

# 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

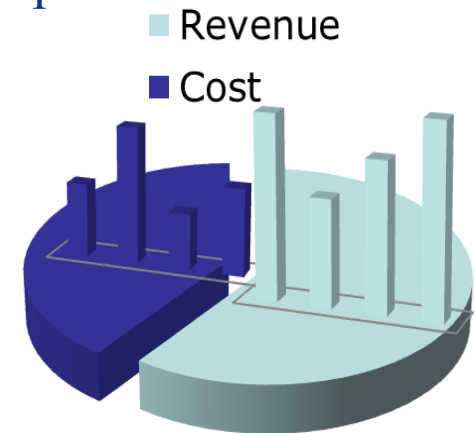


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# Cooperative as Portfolio of Contract Relationships

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





# 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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