4	35.2	19.1	13.3	8.1	3.3	0.8	0.6
<i>Insurance premiums</i>	2123	303	348	303	304	299	298	269

AGRICULTURE AID, Million €
 % GDP

2014-2020								
	2014	2015	2016	2017	2018	2019	2020	
Pillar I								
Fruits & vegetables								
<i>measures</i>								
Wine								
<i>measures</i>								
Pillar II - RDP (Art-1305/2013)	14							
17.1. Crop, animal and plant insurance premium								
17.2. Mutual Funds								
17.3. Income stabilisation tool								
Region - CASTILLA Y LEÓN					14			
0.97% of farms supported for risk management								
Other Agricultural Aid (State Aid)								
ABER (Art.702/2014)								
<i>measures</i>								
De minimis (Art.1408/2013)								
<i>measures</i>								
Unclassified								
Selected unclassified	223.2							
<i>Natural disasters or exceptional occurrences</i>	0							
<i>Compensation of damages caused by natural disaster</i>	:							
<i>Adverse climatic events</i>	0							
<i>Adverse weather conditions</i>	0							
<i>Animal diseases</i>	3.4							
<i>Plant diseases and pest infestations</i>	0.1							
<i>Insurance premiums</i>	219.7							

FRANCE

Risk Management Support

Nat. + Reg. support

AGRICULTURE AID, Million € (at prices of the previous year)
% GDP

2007-2013								
€ million	2007	2008	2009	2010	2011	2012	2013	
Pillar I	435.2							
Fruits & vegetables <i>measures</i>								
Wine	1.20							
<i>Harvest insurance</i>			0.98	0.03	0.19			
Art. 68	434							
<i>Insurance</i>					350			
<i>Mutual Funds</i>					84			
Other Agricultural Aid (State Aid)	2008							
Art. 107 6 108 <i>measures</i>								
De minimis <i>measures</i>								
Unclassified								
Selected unclassified	2008.3	299	263	390	286	363	334	75.8
<i>Natural disasters or exceptional occurrences</i>	610.9	0	0	164	182	109	93.9	61.8
<i>Compensation of damages caused by natural disaster</i>	0	:	:	:	:	:	:	:
<i>Adverse climatic events</i>	746	:	123	94.2	26.5	252	238	11.9
<i>Adverse weather conditions</i>	188.3	177	8	1.4	2.2	:	:	:
<i>Animal diseases</i>	395.4	101	97.8	117	74.6	1.2	1.4	2.1
<i>Plant diseases and pest infestations</i>	1.3	0.4	0	0.8	0.1	:	:	:
<i>Insurance premiums</i>	66.4	20.2	34	12.1	0.1	:	:	0

AGRICULTURE AID, Million €
% GDP

2014-2020						
	2014	2015	2016	2017	2018	2019
Pillar I	0					
Fruits & vegetables <i>measures</i>						
Wine	0					
<i>Harvest insurance</i>						
Pillar II - RDP (Art-1305/2013)	600.75					
17.1. <i>Crop, animal and plant insurance premium</i>				540.75		
17.2. <i>Mutual Funds</i>				60		
17.3. <i>Income stabilisation tool (National Plan)</i>				0		
<i>More than 95% of farms supported for risk management, 495000 farms</i>						
Other Agricultural Aid (State Aid)						
ABER (Art.702/2014) <i>measures</i>						
De minimis (Art.1408/2013) <i>measures</i>						
Unclassified						
Selected unclassified	57.7					
<i>Natural disasters or exceptional occurrences</i>	46.1					
<i>Compensation of damages caused by natural disaster</i>	:					
<i>Adverse climatic events</i>	10.5					
<i>Adverse weather conditions</i>	:					
<i>Animal diseases</i>	1					
<i>Plant diseases and pest infestations</i>	:					
<i>Insurance premiums</i>	0.1					

CROATIA

National support

Risk Management Support

AGRICULTURE AID, Million € (at prices of the previous year)
% GDP

2007-2013								
€ million	2007	2008	2009	2010	2011	2012	2013	
Pillar I								
Fruits & vegetables <i>measures</i>								
Wine <i>measures</i>								
Art. 68 <i>measures</i>								
Other Agricultural Aid (State Aid)	0							
Art. 107 6 108 <i>measures</i>								
De minimis <i>measures</i>								
Unclassified								
Selected unclassified	0	0	0	0	0	0	0	0
<i>Natural disasters or exceptional occurrences</i>	0	:	:	:	:	:	:	:
<i>Compensation of damages caused by natural disaster</i>	0	:	:	:	:	:	:	:
<i>Adverse climatic events</i>	0	:	:	:	:	:	:	:
<i>Adverse weather conditions</i>	0	:	:	:	:	:	:	:
<i>Animal diseases</i>	0	:	:	:	:	:	:	:
<i>Plant diseases and pest infestations</i>	0	:	:	:	:	:	:	:
<i>Insurance premiums</i>	0	:	:	:	:	:	:	:

AGRICULTURE AID, Million €
% GDP

2014-2020								
	2014	2015	2016	2017	2018	2019	2020	
Pillar I								
Fruits & vegetables <i>measures</i>								
Wine <i>measures</i>								
Pillar II - RDP (Art-1305/2013)	57							
<i>17.1. Crop, animal and plant insurance premium</i>					57			
<i>17.2. Mutual Funds</i>								
<i>17.3. Income stabilisation tool</i>								
Other Agricultural Aid (State Aid)								
ABER (Art.702/2014) <i>measures</i>								
De minimis (Art.1408/2013) <i>measures</i>								
Unclassified								
Selected unclassified								
<i>Natural disasters or exceptional occurrences</i>	:							
<i>Compensation of damages caused by natural disaster</i>	:							
<i>Adverse climatic events</i>	:							
<i>Adverse weather conditions</i>	:							
<i>Animal diseases</i>	:							
<i>Plant diseases and pest infestations</i>	:							
<i>Insurance premiums</i>	:							

ITALY

Nat. + Reg. support

Risk Management Support
AGRICULTURE AID, Million € (at prices of the previous year)
 % GDP

		2007-2013						
€ million		2007	2008	2009	2010	2011	2012	2013
Pillar I	407							
Fruits & vegetables	11.9							
<i>Crop insurance</i>		0	4.91	3.49	3.51			
Wine	115.13							
<i>Harvest insurance</i>					35.3	27.8	32	20
Art. 68	280							
<i>Insurance</i>							280	
<i>Mutual Funds</i>								
Other Agricultural Aid (State Aid)	1648.9							
Art. 107 6 108								
<i>measures</i>								
De minimis								
<i>measures</i>								
Unclassified								
Selected unclassified	1649	170	310	218	258	266	177	250
<i>Natural disasters or exceptional occurrences</i>	12.1	1	2.9	1.6	0.1	4.1	1.9	0.5
<i>Compensation of damages caused by natural disaster</i>	48.4	:	:	:	:	:	0	48.4
<i>Adverse climatic events</i>	17.6	0	0	1.9	2.4	3.7	6.3	3.3
<i>Adverse weather conditions</i>	397.2	130	62.7	63	24.9	62.5	22.5	31.4
<i>Animal diseases</i>	133.1	15.6	21.7	26.7	21.4	19.3	12.3	16.1
<i>Plant diseases and pest infestations</i>	99.5	10.5	10.1	8.4	8.9	37.7	6.9	17
<i>Insurance premiums</i>	941	12.7	212	116	200	139	127	133

AGRICULTURE AID, Million €
 % GDP

		2014-2020						
		2014	2015	2016	2017	2018	2019	2020
Pillar I	110.14							
Fruits & vegetables	0							
<i>measures</i>								0
Wine	110.14							
<i>Harvest Insurance</i>		30.2	20	20	20	20		
Pillar II - RDP (Art-1305/2013)	1590.8							
17.1. <i>Crop, animal and plant insurance premium</i>								1396.8
17.2. <i>Mutual Funds</i>								97
17.3. <i>Income stabilisation tool</i>								97
5.55% percentage of farms participating in risk management scheme, 90000 farms expected								
Other Agricultural Aid (State Aid)								
ABER (Art.702/2014)								
<i>measures</i>								
De minimis (Art.1408/2013)								
<i>measures</i>								
Unclassified								
Selected unclassified	189.1							
<i>Natural disasters or exceptional occurrences</i>	0.2							
<i>Compensation of damages caused by natural disaster</i>	18							
<i>Adverse climatic events</i>	0							
<i>Adverse weather conditions</i>	20							
<i>Animal diseases</i>	12.5							
<i>Plant diseases and pest infestations</i>	14.6							
<i>Insurance premiums</i>	123.8							

CYPRUS

National support

Risk Management Support
AGRICULTURE AID, Million € (at prices of the previous year)
 % GDP

2007-2013							
€ million	2007	2008	2009	2010	2011	2012	2013
Pillar I	0.88						
Fruits & vegetables	0.29						
<i>Harvest insurance</i>			0.08	0.11	0.1		
Wine	0.59						
<i>Harvest insurance</i>				0.08	0.12	0.2	0.19
Art. 68							
<i>measures</i>							
Other Agricultural Aid (State Aid)	155						
Art. 107 6 108							
<i>measures</i>							
De minimis							
<i>measures</i>							
Unclassified							
Selected unclassified	155	7.1	13.5	104	8.3	6	6.5
<i>Natural disasters or exceptional occurrences</i>	42.6	0.3	0.5	35.9	1.6	0	1
<i>Compensation of damages caused by natural disaster</i>	0	:	:	:	:	:	:
<i>Adverse climatic events</i>	1.7	:	1.7	:	:	:	:
<i>Adverse weather conditions</i>	66.5	:	2.4	63.3	0.4	0.4	0
<i>Animal diseases</i>	14.6	3.1	3.3	1.2	2.6	1.5	1.1
<i>Plant diseases and pest infestations</i>	0.9	0.1	0.1	0.1	0.2	0.1	0.2
<i>Insurance premiums</i>	28.7	3.6	5.5	3.5	3.5	4	4.2

AGRICULTURE AID, Million €
 % GDP

2014-2020							
	2014	2015	2016	2017	2018	2019	2020
Pillar I	0.96						
Fruits & vegetables							
<i>measures</i>							
Wine	0.96						
<i>Harvest Insurance</i>	0.19	0.17	0.2	0.2	0.2		
Pillar II - RDP (Art-1305/2013)							
17.1. <i>Crop, animal and plant insurance premium</i>							
17.2. <i>Mutual Funds</i>							
17.3. <i>Income stabilisation tool</i>							
Other Agricultural Aid (State Aid)							
ABER (Art.702/2014)							
<i>measures</i>							
De minimis (Art.1408/2013)							
<i>measures</i>							
Unclassified							
Selected unclassified	6.5						
<i>Natural disasters or exceptional occurrences</i>	1.3						
<i>Compensation of damages caused by natural disaster</i>	:						
<i>Adverse climatic events</i>	:						
<i>Adverse weather conditions</i>	:						
<i>Animal diseases</i>	1.3						
<i>Plant diseases and pest infestations</i>	0.1						
<i>Insurance premiums</i>	3.8						

LATVIA

Risk Management Support

National support

AGRICULTURE AID, Million € (at prices of the previous year)
% GDP

2007-2013							
€ million	2007	2008	2009	2010	2011	2012	2013
Pillar I							
Fruits & vegetables <i>measures</i>							
Wine <i>measures</i>							
Art. 68 <i>measures</i>							
Other Agricultural Aid (State Aid)	6.6						
Art. 107 6 108 <i>measures</i>							
De minimis <i>measures</i>							
Unclassified							
Selected unclassified	6.6	3.4	0.5	0.3	0.3	0.4	0.6
<i>Natural disasters or exceptional occurrences</i>	0	:	:	:	:	:	:
<i>Compensation of damages caused by natural disaster</i>	0	:	:	:	:	:	:
<i>Adverse climatic events</i>	0	:	0	0	0	0	0
<i>Adverse weather conditions</i>	0.6	0.6	:	:	:	:	:
<i>Animal diseases</i>	1.9	1.9	:	:	:	:	:
<i>Plant diseases and pest infestations</i>	0.5	0.4	0.1	0	0	0	0
<i>Insurance premiums</i>	3.6	0.5	0.4	0.3	0.3	0.4	0.6
							1.1

AGRICULTURE AID, Million €
% GDP

2014-2020							
	2014	2015	2016	2017	2018	2019	2020
Pillar I							
Fruits & vegetables <i>measures</i>							
Wine <i>measures</i>							
Pillar II - RDP (Art-1305/2013)	10						
<i>17.1. Crop, animal and plant insurance premium</i>					10		
<i>17.2. Mutual Funds</i>							
<i>17.3. Income stabilisation tool</i>							
Other Agricultural Aid (State Aid)							
ABER (Art.702/2014) <i>measures</i>							
De minimis (Art.1408/2013) <i>measures</i>							
Unclassified							
Selected unclassified	0						
<i>Natural disasters or exceptional occurrences</i>	:						
<i>Compensation of damages caused by natural disaster</i>	:						
<i>Adverse climatic events</i>	:						
<i>Adverse weather conditions</i>	:						
<i>Animal diseases</i>	:						
<i>Plant diseases and pest infestations</i>	0						
<i>Insurance premiums</i>	:						

LITHUANIA

National support

Risk Management Support

AGRICULTURE AID, Million € (at prices of the previous year)
 % GDP

2007-2013							
€ million	2007	2008	2009	2010	2011	2012	2013
Pillar I							
Fruits & vegetables <i>measures</i>							
Wine <i>measures</i>							
Art. 68 <i>measures</i>							
Other Agricultural Aid (State Aid)	89.2						
Art. 107 6 108 <i>measures</i>							
De minimis <i>measures</i>							
Unclassified							
Selected unclassified	89.2	50.5	9.1	7.7	5.3	8.5	6.1
<i>Natural disasters or exceptional occurrences</i>	2.7	0.3	2.4	0	0	0	0
<i>Compensation of damages caused by natural disaster</i>	0	:	:	:	:	:	:
<i>Adverse climatic events</i>	0	:	:	:	:	:	:
<i>Adverse weather conditions</i>	43.9	43.9	:	:	:	:	:
<i>Animal diseases</i>	0.3	:	0	0	0.2	0	0.1
<i>Plant diseases and pest infestations</i>	1.9	0.6	0.6	0.3	0.1	0.1	0.1
<i>Insurance premiums</i>	40.4	5.7	6.1	7.4	5.2	8.2	6

AGRICULTURE AID, Million €
 % GDP

2014-2020							
	2014	2015	2016	2017	2018	2019	2020
Pillar I							
Fruits & vegetables <i>measures</i>							
Wine <i>measures</i>							
Pillar II - RDP (Art-1305/2013)	17						
<i>17.1. Crop, animal and plant insurance premium</i>					17		
<i>17.2. Mutual Funds</i>							
<i>17.3. Income stabilisation tool</i>							
Other Agricultural Aid (State Aid)							
ABER (Art.702/2014) <i>measures</i>							
De minimis (Art.1408/2013) <i>measures</i>							
Unclassified							
Selected unclassified	3.9						
<i>Natural disasters or exceptional occurrences</i>	:						
<i>Compensation of damages caused by natural disaster</i>	:						
<i>Adverse climatic events</i>	:						
<i>Adverse weather conditions</i>	:						
<i>Animal diseases</i>	1.6						
<i>Plant diseases and pest infestations</i>	0.2						
<i>Insurance premiums</i>	2.1						

LUXEMBOURG

National support

Risk Management Support
AGRICULTURE AID, Million € (at prices of the previous year)
 % GDP

2007-2013							
€ million	2007	2008	2009	2010	2011	2012	2013
Pillar I							
Fruits & vegetables <i>measures</i>							
Wine <i>measures</i>							
Art. 68 <i>measures</i>							
Other Agricultural Aid (State Aid)	22.2						
Art. 107 6 108 <i>measures</i>							
De minimis <i>measures</i>							
Unclassified							
Selected unclassified	22.2	2.3	2.2	1.6	1.4	6.5	6.6
<i>Natural disasters or exceptional occurrences</i>	0	:	:	:	:	:	:
<i>Compensation of damages caused by natural disaster</i>	0	:	:	:	:	:	:
<i>Adverse climatic events</i>	10	:	:	:	5.2	5.1	0
<i>Adverse weather conditions</i>	0	0	0	0	:	:	:
<i>Animal diseases</i>	3.3	1.2	0.9	0.3	0.3	0.2	0.2
<i>Plant diseases and pest infestations</i>	0	:	:	:	:	:	:
<i>Insurance premiums</i>	8.6	1.1	1.3	1.3	1.1	1.3	1.4

AGRICULTURE AID, Million €
 % GDP

2014-2020							
	2014	2015	2016	2017	2018	2019	2020
Pillar I							
Fruits & vegetables <i>measures</i>							
Wine <i>measures</i>							
Pillar II - RDP (Art-1305/2013)							
<i>17.1. Crop, animal and plant insurance premium</i>							
<i>17.2. Mutual Funds</i>							
<i>17.3. Income stabilisation tool</i>							
Other Agricultural Aid (State Aid)							
ABER (Art.702/2014) <i>measures</i>							
De minimis (Art.1408/2013) <i>measures</i>							
Unclassified							
Selected unclassified	1.6						
<i>Natural disasters or exceptional occurrences</i>	:						
<i>Compensation of damages caused by natural disaster</i>	:						
<i>Adverse climatic events</i>	0						
<i>Adverse weather conditions</i>	:						
<i>Animal diseases</i>	0.1						
<i>Plant diseases and pest infestations</i>	:						
<i>Insurance premiums</i>	1.5						

HUNGARY

National support

Risk Management Support
AGRICULTURE AID, Million € (at prices of the previous year)
 % GDP

2007-2013								
€ million		2007	2008	2009	2010	2011	2012	2013
Pillar I	15							
Fruits & vegetables <i>measures</i>								
Wine <i>measures</i>								
Art. 68	15							
<i>Insurance</i>						15		
<i>Mutual Funds</i>								
Other Agricultural Aid (State Aid)	233.4							
Art. 107 6 108 <i>measures</i>								
De minimis <i>measures</i>								
Unclassified								
Selected unclassified	233.4	34.3	23.6	8.3	24.9	39.9	50	52.4
<i>Natural disasters or exceptional occurrences</i>	30.1	2.9	0.7	0	0	0	0.9	25.6
<i>Compensation of damages caused by natural disaster</i>	0	:	:	:	:	:	:	:
<i>Adverse climatic events</i>	78.4	22.2	2.9	0.2	19.4	15.3	17.8	0.6
<i>Adverse weather conditions</i>	12.7	2.9	3.9	2.2	1.5	1	0.8	0.4
<i>Animal diseases</i>	111	5.7	16	5.7	3.8	23.5	30.3	25.6
<i>Plant diseases and pest infestations</i>	1.6	0.6	0.1	0.2	0.2	0.1	0.2	0.2
<i>Insurance premiums</i>	0	:	:	:	:	:	:	:

AGRICULTURE AID, Million €
 % GDP

2014-2020								
		2014	2015	2016	2017	2018	2019	2020
Pillar I								
Fruits & vegetables <i>measures</i>								
Wine <i>measures</i>								
Pillar II - RDP (Art-1305/2013)	95.3							
17.1. <i>Crop, animal and plant insurance premium</i>								76.3
17.2. <i>Mutual Funds</i>								0
17.3. <i>Income stabilisation tool</i>								19
* insurance premiums and income stabilisation support will be provided to 15 000 farms								
Other Agricultural Aid (State Aid)								
ABER (Art.702/2014) <i>measures</i>								
De minimis (Art.1408/2013) <i>measures</i>								
Unclassified								
Selected unclassified	28.6							
<i>Natural disasters or exceptional occurrences</i>	8.5							
<i>Compensation of damages caused by natural disaster</i>	:							
<i>Adverse climatic events</i>	0.4							
<i>Adverse weather conditions</i>	0.2							
<i>Animal diseases</i>	19.3							
<i>Plant diseases and pest infestations</i>	0.2							
<i>Insurance premiums</i>	:							

MALTA

Risk Management Support

National support

AGRICULTURE AID, Million € (at prices of the previous year)
% GDP

2007-2013								
€ million	2007	2008	2009	2010	2011	2012	2013	
Pillar I								
Fruits & vegetables <i>measures</i>								
Wine <i>measures</i>								
Art. 68 <i>measures</i>								
Other Agricultural Aid (State Aid)	0							
Art. 107 6 108 <i>measures</i>								
De minimis <i>measures</i>								
Unclassified								
Selected unclassified	0	0	0	0	0	0	0	0
<i>Natural disasters or exceptional occurrences</i>	0	:	:	:	:	:	:	:
<i>Compensation of damages caused by natural disaster</i>	0	:	:	:	:	:	:	:
<i>Adverse climatic events</i>	0	:	:	:	:	:	:	:
<i>Adverse weather conditions</i>	0	:	:	:	:	:	:	:
<i>Animal diseases</i>	0	:	:	:	:	:	:	:
<i>Plant diseases and pest infestations</i>	0	:	:	:	:	:	:	:
<i>Insurance premiums</i>	0	0	0	0	0	0	0	:

AGRICULTURE AID, Million €
% GDP

2014-2020							
	2014	2015	2016	2017	2018	2019	2020
Pillar I							
Fruits & vegetables <i>measures</i>							
Wine <i>measures</i>							
Pillar II - RDP (Art-1305/2013)	2.5						
<i>17.1. Crop, animal and plant insurance premium</i>					2.5		
<i>17.2. Mutual Funds</i>							
<i>17.3. Income stabilisation tool</i>							
Other Agricultural Aid (State Aid)							
ABER (Art. 702/2014) <i>measures</i>							
De minimis (Art. 1408/2013) <i>measures</i>							
Unclassified							
Selected unclassified	0						
<i>Natural disasters or exceptional occurrences</i>	:						
<i>Compensation of damages caused by natural disaster</i>	:						
<i>Adverse climatic events</i>	:						
<i>Adverse weather conditions</i>	:						
<i>Animal diseases</i>	:						
<i>Plant diseases and pest infestations</i>	:						
<i>Insurance premiums</i>	:						

THE NETHERLANDS

National support

Risk Management Support
AGRICULTURE AID, Million € (at prices of the previous year)
 % GDP

2007-2013							
€ million	2007	2008	2009	2010	2011	2012	2013
Pillar I	39						
Fruits & vegetables [8]	7						
<i>Harvest insurance</i>				7			
Wine							
<i>measures</i>							
Art. 68	32						
<i>Insurance ("Extensive weather insurance")</i>					32		
<i>Mutual Funds</i>							
Other Agricultural Aid (State Aid)	210.9						
Art. 107 6 108							
<i>measures</i>							
De minimis							
<i>measures</i>							
Unclassified							
Selected unclassified	210.9	36.5	31.7	24.5	53	24.7	25.9
<i>Natural disasters or exceptional occurrences</i>	0.2	:	:	:	:	0.2	0
<i>Compensation of damages caused by natural disaster</i>	0	:	:	:	:	:	:
<i>Adverse climatic events</i>	14.2	:	11.8	2.4	0	0	:
<i>Adverse weather conditions</i>	0.6	0.1	0.5	0	0	0	:
<i>Animal diseases</i>	179.5	31.9	17.3	20.4	50.7	23.1	23.3
<i>Plant diseases and pest infestations</i>	15.9	4.5	1.8	1.7	2.3	1.6	2.2
<i>Insurance premiums</i>	0.5	0	0.3	0	0	0	0.2

AGRICULTURE AID, Million €
 % GDP

2014-2020							
	2014	2015	2016	2017	2018	2019	2020
Pillar I							
Fruits & vegetables							
<i>measures</i>							
Wine							
<i>measures</i>							
Pillar II - RDP (Art-1305/2013)	54						
17.1. <i>Crop, animal and plant insurance premium</i>							
17.2. <i>Mutual Funds</i>				54			
17.3. <i>Income stabilisation tool</i>							
Other Agricultural Aid (State Aid)							
ABER (Art.702/2014)							
<i>measures</i>							
De minimis (Art.1408/2013)							
<i>measures</i>							
Unclassified							
Selected unclassified	20.1						
<i>Natural disasters or exceptional occurrences</i>	0						
<i>Compensation of damages caused by natural disaster</i>	:						
<i>Adverse climatic events</i>	:						
<i>Adverse weather conditions</i>	:						
<i>Animal diseases</i>	19.7						
<i>Plant diseases and pest infestations</i>	0						
<i>Insurance premiums</i>	0.4						

AUSTRIA

National support

Risk Management Support

AGRICULTURE AID, Million € (at prices of the previous year)
% GDP

2007-2013		2007	2008	2009	2010	2011	2012	2013
€ million								
Pillar I	0.32							
Fruits & vegetables	0.32							
<i>Crop insurance</i>				0.16	0.16			
Wine								
<i>measures</i>								
Art. 68								
<i>measures</i>								
Other Agricultural Aid (State Aid)	292.2							
Art. 107 6 108								
<i>measures</i>								
De minimis								
<i>measures</i>								
Unclassified								
Selected unclassified	292.2	32.8	31.6	41.6	49.1	45.2	43.9	48
<i>Natural disasters or exceptional occurrences</i>	7	0.6	0.1	4	2.2	0.1	0	0
<i>Compensation of damages caused by natural disaster</i>	3.7	:	:	:	:	:	:	3.7
<i>Adverse climatic events</i>	0	:	:	:	:	:	:	:
<i>Adverse weather conditions</i>	2.5	2.3	0	0	:	:	:	0.2
<i>Animal diseases</i>	28.1	3.2	3.7	3.3	4.8	4.6	4.3	4.2
<i>Plant diseases and pest infestations</i>	0.7	0.3	0.2	0.1	0.1	0	0	0
<i>Insurance premiums</i>	250	26.4	27.6	34.2	42	40.5	39.6	39.9

AGRICULTURE AID, Million €
% GDP

2014-2020		2014	2015	2016	2017	2018	2019	2020
Pillar I								
Fruits & vegetables								
<i>measures</i>								
Wine								
<i>measures</i>								
Pillar II - RDP (Art-1305/2013)								
17.1. <i>Crop, animal and plant insurance premium</i>								
17.2. <i>Mutual Funds</i>								
17.3. <i>Income stabilisation tool</i>								
Other Agricultural Aid (State Aid)								
ABER (Art.702/2014)								
<i>measures</i>								
De minimis (Art.1408/2013)								
<i>measures</i>								
Unclassified								
Selected unclassified	64.5							
<i>Natural disasters or exceptional occurrences</i>	0							
<i>Compensation of damages caused by natural disaster</i>	0.7							
<i>Adverse climatic events</i>	:							
<i>Adverse weather conditions</i>	17.7							
<i>Animal diseases</i>	4.2							
<i>Plant diseases and pest infestations</i>	0							
<i>Insurance premiums</i>	41.9							

POLAND

National support

Risk Management Support
AGRICULTURE AID, Million € (at prices of the previous year)
 % GDP

2007-2013								
€ million		2007	2008	2009	2010	2011	2012	2013
Pillar I								
Fruits & vegetables <i>measures</i>								
Wine <i>measures</i>								
Art. 68 <i>measures</i>								
Other Agricultural Aid (State Aid)	936.6							
Art. 107 6 108 <i>measures</i>								
De minimis <i>measures</i>								
Unclassified								
Selected unclassified	936.6	124	188	101	157	132	122	113
<i>Natural disasters or exceptional occurrences</i>	148.5	40.4	45.8	23	17.4	13.8	7.2	0.9
<i>Compensation of damages caused by natural disaster</i>	0	:	:	:	:	:	:	:
<i>Adverse climatic events</i>	180.8	8.9	52.9	20.8	55.9	22.9	12.6	6.8
<i>Adverse weather conditions</i>	8.6	8.6	0	0	0	0	0	0
<i>Animal diseases</i>	392.1	57	48.8	35.6	58.4	63.6	63.2	65.5
<i>Plant diseases and pest infestations</i>	3.3	0.4	0.4	0.7	0.8	0.2	0.2	0.6
<i>Insurance premiums</i>	203.3	8.7	40	20.7	24.6	31.1	39	39.2

AGRICULTURE AID, Million €
 % GDP

2014-2020								
		2014	2015	2016	2017	2018	2019	2020
Pillar I								
Fruits & vegetables <i>measures</i>								
Wine <i>measures</i>								
Pillar II - RDP (Art-1305/2013)								
<i>17.1. Crop, animal and plant insurance premium</i>								
<i>17.2. Mutual Funds</i>								
<i>17.3. Income stabilisation tool</i>								
Other Agricultural Aid (State Aid)								
ABER (Art.702/2014) <i>measures</i>								
De minimis (Art.1408/2013) <i>measures</i>								
Unclassified								
Selected unclassified	116.1							
<i>Natural disasters or exceptional occurrences</i>	1.8							
<i>Compensation of damages caused by natural disaster</i>	:							
<i>Adverse climatic events</i>	3.6							
<i>Adverse weather conditions</i>	0							
<i>Animal diseases</i>	72							
<i>Plant diseases and pest infestations</i>	0.1							
<i>Insurance premiums</i>	38.6							

PORTUGAL

Nat. + Reg. support

Risk Management Support

AGRICULTURE AID, Million € (at prices of the previous year)
% GDP

2007-2013		2007	2008	2009	2010	2011	2012	2013
€ million								
Pillar I	7.81							
Fruits & vegetables measures								
Wine	7.81							
<i>Harvest insurance</i>						1.83	5.98	
Art. 68 measures								
Other Agricultural Aid (State Aid)	117.8							
Art. 107 6 108 measures								
De minimis measures								
Unclassified								
Selected unclassified	117.8	15.4	21.7	16.1	9.1	0	44.3	11.2
<i>Natural disasters or exceptional occurrences</i>	0.1	0.1	:	:	:	:	:	:
<i>Compensation of damages caused by natural disaster</i>	0	:	:	:	:	:	:	:
<i>Adverse climatic events</i>	32.9	:	:	:	:	:	26.3	6.6
<i>Adverse weather conditions</i>	84.8	15.3	21.7	16.1	9.1	0	18	4.6
<i>Animal diseases</i>	0	:	:	:	:	:	:	:
<i>Plant diseases and pest infestations</i>	0	:	:	:	:	:	:	:
<i>Insurance premiums</i>	0	0	0	0	0	0	0	0

AGRICULTURE AID, Million €
% GDP

2014-2020		2014	2015	2016	2017	2018	2019	2020
Pillar I	28.42							
Fruits & vegetables measures								
Wine	28.42							
<i>Harvest Insurance</i>		3.89	3.53	7	7	7		
Pillar II - RDP (Art-1305/2013)	53.2							
17.1. <i>Crop, animal and plant insurance</i>	53.2							
Mainland					50			
Azores					2.4			
Madeira					0.8			
17.2. <i>Mutual Funds</i>	0							
Azores								
17.3. <i>Income stabilisation tool</i>	0							
Other Agricultural Aid (State Aid)								
ABER (Art.702/2014) measures								
De minimis (Art.1408/2013) measures								
Unclassified								
Selected unclassified	0							
<i>Natural disasters or exceptional occurrences</i>	:							
<i>Compensation of damages caused by natural disaster</i>	:							
<i>Adverse climatic events</i>	0							
<i>Adverse weather conditions</i>	0							
<i>Animal diseases</i>	:							
<i>Plant diseases and pest infestations</i>	:							
<i>Insurance premiums</i>	0							

ROMANIA

National support

Risk Management Support

AGRICULTURE AID, Million € (at prices of the previous year)
 % GDP

2007-2013							
€ million	2007	2008	2009	2010	2011	2012	2013
Pillar I	1.49						
Fruits & vegetables measures							
Wine	1.49						
Harvest insurance			0.32	0.36	0.27	0.3	0.23
Art. 68 measures							
Other Agricultural Aid (State Aid)	657.2						
Art. 107 6 108 measures							
De minimis measures							
Unclassified							
Selected unclassified	657.2	613	18.4	9.8	0	4.1	5.3
Natural disasters or exceptional occurrences	609.8	602	3.7	3.7	0	:	:
Compensation of damages caused by natural disaster	0	:	:	:	:	:	:
Adverse climatic events	0.7	:	:	0.7	0	:	:
Adverse weather conditions	0	:	:	:	:	:	:
Animal diseases	12.8	6.4	5.3	1.1	:	:	:
Plant diseases and pest infestations	17.7	3.8	9.4	4.3	0	0	0.2
Insurance premiums	16.2	:	:	:	0	4.1	5.1

AGRICULTURE AID, Million €
 % GDP

2014-2020							
	2014	2015	2016	2017	2018	2019	2020
Pillar I	1.53						
Fruits & vegetables measures							
Wine	1.53						
Harvest Insurance	0.25	0.23	0.35	0.35	0.35		
Pillar II - RDP (Art-1305/2013)							
17.1. Crop, animal and plant insurance premium							
17.2. Mutual Funds							
17.3. Income stabilisation tool							
Other Agricultural Aid (State Aid)							
ABER (Art.702/2014) measures							
De minimis (Art.1408/2013) measures							
Unclassified							
Selected unclassified	7						
Natural disasters or exceptional occurrences	:						
Compensation of damages caused by natural disaster	:						
Adverse climatic events	:						
Adverse weather conditions	:						
Animal diseases	:						
Plant diseases and pest infestations	0						
Insurance premiums	7						

SLOVENIA

Risk Management Support

National support

AGRICULTURE AID, Million € (at prices of the previous year)
% GDP

2007-2013							
€ million	2007	2008	2009	2010	2011	2012	2013
Pillar I							
Fruits & vegetables <i>measures</i>							
Wine <i>measures</i>							
Art. 68 <i>measures</i>							
Other Agricultural Aid (State Aid)	134						
Art. 107 6 108 <i>measures</i>							
De minimis <i>measures</i>							
Unclassified							
Selected unclassified	134	24.1	25.8	25.1	16.8	15.2	10.5
<i>Natural disasters or exceptional occurrences</i>	12	10	1.6	0.3	0	0	0
<i>Compensation of damages caused by natural disaster</i>	0	:	:	:	:	:	:
<i>Adverse climatic events</i>	10	:	4.6	0.1	0	0	5.3
<i>Adverse weather conditions</i>	2.8	:	:	0.9	1.6	0	0.3
<i>Animal diseases</i>	61	9.1	12.4	11.5	8.9	8	5.9
<i>Plant diseases and pest infestations</i>	1.3	0.2	0	0	0.1	0.3	0.1
<i>Insurance premiums</i>	47	4.8	7.2	13.2	6.9	5.3	4.5

AGRICULTURE AID, Million €
% GDP

2014-2020							
	2014	2015	2016	2017	2018	2019	2020
Pillar I							
Fruits & vegetables <i>measures</i>							
Wine <i>measures</i>							
Pillar II - RDP (Art.1305/2013)							
<i>17.1. Crop, animal and plant insurance premium</i>							
<i>17.2. Mutual Funds</i>							
<i>17.3. Income stabilisation tool</i>							
Other Agricultural Aid (State Aid)							
ABER (Art.702/2014) <i>measures</i>							
De minimis (Art.1408/2013) <i>measures</i>							
Unclassified							
Selected unclassified	14.6						
<i>Natural disasters or exceptional occurrences</i>	0						
<i>Compensation of damages caused by natural disaster</i>	:						
<i>Adverse climatic events</i>	5						
<i>Adverse weather conditions</i>	0.3						
<i>Animal diseases</i>	6.1						
<i>Plant diseases and pest infestations</i>	0.2						
<i>Insurance premiums</i>	3						

SLOVAKIA

National support

Risk Management Support

AGRICULTURE AID, Million € (at prices of the previous year)
 % GDP

2007-2013		2007	2008	2009	2010	2011	2012	2013
€ million								
Pillar I	0.72							
Fruits & vegetables measures								
Wine	0.72							
Harvest insurance [7]			0.06	0.1	0.1	0.2	0.26	
Art. 68 measures								
Other Agricultural Aid	27.5							
Art. 107 6 108 measures								
De minimis measures								
Unclassified								
Selected unclassified	27.5	4.9	1	4.4	9.4	4.2	2.3	1.3
Natural disasters or exceptional occurrences	5.6	0	0	:	2.8	2.8	0	0
Compensation of damages caused by natural disaster	0	:	:	:	:	:	:	:
Adverse climatic events	3.9	3.9	0	0	0	0	0	0
Adverse weather conditions	0	0	:	:	:	:	:	:
Animal diseases	8.7	0.1	:	1.8	2.8	1.4	1.3	1.3
Plant diseases and pest infestations	0	:	:	0	0	0	0	0
Insurance premiums	9.3	0.9	1	2.6	3.8	0	1	0

AGRICULTURE AID, Million €
 % GDP

2014-2020		2014	2015	2016	2017	2018	2019	2020
Pillar I	0.92							
Fruits & vegetables measures								
Wine [4]	0.92							
Harvest Insurance [7]		0.12	0.2	0.2	0.2	0.2		
Pillar II - RDP (Art-1305/2013)								
17.1. Crop, animal and plant insurance premium								
17.2. Mutual Funds								
17.3. Income stabilisation tool								
Other Agricultural Aid (State Aid)								
ABER (Art.702/2014) measures								
De minimis (Art.1408/2013) measures								
Unclassified								
Selected unclassified	2							
Natural disasters or exceptional occurrences	0							
Compensation of damages caused by natural disaster	:							
Adverse climatic events	0							
Adverse weather conditions	:							
Animal diseases	2							
Plant diseases and pest infestations	0							
Insurance premiums	0							

FINLAND

Risk Management Support

Nat. + Reg. support

AGRICULTURE AID, Million € (at prices of the previous year)
% GDP

2007-2013								
€ million	2007	2008	2009	2010	2011	2012	2013	
Pillar I								
Fruits & vegetables <i>measures</i>								
Wine <i>measures</i>								
Art. 68 <i>measures</i>								
Other Agricultural Aid (State Aid)	27.1							
Art. 107 6 108 <i>measures</i>								
De minimis <i>measures</i>								
Unclassified								
Selected unclassified	27.1	1.4	4	3.6	4.6	1.9	11.1	0.5
<i>Natural disasters or exceptional occurrences</i>	0.3	0	0	0	0	0	0.3	0
<i>Compensation of damages caused by natural disaster</i>	0	:	:	:	:	:	:	:
<i>Adverse climatic events</i>	3.2	0	2.2	0.6	0.4	0	0	:
<i>Adverse weather conditions</i>	13.1	0	0	0	2.2	1.2	9.4	0.3
<i>Animal diseases</i>	0.7	0.1	0.1	0.2	0.1	0.1	0.1	0
<i>Plant diseases and pest infestations</i>	9.8	1.3	1.7	2.8	1.9	0.6	1.3	0.2
<i>Insurance premiums</i>	0	:	:	:	:	:	:	:

AGRICULTURE AID, Million €
% GDP

2014-2020							
	2014	2015	2016	2017	2018	2019	2020
Pillar I							
Fruits & vegetables <i>measures</i>							
Wine <i>measures</i>							
Pillar II - RDP (Art-1305/2013)							
<i>17.1. Crop, animal and plant insurance premium</i>							
<i>17.2. Mutual Funds</i>							
<i>17.3. Income stabilisation tool</i>							
Other Agricultural Aid (State Aid)							
ABER (Art.702/2014) <i>measures</i>							
De minimis (Art.1408/2013) <i>measures</i>							
Unclassified							
Selected unclassified	1.6						
<i>Natural disasters or exceptional occurrences</i>	0						
<i>Compensation of damages caused by natural disaster</i>	:						
<i>Adverse climatic events</i>	:						
<i>Adverse weather conditions</i>	1.4						
<i>Animal diseases</i>	0						
<i>Plant diseases and pest infestations</i>	0.2						
<i>Insurance premiums</i>	:						

SWEDEN

National support

Risk Management Support
AGRICULTURE AID, Million € (at prices of the previous year)
 % GDP

2007-2013							
€ million	2007	2008	2009	2010	2011	2012	2013
Pillar I							
Fruits & vegetables <i>measures</i>							
Wine <i>measures</i>							
Art. 68 <i>measures</i>							
Other Agricultural Aid (State Aid)	297.6						
Art. 107 6 108 <i>measures</i>							
De minimis <i>measures</i>							
Unclassified							
Selected unclassified	297.6	141	61.6	27	30	17	11.7
<i>Natural disasters or exceptional occurrences</i>	185	122	42.1	8.2	11.1	1.6	0 :
<i>Compensation of damages caused by natural disaster</i>	0 :	:	:	:	:	:	:
<i>Adverse climatic events</i>	0 :	:	:	:	:	:	:
<i>Adverse weather conditions</i>	0 :	:	:	:	:	:	:
<i>Animal diseases</i>	113	18.4	19.5	18.8	18.9	15.4	11.7
<i>Plant diseases and pest infestations</i>	0 :	:	:	:	:	:	:
<i>Insurance premiums</i>	0 :	:	:	:	:	:	:

AGRICULTURE AID, Million €
 % GDP

2014-2020							
	2014	2015	2016	2017	2018	2019	2020
Pillar I							
Fruits & vegetables <i>measures</i>							
Wine <i>measures</i>							
Pillar II - RDP (Art-1305/2013)							
<i>17.1. Crop, animal and plant insurance premium</i>							
<i>17.2. Mutual Funds</i>							
<i>17.3. Income stabilisation tool</i>							
Other Agricultural Aid (State Aid)							
ABER (Art.702/2014) <i>measures</i>							
De minimis (Art.1408/2013) <i>measures</i>							
Unclassified							
Selected unclassified	10.3						
<i>Natural disasters or exceptional occurrences</i>	:						
<i>Compensation of damages caused by natural disaster</i>	:						
<i>Adverse climatic events</i>	:						
<i>Adverse weather conditions</i>	:						
<i>Animal diseases</i>	10.3						
<i>Plant diseases and pest infestations</i>	:						
<i>Insurance premiums</i>	:						

UNITED KINGDOM

Regional support

Risk Management Support

AGRICULTURE AID, Million € (at prices of the previous year)
% GDP

2007-2013		2007	2008	2009*	2010*	2011	2012	2013
€ million								
Pillar I	0.362							
Fruits & vegetables	0.362							
<i>Harvest insurance</i>				0.3	0.06			
Wine								
<i>measures</i>								
Art. 68								
<i>measures</i>								
Other Agricultural Aid (State Aid)	1245.3							
Art. 107 6 108								
<i>measures</i>								
De minimis								
<i>measures</i>								
Unclassified								
Selected unclassified	1245.3	253	192	174	192	143	152	141
<i>Natural disasters or exceptional occurrences</i>	2.7	:	:	2.4	0.3	0	:	:
<i>Compensation of damages caused by natural disaster</i>	0	:	:	:	:	:	:	:
<i>Adverse climatic events</i>	0.3	:	:	:	:	:	:	0.3
<i>Adverse weather conditions</i>	0.7	0.7	0	:	:	:	:	:
<i>Animal diseases</i>	1241	252	192	172	192	143	151	141
<i>Plant diseases and pest infestations</i>	0.3	:	:	:	:	0	0.3	0
<i>Insurance premiums</i>	0	:	:	:	:	:	:	:

AGRICULTURE AID, Million €
% GDP

2014-2020		2014	2015	2016	2017	2018	2019	2020
Pillar I								
Fruits & vegetables								
<i>measures</i>								
Wine								
<i>measures</i>								
Pillar II - RDP (Art-1305/2013)								
17.1. Crop, animal and plant insurance premium								
17.2. Mutual Funds								
17.3. Income stabilisation tool								
Other Agricultural Aid (State Aid)								
ABER (Art.702/2014)								
<i>measures</i>								
De minimis (Art.1408/2013)								
<i>measures</i>								
Unclassified								
Selected unclassified	151.7							
<i>Natural disasters or exceptional occurrences</i>	:							
<i>Compensation of damages caused by natural disaster</i>	:							
<i>Adverse climatic events</i>	0.2							
<i>Adverse weather conditions</i>	:							
<i>Animal diseases</i>	151.5							
<i>Plant diseases and pest infestations</i>	0							
<i>Insurance premiums</i>	:							

DIRECTORATE-GENERAL FOR INTERNAL POLICIES

POLICY DEPARTMENT **B** STRUCTURAL AND COHESION POLICIES

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