Cheese Price Discovery

Structures, Reasons, & Consequences

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-OR-

CME Cash Markets & Cheese Price Discovery

Structures, Reasoning, and Consequences

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Cheese Pricing Methods

- Current US Practices
  - Pricing Structure Based on CME
    - Adjustments
  - World Markets
  - Why use the CME?
  - Challenges
- Alternative Ideas

Slide 4

Almost All Cheese Priced the Same

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- **Price Base is CME Spot Markets**
  - CME Cash Barrel price used for Barrel cheese for further processing
  - CME Cash Block Price used for most all other commodity cheese.

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Many Adjustments to CME

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Pricing Dates

Location

Cheese Composition

Variety

Market Demand

Slide 6

Price Timing

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- "Date of Make"
  - Most common pricing for commodity cheese
  - Most cheese is sold under longer-term contracts, usually for a year.
  - Date of make usually reflects a weekly average CME spot price.
    - Price reflects the price when the cheese was manufactured and the milk was purchased.
    - Fresh cheese most often delivered about 10-14 days after manufacture, and most is sold within a month.
    - Weekly price average is based on average CME price from 1-2 weeks previous.
    - Even "commodity" aged cheese is sold on date of make.
      - Covers cost of milk at time of production, plus aging costs.

Slide 7

Price Timing

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- Date of Sale
  - Some sales based on at time of delivery.
  - Current demand is moving ahead of supplies of fresh cheese
    - Higher price than DOM
  - Current production and/or inventory levels too high
    - Lower price than DOM
  - Spot cheese may be still invoiced based on date of make
    - Premium/discount to reflect current date of sale conditions.
    - Keeps the Accountants Happier.

Slide 8

Composition Adjustments

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- Price can reflect milk ingredient costs – adjustments for level of moisture, and thus fat and protein
- Higher moisture cheese:
  - Less solids & more water = possible lower price
    - Doesn't necessarily mean less margin
    - Monterey Jack vs. Cheddar is one Example
  - Lower moisture cheese
    - Barrels generally sold at standardized moisture of 39%, but most commonly contain 35-36% moisture.
    - Milk Component content of cheese also can impact adjustments from CME Cash Market.
      - Historically, butterfat monitored more closely in Cheddars

Slide 9

Location Adjustments

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- Delivery Cost to Markets big part of price adjustment.
  - Closer to Buyers = Higher Value
    - Price Differentials don't have to be set by regulation
    - West Coast cheese worth less
    - Wisconsin & NY cheese worth more
  - Export sales can change this relative location value
    - CA, WA cheese best positioned for Asia
    - NM, West TX best positioned for Mexico
    - EX: Western whey > central whey when exports are strong
      Less so when exports slow

Slide 10

Export Pricing

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- **World Markets also want open price discovery**
  - Buyers may want fixed price, but they prefer it be based on some reference price.
    - GDT provides bi-weekly price discovery tool for NZ products.
    - CME provides daily price discovery.
    - What determines their point of reference?
    - Importer may want the seller to offer a fixed price based on these markets, plus cheese futures.
      - Generally leave the process to fix price to Seller

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Why CME?

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- **"Not perfect but it's the best we have"**
  - Customers want open-market price
    - Market Traded Price, if with limited volume
    - Buyers, Sellers know others pay off the same price
    - Aligns with CME Cheese Futures
      - Two week lag is quite predictable
      - Biggest issue can be block barrel spread.

Slide 12

Why CME?

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- Processors want alignment with regulated milk price

FMMO Pricing :

- **NDPSR vs CME Cheese correlation about 98% with a two week lag.**
- **Obligated to Class III under FMMO rules unless depooled**

CDFA Pricing:

- **Price is entirely based on CME Blocks**
- **Near-perfect correlation for processors**

Slide 13

Other Options

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- **NDPSR Price**
  - Not Common
    - **Combination of Blocks and Barrels**
    - **No one wants circularity to become an issue**
  - Works well with CME Cheese Futures
  - Minimize cheese milk cost basis with Class III Pricing
- **Class III Price**
  - Used with some products
    - **Still strongly correlated with CME**

Slide 14

Other Options

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- **Cost-Based Pricing**
  - In its infancy
  - Most workable with longer-term sales (>1 Year)
  - Cheese Costs based on changes in primary inputs
    - Futures-based so inputs can be hedged by buyer
    - Costs reflect change in input costs
  - Limitations
    - Everyone's costs are different
    - "Aligning the stars" for producers and buyers is difficult

Slide 15

Overall:

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- **In a perfect world, our the CME markets would have more volume.**
- **But, both Buyers and Sellers have enough comfort in the CME cash markets to use as a pricing tool.**
- **Buyers do not want a market price that may be out of sync with their competitors – they will hedge when they want.**
- **Close relationship to NDPSR prices make Cash Cheese Futures hedging workable.**
- **Most foreign buyers also prefer a public cash market.**

Slide 16

Overall:

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- **Regulated milk pricing makes use of CME nearly mandatory, and limits the opportunity for more creative and differentiated price discovery.**
  - Unregulated competitive price risk vs. regulated price obligations.
  - Regulation ties realistic risk management options to futures.
    - **Difficult to exercise more creative approaches in FMMO regulated markets.**
    - **Even less opportunity in California.**

Slide 17