Risk Management Tools

Earl D. Biggers
Manager, DFA Risk Management
One way to handle risk – just sit it out!
Why is milk marketing so complicated?

- In times past, the dairyman received whatever the local creamery was paying

- Virtually every aspect of farming has changed
Sample milk check from a Skim/Fat Federal Order, “southern” Missouri

<table>
<thead>
<tr>
<th>Pay Period Totals:</th>
<th>WEIGHT</th>
<th>GROSS</th>
<th>DEDUCTION</th>
<th>NET</th>
<th>$38,474.90</th>
</tr>
</thead>
<tbody>
<tr>
<td>TANK WEIGHTS</td>
<td></td>
<td></td>
<td></td>
<td>2500.00</td>
<td>$36,974.90</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>01 thru 30</td>
<td>200,000</td>
<td>AVG</td>
<td>3.50</td>
<td>3.12</td>
<td>200,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAYMENT</th>
<th>WEIGHT</th>
<th>PRICE</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skim Payment</td>
<td>193,000</td>
<td>0/CWT</td>
<td>109.20</td>
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<tr>
<td>Butterfat Payment</td>
<td>7,000</td>
<td>0/LB</td>
<td>33.70</td>
</tr>
<tr>
<td>RBST Free Premium</td>
<td>200,000</td>
<td>0/CWT</td>
<td>20.00</td>
</tr>
<tr>
<td>Pi Quality</td>
<td>200,000</td>
<td>0/CWT</td>
<td>30.00</td>
</tr>
<tr>
<td>Volume</td>
<td>200,000</td>
<td>0/CWT</td>
<td>30.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>38,474.90</td>
</tr>
<tr>
<td>Grade A</td>
<td>PAY PRICE</td>
<td>$19,237.45</td>
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</tbody>
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**FORWARD CONTRACTING PRICING INFORMATION**

<table>
<thead>
<tr>
<th>MIN/MAX CLASS III</th>
<th>WEIGHT</th>
<th>MIN/STRIKE</th>
<th>MAX/STRIK</th>
<th>PREMIUM</th>
<th>CONTRACT</th>
<th>PRICE</th>
<th>ANNOUNCED PRICE</th>
<th>ADJ</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>100,000</td>
<td>$14.00</td>
<td>$17.00</td>
<td>$0.10</td>
<td>$16.40</td>
<td>$16.50</td>
<td>$16.50</td>
<td>(0.10)</td>
<td>$100.00</td>
</tr>
</tbody>
</table>

**FORWARD CONTRACT SUBTOTAL**

| PAY PRICE ADJUSTED BY FORWARD CONTRACT PRICING | $19,187.45 |

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DFA Risk Management
Sample milk check from a multiple component Federal Order, “northern” Missouri

<table>
<thead>
<tr>
<th>Pay Period Totals:</th>
<th>WEIGHT</th>
<th>GROSS</th>
<th>DEDUCTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1,603,200</td>
<td>265,794.04</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TANK WEIGHTS</th>
<th>COMPONENTS</th>
<th>QUALITY TEST RESULTS</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>B.F.</td>
<td>PROT</td>
</tr>
<tr>
<td>01 thru 30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>1,603,200</td>
<td>AVG</td>
</tr>
</tbody>
</table>

PRICING INFORMATION

| BUTTERFAT PAYMENT | DF AVG | 59.001 | 1.2984 | 100.09952 |
| PROTEIN PAYMENT   | PROT AVG | 49.18322 | 2.7055 | 133.06520 |
| OTHER SOLIDS PAYMENT | OS AVG | 92.28317 | 0.1020 | 9.41288 |
| PROD PRICE DIFF    | 1,603,200 | 0.0400 | 641.28 |
| SOMCELL ADJ        | 322,000 SCC RATE .00280 | 1,603,200 | 0.0800 | 1,282.55 |
| QUALITY            | 1,603,200 | 0.1000 | 1,603.20 |
| VOLUME             | 1,603,200 | 1.2000 | 19,238.40 |

GRADE A PAY PRICE $16,550.28

FORWARD CONTRACTING PRICING INFORMATION

<table>
<thead>
<tr>
<th>WEIGHT</th>
<th>MIN PRICE</th>
<th>PREMIUM</th>
<th>CONTRACT PRICE</th>
<th>ANNOUNCED PRICE</th>
<th>ADJ</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIXED CLASS III</td>
<td>200,000</td>
<td>$12.50</td>
<td>$12.29</td>
<td>$12.29</td>
<td>$0.21</td>
<td>$420.00</td>
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<tr>
<td>FIXED CLASS III</td>
<td>200,000</td>
<td>$12.00</td>
<td>$12.29</td>
<td>$12.29</td>
<td>$(0.29)</td>
<td>$(590.00)</td>
</tr>
<tr>
<td>MINIMUM CLASS III</td>
<td>200,000</td>
<td>$13.00</td>
<td>$12.60</td>
<td>$12.29</td>
<td>$0.31</td>
<td>$620.00</td>
</tr>
</tbody>
</table>

PAY PRICE ADJUSTED BY FORWARD CONTRACT PRICING

FORWARD CONTRACT SUBTOTAL $16,578.97
S Missouri Mailbox Price
Compared to Class III

DFA Risk Management
Volatility!
A 30 Year Class III History

Why volatility may be here to stay
BY Jurrien Timmer, Director of Global Macro and Co-Manager of Fidelity® Global Strategies Fund, Fidelity Viewpoints — 10/24/11
So Why Forward Contract?

1. To decrease price volatility
2. To aid in cash flow, to make your debt obligations
3. To create a price floor (Min Price Contract)
4. To shift price risk to somebody else

IT’S NOT TO BEAT THE MARKET!
What is “Beating the Market”?

KEY POINT!

• Forward contracting is NOT being “smart enough” to consistently out guess the market and thereby get a higher price –

• It’s about transferring risk and/or decreasing volatility of prices.
This is NOT forward contracting!

Wise Guy

Placing Order With Earl in KC

≠

Hit the Jackpot

DFA Risk Management
“Basis”
an important concept even if you never contract
Your Farm Gross Milk Price =

Announced Class III

+/- your actual test %
+/- bacteria quality (SPC, PI, LPC, etc)
+/- your SCC
+/- any other premium (rBST, vol, etc)
+/- the value brought by Cl I, Cl II, & Cl IV sales

= Your farm’s specific, gross pay price
Sample Basis Report

Your Basis Report is available on your homepage on the MyDFA Website and at dfariskmanagement.com
S Missouri Mailbox Price Compared to Class III

Class III

DFA Risk Management
Contracting Tools
Two Main Distinctions:

Other forward contracts act like a safety net:
- Min Price (buying a “put”)
- Min/Max Price forward contract
- Upside Rider (buying a “call”)

There are forward contracts that are fixed:
- Fixed Class III
- Fixed Class IV
- Target Blend
Fixed Price, Class III* Example

12 Month, Average Price, Fixed Forward Contract

Example IF Class III then Averaged $16.76

$16.85 Contracted For 2014 on 11/21/2013

* Class IV works the same way
How fixed contracts work over time
DFA Risk Management Weighted Average Contract Prices vs. USDA Announced Class III Prices thru Feb 2013
Weighted Average Value - $14.04 vs. Class III Average - $14.14
How do you measure success?

Weighted Average Contract Price
Announced Class III Price

Right choice?
How do you measure success?

Dollars per cwt.

Wrong Choice?
How do you measure success?

The objective is this!
16 Month Price History for July 2012
Target Blend, Another **Fixed** Price Example

- Uses a combination of Class III and Class IV
- Creates opportunities to contract prices that are closer to actual farm price than Class III alone
- Reduces price swings traditionally associated with major changes in “Blend Basis”
- Protects from significant declines in both Class III and Class IV
- **6 month minimum**
Fixed Target Blend Price

Target Blend for All 2014 (as of 11/21/2013): $20.75 compared to the historic S Missouri mailbox price
Target Blend Contract Availability

- Class IV futures volume is limited
- May be opportunities to contract Class IV with processor customers
  - processor offers now include calculation for Target Blends
- Ability to write Blend Contract will depend on availability of Class IV contract interest
- DFA Risk Management can also do just a mix of Class III & IV too
Two Main Distinctions:

There are forward contracts that are **fixed**:  
- Fixed Class III  
- Fixed Class IV  
- Target Blend

Other forward contracts act like a **safety net**:  
- Min Price (buying a “put”)  
- Min/Max Price forward contract  
- Upside Rider (buying a “call”)
Safety Net Example; Minimum Price Forward Contract (buying a “put”)

Minimum Price Protection Level: $15.50/cwt.
Less Cost: .34/cwt
Actual Minimum Price Protected: 15.16/cwt.
Minimum Price Contract (buying a put)

- Protects against a declining market
- Sets a floor for Class III (or IV) price
  - You set the floor price (.25 increments)
- Market prices higher than floor are paid
- Monthly premium per cwt contracted
  - Premium cost fluctuates daily on the CME
  - Through the co-op, no “up front” charges
Min/Max Forward Contract

- Set a floor and ceiling for Class III price
  - The “ceiling” helps lower the cost
- Creates a price window (collar, fence)
- Can be a lower cost alternative to Minimum Contract
- You “give up” any prices above the Maximum
- Can consider using an Upside Rider with this program
Safety Net Example: Min/Max Forward Contract

Example: $15.50/$19 Min/Max Costing $.15 for CY 2014
Safety Net Example: Min/Max Forward Contract

Example: $15.50/$19 Min/Max Costing $.15 for Jan 14 – Dec 14
“Safety valve”: Upside Rider (buying a call)

• Generally used as an amendment to an existing contract
  – For example, you have a $17 Fixed Contract for 2014 and then you could have bought a $19 Upside Rider (call) for an additional $.31 (as of 11/21/2013)
  – Can also be used with Min/Max
  – Rising prices increases cost
Other Risk Management Tools . . .
DFA Risk Management Feed Riders

Your Feed Source will Impact your Milk Hedging Strategy

GROWN
- Crop Insurance
- Pre-purchase inputs

or

PURCHASED
- Contract with suppliers
- Hedge with DFA/RM

Your Feed Source will Impact your Milk Hedging Strategy
Milk-Feed Margin Program

• Secure the margin between a Class III milk price and primary feed costs
• **Done as single months only**
• Shown daily in DFA Today and on the MyDFA website
• It’s like selling your milk today and buying the feed today
Your Source for Watching Margins

DFA Today
January 10, 2013

Daily Market Update
Dairy
- The CME cash cheese market experienced activity in the barrel with six tickets traded at the price moving 1/10 cent lower. This is the sixth consecutive day that the barrel price has been unchanged or lower.
- Despite the weak Class III milk futures closed mixed with little fresh news in the market. The volume of barrel cheese brought to the market by sellers has not lasted to the Class III milk futures market.
- The lack of direction from the CME cheese market has resulted in the 2013 average Class III milk futures settling 10 cents lower since the beginning of the year.
- CME cheese futures provided further downward pressure to Class III milk futures, with the majority of mercado settling lower on the day.

Grains
- USDA officials will release the January Crop Production report at 11 a.m. CST tomorrow versus the previous release of 7:30 a.m. CST.
- The focal point for today’s grain market is complex activity was the adjustment of positions prior to tomorrow’s USDA report. The complex closed mixed on the day with little movement in either direction.
- CME corn futures settled slightly higher at the market priced in an expectation of slightly lower reserve of the final 2012 US corn production in tomorrow’s report.
- CME soybean and soybean meal futures closed higher with a relatively narrow range.

MILC program update
The recent extension of the Farm Bill, signed by President Barack Obama last week, reinstated the Milk Income Loss Contract (MILC) program through August 31, 2013, at a payment rate of 45 percent, covering 2.086 million pounds of milk per year with a feed adjustor of $7.35 per hundredweight.

The extension provided for retroactive MILC payments for the September 2012-December 2012 timeframe at the above stated rate. While details of the new program remain to be finalized, an announcement regarding the 2012-2013 MILC sign-up period is expected soon. USDA officials of the state are committed to making the process for farmers friendly.

To view projections for possible MILC payments, visit www.rmp.org or preinsuring MILC payments.

Dairy contract slaughter decline
Today, U.S. Department of Agriculture (USDA) officials released Cattle Slaughter Under Federal Inspection by Region and U.S. Total report. For the week ending December 29, there were 43,100 dairy cows culled. This is 8,600 head (16.3 percent) less compared to the previous year, marking the first time in 34 weeks that cow slaughter has declined from last year. Year to date, 3.1 million dairy cows have been culled, up 177,500 head (6.1 percent) from the same period last year.

For states east of the Mississippi River, cutting total 21,300 head, down 6,100 (22.3 percent) from the previous year. The states west of the Mississippi River culled 21,200 head for the week ending December 29. This is 2,300 head (9.8 percent) less compared to the same period last year.

Prices listed above are based on published CME prices for the date listed and are not actual contract offers. DFA does not make, and expressly disclaims, any express or implied guaranty, representation, or warranty regarding any opinions or statements set forth herein. DFA is not acting as your consultant or advisor, in a fiduciary capacity, for any purpose, and is not providing advice regarding the value or advisability of trading in commodity interests, including swaps, futures contracts and commodity options or any other activity which would cause DFA or any of its affiliates to be considered a commodity trading advisor under the Commodity Exchange Act. None of the information contained herein should be construed as trading or risk management advice. Before undertaking any trading strategy, you (and your customers or members) should consult your own independent advisors. If you are interested in forward contracting with DFA RM, please call 1-877-424-5345 to discuss current offerings.
How do I get started?

• DFA members can call DFA/RM and we will send you a Master Agreement (or you can establish a relationship with a broker)
• Return signed Master Agreement to DFA/RM
• Once you’re in the system, just call DFA/RM to place and order
• Orders can be revised/cancelled as long as they have not been “filled”
Milk Contracting Details

• Forward contracts can be for Class III, Class IV, options, and a variety of combinations
• Can be for one month or up to 24 months*
• Can place multiple, single month orders – or - groups of months, done as an average
• Some producers have several contracts in any given month, resulting in several different prices
  – A CME contract is 200,000 pounds
  – DFA/RM Minimum = 20,000 pounds and in 5,000 pound increments

* More distant months may have limited activity
Your Obligation

- Your forward contract is an agreement to deliver a stated volume of milk for the agreed upon month(s) at the agreed upon price plus applicable basis and agreement by your coop to market your milk, provided it meets the required quality and delivery requirements.
Information Sources:

- www.dfariskmanagement.com, your basis report, links to the CME, cool tools, and more!
- DFA Today: free, daily e-mail or fax
- DFA/RM Pricing Update: free, weekly summary e-mail or fax
- Twitter feed for daily cheese market results to your cell.
- Mobile website too
- CME has an extensive website
Additional thoughts:

• Don’t need to do all at once, you can have multiple contracts for any given month; “The only way any of us will ever be 100% right or wrong is to sell everything in one day. Don’t do it!” The Brock Report, 1/6/2012

• In my opinion, forward contracting should be an on-going activity; stay informed on current market conditions
Questions?

• Why don’t my *target orders* fill?
  – Offering above current levels?
• What is a *margin account*?
• Why can’t I get *high of the day*?
• What’s the difference between doing months *individually* or as an *average*?
Thanks!

Any Questions?

ebiggers@dfamilk.com

DFA Risk Management 877-424-3343

www.dfariskmanagement.com
• Following slides are just additional material
Feed Rider Forward Contracts

• Done as single months only

• Members can select corn and/or soybean meal quantities to hedge
  – There are quantity limits though (1,100 bu corn or 10 tons soybean meal per 100,000# milk)

• DFA/RM now offers price protection on corn and soybean meal
  – Fixed Price
  – Maximum Price
DFA's Risk Management Weighted Average Contract Prices vs. USDA Announced Class III Prices

Understanding Basis Variability

• It’s not **Basis Variation** that will hurt you but it’s the lack of understanding and an unrealistic expectation of what your basis will be:

• $19 \text{ contracted} + $4 \text{ expected basis} = $23

  . . . however . . .

• $19 \text{ contracted} + $2 \text{ actual basis} = $21!