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# **Re-adjusting Risk Management within the CAP: evidences on the implementation of the Income Stabilization Tool**

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# INTRODUCTION

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## Renewed emphasis on RISK MANAGEMENT IN AGRICULTURE

- ✓ **Higher exposure to PRODUCTION & MARKET RISK** for Italian agriculture:
  - increasing price volatility (unpredictable weather conditions, climate change, global market dynamics)
  - reduction of direct payments
- ✓ **INCOME RISK = key issue** for stakeholders:
  - reduced farmers' economic sustainability and viability
  - declining living conditions
  - high uncertainty → weakened propensity to invest in more sustainable farming

# EVOLUTION OF RM POLICY FRAMEWORK IN ITALY

⇒ **1957 - Treaty of Rome (art. 39)** → To ensure a good standard of living for farmers

Risk management at the margins of policy debate in Europe:  
the development of instruments to hedge production risk referred to each Member State

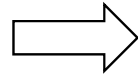
ITALY

⇒ **1970 National Solidarity Fund (FSN) (Law n. 364)**  
✓ Ex-post compensations for natural disasters + **Partial coverage of insurance premium**

⇒ **2004: Reform of FSN (Decree n. 102)**  
✓ Promotion of insurance (national public support up to 80% of the premium)

⇒ **2010: CAP Health Check Reform (Reg. n. 73/2009)**  
✓ National + European public support (up to 65%) to:  
- insurance premiums  
- mutual funds  
**+ COM for the wine sector (Reg. 479/2008)**

# CURRENT RM POLICY FRAMEWORK IN ITALY



**CAP 2014-2020 (Reg. n. 1305/2013) - art. 36-39**

- ✓ risk management from I to II Pillar
- ✓ implementation of **RISK MANAGEMENT TOOLKIT**

**Public support: max 65%**

**Threshold for the indemnification: 30%**

**1. MUTUAL FUNDS** (low success in Italy)

**2. INSURANCES** (established market from the '80)



**3. INCOME STABILIZATION TOOL (IST)**

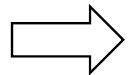
- overall risk coverage for farmers
- Hungary, Spain (Castilla Y Leon), **Italy (97million € for 2014-2020 and a National Plan)**
- still no IST experiences in Italy!

YIELD RISKS

INCOME RISKS

# RISK MANAGEMENT TOOLKIT & PUBLIC SUPPORT

- **CROP INSURANCE:** CAP pays 65% of the insurance premium
- **MUTUAL FUNDS & IST:** CAP pays 65% of the indemnity paid to farmers (ex-post)

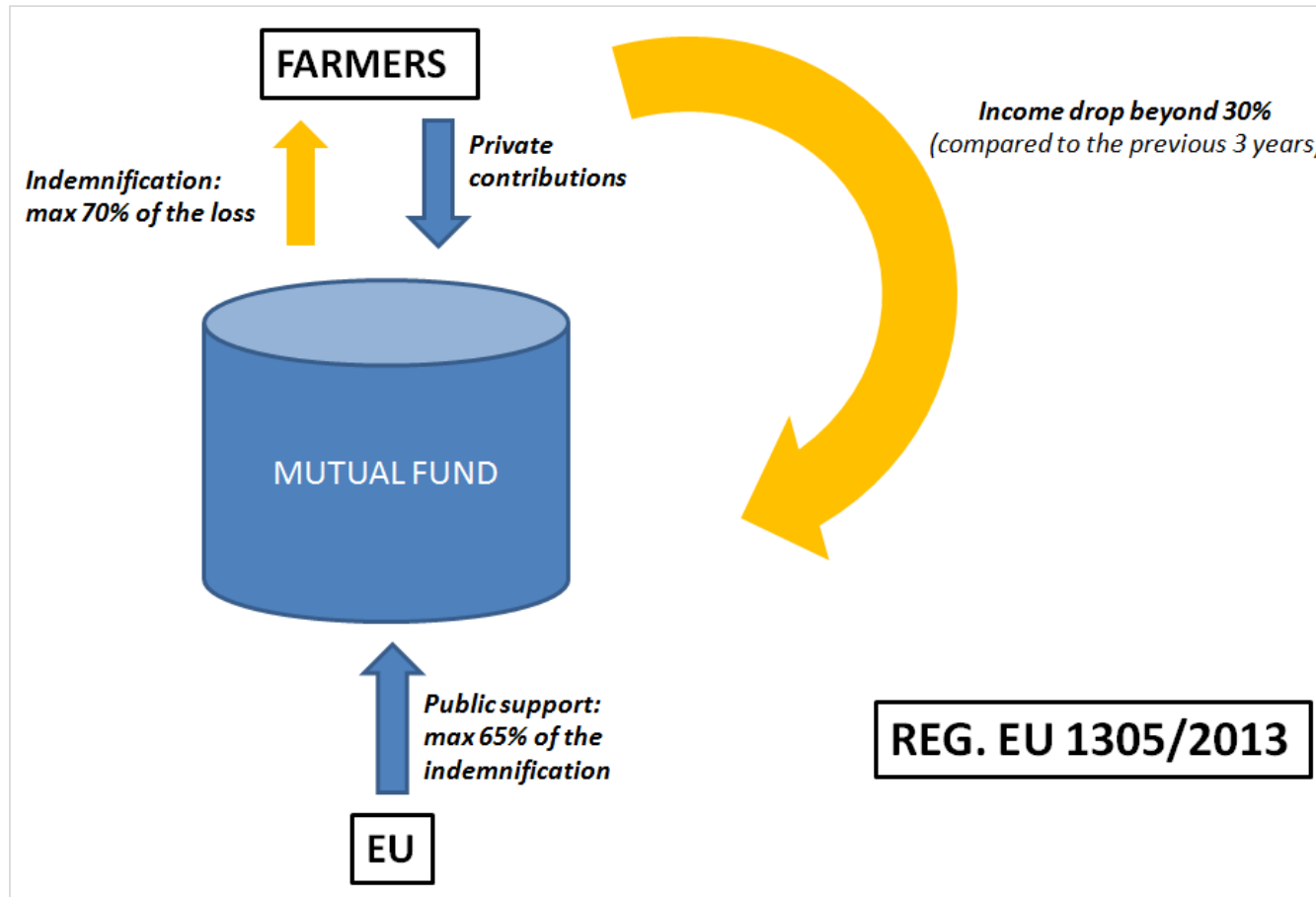


## ***In Italy: Ministerial Decree n. 10158 (2016)***

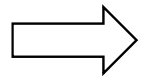
- voluntary participation;
- voluntary payments for the initial asset;
- fund duration (5 years);
- fund membership (3 years);
- 150 farmers or 50 with a total turnover > than 10 million €;
- duration of the protection (1 year);
- subjects responsible for the establishment /management of the fund (cooperatives/consortia/POs)

**for MUTUAL FUNDS**

# INCOME STABILIZATION TOOL

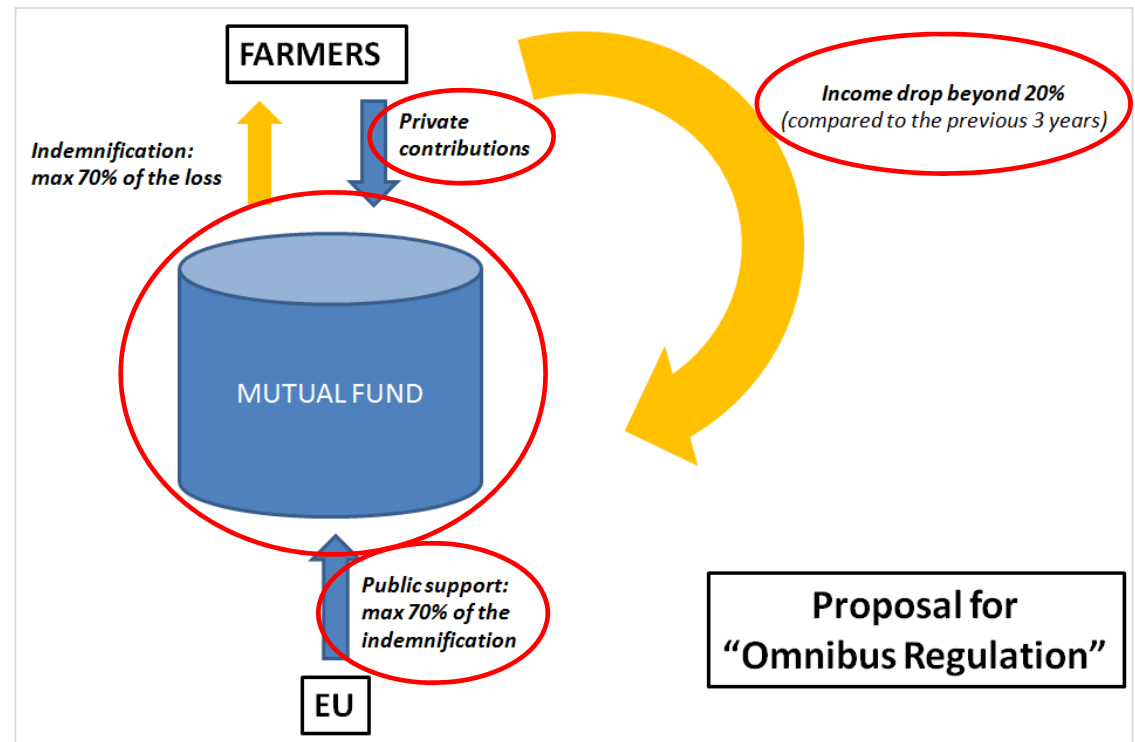


# INCOME STABILIZATION TOOL



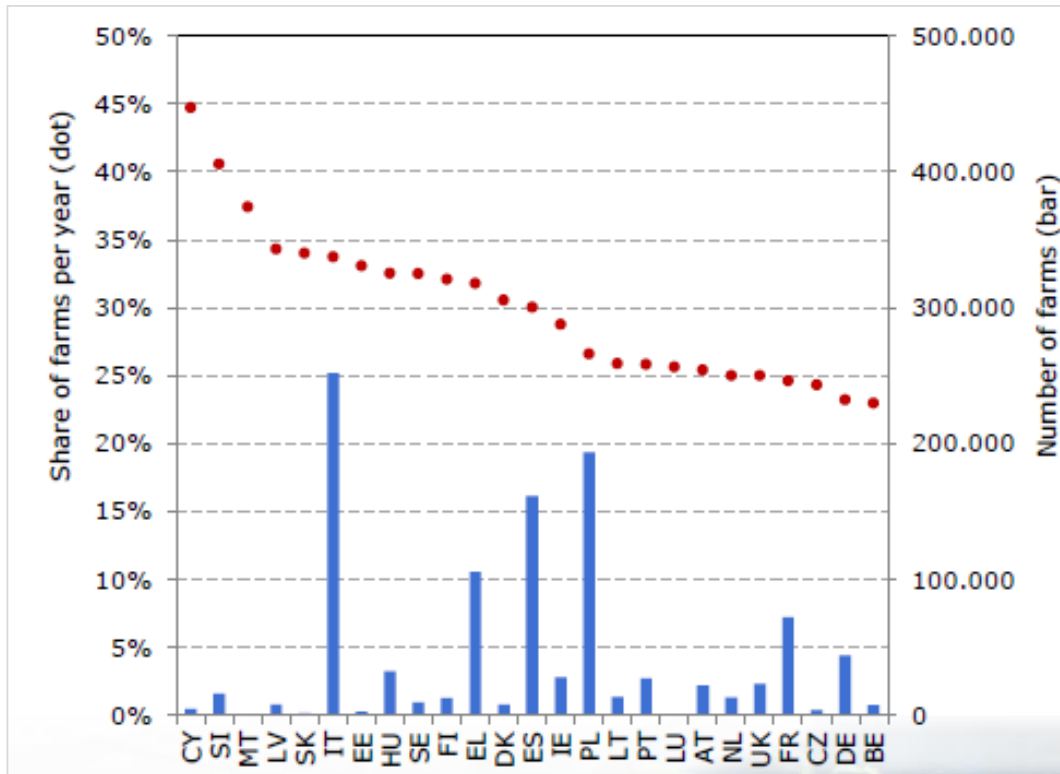
## **Agreement on the Omnibus Regulation (2017):**

- ✓ SECTOR SPECIFIC IST with THRESHOLD at 20%
- ✓ Public support up to 70%
- ✓ Index-based IST (to calculate losses)
- ✓ Public support for mutual funds covering:  
**initial assets + annual contribution**

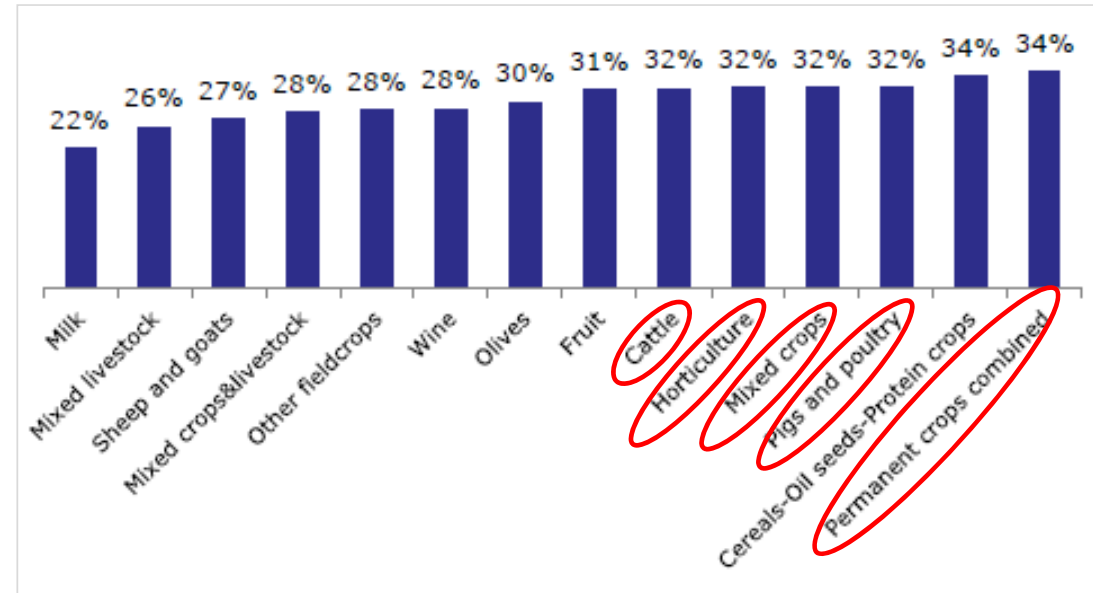


# FARM WITH INCOME DROP > 30% (EU-25)

MEMBER STATES (2007-2013 average)



TYPES OF FARMING (2007-2013 average)



Source: DG Agriculture and Rural Development (based on FADN DATA; calculations compared to the previous three years)



## Toward the implementation of the Income Stabilization Tool: an analysis of factors affecting the probability of farm income losses in Italy

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Jel codes: G32, Q12, Q18

### 1. Introduction

In association with the recent economic crises, nowadays the increasing price volatility, that is associated with unexpected

### Abstract

Over the last years, EU agricultural farms suffered an increased sensitivity to market fluctuations in terms of both production flows and incomes, due especially to climate change and market globalisation. In addition to previous instruments as insurances and mutual funds, the new reform of European Common Agricultural Policy 2014-2020 proposes a new instrument, namely the Income Stabilisation Tool (IST), in order to specifically support farmers' severe income drops. This study aims at contributing to the lively debate on risk management linked to the implementa-

sector are nowadays required, in order to minimize all the expected and unavoidable negative implications of market volatility and income uncertainties.

# Which farm types loose more in Italy (Veneto region)?

Trestini, S., Giampietri, E., Boatto, V. (2017). Toward the implementation of the Income Stabilization Tool: an analysis of factors affecting the probability of farm income losses in Italy. *New Medit*, vol. 4 (2017), pp. 24-30.

- FADN dataset 1980-2007
- Farms in VENETO REGION
- 6,605 total observations (only farms observed for at least 4 consecutive years)



→ **PROBABILITY OF A SEVERE INCOME DROP** (>30% over the previous 3 years)

VALUE ADDED as indicator of income variability (*see Reg. EU 1305/2013*)

= [farm revenues + other revenues + public payments] - costs for external factors

Variable	Coefficient	SE	P[ Z >z]
Cons.	-3.526	0.160	0.000
<i>Farm type</i>			
Specialist Horticulture	1.437	0.210	0.000
Specialist Viticulture	0.100	0.187	0.592
Other permanent crop	0.917	0.264	0.001
Specialist milk	-0.015	0.166	0.926
Specialist cattle fattening	0.573	0.302	0.058
Mixed cattle	0.120	0.214	0.576
Specialist granivores	0.601	0.348	0.084
Mixed crops	0.462	0.164	0.005
Mixed crop with livestock	-0.540	0.214	0.012

• **High FARM DIVERSIFICATION** (crops + livestock):  
reduced probability of a severe income drop

• **STRATEGIES** to reduce Prob. of severe income drop:

- Farms specialised in **FIELD CROPS**: improve the mechanisation (< labour units/ha);

- **HORTICULTURE** and **OTHER PERMANENT CROPS**: improve the quality of production (> labour units/ha)

**AROUND THE ECONOMIC SUSTAINABILITY OF ITALIAN VITICULTURE: DO FARM STRATEGIES TACKLE INCOME RISKS?**

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**ABSTRACT**

*Due to the increasing price and income volatility that affect the agricultural sector, nowadays the reformed CAP 2014-2020 puts new emphasis on risk management in agriculture, especially to cope farmer income risk, with the introduction of the new income stabilization tool (IST). Although it has been applied in Italy, still any experience exists. In order to contribute to the growing debate around the feasibility of IST implementation, this paper aims at investigating factors that affect the probability of income loss for Italian farms specialised in viticulture. The analysis considers the farm value added to measure income volatility and, in particular, it focuses on some strategies that are commonly adopted by farmers as self-coping tools. Results show that such strategies do not reduce income risk actually as they merely increase farm productivity. It follows that the adoption of specific risk management tools as IST can represent a possible solution.*

**KEYWORDS**

*Risk management policy, risk assessment, Income Stabilization Tool, Common Agricultural Policy, Rural Development, farm income.*

# Which is the risk profile of Italian farms specialised in viticulture?

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**Trestini, S., Pomarici, E., Giampietri, E. (2017). Around the economic sustainability of Italian viticulture: Do farm strategies tackle income risks?. *Quality - Access to Success*, Vol. 18, pp. 461-467. ISSN 1582-2559**

- FADN dataset 2008-2014
- Italian farms specialized in VITICULTURE
- 321 farms and 1899 total observations
- **\_PROBABILITY OF A SEVERE INCOME DROP (>30%):**
- VALUE ADDED
- Growth rate ( $\Delta_y$ ) between 2 consecutive years as:

$$\Delta_y = (y_n - y_{n-1}) / y_{n-1}$$

	Prob (j=2) (Income drop > 30%)		
	Coef.	Sig.	Std. Err.
year2009	0.30512		0.22019
year2010	-0.39115	*	0.23126
year2011	-0.47214	**	0.22862
year2012	-0.68997	***	0.22941
year2013	-0.65052	***	0.23051
hill	0.21447		0.23217
mountain	0.24242		0.33265
center (C)	-1.14412	*	0.65067
islands_south (IS)	-1.03140	**	0.42804
north-west (NW)	-0.43229		0.38638
UAA	0.01122	**	0.00547
legal form (individual company)	-0.41557		0.30615
gender (woman)	-0.32727	*	0.17741
young farmer	0.49252	**	0.20515
farm units	0.01214		0.01794
AWU/UAA	-2.04866	***	0.68851
FB/UAA	0.00106		0.00094
wine_yield	-0.01691	***	0.00194
organic	0.04420		0.40586
insurance	0.07045		0.17562
VA/UAA	0.00001		0.00002
VA/AWU	-0.00004	***	0.00001

- **INCOME RISK = a real threat for wine growers in Italy**
- **Different level of risk in different geographical areas** (< Prob. In Central Italy, South and Islands, compared to NE)
- **Risk is higher in traditional viticulture areas** (mountains and hills) & for **big farms** (that represent the engine to drive this sector toward the internationalization)
- **STRATEGIES** to reduce the Prob. of severe income drop :
  - **Increasing wine yields**
  - **Increasing working units per hectare**

# Hypothesis for a sector specific IST in Italy (viticulture)

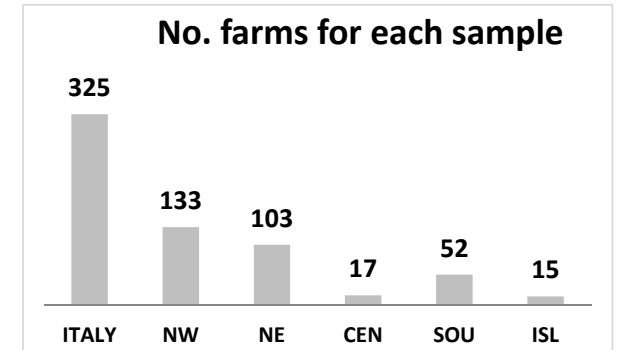
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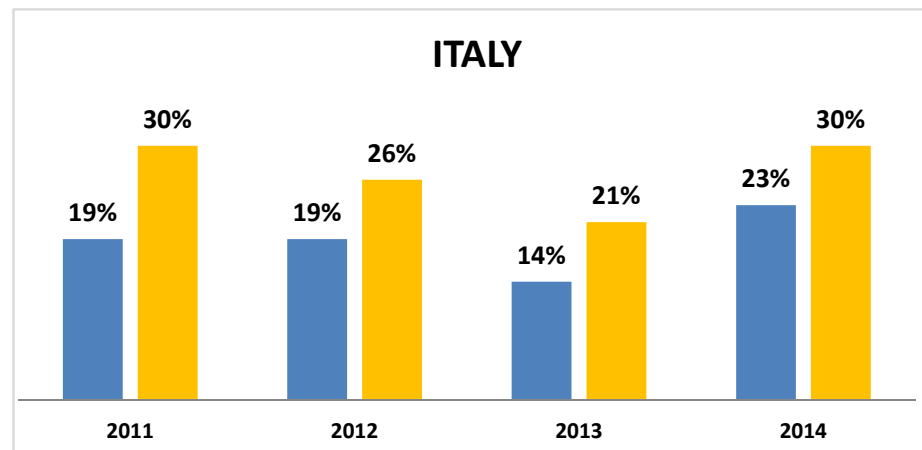
- FADN dataset 2008-2014
- Italian farms specialized in VITICULTURE
- 325 farms (1300 total observations)

→ **TEST DIFFERENCES OF INCOME VARIABILITY**

- national vs 5 macro-regional ISTs
- threshold at 20% (see Proposal for Omnibus Regulation) and 30%
- comparing VA for each year (2011-2014) with the reference VA (previous 3 years)



**FARMS (%) WITH LOSS BEYOND THE THRESHOLD**

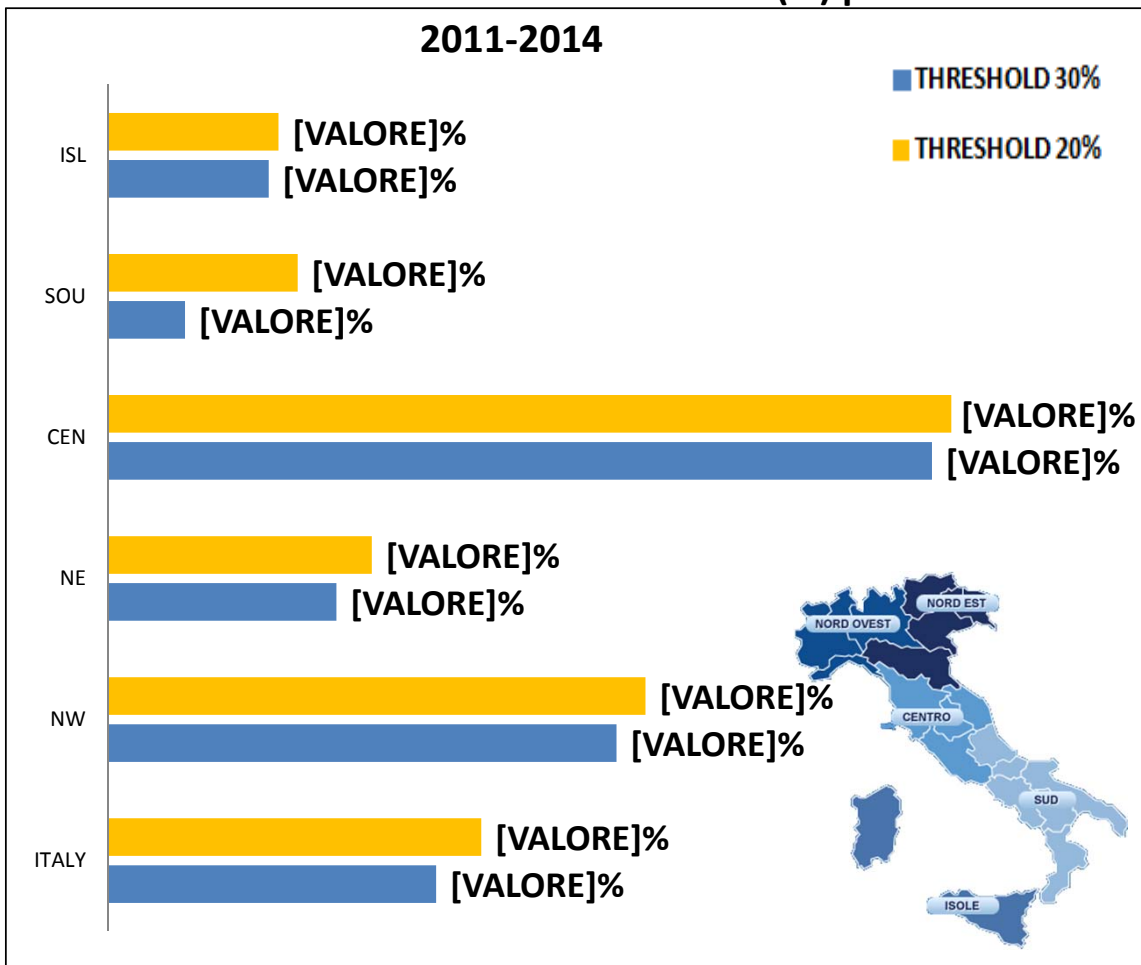


### AVERAGE FEE ON REFERENCE VA (%) per farm

2011-2014

■ THRESHOLD 30%

■ THRESHOLD 20%



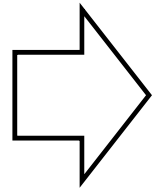
### AVERAGE FEE PER HECTARE(€/ha)

30%

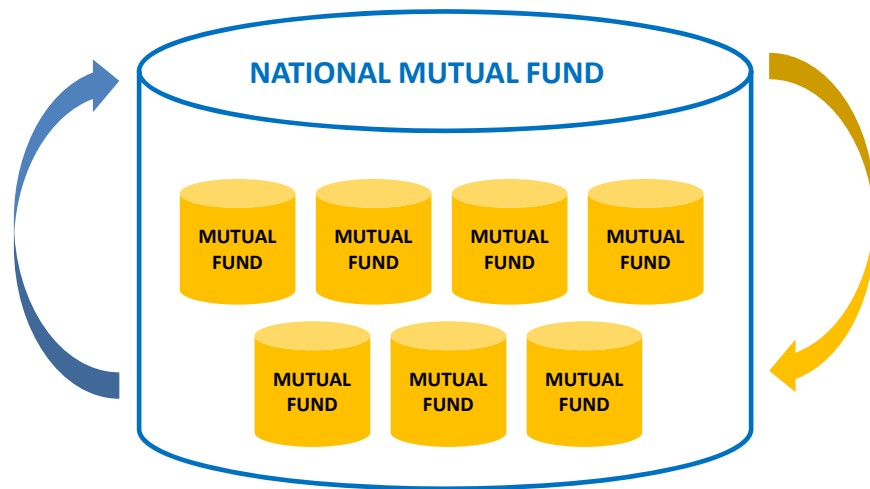
- National IST: **822€/ha**
- Macro-regional ISTs: **178-1400€/ha**

20%

- National IST: **932€/ha**
- Macro-regional ISTs: **398-1480€/ha**



## Hypothesis: Double national/macro-regional (or regional) IST in Italy



VARIABILITY OF INDEMNITY

	30%	20%
	C.V. (%)	C.V. (%)
ITALY	27.6%	17.8%
NW	47.1%	46.4%
NE	63.4%	44.4%
CEN	21.2%	21.5%
SOU	82.1%	64.9%
ISL	54.8%	50.9%

### NATIONAL IST:

- < Variability of indemnification and fee → < **RISK OF INSOLVENCY OF THE FUND**
- Including geographical heterogeneity → < **SYSTEMIC RISK**
- As a buffer for smaller funds (providing resources in case of emergency and reducing costs for reinsurance)

### MACRO-REGIONAL ISTs:

- The level of fee reflects each area-specific level of risk → < **ADVERSE SELECTION**



# CONCLUSION

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- **Multilevel approach required** (not only policy strategies and financed tools but also farmers' responsibility at farm level, i.e. self-coping strategies)
- Problems to implement the IST in Italy (although the existing budgetary allocation):
  - **lack of available farm data** (to calculate the reference income) → index based IST as a solution (Omnibus Reg.)
  - **lack of official rules** to create/manage IST → it's up to Member States
  - **scarce information about the risk profile** of sector specific farms → the role of Research
- Application of a **IST for Italian farms of milk sector** (index-based) belonging to a cooperative
- Further research:
  - Comparison among different EU Countries (e.g. Poland) to **investigate farmers' perception about the adoption of risk management tools financed by the CAP** (to understand the barriers that prevented a wide adoption until now)

# Thank you.



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