

Financial Risk Management Innovations as Key Competence in Improving the Competitiveness and Member Relationships of Cooperatives

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Risk & Competence in Coop context

- Financial risk
 - The probability that the coop's net cash flow will be inadequate to satisfy member needs and coop's financial needs (health)
- Competence:
 - The ability to function or develop in a particular way in achieving the coop (and hence member) goal(s).



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Complexity of cooperatives

The biggest complexity is that cooperatives have an important “*task (goal)*” to help their members to be financial healthy

A coop can only prosper with financial healthy members

- How far must the coop go?
 - Examples of dairy cooperatives



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Improving the Competitiveness and Member Relationships by means of Value Creation

- Value in terms of member benefits & value of the cooperative
- Value creation
 - Traditionally → product market-combinations
 - ✓ Coops making a “commodity” a high value product (de-commoditizing)



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Risk & Financial Innovations

- Financial innovation (which allows technical innovation)
 - Decrease/manage price volatility of members (driver of member financial resilience)
 - Creating or using financial instruments to lower members' capital costs
 - ✓ capitalizing on natural hedge
 - Offering risk reduction services



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Challenges: Heterogeneity of members preferences in terms of risk & return

How can a cooperative continue to be relevant for all her members from a value creation perspective?

- → Heterogeneity in member base
 - Members have different needs & preferences
 - For example: Risk management needs
 - ✓ Large differences in risk attitudes and risk perceptions of members
 - ✓ Results in different risk-return trade offs and hence behavior
 - ✓ Different member segments with different contracting (and risk) preferences



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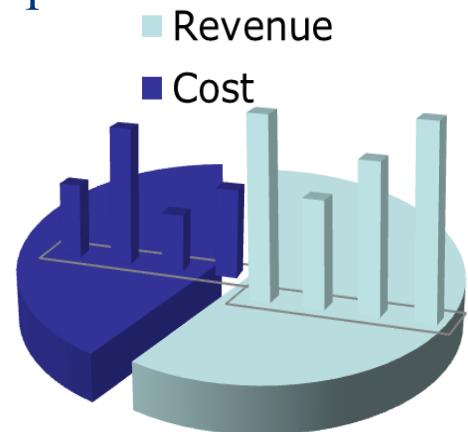


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Cooperative as Portfolio of Contract Relationships

- Volatility in input (prices) and output (prices) drives:
 - Net cash flow volatility → residual risk → cost of capital
 - What is extent of natural hedge?
 - Co-variance structure of coop's portfolio
 - What risk is left? → so called residual risk
- Portfolio of relationships with members (heterogeneity)



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Capitalizing on heterogeneity of members

- Cooperative as a portfolio (contractual) member relationships
- Unique co-variance structure (natural hedge)
 - By adding the risks from members and other channel actors
 - Coops can reduce the risk in their own portfolio
- Revenue model for coop and members:
 - Double whammy (accelerated effect!)
 - Higher cash flow (collecting risk premium)
 - Reducing cost of capital

$$\uparrow\uparrow SV = \sum_{i=1}^t \frac{A_i \uparrow}{(1 + R \downarrow)^i}$$



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Grain Coop (GC) case

Main challenge:



- Members face highly volatile grain prices
- Members demand action
 - ✓ needs/preferences & demands are heterogeneous
- Coop is loosing grip on physical flow of grain
 - ✓ (increasing their capital costs)



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Grain Coop (GC) case

- Educate management and board members on risk management & coop relationships (coop structure): strengthening of **competence**
- Developing of action plan
 - Providing risk management service to members and combining this with physical flow challenge
- Educate members and employees about plan
- Develop tools (software) such that coop can implement and execute plan



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Grain Coop (GC) case

Action Plan: Offering of 4 contractual relationships: *spot, pool, futures contracts or (virtual) storage*

- No actual storage (but instead coop goes long in futures markets on behalf of producer)
- Use storage facility for other use (e.g. fertilizer)
- Reduction in capital costs
- Cooperative insures physical flow



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Grain Coop (GC) case

Results:

- Members can reduce their risk and hence cost of capital by services offered by coop
- Coop is ensured physical flow
- Using “futures” (=the action/plan) coop improves relationships, ensures physical flow and lowers its own cost of capital dramatically (capitalizing on storage)
- Coop is relevant for members again!



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Leadership by Grain Coop Board and CEO

- Recognize and identify what you do **not** know → investing in intangibles (knowledge → market-based asset); competence
- Motivating employees and coop members to *learn* and *respect* different risk-return preferences
- Capitalizing on heterogeneous risk-return preferences of members and portfolio risks of coop: Natural hedge
- Adoption of financial innovation



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New founded Risk Management Coop (RMC)

Challenge:

- Dairy farmers face dramatic volatility in their margin
- Their dairy coop is not able to help them

Why?



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New founded Risk Management Coop (RMC)

- Dairy farmers come together and realize that they need to hedge output (and input)
- Plan: Using futures to fix simultaneous grain (feed) price and milk price.
- They realize: we need education, we need professionals that can execute trades → development of new type of coop: **risk management coop**



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Risk Management Coop (RMC)

Result

- New coop run by professionals hired by board
- Because members understand hedging they provide protocol to “managers” of RMC
- RMC complements existing dairy coop → Improved relationships with existing coop by founding RMC!



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Experiences

- Content knowledge of CEO and Board about specific challenge is key:
 - In the case discussed:
 - Natural hedge, hedging effectiveness and optimal hedge ratios
 - ✓ Needs to be understood and quantified
 - ✓ Hedging tools (software) developed
- Capitalize on knowledge and skills available in heterogeneous membership base
 - Concept of co-creation / living lab



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Risk & Coop Leadership

Demands knowledge and discipline to execute



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