UNITED STATES DEPARTMENT OF AGRICULTURE
BEFORE THE SECRETARY OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

REC'D - USDA/OALJ/HCO
2024 APR 1 10:01 AM

In re:	)	
	)	
7 CFR Parts 1000 et seq.	)	**Docket No. 23-J-0067**
	)	
Milk in the Northeast and Other	)	**AMS-DA-23-0031**
	)	
Marketing Areas	)	
	)	

PROPOSED FINDINGS AND CONCLUSIONS OF THE INTERNATIONAL DAIRY FOODS ASSOCIATION

Steven J. Rosenbaum
Covington & Burling LLP
850 10th Street, N.W.
Washington, D.C. 20001
(202) 662-5568
srosenbaum@cov.com
Counsel for the International Dairy Foods Association

April 1, 2024

TABLE OF CONTENTS

UNITED STATES DEPARTMENT OF AGRICULTURE
BEFORE THE SECRETARY OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

In re:	)	
	)	
7 CFR Parts 1000 et seq.	)	**Docket No. 23-J-0067**
	)	
Milk in the Northeast and Other	)	**AMS-DA-23-0031**
	)	
Marketing Areas	)	
	)	

PROPOSED FINDINGS AND CONCLUSIONS OF THE INTERNATIONAL DAIRY FOODS ASSOCIATION

The International Dairy Foods Association (IDFA) submits this post-hearing Proposed Findings and Conclusions with respect to the recent hearings addressing twenty-two proposals to revise the current federal milk marketing order (FMMOs).

IDFA represents the nation's dairy manufacturing and marketing industry, which supports more than 3.2 million jobs that generate $49 billion in direct wages and $794 billion in overall economic impact. IDFA's diverse membership ranges from multinational organizations to single-plant companies, from dairy companies and cooperatives to food retailers and suppliers, all on the cutting edge of innovation and sustainable business practices. Together, they represent manufacturers of cheese, milk proteins, ice cream, yogurt, cultured products, and dairy ingredients produced and marketed in the United States and sold throughout the world. As buyers and processors of milk, the members of IDFA have a critical interest in these hearings. Most of the milk bought and handled by IDFA members is purchased under the Federal milk marketing orders promulgated pursuant to the Agricultural Marketing Agreement Act of 1937 (the "AMAA"). (Hearing Exh. 98 (IDFA Exh. 4) at p. 1 (testimony of M. Brown)).[1]

These Proposed Findings and Conclusions establish that USDA should adopt Proposals 8 and 9 (which are identical) and Proposal 14 (or, if USDA prefers, Proposal 15). These Proposed Findings and Conclusions establish that USDA should not adopt Proposals 1, 2, 3, 4, 5, 6, 7, 10, 11, 12, 13, 16, 17, 18, 19 and 21. IDFA is neutral with respect to Proposal 20.

I. USDA SHOULD REJECT PROPOSALS 1 AND 2, WHICH WOULD CHANGE THE CURRENT FMMO SKIM MILK COMPONENT FACTORS.

PROPOSED CONCLUSIONS REGARDING PROPOSALS 1 AND 2

Based upon the Proposed Findings that follow, IDFA's Proposed Conclusions Regarding Proposals 1 and 2 are:

a. **The Effect of Proposals 1 and 2 on Class I.** In the guise of a supposedly simple "update" of FMMO milk component factors to reflect what is claimed to be current national average nonfat component levels, Proposals I and II will increase the Class I price in all eleven FMMOs (C. Covington (Southeast Milk) Tr. 433 line 24 - 434 line 5), requiring Class I handlers

[1] Mike Brown is the IDFA Chief Economist and leads economic and policy analysis and strategy development related to dairy policy and pricing. He has testified on many occasions in hearings held by USDA to consider FMMO amendments and was formally recognized in these hearings as an expert on multiple component pricing, dairy product yields and values, farm costs and economics, risk management, and the impact of public policy on dairy plant and dairy industry economics. (Tr. 946 line 25 - 947 line 4). Before joining IDFA, Mr. Brown led from 2015 through early 2023 the milk and dairy procurement team for The Kroger Co., one of the country's largest supermarket operators by revenue, where he led the team responsible for buying all raw dairy ingredients for approximately 14 Company-owned dairy plants, as well as 2 cheese packaging plants. Prior to Kroger, he served as a dairy economist for Glanbia, a worldwide company whose operations include cheese, sports nutrition products, and dairy ingredients; director of membership services for Darigold, which is owned by a farmer cooperative with approximately 350 dairy farm members located in Washington, Oregon, Idaho, and Montana; and general manager of National All-Jersey, Inc., a dairy producer trade association where he led efforts to expand multiple component pricing through private plant incentives and federal milk marketing order reform. (Hearing Exh. 98 (IDFA Exh. 4) at p. 2-3 (testimony of M. Brown (IDFA)).

collectively to pay roughly $240 million more a year for their milk even though these higher nonfat components levels have no value whatsoever to Class I handlers or their products.

b. Class I handlers should not be required to pay more for milk components that have no value to them.

c. USDA has already addressed that very question and agrees with this position. USDA did so when it explicitly resolved that the FMMO provisions requiring Class II, III and IV handlers in the seven Multiple Component Pricing (MCP) orders (which comprise 89% of all FMMO pooled milk) to pay more for milk with higher nonfat component levels should not be extended to Class I handlers. USDA reached that conclusion for the precise reason that these higher nonfat components are of no value to Class I handlers.

d. Thus, Proposals 1 and 2 set forth a path that USDA has expressly declined to go down. Nothing in the hearing record supports USDA taking a different approach now.

e. **The effect of Proposals 1 and 2 on Classes II, III and IV.** Proposals 1 and 2 would have no impact on prices paid by Class II, III and IV handlers in the seven MCP orders, because payment obligations in those orders are based upon the actual component levels in farmer milk. In other words, farmers in the seven MCP orders, which encompasses 89% of all FMMO pooed milk, are already being paid in full for higher component levels in their milk when used for Class II, III, or IV products. Under the current formulas in the MCP orders, Class II, III and IV prices go up as component levels go up, but not Class I prices. (Hearing Exh. 98 (IDFA Exh. 4) at p. 9, testimony of M. Brown (IDFA)); Hearing Exh. 99 (Updated IDFA Exh. 5) at p. 5, testimony of M.

Brown (IDFA)); P. Vitaliano (NMPF) Tr. 180 lines 8-27; C. Covington (Southeast Milk) Tr. 429 line 27 - 430 line 21, 430 line 27 - 431 line 2, 447 lines 6-26).[2]

f. As a practical matter, given that the farmers providing 89% of all pooled milk are already being paid based on actual component levels for milk going int Classes II, III and IV, Proposals 1 and 2 are principally about raising Class I prices. (Metzger (NAJ) Tr. 571 line 12 - 572 line 10). Nonetheless, Proposals 1 and 2 would also increase by between $0.37/cwt and $0.72/cwt the minimum milk prices that Class II, III and IV handlers must pay for milk in the four federal orders that use fat-skim pricing rather than Multiple Component Pricing (MCP). Proposals 1 and 2 would do that by amending FMMO formulas to assume that nonfat solid levels in the four fat-skim orders are equal to the national average levels, and requiring handlers to pay for their milk in those four orders based upon those averages.

g. But milk in the four fat-skim orders in fact has significantly lower average nonfat component levels than the national averages. This is what one would expect, given that federal order formulas in the seven MCP orders provide hefty financial incentives to farmers to produce milk with higher nonfat component levels, while the formulas in the four fat-skim orders do not. By basing minimum prices on component levels that do not actually exist, Proposals 1 and 2 would overcharge Class II, III and IV handlers in the four fat-skim orders by more than $30 million a year.

[2] Proposals 1 and 2 would have a very small, $0.0034 impact on Class II prices in the 7 MCP orders. This is because the proposed increase in the Class IV component assumption from 9.0 to 9.41 would carry through to the pricing of Class II milk. However, because the Class II differential of $0.70 would be divided by the new component assumption of 9.41 rather than 9.0, the actual impact is only the -$0.0034 referenced above. (Hearing Exh. 98 (IDFA Exh. 4) at p. 4 and Attachment D thereto, testimony of M. Brown (IDFA)).

h. Proposals 1 and 2 would have pernicious effects on the pricing of both Class I and Classes II, III and IV milk. They should not be adopted.

PROPOSED FINDINGS REGARDING PROPOSALS 1 AND 2

A. How Proposals 1 And 2 Would Operate.

Proposal 1 would amend the milk component factors in the Class III and Class IV skim milk price formulas. Those milk components factors were adopted as part of the 2000 order reform, and reflected in substantial part a USDA effort to establish prices close to those that had existed under the Basic Formula Price, which was being replaced in order reform by end-product formula pricing. *See* USDA, Milk in the New England and Other Marketing Areas; Decision on Proposed Amendments to Marketing Agreements and to Orders, 64 FR 16026, 16096 (Apr. 2, 1999) ("The proposed rule make allowances used in computing the component prices for Class III and Class IV resulted in per hundredweight prices which did not deviate greatly on average from the current BFP over the period analyzed, one of the criteria for a basic formula price replacement."); *id.* at 16033 (showing the minor change from current to new Class I prices under Option 1A, the option ultimately adopted through order reform). USDA did not state any specific intent to match existing average milk component levels. (M. Brown (IDFA) Tr. 1013 line 7 - 1016 line 5).

Proposal 1 would increase the nonfat component factors in current pricing formulas to equal the 2022 weighted average nonfat solids, true protein, and other solids factors for FMMO pooled milk, with a 12-month implementation lag. (Hearing Exh. 13 (USDA Exh. 13) at pp. 3-5). Based upon reported data, Proposal 1 proposes to increase the component factors as follows at the end of year one:

- Nonfat solids: Increase from 9.0 to 9.41 per hundredweight of Class IV skim milk;
- Protein: Increase from 3.1 to 3.39 per hundredweight of Class III skim milk; and

- Other solids: Increase from 5.9 to 6.02 per hundredweight of Class III skim milk.

Proposal 1 would subsequently update these factors no less than every three years if the weighted average nonfat solids component for the prior three years changes by at least 0.07 percentage points. Proposal 2 differs from Proposal 1 only in that it would update these factors annually, and would not limit the update based on the magnitude of the change. (Hearing Exh. 13 (USDA Exh. 13) at pp. 3-5).

A detailed discussion of the FMMO provisions used to set Class I, II, III and IV prices, and the specific manner in which those formulas would be changed by Proposals 1 and 2, is set forth in Hearing Exh. 98 (IDFA Exh. 4) at pp. 7-15 and 30-32, testimony of M. Brown (IDFA)). As calculated in detail in Tables 1 and 2 of Hearing Exh. 98, had Proposals 1 and 2 been in place over the five years preceding the hearings, the minimum milk prices for Class I handlers in all eleven federal orders would have increased by roughly \$0.52/cwt, raising regulated minimum Class I prices by more than \$270 million a year. As also shown in Tables 1 and 2, had Proposals 1 and 2 been in place over the five years preceding the hearings, the minimum milk prices for Class III and IV handlers in the four fat-skim orders (*i.e.*, the four non-MCP orders) would have increased by over \$30 million a year.

B. Higher Nonfat Component Levels Are Of Little To No Value To Class I Milk Processors Or Products.

1. Higher Nonfat Components Do Not Increase The Amount Of Fluid Milk.

Even assuming that there really are increased nonfat solid, protein or other solids levels in milk used for Class I purposes (but see Section I(D) below), those increased levels have no value to the Class I handler buying the milk or the consumer buying the Class I handlers’ products. This is in direct contradistinction to, for example, an increased level of protein or other solids in Class III milk, which is of direct benefit to a Class III handler because that increased level increases how much cheese and whey the handler can produce from 100 pounds of milk. The same holds true for increased nonfat solid and butterfat levels in Class II, and increased nonfat solid and butterfat levels in Class IV; and that is why the MCP formulas increase the price of milk going into those classes based upon the specified component levels in the milk used to make those products. (Hearing Exh. 98 (IDFA Exh. 4) at p. 34, testimony of M. Brown (IDFA)).

NMPF proponents largely admitted as much. For cheese, nonfat dry milk, and butter, the actual nonfat solids farm milk components are converted into an equivalent yield of goods that those components can make. Higher nonfat components mean more product can be made from the milk. (Vitaliano (NMPF) Tr. 270 lines 18 - 20; C. Covington (Southeast Milk) Tr. 432 line 15 - 433 line 8; 436 line 6 - 437 line 23). By contrast, one cannot produce more fluid milk due to higher nonfat solids. (Vitaliano (NMPF) Tr. 266 line 24 - 267 line 19; C. Covington (Southeast Milk) Tr. 436 line 24 - 437 line 8).

2. Class I Handlers Cannot Get Value From The Marketplace For Higher Nonfat Solid Milk.

Nor can a Class I handler get value from the marketplace from higher nonfat solids levels. Consumers make purchase decisions based upon their desired fat level (whole, 2%, 1% or skim), the perceived "freshness" as indicated by the sell-by date, and the price for the same product, within the store or across other retailers. Milk consumed in fluid form is not worth more to the average consumer, or to the Class I handlers that serve consumer needs, based upon nonfat milk composition. The FDA standard of identify for milk requires only that milk contains at least 8.25% nonfat milk solids. 21 C.F.R. 131.110(a). (Hearing Exh. 98 (IDFA Exh. 4) at p. 34-35, testimony of M. Brown (IDFA)). There is no value to Class I milk containing nonfat solids in excess of FDA minimum standard of identity requirements. (M. Brown (IDFA) Tr. 1017 line 24 - 1018 line 7).

The bottom line is simple: even if the proponents of Proposals 1 and 2 were correct that national average FMMO skim milk now has 9.41% nonfat solids, or 6.02% other solids, or 3.39% protein, those increased levels carry no financial benefit at all to Class I handlers, increasing neither the quantity nor the price of the fluid milk that handlers can sell. *Id.*

HP Hood, which operates nine fluid milk plants, made this point in great detail. The majority of its Class I customers use the specifications developed by Hood. Hood's specifications are driven by the FDA standard of identity, and do not identify any nonfat solids level in excess of the standard of identity requirements. These specifications state only the butterfat levels under the chemical composition of the product. For example, 2% milk states the butterfat range from 1.80% to 2.20% with a target of 2.00%. Hood's customers are expecting the butterfat range that is stated in the specification match what is listed on the package label, and that the milk meet standard of identity requirements. But those customers otherwise have no expectation on the nonfat solids, protein or other solids that in the milk. (Hearing Exh. 102 (MIG Exh. 3), at p. 9 (testimony of W. Landry (H. P. Hood)).

Some Hood customers set their own specifications, but Hood has never received any specifications from a customer that reference or require any specific level of nonfat solids, protein, or other solids. (Hearing Exh. 102 (MIG Exh. 3), at p. 9, testimony of W. Landry (H. P. Hood)). Indeed, Hood is not sure most of its customers even know what nonfat solids or other solids even are, and Hood is confident that the average consumer purchasing its products does not know. Given that there is no demand by retailers or consumers for such nonfat components, there is no way for Hood to raise its prices to customers based on higher nonfat component levels. (Hearing Exh. 102 (MIG Exh. 3), at pp. 9-10 (testimony of W. Landry (H. P. Hood)).

Shehadey Family Foods, with four Class I plants in California, Nevada and Oregon, similarly confirmed that having an increased level of nonfat solids, protein and other solids is of no value to it or its customers, given that such increased levels: (a) do not increase the amount of volume of product Shehadey can bottle; (b) retailers do not pay Class I manufacturers based on nonfat component tests, and (c) Class I processors cannot standardize these components, so there is no way to capture them and use them another way or get more final product from the raw milk. "As a Class I processor, we do not need and cannot use those components." (Hearing Exh. 105 (MIG Exh. 4), at p. 3 testimony of J. Ellis (Shehadey Family Foods)).

The proponents of Proposals 1 and 2 had little if anything to say against this evidence. NMPF conducted no survey to determine whether, and has no study establishing that, extra nonfat solids are deemed of value to consumers. (Vitaliano (NMPF) Tr. 244 lines 4-28; C. Covington (Southeast Milk) Tr. 453 lines 12-23). NMPF witnesses were not aware of any studies indicating that consumer look closely enough at nutrition labels to distinguish between milk being 8 grams protein versus 9 grams protein. (C. Covington (Southeast Milk) Tr. 480 line 28 - 481 line 11). Proponent National All Jersey (NAJ) likewise did not have data indicating any material marketing being done on that basis. (Metzger (NAJ) Tr. 567 line 11 - 568 line 2). Nor had National All Jersey gone to Class I processors and suggested they should market based upon higher nonfat solids levels. (Metzger (NAJ) Tr. 564 line 22 - 565 line 19).

Although NMPF did make reference to a specific product, Fairlife milk, and Fairlife is indeed a wonderful higher protein, lower sugar (lactose free) milk product, it requires special ultrafiltration and packaging and remains a specialty product. (Hearing Exh. 98 (IDFA Exh. 4) at p. 35, testimony of M. Brown (IDFA)); Vitaliano (NMPF) Tr. 248 lines 11 - 17). The same is true for specialty products like Lactaid Protein milk. (Landry (HP Hood) Tr. 1128 lines 1 -20). Indeed, NMPF admitted that consumers had rejected a 2% milkfat, 10% total nonfat solids product with higher solids, sold at a higher price. (Vitaliano (NMPF) Tr. 246 lines 1 - 17, 249 lines 7-23).

Additional proof of the absence of any consumer support for a higher nonfat milk product comes from the State of California legal requirement that milk have higher total solids levels than the federal standard of identity. Specifically, 1% and 2% milk sold in California must have 13% total solids. This requires that 1% and 2% milk be fortified with powdered or condensed milk, and Shehadey must, at a higher cost, make special product for sale in California that meets these requirements. (Ellis (Shehadey) Tr. 1184 line 20 - 1186 line 22).

California is an anomaly, and no other state requires (or under federal law, may require) higher nonfat milk solids in milk. (Vitaliano (NMPF) Tr. 64 lines 26-31; 250 line 12 - 252 line 12). No customer outside California has ever requested that it be supplied with these higher solids milk. None has ever wanted to pay a higher price in exchange for higher nonfat solids levels. (Ellis (Shehadey) Tr. 1184 line 20 - 1186 line 22). Similarly, while Crystal Creamery is required by California law to sell milk with a higher protein content, it had never found a customer in its sales territories outside California willing to pay more for a higher protein product. (J. Schuelke (Crystal Creamery) Tr. 5811 lines 1-21).

There is accordingly no basis for Class I handlers to pay more for their milk as a result of average component increases. Simply stated, Proposals 1 and 2 would require Class I handlers to pay a higher price for farmer milk based upon higher solids and protein levels that do not provide any higher economic value whatsoever.

3. Class I Handlers Cannot Remove And Sell Excess Nonfat Solids.

One might think that those higher nonfat solids, other solids, or protein levels have value because the Class I handler could separate out and sell to handlers making other classes of products the portion of the components present in the milk in excess of the milk standard of identify requirements. That is a non-starter.

The standard of identity for milk forbids removing any component from the milk other than milkfat, see 21 C.F.R. 131.110(a) ("Milk may have been adjusted by separating part of the milkfat therefrom, or by adding thereto cream, concentrated milk, dry whole milk, skim milk, concentrated skim milk, or nonfat dry milk."). In short, as USDA recognized in 1988 when MCP was introduced in the Great Basin Order (see Section I(C) below), it is not permissible to standardize fluid milk composition, other than for milkfat. Thus, as NMPF admitted, the "excess" nonfat solids, other solids, or protein levels just stay in the milk, and cannot be separated out and monetized. (Vitaliano (NMPF) Tr. 268 line 14 - page 269 line 7; see also Hearing Exh. 98 (IDFA Exh. 4) at p. 36, testimony of M. Brown (IDFA); Hearing Exh. 102 (MIG Exh. 3), at p. 8 , testimony of W. Landry (H. P. Hood)).

Nor is a processor allowed to create "more" milk by adding water to dilute the nonfat solids. That is because the standards of identify for milk do not let a processor dilute the milk in any way. Thus, processors are left with the same volume of milk no matter the nonfat solids. (Hearing Exh. 102 (MIG Exh. 3), at p. 8, testimony of W. Landry (H. P. Hood)).

This treatment of nonfat solids is in sharp counter-distinction to the treatment of milkfat. The standard of identify for milk only requires 3.25% milkfat, *see* 21 C.F.R. 131.110(a), which is itself below average farmer milk milkfat levels, and reduced fat, low fat and fat free milk are allowed to contain even less milkfat, *see* 21 C.F.R. 101.62. FDA regulations explicitly allow Class I handlers to separate out milkfat in excess of desired levels (*e.g.*, the lower fat levels for low fat or nonfat milk). See 21 C.F.R. 131.110(a) ("Milk may have been adjusted by separating part of the milkfat therefrom…").

A Class I handler can thus either itself use this separated milkfat in its non-Class I products or sell that milkfat to others for such use by them. The milkfat thus does have real value to Class I handlers. For that reason, FMMO provisions (appropriately) require Class I handlers to pay farmers based upon the actual milkfat levels in the farmer milk they receive. *See, e.g.*, 7 C.F.R. 1033.60 ("For the purpose of computing a handler's obligation for producer milk … (a) Class I value: (1) Multiply the pounds of skim milk in Class I by the Class I skim milk price; and (2) Add an amount obtained by multiplying the pounds of butterfat in Class I by the Class I butterfat price.")

But the very reason why USDA has (correctly) determined that Class I handlers should be required by FMMOs to pay for higher levels of milkfat — that Class I handlers can either use the milkfat in their products or remove and sell it — is the very reason Class I handlers should not be required to pay for nonfat solids. Indeed, NMPF acknowledged that FMMOs price Class I butterfat based on actual butterfat content because Class I handlers can separate the extra butterfat and sell it, but that higher nonfat solids in Class I milk does not produce anything that can be sold. (C. Covington (Southeast Milk) Tr. 454 lines 3-13).

C. USDA Has Already Decided That Class I Handlers Should Not Pay For Nonfat Solids, Because They Are Of No Value To Class I Processors.

The federal order system has never embraced NMPF's and NAJ's position that Class I prices should reflect increases in nonfat milk components. Had the order system done so, its regulations would have provided that Class I prices would automatically increase with increased nonfat milk component levels. (Hearing Exh. 98 (IDFA Exh. 4) at p. 37, testimony of M. Brown (IDFA)).

That is in fact what does ***automatically*** happen in MCP orders ***for Classes II, III and IV uses***, and that is how it has worked for decades since MCP pricing first came into existence. But Class I has for those same decades pointedly been exempted from this process. The FMMO system has never adopted proponents' notion that Class I prices should reflect increases in nonfat milk components. (Hearing Exh. 98 (IDFA Exh. 4) at p. 38, testimony of M. Brown (IDFA)).

And for good reason. As already explained, higher nonfat solid component levels are of no value to Class I handlers. Higher nonfat solids do not result in more fluid milk; customers are not willing to pay more for higher nonfat solids; and Class I handlers are forbidden from removing and selling the nonfat solids in excess of FDA standard of identity requirements. (Hearing Exh. (IDFA Exh. 4) at p. 38, testimony of M. Brown (IDFA)).

USDA explicitly recognized and embraced all of this reasoning when MCP was put in place in the Great Basin Order. It explicitly rejected the proposition that Class I handlers should pay more based upon the nonfat solids levels in their farmer milk. The USDA decision adopting MCP pricing explicitly concluded:

> While protein content was seen to be critical in establishing the value of milk used in cheese, **there was no evidence that protein content has any effect on the value of fluid milk products at all. On the contrary, there appears to be general agreement that consumers are not willing to pay more for fluid milk with a higher-than-average protein content than they are for low-protein milk.** Handlers cannot easily remove protein from fluid milk products to add it to products in which it would have value, and it is illegal for them to add water to milk to reduce its protein content. Therefore, handlers obtain no discernable difference in economic benefit from the various levels of protein contained in milk used in fluid milk products, and **there is no justification for requiring them to pay for such milk according to its protein content**.

Milk In the Great Basin and Lake Mead Marketing Areas; Decision on Proposed Amendments to Marketing Agreements and to Orders, 53 Fed. Reg. 686, 702 (Jan. 11, 1988).

Although that Great Basin decision is now 36 years old, its conclusions remain fully accurate. Higher nonfat solids still do not result in more fluid milk. There have been no relevant changes in the standards of identity for milk, and it is still forbidden to remove and sell any of the nonfat solids in excess of standard of identity minimums. (M. Brown (IDFA) Tr. 1079 line 27 -

1080 line 13). Likewise, there continues to be no consumer support to pay more for milk based upon higher nonfat solids levels. (See Section I(B)(2) above). Accordingly, now as then, "there is no justification for requiring [Class I handlers] to pay for such milk according to its protein content."

The current federal order system of pricing Class I versus Classes II, III, and IV milk with respect to nonfat solids levels does not create disorderly marketing. To the contrary, what would be disorderly would be to saddle Class I handlers with higher prices based upon nonfat milk components that carry no value to Class I. (Hearing Exh. (IDFA Exh. 4) at pp. 38-39, testimony of M. Brown (IDFA)).

D. Component Levels In Class I Milk Are Not As High As Proposals 1 And 2 Assume.

There are additional problems with Proposals 1 and 2 as they relate to Class I milk.

Proposal 1 and 2's proposed component levels are as noted far in excess of statutory and regulatory requirements for Class I milk products:

SKIM	Nonfat Solids lb. /cwt skim	Protein lb./ cwt skim	Other Solids lb. /cwt skim	Butterfat lb. /cwt skim	Skim lb. /cwt skim
Current	9.00	3.10	5.90	0.00	100.00
Proposals 1 & 2	9.41	3.39	6.02	0.00	100.00
Federal Standard	8.53	n/a	n/a	0.00	100.00
California Standard	9.02	n/a	n/a	0.00	100.00

(Hearing Exh. 111 (MIG Exh. 5) at p. 3, testimony of S. Keefe (MIG)).

Proposal 1 and 2's proposed nonfat solid component levels are also far in excess of actual nonfat solid component levels in many orders and in many months in all orders.

First, as discussed in Section I(F)(2) below, reliable testing data shows that nonfat solid component levels in the four fat-skim orders are well below the levels in the seven MCP orders. Yet Proposals 1 and 2 would price milk in all orders based upon national average component levels. This would mean that Class I handlers in the four fat-skim orders would be paying more for milk based upon non-existent nonfat components.

Second, actual nonfat component levels are often not consistent with the values that Proposals 1 and 2 would assume. HP Hood is a major Class I processor operating nine Class I fluid milk plants. Hearing Exh. 102 (MIG Exh. 3) at pp. 3-4, testimony of W. Landry (H. P. Hood)). The table below is a summary comparison between HP Hood's producer milk receipts at its nine Class I fluid milk plants for the 24-month period from January 2021 to December 2022 and the nonfat solid levels that Proposal 1 and 2 would insert into the FMMO pricing formulas:

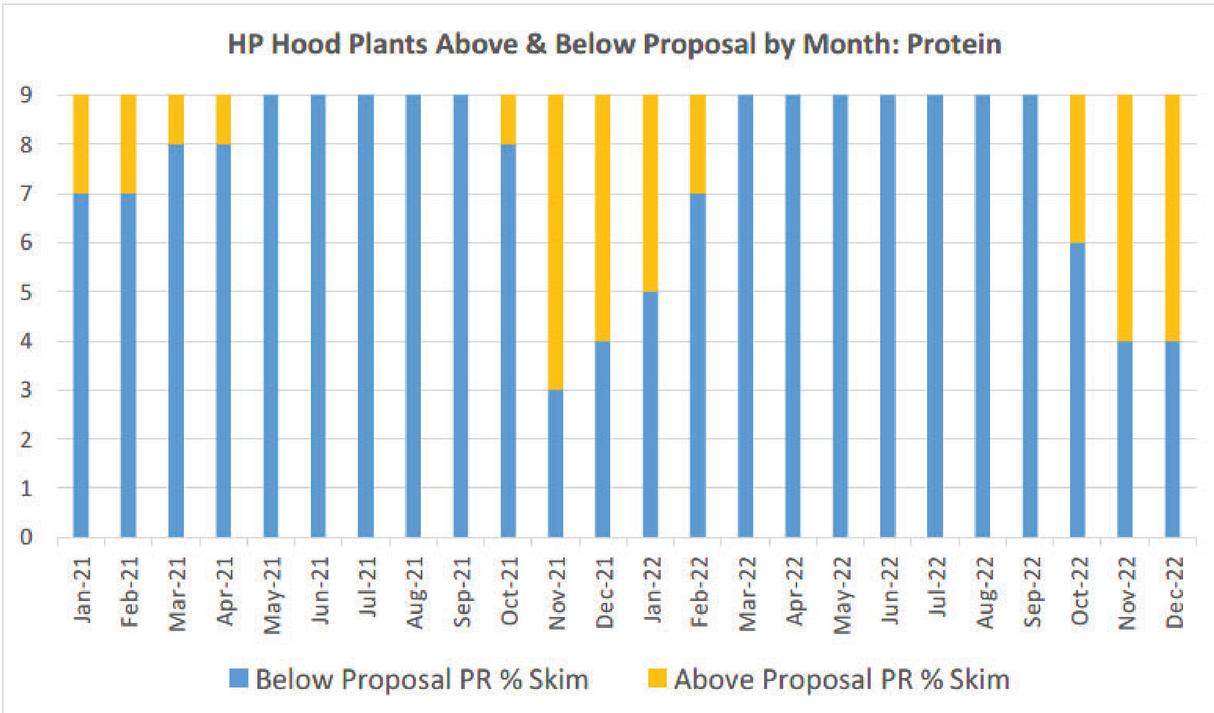
HP Hood Milk Receipts Skim Components			
	Protein % Skim	**Other Solids % Skim**	**Nonfat Solids % Skim**
FMMO Current	3.10	5.90	9.00
Proposals 1 and 2	3.39	6.02	9.41
HP Hood Minimum	3.09	5.83	8.92
HP Hood Maximum	3.50	6.08	9.49
% Months with Plants Below Proposal	**83%**	**72%**	**86%**

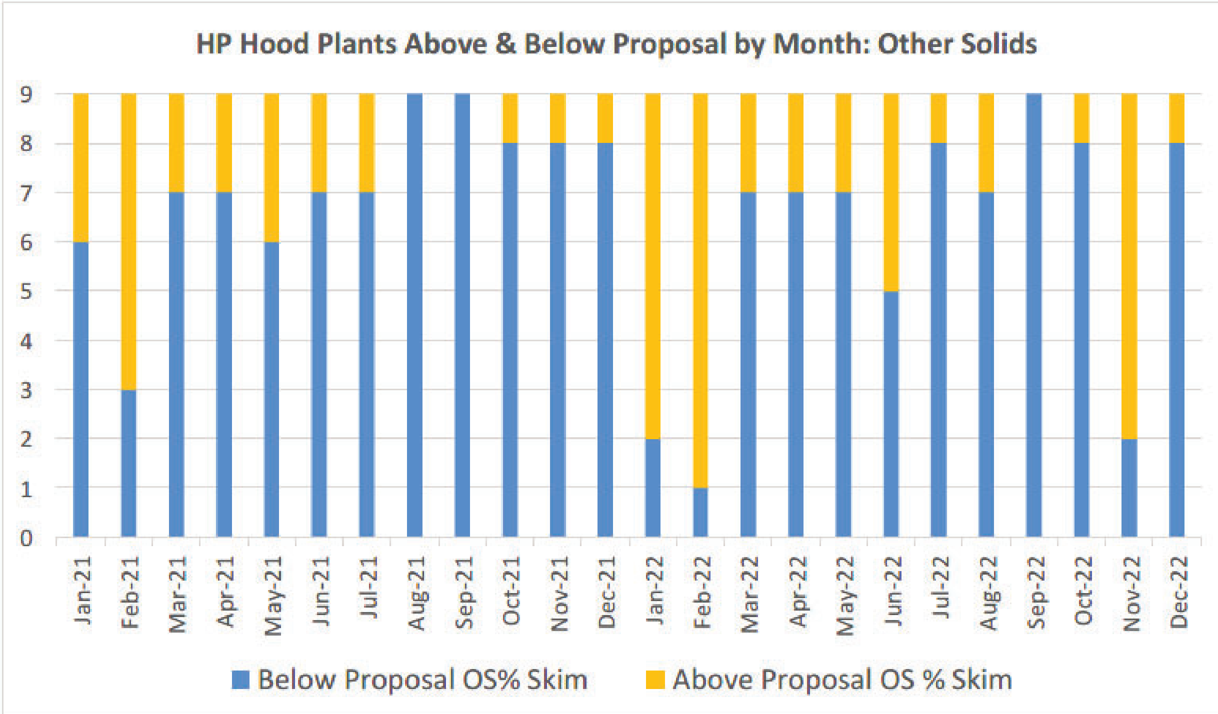
(Hearing Exh. 102 (MIG Exh. 3) at p. 4 (testimony of W. Landry (H. P. Hood)).

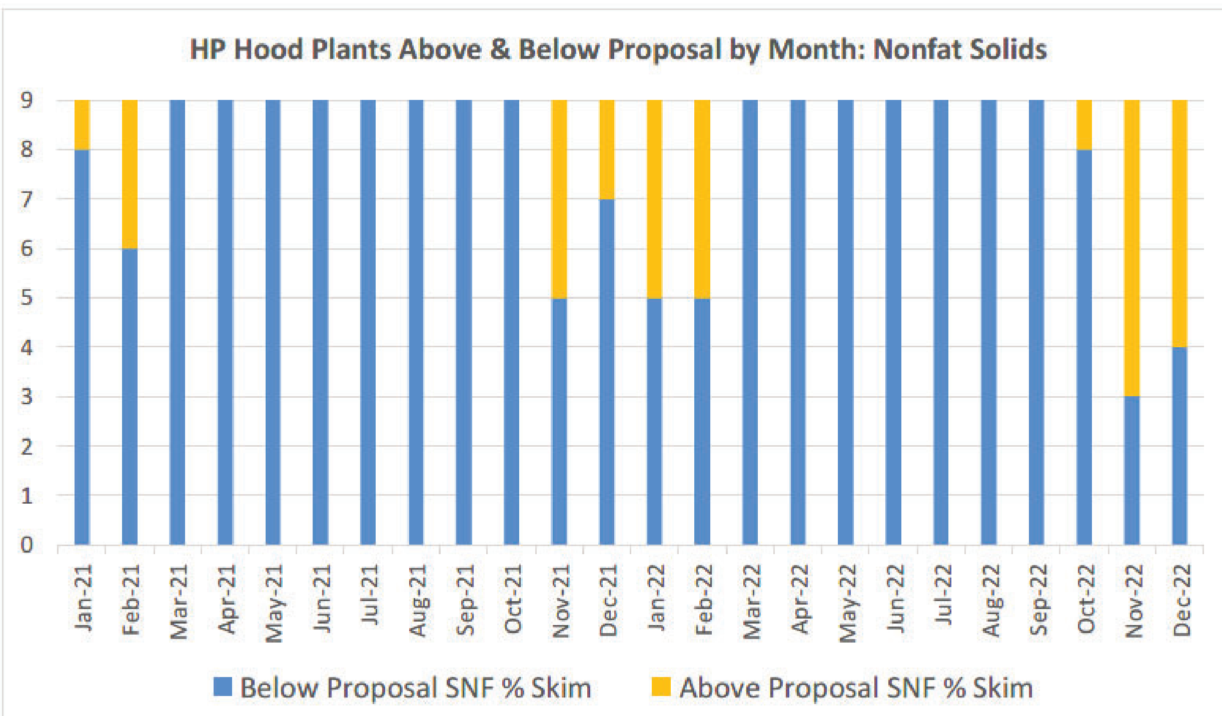
A few notable conclusions can be drawn from this data.

First, the lowest individual monthly component levels Hood received for all three nonfat components were less than the *current* levels for these components as set fort in the current Class I skim price formula. So if USDA were to set the formula component factors at the lowest actual market level, HP Hood's data shows the current factors are already at the appropriate levels.

Second, for an overwhelming majority of months, Hood's nine plants received component levels less than the Proposal 1 and 2 levels. The following three charts show that for each of protein, other nonfat solids and total nonfat solids, most of Hood's nine plants received below the Proposals 1 and 2 levels in most months, and all of Hood's plants received below Proposals 1 and 2 levels in some months:







(Hearing Exh. 102 (MIG Exh. 3) at pp. 5-6, testimony of W. Landry (H. P. Hood)).

These charts partly reflect seasonal variation. The minimums for all three components were from July and the maximums were from November, December, and January. This aligns with milk production realities in that cows produce higher component milk in the winter months (due to feed), and lower component milk in the summer months (exacerbated by heat). (Hearing Exh. 102 (MIG Exh. 3) at p. 6, testimony of W. Landry (H. P. Hood)). Yet Proposals 1 and 2 would impose monthly pricing based on average annual component levels.

Moreover, the variation is not just seasonal but geographic. For example, for protein, three of Hood's nine plants never once met the proposed protein levels in the two years surveyed. Similarly, one plant never once met the proposed levels for other solids. Finally, three of Hood's nine plants never once met the proposed total nonfat standard levels in the two years surveyed. While other Hood plants in other locations may have had, on average, higher levels that did occasionally reach the proposal levels, some plants are routinely on the lower end due to the geographic location of their supply. (Hearing Exh. 102 (MIG Exh. 3) at p. 6, testimony of W. Landry (H. P. Hood)). Yet Proposals 1 and 2 would impose uniform pricing on all Class I milk at all locations, based on average annual national nonfat component levels.

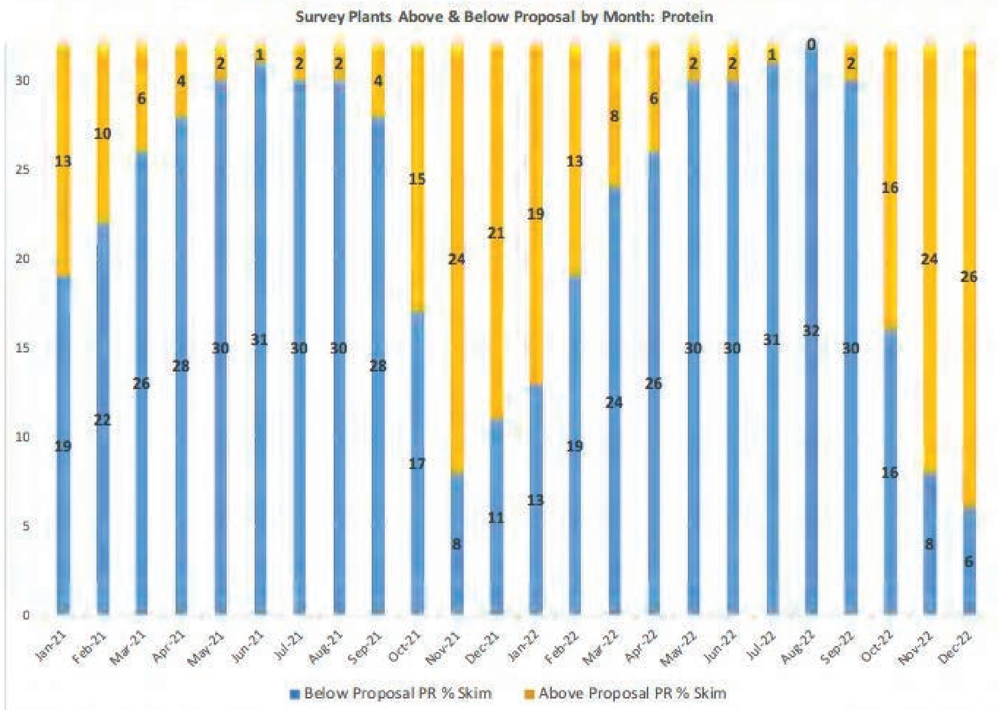
Similar information was provided by Shehadey Family Foods. In 2021 and 2022 combined, Shehadey Family Foods purchased 2.5 billion pounds of producer milk. Only 446.7 million of these 2.5 billion pounds (17.6%) would have met Proposals 1 and 2 assumption of a 3.39% protein level. Using Shehadey's four plant weighted average for protein on a skim basis, protein levels met or exceeded the 3.39% protein level assumed in Proposal 1 and 2 in only six out of 24 months. (Hearing Exh. 105 (MIG Exh. 4) at pp. 4-6, testimony of J. Ellis (Shehadey)).

Similarly, Proposals 1 and 2 would increase the formula's other solids level to 6.02% from 5.9%, but only 221.5 million pounds (8.8%) of the milk received by Shehadey met or exceeded that proposed percentage. (Hearing Exh. 105 (MIG Exh. 4) at p. 5, testimony of J. Ellis (Shehadey)). Again using Shehadey's four plant weighted average, the milk supplied to Shehadey would have met or exceeded the 6.02% level only once out of 24 months. *Id*. at p. 6. Finally, Proposals 1 and 2 would increase the total non-fat solids component factor to 9.41 from 9.0, but only 254 million pounds (10%) of the milk received by Shehadey met or exceeded that proposed percentage. On a weighted average basis across plants, Shehadey would have met the Proposals total nonfat solids level of 9.41% only four out of 24 months. *Id*. at p. 5.

The milk received by Anderson Erickson Dairy during the 24-month period from January 2021 through December 2022 had the following averages: nonfat solids, 9.0401%, protein, 3.1967%, and other solids, 5.8435%. (Hearing Exh. 455 (MIG Exh. 17A) at p. 3, testimony of W. Erickson (Anderson Erickson). All of these actual nonfat solids levels are well below the levels that Proposals 1 and 2 would assume.

A broader survey of 36 fluid milk plants showed similar results, with many, many facilities receiving below Proposals 1 and 2's proposed formula solid levels, in many, many months:

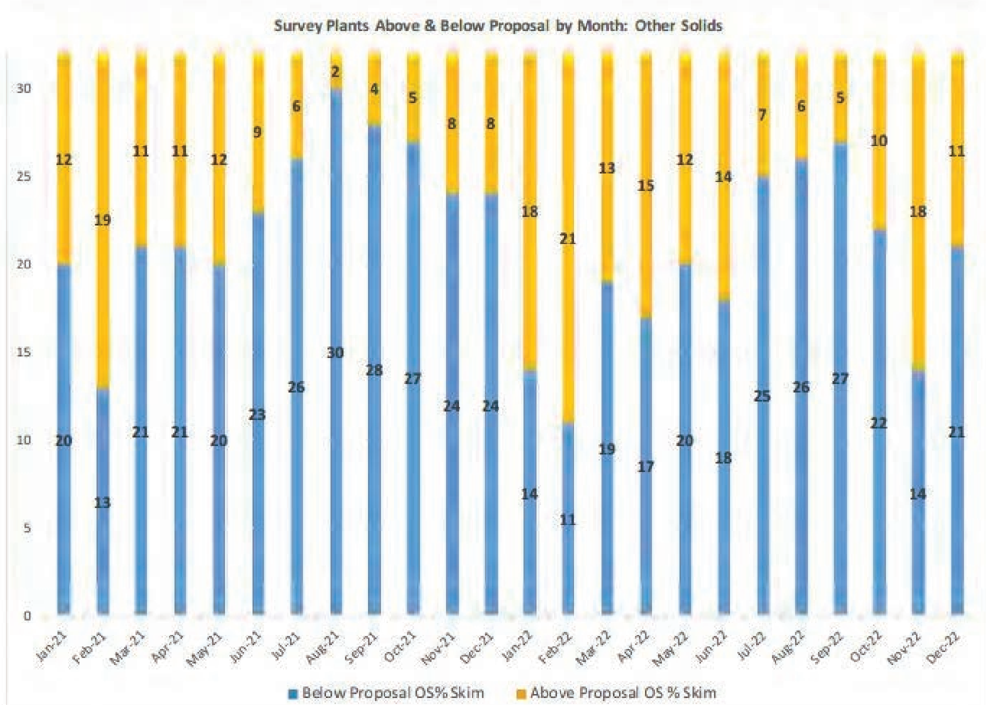
Exhibit MIG - 5B



Data Source: Fluid Milk Plant Survey
*Per AMS request; See also Exhibit 112 p. 25

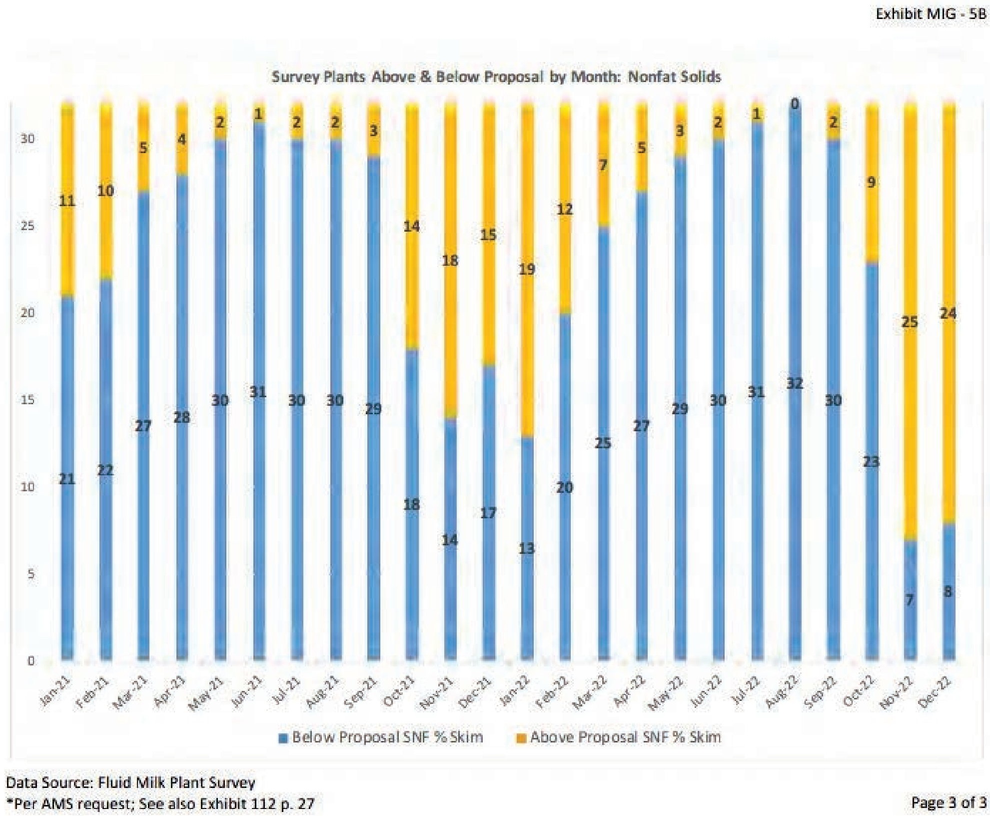
Page 1 of 3

Exhibit MIG - 5B



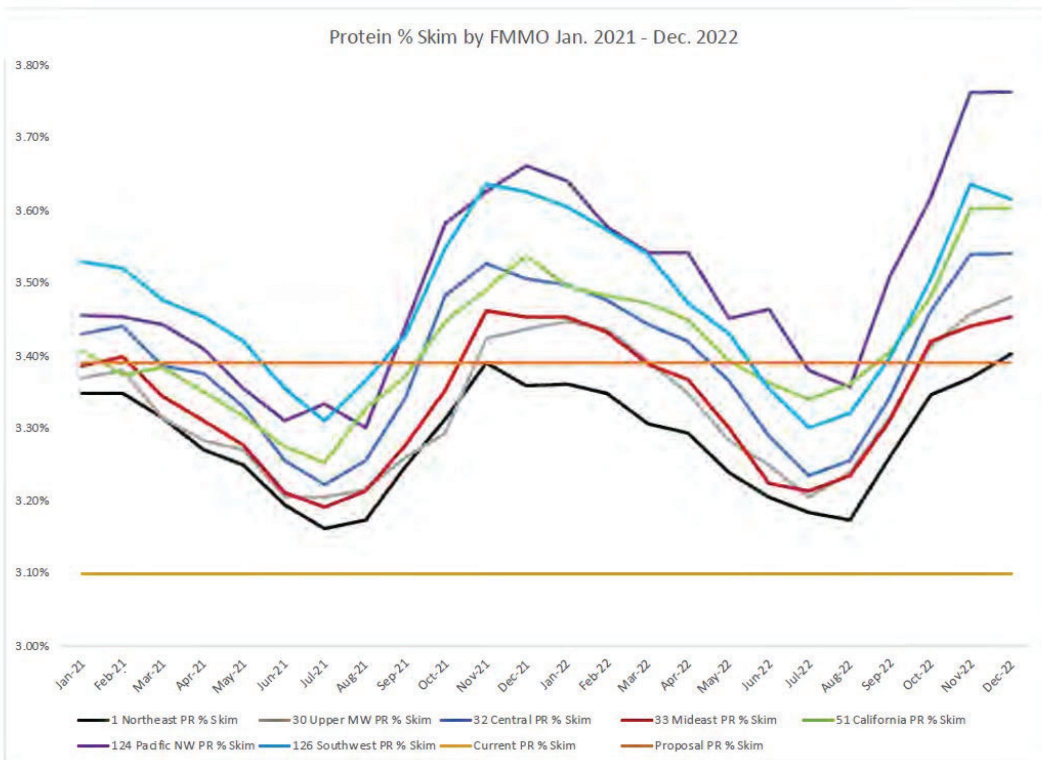
Data Source: Fluid Milk Plant Survey
*Per AMS request; See also Exhibit 112 p. 26

Page 2 of 3



(Hearing Exh. 341 (MIG Exh. 5B) at pp. 1-3, testimony of S. Keefe (MIG); Hearing Exh. 111 (MIG 5) at pp. 4-7, testimony of S. Keefe (MIG)).

USDA's own data from the seven MCP orders similarly shows that (a) in many orders, protein levels hardly ever meet or exceed the levels that Proposals 1 and 2 would adopt, and (b) in no order do protein levels meet or exceed year-round the levels that Proposals 1 and 2 would adopt:



Data Source: USDA Exhibit 17 Component Tests in Producer Milk by Order

(Hearing Exh. 112 (MIG Exh. 5A) at p. 1, testimony of S. Keefe (MIG)).

E. The Narrowing Of Pricing Between Class I And The Other Classes Simply Reflects Relative Milk Values.

The price of Class III and Class IV milk are determined by the price paid for Class III and Class IV products respectively, and when demand for Class III and IV products or other factors increase the price at which those products are sold, regulated minimum Class III and IV prices automatically increase, in the form of the formulas' calculation of the protein price, other solids price, nonfat solids price, and butterfat price. Those increases are automatically reflected in higher Class I minimum prices, via the base Class I skim milk and butterfat prices. (Hearing Exh. 98 (IDFA Exh. 4) at pp. 29-33, testimony of M. Brown (IDFA)).

Specifically, as shown on those pages, the advanced Class I skim milk price is an amalgamation of the Class III skim milk price and the Class IV skim milk price, the prices of which are determined by the cheese price; the dry whey price; the nonfat dry milk price and the butter price. Thus, Class I milk minimum prices are directly linked to, and increased by, increases in the price for Class III and IV milk, which are in turn directly linked to, and increased by, increases in the market price for Class III and IV products. Class I pricing is thus inherently coupled to Class III and Class IV pricing.

But the federal order system does not, and should not, increase Class I prices when the increase in Class II, III and IV payment obligations instead reflect higher nonfat component levels that are of value to the production of Class II, III and IV products but not Class I products. Indeed, as discussed above, USDA adopted this reasoning when it first adopted MCP. MCP would by its very nature increase the price for Class III and IV milk in the federal orders as component levels rose, while leaving Class I pricing unchanged. (Hearing Exh. 98 (IDFA Exh. 4) at p. 39, testimony of M. Brown (IDFA)).

Any narrowing of the difference between the effective price of milk going to Class II, III and IV uses in MCP orders and the price of milk going to Class I use simply reflects that the higher solids levels that have been encouraged and achieved in the MCP orders have value to Classes II, III, and IV but not Class I, because higher components increase manufactured product yields but not fluid milk output. This represents alignment, not misalignment. (Hearing Exh. 98 (IDFA Exh. 4) at p. 39, testimony of M. Brown (IDFA)).

In sum, as quoted above, USDA previously concluded:

> Handlers obtain no discernible difference in economic benefit from the various levels of protein contained in milk used in fluid milk products, and there is no justification for requiring them to pay for such milk according to its protein content.

Nothing has changed since that conclusion was reached.

F. The Effect Of Proposals 1 And 2 On Classes II, III And IV In The Four Fat-Skim Orders.

Unlike in the seven MCP orders, in the four fat-skim orders (Arizona, Appalachian, Southeast and Florida), dairy farmers are not paid for milk used to make Class II, III and IV products based on the actual levels of the various dairy components in their milk. Rather, farmers are paid based solely upon the butterfat pounds and skim milk pounds in the milk. See, e.g., 7 C.F.R. 1007.60 (Southeastern order) ("Multiply the pounds of skim milk and butterfat in producer milk that were classified in each class … by the applicable skim milk and butterfat prices.") As a result, as NMPF witnesses admitted, farmers in the four fat-skim, non-MCP orders lack financial incentive to increase nonfat component levels in their milk. (Vitaliano (NMPF) Tr. 179 lines 4-25).

Proposals 1 and 2 would adjust the formulas under which nonfat solids, other solids and protein are valued in pricing the skim milk component of Class II, III and IV milk in the four fat-skim orders. But this would ***not*** be based upon the actual levels of those components in the farmer milk received by handlers, as is the case with Class II, III and IV handlers in the seven MCP orders. Rather, for the four fat-skim orders, minimum prices would be based upon the ***national*** average levels of the three non-fat components in the federal order system. (Hearing Exh. 98 (IDFA Exh. 4) at p. 18 (testimony of M. Brown)).

Proposals 1 and 2 would, using the most recent 5-year average, increase minimum skim milk prices in the four fat-skim orders by $0.40/cwt for Class II milk, $0.80/cwt for Advanced Class III milk, and $0.40/hundredweight for Advanced Class IV milk. This would result in a $33 million per year increase in minimum milk price costs for the Class II, III and IV milk used in the four fat-skim orders. (Hearing Exh. 98 (IDFA Exh. 4) at Table 1 and 2 and Attachments A and C, testimony of M. Brown (IDFA)).

Proposals 1 and 2 are thus predicated on the notion that it is appropriate to require Class II, III and IV handlers in the four fat-skim orders to pay a minimum price based upon the assumption that the components in the milk being supplied for Class II, III and IV in the four fat-skim orders are equal to the reported national average component levels in milk pooled on all federal orders. **So the $33 million question is: does this assumption make any sense?**

1. Farmers In The Four Fat-Skim Orders Lack Financial Incentive To Increase Their Nonfat Component Levels.

As a matter of simple logic, this assumption of equal component levels in the fat-skim orders versus the MCP orders is exceedingly unlikely to be correct. The farmers in the seven MCP orders, which represent 89% of all milk pooled in the federal order system, have for many years been financially motivated by MCP pricing (which as noted increases the price paid to the farmer as the level of components in his or her milk increases) to engage in feeding, breeding, breed selection, and other efforts to increase nonfat solids, protein and other solids component levels. That is good for both farmers, because they are paid more for their milk, and for Class II, III and IV processors in the MCP orders, which can make more of their products due to the higher component levels. (Hearing Exh. 98 (IDFA Exh. 4) at p. 19, testimony of M. Brown (IDFA)).

As one prominent observer from the dairy farmer side of the industry, Calvin Covington, the former CEO of dairy cooperative Southeast Dairy, Inc., has commented:

> One of the objectives of MCP is to give dairy farmers the economic incentive to increase the component content of their milk production, especially protein. It is the solids in milk (butterfat, protein, other solids) that determine the yield of most manufactured products.
>
> In manufacturing cheese, which utilizes more than half of the nation's milk production, protein is the most important factor in determining yield. In other words, the more protein in milk, the more cheese manufactured from that milk. Dairy farmers have responded positively to MCP, especially in increasing protein content. What have dairy farmers done to increase the components

> in their milk production, especially protein? It is a combination of several factors. MCP allows dairy farmers to easily and directly see the contribution of the different components to their milk check, which encourages improvement. Thus, through their breeding and nutrition programs, dairy farmers focus more on improving protein content. Most A.I. companies emphasize the protein transmitting ability of their sires. Plus, the increased use of Jersey genetics has aided the improvement of milk component levels as well.

"14 years of multiple component pricing: What has changed?" (Apr. 15, 2015). (Hearing Exh. 65 (IDFA Exh. 3) at p. 4).

Those efforts to increase component levels in MCP orders are necessarily reflected in the average federal order component levels upon which Proposals 1 and 2 rely. Indeed, given that MCP orders represent 89% of all milk pooled, the increased component levels in MCP orders dominate any calculation of average federal order component levels. (Hearing Exh. 98 (IDFA Exh. 4) at p. 20 (testimony of M. Brown (IDFA)).

By contrast, as NMPF itself admits, farmers in the four fat-skim orders have not been given this financial motivation to increase component levels, because actual component levels (other than butterfat) play no role whatsoever in how much they are paid for their milk. (Vitaliano (NMPF) Tr. 179 lines 4-25). It would defy logic that their milk would contain protein, nonfat solids and other solids concentrations at the levels achieved in MCP orders, when they (unlike MCP order farmers) have not been paid more to achieve those results. (Hearing Exh. 98 (IDFA Exh. 4) at p. 20 (testimony of M. Brown (IDFA)).

To the contrary, given that farmers in the seven MCP orders have been incentivized to increase component levels while farmers in the fat-skim orders have not, component levels in the fat-skim orders would as a matter of logic be well below the average set by the MCP orders. (Hearing Exh. 98 (IDFA Exh. 4) at p. 20 (testimony of M. Brown (IDFA)).

2. Nonfat Component Levels In The Four Fat-Skim Orders Are Well Below The Levels That Proposals 1 And 2 Would Adopt.

Actual data supports this logical conclusion. The one consistent information source of components levels in farmer milk is available through the efforts of the Dairy Herd Improvement Association (DHIA) and the Council on Dairy Cattle Breeding (CDCB). These organizations assist dairy farmers to improve dairy cattle milk health, productivity and quality. They work through a multi-tier operation, in which Dairy Records Providers (DRPs) are state or regional organizations that gather on-farm data in an accurate, credible and uniform manner, for herd management, research and genetic evaluations; Dairy Records Processing Centers (DRPCs) develop computerized software to normalize data coming from farms and transfer to the CDCB cooperator database for research and genetic evaluations; and the CDCB maintains the national cooperator database - the world's largest animal database - that integrates genomic information and more than 80 years of recorded U.S. dairy animal performance. Genotypic and pedigree data from genotyping labs and genomic nominators - like breed associations and genetic companies - combines with phenotypic (performance) data from the Dairy Herd Improvement (DHI) system, breed associations, international partners and research institutions. (Hearing Exh. 98 (IDFA Exh. 4) at pp. 20-21, testimony of M. Brown (IDFA)); C. Covington (Southeast Milk) Tr. 451 line 10 - 452 line 16) (DHI's "management information" is "critical" to farmers)).

USDA originally established the database, which was transferred to CDCB in 2013. USDA remains a key partner through world-renowned research at the Animal Genomics and Improvement Laboratory (AGIL). See DHIA - National Dairy Herd Information Services, available at https://dhia.org/; CDCB - About CDCB, available at uscdcb.com. (Hearing Exh. 98 (IDFA Exh. 4) at p. 21, testimony of M. Brown (IDFA)).

Using this CDCB/DHIA database, IDFA calculated in Table 3 of Hearing Exh. 98 (IDFA Exh. 4) at p. 23, testimony of M. Brown (IDFA) the following protein levels in skim milk in each of the eleven federal orders from 2000 through 2022:

TABLE 3 — **DHI Skim Milk Protein Content By Federal Order Regions**

	Federal Orders[1]											Combined Orders[2]	
YEAR	6	7	5	131	1	30	32	33	51	124	126	F/S	MCP
2001	3.12	3.19	3.16	3.15	3.13	3.17	3.20	3.16	3.30	3.20	3.24	3.15	3.19
2002	3.13	3.18	3.17	3.13	3.13	3.18	3.19	3.17	3.29	3.22	3.22	3.15	3.19
2003	3.12	3.20	3.16	3.10	3.15	3.17	3.19	3.17	3.29	3.23	3.24	3.14	3.20
2004	3.14	3.19	3.17	3.13	3.16	3.19	3.21	3.18	3.30	3.25	3.23	3.16	3.21
2005	3.07	3.20	3.17	3.12	3.16	3.16	3.19	3.14	3.29	3.24	3.22	3.14	3.19
2006	3.05	3.21	3.17	3.16	3.16	3.17	3.21	3.14	3.31	3.25	3.24	3.15	3.20
2007	3.00	3.23	3.19	3.20	3.18	3.17	3.21	3.16	3.30	3.28	3.26	3.15	3.21
2008	2.98	3.23	3.18	3.19	3.20	3.18	3.22	3.18	3.22	3.28	3.27	3.14	3.21
2009	3.00	3.21	3.16	3.18	3.19	3.16	3.20	3.18	3.29	3.28	3.28	3.13	3.21
2010	3.05	3.20	3.16	3.20	3.18	3.16	3.20	3.17	3.30	3.30	3.31	3.15	3.22
2011	3.10	3.24	3.18	3.23	3.18	3.18	3.23	3.18	3.30	3.30	3.34	3.18	3.23
2012	3.12	3.23	3.19	3.22	3.18	3.20	3.23	3.19	3.31	3.32	3.40	3.19	3.25
2013	3.08	3.21	3.19	3.26	3.18	3.23	3.25	3.21	3.33	3.33	3.41	3.19	3.26
2014	3.10	3.24	3.17	3.23	3.18	3.24	3.26	3.22	3.35	3.34	3.40	3.18	3.27
2015	3.06	3.21	3.16	3.23	3.19	3.22	3.23	3.20	3.34	3.36	3.41	3.16	3.26
2016	3.13	3.23	3.17	3.15	3.19	3.22	3.25	3.19	3.36	3.38	3.48	3.16	3.27
2017	3.07	3.29	3.22	3.21	3.21	3.24	3.28	3.22	3.40	3.41	3.49	3.19	3.30
2018	3.08	3.28	3.23	3.29	3.21	3.25	3.28	3.23	3.40	3.40	3.50	3.22	3.30
2019	3.01	3.33	3.23	3.24	3.24	3.26	3.29	3.25	3.41	3.43	3.52	3.20	3.32
2020	2.99	3.32	3.22	3.30	3.23	3.28	3.32	3.25	3.43	3.39	3.54	3.20	3.33
2021	3.23	3.32	3.23	3.36	3.28	3.32	3.32	3.29	3.46	3.44	3.57	3.28	3.36
2022	3.24	3.26	3.26	3.37	3.28	3.35	3.37	3.33	3.48	3.51	3.59	3.29	3.39
AVG 2019-22	3.15	3.30	3.24	3.34	3.26	3.32	3.34	3.29	3.46	3.45	3.57	3.26	3.36

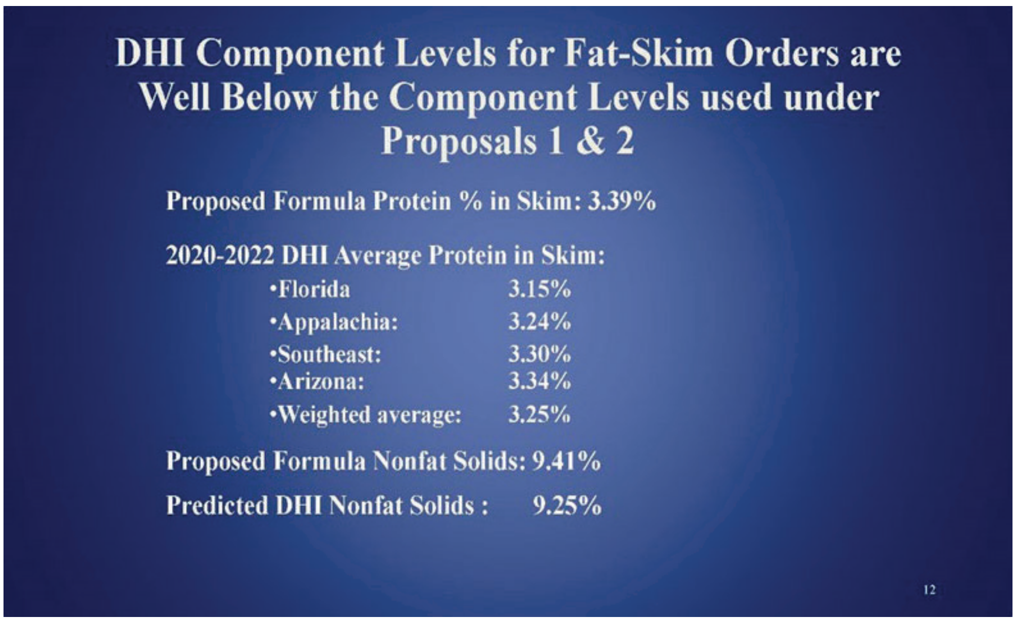
[1] Individual Order estimates include the states marketing the greatest share of their mlk into that individual order.

[2] The combined F/S and MCP Order composition is weighted by total milk pooled in each individual order.

Of special note, the 2022 CDCB/DHIA protein average for the seven MCP orders is ***identical*** to the 3.39% that Proposal 1 reports as the 2022 average protein levels for the seven MCP orders, based upon the test results that USDA collects on farm milk in the seven MCP orders. The fact that these two numbers are identical demonstrates that the CDCB/DHIA component numbers are accurate, and are not skewed by participation in CDCB/DHIA being voluntary. (Hearing Exh.

98 (IDFA Exh. 4) at p. 24 (testimony of M. Brown (IDFA)); M. Brown (IDFA) Tr. 1091 line 26 - 1095 line 11).[3]

USDA does not collect the same data for the four skim-fat orders because protein levels are not relevant to setting Class II, III and IV prices in those orders. However, the 2022 CDCB/DHIA data is available to determine those levels, and for purposes of assessing the propriety of Proposals 1 and 2, the key takeaway is that **none of the four fat-skim orders had protein levels at the 3.39% level that Proposals 1 and 2 would adopt for purposes of setting minimum milk prices in the four fat-skim orders**:



(Hearing Exh. 99 (IDFA Exh. 5) at p. 12, testimony of M. Brown (IDFA)). As shown, the current formula is at 3.1% protein. The Florida order, at 3.15% protein (over the 2020-22 period) is only a smidgeon higher than the current formulas' 3.1% protein. The Appalachian order is at 3.24%,

[3] This similarity between USDA numbers and DHIA numbers is established here for purposes of verifying the accuracy of the CDCB/DHI database. Farmers in the seven MCP orders are paid based upon actual component levels in each load of milk delivered, based on the component tests performed on each load.

is closer to the current formula's 3.1% protein than to Proposal 1's proposed 3.39% protein. The Southeast and Arizona orders are also both below the 3.39% protein proposed in Proposal 1.[4]

In short, Proposals 1 and 2 would require dairy farmers in the four fat-skim orders to be paid for their milk as if the component levels in their milk were equal to the levels in the MCP orders, even though they are in fact well below that average, at least for protein and solids not fat. That conclusion is further supported by testimony by handlers in the four fat-skim orders that the milk they receive does not contain the protein and solids not fat levels that Proposal 1 and 2 would assume. (Hearing Exh. 113 (IDFA Exh. 24), at p. 2-3, testimony of S. Galbraith (Saputo)); Hearing Exh. 464 (MIG Exh. 23B) at p. 7, testimony of T. Kelly (Shamrock)). NMPF admits that if Proposals 1 and 2 were adopted, farmers in the four fat skim orders would be paid based upon an assumed 3.39% protein level even if their actual protein levels were lower. (C. Covington (Southeast Milk) Tr. 450 line 21 - 451 line 2).

3. Overpaying Farmers For Nonexistent Nonfat Solids Has Substantial Adverse Consequences.

Overpaying farmers for nonexistent nonfat solids is not a hypothetical concern. Saputo Cheese operates 29 plants in 13 states across the United States, manufacturing and packaging a variety of cheeses, cultured dairy products, whey ingredients and extended shelf-life and aseptic dairy products. It is among the top 3 U.S. cheese manufacturers and one of the largest producers

[4] Protein levels in the Arizona order are somewhat higher than in the other three fat-skim orders due to a private program that provided financial incentives to achieve that result. (M. Brown (IDFA) Tr. 982 line 24 - 983 line 25; 999 line 26 -1001 line 1). But Arizona levels are still below the levels proposed by Proposals 1 and 2.

While the CDCB database only tracks protein levels, as a practical matter, a 97% correlation between protein levels and nonfat solids levels would indicate it is also tracking nonfat solids levels to a great degree. In other words, given that protein levels are lower in the four fat-skim orders than in the seven MCP orders upon which the Proposal 1 increase are predicated, nonfat solids levels are also lower in the four fat-skim orders. (Hearing Exh. 98 (IDFA Exh. 4) at pp. 24-25 Table 4 and Attachment B, testimony of M. Brown (IDFA)).

of extended shelf-life fluid products, with twenty-two of its twenty-nine plants in the United States processing milk, and receiving milk pooled in seven different Federal Milk Marketing Orders. (Hearing Exh. 113 (IDFA Exh. 24) at p. 1, testimony of S. Galbraith (Saputo)).

Saputo's hearing testimony provided detailed, monthly data from January 2022 through July 2023 for each of its three plants in fat-skim orders. That data firmly established that the raw milk delivered into Saputo Plants in FMMO 6 (Florida) and 7 (Southeast) does not contain the nonfat component levels that Proposals 1 and 2 would incorporate into the FMMOs. (Hearing Exh. 113 (IDFA Exh. 24) at p. 4, testimony of S. Galbraith (Saputo)).

As Saputo's data shows, total nonfat solids as a percentage of skim milk in Saputo's Order 7 Decatur, Alabama and Murray, Kentucky plants and Order 6 Plant City, Florida plant averaged 9.12%, well below the 9.41% that Proposals 1 and 2 would require be assumed for minimum price payment obligations:

Plant City Florida		
Month	Skim Solids %	Butterfat%
Jan-22	8.84%	4.00%
Feb-22	8.95%	3.98%
Mar-22	8.83%	3.89%
Apr-22	8.74%	3.74%
May-22	8.72%	3.58%
Jun-22	8.79%	3.65%
Jul-22	8.77%	3.66%
Aug-22	8.76%	3.64%
Sep-22	8.81%	3.72%
Oct-22	8.84%	3.89%
Nov-22	8.91%	3.86%
Dec-22	8.88%	3.94%
Average 2022	**8.82%**	**3.80%**
Jan-23	8.87%	4.11%
Feb-23	8.83%	4.16%
Mar-23	8.73%	4.04%
Apr-23	8.81%	3.97%
May-23	8.75%	3.95%
Jun-23	8.72%	3.80%
Jul-23	8.77%	3.96%
Total Average	**8.81%**	**3.87%**

Sulphur Springs Texas		
Month	Skim Solids %	Butterfat%
Jan-22	9.12%	4.30%
Feb-22	9.41%	4.97%
Mar-22	8.97%	4.33%
Apr-22	8.89%	4.01%
May-22	8.97%	3.94%
Jun-22	8.94%	3.74%
Jul-22	8.74%	4.03%
Aug-22	8.87%	4.02%
Sep-22	8.97%	4.15%
Oct-22	9.14%	4.19%
Nov-22	9.35%	4.41%
Dec-22	9.29%	4.37%
Average 2022	**9.06%**	**4.21%**
Jan-23	9.24%	4.26%
Feb-23	9.21%	4.27%
Mar-23	9.09%	4.13%
Apr-23	9.09%	4.36%
May-23	9.06%	4.19%
Jun-23	8.96%	4.19%
Jul-23	8.92%	4.09%
Total Average	**9.08%**	**4.21%**

Decatur Alabama		
Month	Skim Solids %	Butterfat%
Jan-22	8.95%	4.28%
Feb-22	9.06%	4.24%
Mar-22	9.07%	4.11%
Apr-22	9.02%	4.05%
May-22	8.87%	3.90%
Jun-22	8.74%	3.84%
Jul-22	8.74%	3.78%
Aug-22	8.74%	3.78%
Sep-22	8.79%	3.95%
Oct-22	8.84%	4.00%
Nov-22	8.75%	3.94%
Dec-22	8.98%	4.12%
Average 2022	**8.88%**	**4.00%**
Jan-23	8.91%	4.29%
Feb-23	8.92%	4.12%
Mar-23	8.89%	4.04%
Apr-23	8.88%	4.08%
May-23	8.80%	3.96%
Jun-23	8.84%	3.97%
Jul-23	8.67%	3.93%
Total Average	**8.87%**	**4.02%**

Murray Kentucky		
Month	Skim Solids %	Butterfat%
Jan-22	8.64%	4.03%
Feb-22	8.64%	4.01%
Mar-22	8.64%	3.95%
Apr-22	8.64%	4.01%
May-22	8.65%	3.91%
Jun-22	8.65%	3.87%
Jul-22	8.66%	3.74%
Aug-22	8.65%	3.85%
Sep-22	8.64%	4.01%
Oct-22	8.64%	4.03%
Nov-22	8.64%	4.01%
Dec-22	8.63%	4.11%
Average 2022	**8.64%**	**3.96%**
Jan-23	8.63%	4.11%
Feb-23	8.63%	4.14%
Mar-23	8.63%	4.15%
Apr-23	8.63%	4.10%
May-23	8.64%	4.01%
Jun-23	8.65%	3.91%
Jul-23	8.65%	3.90%
Total Average	**8.64%**	**3.99%**

2022 Skim Solids Avg. Dec/Mur/PC	8.78%
2022 Butterfat Avg. Dec/Mur/PC	3.92%
2022 Skim Solids As % Skim	9.1070%

Total Skim Solids Avg. Dec/Mur/PC	8.77%
Total Butterfat Avg. Dec/Mur/PC	3.96%
Total Skim Solids As % Skim	9.1212%

(Hearing Exh. 113 (IDFA Exh. 24) at pp. 4-5, testimony of S. Galbraith (Saputo)).[5]

Indeed, adding insult to injury, many Saputo products made at these plants are classified as Class II and necessitate minimum levels of milk solids to meet Standard of Identity requirements (such as for Ice Cream Mix). To meet these Standard of Identity requirements, other skim solids are purchased (in the form of Condensed Skim Milk) and added to meet the obligation. Receiving raw milk that has a pricing formula which does not reflect actual component values requires Saputo to pay for milk solids that do not exist (ghost solids). And, Saputo's subsequent purchase of Condensed Skim Milk to meet product requirements that are replacing the "ghost solids" is simply

[5] Data for the Saputo Sulphur Springs, Texas plant was included as a reference point. That plant is in MCP Order 126. (Galbraith (Saputo) Tr. 1428 line 27 – 1479 line 5).

paying for the skim solids twice. (Hearing Exh. 113 (IDFA Exh. 24) at p. 2, testimony of S. Galbraith (Saputo)).

IDFA notes that USDA provided USDA Table 1, "Milk Components by Class and Order 2008-2023 YTD" (Hearing Exhibit 44 (USDA Exh. 44) in response to a request for information, and that this table sets forth higher protein levels for the four fat-skim orders than the CDCB/DHI data. But in the footnotes to USDA Table 1 (Hearing Exh. 44 (USDA Exh. 44), USDA indicates that it did not have protein, solids not fat or other solids test data for the fat-skim Arizona order, but instead assumed those levels were identical to the Pacific Northwest order. Yet USDA Table 1 (Hearing Exh. 44 (USDA Exh. 44) shows that fat levels in the Pacific Northwest (4.16%) are far higher than in the Arizona order (3.78%) (indeed, the highest in any order in the federal order system). Higher fat levels are strongly associated with higher non-fat skim component levels (there is a 90% correlation between fat levels and non-fat skim component levels, and an 89% correlation between fat levels and protein levels). (Hearing Exh. 98 (IDFA Exh. 4) at p. 26 (testimony of M. Brown (IDFA)).

Thus, it is highly unlikely that USDA Table 1 (Hearing Exhibit 44 (USDA Exh. 44) figures for the Arizona order are correct, given the much lower fat levels in Arizona. (Hearing Exh. 98 (IDFA Exh. 4) at p. 27, testimony of M. Brown (IDFA)). The CDCB/DHI data for Arizona recited by IDFA in Table 3 of Hearing Exh. 98 (IDFA Exh. 4) at p. 23, testimony of M. Brown (IDFA) should be accepted.

Likewise, USDA indicates in USDA Table 1 (Hearing Exh. 44 (USDA Exh. 44) that for the three Southeast fat-skim orders (Florida, Southeast and Appalachia), it was forced to rely upon partial data supplied by certain handlers. So the question is: which data is more accurate with respect to the three Southeast fat-skim orders. We ***know*** that the CDCB/DHI data for the seven

MCP orders is accurate, because it matches precisely the USDA data for the seven MCP orders, orders for which USDA had access to complete test data (*see* p. 28 above). There is no reason why CDCB/DHI data would not be equally accurate for the three Southeast fat-skim orders.

Accordingly, the data IDFA cited in Table 3 of Hearing Exh. 98 (IDFA Exh. 4) at p. 23, testimony of M. Brown (IDFA), reproduced above, constitute the best available data source regarding actual nonfat solid levels in the four fat-skim orders.

In any event, the average for each of the three component levels (protein, nonfat solids and other solids) in each of the three orders as reported in USDA Table 1 (Hearing Exh. 44 (USDA Exh. 44)) were below the levels that Proposals 1 and 2 would establish.[6]

4. Proposals 1 And 2 Also Ignore Seasonality.

To make matters worse, the component levels assumed in Proposals 1 and 2 ignore the significant amount of seasonal variability in component levels. Table 5 of Hearing Exh. 98 (IDFA Exh. 4) at p. 28, testimony of M. Brown (IDFA) is taken from USDA's data in Table 1 (Hearing Exh. 44 (USDA Exh. 44)) and shows that given the seasonal variation in component levels, Proposals 1 and 2 would overvalue skim milk going to Classes II, III and IV in half the months of the year by overestimating yields during those months.

Specifically, for cheese, USDA assumes that each pound of milk protein contributes 1.382 pounds cheese yield but that each pound protein allows 1.17 pounds of milk fat to be used in cheese. USDA uses a factor of 1.03 to determine whey yield from other solids, and 0.99 to determine nonfat dry milk yield from nonfat solids. Based on these USDA yield assumptions, and

[6] USDA Table 1 (Hearing Exhibit 44 (USDA Exh. 44)) sets forth monthly data but does not calculate averages. IDFA did so, using the 2020-22 data in USDA Table 1 (Hearing Exh. 44 (USDA Exh. 44)). See Hearing Exh. 98 (IDFA Exh. 4) at p. 28, testimony of M. Brown (IDFA)).

Given that Mr. Metzger's Exhibit NAJ 3 (Hearing Exh. 68) relied upon USDA's estimates for fat skim orders, his numbers are also dubious.

actual monthly MCP component levels from the past three years, calculated milk yields per hundredweight vary significantly as components rise and fall during the year. Cheese yield varies by 0.80 pounds from high to low month, and Nonfat Dry Milk yield varies by 0.28 pounds. In a $2.00 per pound cheese market, that variance equates to a $1.44/cwt minimum payment obligation in the price of Class III milk. Component pricing in MCP orders recognizes these seasonal variations because payment obligations are based upon the actual component levels in the milk being paid for, but pricing in the four fat-skim does not and would not under Proposals 1 and 2. While USDA uses cheddar cheese, butter, dry whey and nonfat dry milk to set minimum prices, yields from all products, outside of fluid milk and creams, are similarly impacted in the same way as those four products. (Hearing Exh. 98 (IDFA Exh. 4) at p. 29, testimony of M. Brown (IDFA)); (Hearing Exh. 99 (IDFA Exh. 5) at p. 14, testimony of M. Brown (IDFA)).

Thus the proposed increases in the skim milk composition assumptions are not only unwarranted on their face, but would unfairly put Class II, III and IV handlers in the fat-skim orders at a competitive disadvantage to Class II, III and IV handlers in the MCP orders, because fat-skim order handlers would be paying a higher price for milk that has lower levels of the components necessary to make their products. This would be particularly true in the summer months when milk component levels are at their lowest point, and the proposed skim prices would not reflect anything close to the actual value. (Hearing Exh. 98 (IDFA Exh. 4) at pp. 28-29, testimony of M. Brown (IDFA)).

5. The Four Fat-Skim Orders Are Free To Petition To Become MCP Orders.

If dairy farmers in the four fat-skim orders feel they are being underpaid because their nonfat component levels are (slightly) higher than the component levels in the current Class II, III and IV formulas, the solution is for them to be paid based on their milk’s actual component levels, i.e., for the fat-skim orders to become MCP orders. Their federal orders would then reward farmers for actual component levels the same as the other seven orders, and encourage the same feeding, genetic, and breed selection efforts necessary to increase component levels. Proponent NAJ acknowledged that paying farmers in the four fat-skim orders via MCP would resolve any alleged underpayment to them to extent that the nonfat component levels in their milk are higher than those assumed in the current formulas. (Metzger (NAJ) Tr. 563 line 23 - 564 line 4).

While the fat-skim orders becoming MCP orders was deemed beyond the scope of the instant hearing, farmers and in the fat-skim orders and their cooperatives are free to ask USDA to hold a hearing specifically to impose MCP in some or all of these four orders. A request to do so in Orders 5 and 7 was submitted in 2018 by NAJ on behalf of a number of cooperatives, but later withdrawn. (See July 10, 2018 Deputy Administrator, Dairy Division Letter to Stakeholders Re National All Jersey Withdrawal of Southeast and Appalachian Hearing Request, available at https://www.ams.usda.gov/sites/default/files/media/LettertoStakeholdersNAJWithdrawal.pdf; (Official Notice Requested, Hearing Exh. 507 (IDFA Exh. 69), Item 10; Official Notice Taken, ALJ Order of March 20, 2024 at p. 2); C. Covington (Southeast Milk) Tr. 473 lines 14 - 22).

USDA has demonstrated it can act with considerable alacrity on such requests, having recently noticed, held a hearing, and issued recommended and final decisions, regarding transportation and distributing plant delivery credits in the three Southeastern orders, all within a single calendar year. USDA, Milk in the Appalachian, Florida, and Southeast Marketing Areas; Final Decision on Proposed Amendments to Marketing Agreements and to Orders, 88 Fed. Reg. 88038 (Dec. 1, 2023).

If by chance farmers in the three Southeastern orders are for some non-obvious reason disincentivized from seeking such a change due to their high Class I utilization, that hardly supports changing the formulas to require Class II, III and IV processors to pay them for nonfat component levels their milk does not have. (Hearing Exh. 98 (IDFA Exh. 4) at p. 29, testimony of M. Brown (IDFA)).

By contrast, a change to multiple component pricing would ensure that handlers who derive a yield benefit from higher components would compensate their suppliers for that benefit. (Hearing Exh. 249 (INST Exh. 1) at p. 4, testimony of W. Schiek (Dairy Institute of California)).

Indeed, paying farmers in the four fat-skim orders as if they were producing milk with the same nonfat solid levels of farmers in the MCP orders would create the most perverse of disincentives. Those farmers would lack any inducement to undertake efforts or incur expenses (such as for higher quality feed) in order to increase their nonfat solid levels, because they would be paid for their milk as if they had already done so. Indeed, they would be paid more for their milk than the fifty percent of dairy farmers in the MCP orders whose nonfat solid levels are below the national average. (Vitaliano (NMPF) Tr. 185 line 17 - 186 line 8.)

II. USDA SHOULD REJECT PROPOSAL 3, WHICH WOULD ELIMINATE 500-POUND CHEDDAR CHEESE BARREL PRICES FROM THE CLASS III PROTEIN FORMULA.

PROPOSED CONCLUSIONS REGARDING PROPOSAL 3

Based upon the Proposed Findings that follow, IDFA's Proposed Conclusions Regarding Proposal 3 are:

a. USDA has consistently rejected proposals to exclude 500-pound barrels from the protein formula. Nothing has changed that would merit a different result here. Barrels continue to represent a substantial portion of cheddar cheese production, with barrel production estimated by NMPF itself to exceed 1.2 billion pounds a year.

b. Proponents are wrong when they contend that USDA included 500-pound barrels in the pricing formula simply to serve as a "synthetic" block price. 500-pound barrels were included because they: (a) comprise a material component of cheddar cheese sales, and (b) are subject to supply and demand conditions different than blocks, which warrant their inclusion in the protein formula to ensure that the formula accurately captures and reflects the value of both major variants of cheddar cheese.

c. Proponents' view that excluding 500-pound barrels would increase Class III regulated milk prices is misguided (even assuming that raising Class III prices would in and of itself constitute a legitimate justification for Proposal 3). Had 500-pound barrels been excluded, the Class III milk prices would have been lower, not higher, in 63% of all months from 2000 through 2022. This is because in those months, the 500-pound barrel price plus $0.03 was higher than the 40-pound block price. While the 500-pound barrel price plus $0.03 has been lower than the 40-pound block price in several more recent years (although not, for example, during 2022), the substantial recent, ongoing expansion of 40-pound block capacity in the United States will likely reverse the relationship between 500-pound barrel and 40-pound block prices in the next couple of years, and the divergence in pricing will likely be narrower thereafter.

d. During the periods when 500-pound barrel price plus $0.03 are lower than the price of 40-pound blocks, barrel cheese serves the critical function of clearing the market, a role for which barrels are especially suited, given that they are storable for a longer period without material degradation. Removing 500-pound barrels from the formula, and pricing the milk used to make them based upon a higher 40-pound block cheese price, would make 500-pound barrel production uneconomical, resulting in barrel makers going out of business or switching to block production, which would only serve to destabilize the block market.

e. Point (d) also shows why USDA should not accept the Edge Cooperative suggestion that 500-pound barrels be retained in the formula but given less weight than 40-pound blocks.

FMMOs establish a regime of minimum pricing. The price for Class III milk must be set at a level that will allow 500-pound barrel manufacturers to make their product and cover their costs. This is especially true because 500-pound barrels are often produced when international demand for exported US cheeses is weak but the milk still needs to be processed. (M. Brown (IDFA) Tr. 2014 lines 24-25). Setting the Class III price primarily based upon 40-pound block cheese would make it impossible for 500-pound barrel manufacturers to sell their product at market prices and cover their costs, in those months in which the 40-pound block price materially exceeds the 500-pound barrel price (plus $0.03) by more than a few cents.

f. Proposal 3 should not be adopted.

PROPOSED FINDINGS REGARDING PROPOSAL 3

A. The FMMO Pricing Formula.

Since January 2000, federal milk marketing orders have utilized the price of end-products to determine the minimum milk prices that must be paid to farmers, through a mechanism commonly referred to as a "product price formula." Oversimplifying slightly, a product price formula sets the minimum price that farmers must be paid for their milk (at least by proprietary handlers) as the price handlers receive for their end-products (cheddar cheese, dry whey, butter and nonfat dry milk) minus the costs handlers incur in turning farm milk into those end-products (commonly referred to as the "cost of manufacture" or the "make allowance"). In performing this calculation, USDA must make assumptions as to how much of the end- products can be made from a given quantity of milk (the "yield factors"). (Hearing Exh. 127 (IDFA Exh. 30) at pp. 1-2, testimony of M. Brown (IDFA)).

Step one in the formulas is a survey to determine the price paid for each of the specified manufactured dairy products. Class III products consist principally of cream cheese and other spreadable cheeses, and hard cheese of types that may be shredded, grated, or crumbled. 7 C.F.R.

1000.40(c). In order to set the protein price component of the price of milk used to make Class III products, the orders since 2000 have in step one relied upon the weighted average of (a) the U.S. average price for 40-lb. block cheddar cheese, and (b) the U.S. average price for 500-pound barrel cheddar cheese (38 percent moisture) plus $0.03. 7 C.F.R. 1000.50(n)(1). The 40-lb. block and 500-pound barrel prices are obtained through a survey of: (i) the National Dairy Products Sales Report (NDPSR) of prices paid for 40-lb. block cheddar cheese; and (ii) the NDPSR for prices paid for 500-pound barrel cheddar cheese (38 percent moisture). Id. To be included in these Sales Reports, cheese must meet various criteria, including age (no less than 4 days or more than 30 days on the date of sale); color (within a specified color range for 40-pound blocks; white for 500-pound barrels); and moisture content (no more than 37.7% moisture for 500-pound barrels). 7 C.F.R. 1170.8(a). (Hearing Exh. 127 (IDFA Exh. 30) at pp. 2-3, testimony of M. Brown (IDFA)).

Proposal 3 would eliminate the cheddar cheese 500-pound barrel price series from the protein price formula used to price milk used to make cheese. Thus, the price survey would be limited to 40-lb. blocks.

B. USDA Has Consistently Declined To Exclude 500-Pound Barrels, On Grounds That Remain Sound Today.

Whether 500-pound barrel cheese should be included in the price surveys used to set the protein price in FMMO formulas is a question USDA has previously addressed, and on three separate occasions, resolved in favor of inclusion. USDA's reasoning in reaching that result was sound then and remains fully valid today.

When USDA in 1999 and 2000 adopted product price formulas to set FMMO minimum milk prices, NMPF argued, as it does now, that the survey should be limited to 40-pound blocks. "NMPF urged that the barrel price not be included because barrels don't have uniform composition, and because the use of such prices would have the effect of unnecessarily reducing prices to producers." USDA, Milk in the New England and Other Marketing Areas; Decision on Proposed Amendments to Marketing Agreements and to Orders, 64 FR 16026,16098 (Apr. 2, 1999).

Other industry participants disagreed, and USDA rejected NMPF's position, concluding that "including both block and barrel cheese in the price computation increases the sample size by about 150 percent, giving a better representation of the cheese market." Id.

An identical proposal to eliminate 500-pound barrels was subsequently advanced in connection with the 2006-07 hearings that led to the 2008 revisions to FMMOs. USDA in 2008 issued a tentative decision that once again rejected that proposal, concluding:

> This decision finds that retaining the cheese barrel price in the protein price formula is necessary to ensure that the protein price is representative of the national cheese market. The Class III product-product price formula needs to be as reasonably representative of the market for cheese that determines the value of milk. Record evidence reveals that barrel production in the NASS survey is often in excess of 50 percent of the total cheese volume surveyed. Eliminating the barrel price from the protein price formula would significantly and needlessly reduce the volume of cheese used in the Class III product price formula which could lead to protein prices that are not as representative of the national cheese market. Accordingly, Proposal 13 [to eliminate 500-pound barrels] is not adopted.

Milk in the Northeast and Other Marketing Areas; Tentative Partial Final Decision on Proposed Amendments and Opportunity To File Written Exceptions to Tentative Marketing Agreements and Orders, 73 FR 35306, 35309, 35328 (June 20, 2008).

USDA revisited this issue five years later when it issued a final decision regarding the 2006 -07 hearings:

> The Class III product-price formula needs to be reasonably representative of the market for cheese that determines the value of milk. Record evidence reveals that barrel production in the AMS survey is often in excess of 50 percent of the total cheese volume surveyed. Eliminating the barrel price from the protein price formula would significantly and needlessly reduce the volume of cheese used in the Class III product price formula which could lead

> to protein prices that are not as representative of the national cheese market.

Milk in the Northeast and Other Marketing Areas; Final Decision on Proposed Amendments to Marketing Agreements and Orders and Termination of a Portion of the Proceeding, 78 Federal Register 9248, 9275 (Feb. 7, 2013).

These stated reasons behind USDA's decision to include 500-pound barrels in the product surveys are equally valid today. First and foremost, volume sales of both barrel and block cheddar cheese remain very robust. The increase in the number of pounds of barrel and block cheese included in the NPDES survey has been roughly equivalent between 2000 and 2022, with barrel pounds up by 270 million pounds and block pounds up by 330 million pounds. (E. Reynolds (DFA) Tr. 2145 line 9 - 2147 line 21).

In 2022, NDPSR reported 40-pound cheddar block sales volume totaling 643.0 million pounds, while NDPSR reported 500-pound barrel sales totaling 701.4 million pounds. USDA Datamart, Location: Products\Dairy\All Dairy\(DY_WK100) National Dairy Products Prices - Weekly Final Block and Barrel Cheese Prices https://mpr.datamart.ams.usda.gov/.

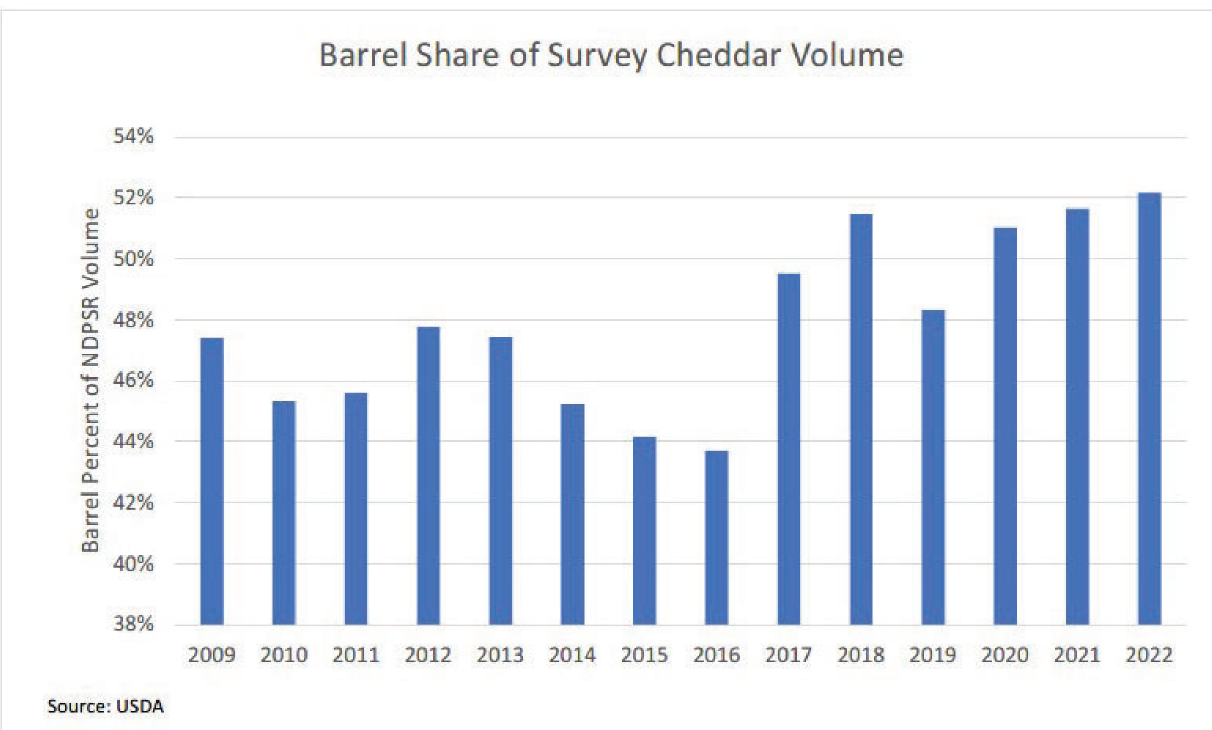
The foregoing figure for 500-pound barrel sales only captures that portion of barrel sales that meet the regulatory requirement for inclusion in the NDPSR, *see* p. 40 above. NMPF itself estimates that roughly 1.2 billion pounds of 500-pound barrel cheese were produced in 2022. (D. Hanson (Foremost Farms) Tr. 1630 lines 14-17; Tr. 1769 line 25- 1770 line 12). Thus, NMPF acknowledges a substantial demand for 500-pound barrels (D. Hanson (Foremost Farms) Tr. 1634 lines 8-11), which play a significant role in establishing the market value of cheddar cheese, the core goal of step one of the process of setting minimum prices for Class III milk used. (Hearing Exh. 127 (IDFA Exh. 30) at p. 4, testimony of M. Brown (IDFA)).

Furthermore, a significant number of large and medium size companies produce 500-pound barrels, including Glanbia, Agropur, Hilmar, Lactalis, Land O' Lakes, Ellsworth, AMPI, First

District Association, and Wisconsin Whey Protein Specialties. P. Bauer (Ellsworth) Tr. 1830 line 10 - 1831 line 15); Hearing Exh. 196 (IDFA Exh. 22) p. 2, testimony of DeJong (Glanbia)). 500-pound barrels are part of a dynamic market.

The conclusions reached by USDA in 2008 and 2013 (see pp. 41-42 above) fully resonate today: "Eliminating the barrel price from the protein price formula would significantly and needlessly reduce the volume of cheese used in the Class III product price formula which could lead to protein prices that are not as representative of the national cheese market." "Retaining the cheese barrel price in the protein price formula is necessary to ensure that the protein price is representative of the national cheese market."

Indeed, this reasoning applies even more today, given that barrel volume is more important today to the current milk price formula than it has been historically. The share of barrels in the NDPSR survey has since 2009 moved from representing less than half of survey cheese volume to now being the majority:



Hearing Exh. 133 (IDFA Exh. 34), at p. 9, testimony of A. Krebs (Leprino Foods). By including 500-pound barrels, the NPDSR currently captures 34% of all cheddar cheese production, a very robust survey. (Hearing Exh. 117 (NMPF Exh. 7) at p. 5, Table 2, testimony of D. Hanson (Foremost Farms)); D. Hanson (Foremost Farms) Tr. 1629 line 28 - 1630 line 5). Eliminating 500-pound barrels would reduce by more than half the market pricing information upon which USDA currently and appropriately relies, and result in a cheddar cheese survey that covers a far small percentage of total cheddar cheese production than, for example, the percentage of NFDM production (52%) and whey production (27%) captured by the NPDES surveys of those products. (Hearing Exh. 117 (NMPF Exh. 7) at p. 5, Table 2, testimony of D. Hanson (Foremost Farms)).

While proponents claimed that USDA could continue to gather sales price data regarding barrel cheese even if it were removed from the formula (Hearing Exh. 126 (NMPF Exh. 9) at p. 2, testimony of C. Edmiston (Land O'Lakes)), that is clearly wrong, because USDA's legal authority to gather such data is limited to data used in the formulas to set minimum milk prices, 7 U.S. Code § 1637b(b)(2); and the NMPF witness was not able to identify any other relevant legal authority. (Edmiston (Land O'Lakes) Tr. 1937 line 10 - 1943 line 22).

C. USDA Included 500-Pound Barrels For Reasons Having Nothing To Do With Serving As A "Synthetic" 40-Pound Block.

NMPF belittles USDA's repeated decision to include 500-pound blocks in the protein price formula, contending that it was included and its price increased by $0.03 simply to serve as a "synthetic 40-pound block cheddar price." (Hearing Exh. 119 (NMPF Exh. 8) p. 1, testimony of P. Bauer (Ellsworth); Hearing Exh. 117 (NMPF Exh. 7) at p. 5, testimony of D. Hanson (Foremost Farms)). This assertion has no support in the USDA order reform decision making, and the principal NMPF witness who so claimed was not involved at the time and had not read USDA proposed or final decisions. (P. Bauer (Ellsworth) Tr. 1828 line 17 - 1829 line 15). NMPF witnesses were unable to point to any USDA statement anywhere in which USDA used the term "synthetic block cheese price" or any other words to that effect. (E. Reynolds (DFA) Tr. 2159 lines 5-14).

In fact, USDA in its April 2, 1999 order reform final decision described the $0.03 adjustment solely in terms of the difference in packaging ***costs*** between block and barrels, so that barrels and blocks from a cost of production perspective would be equivalent for purposes of determining an appropriate make allowance. USDA never states that it intended to equate the market price of the two or make barrels a synthetic version of blocks. Milk in the New England and Other Marketing Areas; Decision on Proposed Amendments to Marketing Agreements and to Orders, 64 Fed. Reg. 16026, 16098 (Apr. 2, 1999). NMPF witness ultimately agreed that "every statement… in the [USDA] decision, the April 2nd, 1999, decision -- they are all talking about the difference ***in the cost to make*** [block versus barrel] cheese." (C. Edmiston (Land O'Lakes) Tr. 1943 line 26 - 1947 line 23).

Indeed, USDA's 2013 final decision implementing the 2006 and 2007 make allowance hearings made clear that USDA had no expectation that barrels would serve as a synthetic form of blocks. To the contrary, USDA stated that "[s]ince barrel cheese prices exceed block cheese prices at certain times due to different supply and demand curves, average prices will not in and of themselves indicate cost differences." Milk in the Northeast and Other Marketing Areas; Final Decision on Proposed Amendments to Marketing Agreements and Orders and Termination of a Portion of the Proceeding, 78 Federal Register 9248, 9274 (Feb. 7, 2013). **That statement clearly indicates USDA's views that (a) the inclusion of barrel cheese in the formula incorporates the different supply and demand curves that apply to barrel versus block, (b) barrel cheese prices and block cheese prices are not always going to be the same, and (c) the $0.03 cost**

adjustment was not intended to capture market price differences. (Krebs (Leprino) Tr. 2231 line 10 - 2233 line 2).

In short, barrels are not a synthetic price for anything. They are their own market. (M. Brown (IDFA) Tr. 2056 lines 18-24). 40-pound blocks and 500-pound barrels serve materially different functions, and the failure to include both in the FMMO pricing formulas would provide a badly distorted representation of the commodity cheddar cheese market. 40-pound blocks are typically sliced, diced, shredded or cut into smaller blocks and sold in their current form. 500-pound barrels are typically further processed to create processed cheese and other cheese-flavored products. (Hearing Exh. 127 (IDFA Exh. 30) at p. 5, testimony of M. Brown (IDFA)).

Critically, because 500-pound cheddar barrels are further processed through melting, they can be stored at 28-29 degrees for six months. This storage capacity has played an active role in barrel inventory management for a decade and been widely adopted by both manufacturers and buyers. This process allows 500-pound barrels to successfully balance seasonal inventories and when necessary, provide a good market of last resort outlet for milk going into cheese. These market functions can only be captured by including 500-pound barrels in the formulas. (Hearing Exh. 127 (IDFA Exh. 30) at p. 5, testimony of M. Brown (IDFA)); M. Brown (IDFA) Tr. 1989 lines 12 - 21).

The CME itself has officially noted the differences between the usage of blocks and barrels, and how the market price for one does not capture the market conditions affecting the price of the other:

> Although blocks and barrels are both Cheddar cheese products, their end uses are diverse. Typically, manufacturers use block Cheddar cheese for chunks, loaves, shreds, and snack-sized natural cheeses, while barrels are often consumed in the processed cheese category. The different channels can create unique and often dissimilar demand cycles and trends as well as varied seasonal patterns.

CME Block Cheese Futures - A New Hedging Tool, available at: https://www.cmegroup.com/education/articles-and-reports/cme-block-cheese-futures-a-new-hedging-tool.html

NMPF witnesses acknowledged the correctness of these CME descriptions. (D. Hansen (Foremost Farms) Tr. 1634 line 12- 1635 line 3).

Furthermore, both 40-pound blocks and 500-pound barrels are traded on the Chicago Mercantile Exchange (CME) spot market. It would make no sense for a product sufficiently central to the commodity cheese marketplace to be so traded on the CME cash exchange, and yet not taken into account when the federal order system assesses the market value of cheddar cheese for purposes of setting minimum milk prices. While NMPF proponents point out that cheese is the only commodity for which more than one product is used to set the minimum price, they acknowledged that there are no "second products" that exist for nonfat dry milk or whey. (P. Bauer (Ellsworth) Tr. 1797 lines 6-15).

Dairy cooperative Associated Milk Producers Inc. (AMPI), with 800 dairy farmer-owners, is the largest farmer-owned cheese cooperative in the United States. Its cheese, butter and powdered dairy products are produced at eight manufacturing plants and then marketed to foodservice, retail and food ingredient customers. (Hearing Exh. 147 (IDFA Exh. 36) at p. 1, testimony of S. Schlangen (AMPI)). As both a block and barrel cheddar manufacturer, AMPI recognizes the unstable relationship between block and barrel prices in Class III has caused a variety of problems for the industry. It believes, however, eliminating barrels will create more volatility for barrel manufacturers and compromise their competitive position for milk. (Hearing Exh. 147 (IDFA Exh. 36) at p. 1, testimony of S. Schlangen (AMPI)). AMPI argues that moving Class III to a 100% block weighting would complicate milk pricing for manufacturers making barrel cheese. Barrels produced in the U.S. are almost always priced based on the CME spot barrel price, while Proposal 3 would essentially disconnect Class III milk pricing from the CME barrel price. The resulting disconnect between revenue and the Class III milk price could increase margin volatility and the ability to compete for milk. (Hearing Exh. 147 (IDFA Exh. 36) at pp. 1-2, testimony of S. Schlangen (AMPI)).

D. Excluding 500-Pound Barrels Is Unlikely To Raise Class III Milk Prices On A Consistent Or Long-Term Basis.

IDFA does not oppose eliminating 500-pound barrels because the current formula results in any particular advantage to processors. Whether the 40-pound block price is higher or lower than the 500-barrel price varies over time (once one adds $0.03 to the barrel price, as provided for in the milk order formulas). ***Indeed, for the months from 2000 through 2022, the 500-pound barrel price plus $0.03 exceeded the 40-pound block price 63% of the time. Thus Proposal 3 would have lowered, not increased, Class III minimum prices in 63% of months, the exact opposite of what proponents are attempting (without adequate justification) to achieve.*** (Corrected Hearing Exh. 423A (Corrected IDFA Exh. 59A) at p. 8, testimony of M. Brown (IDFA)); M. Brown (IDFA) Tr. 10309 line 20 - 10314 line 8).

If one chooses to focus on a shorter time frame from 2009, it remains the case that in most years using only 40-pound blocks to price Class III milk would have ***reduced*** the surveyed cheese price and therefore reduced minimum milk prices to farmers. While that relationship shifted for a few years from 2017 through 2021, it ***shifted back*** in 2022:

Comparisons of NDPSR Monthly Block Price With The NDPSR Weighted Average Cheese Price

YEAR	NDPSR Wtg Avg Block-Barrel Price	NDPSR Block Price	Block vs. Wtd Average	Percent Blocks
2009	$1.30	$1.29	-$0.01	52.6%
2010	$1.52	$1.51	-$0.01	54.6%
2011	$1.82	$1.81	-$0.02	54.3%
2012	$1.71	$1.70	-$0.01	52.2%
2013	$1.77	$1.76	-$0.01	52.6%
2014	$2.16	$2.14	-$0.01	54.8%
2015	$1.65	$1.64	-$0.01	56.0%
2016	$1.61	$1.59	-$0.02	56.3%
2017	$1.63	$1.65	$0.02	50.6%
2018	$1.54	$1.58	$0.04	48.4%
2019	$1.76	$1.78	$0.02	51.7%
2020	$1.92	$2.04	$0.12	49.1%
2021	$1.68	$1.73	$0.06	48.4%
2022	$2.11	$2.10	-$0.01	47.8%

Source: https://usda.library.cornell.edu/concern/publications/zs25x847n?locale=en

(Hearing Exh. 127 (IDFA Exh. 30) at p. 7, testimony of M. Brown (IDFA)).

Moreover, as IDFA witnesses explained, the substantial new block capacity coming on line in the next year and a half, combined with the absence of new barrel capacity, could easily cause the block-barrel price relationship to invert from its current "blocks are higher" correlation, causing Class III minimum milk prices to fall were Proposal 3 to be adopted and blocks eliminated from the pricing formulas. (M. Brown (IDFA) Tr. 1997 line 2 - 2000 line 11; 2020 lines 15-22).

With new block cheese plants coming online, Leprino Foods expects a compression in the block-barrel spread, ending up with barrel prices higher than block prices in the springtime. (S. Taylor (Leprino) Tr. 2206 line 23 - 2207 line 21). As Leprino witnesses further explained, an additional block plant came online in 2021, additional capacity is currently being ramped up in Texas, and more block capacity is being added in Kansas and South Dakota. The supply and demand balance between 40-pound blocks and 500-pound barrels will likely also be facilitated by adequate updates to make allowances. (Hearing Exh. 133 (IDFA Exh. 34), at p. 4, testimony of A. Krebs (Leprino Foods)).

Dr. Bozic likewise foresees convergence and potentially inversion of the block-barrel price relationship over the near to long term:

> My estimate is that the volume of new block cheese that will be brought to market in 2025, so just as these regulation goes into effect -- unless we delay them --will substantially outpace the typical annual domestic increase in cheese demand due to population growth and per capita increases in consumption. As such, the block-barrel spread may very well invert in 2025 because of the growth and supply of block cheese…. Further, once fixed costs in processing flexibility are incurred and sales strategies have adjusted, cheese manufacturers who can make either blocks or barrels will react to profitable opportunities to reduce the spread between blocks and barrels by altering their production schedules. Therefore, I expect that any deviations in block-barrel spread from long-term average to be shorter lived in future years than was the case in 2017-2021 period.

(Hearing Exh. 134 (Edge Exh. 4) at pp. 2-3, testimony of M. Bozic (Edge)).

E. 500-Pound Barrels Serve A Critical Market Clearing Function, And Their Elimination From The Formula Would Badly Misprice Milk Used To Make Barrels, Jeopardizing Their Production.

Eliminating 500-pound barrels from the Class III pricing formula is antithetical to fundamental principles of orderly marketing, including the principle that FMMOs must set minimum, market clearing prices. If this principle is violated, the market ends up with supplies that exceed the demand for milk.

This need has been explicitly recognized by USDA, in the context of setting minimum prices for each milk class:

> This pricing plan [being adopted by USDA] will allow the market-clearing price level of each of these manufactured products to be achieved independent of the other products. As a result, dairy farmers will be paid a price which is more representative of the level

> at which the market values their milk in its different uses. **The importance of using minimum prices that are market-clearing for milk used to make cheese and butter/nonfat dry milk cannot be overstated. The prices for milk used in these products must reflect supply and demand, and must not exceed a level that would require handlers to pay more for milk than needed to clear the market and make a profit.**

Milk in the New England and Other Marketing Areas; Decision on Proposed Amendments to Marketing Agreements and to Orders, 64 Fed. Reg. 16026, 16095 (Apr. 2, 1999).

Barrel cheddar continues to be a critical market-clearing format within the cheddar category, as demonstrated by its price volatility. Its prices can swing from a significant discount to blocks, to a premium over blocks, reflecting greater shifts in supply and demand than blocks. Removing barrels from the Class III cheese price formula removes the price that most closely reflects the supply and demand balance. Cheddar barrels are also storable and are produced and used by several buyers and sellers. (Hearing Exh. 133 (IDFA Exh. 34), at p. 4, testimony of A. Krebs (Leprino Foods)). As described above, in its 2013 Final Decision (p. 9274), USDA noted that "blocks and barrels have different supply and demand functions."

As NMPF witnesses themselves acknowledged, when 500-pound barrels are the lower price, that represents the market clearing price (i.e., 500-pound barrels are the product of last resort). (D. Hanson (Foremost Farms) Tr. 1637 lines 8-10). Accordingly, if one sets the minimum Class III price based upon the higher price of blocks (at that point in time), one is necessarily setting a price in excess of the market clearing price. (D. Hanson (Foremost Farms) Tr. 1637 line 28 - 1638 line 14). Put another way, in those months when the inclusion of barrels in the formula has lowered the regulated minimum Class III price, that is because the demand for barrel cheese did not support as high a price. (D. Hanson (Foremost Farms) Tr. 1635 line 24 - 1636 line 4). Eliminating barrel prices from the Class III price calculation will put barrel cheddar manufacturers' margins under increased pressure when block prices exceed barrel prices as Class III milk prices, based solely on blocks, would be higher than they are now. (Hearing Exh. 249 (Dairy_Inst_of_CA Exh. 1), at p. 5, testimony of W. Schiek (Dairy Institute of California)).

Under the current regulation, in a hypothetical (but not unrealistic) situation in which the 500-pound barrel cheese price is $1.97 per pound (and adjusted upward by $0.03 to $2.00 per pound), the 40-pound block price is $2.10 per pound, barrels and blocks each make up 50% of the NPDES survey, and the cost of making cheese is assumed to be $0.20 (a simplified, low assumption based on the current make allowance), the weighted average cheese price is $2.05 per pound, the minimum Class III milk price is $1.85 ($2.05 minus $0.20), and the barrel cheese manufacturer only has $0.12 left over to pay its $0.20 cost of manufacture. That is bad enough, but under Proposal 3, the cheese price would be the $2.10 block price, the minimum Class III milk price would be $1.90 ($2.10 minus $0.20), and the barrel cheese manufacturer would only have $0.07 left over to pay its $0.20 cents cost of manufacture. (C. Edmiston (Land O'Lakes) Tr. 1951 line 2 - 1955 line 20).

Given that Proposal 3 perforce does nothing to increase the market value of barrel cheese, this is the inevitable effect of the proposal at any time the value of barrel cheese is less than the value of block cheese: the barrel cheese manufacturer cannot cover its costs of manufacture.

For the dairy industry to function, manufacturers must receive relevant compensation for the value they create in converting milk to dairy products. The business model must cover the costs of inputs, processing, maintenance of existing plants, and, as needed, investment in new plants. Only milk priced at market-clearing levels will drive adequate investment in dairy processing assets. Regulations should not be adopted that would run into the ground manufacturers that have invested in balancing assets that benefit the overall industry. (Hearing Exh. 133 (IDFA Exh. 34), at p. 3, testimony of A. Krebs (Leprino Foods)).

The barrel price is currently set by reference to the CME spot market 500-pound barrel price, and under the scenario just described, 500-pound barrels cannot perform a market clearing function because the price of Class III milk is too high to support production. NMPF witnesses appear to suggest that if 500-pound barrels were no longer part of the pricing formula, processors would price 500-pound barrel cheese off of the price of 40-pound blocks. (P. Bauer (Ellsworth) Tr. 1850 line 17 – 1851 line 4).

First, neither IDFA nor the many members with whom IDFA has discussed this issue see any indication that the CME would cease trading 500-pound barrels simply because they were no longer included in the milk order pricing formulas. (Hearing Exh. 127 (IDFA Exh. 30) at p. 5, testimony of M. Brown (IDFA)). The CME is a private entity that operates beyond the scope of the Federal Order System. Hearing Exh. 133 (IDFA Exh. 34), at p. 4, testimony of A. Krebs (Leprino Foods).

As Dr, Bozic elucidated:

> Some proponents of the elimination of barrel cheese from the protein formula may believe that such regulatory change would lead to barrel cheese being priced off block cheese, but I find such expectations not well reasoned. Even if NDPSR stops reporting barrel cheese prices and volumes, the CME Group spot barrel market will continue. Even if CME Group were to decide to discontinue the spot barrel market, which I hold to be highly unlikely, it would likely be a matter of weeks before another exchange would re-establish such a market. For example, NUI Markets - a digital trading platform company - has recently established presence in the U.S. market and a growing number of cheese manufacturers use their solutions for selling dairy products."

(Hearing Exh. 134 (Edge Exh. 4) at p. 2, testimony of M. Bozic (Edge)). In short, if barrels were eliminated from the pricing formula, they would nonetheless continue to be traded off of the CME spot barrel price. (M. Brown (IDFA) Tr. 1990 line 12 - 1991 line 2). CME could not be expected to do away with the CME block cheese absent industry consensus, which would be very unlikely to occur. ((M. Brown (IDFA) Tr. 1990 line 4 - 1991 line 22).

AMPI, the largest cheese producing farmer cooperative in the United States, similarly believes that removing barrels from the NDPSR cheese price by no means guarantees the CME will remove the barrel cheddar spot market from its daily market offerings. The CME makes changes to its market offerings based on market demand, and there is no reason to expect barrel manufacturers and buyers will agree to shift their pricing to the block market. Barrel buyers will want to be assured their costs are aligned with the commodity market for barrel cheese. (Hearing Exh. 147 (IDFA Exh. 36) at pp. 1-2, testimony of S. Schlangen (AMPI)).

Using the barrel cash market as a pricing reference point provides that assurance. (Hearing Exh. 147 (IDFA Exh. 36) at pp. 1-2, testimony of S. Schlangen (AMPI)). Proposal 3 would create even more price disparity between the Cheddar Barrel CME market price and Class III pricing. They would be completely disconnected. This would create even greater margin volatility for 500-pound cheddar barrel manufacturers. (Hearing Exh. 202 (IDFA Exh. 27) at p. 2, testimony of T. Brockman (Saputo)). Barrels produced in the US are almost always sold based on the CME spot barrel price, while Proposal 3 would essentially disconnect Class III milk pricing from the CME barrel. The resulting disconnect between revenue and the Class III milk price could drastically increase margin volatility and ability to compete for milk - even for barrel manufactures outside FMMOs. (Hearing Exh. 196 (IDFA Exh. 22) at p. 9, testimony of J. DeJong (Glanbia)).

For example, Glanbia’s barrel plant in Gooding, Idaho, which is outside the FMMO system, frequently uses a basis to Class III to buy/sell milk for plant balancing purposes, while most milk handlers and dairy farmers also use Class III as a competitive benchmark in Idaho. The removal of barrels from the protein price would essentially put barrel manufactures and their milk suppliers on an island and disconnected from the Class III price surface. This would be a major strategic risk for Glanbia's Idaho business, which produces a lot of barrel cheese. (Hearing Exh. 196 (IDFA Exh. 22) at p. 9, testimony of J. DeJong (Glanbia)).

Second, even if the CME were to disappear, that would have no impact on the fundamental problem: that market conditions for barrel cheese simply do not support in all months a Class III milk price based solely upon block cheese. Dairy cooperative AMPI explained that the primary reason to continue including blocks and barrels in the NDPSR cheese price is that both have comprised the total supply and demand picture for cheddar cheese. They are traded commodities at CME cash markets, and thus have an openly traded market to determine value. Combined, they provide a picture of the commodity cheddar market. AMPI is a major manufacturer of both block and barrel cheddar and believes a combination of the two provides the best indicator of overall market conditions. (Hearing Exh. 147 (IDFA Exh. 36) at pp. 1-2, testimony of S. Schlangen (AMPI)).

NMPF's related argument, that most cheese is priced off of blocks rather than barrels, is similarly misplaced. First, even the NMPF witnesses are not consistent with their estimates of the percentage of cheese that it priced off of blocks, ranging from 75% to 90%. (Hearing Ex. 117 (NMPF Exh. 7) at p. 8, testimony of D. Hansen (Foremost Farms)). NMPF lacks access to the actual private contracts for sale of cheese and what was used to price them, especially given that not all sellers are NMPF members. (Vitaliano (NMPF) Tr. 1599-line 9-1600 line 3). Some NMPF witnesses provided percentage figures in their written testimony, but admitted during examination that they had no personal knowledge regarding the subject. (E. Reynolds (DFA) Tr. 2147 line 22 - 2158 line 13).

The record evidence establishes that a growing portion of the cheese market is not priced on either the block or barrel market. More and more small cheese manufacturers are turning to the reported NDPSR cheese price as their base for its simplicity in hedging. Others are using the Class III milk price for a cheese value base because it eliminates whey price volatility in the Class III price for plants with limited opportunities for return on their liquid whey. (Hearing Exh. 127 (IDFA Exh. 30) at p. 6, testimony of M. Brown (IDFA)). NMPF witnesses also admitted that when companies making processed cheese use something other than 500-pound barrels, that sometimes use the barrel price to set what they will pay for the other cheese. (P. Bauer (Ellsworth) Tr. 1815 lines 7- 25). One billion pounds of cheese other than 500-pound barrels goes into processed cheese. (P. Bauer (Ellsworth) Tr. 1816 lines 21-24).

In addition, some exporters are using the barrel price for setting export values in very competitive markets where the block price simply is not competitive. Using the barrel price for these products moves the milk solids overseas, and away from the CME in either block or barrel form. (Hearing Exh. 127 (IDFA Exh. 30) at pp. 6-7, testimony of M. Brown (IDFA)). Furthermore, some Swiss cheese is priced off of the Class III price rather than the barrel or block price. (P. Bauer (Ellsworth) Tr. 1817 lines 1-10).

Thus, there is no clear evidence of any specific percentage of cheese being priced off of barrels rather than blocks. But this dispute in any event simply misses the point. Regardless of whether barrels were to be priced “off of” blocks, the actual price will be the price the market will bear. And that will not change.

That is especially true given the more than 50 billion pounds of unpooled milk used to make cheese, whose pricing often does not reflect FMMO. Given the competitive forces emanating from these other barrel cheese makers, there is no basis to believe that eliminating the barrel cheese from the Class III pricing formula would cause barrel cheese prices to rise. (M. Brown (IDFA) Tr. 1991 line 23 - 1993 line 11; 2019 line 15 - 2020 line 24). Rather, that action would simply put federally regulated barrel cheese handlers at a substantial competitive disadvantage if they had to pay more for milk due to the elimination of barrel cheese from the formula, a burden unregulated barrel cheese manufacturers would not face. (M. Brown (IDFA) Tr. 2040 line 26 - 2042 line 2).

Dairy cooperative AMPI, in its opposition to Proposal 3, similarly noted that it competes for sales with barrel manufacturers operating both inside and outside the FMMOs. Unregulated manufacturers must still compete with other manufacturers for milk in their local markets, but their profitability will be directly impacted by regulated minimum prices, — just market competition for milk. (Hearing Exh. 147 (IDFA Exh. 36) at pp. 1-2, testimony of S. Schlangen (IDFA)).

NMPF admitted that it had not performed any analysis of the effect on barrel manufacturers if the minimum milk price they must pay is not based upon the price at which they are able to sell barrel cheese but rather the price at which block cheese is being sold. (E. Reynolds (DFA) Tr. 2157 lines 13-17). Leprino, the country's largest mozzarella cheese manufacturer, explained that while one could theoretically price barrel cheese off of the block market, the supply and demand factors that drive barrel production and pricing are different than those same factors driving block cheese, and you may end up with some barrel manufacturers going out of business because of the increased elevation of the class price, or they could be shifting in redeploying their milk over to the block market, which would add to the volatility of the block market as far as a market-clearing mechanism for the industry, and depress the block prices. (S. Taylor (Leprino) Tr. 2206 lines 8 - 22).

In short, on its face, eliminating barrels from consideration in the milk pricing system would likely, based on most recent trends, put barrel producers at a loss. (S. Taylor (Leprino) Tr. 2218 line 22 - 2219 line 3). If Proposal 3 were adopted, the result would be a combination of some barrel makers going out of business, and some barrel makers redeploying assets over to block contributing to decreases in block prices and increased volatility as block increasingly became more of a balancer than it currently is. (S. Taylor (Leprino) Tr. 2219 lines 4 - 14).

Thus, for as long as a wider spread to block price remains, barrel makers will be at a disadvantage in the marketplace as their milk cost will be higher relative to the price they receive for their product. Removal of cheddar barrels from the formulas would both shrink the survey volume and would likely result in greater production of cheddar blocks as an outlet to clear the market. This would likely add volatility to the block market, adding unnecessary stress to the US marketplace and making US cheese a less-attractive option for global buyers. (Hearing Exh. 133 (IDFA Exh. 34), at p. 4, testimony of A. Krebs (Leprino)).

F. The Edge "Proposal" Is Unworkable.

Edge's "proposal" (which was not presented to USDA as a formal proposal but as a proposed "modification" to Proposal 3) would continue to use the NDPSR surveyed block and barrel products to establish the "step one" cheese price, but instead of weighting the two prices by their relative weight in the survey, as is now done, would weigh them based upon the relative total pounds of barrels and blocks produced during the prior year. (Hearing Exh. 134 (Edge Exh. 4), testimony of M. Bozic (Edge)). Under the example provided in the Edge exhibit, this would result in an 80-20 weighting between the block and barrel prices.

The Edge proposal still ignores the fundamental market clearing, minimum pricing principles discussed in the preceding section of this brief. The Class III milk price would predominantly (80%) be set by the block price, which would continue to establish a Class III minimum price well in excess of that which will (at those times when barrel prices are materially lower than block prices) allow barrel manufacturers to recover their costs and play their essential market clearing role. Recall, again, that approximately 1.2 billion pounds of 500-barrel cheese are produced each year. USDA should not adopt a pricing formula that so jeopardizes this important outlet for farmer milk.

Indeed, given that barrels tend by their nature to be the market clearing product rather than blocks, one could make a very coherent argument why if one were going to eliminate one of the two cheddar cheeses from the FMMO cheese price formula, it would be blocks that should be eliminated, not barrels. (S. Taylor (Leprino) Tr. 2209 line 16 - 2210 line 25). This observation does not constitute advocacy for that result, but an illustration of the shortcomings of the Edge proposal.

NMPF itself opposes the Edge proposal, contending that it "would tend to blend out the barrel price problem which would makes it worse for producers who ship to barrel plants," "further concentrates barrels and provides a wider gap on what can be paid to producers who own and operate barrel cheese plants," and "will lead to further disorderly marketing of milk in FMMOs." (Hearing Exh. 119 (NMPF Exh. 8 at pp. 5-8, testimony of P. Bauer (Ellsworth)).

For all these reasons, USDA should reject Proposal 3, including the Edge variation thereof.

III. USDA SHOULD REJECT PROPOSAL 4, WHICH WOULD ADD 640-POUND BLOCKS TO THE CLASS III PROTEIN FORMULA.

Proposal 4 would change the first step in the process by which USDA sets the minimum price for milk used to make Class III and IV products, by adding a new product, 640-pound blocks, to the manufactured dairy products whose prices are included in the price surveys. IDFA urges USDA to reject Proposal 4.

PROPOSED CONCLUSIONS REGARDING PROPOSAL 4

Based upon the Proposed Findings that follow, IDFA's Proposed Conclusions Regarding Proposal 4 are:

a. USDA previously concluded that 640-pound blocks should not be included in the pricing formula. Nothing has changed that would challenge the correctness of that decision.

b. 640-pound blocks are not needed to ensure a sufficiently robust survey of cheese prices.

c. 640-pound blocks require specialized packaging equipment, and are usually produced to order, not to balance any market. They are generally not exported due to handling issues. They do not add to price discovery as they are priced off of 40-pound blocks.

d. 640-pound blocks are not publicly traded on any exchange, which further limits their use for FMMO price discovery and setting.

f. Proposal 4 should not be adopted.

PROPOSED FINDINDS REGARDING PROPOSAL 4

A. USDA Has Consistently Rejected Proposals To Include 640-Pound Blocks In The Pricing Formula.

As noted in the discussion of Proposal 3, Class III products consist principally of cream cheese and other spreadable cheeses, and hard cheese of types that may be shredded, grated, or crumbled. 7 C.F.R. 1000.40(c). In order to set the protein price component of the price of milk used to make Class III products, the orders since 2000 have in step one relied upon the weighted average of the U.S. average price for 40-lb. block cheddar cheese and the U.S. average price for 500-pound barrel cheddar cheese (38 percent moisture). These prices are obtained through a survey of prices paid for these two products.

Whether 640-pound blocks should also be included in the survey used to set minimum milk prices is a question USDA has previously addressed and resolved. When USDA in 2000 held hearings in response to a Congressional mandate to reconsider the Class III and Class IV pricing formulas included in the 1999 final rule for the consolidation and reform of Federal milk orders, a proposal was advanced to include 640-pound blocks in the survey. USDA, Milk in the Northeast and Other Marketing Areas; Tentative Decision on Proposed Amendments and Opportunity To File Written Exceptions to Tentative Marketing Agreements and to Orders. 65 FR 76832, 76845 (Dec. 7, 2000). USDA agreed with the opponents' position that "the vast majority of 640's are made on a custom basis to customers' specifications, and therefore are not sufficiently uniform to have a standard identity." Id. And, "[w]ithout a standard identity for the product, standardized pricing cannot be developed." Id. Furthermore, 640-pound blocks were not traded on the exchange. Id.; See also Hearing Exh. 130 (IDFA Exh. 31) at p. 3, testimony of M. Brown (IDFA)).

Nothing has happened to call into question the correctness of USDA's decision.

B. The Current Survey Captures A Volume Of Cheese More Than Adequate To Discover The Price.

The NPDES surveys covering 500-pound barrels and 40-pound blocks encompass very substantial sales volumes. The price surveys encompassed well over 1.34 billion pounds of sales in 2022, divided almost evenly between 40-pound blocks and 500-pound barrels. Hearing Exh. 130 (IDFA Exh. 31) at p. 4, testimony of M. Brown (IDFA)). The NPDSR 500-pound barrel and 40-pound block surveys together capture 34% of all cheddar cheese production, a very robust survey. (Hearing Exh. 117 (NMPF Exh. 7) at p. 5, Table 2 (testimony of D. Hanson (Foremost Farms); D. Hanson (Foremost Farms) Tr. 1629 line 24 - 1630 line 4). This robust data set is more than sufficient to determine prices in the market. 640-pound blocks are not needed to fill any information gap. Hearing Exh. 130 (IDFA Exh. 31) at p. 4, testimony of M. Brown (IDFA)).

C. 640-Pound Blocks Lack Any Distinct Function And Are Priced Off Of 40-Pound Blocks.

As discussed in connection with Proposal 3, 500-pound barrels merit inclusion in the FMMO formulas in part because they are utilized to make different end products than those made from are 40-pounds blocks. By contrast, 640-pound blocks serve the same ultimate end use as 40-pound blocks. (M. Brown (IDFA) Tr. 2120 line 28 - 2122 line 6). Accordingly, 640-pound blocks do not need to be included in the FMMO formulas in order to ensure that the formulas capture the breadth of the cheddar cheese market.

In addition, 640-pound blocks typically trade off the price of 40-pounds blocks, which are already included in the NPDES survey. The inclusion of 640-pound blocks would therefore bring little if any additional information to bear. (Hearing Exh. 130 (IDFA Exh. 31) at p. 4, testimony of M. Brown (IDFA)); (Hearing Exh. 259 (WCMA Exh. 4) at p. 1, testimony of J. Umhoefer (WCMA)). Instead, because 640-pound cheddar blocks are virtually always priced off a basis to the CME block cheddar price, any NDPSR 640-pound cheddar survey would be expected to track virtually perfectly with the current NDPSR 40-pound block cheddar price. (Hearing Exh. 196 (IDFA Exh. 22) at p. 10, testimony of J. DeJong (Glanbia Nutrition)).

Nor do 640-pound blocks provide useful information as to the price paid for cheese serving a balancing function. The balancing that occurs within the 640-pound block market is through the cutting down of 640-pound blocks into 40-pound blocks. Therefore, the balancing amongst 640-pound block manufacturers is already manifested in the 40-pound block cheddar market that is already embedded in the formula. (Hearing Exh. 133 (IDFA Exh. 34) at pp. 4-5, testimony of A. Krebs (Leprino)).

D. 640-Pound Blocks Have Attributes That Make Their Pricing Less Suitable For Use In The FMMO Formulas.

The competitive market for 640-pound blocks makes then less suitable for setting minimum milk prices attendant to all cheeses. Only certain facilities are set up to purchase and handle 640-pound blocks, resulting in a much thinner market. (Hearing Exh. 130 (IDFA Exh. 31) at pp. 3-4, testimony of M. Brown (IDFA)). The lack of equipment amongst buyers to handle 640-pound blocks limits sales to a narrow group of buyers. (Hearing Exh. 133 (IDFA Exh. 34) at pp. 4-5, testimony of A. Krebs (Leprino)). In addition, 640-pound blocks are not suitable for export because few potential buyers are set up to handle them. (M. Brown (IDFA) Tr. 2016 line 27 - 2018 line 1).

E. 640-Pound Blocks Are Not Traded On A Public Market.

40-pound blocks and 500-pound barrels are both traded on the Chicago Mercantile Exchange (CME), while 640-pound blocks are not, as proponent AFBF acknowledges. (R. Cryan (AFBF) Tr. 2081 line 14 - 2082 line 2). This distinguishes 640-pound blocks from all five products currently used to set FMMO minimum prices, for which CME currently operated both a spot market and a futures market (40-pound cheddar cheese blocks, 500-pound cheddar cheese barrels, nonfat dry milk, butter, and dry whey). (Hearing Exh. 78 (CME Exh. 1) at p. 2, testimony of A. Krema (CME)); R. Cryan (AFBF) Tr. 2083 lines 5-10); Hearing Exh. 139 (NMPF Exh. 100) at p. 1, testimony of R. Vandenheuvel (California Dairies, Inc. ("CDI")) ("While access to an available spot market at the CME is not a legal requirement, it is worth noting that such access is available across all the other current products that are used to set minimum milk prices under the FMMO.")

This absence of a public market makes the market for 640-pound blocks less robust, and less suited for determining actual market values for cheese. (Hearing Exh. 130 (IDFA Exh. 31) at p. 4, testimony of M. Brown (IDFA)). In fact, 640-pound blocks are typically sold pursuant to long term contracts a year in length, sometimes at a fixed price and sometimes based on a formula off of the CME 40-pound block market. (M. Brown (IDFA) Tr. 2115 line 23 - 2116 line 9).

Nor would the hypothetical creation of a CME 640-pound cash market cash market represent a positive development. The problem with a 640-pound CME block market is the smaller pool of buyers and sellers versus the more liquid 40-pound block market on the CME. A small number of buyers and sellers could more easily sway a CME 640-pound block market in ways that are not helpful to the larger industry or dairy producers linked to Class III. (Hearing Exh. 196 (IDFA Exh. 22) at p. 10, testimony of J. DeJong (Glanbia)). WCMA members similarly expressed concern that such a 640-pound cash market would be thinly traded with very few buyers and sellers. (Hearing Exh. 259 (WCMA Exh. 4) at p. 1, testimony of J. Umhoefer (WCMA)).

F. 640-Pound Blocks Lack A Standard Of Identity.

As was the case when USDA previously addressed this issue in 2000, there is no standard of identity for 640-pound blocks that is consistently followed by manufacturers. 640-pound blocks are more of a made to order product. For example, Kroger regularly purchases 640-pound blocks, which were made to order to fit Kroger's specific needs and specifications. (M. Brown (IDFA) Tr. 2106 line 27 - 2107 line 10). This could include specific specifications as to color, or specific cultures, or moisture. (M. Brown (IDFA) Tr. 2113 line 21 - 2115 line 8).

While there are likely some 640-pound blocks that meet a standard specification, they are not like 40-pound blocks, where are routinely made to a standard specification, given that there are multiple buyers for 40-pound blocks and a cheese manufacturer wants to be able to sell its output to any of them. (M. Brown (IDFA) Tr. 2106 line 27 - 2107 line 10, 2115 lines 14 - 22, 2119 lines 7 - 14). Thus, just as in 2000, the absence of routine, consistent uniformity in 640-pound block specifications make it very challenging as a practical matter to determine a reliable uniform price for 640-pound blocks. (Hearing Exh. 130 (IDFA Exh. 31) at p. 4, testimony of M. Brown (IDFA)).

For all these reasons, Proposal 4 should not be adopted.

IV. USDA SHOULD REJECT PROPOSAL 5, WHICH WOULD ADD UNSALTED BUTER TO THE BUTTERFAT AND PROTEIN PRICE FORMULAS.

As previously noted, step one in the formulas by which USDA sets minimum price for milk used to make Class III and IV products starts with a survey of the price paid for specified manufactured dairy products. Proposal 5 would change that step in the process, by adding unsalted butter to the products whose prices are included in the price surveys. IDFA urges USDA to reject Proposal 5.

PROPOSED CONCLUSIONS REGARDING PROPOSAL 5

Based upon the Proposed Findings that follow, IDFA's Proposed Conclusions Regarding Proposal 5 are:

a. USDA currently relies upon a robust survey of AA salted butter containing 80% butterfat, which is the industry standard, meets the US Standard of Identity and is traded on the CME.

b. Unsalted butter lacks these attributes, as it is not the industry standard, but a made to order product, which is not traded on the CME, and thereby lacks a robust framework for determining market values.

c. Unsalted butter does not bring to bear additional pricing information, given that it is typically priced off of AA 80 percent salted butter.

d. Unsalted butter would be largely if not entirely excluded from the NDPSR survey under any circumstance, given that it often has a butterfat content in excess of NDPSR limits, and is often subject to supported sales, which also excludes it from the NDPSR survey. Very littler butter would be added to the survey were unsalted butter otherwise to qualify.

e. The hearing record lacks evidence as to the make allowance that would apply to unsalted butter, given that the cost of manufacture for salted butter is clearly different than salted butter, and no effort was made by proponents to calculate a cost of manufacture for unsalted butter.

f. There was no hearing evidence suggesting that the inclusion of unsalted butter would affect FMMO regulated minimum prices, and hence no obvious reason why USDA should pursue is inclusion.

g. Proposal 5 should not be adopted.

PROPOSED FINDINGS REGARDING PROPOSAL 5

A. USDA Currently Relies Upon A Robust Survey Of Aa 80 Percent Salted Butter, Which Is The Industry Standard And Traded On The CME.

In order to set the butterfat price component of the price of milk used to make Class I, II, III and IV products, the orders since 2000 have in step one relied upon the U.S. average price for AA butter. 7 C.F.R. 1000.50(l). This price is obtained through the NDPSR survey. To be included, the butter must meet certain criteria, including being 80 percent butterfat, salted, fresh or storage; meeting USDA Grade AA standards; and being packaged in 25-kilogram and 68-pound box sales. 7 C.F.R. 1170.8(b). Unsalted and Grade A butter are specifically excluded, as are several other categories of butter. 7 C.F.R. 1170.8(b)(4). (Hearing Exh. 131 (IDFA Exh. 32) at pp. 2-3, testimony of M. Brown (IDFA)).

NDPSR surveyed sales of Grade AA butter are quite substantial, over 194 million pounds in 2022. USDA Datamart, Location: Products\Dairy\All Dairy\(DY_WK100) National Dairy Products Prices - Weekly, available at https://mpr.datamart.ams.usda.gov/. Thus, a very robust quantity of butter sales is relied upon for purposes of determining the market butter price. (Hearing Exh. 131 (IDFA Exh. 32) at p. 3, testimony of M. Brown (IDFA)).

Grade AA butter is traded on the Chicago Mercantile Exchange (CME). Thus, by basing the butterfat price on the price of Grade AA salted butter, USDA is relying upon a heavy volume of trade data, of a commodity that is subject to uniform specifications, publicly traded, and for which price surveys are already conducted. (Hearing Exh. 131 (IDFA Exh. 32) at p. 3, testimony of M. Brown (IDFA)).

The reported price, whether from the CME or the NDPSR, of salted bulk butter with 80 percent butterfat has been and continues to be an industry-wide price index used in the sales and marketing of the vast majority of butter sold in the U.S. That includes different cuts - such as retail or food service - and different varieties - such as salted, unsalted or cultured. The reported price of salted bulk butter is also the basis of a majority of the cream sales in the U.S., as a majority of cream is sold on the basis of a multiple applied against either a recent CME or NDPSR butter price. (Hearing Exh. 139 (NMPF Exh. 100) at p. 2, testimony of R. Vandenheuvel (CDI)).

B. None Of The Foregoing Attributes Of Salted Butter Apply To Unsalted Butter.

None of the foregoing attributes apply to unsalted butter. Unsalted butter is not traded on the CME. (R. Cryan (AFBF) Tr. 2085 lines 17-22). There is no uniform specification for unsalted butter. Without a uniform specification, it is difficult to derive a uniform price usable for purposes of a federal order pricing formula. (Hearing Exh. 131 (IDFA Exh. 32) at p. 3, testimony of M. Brown (IDFA)); M. Brown (IDFA) Tr. 2126 line 5 - 2128 line 4).

Furthermore, as proponent AFBF admitted, unsalted butter does not store as well as salted butter. (R. Cryan (AFBF) Tr. 2085 lines 23-25). As a result, unsalted butter is much more likely to be made to order, according to the requirements of a specific buyer, and thus even less capable of providing useful uniform price information. (Hearing Exh. 131 (IDFA Exh. 32) at p. 3, testimony of M. Brown (IDFA)).

As the NMPF witness explained in its opposition to Proposal 5, a product used to set minimum milk prices needs a widely available market outlet that allow the product to clear the market. (Hearing Exh. 139 (NMPF Exh. 100) at p. 2, testimony of R. Vandenheuvel (CDI)). In that regard, there is simply no comparison between salted and unsalted bulk butter.

For example, CDI has four butter plants and manufactures both varieties of bulk butter. It produces unsalted bulk butter exclusively for order, while it produces salted bulk butter with any cream it is unable to produce and sell as a retail, food service, or unsalted bulk item. The reason for that is simple: when CDI needs to turn a product into cash and sell it into the marketplace, there is an active market for salted bulk butter, either on or off the CME, as it is still the prominent industrial-use butter in the U.S. (Hearing Exh. 139 (NMPF Exh. 100) at p. 2, testimony of R. Vandenheuvel (CDI)); R. Vandenheuvel (CDI) Tr. 2376 lines 21-27). Salted butter is thus used to clear the market of cream for which CDI does not have another home. By contrast, unsalted butter is made to order and is not a market clearing product. (R. Vandenheuvel (CDI) Tr. 2387 line 14 - 2388 line 3).

C. Unsalted Butter Does Not Bring To Bear Additional Pricing Information.

In addition, unsalted butter tends to be priced off the CME Grade AA salted butter price, and therefore does not bring to bear any new pricing information. (Hearing Exh. 131 (IDFA Exh. 32) at p. 3, testimony of M. Brown (IDFA)); M. Brown (IDFA) Tr. 2130 line 23 - 2131 line 1).

D. Unsalted Butter Would Be Largely If Not Entirely Excluded From The NDPSR Survey Anyway Due To Its Higher Butterfat Content And Supported Sales.

There is an additional reason why the inclusion of unsalted butter in the surveys is unwarranted. Little if any of it would qualify for inclusion in the NDPSR survey, and thus could not be used to set FMMO prices.

Proposal 5 proponents admit that a significant share of unsalted butter is made for the export market. (R. Cryan (AFBF) Tr. 2087 lines 3 -7). For example, the vast majority of the bulk unsalted butter made by CDI is exported. (R. Vandenheuvel (CDI) Tr. 2381 line 27- 2382 line 8).

The U.S. standard for Grade AA butter is 80% butterfat, which is the butterfat level required for a product to be included in the NDPSR survey. (R. Cryan (AFBF) Tr. 2087 lines 15 -18); 7 C.F.R. Section 1170.8(b)(1). AFBF is not urging that this 80% standard be changed. (R. Cryan (AFBF) Tr. 2097 line 22- 2098 line 8). But butter made for export is 82% butterfat, because that is the level necessary to meet CODEX standards. (R. Vandenheuvel (CDI) Tr. 2381 lines 8-17).

Given its higher than 80% butterfat content, export butter would not be part of the NPDSR survey even if unsalted butter were to be added to the survey. (R. Cryan (AFBF) Tr. 2088 line 11-2089 line 15). Some of the export butter also contains cultured products, which would also be disqualifying for inclusion in the NPDSR survey. (R. Vandenheuvel (CDI) Tr. 2381 lines 19-26).

Thus, while the AFBF written testimony points to the increase in butter exports from 2000 metric tons in 200 to 65,000 tons in 2022 as justification for Proposal 5, in fact, most if not all of that export growth would be excluded from the survey (were unsalted butter to be added to it) because it is 82% butterfat. (R. Cryan (AFBF) Tr. 2096 line 24- 2097 line 21).

NPDSR also excludes all butter packaged in retail packages. AFBF did not know how many pounds of unsalted butter would be left over for inclusion in the survey once that was excluded. Nor did AFBF know what poundage of butter would be included in the survey under Proposal 5 once all the exclusions were made. (R. Cryan (AFBF) Tr. 2098 line 9- 2099 line 11).

Furthermore, even leaving aside the 82% butterfat issue, substantial quantities of unsalted butter are exported through government or private assisted sales such as the Dairy Export Incentive Program or Cooperatives Working Together. (R. Cryan (AFBF) Tr. 2085 line 28 - 2086 line 7; (Hearing Exh. 131 (IDFA Exh. 32) at p. 3, testimony of M. Brown (IDFA)). These sales are explicitly excluded from NDPSR, for the very reason that they are not reflective of actual competitive pricing for butter. 7 C.F.R. 1170.8(b)(4). This treatment provides further proof that unsalted butter should not be relied upon for determining the market price of butter, for milk order product pricing purposes. (Hearing Exh. 131 (IDFA Exh. 32) at pp. 3-4, testimony of M. Brown (IDFA)).

NMPF estimates that "very limited" volumes of butter would be added to the survey were unsalted butter added, given all of the exclusions that would apply. (R. Vandenheuvel (CDI) Tr. 2382 lines 9-15).

E. The Hearing Record Lacks Evidence As To The Make Allowance That Would Apply To Unsalted Butter.

There is also no hearing evidence that would support using the current make allowance for butter, which is based upon the cost of manufacturing Grade AA butter, to translate the market price for unsalted butter to a minimum butterfat milk price. While proponent AFBF hypothesized that the primary cost difference in making salted and unsalted butter is the price of the salt, this was only a “best guess,” because AFBF did not have any actual cost data regarding the cost of making one versus the other, instead stating that this would be “another excellent subject of a mandatory and audited survey of processing costs and yields.” (R. Cryan (AFBF) Tr. 2086 lines 18 -23; 2090 lines 22-27; 2102 lines 10-24).

In fact, the difference in cost of manufacture goes beyond the cost of the salt, as the proponents ultimately admitted. In order to make butter that meets the 92% butterfat world standard, a manufacturer must run its plant at a slower level. (R. Cryan (AFBF) Tr. 2088 line 11-2089 line 15). This would make the Grade AA salted butter cost of manufacture surveys currently used to set the butter make allowance unsuitable for determining the proper make allowance for unsalted butter.

F. There Was No Hearing Evidence Suggesting That The Inclusion Of Unsalted Butter Would Affect FMMO Regulated Minimum Prices.

Last but certainly not least, AFBF is not proposing the inclusion of unsalted butter because it believes the current focus on salted butter results in a FMMO regulated minimum price that is lower than it would otherwise be. (R. Cryan (AFBF) Tr. 2093 line 27- 2094 line 13). Thus, the inclusion of unsalted butter truly constitutes a solution in search of a problem.

USDA should not attempt to take on and solve the myriad problems that the inclusion of unsalted butter would present. Proposal 5 should not be adopted.

V. USDA SHOULD REJECT PROPOSAL 6, WHICH WOULD ADD MOZZARELLA CHEESE TO THE PROTEIN PRICE FORMULAS.

Proposals 6 would add mozzarella cheese to the product surveys used to establish minimum Class III prices. IDFA urges USDA to reject Proposal 6. Based upon the Proposed Findings that follow, IDFA’s Proposed Conclusions Regarding Proposal 6 are as follows:

PROPOSED CONCLUSIONS REGARDING PROPOSAL 6

a. USDA has consistently rejected the inclusion of cheeses other than cheddar, and specifically mozzarella, in the price surveys used to establish the protein value used to set minimum Class III prices.

b. There are no obvious criteria for the identification of a benchmark mozzarella product, and the proponents do not offer any.

c. The methods and costs of manufacture of mozzarella are very different from cheddar cheese, and the hearing record contains no information that would allow USDA to determine an appropriate make allowance for mozzarella, even if a benchmark mozzarella product could be identified.

d. Proposal 6 does not address how to deal with differences in butterfat levels between cheddar and mozzarella, which would significantly affect the minimum prices that would be established were mozzarella to be included in the FMMO pricing formula.

e. USDA has consistently emphasized that FMMO minimum prices must be market clearing prices. But cheddar is the cheese more often produced to clear the market of surplus milk, given that cheddar is readily storable for extended periods; the processor can make bulk cheddar products using surplus milk with reasonable confidence that it will be able to find a buyer while the cheese is still saleable; standard cheddar cheese can be sold to a variety of companies that will use bulk cheese making a variety of food products; and it can always be sold on the CME. By contrast, most mozzarella is stored in refrigerated form and by comparison has a limited shelf life; once produced mozzarella encounters fewer potential outlets; mozzarella is not generally sold in bulk form; mozzarella lacks uniformity in compositional specifications and yields; and mozzarella is not traded on the CME or directly hedgeable.

f. Proponents' price comparison that purports to identify material variance in the price of mozzarella versus cheddar cheese is deeply flawed. These are apples and oranges comparisons between bulk and individual products, sold at the point of manufacture versus the point of delivery, at wholesale versus retail prices.

g. Proposal 6 should not be adopted.

PROPOSED FINDINGS REGARDING PROPOSAL 6

A. USDA Has Consistently Rejected The Inclusion Of Cheeses Other Than Cheddar, And Specifically Mozzarella, In The Price Surveys Used To Establish The Protein Value Used To Set Minimum Class III Prices.

When USDA in 1999 utilized notice and comment rulemaking to carry out Congress' mandate to consolidate the existing federal orders and consider other order reforms, it noted that several "commenters argued that all varieties of cheese should be included in the NASS price survey to assure that all cheese value is captured." Milk in the New England and Other Marketing Areas; Decision on Proposed Amendments to Marketing Agreements and to Orders, 64 Fed. Reg. 16026, 16098 (Apr. 2, 1999). However, USDA concluded that it was unworkable to have a system that tried to contour minimum milk prices to reflect the unique compositions of each Class III product. USDA instead adopted a system that calculated a minimum price based on cheddar, which would "enable handlers to adjust prices paid to producers to account for additional value above the minimum Federal order prices." Id. at 16099.

In so doing, USDA emphasized that the minimum milk price being established for each commodity (cheese, butter and nonfat dry milk) needed to be the market clearing price for that commodity:

> This pricing plan [being adopted by USDA] will allow the market-clearing price level of each of these manufactured products to be achieved independent of the other products. As a result, dairy farmers will be paid a price which is more representative of the level at which the market values their milk in its different uses. **The**

> **importance of using minimum prices that are market-clearing for milk used to make cheese and butter/nonfat dry milk cannot be overstated. The prices for milk used in these products must reflect supply and demand and must not exceed a level that would require handlers to pay more for milk than needed to clear the market and make a profit.** Id. at 16095.

As USDA further explained when it later considered additional milk order amendments in 2000, the problems with included other types of cheeses in setting minimum prices are that: (a) the resulting product price would not be representative of the value of any particular product, and (b) the make allowance deducted from that product price in order to establish minimum Class III milk prices would not be reflective of the cost of processing that cheese, because the make allowance data relied upon to set minimum milk prices relates solely to cheddar cheese. As USDA explicated in rejecting the inclusion of cheeses other than cheddar:

> Several witnesses testified that types of cheeses other than cheddar should be included in the NASS price survey as a more comprehensive basis for identifying a cheese price, although such a proposal was not included in the hearing notice. The cheddar cheese included in the NASS survey meets certain standard criteria that makes prices for the reported cheese sales comparable. If the survey included other descriptions of cheddar and other types of cheese, such as mozzarella, it would not be possible to consider the reported price as representative of the value of any particular product. Further, the manufacturing costs surveyed are, to a great extent, limited to the costs of processing cheddar cheese.

Milk in the Northeast and Other Marketing Areas; Tentative Decision on Proposed Amendments and Opportunity To File Written Exceptions to Tentative Marketing Agreements and to Orders, 65 FR 76832, 76846 (Dec. 7, 2000).

All these USDA conclusions remain valid today, with respect to both the criteria for inclusion in the price survey, and the existence of costs of manufacture data only for cheddar.

B. There Are No Obvious Criteria For The Identification Of A Benchmark Mozzarella Product, And The Proponents Do Not Offer Any.

USDA has established very specific criteria for cheese to be included in the average price survey used to set minimum milk prices. For Class III, the survey covers (i) the National Dairy

Products Sales Report (NDPSR) of prices paid for 40-lb. block cheddar cheese; and (ii) the NDPSR for prices paid for 500-pound barrel cheddar cheese (38 percent moisture). 7 C.F.R. 1000.50(n). To be included in these Sales Reports, cheddar cheese must meet various criteria, including age (no less than 4 days or more than 30 days on the date of sale); color (within a specified color range for 40-pound blocks; white for 500-pound barrels); and moisture content (no more than 37.7% moisture for 500-pound barrels). 7 C.F.R. 1170.8(a).

No similar USDA Sales Report criteria exist for mozzarella cheese. Furthermore, the commercial mozzarella cheese market contains very wide variability in the relevant criteria. For example, FDA standard of identity regulations provide for four different variants of mozzarella cheese, with widely varying fat and moisture parameters, see 21 C.F.R. 133.155 (mozzarella, minimum 45% fat and 52 to 60% moisture); 21 C.F.R. 133.156 (low-moisture mozzarella, minimum 45% fat and 45 to 52% moisture); 21 C.F.R. 133.157 (part-skim mozzarella, 30 to 45% fat and 52 to 60% moisture); and 21 C.F.R. 133.158 (low-moisture part-skim mozzarella, 30 to 45% fat and 45 to 52% moisture). (Hearing Exh. 128 (IDFA Exh. 33) at p. 3, testimony of M. Brown (IDFA)).

Proposal 6 does not define the type of mozzarella to be surveyed or how the USDA should address the diversity of mozzarella cheese types. Proponents admitted that they had not identified any specific form of mozzarella they were advocating for inclusion in the FMMO pricing formulas. (L. McBride (California Dairy Campaign) Tr. 891 line 22 - 892 line 3).

In contrast with the dominance of a single Standard of Identity for cheddar and the uniformity of its production, the mozzarella category is a diverse category with the four distinct FDA Standards of Identity discussed above and a range of similar pasta filata products that are designed for a variety of food applications with wide ranging cook conditions and performance requirements. Performance in this range of conditions has been fine-tuned through years of research and development and the resulting cheese-make innovation. As a point of reference, given the diversity of product specifications, customizations, and other customer requirements, Leprino Foods produces nearly 400 separate pasta filata product codes. (Hearing Exh. 133 (IDFA Exh. 34) at p. 5, testimony of A. Krebs (Leprino Foods)).

Wisconsin Cheese Makers Association (WCMA) members similarly expressed concern that mozzarella cheese is produced in dozens, if not hundreds, of shapes, sizes, weights, moistures, fats, flavor profiles and functional profiles. There is no standard mozzarella cheese that could be surveyed by the government or created as a cash market for price discovery. The wide variety of forms and functionality of each unique "make" of mozzarella cannot be overstated. Individual manufacturers report producing multiple mozzarella types throughout the year based on each customers' unique needs. (Hearing Exh. 259 (WCMA Exh. 4) at p. 1, testimony of J. Umhoefer (WCMA)).

NMPF in opposing Proposal 6 similarly observed that "mozzarella cheese has numerous official composition requirements, according to the USDA Agricultural Marketing Service, creating a complex industry portfolio of Mozzarella products to be included in the federal survey. Mozzarella can be regular, low moisture, part skim, low moisture & part skim and Lite. There are also a wide range of specific customer formulations in between that can include, low salt or low browning, etc. A standardized process to convert all these forms of Mozzarella to a 40-pound block equivalent would be complex and cumbersome." (Hearing Exh. 140 (NMPF Exh. 95) at p. 2, testimony of D. Hanson (Foremost Farms)). This testimony came from a representative of Foremost Farms, a large dairy cooperative headquartered in Middleton, Wisconsin, whose 850 members produce 6.2 billion pounds of milk annually and are located in Wisconsin, Michigan, Iowa, Minnesota, Indiana, Ohio, and Illinois. Foremost is a large manufacturer of cheese, producing 500 million pounds annually, of which 350 million pounds is soft Italian styles of cheese, making Foremost one of the top manufacturers of soft Italian style of cheese in the US. (Hearing Exh. 140 (NMPF Exh. 95) at p. 1, testimony of D. Hanson (Foremost Farms)).

Unless one specification was identified as accurate to use in the protein formula, even more protein formulas would be needed to account for the different product compositions. In this case, USDA would need to survey a broad spectrum of the mozzarella price surface and weight many different protein formulas - that fluctuate with surveyed weightings - to get an accurate price. Chaos would ensue. (Hearing Exh. 196 (IDFA Exh. 22) at p. 10, testimony of J. DeJong (Glanbia)).

In addition to different compositions, there are a wide range of packaging sizes and forms for Mozzarella. These can range from 20-pound block, 6-pound block, long styles, Individual Quick Freeze (IQF), cheese sticks, cubes, unpackaged blocks in totes, and numerous other forms. All of these have different packaging cost profiles that are not easily converted back to a cheddar block equivalent. (Hearing Exh. 140 (NMPF Exh. 95) at p. 2, testimony of D. Hanson (Foremost Farms)); D. Hanson (Foremost Farms) Tr. 2399 lines 21-27).

For example, the low moisture part-skim mozzarella string cheese plants operated by Saputo (the country's second larges mozzarella manufacturer) are very different and have a much higher cost structures than its low moisture part-skim mozzarella loaf plants that service its foodservice and industrial customers. The multitude of mozzarella recipes, end-product analytical data, packaging formats and production processes all vary greatly based upon customer and consumer expectations. (Hearing Exh. 202 (IDFA Exh. 27) at p. 2, testimony of T. Brockman (Saputo)).

In what appears to be an attempt to address the lack of uniformity in the mozzarella category, the proponent calls for collection of moisture and fat content in the mozzarella price survey but does not clarify how that data is to be used. Adjusting mozzarella prices based upon these parameters is inconsistent with the commercial marketplace. The primary variation within cheddar barrels is the level of moisture in the cheddar. The value of barrels in processed cheese production is the solids content. The commercial marketplace recognizes that value equation by pricing barrel cheddar on a price-per-pound solid basis. This commercial marketplace practice is easily emulated by USDA by performing the same calculation to adjust the barrel price to a common moisture level (38%). (Hearing Exh. 133 (IDFA Exh. 34) at pp. 5-6 (testimony of A. Krebs (Leprino Foods)).

By contrast, the performance and functionality of mozzarella drives value within the mozzarella market. Mozzarella prices in the commercial marketplace are not mathematically adjusted based upon a price-per-pound solid basis. A moisture-based price adjustment similar to that applied to cheddar barrels is not appropriate. (Hearing Exh. 133 (IDFA Exh. 34) at pp. 5-6 (testimony of A. Krebs (Leprino Foods)).

Mozzarella has very different fat, solids-nonfat and moisture levels compared to a very standard cheddar cheese, which is the current foundation of the Class III protein formula. To integrate mozzarella into the protein price would require a separate and unique protein formula. Depending on the weightings of cheddar versus mozzarella in a new NDPSR price survey, the protein formula would be constantly changing. (Hearing Exh. 196 (IDFA Exh. 22) at pp. 10-11, testimony of J. DeJong (Glanbia)).

The only price information presented by proponents listed the minimum and maximum price reported in a given month, which showed a very wide range, from for example a minimum price of $1.546 per pound to a maximum price of $2.2150 per pound. Proponents had no information how much was sold at any price point; if, for example, 95% was sold at the minimum price and 5% at the maximum price. Proponents' exhibit listing an "average" price was in fact reporting the simple average of the minimum and maximum price, and not an indication of the average price at which the cheese was sold. (L. McBride (California Dairy Campaign) Tr. 886 line 11- 888 line 20). And the prices reported were for 5-6 pound mozzarella loaves, not bulk mozzarella. (L. McBride (California Dairy Campaign) Tr. 888 line 21- 889 line 17).

Proposal 6 likewise fails to identify the form of mozzarella to be surveyed. Most mozzarella is sold in a form that already includes further manufacturing beyond the base bulk format. For example, mozzarella is often shredded by the first manufacturer. Additionally, mozzarella is often molded into smaller retail or food service sizes by the first manufacturer, rather than being sold in a bulk format and sold to a secondary manufacturer for further transformation. None of these formats represent bulk product appropriate for a minimum pricing system. (Hearing Exh. 133 (IDFA Exh. 34) at p. 6, testimony of A. Krebs (Leprino Foods)).

AFBF testified that, while it would support the inclusion of mozzarella if there were a practical way to do it, AFBF does not in fact see a practical way to do it, given that there is no benchmark mozzarella product. (R. Cryan (AFBF) Tr. 2079 line 28 - 2080 line 15).

In short, it would be likely be impossible to select a suite of criteria for inclusion of mozzarella in a pricing survey that would adequately represent the market value of mozzarella cheese as a whole.

C. The Methods And Costs Of Manufacture Of Mozzarella Are Different, And The Hearing Record Contains No Information That Would Allow USDA To Address Those Differences In A Pricing Formula.

Even if pricing information for an identifiable "mozzarella cheese" were obtainable, no reported survey data includes the cost of making mozzarella cheese. Proponents testifying in support of Proposal 6 admitted that they had not presented, and the record did not contain, information as to the cost of making mozzarella cheese, and that USDA in its decision-making is limited to evidence presented at the hearing. (L. McBride (California Dairy Campaign) Tr. 884 line 17- 885 line 17). The proponent further admitted that the equipment used to make mozzarella differed from that used to make cheddar. (L. McBride (California Dairy Campaign) Tr. 885 line 18- 886 line 10).

No other party to this hearing purported to provide such survey data for the record. Thus, even if one were somehow able to develop a reportable price of mozzarella cheese, one would still have to use as the make allowance the cost of making cheddar cheese. But given that the minimum prices for Class III milk is the selling price of the end product minus the cost to make the product, basing the end-product price on the price of both cheddar cheese and mozzarella, while basing the make allowance solely on the cost of making cheddar cheese, would be a complete mismatch. (Hearing Exh. 128 (IDFA Exh. 33) at p. 6, testimony of M. Brown (IDFA)).

USDA stated in its letter dated July 24, 2023, to the proponents of Proposal 6 that "USDA does not currently have the legal authority to conduct a mandatory cost survey." Without cost data, the price data collected in Proposal 6 has no utility. (Hearing Exh. 133 (IDFA Exh. 34) at p. 5 (testimony of A. Krebs (Leprino Foods)).

This is especially true because the two cheeses are quite different in content and method of production. Cheddar must contain no less than 50% milkfat by weight of the solids and a maximum 39% moisture with no minimum, according to FDA Regulation 21 C.F.R. Section 133.113(a). By contrast, the minimum milkfat content of mozzarella cheese is 45 percent by weight of the solids, and the moisture content is more than 52 percent but not more than 60 percent by weight. 21 C.F.R. 133.155(a)(1). (Hearing Exh. 128 (IDFA Exh. 33) at p. 4 (testimony of M. Brown (IDFA)).

These differences in content necessarily make the products heterogeneous and lacking the similarities sufficient to include both in the same pricing formula. These differences result in material differences in the costs of manufacture, which foreclose as a practical matter deriving a uniform cost of manufacture that could be utilized in a product pricing formula. (Hearing Exh. 128 (IDFA Exh. 33) at p. 4 (testimony of M. Brown (IDFA)).

That heterogeneity is exacerbated by the divergence between the manufacturing steps used in cheddar versus mozzarella production. Cheddar cheese is subject to specific mandatory manufacturing steps:

> [Cow's milk or another specified dairy ingredient] may be warmed, treated with hydrogen peroxide/catalase, and is subjected to the action of a lactic acid-producing bacterial culture. One or more of [specified] clotting enzymes specified is added to set the dairy ingredients to a semisolid mass. The mass is so cut, stirred, and heated with continued stirring, as, to promote and regulate the separation of whey and curd. The whey is drained off, and the curd is matted into a cohesive mass. The mass is cut into slabs, which are so piled and handled as to promote the drainage of whey and the development of acidity. The slabs are then cut into pieces, which may be rinsed by sprinkling or pouring water over them, with free and continuous drainage; but the duration of such rinsing is so limited that only the whey on the surface of such pieces is removed. The curd is salted, stirred, further drained, and pressed into forms. One or more of the other [specified] optional ingredients may be added during the procedure.

21 C.F.R. 133.113(a)(3).

Mozzarella cheese is subject to different specific required manufacturing steps:

> [Cow's milk or another specified dairy ingredient] is warmed to approximately 88 °F and subjected to the action of a lactic acid-producing bacterial culture. One or more of [specified] clotting enzymes is added to set the dairy ingredients to a semisolid mass. The mass is cut, and it may be stirred to facilitate separation of whey from the curd. The whey is drained, and the curd may be washed

> with cold water and the water drained off. The curd may be collected in bundles for further drainage and for ripening. The curd may be iced, it may be held under refrigeration, and it may be permitted to warm to room temperature and ripen further. The curd may be cut. It is immersed in hot water or heated with steam and is kneaded and stretched until smooth and free of lumps. It is then cut and molded. The molded curd is firmed by immersion in cold water and drained. One or more [other specified] optional ingredients may be added during the procedure.

21 C.F.R. 133.155(a)(3).

While both mozzarella and cheddar can be produced in the same types of vats, the similarities end there. The manufacturing process beyond the vats differs significantly. Pasta filata mozzarella requires curd washing, heating, and mixing to achieve the product performance (such as stretch and no burning) desired in most uses of mozzarella. This requires additional equipment that is not used in cheddar manufacturing. Similarly, the pressed curd nature of cheddar production involves some equipment not used in mozzarella production. (Hearing Exh. 128 (IDFA Exh. 33) at p. 5, testimony of M. Brown (IDFA)); Hearing Exh. 133 (IDFA Exh. 34) at p. 5, testimony of A. Krebs (Leprino Foods)).

For example, the manufacturing facilities of Saputo USA, the second largest mozzarella manufacturer in the United States, are all unique. The processes and equipment utilized are designed to make end products that meet customer and consumer expectations. Recipes are designed to achieve finished good analytical data (i.e., fat, solids/non-fat, moisture, salt) that meet specific customer needs and consumer expectations. (Hearing Exh. 202 (IDFA Exh. 27) at p. 2, testimony of T. Brockman (Saputo)).

Typical Mozzarella production processes use a cooking step where the curd is heated to around 140 degrees to melt and stretch the cheese to give Mozzarella its iconic texture. The cheese is then formed and sent to a brine tank/flume to be cooled and salted. These processes are not part of the cheddar cheese manufacturing process, rendering the Class III cheddar cheese make allowance inappropriate to represent Mozzarella manufacturing. (Hearing Exh. 140 (NMPF Exh. 95) at pp. 2-3, testimony of D. Hanson (Foremost Farms)).

Furthermore, many Mozzarella manufacturers use semi-processed dairy raw materials in the production process to reduce the butterfat content to achieve the desired product composition. These raw materials include evaporated skim milk, RO skim milk, UF skim milk, and NFDM. These have an impact on the cost of the end product and can impact the price of the product sold to the customer. Inclusion of a mozzarella price series in the Class III protein calculation would distort the protein value because these cost factors would likely be included in the price calculation. (Hearing Exh. 140 (NMPF Exh. 95) at p. 3, testimony of D. Hanson (Foremost Farms)).

Mozzarella yields differ from cheddar yields. (Hearing Exh. 128 (IDFA Exh. 33) at p. 4, testimony of M. Brown (IDFA); Hearing Exh. 133 (IDFA Exh. 34) at p. 5, testimony of A. Krebs (Leprino Foods)). While proponents advocated the use of the Van Slyke formula to determine yields, they acknowledged that they lacked information to present for the hearing record as to how the Van Slyke cheese yield formula should be revised to fit mozzarella cheese, in terms of, e.g., butterfat recovery or fat and protein factors, or even where USDA might look for information as to what those factors should be. (L. McBride (California Dairy Campaign) Tr. 915 lines 12-25).

Accordingly, the cost of making cheddar is quite different than the cost of making mozzarella. One could not reliably use the former as a proxy for the cost of the latter for purposes of setting minimum milk prices. Yet the cost data for doing something else does not currently exist within USDA or this hearing record, and even if it did, calculating and applying different make allowances within the same product category would unduly complicate the effort to set minimum milk prices, especially given the differences in the various categories of mozzarella. (Hearing Exh. 128 (IDFA Exh. 33) at p. 6, testimony of M. Brown (IDFA)).

D. Mozzarella Lacks Market-Clearing Capacity.

USDA has emphasized that "the importance of using minimum prices that are market-clearing for milk used to make cheese and butter/nonfat dry milk cannot be overstated. The prices for milk used in these products must reflect supply and demand and must not exceed a level that would require handlers to pay more for milk than needed to clear the market and make a profit." Milk in the New England and Other Marketing Areas; Decision on Proposed Amendments to Marketing Agreements and to Orders, 64 Fed. Reg. 16026, 16095 (Apr. 2, 1999).

Accordingly, the products that USDA selects to be surveyed and to represent the market value of the milk in Classes III and IV must:

- represent the market clearing products within the respective categories,
- have clearly defined content specifications that facilitate matching products with their associated yields and costs of manufacturing,
- be in bulk form without value-added attributes or further processing,
- represent the value received by original manufacturers, i.e., product prices must represent manufacturers' value rather than distributor or retail values that incorporate additional costs in the supply chain beyond manufacturing.

(Hearing Exh. 133 (IDFA Exh. 34) at pp. 6-7, testimony of A. Krebs (Leprino Foods)).

It is cheddar, not mozzarella, that serves this market clearing function for cheese.

- ***First***, cheddar is the true commodity cheese product, usable both in its own form and as a component of processed cheeses. Mozzarella is not so usable.
- ***Second,*** cheddar is the cheese more often produced to clear the market of surplus milk, given that cheddar is readily storable for extended periods, and the processor can make bulk cheddar products using surplus milk with reasonable confidence that it will be able to find a buyer while the cheese is still saleable. That confidence is bolstered by the fact that

standard cheddar cheese can be sold to a variety of companies that will use bulk cheese making a variety of food products. And it can always be sold on the CME.

- By contrast, most mozzarella is stored in refrigerated form and by comparison has a limited shelf life, and once produced encounters fewer potential outlets.

- ***Third,*** large volumes of cheddar cheese are sold in bulk form, either as 40 pound or larger blocks or 500-pound barrels, providing price transparency for significant volumes of the base commodity. A single product specification (21 C.F.R. § 133.113) and common manufacturing processes facilitate associating prices with yield and manufacturing cost factors related to the same product account for virtually all cheddar production.

- Most mozzarella is not sold in bulk form. Significant volumes of mozzarella are manufactured into value-added forms, whether as shred, string, or smaller retail or foodservice loaves by the primary manufacturer. The volume of mozzarella production that is sold by the primary manufacturer in bulk format is comparatively small. This contrasts with cheddar cheese in which most shredding, cuffing to retail or food service sizes, or conversion to other forms is performed by different companies than the original manufacturer. Mozzarella is characterized by a lack of uniformity in compositional specifications and yields, making it difficult to accurately match prices with yields and manufacturing costs.

- ***Fourth,*** bulk cheddar cheese remains representative of broader commodity cheese values. Margins for the most generic bulk forms of other cheeses are forced to converge with cheddar margins over time as companies seek profit opportunities by adjusting their capacity to produce the higher margin products. Over the last several decades, many cheddar plants have been converted to mozzarella production where the profitability of mozzarella production exceeded that of cheddar cheese for sustained periods. Some companies maintain flexible plant capacity so that they may produce cheddar or mozzarella, depending upon comparative profit opportunities on a shorter-term basis. The ultimate result is that margins for basic mozzarella and cheddar converge over time.

- ***Fifth,*** both cheddar variants (40-pound blocks or 500-pound barrels) are traded on the CME, and thus subject to easy price-discovery and straightforward hedging. Mozzarella is not so traded or directly hedgeable.

(Hearing Exh. 128 (IDFA Exh. 33) at pp. 6-7, testimony of M. Brown (IDFA)); M. Brown (IDFA) Tr. 2060 lines 2-17; Hearing Exh. 133 (IDFA Exh. 34) at p. 7, testimony of A. Krebs (Leprino Foods)).

E. Proponents' Price Comparison Is Deeply Flawed.

Proposal 6 proponents have argued that a recent USDA food procurement solicitation resulted in mozzarella being delivered at an average price per pound of $3.6445, as compared to an AMS survey price for cheddar of less than $1.50 per pound. Proponents infer that they are missing out when minimum milk prices are based on cheddar rather than mozzarella. This is not a proper conclusion to reach.

Some of that price difference reflects cost differences based upon differences in the equipment used and methods employed to make mozzarella versus cheddar, as discussed above. Furthermore, the USDA solicitation to which proponents refer entailed the purchase of one-ounce mozzarella string sticks, 360 to the box, to more than a dozen cities throughout the United States. (A copy of the solicitation appears as Hearing Exhibit 95.) Thus, as compared to the AMS reported price for cheddar cheese, which is an FOB plant price for bulk cheese in either 40-pound blocks or 500-pound barrels, the USDA solicitation was for mozzarella cheese that: (a) had been shaped into strings, which is itself an equipment specific and laborious undertaking; (b) cut into one-ounce pieces; (c) packaged and labeled individually; (d) packed 360 to a box, and (e) delivered by the seller in hundreds of boxes quantities to 36 different locations ranging from Alabama to California, and from Minnesota to Texas. (Hearing Exh. 128 (IDFA Exh. 33) at p. 8, testimony of M. Brown (IDFA)).

In short, the string cheese price reported by USDA is a retail level price that embodies many costs beyond those of manufacturing. Further, string cheese represents a value-added form of mozzarella and requires additional equipment finely tuned to maintain dimension control. The string cheese specification associated with the quoted price is for one-ounce pieces in single-serve packaging, representing significantly more packaging than the minimal packaging associated with 40-pound blocks or 500-pound barrels. The price associated with the school lunch program is a delivered price to numerous locations for less-than-truckload quantities of product. (Hearing Exh. 133 (IDFA Exh. 34) at p. 6, testimony of A. Krebs (Leprino Foods)).

The second price series included in the proponent's testimony is the delivered price for 5 to 6-pound loaves of mozzarella in mixed lots of 1,000 to 5,000 pounds (Dairy Market News). Rather than f.o.b. manufacturer price, it is delivered and in less-than-truckload quantities. Further, only an unweighted price range is provided. Finally, this product is typically used by independent pizzerias and does not represent bulk product and therefore cannot be interpreted as such. (Hearing Exh. 133 (IDFA Exh. 34) at p. 6, testimony of A. Krebs (Leprino Foods)).

Further, this price series has been discredited as being, according to USDA testimony during the hearing, based upon mozzarella survey that ended 10-15 years ago, at which point that price was simply updated thereafter by changes in the weekly CME ***cheddar*** block price. (L. Cashman (USDA) Tr. 1922 line 22 - 1927 line 11; 1928 lines 2-11). Underlying assumptions incorporated into the base survey are not available. This price series should be disregarded altogether. (Hearing Exh. 133 (IDFA Exh. 34) at p. 6, testimony of A. Krebs (Leprino Foods)).

NMPF likewise concludes that mozzarella cheese should not be included in the product price surveys used to establish minimum Class III prices, explaining:

> NMPF strongly recommends not including Mozzarella products into the calculation of Class III protein. Mozzarella is dissimilar to cheddar in multiple fundamental ways and introducing these variables into the protein calculation would be complex, time-consuming to develop the model, and difficult to administer. Mozzarella has significant variations in composition and packaging forms/sizes. The mozzarella manufacturing footprint is significantly different than block cheddar, both from a manufacturing process perspective and dairy ingredients used in the formulation, rendering the cheese make allowance irrelevant. Since there isn't a spot market for Mozzarella and moves with the cheddar block market, including Mozzarella into the protein calculation does not enhance price discovery. There are too many complex variables in question for the USDA to consider including Mozzarella in the Class III protein calculation.

(Hearing Exh. 140 (NMPF Exh. 95) at p. 4, testimony of D. Hanson (Foremost Farms)).

Proposal 6 should not be adopted.

VI. USDA SHOULD ADOPT MAKE ALLOWANCES PROPOSALS 8 AND 9 (WHICH ARE IDENTICAL) AND REJECT PROPOSAL 7.

Proposals 8 and 9 (which are substantively identical), would update the existing make allowances to reflect the most recently available (2022) data regarding current average costs of manufacture. Recognizing that Proposals 8 and 9 would represent a material increase in make allowances, and in the spirit of accommodation to dairy farmers, Proposals 8 and 9 propose a phase in those increases over a prescribed four-year schedule.

By contrast, NMPF's Proposal 7 would only partially increase make allowances, to a level that has little factual grounding and which its proponents openly admit would not remotely reflect actual costs of manufacture.

Based upon the Proposed Findings that follow, IDFA's Proposed Conclusions Regarding Proposals 7, 8 and 9 are as follows:

PROPOSED CONCLUSIONS REGARDING PROPOSALS 7, 8 AND 9

a. Make allowances adequate to cover costs are absolutely essential to the proper operation of FMMOs, given that they provide the only means by which dairy product manufacturers can cover their costs of operation and make possible the maintenance, replacement and expansion of manufacturing facilities within the FMMO system.

b. The ability of a manufacturer to offset cost increases is limited by the level of make allowances in the Class III and Class IV price formulas. Manufacturing processors are charged the FMMO minimum price for producer milk used to produce Class III and Class IV products. However, plant manufacturing cost increases may not be recovered because Class III and Class IV product-price formulas use make allowances that are fixed regardless of market conditions and change only by regulatory action.

c. Adequate make allowances ae also requisite to establishing market clearing prices. If make allowances are too low, the resulting milk price is too high, resulting in milk being produced that processors cannot afford to buy and make their product. The market therefore will not clear. The importance of using minimum prices that are market-clearing for milk used to make cheese and butter/nonfat dry milk cannot be overstated. The prices for milk used in these products must reflect supply and demand, and must not exceed a level that would require handlers to pay more for milk than needed to clear the market.

d. Opponents of increasing make allowances argue a number of points— that they are already set at too high a level, that dairy farmer production costs also have increased significantly due to higher energy and feed costs, that processors should look beyond asking dairy farmers to receive less for their milk by charging more for manufactured products, and that make allowance increases should be made only when all dairy farmer production costs are captured in their milk pay price. These are not valid arguments for opposing how make allowances should be determined or what levels make allowances need to be in the Class III and Class IV product- pricing formulas. The record demonstrates that current make allowance levels are not reflective of the costs manufacturers incur in processing raw milk into the finished products of cheese, butter, NFDM and dry whey.

e. It is reasonable to conclude that the make allowances used in the Class III and Class IV product-price formulas should be updated to reflect the costs manufacturers incur in producing cheese, butter, dry whey, and NFDM. It is necessary to reflect changes in manufacturing costs so that minimum Federal order classified prices can be set based on the prevailing market prices for manufactured products.

f. Proposals 8 and 9 provide that the same basic methodology be employed in setting new make allowances as has consistently been employed by USDA in the past. The data sources used to support the Proposals 8 and 9 make allowances are the same sources used to set make allowances in the past. USDA has consistently set make allowances based upon cost of manufacture survey data from two sources. It has consistently used the CDFA audited cost data as one of the two data sources. It has consistently used another, unaudited cost data survey as the other data source.

g. Dr. Mark Stephenson has been involved in dairy processing cost studies for more than 30 years. He participated in the cost of processing studies conducted in 2006 and 2007 the results of which were offered as testimony in the 2006 and 2007 Federal Milk Marketing Order hearings, and upon which USDA relied in setting make allowances. Dr. Stephenson completed an updated 2022 cost survey in May, 2023 using the same fundamental methodology.

h. While the California state milk order was replaced by the California federal milk order effective November 1, 2018, CDFA study data of the precise kind also relied on in the 2006 and 2007 formal rulemaking proceedings is available through 2016. Dr. William Schiek examined that data and utilized standard regression analysis techniques to update that cost data through 2022.

i. The 2023 Stephenson survey of 2022 costs and the 2022 Schiek study closely parallel the cost studies USDA had previously found sufficiently reliable to establish make allowances. Proposals 8 and 9 utilize them to calculate appropriate updated make allowances.

k. The 2023 Stephenson study was far more robust than any prior survey. Fifteen firms with ownership of 45 different plants participated in the 2023 Stephenson survey. Eight of the firms were under cooperative ownership with the remaining seven proprietary. Thirteen of the plants processed butter, fifteen processed nonfat dry milk, eighteen processed cheddar cheese, and nine processed dry whey for a total of 55 plant-product observations. Plant locations were geographically dispersed across all regions of the country except the Southeast where few manufacturing plants exist with reportable products. Dr. Stephenson's 2023 cost survey encompassed surpassed 50% of all 2022 NASS production for the four commodity products, with the applicable percentages for butter and NFDM reaching 80% and 91%, respectively.

l. The results of the Stephenson and Schiek studies with respect to 2022 costs of manufacture are generally consistent with (indeed, often lower than) company data submitted by various *cooperative* manufacturers during the hearing. The results are also consistent with company data from proprietary handlers.

m. Proposals 8 and 9 appropriately base their updated make allowances based upon an equal weighting of the results of the 2023 Stephenson survey and the 2022 Schiek study, after adding to the costs reflected in those studies an additional $0.0015 for marketing costs. Even though the inflation rate may have decreased after 2022, one would have to have deflation before costs would be lower post 2022, and that has not happened. Indeed, the country would have to enter a sharply deflationary period before actual costs in 2028 would be lower than 2022 costs. Historically that simply has never happened with respect to manufacturing costs.

n. Proposals 8 and 9 appropriately implement the make allowance increases in steps. Step one make allowances made effective January 1, 2025 (or as soon thereafter as possible) would capture 50% of the difference between the current make allowances and the proposed make allowances based upon the average of the results of the 2023 Stephenson survey and the 2022 Schiek study. Then, on each of the next three anniversaries of the implementation of the step one make allowances, the make allowances for each of the four products would be increased by one-third of the difference between the step one make allowances and the make allowances based upon the average of the results of the 2023 Stephenson survey and the 2022 Schiek study. Thus, the full make allowances based upon the average of the 2023 Stephenson survey and the 2022 Schiek study would go into effect three years after the initial make allowance increase.

o. The possible future enactment and implementation of legislation allowing USDA to conduct mandatory, audited cost of manufacture surveys provides no excuse for a delay in implementing appropriate make allowances.

p. The make allowances proposed in NMPF's Proposal 7 are not grounded in any data regarding actual costs of manufacture, but simply arguments regarding the impact of increased make allowances on dairy farmers. Proposal 7 does not purport to reflect the actual costs of manufacture, but some kind of imprecise weighing by NMPF and its members of actual costs of manufacture and the impact of higher make allowances on farmers.

q. USDA should adopt Proposals 8 and 9, as set forth in Hearing Exhs. 12 and 13 (USDA Exhs. 12 and 13). USDA should not adopt Proposal 7.

PROPOSED FINDINGS REGARDING PROPOSALS 7, 8 AND 9

A. The Fundamental Features Of Product Price Formulas.

Federal milk marketing orders since January 2000 have utilized the price of end-products to determine the minimum milk prices that must be paid farmers, through a mechanism commonly referred to as a "product price formula." Oversimplifying slightly, a product price formula sets the minimum price that farmers must be paid for their milk (at least by proprietary handlers) as the price handlers receive for their end products (cheddar cheese, dry whey, butter and nonfat dry milk) minus the costs handlers incur in turning farm milk into those end products (commonly referred to as the "cost of manufacture" or the "make allowance"). In performing this calculation, USDA must make assumptions as to how much of the end products can be made from a given quantity of milk (the "yield factors"). (Hearing Exh. 214 (IDFA Exh. 6) at p. 2, testimony of M. Brown (IDFA)).

In general terms, a make allowance is the difference between the wholesale sales value of a manufactured dairy product and the cost to purchase the raw milk necessary for that product's production. This make allowance is used by the processor for many economic purposes, e.g., to pay for the use of the capital necessary to build and maintain the dairy processing plant, to cover the non-milk costs relating to obtaining raw milk, to pay for marketing the processed dairy product, to pay wages to employees of the manufacturing plant, to pay utility companies for the water, electricity and natural gas used to manufacture the dairy product, to buy ingredients other than raw milk, and to cover a wide variety of other expenses such as plant maintenance, equipment, and insurance. (Hearing Exh. 214 (IDFA Exh. 6) at pp. 2-3, testimony of M. Brown (IDFA)).

USDA defines a make allowance, as published in the Federal Register on both November 22, 2006, and June 20, 2008 as follows: "The make allowance factor represents the cost manufacturers incur in making raw milk into one pound of product." In other words, a make allowance is not a "cost credit" to cover *a portion of* these conversion costs, a make allowance is intended to represent *the* cost of converting milk into dairy products. (Hearing Exh. 199 (IDFA Exh. 23) at p. 1, testimony of A. Krebs (Leprino Foods)).

If the regulated minimum prices generated by the end-product pricing formulas are to accurately reflect the value of milk to manufacturing plants, it is important that the manufacturing costs that constitute the make allowances be accurate and current. (Hearing Exh. 180 (IDFA Exh. 2) at p. 1, testimony of W. Schiek (Dairy Institute of California)). A simple example may help explain this concept.

Assume the example where the wholesale price of fresh "short hold" cheddar cheese is $2.00 per pound and the total costs of manufacturing and marketing that cheese is 28 cents per pound of cheese. A manufacturing plant facing these assumed economic factors would be able to pay up to $1.72 ($2.00 minus $0.28) for the raw milk needed to manufacture each pound of cheese. (Hearing Exh. 214 (IDFA Exh. 6) at p. 3, testimony of M. Brown (IDFA)).

What if this hypothetical plant is regulated under a federal order? If the make allowance specified in the regulated minimum price is 28 cents, this plant can pay all the costs associated with manufacturing and marketing cheese after paying the regulated minimum milk price to the milk producers supplying the raw milk. If, on the other hand, the make allowance specified in the regulations was only 20 cents, the plant would be required to pay a minimum price of $1.80 ($2.00 minus $0.20) to milk producers supplying milk. In this scenario, the plant would still receive the wholesale cheese price of $2.00, but after being required to pay the minimum milk price of $1.80

would only have 20 cents left to cover the total costs of turning that milk into cheese. But with actual total costs of manufacturing and marketing cheese of 28 cents, the plant would be unable to pay for one or more factors of manufacturing and marketing. Obviously, the plant could not continue to operate like this for any extended period. (Hearing Exh. 214 (IDFA Exh. 6) at pp. 2-4, testimony of M. Brown (IDFA)).

For most industries, raising prices is one of the most common ways to offset higher costs. But with commodity dairy products, any increase in price would be picked up in the NDPSR commodity price survey used to set FMMO milk component values. This in turn would raise the reference price by the same amount. We can see why this is so by returning to our example. Recall that the handler is selling cheese for $2.00, the make allowance is 20 cents, and the minimum price of milk is therefore $1.80. The handler is losing 8 cents for every pound of cheese it makes because its true costs of manufacturing is 28 cents, but it only has 20 cents left over after it pays for its milk. In our example, before any end product price increase, the minimum milk price was $2.00 minus 0.20 equals $1.80. After an end product price increase of $0.08 to $2.08 in an effort to cover the shortfall, the minimum milk price is $2.08 minus 0.20 equals $1.88. (Hearing Exh. 214 (IDFA Exh. 6) at p. 4, testimony of M. Brown (IDFA)).

Thus, all of the 8 cents derived from the increase in the end product price has gone directly to the farmer, through the Federal order pricing formulas. None of the money derived from the end product price increase is retained by the handler. After paying the now higher minimum milk price, the handler still only has 20 cents left over—precisely the same - and inadequate - amount as before it raised its end product prices. (Hearing Exh. 214 (IDFA Exh. 6) at p. 4, testimony of M. Brown (IDFA)).

The manufacturer has not gained anything, but nonetheless must still increase its overage over the CME spot market or risk falling behind the NDPSR price in Class III. Without make allowance increases, the only way for a manufacturer of NDPSR reported products to recover higher manufacturing costs is to pursue ruthless efficiency, look for opportunities outside NDPSR reported products, look for escape valves out of the Class III price, invest outside the FMMO regulated dairy industry, or invest outside of dairy. (Hearing Exh. 196 (IDFA Exh. 22) at pp. 7-8, testimony of J. DeJong (Glanbia Nutrition)).

This phenomenon has been fully recognized by USDA. As USDA stated when it last revised make allowances in 2008:

> The ability of a manufacturer to offset cost increases is limited by the level of make allowances in the Class III and Class IV price formulas. Manufacturing processors are charged the FMMO minimum price for producer milk used to produce Class III and Class IV products. However, plant manufacturing cost increases may not be recovered because Class III and Class IV product-price formulas use make allowances that are fixed regardless of market conditions and change only by regulatory action.

Milk in the Northeast and Other Marketing Areas; Tentative Partial Final Decision on Proposed Amendments and Opportunity To File Written Exceptions to Tentative Marketing Agreements and Orders, 73 Federal Register 35,305, 35,323 (June 20, 2008).

Indeed, NMPF itself recognized in its May 1, 2023 proposal that "[h]aving accurate and updated plant processing costs, or 'make allowances,' and appropriate product yield factors are critical for this indirect method of determining milk prices, which is a principal function of the Federal Order Program." NMPF also agreed that "inadequate make allowances challenge manufacturing operations' abilities to pay minimum announced milk prices and still operate their facilities at reasonable rates of return. this discourages the plant investment needed to provide market demand on a daily, seasonal and annual basis." (Hearing Exh. 143 (IDFA Exh. 35). (As discussed later, NMPF's own make allowance proposal, Proposal 7, fails NMPF's own standards.)

AMPI, the largest farmer-owned cheese cooperative in the United States, perhaps put it best. AMPI produces cheese, butter and powdered dairy products at eight manufacturing plants located throughout the Midwest and upper Midwest region. (Hearing Exh. 146 (IDFA Exh. 25) at p. 1, testimony of S. Schlangen (AMPI)). AMPI supports Proposals 8 and 9. Noting that the opening page of the USDA-AMS Federal Milk Marketing Order web site states that the intended purpose of federal milk marketing orders is to "maintain stable marketing relationships for all handlers and producers supplying marketing areas, thus facilitating the complex process of marketing fresh milk, and that the first step of fulfilling this mission is determining the minimum milk prices for the four classes of milk utilization, AMPI concludes:

> "The system must reflect current manufacturing costs for milk and require regular updates to reflect both changes in costs and efficiencies. Today, the milk price regulations are outdated and increasingly irrelevant. Void of any updates since 2008, the current manufacturing milk calculations do not reflect today's costs. Simply put, it has become a system built on bad math. This is detrimental to dairy manufacturers and farmers alike, disregarding the basic purpose of the system: providing the stable marketing relationships as described on the FMMO website.

(Hearing Exh. 146 (IDFA Exh. 25) at p. 2, testimony of S. Schlangen (AMPI)).

Adequate make allowances ae also requisite to establishing market clearing prices. If make allowances are too low, the resulting milk price is too high, resulting in milk being produced that processors cannot afford to buy and make their product. The market therefore will not clear. Hearing Exh. 215 (IDFA Exh. 42) at p. 7, testimony of M. Brown (IDFA)). As USDA has explained:

> The importance of using minimum prices that are market-clearing for milk used to make cheese and butter/nonfat dry milk cannot be overstated. The prices for milk used in these products must reflect supply and demand, and must not exceed a level that would require handlers to pay more for milk than needed to clear the market and make a profit.

Milk in the New England and Other Marketing Areas; Decision on Proposed Amendments to Marketing Agreements and to Orders, 64 Fed. Reg. 16026, 16095 (Apr. 2, 1999).

The foregoing aspects of product price formulas illustrate how much heavier USDA's responsibilities have been since 2000. Or, to put it more bluntly, these aspects reveal how much damage can result if make allowances are set at an inadequate level. (Hearing Exh. 214 (IDFA Exh. 6) at p. 5, testimony of M. Brown (IDFA)).

Before 2000, USDA utilized a system which based minimum prices on the competitive pay price paid by manufacturing plants in Minnesota and Wisconsin to producers of unregulated Grade B (manufacturing grade) milk to set regulated prices; this was known as the M-W price series, eventually becoming the Basic Formula Price (BFP). Thus a surveyed unregulated market for farm milk set the regulated price and resulted in an implicit make allowance for each manufacturing plant, equal to the difference between the wholesale value received for the dairy product minus the value paid for the raw milk used to make that dairy product. This varied over time based on many economic factors such as the capacity utilization of the plant, variability in the cost of inputs other than raw milk like wage rates, energy costs and interest rates, and of course the competitive environment for raw milk. Market conditions automatically and continuously determined what the raw milk price should be, and how much of the end-product price a processor would retain. (Hearing Exh. 214 (IDFA Exh. 6) at p. 6, testimony of M. Brown (IDFA)).

USDA did not have to make those determinations; the market did so. To a large extent, the system was on autopilot, until the Grade B milk supply declined to less than 10% of the total Minnesota and Wisconsin Milk supply by the mid-1990's and was no longer deemed a reliable indicator of the market value of raw milk. (Hearing Exh. 214 (IDFA Exh. 6) at p. 6, testimony of M. Brown (IDFA)).

Since initiation of Federal Order Reform in 2000, USDA tries to mimic these market forces through product price formulas -- and market forces cannot step in to fix the situation if USDA has assumed end-product prices that are too high; established yield factors that are too high; or established make allowances that are too low. A processor in any of those scenarios will be required to pay a minimum milk price that leaves it an inadequate amount of money to cover its true costs of manufacture; and the processor cannot raise its prices in the marketplace to try to compensate, because that would only increase the minimum milk price the processor owes. (Hearing Exh. 214 (IDFA Exh. 6) at p. 6, testimony of M. Brown (IDFA)).

Neither Congress nor USDA intended to threaten the economic viability of the US manufacturing industry by forcing manufacturers to lose money on every pound of dairy products produced, or potentially injure dairy producers by eliminating these important outlets for farm milk. However, the current system of FMMO regulated price formulas, fixes the difference between the value cheese, butter, whey and nonfat dry milk manufacturers obtain in the marketplace for their products and the minimum price they must pay for the milk used to make those products based on the industry costs as they existed at or before a May 2000 hearing at which the make allowances were established and then modified after a January 2006 hearing and again after hearings convened over several month from February through July 2007. (Hearing Exh. 214 (IDFA Exh. 6) at p. 7, testimony of M. Brown (IDFA)).

Thus, current make allowances are based upon cost data submitted more than 16 years ago. Unless those make allowances are adjusted in response to changes in industry costs, manufacturers are trapped in either losing money on every pound of product produced, stopping production entirely or otherwise taking steps to escape FMMO minimum price regulations (a phenomenon discussed further below. (Hearing Exh. 214 (IDFA Exh. 6) at p. 7, testimony of M. Brown (IDFA)).

As noted in the February 7, 2013, Final Decision from USDA: "The ability of a manufacturer to offset cost increases is limited by the level of make allowances in the Class III and Class IV price formulas." Given the current system, if manufacturing costs are not covered in their entirety, over time, the math just doesn't work. Essentially, processing assets get run into the ground and the industry lacks financial incentive for the investment needed to maintain or build sufficient processing assets. (Hearing Exh. 199 (IDFA Exh. 23) at p. 1, testimony of A. Krebs (Leprino Foods)).

There should be relatively little concern that applying the principles discussed above will result in make allowances that are too high, yield factors that are too low, or product prices that are too low, such that producers will be "cheated" out of a rightful price for their milk.

We are only dealing here with minimum milk prices. Cooperative associations will pass on to their milk producer members, or put to other business uses, all of the wholesale sales value of dairy products in excess of that needed to cover the total costs of manufacturing. Since cooperative associations are significant players in the manufacturing of dairy products, they are a considerable force to be reckoned with in the marketplace. To remain competitive in the marketplace for raw milk, a proprietary plant would have to pay an amount at least equal to the cooperative association in the above example, as an over-order premium. (Hearing Exh. 214 (IDFA Exh. 6) at p. 7, testimony of M. Brown (IDFA)).

Regulated prices that are hypothetically set too low (below the marketing clearing level) can be compensated in the marketplace through competitive premiums. Regulated prices that are set too high can lead to the milk produced by dairy farmers being dumped at the farm or moved out of area to find a processing home. Minimum regulated prices must be set to levels where the plants can clear the market and operate profitably. (Hearing Exh. 249 (Dairy Inst of Cal. Exh. 1) at p. 3, testimony of W. Schiek (Dairy Institute of California)).

In short, over time, market forces have resulted in over order premiums that will adjust the amount being paid to producers if make allowances are set at a level higher than the actual cost of production, yield factors are set at a level below actual yields, or product prices are assumed to be lower than they really are. There is nothing revolutionary about relying on the market for these purposes -- after all, that is exactly what federal orders did for the first 67 years of their existence, before an adequate supply of surveyable manufacturing milk dissipated to tiny amounts by the mid-late 1990's. (Hearing Exh. 214 (IDFA Exh. 6) at p. 8, testimony of M. Brown (IDFA)).

It is a completely mistaken notion that the product pricing system provides a fixed margin for processors but no safety provision for farmers, or that the system somehow forces farmers to bear the cost of cost increases at the manufacturing level. Make allowances are based upon the average weighted cost of manufacture. Processors whose costs are above the make allowances must either reduce their costs, suffer losses, or go out of business; and processors whose costs are below the make allowances will face competitive pressures for milk supplies that will result in over order premiums. (Hearing Exh. 214 (IDFA Exh. 6) at p. 8, testimony of M. Brown (IDFA)).

As for producers, they must be subject to price signals that will cause them to produce more milk when rising market demand for end-dairy products dictates the need for more milk, and to produce less milk when falling product demand so dictates. No purpose can be served by regulated milk prices that incentivize increased production without any market outlet. (Hearing Exh. 214 (IDFA Exh. 6) at p. 8, testimony of M. Brown (IDFA)).

Balancing this economic necessity is the fact that, unlike regulated processors, producers are not subject to regulations that fix the maximum margin between their output price and input costs. Indeed, one can only imagine the protest if dairy producers were required by regulation to pass on higher milk prices to their suppliers of grain or other inputs. (Hearing Exh. 214 (IDFA Exh. 6) at pp. 8-9, testimony of M. Brown (IDFA)).

USDA itself has already recognized the fallacy of these arguments against make allowance increases. AS USDA explained when it last increased make allowances in 2008:

> Opponents of increasing make allowances argue a number of points— that they are already set at too high a level, that dairy farmer production costs also have increased significantly due to higher energy and feed costs, that processors should look beyond asking dairy farmers to receive less for their milk by charging more for manufactured products, and that make allowance increases should be made only when all dairy farmer production costs are captured in their milk pay price. These are not valid arguments for opposing how make allowances should be determined or what levels make allowances need to be in the Class III and Class IV product-pricing formulas. The record demonstrates that current make allowance levels are not reflective of the costs manufacturers incur in processing raw milk into the finished products of cheese, butter, NFDM and dry whey.
>
> Additionally, the Class III and Class IV product-price formulas establish derived classified prices for producer milk that are used nationally in all Federal milk orders. When dairy farmer production costs exceed the value for which products are sold in the marketplace, no source of revenue from the marketplace is available to cover those costs.
>
> In the aggregate, the costs of producing milk are reflected in the supply and demand conditions for the dairy products. When the supply of milk is insufficient to meet the demand for Class III and Class IV products, the prices for these products increase as do regulated minimum milk prices paid to dairy farmers because the milk is more valuable, and this greater milk value is captured in the pricing formulas. Dairy farmers face no regulatory minimums in their costs and face no regulated minimum payment obligation in the way that regulated handlers must pay dairy farmers for milk.
>
> ***

> It is reasonable to conclude that the make allowances used in the Class III and Class IV product-price formulas should be updated to reflect changes in the costs manufacturers incur in producing cheese, butter, dry whey, and NFDM. It is necessary to reflect changes in manufacturing costs so that with the prevailing market prices for manufactured products, minimum Federal order classified prices can be set.

Milk in the Northeast and Other Marketing Areas; Tentative Partial Final Decision on Proposed Amendments and Opportunity To File Written Exceptions to Tentative Marketing Agreements and Orders, 73 Federal Register 35,305, 35,324 (June 20, 2008).

No one thinks the current manufacturing allowances remotely reflect current manufacturing costs. And manufacturing allowances are the one aspect of milk orders that entirely replaces market forces for milk supplies with regulated prices. Regulated manufacturers of Class III and IV products must put into the pool the entirety of the amount received selling those products, minus the manufacturing allowances. (Hearing Exh. 214 (IDFA Exh. 6) at p. 10, testimony of M. Brown (IDFA)).

B. USDA'S Historical Approach To Setting Make Allowances Remains The Correct Approach.

WCMA Proposal 8 and the identical IDFA Proposal 9 address the disorderly marketing and economic hardships imposed on cheese, nonfat dry milk, butter and whey manufacturers due to the dramatically higher costs of manufacturing these products since USDA last established the current manufacturing cost factors (make allowances) in 2008 based on industry cost data from 2005-2006.

As described above, the product pricing formulas can only work if they incorporate make allowances that are consistent with actual costs of manufacture. **That is a fundamental principal USDA has adopted and applied ever since USDA more than twenty years ago began using component pricing to set minimum milk prices for manufactured (Class III and IV) products.** The Department has applied a straightforward, overriding principle: minimum manufacturing product prices must incorporate a make allowance consistent with the average manufacturing cost for the core commodity Class III and IV products, as determined by the most recently available reliable cost data. (Hearing Exh. 214 (IDFA Exh. 6) at pp. 10-11, testimony of M. Brown (IDFA)).

As USDA explained when it first adopted this approach effective January 1, 2000:

> The make allowances contained in the proposed rule were developed primarily from make allowance studies conducted at and published by Cornell University and an analysis of manufacturing plant size in relationship to the data contained in the Cornell studies. Audited cost of production data published by the California Department of Food and Agriculture was also used in determining a reasonable level of make allowances.
>
> . . . .
>
> . . . Both handler and producer interests argued that failure to cover processors' costs of converting milk to finished products results in a disincentive to produce finished dairy products. They expressed concern that the disincentive would discourage investment in the manufacturing sector, leading to reduced manufacturing capacity and reduced outlets for producers' milk.

Milk in the New England and Other Marketing Areas; Decision on Proposed Amendments to Marketing Agreements and to Orders, 64 Fed. Reg. 16,026, 16,096 (Apr. 2, 1999).

Since that initial implementation of product pricing formulas, USDA has on four separate occasions held hearings to amend make allowances. In every instance, USDA has updated (increased) the make allowances to reflect more recent weighted average cost of production data. As shown by the following excerpts from the Department's decision-making, the Department has without exception continued to apply the same foundational principle: make allowances should reflect the weighted average of actual manufacturing costs:

1. December 2000 USDA Decision Increasing Make Allowances

> As supported by most of the hearing participants, the make allowances incorporated in the component price formulas under the

> Federal milk orders should cover the costs of most of the processing plants that receive milk pooled under the orders. . . .
>
> . . . .
>
> . . . . [M]anufacturing costs used to determine appropriate make allowances for cheddar cheese, butter and nonfat dry milk in this proceeding are calculated primarily from a weighted average of the RBCS [Rural Business Cooperative Service] and CDFA [California Department of Food and Agriculture] surveys, with a check against the NCI [National Cheese Institute] survey cost of manufacturing cheddar cheese. The cost of manufacturing nonfat dry milk continues to be used as the cost of making whey powder due to the nature of the information in the hearing record about the actual costs of drying whey.

Milk in the Northeast and Other Marketing Areas; Tentative Decision on Proposed Amendments and Opportunity to File Written Exceptions to Tentative Marketing Agreements and to Orders, 65 Fed. Reg. 76,831, 76,839-40 (Dec. 7. 2000).

2. November 2002 USDA Decision Increasing Make Allowances

> As supported by most of the hearing participants, the make allowances incorporated in the component price formulas under the Federal milk orders should cover the costs of most of the processing plants that receive milk pooled under the orders. In part, this approach is necessary because pooled handlers must be able to compete with processors whose milk receipts are not priced in regulated markets. The principal reason for this approach, however, is to ensure that the market is cleared of reserve milk supplies.
>
> . . . .
>
> This final decision finds that continuing to use an average make allowance of dairy manufacturing plants' costs is appropriate. Reliance on product-price formulas necessitates the need to reflect and to offset the manufacturing costs incurred and is supported by the record even though there is disagreement on exactly how to accomplish this. Using an average make allowance provides a reasonable measure to reflect and offset manufacturing costs and is the only reasonable measure that can be supported by the record evidence.

Milk in the Northeast and Other Marketing Areas; Decision on Proposed Amendments to Tentative Marketing Agreement and To Orders, 67 Fed. Reg. 67905, 67915 (Nov. 7, 2002).

3. November 2006 USDA Decision Increasing Make Allowances

> This tentative final decision proposes to adopt, on an interim final and emergency basis, changes to the manufacturing allowances contained in the Class III and Class IV product price formulas applicable to all Federal milk marketing orders.
>
> . . . .
>
> . . . .
>
> The price formulas used to compute Class III and Class IV prices contain a factor called a manufacturing (make) allowance. The make allowance factor represents the cost manufacturers incur in making raw milk into one pound of product. . . . The [current] make allowances were last amended in 2003 and were determined on the basis of a California Department of Food and Agriculture (CDFA) and a USDA Rural Business Cooperative Service (RBCS) survey of 1998 manufacturing costs. The current make allowances were computed by taking a weighted average of the CDFA and RBCS surveys and adjusting for return on investment, general and administrative costs and marketing costs.
>
> . . . .
>
> This tentative final decision finds that combining the weighted average manufacturing costs of the [most recent] CDFA survey and CPDMP [Cornell Program on Dairy Markets and Policy] study for cheese, nonfat dry milk and butter into a single weighted average is appropriate for updating make allowances for those three products. The CPDMP study weighted average manufacturing cost of dry whey (without California) should be used for the dry whey make allowance.

Milk in the Northeast and Other Marketing Areas; Tentative Final Decision on Proposed Amendments and Opportunity To File Written Exceptions to Tentative Marketing Agreements and Orders, 71 Federal Register 67,467, 67,469-70, 67,487 (Nov. 22, 2006).

4. June 2008 USDA Decision Increasing Make Allowances

> This tentative final decision adopts on an interim basis, a proposal published in the hearing notice as Proposal 1 which seeks to amend the manufacturing allowances for butter, cheese, nonfat dry milk (NFDM) and dry whey using the most currently available data . . . .
>
> . . . .

> The make allowances adopted represent national manufacturing cost averages for cheese, butter, NFDM and dry whey. As found and determined in previous rulemakings on this issue, an estimation of manufacturing costs for national application requires that national production volumes of these commodities be considered in determining the level of make allowances to be relied upon and used in the Class III and Class IV product-pricing formulas.

Milk in the Northeast and Other Marketing Areas; Tentative Partial Final Decision on Proposed Amendments and Opportunity To File Written Exceptions to Tentative Marketing Agreements and Orders, 73 Federal Register 35,305, 35,308, 35,325 (June 20, 2008).

In short, by setting both the original make allowances, and by amending the make allowances to reflect current costs on four separate occasions, USDA has consistently updated make allowances to reflect the most recent and reliable weighted average cost of production data. (Hearing Exh. 214 (IDFA Exh. 6) at p. 14, testimony of M. Brown (IDFA)).

C. USDA'S Historical Use Of Survey Data To Determine The Weighted Average Cost Of Manufacture And Establish The Make Allowances Remains The Correct Methodology.

Proposals 8 and 9 provide that the same basic methodology be employed in setting new make allowances as has consistently been employed in the past. The method employed following the May 2000 hearing to establish make allowances used a weighted average (by volume of dairy product production) of two sources of industry cost data. The first was the annual published summary of the industry cost audit conducted by the California Department of Food and Agriculture ("CDFA"). The second was based on the results of a survey of dairy cooperative manufacturing plant costs conducted by the Rural Business Cooperative Service of USDA ("RBCS"). Milk in the Northeast and Other Marketing Areas; Tentative Decision on Proposed Amendments and Opportunity To File Written Exceptions to Tentative Marketing Agreements and to Orders, 65 Fed. Reg. 76,831, 76,839-40 (Dec. 7, 2000). The RBCS survey was neither audited nor mandatory. (M. Brown (IDFA) Tr. 4228 lines 10-20).

At the 2006 and 2007 hearings, proponents presented updated data from CDFA and RBCS. In addition, proponents introduced evidence from Dr. Mark Stephenson of Cornell University, who presented a research study conducted by the Cornell Program on Dairy Markets and Policy. CPDMP assessed the cost of manufacture of cheddar cheese, dry whey, butter, and nonfat dry milk. (Hearing Exh. 214 (IDFA Exh. 6) at p. 17, testimony of M. Brown (IDFA)).

AMS concluded after the 2006 proceeding that CPDMP presented a more comprehensive set of FMMO costs than RBCS, and declined to further use RCBS. AMS also concluded that combining the CPDMP data with the CDFA data for California plants generally established a superior set of data on which to determine revised make allowances. AMS decided to use a single weighted average of milk volumes studied by CDFA and CPDMP for three of the products - cheese, butter and nonfat dry milk plus a fixed marketing cost of $0.0015. As to dry whey, AMS concluded that it would be best to use the CPDMP manufacturing costs plus the same marketing cost of $0.0015. AMS chose not to rely on the CDFA study for whey costs due to plant "outliers." Milk in the Northeast and Other Marketing Areas; Tentative Final Decision on Proposed Amendments and Opportunity To File Written Exceptions to Tentative Marketing Agreements and Orders, 71 Federal Register 67,467, 67,486 (Nov. 22, 2006).

AMS subsequently in its 2008 decision combined the CPDMP survey report of weighted average costs with the average cost data from the most recent CDFA survey in setting the butter and NFDM make allowances. AMS relied upon the CDFA survey to set the make allowance for cheese, and the CPDMP survey to set the make allowance for dry whey. Milk in the Northeast and Other Marketing Areas; Tentative Partial Final Decision on Proposed Amendments and Opportunity To File Written Exceptions to Tentative Marketing Agreements and Orders, 73 Federal Register 35,305, 35,325-26 (June 20, 2008).

In short, USDA has consistently set make allowances based upon cost of manufacture survey data from two surveys. It has consistently used the CDFA audited cost data as one of the two data sources. It has consistently used another, unaudited cost data survey as the other data source. (Hearing Exh. 214 (IDFA Exh. 6) at p. 18, testimony of M. Brown (IDFA)).

D. USDA Should Amend The Current Make Allowances Using The Average Of The 2023 Stephenson Cost Survey And The 2022 Schiek Cost Study Utilizing CDFA Audited Cost Data.

Dr. Mark Stephenson has been involved in dairy processing cost studies for more than 30 years. As detailed below, he participated in the cost of processing studies conducted in 2006 and 2007 the results of which were offered as testimony in the 2006 and 2007 Federal Milk Marketing Order hearings, and upon which USDA relied in setting make allowances. Dr. Stephenson has conducted an updated 2023 cost survey using the same fundamental methodology. (Hearing Exh. 214 (IDFA Exh. 6) at pp. 18-19, testimony of M. Brown (IDFA)).

In addition, while the California state milk order was replaced by the California federal milk order effective November 1, 2018, CDFA study data of the precise kind also relied on in the 2006 and 2007 formal rulemaking proceedings is available through 2016. Dr. William Schiek examined that data and utilized standard regression analysis techniques to update that cost data through 2022. (Hearing Exh. 214 (IDFA Exh. 6) at p. 19, testimony of M. Brown (IDFA)).

The 2023 Stephenson survey and 2022 Schiek study closely parallel the cost studies USDA had previously found sufficiently reliable to establish make allowances. Proposals 8 and 9 utilize them to calculate appropriate updated make allowances. (Hearing Exh. 214 (IDFA Exh. 6) at p. 19, testimony of M. Brown (IDFA)).

1. Dr. Stephenson's Cost Of Manufacture Studies.

Dr. Mark Stephenson has a bachelor's and master's degree in Dairy Science from Michigan State University and a second master's and doctorate degrees in Agricultural Economics from

Cornell University. Over the course of his career at Cornell University and the University of Wisconsin, Dr. Stephenson for 35 years conducted and published research on the cost of processing dairy products. He retired from the University of Wisconsin in November 2022 as the Director of Dairy Policy Analysis and the Director of the Center for Dairy Profitability. (Hearing Exh. 176 (Updated Stephenson Exh. 1) at p. 2, testimony of M. Stephenson (University of Wisconsin)).[7]

Early work at Cornell University dating back to the 1970s and 80s included the Dairy Information Management System, or DMIS, a project to collect and summarize monthly fluid milk plant processing costs. Later work by the Cornell Program on Dairy Markets and Policy (CPDMP) included studies, several of which were participated in by Dr. Stephenson, on the cost of processing cheese, whey, butter, nonfat dry milk powder, fluid milk and then ultra-filtered milk. Cost of processing projects were again conducted by CPDMP in 2006 and 2007 and participated in by Dr. Stephenson. (Hearing Exh. 177 (IDFA Exh. 29); Hearing Exh. 145 (IDFA 28); M. Stephenson (University of Wisconsin) Tr. 3409 lines 6 - 27). These studies examined the cost of processing the four products used to set FMMO make allowances, and whose volumes and prices are now tracked in the NDPSR. Dr. Stephenson offered testimony as to those results in the FMMO hearings considering, and ultimately adopting, increases to the then-existing make allowances. (Hearing Exh. 176 (Updated Stephenson Exh. 1) at p. 2-3, testimony of M. Stephenson (University of Wisconsin); Hearing Exh. 178 (IDFA Exh. 1) at pp. 2-3, report of M. Stephenson (University of Wisconsin)).

[7] University affiliations are provided for convenience and are not intended to indicate that the testimony was prepared under the auspices of, or endorsed by, the listed university.

a) The 2021 Stephenson Survey.

AMS requested that Dr. Stephenson perform a new cost of manufacture study using the techniques and methodologies employed by CPDMP when it prepared and submitted the cost of manufacture studies previously relied upon by AMS in setting make allowances. In 2018, Dr. Stephenson entered into a Memorandum of Understanding with AMS to update the cost of processing of these four products. Dr. Stephenson and AMS published the results of that 2021 survey, which was based mostly on 2018 data, on February 14, 2022. (Hearing Exh. 176 (Updated Stephenson Exh. 1) at p. 2, testimony of M. Stephenson (University of Wisconsin)); Hearing Exh. 158 (NMPF Exh. 18C)).

b) The 2023 Stephenson Survey.

IDFA and WCMA subsequently asked Dr. Stephenson to update the 2021 survey to capture the impact of inflation and supply chain disruptions since the pandemic. This was done and the results shared in a final 2023 report of primarily 2022 calendar year data from participating plants. (Hearing Exh. 178 (IDFA Exh. 1), report of M. Stephenson (University of Wisconsin)); Hearing Exh. 176 (Updated Stephenson Exh. 1) at p. 3, testimony of M. Stephenson (University of Wisconsin)).

Dr. Stephenson appeared at the 2023-24 FMMO hearing as a neutral witness, neither supporting nor opposing any particular make allowance proposal. (M. Stephenson (University of Wisconsin) Tr. 3410 lines 20-25). In addition to the work Dr. Stephenson performed at the request of IDFA and WCMA to update his cost of manufacture survey, Dr. Stephenson also did work for NMPF, and for MIG, regarding their separate Class I proposals under consideration at these hearings. (M. Stephenson (University of Wisconsin) Tr. 3423 line 24 - 3424 line 13).

A detailed discussion of the 2023 Stephenson survey is set forth in Hearing Exh. 178 (IDFA Exh. 1). The following highlights some of the key points.

(1) The 2023 Stephenson Survey Was Incredibly Robust, More So Than Any Prior Survey.

USDA had recommended that IDFA obtain the best available cost of production data. So IDFA encouraged member participation and arranged for Dr. Stephenson to conduct the survey, given his experience. (M. Brown (IDFA) Tr. 4288 line 13 - 4290 line 17).

Fifteen firms with ownership of 45 different plants participated in the 2023 Stephenson survey. Eight of the firms were under cooperative ownership with the remaining seven proprietary. Thirteen of the plants processed butter, fifteen processed nonfat dry milk, eighteen processed cheddar cheese, and nine processed dry whey for a total of 55 plant-product observations. Plant locations were geographically dispersed across all regions of the country except the Southeast where few manufacturing plants exist with reportable products. (Hearing Exh. 178 (IDFA Exh. 1), report of M. Stephenson (University of Wisconsin); M. Stephenson (University of Wisconsin) Tr. 3591 1ine 13 - 3592 line 5; Hearing Exh. 214 (IDFA Exh. 6) at p. 20, testimony of M. Brown (IDFA)).

Only plants that manufacture products collected in the NDPSR were solicited to participate in these studies. These plants might not be actual participants in the NDPSR, but they needed to be operations manufacturing products whose characteristics are consistent with the NDPSR products. As an example, exported nonfat dry milk might not be included in the NDPSR because the days between the contract and delivery dates disqualify the transaction. But for Dr. Stephenson's cost survey purposes, the cost of transforming raw milk into that nonfat dry milk powder is still valid data for inclusion in his survey. (Hearing Exh. 176 (Updated Stephenson Exh. 1) at p. 3, testimony of M. Stephenson (University of Wisconsin)).[8] Similarly, the costs of

---

[8] The cost of high-heat nonfat dry milk was not covered in the Stephenson 2023 survey because high-heat nonfat dry milk does not fall with the NPDSR reporting criteria. An AMPI witness (continued…)

producing cheddar cheese ultimately sold as 640-pound blocks could be utilized in the survey, but the specific costs of packaging 640-pound blocks would not be included in the survey results. (M. Stephenson (University of Wisconsin) Tr. 3585 line 5 - 3586 line 7).

Participation was by far the highest of any of the surveys previously used to set make allowances. One can determine the percentage of the total U.S. production of a given commodity covered by the survey by multiplying the number of plants participating in the survey times the average pounds per plant surveyed, divided by the total U.S. production of the commodity. (M. Stephenson (University of Wisconsin) Tr. 3608 line 8 - 3610 line 4). This is the percentage surveyed of ***total*** U.S. production, not simply the percentage of production that meets the requirements to be included in the NPDES survey.

The following chart shows that Dr. Stephenson's 2023 cost survey encompassed surpassed 50% of all 2022 NASS production for the four commodity products, with the applicable percentages for butter and NFDM reaching a whopping 80% and 91%, respectively:

testified that AMPI had nonetheless unwittingly included the costs of high-heat nonfat dry milk in its survey response. S. Schlangen (AMPI) Tr. 2619 lines 3-26). With AMPI's permission, Dr. Stephenson subsequently examined AMPI's survey response and determined that the average cost of production Stephenson had reported for nonfat dry milk was unchanged to the fourth decimal point by the exclusion of the mistakenly included AMPI high-heat nonfat dry milk data. (M. Stephenson Tr. 3422 line 7 - 3423 line 23; 3543 line 22 - 3544 line 16).

Costs for Whey Protein Concentrate were collected but not reported. (M. Stephenson Tr. 3585 line 5 - 3586 line 7).

USDA-NASS and Stephenson Cost Survey Dairy Product Volumes

USDA NDPSR Cost Survey Products	USDA-NASS 2022 Annual Production	2023 Stephenson Cost Survey			Survey Production Share of USDA NASS Production
		Participating Plants	Average Annual Production	Total Survey Annual Production	
Cheddar Cheese	3,963,741,000	18	122,404,426	2,203,279,668	55.6%
Whey (Human)	885,929,000	9	49,986,287	449,876,583	50.8%
Nonfat Dry Milk	1,968,364,000	15	119,615,524	1,794,232,860	91.2%
Butter	2,058,737,000	13	126,906,009	1,649,778,117	80.1%

Data Sources: Dairy Products 2022 Summary April 2023. USDA NASS ISSN: 1057-784X PP11,23,29.
Cost of Processing in Cheese, Whey, Butter and Nonfat Dry Milk Plants, Mark Stephenson, Ph.D., June 2023

(Hearing Exh. 178 (IDFA Exh. 1) at pp. 9-11 (report of M. Stephenson); Hearing Exh. 215 (IDFA Exh. 42 (testimony of M. Brown (IDFA)).

One would expect percentages this high to be representative of the population as a whole. (W. Schiek (Dairy Institute of California) Tr. 3705 line 23 - 3707 line 2). Indeed, for butter, the percentage covered by the survey was so high, 85%, that the study was really a census, not a survey. (M. Stephenson (University of Wisconsin) Tr. 3608 line 8 - 3610 line 4). The percentage covered by nonfat dry milk was likewise more of a census than a survey. (W. Schiek (Dairy Institute of California) Tr. 3705 line 23 - 3706 line 14).

NMPF counsel in questioning certain witnesses indicated that the surveys covered as little as 10% of the total volume of some of the products being surveyed, asking: "And did you hear him [Dr. Stephenson] say that his response rate depending on the category ranged anywhere between 10% of the volumes produced in those categories up to about 50%?" Tr. 3805 lines 5-7. As the chart above indicates, the actual percentages for the 2023 Stephenson study were far higher, ranging from 55.6% to 91.2%.

Indeed, Dr. Stephenson's 2023 cost study covered significantly higher shares of all commodities than his previous 2006 and 2021 cost studies, the only exception being the marginally higher percentage of butter covered in the 2021 study:

2019 USDA-NASS and Stephenson Cost Survey Dairy Product Volumes

USDA NDPSR Cost Survey Products	USDA-NASS 2019 Annual Production	2021 Stephenson Cost Survey (2019 Data)			Survey Production Share of USDA NASS Production
		Participating Plants	Average Annual Production	Total Survey Annual Production	
Cheddar Cheese	3,736,753,000	10	61,050,768	610,507,680	16.3%
Whey (Human)	961,792,000	8	35,666,405	285,331,240	29.7%
Nonfat Dry Milk	1,851,110,000	27	44,425,802	1,199,496,654	64.8%
Butter	1,994,108,000	12	136,365,557	1,636,386,684	82.1%

Data Sources: Dairy Products 2020 Summary April 2021. USDA NASS ISSN: 1057-784X PP 8,20,26.
Cost of Processing in Cheese, Whey, Butter and Nonfat Dry Milk Plants, Mark Stephenson, Ph.D., December 2021

2006 USDA-NASS and Stephenson Cost Survey Dairy Product Volumes

USDA NDPSR Cost Survey Products	USDA-NASS 2006 Annual Production	2007 Stephenson Cost Survey (2006 Data)			Survey Production Share of USDA NASS Production
		Participating Plants	Average Annual Production	Total Survey Annual Production	
Cheddar Cheese	3,124,001,000	11	118,711,332	1,305,824,652	41.8%
Whey (Human)	1,063,551,000	7	58,722,459	411,057,213	38.6%
Nonfat Dry Milk	1,243,572,000	7	70,142,458	490,997,206	39.5%
Butter	1,448,482,000	4	57,626,803	230,507,212	15.9%

Data Sources: Dairy Products 2007 Summary April 2008. USDA NASS ISSN: 1057-784X PP 4,10.
Testimony on Cost of Processing in Cheese, Whey, Butter and Nonfat Dry Milk Plants, Federal Order Hearing, Pittsburgh, PA, Dr. Mark Stephenson, July 2007

(Hearing Exh. 221 (IDFA Exh. 221) (corrected version of page 12 of Hearing Exh. 215 (IDFA Exh. 42), testimony of M. Brown (IDFA)); M. Brown (IDFA) Tr. 4469 line 8 - 4474 line 1)).

Although participation in the 2023 Stephenson survey was anonymous, many participants voluntarily revealed their participation in their own hearing testimony. This included all of the largest participants in the manufacturing section, which could be expected to have the lowest costs of production given their economies of scale. For example, the participating cheese plaints produced an average of 122 million pounds of cheddar cheese annually, well above the average cheddar production per plant in this country. (Hearing Exh. 146 (IDFA Exh. 25) at p. 3, testimony of S. Schlangen (AMPI)).

Participating plants, including both cooperative and proprietary plants, included among others:

- **AMPI**, the largest farmer-owned cheese cooperative in the United States, which submitted costs for multiple products from four cheese manufacturing facilities and one nonfat dry milk plant. These cheese plants all process 3 million pounds a day, and all have had new cheese equipment installed over the last ten years. (Hearing Exh. 146 (IDFA Exh. 25) at p. 4, testimony of S. Schlangen (AMPI)); S. Schlangen (AMPI) Tr. 2620 line 26 - 2621 line 3).
- **Leprino** manufactures sweet whey at its Allendale, Michigan and Waverly, New York plants, and nonfat dry milk at its Greeley, Colorado plant. 2022 data from all three of these plants was included in Dr. Stephenson's latest cost of processing study. (Hearing Exh. 199 (IDFA Exh. 23) at p. 1, testimony of A. Krebs (Leprino Foods)).
- **Glanbia Nutrition** fully owns four dairy plants in Idaho that process a combined 12 million pounds of milk a day and turn that milk into barrel cheese, block cheese, high concentrate whey proteins, proprietary protein blends and lactose, and Glanbia's Joint Venture plants in New Mexico and Michigan process a combined 22 million pounds of milk per day and turn it into American style block cheese and high concentrate whey proteins. Glanbia's combined output between its fully owned and Joint Venture plants makes it the largest American style cheese manufacturer. All five of Glanbia's cheddar plants, which include its joint venture plants, participated in the 2023 Stephenson cost study. (Hearing Exh. 196 (IDFA Exh. 22) at p. 23, testimony of J. DeJong (Glanbia)). This included the Southwest Cheese plant, which is the largest cheese manufacturing plant in the world, and its Gooding. Idaho barrel cheese

plant, which is the largest barrel cheese manufacturing plant in the world. (J. DeJong (Glanbia) Tr. 3743 line 10- page 3744 line 6; 3748 lines 2-14). It took well over a month for Glanbia's accounting team and plant controllers to collect and compile the information, which was then reviewed by others to confirm its accuracy, before submittal to Dr. Stephenson. (J. DeJong (Glanbia) Tr. 3742 line 18 - 3743 line 9). Glanbia is a very efficient operator, and its participation in the survey likely brought the average survey costs down. (J. DeJong (Glanbia) Tr. 3814 lines 15-26).

- **Hilmar.** Hilmar is the second largest cheddar cheese manufacturer in the United States. (W. Eveland (Hilmar) Tr. 3850 lines 13-26). Hilmar participated in Dr. Stephenson's 2023 survey, with respect to both of its cheese plants, located in California and Texas. (W. Eveland (Hilmar) Tr. 3845 lines 1-6; 3850 line 27 - 3851 line 6).
- **Saputo.** Saputo is one of the three largest cheese manufacturers in the United States. While it does not make cheddar cheese, it does make dry whey, and submitted cost information from its Las Cruces, New Mexico plant for the 2023 Stephenson study. (Hearing Exh. 202 (IDFA Exh. 27) at pp. 1, 3, testimony of T. Brockman (Saputo)).
- **Land O' Lakes.** Farmer cooperative Land O' Lakes participated in the 2023 Stephenson survey (as well as his 2007 and 2019 surveys), and always did its best to submit accurate information. (C. Edmiston (Land O' Lakes) Tr. 2545 line 14 - 2546 line 13). Land O' Lakes operates two large butter-powder plants in Tulare, California and Carisle, Pennsylvania. (C. Edmiston (Land O' Lakes) Tr. 2529 lines 16-19; 2567 line 3 - 2569 line 16).

- **Foremost Farms.** Farmer cooperative Foremost Farms owns two cheddar cheese processing plants and participated in the 2023 Stephenson survey with respect to both its cheddar cheese and whey operations. (D. Hanson (Foremost Farms) Tr. 2751 lines 7-16; Hearing Exh. 154 (NMPF Exh. 16) at p. 1, testimony of D. Hanson (Foremost Farms)).
- **California Dairies, Inc.** Farmer cooperative California Dairies, Inc. (CDI) operates six processing facilities in California, all of which produce nonfat dry milk, and four of which produce butter. (R. Vandenheuvel (CDI) Tr. 2789 line 15- 2790 line 18). CDI participated in the 2023 Stephenson cost survey. (R. Vandenheuvel (CDI) Tr. 2796 lines 16 -24).
- **Darigold (NDA).** Farmer cooperative Darigold (NDA) operates four nonfat dry milk facilities, a cheese facility that also produces dry whey, and two butter facilities. (Hearing Exh. 159 (NMPF Exh. 19) at p. 1, testimony of M. Schilter (NDA)); M. Schilter (NDA) Tr. 2829 line 9 - 2831 line 15). NDA participated in the 2023 Stephenson cost survey. (M. Schilter (NDA) Tr. 2835 line 24 - 2836 line 1).
- **Maryland and Virginia Milk Producers Cooperative.** Farmer cooperative Maryland and Virginia Milk Producers Cooperative ("MDVA") operates two manufacturing plants, one capable of manufacturing bulk butter along with nonfat dry milk, the other only bulk butter. (Hearing Exh. 160 (NMPF Exh. 23) at p. 2, testimony of M. John (MDVA)). MDVA participated in the 2023 Stephenson cost survey, submitting data for both butter and nonfat dry milk. (M. John (MDVA) Tr. 2863 lines 20-27; 2872 lines 10-19).

- **Agrimark.** Farmer cooperative Agrimark operates three cheese manufacturing facilities and one butter-powder facility. (Hearing Exh. 170 (NMPF Exh. 20) at p. 1, testimony of C. deRonde (Agrimark)). Agrimark participated in the 2023 Stephenson survey. (C. de Ronde (Agrimark) Tr. 3121 lines 10-18).

As compared to previous surveys, the 2023 Stephenson survey skews to larger plants, which one would expect would result in lower average cost of production, given their greater efficiency. (M. Brown (IDFA) Tr. 4283 line 17 - 4284 line 7).

(2) Dr. Stephenson applied well-developed survey techniques.

Dr. Stephenson's objective was to determine the costs of product transformation from raw ingredients to end wholesale products. The costs of raw milk, purchased cream, nonfat dry milk, etc. are excluded. But non-dairy ingredients, such as salt or enzymes are included. Costs are inclusive through product packaging but do not incorporate post-packaging costs such as long-term storage, product aging, sales costs or product distribution. The costs are meant to represent the cost of transformation of milk, or milk ingredients, into the finished wholesale dairy product. An economic depreciation is included to cover consumed capital, and a return on the market value of assets is added to reflect opportunity costs. (Hearing Exh. 176 (Updated Stephenson Exh. 1) at p. 4, testimony of M. Stephenson (University of Wisconsin)); Hearing Exh. 178 (IDFA Exh. 1) at p. 6 (report of Dr. Stephenson)).

Plants were asked to supply one year's worth of data. Virtually all participants used calendar year 2022 for their data year but two instead used their most recent fiscal year. (Hearing Exh. 178 (IDFA Exh. 1) at pp. 8-9 (report of Dr. Stephenson); M. Stephenson (University of Wisconsin) Tr. 3461 line 24 - 3462 line 3).

With some tweaks, the cost survey and allocation method applied by Dr. Stephenson in his various surveys was based on that which the California Department of Food and Agriculture had adopted for use in its own dairy plant cost of production surveys, and included Dr. Stephenson having reviewed the California survey instructional manual. (Stephenson (University of Wisconsin) Tr. 3412 line 25 - 3414 line 25).

The survey utilized a computerized program that began by asking basic questions—like what products are produced in the plant? —and follow that up with only questions relevant to those products. (Hearing Exh. 176 (Updated Stephenson Exh. 1) at p. 4, testimony of Dr. Stephenson (University of Wisconsin)).

The reporting format and the cost categories shown here are the same as CDFA's. "Processing Labor" includes all direct and indirectly allocated labor except for plant management and clerical labor. "Utilities" include all electric, natural gas, coal, steam or other energy costs. "Packaging" includes boxes, liners, totes, tape, labels, glue, pallets, pallet sheets, stretch wrap, etc. "Non-Labor or Utilities Processing" includes all nondairy ingredients, such as salt, starter, etc., depreciation, taxes, cleaning, laboratory and general supplies, etc. "General & Administrative" includes management and clerical labor (but not sales or marketing), dues, postage, legal & accounting, headquarters expense and short-term interest. (Hearing Exh. 178 (IDFA Exh. 1) at pp. 8-9 (report of Dr. Stephenson)).

Plants may have processed several products but only cheddar cheese, dry whey, butter and nonfat dry milk powder results were presented in the Stepheson report. The other products have had processing costs allocated to them in just the same way and those costs are not born by the products of interest. (Hearing Exh. 178 (IDFA Exh. 1) at p. 9 (report of Dr. Stephenson)).

Some processing costs are easily allocated to the product of interest. For example, the cost of cardboard for a 40-pound block is directly assigned to cheddar cheese. Other costs must be allocated across multiple products. Dr. Stephenson collected component values on all products produced at the plant. The weight of total component solids in a product becomes the basis for allocation. For instance, if there was 75,000 pounds of components in cheddar cheese produced at the plant and 25,000 pounds of components in mozzarella cheese, then 75% of the costs of salt used in the plant would be attributed to the cheddar cheese. (Hearing Exh. 176 (Updated Stephenson Exh. 1) at p. 4, testimony of M. Stephenson (University of Wisconsin)).

Other costs are more complicated to properly allocate. If a plant brings in only raw milk and produces butter and nonfat dry milk, then the labor cost in the churn room is directly allocated to the butter produced. But, if the plant has only one electric meter, the total electric costs are allocated by the pounds of components in the butter and nonfat dry milk produced. This has been a standard practice utilized by the industry and previously used by the California Department of Food and Agriculture in their cost accounting for dairy plants. (Hearing Exh. 176 (Updated Stephenson Exh. 1) at p. 4, testimony of M. Stephenson (University of Wisconsin)).

Labor costs are identified by job function. Functional areas depend on the product mix but include such centers as receiving and tanker washing, cheese processing, cheese packaging, dryer labor, powder bagging, cold room, etc. Cheese processing or packaging labor are clearly assigned to cheese labor costs, although they may need to be allocated between different cheeses produced at the plant. However, job functions such as receiving and tanker washing should have labor apportioned to both cheese production, whey processing, etc. (Hearing Exh. 178 (IDFA Exh. 1) at p. 6 (report of Dr. Stephenson)).

An attempt is made to separate the overhead costs required to own and operate a processing plant from the marketing expense. Product must be sold for plants to be viable, however, marketing costs can vary tremendously depending on your target channel (e.g., are plants selling consumer packages to higher end retailers or delivering bulk products to firms specializing in final product marketing). For this reason, all sales expenses are excluded from the cost of processing figures. But some plants are charged a “headquarters” expense. This expense often covers centralized services such as legal, accounting, etc. that would otherwise be line items in a plant’s general ledger. (Hearing Exh. 178 (IDFA Exh. 1) at p. 6 (report of Dr. Stephenson)).

Anywhere plant expenses can be directly allocated to particular products, plants are asked to do so. A good example is utility expense where individual electric or gas meter can be recorded and assigned to a product line such as cheese or powdered products. Some expenses must be indirectly allocated to various products produced at the plant. (Hearing Exh. 178 (IDFA Exh. 1) at p. 6 (report of Dr. Stephenson)).

Going back to 1999, USDA has always included a return on investment in the make allowance, because a handler has an opportunity cost for its manufacturing assets, and one must put a value on that if you are going to establish the true cost of manufacture. (M. Brown (IDFA) Tr. 4326 line 28 - 4327 line 7).

An allowance for a ROI is viewed as an opportunity cost for the firm. If the firm invested the value of the capital assets in another venture or in financial instruments, they would expect a return. Plants were asked to provide “market value of assets” for the plant and this is the value that is used to calculate a ROI allowance. Some plants were not able to estimate the plant’s market value and left these fields blank. Those plants did not have a ROI allowance included in their cost of production. (Hearing Exh. 178 (IDFA Exh. 1) at pp. 8-9 (report of Dr. Stephenson)). If the plant did not enter a number for the value of its plant, then economic depreciation would be treated as zero, which would understate the plant’s true capital costs and total costs of production. (M. Stephenson (University of Wisconsin) Tr. 3489 line 26 - 3490 line 9).

Valuation of assets is half of the information needed to calculate a ROI allowance—a suitable rate of return is the other. CDFA had used the Moody's Baa corporate bond index as their rate and this project does also. This index is considered to be a medium-grade investment vehicle. It is comprised of bonds better than "junk" status but not as solid as "gilt edged" bonds—In other words, a middle of the road rate of return. (Hearing Exh. 178 (IDFA Exh. 1) at pp. 8-9 (report of Dr. Stephenson)).

The rate of return on the asset value used as a return a conservative bond rate. (M. Stephenson (University of Wisconsin) Tr. 3507 line 26 - 3508 line 17). In any event, the return on investment represents a rather small part of total costs of production; for example, for nonfat dry milk processing, return on investment was $0.035 per pound, out of total costs of $0.275 per pound. (M. Stephenson (University of Wisconsin) Tr. 3508 line 23 - 3509 line 10).

(3) Dr. Stephenson employed a variety of techniques to ensure the survey's accuracy.

Dr. Stephenson does not have audit authority to verify the data submitted. However, there are several key cross-checks in the data collection.

The search for outliers. Dr. Stephenson looked for statistical outliers across plants to ensure that data entries are as accurate as possible. Stephenson made inquiries if he discovered statistical outliers based on the other cost data received. Follow-up emails or phone calls will usually clarify any data questions that might arise. (M. Stephenson (University of Wisconsin) Tr. 3549 lines 2-26). (Hearing Exh. 176 (Updated Stephenson Exh. 1) at p. 3, testimony of Dr. Stephenson (University of Wisconsin)).

A mass balance analysis. One quality control method employed by Dr. Stephenson was the performance of a "mass balance" analysis. This entails a comparison of all of the milk and dairy ingredient components coming into the plant, to all the components in the final products from the plant. If the two are not approximately equal, this is a red flag. While there could be minor differences, and one would expect some plant loss (shrink), if it looks like something is unaccounted for, then that mass balance is telling you something. If the mass balance did not look correct, Stephenson would follow up with questions. The most common cause of a discrepancy would be a plant that might have not reported products that they made in the plant that were not among the specific products whose costs were being studied. Stephenson still needed to be provided the component balance for those additional products; in order to allocate costs across the different products made in the plant, he must collect information about products whose costs were not themselves being calculated. If Stephenson had a mass balance that seemed out of whack, he either worked with the company to a point where he came to the conclusion that the information had been made accurate, or rejected the data for inclusion in the survey, which did happen with one plant in the 2023 survey. (M. Stephenson (University of Wisconsin)Tr. 3419 line 1 - 3420 line 9).

Comparison of data entries. For example, you're identifying the pounds of dairy product by a package size that you produced over the course of a year, and then you are entering data as to how many pounds of this product you manufactured in the each of the 12 months. And those numbers need to be the same. If they are not the same, Stephenson needed to know why. For example, was there a significant amount of off spec product that had to be discarded (M. Stephenson (University of Wisconsin) Tr. 3547 line 15 - 3549 line 6).

The justifiability of the costs reported. Stephenson would make inquiries as necessary to determine whether reported plant values were justifiable. (M. Stephenson (University of Wisconsin) Tr. 3561 line 27 - 2562 line 17).

The reversion to traditional allocation methods. In his 2021 project for USDA, Dr. Stephenson had employed a second weighting factor based on the degree of transformation of the product. Products like skim milk are lightly transformed while fully dried and bagged powder has incurred additional utility, labor, packaging, etc. costs. This additional methodology accounted for the total costs in the plant but, ceteris paribus, more costs were placed on powder than butter, and much less on the skim milk sold. (Hearing Exh. 176 (Updated Stephenson Exh. 1) at pp. 4-5, testimony of M. Stephenson (University of Wisconsin)).

Industry, including both proprietary and cooperative handlers, was confused by the 2021 Stephenson survey's use of transformation factors, which was different from the standard practice of distributing costs based upon total pounds of solids. Every company, both proprietary and cooperative, with which the issue was discussed requested that Stephenson return to using the standard practice if an updated survey were to be performed (as in fact occurred, resulting in the 2023 Stephenson survey). (M. Brown (IDFA) Tr. 4233 line 13 - 4234 line 27).

After the 2021 study was published, Dr. Stephenson himself heard from many in the industry that they were concerned about the new methodology and were not yet comfortable with its use. The request to change back to the old methodology came from both IDFA and NMPF. (M. Stephenson (University of Wisconsin) Tr. 3564 lines 16-27).

For the 2022 study, Dr. Stephenson went back to the previous methodology using the pounds of components as the allocation factor and not the degree of transformation. Although he stands by the concept of further accounting for the degree of activity needed to produce a product, he believes that the industry needs to be comfortable with the methodology used (Hearing Exh. 176 (Updated Stephenson Exh. 1) at pp. 4-5, testimony of M. Stephenson (University of Wisconsin)), and the new methodology also made it difficult to compare survey results with the results of prior surveys. (Stephenson (University of Wisconsin) Tr. 3412 lines 15-24). Dr. Stephenson in his 2023 study changed cost allocations back to a "per solids" basis, as is standard practice for most of the industry and the method used in his 2006 survey and the well-regarded California Department of Agriculture audited cost surveys. (Hearing Exh. 146 (IDFA Exh. 25) at p. 3, testimony of S. Schlangen (AMPI)).

Both coops and non-coops, after seeing the 2021 Stephenson survey results, wanted the new survey to go back to allocating costs based upon solids. While it is true the 2021 survey, given its new allocation methodology, suggested a decrease in the butter make allowance, it would have increased the powder make allowance to almost $0.30 per pound (M. Brown (IDFA) Tr. 4309 line 28 - 4311 line 5), far higher than the $0.275 per pound established by the 2023 Stephenson survey. (Hearing Exh. 214 (IDFA Exh. 6) at p. 21 (testimony of M. Brown (IDFA)).

(4) Other differences Between the 2021 and 2023 Stephenson surveys.

The sample matters. Only 10 cheddar cheese plants provided the 2018 data used in the 2021 report, while the 2022 data sample used in the 2023 report included 18 cheddar cheese. The percentage of total U.S. cheese production rose from 16.3% to 55.6%. (Hearing Exh. 176 (Updated Stephenson Exh. 1) at p. 6, testimony of M. Stephenson (University of Wisconsin)); Stephenson (University of Wisconsin) Tr. 4471 line 26 - 4472 line 7).

In the 2018 data used in the 2021 report, 27 nonfat dry milk plants participated, while in the 2022 data used in the 2023 report, there were only 15. However, the average pounds of product per plant was almost three times larger, and the total pounds of product reported for 2022 was much higher than the previous study. (Hearing Exh. 176 (Updated Stephenson Exh. 1) at p. 6, testimony of M. Stephenson (University of Wisconsin)); see pp. 114-15 above.

Dry whey processing had a similar number of operations in the sample. Eight plants were included with the 2021 report and 9 with the 2023 report. But the volume was almost 50 percent greater with the more recent sample. (Hearing Exh. 176 (Updated Stephenson Exh. 1) at p. 6, testimony of M. Stephenson (University of Wisconsin)).

Although the number of participating butter plants were similar (13 in the 2023 report versus 12 in the 2021 report) and the total volume of butter represented is similar between the two, the plants participating are significantly different. The 2022 data represent both larger plants and smaller ones compared with the 2018 data where the size was more homogeneous. (Hearing Exh. 176 (Updated Stephenson Exh. 1) at p. 6, testimony of M. Stephenson (University of Wisconsin)). New automation technology has become available which can reduce labor costs. And, there is considerable variation in per unit utility costs across plants. Further, larger multi-plant firms may have input purchasing cost advantages that smaller single-plant firms do not. (Hearing Exh. 176 (Updated Stephenson Exh. 1) at p. 6, testimony of M. Stephenson (University of Wisconsin); Hearing Exh. 178 (IDFA Exh. 1) at pp. 10-11 (report of Dr. Stephenson)).

Plant ownership might suggest different objectives for firms. In a commodity-based industry, proprietary firms can only improve their profit margin by reducing supply chain and processing costs. Cooperatively owned plants certainly strive for profit for their members, but assuring a home for member milk may be an even stronger objective which may limit plant investment. (Hearing Exh. 176 (Updated Stephenson Exh. 1) at p. 6, testimony of M. Stephenson (University of Wisconsin)).

In the end, one fact stood out: there was surprisingly uniform increases in the cost of processing from the 2006 data to the 2022 data of somewhere around 65-70 percent across all four products. (Hearing Exh. 176 (Updated Stephenson Exh. 1) at p. 7, testimony of M. Stephenson (University of Wisconsin)).

Dr. Stephenson's 2023 cost study established the following 2022 costs of manufacture:

Cheese:	$0.2643
Dry whey:	$0.3361
NFDM:	$0.2750
Butter:	$0.3176

(Hearing Exh. 176 (Updated Stephenson Exh. 1) at p. 5, testimony of M. Stephenson (University of Wisconsin)).

2. The 2022 Dr. William Schiek Cost Study.

Reliance upon California cost of production data makes eminent sense given that state's major role in the production of manufactured dairy products. California produced 860,246,000 pounds of nonfat dry milk, 43.7% of the 1,968,364,000 total U.S. production; 685,953,000 pounds of butter, 33.3% of the 2,058,737,000 total U.S. production; and 2,460,538,000 pounds of cheese in 2022, 17.5% of the 14,062,775,000 total U.S. production. NASS USDA Dairy Products 2022 Summary (published April 2023) at pages 30, 43, and 46; available at: Dairy Products 2022 Summary 04/26/2023 (cornell.edu) (Official Notice Requested, Hearing Exh. 507 (IDFA Exh. 69), Item 11; Official Notice Taken, ALJ Order of March 20, 2024 at p. 2).

In 2022, IDFA retained Dr. William Schiek to analyze and update the CDFA audited cost survey data, which as noted runs through the year 2016. W. Schiek is well suited to this task, having received a Bachelor of Science degree in Applied Economics and Business Management from Cornell University, a Master of Science degree in Food and Resource Economics from the University of Florida, and a PhD in Food and Resource Economics from the University of Florida. He has served as a Cooperative Relations Specialist (Economist) for the New York-New Jersey

Milk Market Administrator, USDA from 1982 through 1987; a Research Assistant in the University of Florida Food and Resource Economics Department from 1989 to 1991; an Assistant Professor of Agricultural Economics at Purdue from 1991 to 1997; the Chief Economist of the California Dairy Institute from 1997 to 2022; and the Executive Director of the California Dairy Institute from 2022 to the present. (Hearing Exh. 195 (IDFA Exh. 40) at p. 2, testimony of W. Schiek (Dairy Institute of California)).

A detailed discussion of the 2022 Schiek study is set forth in Hearing Exh. 180 (IDFA Exh. 2). The following are key highlights.

a) The CDFA cost of manufacture studies.

Before the California FMMO was established in November 2018, milk pricing in the state was regulated by the California Department of Food and Agriculture (CDFA). The California state marketing orders employed end-product pricing formulas, very similar to those used in the FMMOs, to establish regulated minimum prices for milk produced and marketed in the state. Like the FMMOs, California milk pricing formulas contained make allowances to represent the cost of manufacturing dairy products in the state. (Hearing Exh. 180 (IDFA Exh 2) at p. 1, testimony of W. Schiek (Dairy Institute of California); W. Schiek (Dairy Institute of California) Tr. 3649 line 2 - 3650 line 25).

To support regular updates to the pricing formulas, CDFA conducted audited surveys of manufacturing costs for butter, nonfat dry milk, and cheddar cheese, beginning in 1989. During the 1990s and early 2000s, CDFA conducted audited surveys at various times covering periods that spanned beyond a single calendar year. The study periods could overlap from one year to the next, making it difficult to analyze annual changes in costs using econometric techniques. Beginning in 2002, CDFA began completing manufacturing cost surveys annually, covering calendar-year study periods. (Hearing Exh. 180 (IDFA Exh 2) at p. 1, testimony of W. Schiek

(Dairy Institute of California)). These annual CDFA manufacturing cost surveys have repeatedly been relied upon by USDA in setting FMMO make allowances, as discussed on pp. 107-09 above; see also W. Schiek (Dairy Institute of California) Tr. 3704 line 24 - 3705 line 2).

The CDFA surveys were audited. CDFA would request cost data from the plants each of these years, and the plants would submit their data. CDFA then had a manufacturing cost unit, a team of folks who would look at the data, go into the plant, meet with the plant employees, ask questions about the data, ask for and review documentation, and occasionally ask that additional data be gathered and included in the survey results, all for the purpose of ensuring that the cost categories were accurate and to ensure that the data was accurate. Both the CDFA reports themselves and conversations with CDFA personnel confirm that the cost data was audited. (W. Schiek (Dairy Institute of California) Tr. 3645 line 14 - 3647 line 10; 3688 line 5 - 3689 line 15; Hearing Exh. 156 (NMPF Exh 18A), p. 3).

The CDFA weighted average manufacturing costs reported for cheddar cheese, dry whey, butter, and nonfat dry milk (NFDM) from 2002-2016 are shown in Table 1 of Hearing Exh. 180 (IDFA Exh 2) at p. 2, testimony of W. Schiek (Dairy Institute of California)), and the complete CDFA reports are Hearing Exhs. 181-194 (IDFA Exhs. 7-20).

b) Dr. Schiek's employment of regression analysis.

Given the availability of 15 consecutive sets of annual manufacturing cost data from CFDA, regression analysis allows one to estimate dairy manufacturing costs in the post 2016 time period. Regression analysis is a statistical method used to explore and quantify the relationship between a dependent variable, in this case dairy manufacturing costs, and one or more independent variables, such as energy and labor prices. It aims to find a mathematical model that best fits the data, allowing us to understand the impact of changes in the independent variables on the dependent variable. One can then use the estimates of the impacts associated with each of the independent variables to forecast manufacturing costs beyond the period for which we have manufacturing cost data. (Hearing Exh. 180 (IDFA Exh 2) at pp. 2-3, testimony of W. Schiek (Dairy Institute of California)).

For regression analysis of cheddar, nonfat dry milk and butter manufacturing costs, explanatory variables capturing changes in energy, labor, and general material cost. These explanatory variables in each of the cost equations in the model are included because they are expected to be correlated with the underlying cost component that they are meant to represent. With utility costs, for example, the California industrial electricity rate is meant to represent the electricity cost faced by dairy product manufacturers in the state, just as the industrial natural gas price is meant to represent their natural gas costs. (Hearing Exh. 180 (IDFA Exh 2) at p. 5, testimony of W. Schiek (Dairy Institute of California)).

Plant labor costs will be impacted primarily by wages paid to plant workers and by the productivity (efficiency) of those workers. The California wage rate for nonsupervisory manufacturing workers serves as a proxy for the changes in plant labor cost, while nonfarm labor productivity accounts for gains in labor efficiencies that would be expected to reduce labor costs over time. Hearing Exh. 180 (IDFA Exh 2) at p. 5, testimony of W. Schiek (Dairy Institute of California)).

Other costs encompass a broad cost category with many components. It would be difficult to develop proxy measures for each individual cost category. Instead, to represent general changes in the costs of the various items that combine to form the other costs category, the US producer price index (PPI) for intermediate goods was utilized. Intermediate goods, which are typically sold industry-to-industry for resale or to manufacturers, are used in the production process to make other goods that are ultimately sold to consumers. As such, intermediate goods represent many of the material goods that impact the cost of manufacturing and are a reasonable proxy to represent changes in manufacturing costs other than labor and utility costs. Hearing Exh. 180 (IDFA Exh 2) at p. 5, testimony of W. Schiek (Dairy Institute of California)).

The specific data relied upon included U.S. Department of Energy, Energy Information Agency California industrial rates for natural gas and electricity; and U.S. Department of Labor, Bureau of Labor Statistics for California wage rates for non-supervisory manufacturing workers and for non-farm labor productivity. (W. Schiek (Dairy Institute of California) Tr. 3627 line 17 - 3629 line 17).

To account for changes in productivity that might impact other dairy manufacturing costs, the Total Factor Productivity Index for Food, Beverage, and Tobacco manufacturing reported by Bureau of Labor statistics is included as one of the explanatory variables in the other cost equation. Total factor productivity is a description of the relationship between output and the combined factors of production (inputs), and thus would be a better representation than labor productivity of how productivity changes would impact other costs. (Hearing Exh. 180 (IDFA Exh 2) at p. 6, testimony of W. Schiek (Dairy Institute of California)). In addition, if efficiencies have increased over the 16-year period from 2002 to 2016 when the California cost data was collected, that would be reflected in more total pounds of product being produced per total cost, and that phenomenon and trend will be captured in the projected costs going forward. (W. Schiek (Dairy Institute of California) Tr. 3703 line 14 - 3704 line 23).

No cost model was estimated for dry whey, because CDFA audited and reported dry whey costs for only a few plants and for only four years. Therefore, in Dr, Schiek's analysis, whey manufacturing costs were calculated by adding an incremental drying cost of $0.03 per pound to the nonfat dry milk cost estimate. The value of $0.03 per pound was chosen because it approximates the difference between the nonfat dry milk and dry whey manufacturing allowances currently used in the FMMO pricing formulas. (Hearing Exh. 180 (IDFA Exh 2) at p. 4, testimony of W. Schiek (Dairy Institute of California)).

The cost models for each of the commodities (nonfat dry milk, butter, and cheddar cheese) were composed of three equations of the following general form:

Labor Cost = a1 + b1(California Manufacturing Wage) +c1(Labor Productivity)

Utility Cost = a2 + b2(Energy Price)

Other Cost = a3 + b3(US PPI for Intermediate Goods) + c3(Total Factor Productivity).

(Hearing Exh. 180 (IDFA Exh 2) at pp. 4-5, testimony of W. Schiek (Dairy Institute of California)).

The parameters a1, a2, and a3 are constants, while b1, b2, b3, c1 and c3 are parameters that define the impact that the explanatory (independent) variables have on the associated manufacturing costs. Depending on the commodity, the energy price used in the model is the natural gas price, the electricity price or both. In some of the estimated equations, dummy variables, also known as indicator variables, were included to account for one-time temporary or permanent shifts in the cost data, such as the impact of a large new plant opening, or the impact of a new labor contract, as well as observable shifts whose cause may not be known. A dummy variable has a binary value of one (1) if the structural shift is present in a particular year and zero (0) if the structural shift is absent. Dummy variables are also included to capture known shifts in costs, This leads to more accurate estimates of the impact of the other explanatory variables. (Hearing Exh. 180 (IDFA Exh 2) at pp. 4-5, testimony of W. Schiek (Dairy Institute of California)); W. Schiek (Dairy Institute of California) Tr. 3629 line 18 - 3631 line 5).

The total manufacturing cost of each dairy commodity is then derived from the following identity equation:

Total Manufacturing Cost = Labor Cost + Utility Cost + Other Cost.

(Hearing Exh. 180 (IDFA Exh 2) at pp. 4-5, testimony of W. Schiek (Dairy Institute of California)).

Each regression equation was estimated using Ordinary Least Squares (OLS) regression. OLS regression is a widely used form of linear regression analysis. It finds the best-fitting line through a set of data points by minimizing the sum of the squared errors (or residuals) between the observed dependent variable values and the predicted values from the estimated linear equation. OLS calculates the coefficients of the regression equation, including the explanatory variable (slope) parameters and constant (intercept), that minimize the overall prediction errors, providing an efficient and straightforward way to estimate the relationship between the dependent variable (cost) and one or more explanatory variables. OLS regression is an econometric technique widely used for modeling and forecasting purposes. (Hearing Exh. 180 (IDFA Exh 2) at p. 5, testimony of W. Schiek (Dairy Institute of California)).

Regression analysis is more than simply applying a trend line to past data, and its use here demonstrates that it is more accurate in picking up the effect, for example, of changes in general inflation, through its incorporation of explanatory variables, such as wage rates, energy costs, and the Producer Price Index as a proxy for material costs. (W. Schiek (Dairy Institute of California) Tr. 3662 line 6 - 3662 line 18).

c) Several metrics demonstrate the accuracy and reliability of Dr. Schiek's regression analysis.

Several metrics demonstrate the accuracy and reliability of the regression analysis performed.

- Within the 2003-2016 sample period, the model-predicted values for manufacturing costs were highly correlated with the actual cost values. The correlation coefficients of predicted to audited costs were 0.92 for cheese, 0.96 for butter, and 0.91 for nonfat dry milk (where a correlation coefficient of 1.0 denotes perfect correlation). (Hearing Exh. 180 (IDFA Exh 2) at p. 11, testimony of W. Schiek (Dairy Institute of California)).

- The estimated equations generally showed good fit and strong overall correlations. Adjusted R-square (measure of fit where 1.0 is a perfect fit) were better than 0.7 for all but one of the model equations. (Hearing Exh. 195 (IDFA Exh 40) at p. 13, testimony of W. Schiek (Dairy Institute of California)).
- F-statistics for the estimated equations were all statistically significant at the 5% level. (Hearing Exh. 195 (IDFA Exh. 40) at p. 13, testimony of W. Schiek (Dairy Institute of California)).
- For t-tests of explanatory variable parameter estimates, 17 of 24 were significant at the 10% level or better. (Hearing Exh. 195 (IDFA Exh. 40) at p. 13, testimony of W. Schiek (Dairy Institute of California)).

The fact that the model had significant regression F-statistics; many individual parameter estimates were statistically significant different from zero; and the model resulted in quite high correlations of the overall cost predictions and actual costs, indicate that the model does a good job predicting actual costs. (Hearing Exh. 195 (IDFA Exh. 40) at p. 13, testimony of W. Schiek (Dairy Institute of California); W. Schiek (Dairy Institute of California) Tr. 3635 lines 20 -28).

The cost estimates from the regression analysis model unsurprisingly show increasing costs since the last audited CDFA manufacturing cost data from 2016. The analysis results indicate as follows: Between 2016 and 2020, the model suggests that cheese manufacturing costs increased about $0.008 per pound from the 2016 audited cost, while butter increased $0.013 per pound and NFDM manufacturing costs increased by about $0.019 per pound during the same period. Over the 2021-2022 period, cost increases accelerated substantially, increasing a further $0.047 per pound for cheese, $0.030 per pound for butter, and $0.039 per pound for nonfat dry milk as wage rates and material cost indices escalated. (Hearing Exh. 180 (IDFA Exh 2) at pp. 11-12, testimony of W. Schiek (Dairy Institute of California)).

The model-predicted manufacturing costs for 2022 are $0.3006 per pound for cheese, $0.2364 per pound for butter, and $0.2653 per pound for nonfat dry milk with an imputed dry whey manufacturing cost (nonfat dry milk cost plus 3 cents per pound) of $0.2953. These estimates represent a substantial increase from the current manufacturing allowances of $0.2003 per pound for cheese, $0.1715 for butter, $0.1678 for nonfat dry milk, and $0.1991 for dry whey.

These estimates are also higher than the costs predicted by the linear trend costs, which increase year by year based on the slope of the trend line. The trend line cannot capture the impacts of accelerating inflation, so these results are not surprising. Interestingly, the model-predicted costs for 2019 were lower than those predicted by the linear cost trends and showed very little increase from 2019 to 2020. Again, such a result is not surprising given what was happening in the economy at that time. The Federal Reserve was loosening its monetary policy again after the "taper tantrum" in 2018 and the onset of COVID-19 in 2020. The point here is that the model predictions on manufacturing cost are more responsive than the trend line to what is actually happening with price levels in the economy. (Hearing Exh. 180 (IDFA Exh. 2) at p. 12, testimony of W. Schiek (Dairy Institute of California)).

Dr. Schiek's 2022 cost study establishes the following 2022 costs of manufacture:

Cheese:	$0.3006
Dry whey:	$0.2953
NFDM:	$0.2653
Butter:	$0.2364

(Hearing Exh. 180 (IDFA Exh. 2) at p. 12 , testimony of W. Schiek (Dairy Institute of California)).

The 2022 model forecasts indicate that manufacturing costs have increased by the following percentages since 2006 based on 2006 CDFA actual costs:

- Cheese + 51.2%
- Whey + 50.4% (model forecast v. 2006 NFDM cost plus 3 cents/lb.)
- Butter + 72.2%
- NFDM + 59.4%

(Hearing Exh. 195 (IDFA Exh. 40) at p. 22 (testimony of W. Schiek (Dairy Institute of California)).

The above forecasts are generally consistent with company data submitted by various ***cooperative*** manufacturers during the hearing:

- AMPI: 47% increase in the cost of manufacturing bulk cheese from 2008 to 2022. (Hearing Exh. 146 (IDFA Exh. 25) at p. 4, testimony of Steve Schlangen (AMPI)).
- Land O'Lakes: 81% increase in the cost of manufacturing butter and NFDM from 2007 to 2022. (Hearing Exh. 144 (NMPF Exh. 14) at p. 3, testimony of C. Edmiston (Land O' Lakes)); Hearing Exh. 215 (IDFA Exh. 42) at p. 19, testimony of M. Brown (IDFA)); M. Brown (IDFA) Tr. 4245 line 14 – 4246 line 24).
- Northwest Dairy Association: 80% increase in the cost of manufacturing cheese, whey, butter and NFDM. (Hearing Exh. 159 (NMPF Exh. 19) at p. 2, testimony of M. Schilter (NDA).

Indeed, on a percentage basis, the make allowance increases being proposed by Proposals 8 and 9 are lower than the actual increases in cost of production reported by plants owned by farmer cooperatives AMPI, Land O' Lakes and Darigold. (M. Brown (IDFA) Tr. 4243 line 11 - 4245 line 7).

3. A Comparison Of The Results Of The Dr. Stephenson And Dr. Schiek Study Results.

The Stephenson and Schiek weighted average cost of manufacture estimates for cheese, dry whey and nonfat dry milk are all fairly close:

	Stephenson	Schiek	Stevenson vs. Schiek	% Difference
Cheese:	0.2643	0.3006	-0.0363	-13.7%
Dry Whey:	0.3361	0.2953	0.0408	12.1%
NFDM:	0.2750	0.2653	0.0097	3.5%

The difference in butter is larger, but as a percentage, the exact same difference as occurred when make allowances were set in 2008:

Butter:	Stephenson	Schiek	Stevenson vs. Schiek	% Difference
2023 Hearing	0.3176	0.2364	0.0812	25.6%
2008 Hearing	0.1846	0.1373	0.0473	25.6%

Hearing Exh. 215 (IDFA Exh. 42) at p. 15 (testimony of M. Brown).

The differences in the survey results are likely explained in large part by the relative size of plants in California (the sole focus of the Schiek study) versus the rest of the country, with respect to each of the four commodities. For example, the cheese plants in the nationwide Stephenson survey were quite large, and their surveyed costs per pound of production were correspondingly lower. (M. Brown (IDFA) Tr. 4237 line 11 - 4238 line 6). Conversely, the lower butter cost of production numbers in the Schiek study (as well as in the CDFA study relied upon in the 2008 FMMO hearings) is likely explained by the fact that California has two of the very best butter makers in the country, both of which are very large, producing by far the bulk of the butter in California. So their cost of production is lower. (M. Brown (IDFA) Tr. 4239 lines 2 - 11; 4280 line 17 - 4281 line 6).

4. The Appropriate Utilization Of The Dr. Stephenson And W. Schiek Studies.

Proposals 8 and 9 propose that updated make allowances be based upon an equal weighting of the results of the 2023 Stephenson study and the 2022 Schiek study, after adding to the costs reflected in those studies an additional $0.0015 for marketing costs. Marketing costs were not included in the 2023 Stephenson study or the 2022 Schiek study, and USDA has consistently added $0.0015 for marketing costs in setting make allowances. (Hearing Exh. 214 (IDFA Exh. 6) at p. 23, testimony of M. Brown (IDFA)).[9]

The resulting make allowances are as follows:

Cheese:	$0.2840
Dry whey:	$0.3172
NFDM:	$0.2716
Butter:	$0.2785

IDFA and WCMA's approach of using the simple average of weighted average cost data from two different data approaches is eminently reasonable given USDA's long history of employing manufacturing cost data compiled by Dr. Stephenson and CDFA to set make allowances, as detailed in Section VI(C) above. As noted in Section VI(D)(1) above, the methodology employed by Dr. Stephenson largely tracked that used in the CFDA surveys. The use of averaged cost data results in make allowances more moderate than either study alone. Dr. Schiek's cheese cost estimates were higher than Dr. Stephenson's, while Dr. Stephenson's butter, NFDM, and whey cost estimates were higher than Dr. Schiek's. (Hearing Exh. 249 (Dairy Inst. Exh. 1) at p. 7, testimony of W. Schiek (Dairy Institute of California)).

Proposals 8 and 9 propose that the make allowance be set based upon the simple average of the Stephenson and Schiek surveys, because each survey is valid and brings its own attributes.

[9] The $0.0015 per lb. marketing cost addition should be continued. On one hand, marketing costs have risen like other costs due to inflation, which suggests the amount should be raised. On the other hand, one could also argue that industry consolidation has reduced the amount of resources needed to sell cheese domestically. In balance, the $0.0015 per lb. marketing cost should be included in the final make allowance as it was in the previous FMMO make allowance decision. (Hearing Exh. 196 (IDFA Exh. 22) at p. 3, testimony of J. DeJong (Glanbia).

But if USDA were to prefer to set a make allowance weighted by the number of pounds of each commodity covered by each study, the data to do so is contained in the hearing record. (M. Brown (IDFA) Tr. 4242 line 18 - 4243 line 9) (explaining where that data is located with respect to each study).

5. Copious Additional Hearing Record Evidence, Much Of It Coming From Dairy Cooperatives, Fully Supports The Accuracy Of The Proposals 8 And 9 Make Allowances.

Copious information in addition to the Stephenson and Schiek studies themselves fully support the accuracy of the Proposals 8 and 9 make allowances. Numerous individual manufacturers, ***including perhaps most conspicuously cooperative owned manufacturers***, presented at the hearing cost data showing that their own costs of manufacture were fully consistent with — indeed, often higher than — those shown in the Stephenson and Schiek studies.

Proposals 8 and 9's final (year 4) make allowances, as a percentage increase over the current make allowances set in the 2008 make allowance hearings decision (which were based upon 2005 and 2006 cost data), are as follows:

Cheese:	41.79%
Dry whey:	59.32%
NFDM:	61.86%
Butter:	62.39%

(Hearing Exh. 215 (IDFA Exh. 42) at p. 17, testimony of M. Brown (IDFA)). The percentage cost increases between the 2006 and 2022 surveys are generally quite consistent among the four commodities being surveyed, which provides additional comfort as the accuracy of the survey results. (M. Stephenson (University of Wisconsin) Tr. 3607 lines 6 - 19).

Several cooperatives, including specifically AMPI, Land O' Lakes, NDA (Darigold) and Virginia and Maryland Milk Producers Cooperative, testified to ***higher*** percentage increases in their own costs of manufacture over that same time period:

		Cooperative Testimony		
COMMODITY	Proposed IDFA	AMPI	LOL	NDA (Darigold)
Cheese:	41.8%	47%		
Dry Whey:	59.3%			
NFDM:	61.9%			
Butter:	62.4%			
NDM + Butter			81%	
All Four Commodities Combined				80%

(Hearing Exh. 215 (IDFA Exh. 42) at p. 18 (testimony of M. Brown)); id. at p. 19 (calculating the LOL percentage increase in costs of manufacture); (M. Brown (IDFA) Tr. 4245 line 14 - 4246 line 24) (explaining how the Land O'Lakes cost figures were derived from the cost information submitted to the record by Land O Lakes); Hearing Exh. 144 (NMPF Exh. 14) at p. 3, testimony of C. Edmiston (Land O' Lakes)); (Edmiston (Land O' Lakes) Tr. 2548 line 22 - 2560 line 8); (Hearing Exh. 146 (IDFA Exh. 25) at p. 4 (testimony of S. Schlangen (AMPI) (47% cost increase)); (Hearing Exh. 159 (NMPF Exh. 19) at p. 2, testimony of M. Schilter) (NDA) (providing the 80% figure); M. Schilter (NDA) Tr. 2820 lines 1 - 23) (explaining that the 80% figure represents the increase in NDA's total cost of operating its butter, nonfat dry milk, cheese and whey processing facilities between 2008 and 2022).

The testimony of Maryland and Virginia Milk Producers Cooperative ("MDVA") took a slightly different format, but was to the same effect. MDVA prepares annually a "cost standard" reflecting its anticipated costs the following year, updating that standard at the beginning of the next year to reflect actual costs the prior year. The MDVA cost standard to convert milk into nonfat dry milk increased by 64% during the **12-year** period from 2010 to 2022. (M. John (MDVA) Tr. 2863 line 28- 2865 line 17). This 64% cost increase exceeds the 61.86% increase sought in Proposals 8 and 9. Moreover, the 61.86% increase sought in Proposals 8 and 9 was calculated based upon cost increases over a substantially longer, **16-year time period**, from 2005-06 (the date of the cost data used in the 2008 make allowance hearings decision) to 2022, and would therefore be expected to reflect greater cost increases.[10]

Other cooperatives owning processing facilities did not provide specific cost figures but testified that the 2023 Stephenson survey reported average costs that were "representative" of their own costs. (D. Hanson (Foremost Farms) Tr. 2754 line 25 - 2755 line 8).

Numerous proprietary handlers testified to cost increases as high as, and often higher than, those which Proposals 8 and 9 would adopt:

- **Leprino.** Leprino's Allendale and Waverly plants have produced sweet whey since before 2006, and their processing non-labor costs increased 159% between 2006 and 2022; utilities increased 32%, and packaging grew 53%. Total cost, as defined in the 2022 Stephenson study, grew by 58% between 2006 and 2022 on a per pound basis. (Hearing Exh. 199 (IDFA Exh. 23) at pp. 1-2 (testimony of A. Krebs (Leprino Foods)); A. Krebs (Leprino Foods) Tr. 3980 line 23 - 3981 line 12), almost identical to the 59.32% dry whey make allowance increase being proposed in Proposals 8 and 9. Leprino's cheese plants make mozzarella rather than cheddar, so their percentage changes in costs do not exactly compare to the cheddar cheese costs covered by the Stephenson and Schiek surveys. Nonetheless, Dr. Schiek's results looked to be reasonable and valid data when compared to cost increases at Leprino's California cheese plants. (A. Krebs (Leprino) Tr. 3981 line 18 - 3983 line 6).

[10] The fact that these are MDVA plants are used for balancing does not undercut the relevance of their cost increases on a percentage basis.

With respect to nonfat dry milk, since just 2017 Leprino's processing non-labor costs have skyrocketed 79%, with a 67% increase in utilities and a 69% increase in packaging costs. These increases over just the last six years exceed those of the reported weighted industry average increases in such costs in the 17 years between the 2005 and 2006 cost data used in the Stephenson study for the 2008 make allowance hearings and the 2022 cost data used in the Stephenson study for the current make allowance hearings. (Hearing Exh. 199 (IDFA Exh. 23) at p. 2, testimony of A. Krebs (Leprino Foods)).

- **Glanbia.** Glanbia is the country's largest cheddar cheese company, and its Twin Falls, Idaho plant, which processes about 2.5 million milk pounds per day, is its best plant to compare costs over time since it only makes American style cheese (mostly cheddar), does not dry any whey, and has been minimally changed over the years since the current make allowances were set in 2008. While Glanbia has seen some costs like energy only go up slightly (as a result of lower natural gas cost combined with energy efficiency projects), items like direct labor and packing have gone up about 30%, and some items have gone up considerably more - like plant insurance, which was up over 70%. Glanbia's total costs at that plant on a per pound of cheese produced basis have increased by slightly over 50% from 2008 to 2022, well in excess of the 41.79% make allowance increase sought by Proposals 8 and 9. (J. DeJong (Glanbia) Tr. 3744 line 18 - 3745 line 20).

  Glanbia estimates that the $470 million cost to build its eight million pounds of milk per day joint venture cheese and whey plant that was completed in late 2019 and early 2020, would have increased to between $600 million and $700 million if built today. Using the $650 million midpoint, this represents a 38% increase in capital costs in just a few years. This increase in plant equipment costs is reflected in the costs of silos, electric motors, water polishers, various electrical equipment, and countless other parts that keep a cheese plant running. (Hearing Exh. 196 (IDFA Exh. 22) at pp. 6-7, testimony of J. DeJong (Glanbia)).

- **Hilmar.** Hilmar is the second largest cheddar cheese manufacturer in the United States, and is largely owned by dairy farmers. (W. Eveland (Hilmar) Tr. 3850 lines 13-26; Tr. 3852 lines 15-25). Hilmar is a cheese and whey manufacturer with processing locations in California, Texas and soon to be Kansas. Its Hilmar, California cheese and whey manufacturing site processes 12% of the state's milk, while its Dalhart, Texas cheese and whey manufacturing site processes 31% of that state's milk. (Hearing Exh. 198 (IDFA Exh. 26) at pp. 1-2 (testimony of W. Eveland (Hilmar)). Hilmar has seen significant cost increases in the core areas of utilities, labor and other inputs. The Henry Hub spot Natural Gas market is 45.1% above the 20-year average, and the cost per kilowatt-hour is 26.3% above the average. Corrugated shipping containers increased by 76.3% between 2000 and 2022, and wood and lumber Products (an input for crates and pallets) increased by 109.6%. The FRED Private Industry Workers Cost Index shows a 42.5% increase in wages and salaries from 2000 to 2022. All of these indicators align with Hilmar's own experience, and the Stephenson survey result were largely representative of Hilmar's own costs. (Hearing Exh. 198 (IDFA Exh. 26) at p. 3, testimony of W. Eveland (Hilmar)); W. Eveland (Hilmar) Tr. 3856 lines 10-17).

- **Saputo USA** operates 29 plants in the United States, employing approximately 7,900 employees, and is among the country's top three cheese manufacturers and one of the largest producers of extended shelf-life fluid products. Twenty-two of the twenty-nine plants in the United States process milk, and receive milk pooled in seven different Federal Milk Marketing Orders. Most of the milk is regulated by FMMOs and extends at least to some degree to all classes of milk. (Hearing Exh. 202 (IDFA Exh. 27) at p. 1, testimony of T. Brockman (Saputo)).

  Saputo USA's cost to process raw milk into finished product is comprised of the following general cost categories: Overhead, Direct Raw Materials., and Direct Labor. In reviewing the cost history of these categories, Saputo focused primarily on the below subsets of these categories as they are large contributors to the categories: Overhead: Energy (Electricity) and Repair and Maintenance Costs; Direct Raw Materials: Resin-based Materials & Corrugate Packaging; and Direct Labor: Manufacturing Hourly Rates. (IDFA Exh. 27) at p. 3, testimony of T. Brockman (Saputo)). Significant increases have occurred across all major categories that make-up the cost of processing raw milk into finished product. While the specific cost increase percentages below reflect Producer Price Index (PPI) information, Saputo as a company has experienced similar increases over the period from January 2006 through July 2023:

  - Industrial Electric Power: 74%
  - Industrial Machinery Repair and Maintenance: 53%;
  - Plastics Material and Resin Manufacturing: 42%
  - Corrugated Paperboard in Sheets and Rolls: 78%

    - Hourly Production and Nonsupervisory Employees, Manufacturing; 55%.

  (IDFA Exh. 27) at p. 4, testimony of T. Brockman (Saputo)).

  Neither the current whey make allowance nor that proposed by NMPF would be enough to cover Saputo's costs of manufacture. Year four of IDFA's proposal would be enough to cover costs as of today, but it is uncertain that will be enough in the future. (T. Brockman (Saputo) Tr. 4042 line 19 - 4043 line 10).

- **Nasonville Dairy** is a medium size processor producing approximately 60 million pounds of cheese a year, 27% of which are colored cheddar 40-pound blocks. Nasonville submitted detailed cost information showing that it incurs a cost of $0.3226 to produce colored cheddar in 40-pound blocks, well in excess of the $0.2840 cheese make allowance being sought in Proposals 8 and 9. (Hearing Exh. 203 (WCMA Exh. 2), testimony of K. Heiman (Nasonville Dairy)).

There were only a couple of outliers reporting lower cost increases. Agrimark testified to a lower cost increase, apparently due in whole or in part to the fact that what had previously been an Agrimark balancing plant had become a full operation plant, meaning that its total costs would now be spread across many more pounds of product, and thus the cost per pound (which is the cost figure that the surveys determine) would be lower. (C. de Ronde (Agrimark) Tr. 3157 lines 6-20).

Ellsworth also testified to a lower increase, apparently due in whole or in part to its including almost no depreciation or return on investment, despite significant plant expansion. Specifically, Ellsworth only included in its cheese cost calculations $0.0025 (one quarter of a penny) per pound of depreciation, less than one-tenth the $0.0334 per pound average depreciation calculated by Dr. Stephenson in his 2007 cost survey used to set the 2008 make allowances, and only included in its whey cost calculations $0.004 (four-tenths of a penny) per pound of depreciation, less than one-tenth the $0.058 per pound average depreciation calculated by Dr. Stephenson in his 2007 cost survey. (P. Bauer (Ellsworth) Tr. 3184 line 19 - 3188 line 13). In addition, Ellsworth's whey manufacturing changed materially between 2006 and 2022, from being packaged to not being packaged, and from all of the whey being dry why to 23% being only condensed whey. If Ellsworth had not made these end product changes, its costs of production would have been higher in 2022. (P. Bauer (Ellsworth) Tr. 3188 line 14 - 3190 line 27).

In any event, both Agrimark and Ellsworth testified they participated in the 2023 Stephenson cost survey, so their costs were included in his calculation of weighted average costs. (C. de Ronde (Agrimark) Tr. 3121 lines 10-18; P. Bauer (Ellsworth) Tr. 3197 lines 2 -5).

Opponents acknowledged that Proposals 8 and 9 would not fully implement the proposed new make allowances until 2028. The make allowances in effect at that time would reflect 2022 costs, not 2028 costs, because Proposals 8 and 9 do not attempt to project and include any post-2022 cost increases. (C. Edmiston (Land O' Lakes) Tr. 2546 line 14 - 2547 line 10; M. Schilter (NDA) Tr. 2825 lines 19 - 25)).

Even though the inflation rate may have decreased after 2022, you would have to have ***de***flation before costs would be lower post 2022, and that has not happened. (B. Schiek (Dairy Institute of California) Tr. 3702 line 13 - 3703 line 9; A. Krebs (Leprino Foods) Tr. 3933 lines 14-28). Indeed, the country would have to enter a sharply deflationary period before actual costs in 2028 would be lower than 2022 costs. Historically that simply has never happened with respect to manufacturing costs. (M. Brown (IDFA) Tr. 4252 line 7 - 4253 line 7). There is accordingly no risk that the make allowances being proposed will, when implemented, exceed the then-current average costs of manufacture.

6. The Proposed Timetable For Implementation Of The New Make Allowances.

Given the disparity between actual current cost of production and the make allowances, urgent action is needed. Indeed, representatives from many farmer cooperatives echoed this sentiment. (E.g., Hearing Exh. 155 (NMPF Exh. 18) at p. 2, testimony of R. Vandenheuvel (CDI) ("The issue of establishing appropriate manufacturing cost allowances… in the Federal Order formulas is of critical importance to CDI. The risk of inaction or delayed action is simply too great to put the issue off any further."); Hearing Exh. 146 (IDFA Exh. 25) at p. 5, testimony of S. Schlangen (AMPI) ("Any delay will magnify an already disorderly marketplace.")

IDFA reasonably could ask USDA to adopt as soon as possible the new make allowances set forth above. USDA has historically implemented with dispatch make allowances established by the most up to date, reliable, available cost data. The 2023 Stephenson study and the 2022 Schiek study cost figures constitute that data. (Hearing Exh. 214 (IDFA Exh. 6) at p. 24, testimony of M. Brown (IDFA)).

Furthermore, as discussed in detail at Section VI(A) above, product pricing formulas trap dairy product manufacturers into a fixed make allowance with no opportunity to cover their higher costs no matter the price of their dairy products. The 2023 Stephenson study and the 2022 Schiek study reflect real costs and make allowances at any lower-level cause dairy processors to face financial losses, risk financial ruin, and/or lack appropriate financial incentive either to re-invest in their plants or build new plants at a proper level. If manufacturers attempt to raise their product prices to cover higher costs, those higher prices automatically lead to higher milk prices, leaving no additional net income to apply to the higher costs. (Hearing Exh. 214 (IDFA Exh. 6) at p. 24, testimony of M. Brown (IDFA)).

Some IDFA members would prefer that the make allowance increase be implemented all at once. And, large make allowance increases are not unprecedented. For example, USDA in 2008 adopted a 42.7% increase in the make allowance for butter, which was made effective immediately, on an emergency basis. (M. Brown (IDFA) Tr. 4249 line 17 - 4250 line 23); Milk in the Northeast and Other Marketing Areas; Tentative Partial Final Decision on Proposed Amendments and Opportunity To File Written Exceptions to Tentative Marketing Agreements and Orders, 73 Federal Register 35306 (June 20, 2008) (raising the butter make allowances from $0.1202 to $0.1715 per pound).

Nevertheless, IDFA is aware that, with current make allowances being based on 2005 and 2006 cost data, the 2022 cost of manufacture established by the 2023 Stephenson study and the 2022 Schiek study, if implemented immediately as the new make allowances, would represent a material increase, depending on the specific product at issue. Consensus was reached within IDFA that it would make it easier on the farm side if implementation is done over four years. (M. Brown (IDFA) Tr. 4327 line 21 - 4328 line 14).

In the spirit of accommodation to farmers, Proposals 8 and 9 would implement the make allowance increases in steps. Step one make allowances made effective January 1, 2025 (or as soon thereafter as possible) would capture 50% of the difference between the current make allowances and the proposed make allowances based upon the average of the results of the 2023 Stephenson study and the 2022 Schiek study. (Hearing Exh. 214 (IDFA Exh. 6) at p. 24, testimony of M. Brown (IDFA)).

Then, on each of the next three anniversaries of the implementation of the step one make allowances, the make allowances for each of the four products would be increased by one-third of the difference between the step one make allowances and the make allowances based upon the average of the results of the 2023 Stephenson study and the 2022 Schiek study. Thus, the full make allowances based upon the average of the 2023 Stephenson study and the 2022 Schiek study would go into effect three years after the initial make allowance increase. The specific resulting make allowances would be as follows:

Proposed Make Allowance Transition					
Product	Current Make Allowance	Year 1 Make Allowance	Year 2 Make Allowance	Year 3 Make Allowance	Year 4 Make Allowance
Cheese	$0.2003	$0.2422	$0.2561	$0.2701	$0.2840
Whey	$0.1991	$0.2582	$0.2778	$0.2976	$0.3172
NFDM	$0.1678	$0.2198	$0.2370	$0.2544	$0.2716
Butter	$0.1715	$0.2251	$0.2428	$0.2607	$0.2785

(Hearing Exh. 12 (USDA Exh. 12) at pp. 11, 13).

It was only after considerable debate that WCMA's Board of Directors agreed to support this staggered implementation. The proposal to delay full implementation for four years is intended to be an accommodation to WCMA members' dairy farmer suppliers. (Hearing Exh. 258 (WCMA Exh. 1) at p. 3, testimony of J. Umhoefer (WCMA)).

Though some caution a 15-year leap in make allowance values will hurt U.S. dairy farmers, dairy cooperative AMPI, the largest cooperative producer of cheddar cheese, contends it would instead bring about more orderly marketing conditions, and better reflect the relative value of all products. The new make allowances also put regulated milk costs in greater alignment with the prices paid by the many unregulated competitors AMPI competes against for product sales every day. Any delay would therefore magnify an already disorderly marketplace. (Hearing Exh. 146 (IDFA Exh. 25) at p. 5, testimony of S. Schlangen (AMPI)). A majority of cheese manufacturers have fewer than 1,250 employee and therefore qualify as "small businesses." The inadequacy of current make allowances therefore has a negative impact on these manufacturers, and Proposals 8 and 9 will be especially beneficial to them. (Hearing Exh. 214 (IDFA Exh. 6) at p. 26, testimony of M. Brown (IDFA)).

The new make allowances need not be first implemented at the start of a calendar year. (M. Brown (IDFA) Tr. 4334 lines 2 - 22). However, the IDFA and WCMA proposals for a staggered implementation of the new make allowances is conditioned upon the step one make allowances being implemented shortly after USDA issues its final decision. If USDA were to adopt a delay, IDFA and WCMA would no longer support a staggered implementation of their proposed make allowances. Rather, if such a delay were adopted, the make allowances shown above for Year 4 should go into effect in their entirety at the beginning of Year 1. (Hearing Exh. 214 (IDFA Exh. 6) at p. 26, testimony of M. Brown (IDFA); Hearing Exh. 258 (WCMA Exh. 1) at p. 3, testimony of J. Umhoefer (WCMA)).

E. Current Inadequate Make Allowances Are Causing Severe Harm And Destabilizing The FMMO System.

Over 15 years have passed since make allowances were last updated. As already described, and as USDA has fully embraced, accurate and up to date make allowances are critical to a properly functioning FMMO program. Yet the current make allowances were established by USDA based on evidence presented at FMMO hearings held in 2006 and 2007. The evidence presented was based on industry cost data from the periods 2005-2006, the most recent data available at that time. Actual cheese, butter, whey and nonfat dry milk plant manufacturing and related costs have risen significantly in the sixteen-plus years since. FMMO regulations strictly prevent these dairy product manufacturers from in any way recovering any portion of those higher costs through higher sales prices or other means. (Hearing Exh. 214 (IDFA Exh. 6) at pp. 14-15, testimony of M. Brown (IDFA)).

The FMMO current use of fixed out-of-date make allowances is a major problem for all dairy product manufacturers producing cheese, butter, whey and nonfat dry milk, both proprietary plants and coops. The FMMO system to starting to fall apart.

1. Manufacturing Plants Are Avoiding The FMMO System.

There is an underinvestment in new plants, especially in the FMMO system. In light of make allowances being far below actual costs, companies such as Glanbia have continued to make large investments in new plants only because they can build facilities geographically outside the federal order system, depool and thereby escape FMMO minimum pricing. Competitive pay prices in Idaho, which is outside the FMMO system, are typically below the Class III price, and sometimes well below. (J. DeJong (Glanbia) Tr. 3745 line 21 - 3746 line 24; 3780 line 22 - 3781 line 8).

The new, more than $600 million Hilmar plant being built in Kansas is not going to be pooled. It will not be pooled even though staying out of the pool means the plant cannot share in Class I pool revenue. Hilmar does not see any reason to pool based upon the current FMMO pricing. Indeed, it would have been much harder to justify building the plant if it were subject to today's make allowances. (W. Eveland (Hilmar) Tr. 3851 line 7 - 3852 line 14; 3862 line 24 - 3863 line 19). The new plant might join the pool if make allowances accurately reflected actual costs of production. (W. Eveland (Hilmar) Tr. 3855 line 18 - 3856 line 9).

Hilmar's non-owner dairy farmer suppliers are eager to grow; expansion is critical to their business. They know Hilmar does not intend to pool the new Kansas plant and are willing to partner with Hilmar, given the opportunity the new plant provides to sell a lot more milk. Discussions with farmers focus more on their ability to expand than any other topic. (W. Eveland (Hilmar) Tr. 3852 line 26 - 3853 line 18; 3871 line 12 - 3872 line 6).

Cheese processing growth outside of FMMO regulation is creating additional cheese capacity that competes directly with manufacturers regulated under FMMOs. These plants have been able to attract the milk needed at prices outside the FMMO minimums, making it hard for many regulated plants to compete for cheese sales at the price that generates margins sufficient to pay the regulated price. This can contribute to disorderly marketing where pooled plants would be at a financial disadvantage to those who do not pool or operate outside the system. (Hearing Exh. 196 (IDFA Exh. 22) at p. 7, testimony of J. DeJong (Glanbia)).

Dr. Stephenson has observed plant capacity being built in places that really do not care whether the plant is pooled or not. Farms in the area are willing to supply milk to plants that are unregulated. (M. Stephenson (University of Wisconsin) Tr. 3439 lines 12 - 20). The big growth is in unregulated markets. (M. Brown (IDFA) Tr. 4297 line 4 - 4299 line 19).

2. Cooperatives Operating Manufacturing Plants Are Losing Money Because Regulated Prices Are Too High, And Re-Blending So That Their Members Pay For The Shortfall.

Although operating cooperatives are technically required to account to the pool as if the price they are paying their farmers for their milk is the minimum regulated price, if the price is at a level that would require the cooperative to operate its plant at a loss, the cooperative can simply reduce its actual payment to its farmers to cover the loss. In effect, the cooperative is paying its farmers for their milk at a price below the minimum regulated price. This is "reblending," a power available to cooperatives that own processing plants, but not to proprietary processing plants. (Vitaliano (NMPF) Tr. 272 line 22 - 273 line 11; Edmiston (Land O' Lakes) Tr. 2560 line 36 - 2562 line 20; 2573 lines 15 - 25).

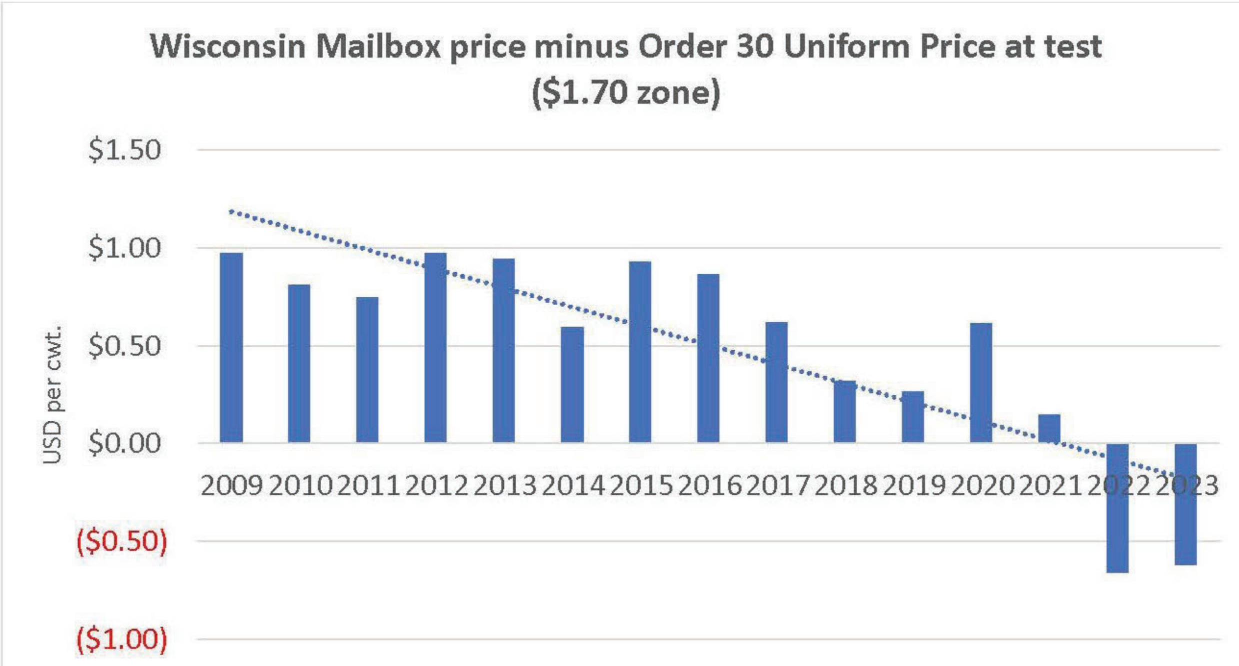
IDFA members include farmer-owned cooperatives that are routinely returning dairy farmer payments with significant deductions from FMMO uniform minimum prices because those prices are too high to allow the cooperative to operate their plants without losses. (Hearing Exh.

214 (IDFA Exh. 6) at p. 15, testimony of M. Brown (IDFA)). As one cooperative explained, “Milk market premiums have been replaced with significant price reblends below regulated minimum prices across much of the country.” (Hearing Exh. 146 (IDFA Exh. 25) at p. 3, testimony of S. Schlangen (AMPI)).

Other cooperative witnesses acknowledged this phenomenon. CDI explained that some farmer-owned cooperatives are routinely returning dairy farmer payments with significant deductions from FMMO uniform minimum prices. CDI’s bulk butter and nonfat dry milk facilities have been operating at a loss, which has been borne by its farmers. (R. Vandenheuvel (CDI) Tr. 2797 line 11 - 2798 line 21).

Cooperative manufacturers of formula products are almost certainly incurring processing losses. This is apparent as the deficit between current make allowances and 2022 manufacturing costs for the average of low-cost processors ranges from a minimum of 10% up to 53%, depending on commodity, based upon Dr. Stephenson’s 2022 cost of production report, Hearing Exh. 178 (IDFA Exh. 1). (Hearing Exh. 199 (IDFA Exh. 23) at p. 2, testimony of A. Krebs (Leprino Foods)).

Looking at USDA published data, one sees declining mailbox milk prices versus uniform milk prices at test, first focusing on the Upper Midwest:

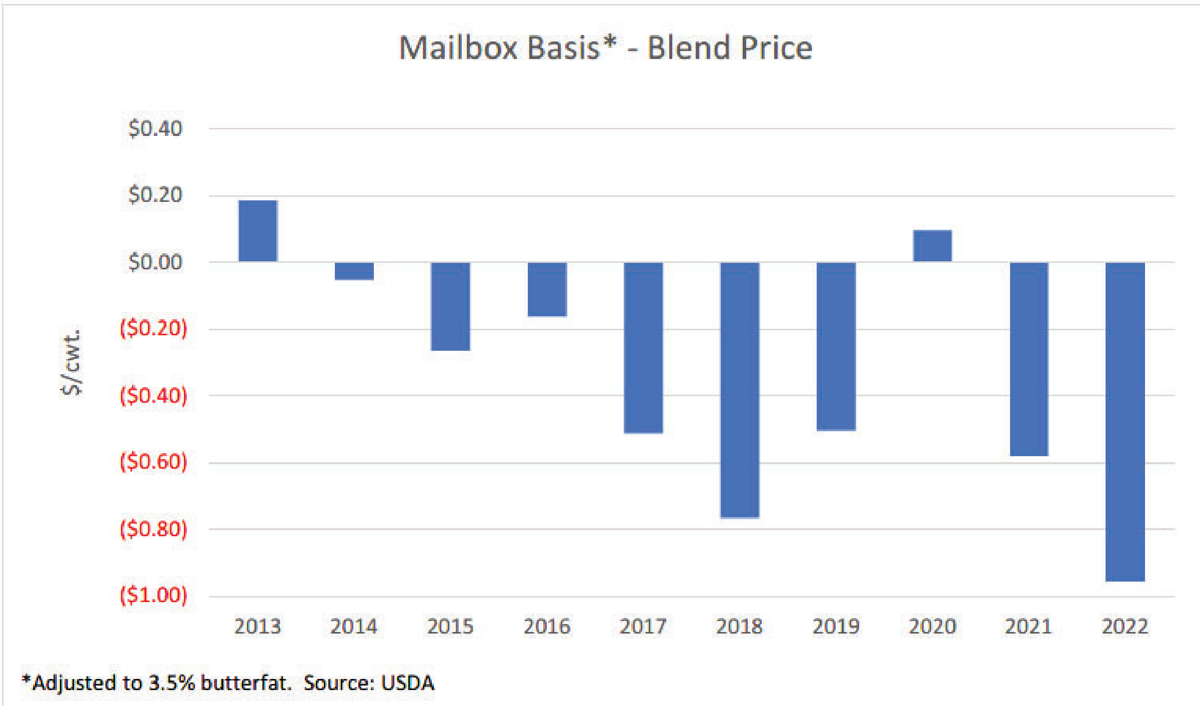


This analysis illustrates how actual producer milk prices have changed over time versus the regulated price at real world milk components. For example, in Wisconsin the mailbox milk price from Oct 2008 to Sept 2010 averaged $14.42 per cwt., while the uniform milk price at test (using the $1.70 zone PPD) averaged $13.54 per cwt. This equals an $0.88 per cwt. positive variance versus the uniform price at test. However, from May 2021 to April 2023 (last available data), the Wisconsin mailbox price averaged $21.78 per cwt. while the uniform milk price at test (again using the $1.70 zone PPD) averaged $22.21 per cwt. This equals a $0.43 per cwt. negative variance versus the uniform price at test and a $1.31 per cwt. negative total swing over this period. (Hearing Exh. 196 (IDFA Exh. 22) at p. 4 and Figure 2, testimony of J. DeJong (Glanbia)).

What this data shows is that there is a "bumping up" of the mailbox price against FMMO uniform prices - in other words, the market is trying to take the actual pay price below the FMMO minimum price. That is a sign that the minimum price is too high, and the price is too high in large part because of the inaccurate make allowances. Three other regions analyzed (Hearing Exh. 196 (IDFA Exh. 22), Figures 3-5) show the same pattern. (Hearing Exh. 196 (IDFA Exh. 22) at p. 4

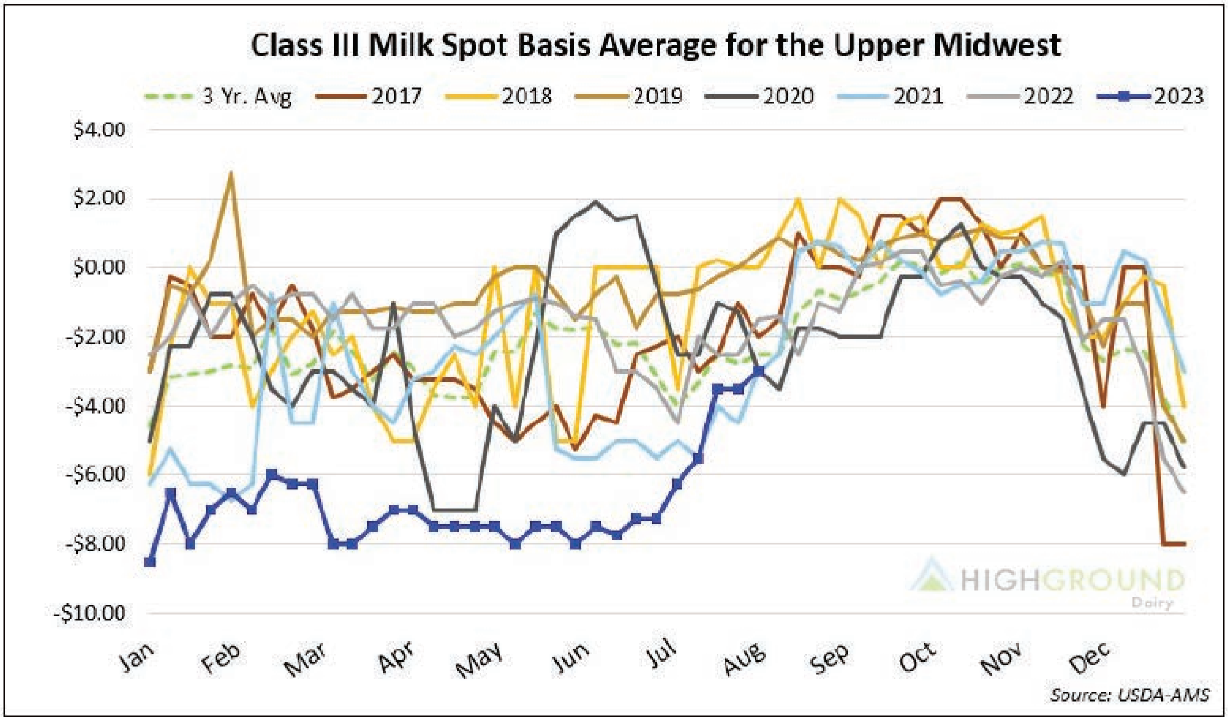
and Figure 2, testimony of J. DeJong (Glanbia); J. DeJong (Glanbia) Tr. 3750 line 25 - 3751 line 16).

That same pattern can also be observed in a comparison of the national average mailbox price, adjusted to a 3.5% percent butterfat level, minus the national average blend price:



(Hearing Exh. 133 (IDFA Exh. 34), at p. 2 and p. 8 Figure 2, testimony of A. Krebs (Leprino Foods)); A. Krebs (Leprino Foods) Tr. 2200 lines 10-26). As this figure shows, mailbox prices are well below blend prices, especially in 2021 and 2022.

The same phenomenon can be observed in the spot market for Class III milk, which has frequently swung far into negative territory, i.e., often far below the Class III regulated minimum price, especially in 2023:



(Hearing Exh. 133 (IDFA Exh. 34), at p. 2 and p. 8 Figure 1, testimony of A. Krebs (Leprino Foods)).

As common banking practices require owners to absorb significant cash flow gaps, these losses are no doubt being passed on to producer milk checks either directly or indirectly. Recent press announcements have noted this practice.[11] Cooperative members may see a direct deduction for manufacturing losses on their checks, or these losses are being assessed via reblending by adjusting rates, which would indirectly allocate manufacturing losses across members. For the long term, current make allowances are not sustainable for any entity that manufactures dairy products, regardless of ownership structure. And no reasonable banker would lend new money to a business which absolutely cannot cash flow. (Hearing Exh. 199 (IDFA Exh. 23) at p. 2, testimony of A. Krebs (Leprino Foods)).

[11] Are Processing Assessments Legitimate?, by Nate Donnay. Hoard's Dairyman, October 24, 2022.

This burden falls unevenly on different cooperatives. Operating cooperatives with manufacturing plants bear an unfair burden from unduly low make allowances, because they bear the burden of the losses incurred in operating their plants, while cooperatives that only sell milk do not incur those losses, but can sell their milk at a minimum regulated price that is improperly elevated as a result of inadequate make allowances. (R. Vandenheuvel (CDI) Tr. 2801 line 26 - 2803 line 10; 2806 line 23 - 2808 line 1).

3. Proprietary Plants Are Avoiding Needed Investments.

When the foregoing opportunities are not available, proprietary plants are absorbing losses, attempting to sell specialty cheeses at prices designed to mitigate losses, and/or otherwise failing to invest in plants and facilities. In fact, investments in plants overall are stagnant. This is not sustainable for the plants, nor for dairy farmers who depend on these plants as outlets for their raw milk. (Hearing Exh. 258 (WCMA Exh. 1) at p. 2, testimony of J. Umhoefer (WCMA)).

Despite the outdated make allowances and the recent inflationary spiral, Leprino Foods is building a new plant in Lubbock, Texas. Leprino has continued with this project because it believes in the long-term future of the US dairy industry, and because it wants to uphold long-standing commitments to its customers. That said, this is a very difficult time to build a new plant. Leprino's President has said: "if make allowances aren't updated, the Lubbock plant will have to be the last plant Leprino builds in the US." (Hearing Exh. 199 (IDFA Exh. 23) at p. 2, testimony of A. Krebs (Leprino)).

Indeed, in its May 1, 2023 petition at p. 8, NMPF itself recognized that "[i]nadequate make allowances challenge manufacturing operations' abilities to pay minimum announced milk prices and still operate their facilities at reasonable rates of return. This discourages the plant investment needed to provide market demand on a daily, seasonal and annual basis." (Hearing Exh. 214 (IDFA Exh. 6) at p. 16, testimony of M. Brown (IDFA)).

Producers need a market for their milk. Without sufficient processing capacity within a reasonable distance, dairy farms cease to be economically viable. Further suffocating dairy processors will just cascade and suffocate dairy farms. Outdated make allowances have become an unhealthy chokepoint for America's dairy industry. (Hearing Exh. 199 (IDFA Exh. 23) at p. 2, testimony of A. Krebs (Leprino Foods)).

4. Cooperatives Have Established Base-Excess Plans To Try To Reduce Milk Production.

When (as now) regulated minimum prices are too high - in excess of market clearing levels - those high price encourage overproduction of milk that lacks a financially viable home. As one cooperative explained, "most U.S. cooperatives have installed production limits, as inadequate manufacturing capacity is not meeting many dairy farmers' desire to grow their businesses and be cost-competitive." (Hearing Exh. 146 (IDFA Exh. 25) at p. 3, testimony of S. Schlangen (AMPI)). These are called "base-excess" programs, designed by cooperatives to make it financially unfeasible for a member to produce milk in excess of a designated quantity (base). Base excess plans are currently needed because milk production is being over-stimulated by the inflated regulated prices. (Hearing Exh. 199 (IDFA Exh. 23) at p. 2, testimony of A. Krebs (Leprino Foods)); M. Brown (IDFA) Tr. 4297 line 4 - 4299 line 19).

Inadequate make allowances have led to inadequate production capacity which has led coops to impose production limits on their farmers. AMPI is limiting its farmers to the amount of milk they produced two years ago. (Schlangen (AMPI) Tr. 2615 lines 3- 18; 2627 line 23 - 2628 line 23; 2664 lines 5 - 10). NDA has operated a base plan to manage growth in milk supply since 2011. (M. Schilter (NDA) Tr. 2840 lines 6 - 22). Agrimark has a base excess plan that pays farmers a lower price on any milk production that exceeds a specified base volume. The lower price is sufficiently low as to make it difficult for the farmer to make any money on milk in excess of the base amount. The program successfully disincentivizes production beyond the base amount. (C. de Ronde (Agrimark) Tr. 3125 line 26 - 3127 line 1).

F. USDA Should Not Delay Prompt Implementation Of Updated Make Allowances Out Of Concern Over Its Impact On Risk Management.

1. Everyone Is Aware That Change Is Coming.

As explained by James DeJong, the Senior Director of Dairy Economics, Risk Management, and Sales Planning for Glanbia Nutritionals, USDA has changed FMMO regulations and pricing formulas multiple times over the decades. USDA's commissioning the 2021 Stephenson cost study, whose collection efforts began in earnest in 2020, clued in market participants that change could be coming. Further, the existence of this hearing, and a likely final decision roughly not expected until late 2024 at the earliest, acts as another indicator for market participants that risk factors are changing. Stakeholders acknowledge this. In the Chicago Mercantile Exchanges (CME) last annual Form 10-K filing, which provides a comprehensive view of a publicly traded business financial condition, they specifically acknowledge regulatory change is a risk for their business model. (Hearing Exh. 197 (IDFA Exh. 41) at pp. 1-2 (testimony of J. DeJong (Glanbia)).

2. Traders Can Deal With Change Risk.

So called "crush traders" or "arbitrage traders" will often take short or long positions in cheese, whey, butter, NFDM, Class III milk and Class IV milk derivatives to profit off the mathematical relationships. For example, if the combination of selling $1.20 NFDM futures and $2.20 butter futures created an implied Class IV futures price of $17.47 per cwt., but Class IV futures could be bought at $17.35 per cwt., an arbitrage trader could execute these available derivatives to lock in a $0.12 per cwt. profit. Whether the market goes up or down, their margin is secure as long as the milk formula remains constant. The same principles apply to Class III and its market components. (Hearing Exh. 197 (IDFA Exh. 41) at p. 2, testimony of J. DeJong (Glanbia)).

If, for example, make allowances were to change, the relationship between the market prices and milk prices would also change. In this case, the arbitrage traders would change their buy/sell formulas to reflect the IDFA or NMPF make allowance changes for the beginning of 2025, or near that time period. The make allowances they would choose in their models (IDFA vs. NMPF) would depend on what gave them the larger margin cushion depending on what side of a trade they were on. Given the make allowances proposed in 2025 by IDFA and NMPF only differ by $0.19 per cwt. for Class III milk, and $0.15 per cwt. for Class IV, this should give arbitrage traders a reasonable level of confidence to adjust their risk models accordingly. While USDA could technically set make allowances substantially outside what the major industry groups are petitioning for, the chances seem low. (Hearing Exh. 197 (IDFA Exh. 41) at p. 2, testimony of J. DeJong (Glanbia)).

3. The Dairy Industry Can Hedge With Individual Commodities, Not Just Class III And IV Milk Derivatives.

In a worst case where dairy producers, for example, were having a hard time finding liquidity to sell Class III and IV milk futures or options due to lack of arbitrage trader's liquidity, they could also hedge with individual commodity prices directly. In fact, Glanbia's Idaho direct ship producers typically hedge directly by selling CME CSC cheese futures (settles to NDPSR cheese price). Given the cheese price is typically the vast majority of their milk pay price, the hedges are effective. This allows them to correlate their mailbox price to the CME derivative regardless of make allowance changes.

Producers in different orders can hedge with more NFDM, butter or dry whey to reflect their mailbox milk price. ((Hearing Exh. 197 (IDFA Exh. 41) at p. 2, testimony of J. DeJong

(Glanbia)). Figures 1 through 3 of the Appendix of Hearing Exh. 197 (IDFA Exh. 41) show the USDA Mailbox milk price correlations for risk management for individual dairy commodities versus hedging the Class III and IV milk prices. The analysis shows that effective hedges can be created using only the commodity futures/options. Risk management brokers or the producer's milk handler can easily provide guidance on the appropriate weightings and volumes of the commodities the dairies should hedge with. ((Hearing Exh. 197 (IDFA Exh. 41) at p. 2, testimony of J. DeJong (Glanbia)).

4. CME Has Its Own Interests.

One reason CME's testimony is sensitive to "liquidity providers" is due to the amount of fee revenue they generate. In their last Form 10-K filing, CME states, "Our revenue is substantially derived from fees for transactions executed and cleared in our markets". Given that crush traders are taking multiple parts of dairy markets and figuratively "crushing" them together requires multiple transaction to accomplish. For example, crushing a Class III milk contract could involve buying a Class III milk contract and selling cheese, dry whey and butter derivatives at the same time. This is four transactions the CME benefits from. For dairy farmer managing their risk using only cheese derivatives, or maybe only one or two additional commodities, there are less transactions involved. ((Hearing Exh. 197 (IDFA Exh. 41) at pp. 2-3, testimony of J. DeLong (Glanbia)).

This is not meant to say CME is nefarious for charging for their valuable services, or that CME market liquidity is not very important for the industry. It is meant to point out that CME's interests are not always aligned with the broader dairy industry. (Hearing Exh. 197 (IDFA Exh. 41) at p. 3, testimony of J. DeLong (Glanbia)).

G. The Possible Future Enactment And Implementation Of Legislation Allowing USDA To Conduct Mandatory, Audited Cost Of Manufacture Surveys Provides No Excuse For A Delay In Implementing Appropriate Make Allowances.

IDFA endorses the position of several farmer organizations that the current ad hoc review and revision of make allowances based upon third party surveys should ultimately be replaced by a system providing USDA the authority and funding to conduct regular, audited mandatory dairy product cost studies, resulting in the periodic updating of make allowances. Legal authority to do this does not yet exist, but it may be included in future legislation. Accordingly, IDFA's proposed make allowance amendments include a proviso that the make allowance increases set forth in the chart above would not come into effect in any given year ***if,*** prior to the start of that year, Congress has enacted legislation providing authority and funding for mandatory audited cost surveys of all manufacturers of products used to set Class III and Class IV prices, and USDA has promulgated regulations implementing that authority and adopted make allowances pursuant thereto. (Hearing Exh. 214 (IDFA Exh. 6) at pp. 26-27, testimony of M. Brown (IDFA)).

However, the hearing record provides no support whatsoever for NMPF's position that the dairy industry should postpone implementation of adequate updated make allowances in the mere hope that legislation is enacted and very promptly implemented. IDFA strongly objects to this approach. NMPF can only hold out the possibility of a new round of hearings to consider the possibility of further increases if legislation is enacted providing USDA the authority to conduct mandatory, audited cost of manufacture surveys. This possibility is far too uncertain and speculative to be given credence. Hearing Exh. 215 (IDFA Exh. 42) at p. 25 (testimony of M. Brown)).

Furthermore, even if USDA is given the authority, make allowances would not be revised to reflect real costs until all of the following steps had occurred:

1. Congress funds such mandatory, audited cost surveys;
2. USDA promulgates regulations by which such authority is carried out;
3. USDA devises the surveys, conducts the surveys, audits the results, and publishes the results;
4. Industry participants petition USDA to hold hearings to raise the make allowances to reflect the new survey.
5. USDA solicits and receives other proposals
6. USDA notices the hearing
7. The hearing takes place
8. The transcript is published and corrected
9. Post hearing briefs are filed
10. A recommended decision is issued (assuming no “emergency”)
11. Comments on the recommended decision are submitted
12. A final decision is issued
13. Farmer referendums are held
14. Updated Federal Orders are enacted.

(Hearing Exh. 215 (IDFA Exh. 42) at pp. 26-27, testimony of M. Brown (IDFA)).

Thus, even if new legislation granting this authority and funding the new cost of manufacture studies were to move through Congress and into law, which is not a given due to political realities, its implementation of updated make allowances from mandatory cost of processing study data would not take place an extended period. To get to that point: rulemaking, hiring and training staff, study design, study programming, training manufacturers, implementing surveys, auditing (as needed), analysis, communication of results, a hearing request, and a hearing, would all need to happen. (Hearing Exh. 199 (IDFA Exh. 23) at p. 4, testimony of A. Krebs (Leprino Foods)). It is more likely to take five years before new make allowances could be adopted based upon newly authorized mandatory surveys. (M. Brown (IDFA) Tr. 4256 lines 21 - 28).

Making matters even worse, NMPF members are not even committed to the implementation of the results of the audited, mandatory surveys regardless of process:

> "[Even] If [credible and reliable] information [regarding costs of manufacture] existed, and it suggested a make allowance change of more than a few cents per pound, we would be restrained from advocating for the full implementation of the change due to the impact on milk prices and profitability of our farmer-owners."

Hearing Exh. 175 (NMPF Exh. 24) at p. 21, testimony of E. Gallagher (DFA). One could thus reasonably anticipate a highly contested, drawn-out administrative hearing not dissimilar to the current proceeding. Leading to further delay in implementation.

H. Properly Priced Raw Milk Is Key To Our Global Competitiveness.

The US dairy industry is now a full-fledged player in global dairy. Fully 18% of US milk solids equivalent is now sold overseas, nearly double the share from when a national Federal Order hearing was last held.[12] While this growth in exports has been a boon for US dairy, exports have become such a large share that milk price policy is now about more than just the domestic US market and this broader perspective must be considered.

Care must be taken in updating milk pricing formulas to ensure US dairy remains competitive. Urgent action is needed to return the processing sector to financial health. Further, changes must incentivize efficient investment. If these necessities are addressed, the US industry

[12] U.S. Dairy Export Council: https://www.usdec.org/research-and-data/market-information/top-charts-x1507.

will be poised to truly leverage its resources to become an even greater force in the global marketplace. (Hearing Exh. 133 (IDFA Exh. 34), at p. 3, Testimony of A. Krebs (Leprino Foods)).

I. The Criticisms Lodged Against Proposal 8 And 9 Make Allowances Are Not Well-Taken, And NMPF's Make Allowance Proposal 7 Should Be Rejected.

The various criticisms lodged against Proposals 8 and 9 are not well taken, and the alternative NMPF make allowance proposal 7 should be rejected.

1. Proposal 8 And 9 Make Allowances Are Necessary To Provide Outlets For Dairy Farmer Milk.

IDFA understands and appreciates the concerns of its members' dairy farmer patrons for whom increased make allowances mean lower regulated minimum prices. However, make allowances that materially understate the actual cost of manufacture are a disaster for all, as they inhibit needed investment in plant capacity, and the resulting loss of viable outlets for farmer milk, and decline in competition, causes greater pain for everyone, including dairy farmers. Such losses of plant capacity result in the disorderly marketing conditions that FMMOs are designed to alleviate, not exacerbate. Lack of plant capacity in the Upper Midwest created the need to dump significant amounts of milk this past winter and spring. IDFA cooperative members and other dairy product manufacturers that serve as nearby outlets for local dairy farmer milk and as balancers of billions of pounds of FMMO milk cannot come close to covering their costs under current FMMO provisions. This is simply unsustainable. (Hearing Exh. 214 (IDFA Exh. 6) at p. 27, testimony of M. Brown (IDFA)).

As detailed above, USDA has repeatedly recognized that make allowances must reflect the average cost of manufacture, and that principle cannot be overcome by arguments regarding farmer production costs or purported unfairness. USDA put it best:

> "Opponents of increasing make allowances argue a number of points— that they are already set at too high a level, that dairy farmer production costs also have increased significantly due to

> higher energy and feed costs, that processors should look beyond asking dairy farmers to receive less for their milk by charging more for manufactured products, and that make allowance increases should be made only when all dairy farmer production costs are captured in their milk pay price. These are not valid arguments for opposing how make allowances should be determined or what levels make allowances need to be in the Class III and Class IV product-pricing formulas."

Milk in the Northeast and Other Marketing Areas; Tentative Partial Final Decision on Proposed Amendments and Opportunity To File Written Exceptions to Tentative Marketing Agreements and Orders, 73 Federal Register 35,305, 35,324 (June 20, 2008).

There is no reason for USDA to abandon these principles now.

As noted in its March 28, 2023 submittal to USDA, IDFA advanced its make allowance proposal only after it had undertaken an extensive effort with NMPF, including several separate meetings involving technical and leadership personnel, to try to reach consensus on the appropriate contours of order revisions. It was only after both parties concluded that such consensus could not be achieved that IDFA submitted its proposal. Nonetheless, there is consensus in both organizations that make allowances need to be addressed even if IDFA and NMPF do not agree on the degree of change. (Hearing Exh. 214 (IDFA Exh. 6) at p. 28, testimony of M. Brown (IDFA)).

While NMPF has asserted that the IDFA proposal would reduce the all milk price by $1.42/cwt, this unsubstantiated assertion ignores two critical facts: (1) FMMO prices are regulated minimums and USDA has in the past recognized that prices actually received by dairy farmers will vary from regulated minimums; and (2) dairy farmers with investments in cheese, nonfat dry milk, butter and whey facilities bear the burden of these increased costs which then depress prices paid to the very dairy farmers who own the facilities. The fact that cooperatives must in turn pay less than the blend price to their dairy farmer owners establishes that those dairy farmers are already incurring these costs, bearing an unequal burden as compared to dairy farmers who do not own this critical infrastructure. (Hearing Exh. 214 (IDFA Exh. 6) at p. 29, testimony of M. Brown (IDFA)). While farm level margins may initially decrease and contract milk supplies, Economics 101 dictates market forces will subsequently pull farm-level prices higher to reach a new equilibrium between supply and demand. Further, margin protection programs such as Dairy Margin Coverage ("DMC") will insulate farms - particularly smaller ones - from lower margins as the market adjusts. (Hearing Exh. 199 (IDFA Exh. 23) at p. 2, testimony of A. Krebs (Leprino Foods)).

2. Proposal 7 Should Be Rejected.

NMPF's Proposal 7 is woefully inadequate. The make allowances proposed are not grounded in any data regarding actual costs of manufacture, but simply arguments regarding the impact of increased make allowances on dairy farmers, which IDFA has addressed in the section above. (Hearing Exh. 214 (IDFA Exh. 6) at p. 29, testimony of M. Brown (IDFA)).

While NMPF clearly acknowledges the need for updated make allowances in their petition, they offer no methodology to their approach other than to say their "…make allowance increases represent a fair balance between the producer impact of higher make allowances and the processor impact of make allowances...". Proposal 7 does not purport to reflect the actual costs of manufacture, but some kind of imprecise weighing by NMPF and is members of actual costs of manufacture and the impact of higher make allowances on farmers. (Hearing Exh. 144 (NMPF Exh. 14) at p. 1, testimony of C. Edmiston (Land O' Lakes)); C. Edmiston (Land O' Lakes) Tr. 2564 line 1 - 2566 line 1). NMPF is asking USDA to ignore a scientific approach to setting minimum FMMO minimum prices and instead use a politically negotiated number. (Hearing Exh. 196 (IDFA Exh. 22) at p. 8, testimony of J. DeJong (Glanbia)). Indeed, this was openly admitted by the proponents: "I would say it represents -- it represents a cost and a Make Allowance proposal that could secure consensus among the organization." (R. Vandenheuvel (CDI) Tr. 2796 lines 4-10).

In fact, NMPF in its May 1, 2023 petition at p. 5 openly admitted that it "does not contend that these increases fully correct for the increases in butter, NFDM, cheddar cheese and dry whey manufacturing costs experienced by manufacturers since 2008, when the current make allowances were implemented." (Hearing Exh. 214 (IDFA Exh. 6) at p. 29, testimony of M. Brown (IDFA)). NMPF openly admits that the make allowances it is proposing are less than the actual average costs of production. (Hearing Exh. 143 (IDFA Exh. 35)).

While NMPF contends that "these make allowance increases represent a fair balance between the producer impact of higher make allowances and the processor impact of make allowances more closely reflecting the current cost of manufacturing commodity style butter, nonfat dry milk, cheddar cheese and dry whey," that position simply ignores USDA's repeated recognition that make allowances must reflect actual costs of production. NMPF's arguments that doing so will reduce producer prices to levels that would narrow margins and negatively impact the availability of adequate supplies of milk" are belied by USDA's repeated recognition that make allowances are not based upon farmer costs of production, and that an adequate supply of milk is achieved because---

> the costs of producing milk are reflected in the supply and demand conditions for the dairy products. When the supply of milk is insufficient to meet the demand for Class III and Class IV products, the prices for these products increase as do regulated minimum milk prices paid to dairy farmers because the milk is more valuable, and this greater milk value is captured in the pricing formulas. Dairy farmers face no regulatory minimums in their costs and face no regulated minimum payment obligation in the way that regulated handlers must pay dairy farmers for milk.

Milk in the Northeast and Other Marketing Areas; Tentative Partial Final Decision on Proposed Amendments and Opportunity To File Written Exceptions to Tentative Marketing Agreements and Orders, 73 Federal Register 35,305, 35,324 (June 20, 2008).

Furthermore, it bears repeating that the federal milk order system is not a price support program or income support program, and that minimum milk prices must reflect the market price of end-dairy products. This is a point that has been repeatedly made by USDA itself. In her September 17, 2012 letter responding to a request to hold a federal order hearing (Attachment A to Hearing Exh. 214 (IDFA Exh. 6)), AMS Deputy Administrator for Dairy Programs Dana Coale observed that "the Federal Milk Marketing Order (FMMO) program is not designed to be a price or income support program since it is not authorized to establish minimum prices above the relative market value of the products of milk. Instead, the FMMO program is a marketing tool that helps dairy farmers maintain a better balance in negotiating with processors by enforcing market-based minimum prices, monitoring the accuracy of milk weights and tests, and providing extensive market information to producers and processors to assist in market negotiations."

Many other similar statements have been made by USDA, see May 16, 2018 USDA presentation (presented by Dana Coale) at KY and TN Farm Bureau meeting: "FMMOs are not a price or income support program." (Attachment B to Hearing Exh. 214 (IDFA Exh. 6).

Set forth below are the actual cost of production as established by the Stephenson and Schiek studies; the make allowances proposed by NMPF; and the dollar shortfall between actual costs and NMPF make allowance Proposal 7:

Commodity	2022 Cost of manufacture	NMPF Proposed Make Allowances	Shortfall in NMPF Proposed Make Allowances As Compared to Actual Costs
Cheese	$0.2840	$0.2400	$0.0440
Dry whey	$0.3172	$0.2300	$0.0872
NFDM	$0.2716	$0.2100	$0.0616
Butter	$0.2785	$0.2100	$0.0685

(Hearing Exh. 214 (IDFA Exh. 6) at p. 32, testimony of M. Brown (IDFA)).

Proposal 7 thus only raises make allowances by less than half of the actual increase in costs of manufacture since make allowances were last increased in 2008. Indeed, NMPF's proposed $0.2400 cheese make allowance is less than CDFA's $0.2454 cheese cost of production figure from its ***2016*** audited survey. (Hearing Exh. 215 (IDFA Exh. 42) at p. 24, testimony of M. Brown (IDFA)); M. Brown (IDFA) Tr. 4257 lines 1 - 22). Similarly, as proponents themselves admitted, the NMPF make allowance proposal for nonfat dry milk ($0.21) only equals what the CDFA survey indicates was the nonfat dry milk cost of manufacture as of seven years ago, in 2016. (R. Vandenheuvel (CDI) Tr. 2772 line 15 - 2773 line 8).

As for disorderly marketing, NMPF clearly misinterprets the term. Whereas tighter supplies of milk (relative to demand) will drive prices higher, "disorderly marketing" instead refers to situations where there is excess milk relative to available processing capacity within a milkshed. This occurs when milk is overpriced relative to demand, not when milk is underpriced. Said another way, disorderly marketing occurs when the price does not clear the market of the available milk volume. Typical symptoms of disorderly marketing include milk dumping and/or unusually low spot milk prices. Again, the Upper Midwest has extensively experienced both phenomena in 2023. (Hearing Exh. 199 (IDFA Exh. 23) at p. 2, testimony of A. Krebs (Leprino Foods)).

More accurately, lower regulated milk prices that reflect current conversion costs and tighter milk supplies would enhance *orderly* marketing of milk as the market moves beyond the current overpricing of milk relative to available processing capacity. If the US dairy industry wants to thrive, or even remain status quo, make allowances must be updated to competitive levels to maintain existing assets and encourage adequate investment to be made in its processing sector. And NMPF's proposal clearly states: "Subsequent analyses by NMPF and other interested parties have estimated that unit costs of inputs have subsequently risen even further above these 2018 levels" and that "average manufacturing costs... are considerably higher than the current Federal Order make allowances." This speaks to the need for significant and adequate updates to make allowances. (Hearing Exh. 199 (IDFA Exh. 23) at p. 2, testimony of A. Krebs (Leprino Foods)).

The NMPF proposal suggests that make allowances based on updated weighted average costs would assure profitability to all processors, no matter how inefficient or high cost. Of course, this presumption doesn't make sense mathematically, as a weighted average takes plant size as well as production cost into account. So, if anything, weighted averages encourage plants producing commodity products to be sized to achieve economies of scale or achieve other above average efficiencies, lest they get left behind. (Hearing Exh. 199 (IDFA Exh. 23) at p. 2, testimony of A. Krebs (Leprino Foods)).

3. The Use Of Audited And Unaudited Survey Data Is Appropriate.

The criticism of the surveys as non-audited is without merit for two reasons. First, as described in detail above, the 2022 Schiek report relied upon the CDFA audited survey of dairy processing costs, and used well-recognized and widely employed economic methods to update those costs to the present.

Second, as detailed above, the 2023 Stephenson survey uses the exact same methodology he had previously used in conducting the Cornell surveys that USDA found sufficiently reliable to utilize in setting make allowances, both in 2007 and in 2008. While the 2023 Stephenson survey was not audited, neither was the RCBS survey relied upon by USDA to set make allowances in 2000, or the Stephenson surveys relied upon by USDA to set make allowances in 2007 and 2008. (Hearing Exh. 214 (IDFA Exh. 6) at p. 32, testimony of M. Brown (IDFA); M. Brown (IDFA) Tr. 4228 lines 10-20).

4. The Survey Size And Scope Are More Than Adequate.

AFBF's criticism that the Stephenson survey purportedly has too small a sample size, and participation arguably self-selected to achieve particular results, was directed at the 2021 Stephenson survey, not the 2023 Stephenson survey that is the basis of IDFA's petition. AFBF argues that the 2021 Stephenson survey "represents only 60% of the nonfat dry milk plants participating in the NDPSR, 29% of the dry whey plants, 24% of the cheddar cheese plants, and 20% of the butter plants. The conclusion is that it would be unfair to increase the make allowances based on this survey." (Hearing Exh. 222 (AFBF Exh. 3) at p. 2, testimony of D. Munch (AFBF)).

IDFA would agree that the 2021 Stephenson survey for cheese, which represented less than 20% of NASS reported cheddar volumes, would be inadequate. This is now a moot point, because as noted above and shown again immediately below, the 2023 Stephenson survey upon which the IDFA proposal is based covered the manufacturing costs of more than 50%, and up to 91%, of the total volume of NASS production for each of the four commodities surveyed. (Hearing Exh. 214 (IDFA Exh. 6) at p. 33, testimony of M. Brown (IDFA)). And because the average size of these plants is far above average, they also are well represented by large manufacturing plants:

USDA-NASS and Stephenson Cost Survey Dairy Product Volumes

USDA NDPSR Cost Survey Products	USDA-NASS 2022 Annual Production	2023 Stephenson Cost Survey			Survey Production Share of USDA NASS Production
		Participating Plants	Average Annual Production	Total Survey Annual Production	
Cheddar Cheese	3,963,741,000	18	122,404,426	2,203,279,668	55.6%
Whey (Human)	885,929,000	9	49,986,287	449,876,583	50.8%
Nonfat Dry Milk	1,968,364,000	15	119,615,524	1,794,232,860	91.2%
Butter	2,058,737,000	13	126,906,009	1,649,778,117	80.1%

Data Sources: Dairy Products 2022 Summary April 2023. USDA NASS ISSN: 1057-784X PP11,23,29.
Cost of Processing in Cheese, Whey, Butter and Nonfat Dry Milk Plants, Mark Stephenson, Ph.D., June 2023

(Hearing Exh. 178 (IDFA Exh. 1) at pp. 9-11 (report of Dr. Stephenson); Hearing Exh. 215 (IDFA Exh. 42) at pp/ 11-12, testimony of M. Brown (IDFA)).

J. Implementing New Make Allowances That Are Reflective Of Actual Costs Of Production Should Not Be Delayed Pending Further Study Of Yield Factors.

NMPF, through California Dairies testimony, contends that its proposed "tempered make allowance adjustments" are further justified based on a perceived need to examine and, if warranted, adjust yield factors once industry studies on yield factors can be completed. (Hearing Exh. 237 (NMPF Exh. 102) at p. 2, testimony of R. Vandenheuvel (CDI); R. Vandenheuvel (CDI) Tr. 4828 lines 2-4). USDA must reject this contention for at least three reasons.

First, IDFA's proposed make allowances are already "tempered" in that they are to be phased in over time. Further with ongoing inflation since Dr. Stephenson's 2023 study, IDFA's proposed make allowances almost certainly will still be far too low even when fully phased in. No further tempering is merited, justified, or, given the need to set minimum prices at market clearing levels, legally warranted.

Second, nothing prevented the proponent of Proposals 10 through 12 from seeking from USDA or conducting industry yield factor studies similar to Dr. Stephenson's make allowance studies, especially since proponent Select Milk Producers has sought virtually identical yield factor regulatory adjustments repeatedly dating back to 2000. And Select knew or should have known that many in industry have sought a review of FMMO make allowances for at least eight years. Going back at least as far as USDA's 2015 hearing adopting a California FMMO, the Dairy Institute of California in testimony and on brief argued that make allowances were already then too low:

> The [Dairy Institute] brief stated that pricing formulas need to be updated in order to be representative of current marketing conditions. The FMMO pricing system, the Institute stressed, needs all pricing formulas to be set at market clearing levels that enable over-order premiums to be paid when appropriate.

Milk in California; Proposal To Establish a Federal Milk Marketing Order; Proposed Rule; 83 Fed. Reg. 14110, 14141 (April 2, 1918).

Select appeared in that proceeding. In the California promulgation hearing, no one argued for modified yield factors, and USDA concluded "the record shows that these values continue to reflect current market conditions." *Id*. at 14145.

In short, everyone in the dairy industry has been on notice of the need and desire to adjust make allowances since USDA first retained Dr. Stephenson in 2018 to update his earlier make allowance studies from 2006 and 2007. (M. Stephenson (University of Wisconsin) Tr. 3426 lines 21-23). Dr. Stephenson's 2021 Study relies on 2019 data. *Id.* at lines 24-28. Proponent has thus known for no less than four and more likely at least eight years that make allowance amendments were likely to be requested and, it could have sought information and surveys on yield factors from USDA or industry. It did not. To hold back on amending make allowances as proposed by IDFA through further "tempering" of IDFA's proposed make allowance is neither economically or legally justified.

Third, as discussed extensively above, NMPF and IDFA (along with many others in industry) agree that make allowances are materially too low, while there is no such agreement with respect to yield factors. With respect to yield factors, and as discussed in Section VIII below in greater detail, there is widespread disagreement around a host of issues including, but not limited to: the need for a more comprehensive review of yield factors formulas, not just individual elements; actual versus theoretically achievable butterfat recovery in the manufacture of cheese; farm to plant shrink; the actual value of whey cream and buttermilk powder; and establishing a uniform mechanism to provide equivalent measurements of actual yields from vats that recognize different processing methods and additives (e.g., coagulants). Hearing Exh. 227 (IDFA Ex. 43) at pp. 1-2, testimony of A. Krebs (Leprino Foods); J. De Jong (Glanbia) Tr. 3827, lines 5-6; Hearing Exh. 228 (IDFA Ex. 44) at pp. 3-4, testimony of M. Brown (IDFA)).

*   *   *

For all of these reasons, USDA should adopt Proposals 8 and 9, as set forth in Hearing Exhs. 12 and 13 (USDA Exhs. 12 and 13) and reject Proposal 7.

VII. USDA SHOULD REJECT PROPOSALS 10 THROUGH 12, WHICH WOULD AMEND THE YIELD FACTORS BY INCREASING THE BUTTERFAT RECOVERY IN THE CLASS III FORMULA TO 93 PERCENT, ELIMINATING THE FACTOR FOR FARM TO PLANT SHRINK, AND RAISING THE NONFAT SOLIDS FACTOR FROM 0.99 TO 1.03

PROPOSED CONCLUSIONS REGARDING PROPOSALS 10 – 12

Based upon the Proposed Findings that follow, IDFA's Proposed Conclusions Regarding Proposals 10 through 12 are:

a. USDA has repeatedly found that the yield factor formulas that Select Milk Producers "Select" proposes to amend continue to represent current market conditions based upon industry experience. Proposals 10 through 12 are premature as they lack any industry or USDA study that undercuts USDA's conclusion in 2018, following the California FMMO promulgation hearing, that the existing yield factors continue to represent current marketing conditions based upon industry experience. Without those comprehensive studies evaluating all aspects of the yield factor formulas, and not just cherry-picked portions of those formulas that are revenue enhancing, USDA cannot reliably amend those provisions.

b. In Proposals 10 through 12, Select proposes reploughing much of the same ground that it has sought to review multiple times since 2000 with respect to butterfat recovery in cheese, farm to plant shrink, and updating nonfat solids yields. It therefore needs to demonstrate that USDA's earlier decisions are no longer correct or were not correct to begin with. A palpable dearth of broad industry evidence exists, however, on a number of key aspects of Select's proposals. Select advances earlier unsuccessful arguments urging USDA to adopt a revised butterfat recovery rate based upon "achievable" versus actually achieved industry results, to eliminate farm to plant shrink based upon its own uniquely achieved results, and to modify the nonfat solids yield factor based again upon its own selected data reflecting its opinion of the value of buttermilk without considering its actual cost of manufacturing, and different industry values for buttermilk in the marketplace.

c. With respect to Proposal 10 to increase butterfat recovery to 93 percent, Select relies on expert witness testimony as to achievable rather than actual industry results, similar to the scientific studies it entered into evidence in earlier hearings. This testimony was directly contradicted by an industry expert who testified about his extensive real live plant experience supporting the conclusion that actual results within industry remain consistent with USDA's earlier findings – that 90 percent butterfat recovery can actually be obtained; older vats with more limited butterfat recovery remain in common use; plant investments and different methodologies used in making cheese (e.g., added solids and or cream and coagulants) result in different butterfat recovery; and cheese making remains an art as well as a science meaning that actual butterfat recovery will depend on the expertise of the cheesemaker. Select, as in the 2007 FMMO hearing, also relies on advertisements claiming that a specific cheese vat will result in higher butterfat recovery rates. USDA expressly rejected this evidence in its 2013 Final Decision on the grounds that product-price formulas must reflect current plant conditions, not plant conditions that may be possible, but not reflective of general industry wide conditions.

d. The issue of butterfat recovery and how it is then valued by USDA in the Class III cheese formula is further complicated by the fact that USDA has earlier concluded that whey cream value can be valued at the same price as AA Butter, without discounting for the fact that whey cream cannot be used to produce AA Butter. Whatever the basis for USDA's earlier conclusion, the market for whey cream in 2023 is significantly and negatively different from 2007. Moreover, an expert testified that food safety and product quality concerns today argue strongly against cheesemakers reintroducing whey cream into the cheesemaking process. USDA should conclude that it cannot adopt a change to the Class III yield formula regarding butterfat recovery without making a corresponding adjustment for changes in whey cream value. For all these reasons, USDA should reject Proposal 10, leaving butterfat recovery at 90 percent as in the current formula.

e. As to Select's Proposal 11 to eliminate farm to plant shrink, other witnesses, including both NMPF and IDFA, testified that farm to plant shrink remains a very real, common, and unavoidable issue, especially for dairy farms smaller than Select's members. WCMA also testified about the continuing need in the Upper Midwest for tankers to make multiple stop pick-ups. The evidence demonstrates that milk is left in the hose and butterfat inevitably sticks to the insides of stainless-steel tankers. Select's response that smaller dairy farms could achieve better farm to plant shrink results through changes in their operations would impose unequal real investment and other costs especially on small businesses. USDA should reject this argument, recognizing the legal requirements of the Regulatory Flexibility Act (5 U.S.C. 601 *et seq*.) ("RFA") to examine and limit additional regulatory costs imposed on small businesses meeting the SBA definition. USDA should reject Proposal 11, and continue to adjust for farm to plant shrink in the yield formulas.

f. As to Select's Proposal 12 to modify the nonfat solids yield factor from 0.99 to 1.03, its renewed effort to adjust for the purported value of buttermilk powder again fails to account for the different manufacturing costs and different values of buttermilk powder versus NFDM. NFDM and buttermilk powder are different products both in composition and in market utilization. Select's own data, like its data on farm to plant shrink, is a limited sample size including months where their butter churn is not used and thus no buttermilk in manufactured or sold. USDA's

Dairy Market News is not anywhere near as standardized, accepted or audited as the National Dairy Product Price Sales Report. Finally, the cost of manufacturing buttermilk powder is not uniformly accepted as being as low as two cents as previously determined by USDA. USDA's prior decision to not include buttermilk powder in the formula makes the question whether the manufacturing costs is two cents versus up to five cents academic; it is not academic if the value is to be included per Select's testimony, but the manufacturing cost not be studied and set accurately. USDA should reject Proposal 12, leaving the nonfat solid yield factor at 0.99.

g. In making its proposals, which do not have the benefit of industry studies, Select asks that USDA only consider yield factor data, that if accurate and demonstrating actual industry experience, would increase minimum prices, rather than revisiting all elements of the multiple, many faceted yield formulas. Moreover, Select's proposals presume that manufacturing facilities are lossless plants that can control the product output based upon perfect conversions from milk to product. For instance, it is established that cream retains some nonfat solids; however, cream is sold based upon its fat value. The nonfat solids in the cream should not be valued as if they are retained in the NFDM. Any future industry studies further need to consider and factor in the different methods and any added components in the cheesemaking so as to standardize the results.

h. The proposals, as presented, do not account for the necessity to set regulated minimum prices at levels that will be market clearing.

i. USDA must reject Select's implicit assertion through cross-examination that it is somehow opponents obligation to have conducted the broad studies necessary to establish new yield factors. Select is the proponent, and especially given USDA's recent reaffirmation in 2018 of the existing yield factors, it was incumbent on Select to conduct the kind of broad surveys of actual plant yields that might support its proposed revisions. Furthermore, there are a number of additional yield factor scope issues even beyond the three proposals made by Select for which there are no industry studies should USDA conclude that modifications in the future are needed including: standardization of methods of measuring butterfat recovery including equipment used and any milk components or nonmilk coagulants included in the process; accurate industry price reporting for buttermilk powder and whey cream; and the actual usage, or not, of whey cream.

j. None of the Proposals 10 through 12 should be adopted by USDA.

PROPOSED FINDINGS REGARDING PROPOSALS 10-12

A. Proposed Findings Common To Proposals 10 Through 12.

In performing make allowance calculations, USDA must make assumptions as to how much of the end-products can be made from a given quantity of milk – the yield factors. (Hearing Exh. 127 (IDFA Exh. 30) at p. 2, testimony of M. Brown (IDFA)). Proposals 10 through 12, submitted by Select Milk Producers, would raise the butterfat recovery assumed in the Class III formula, eliminate the factor for farm to plant shrink, and increase the nonfat solids factor.

While Select has supplied some internal data in support of these proposals, USDA does not have the benefit of any broader industry or USDA studies relevant to the consideration of these proposals. Both NMPF and IDFA agree that such broad industry or USDA studies are a prerequisite to USDA considering amendments to these provisions. USDA should so conclude as well. (Hearing Exh. 228 (IDFA Exh. 44) at pp. 1-2, testimony of M. Brown (IDFA)); Hearing Exh. 237 (NMPF Exh. 102) at p. 1, testimony of R. Vandenheuvel (CDI)) ("[I]n the absence of broad-based industry-wide data in the area of product yields, [NMPF] did not pursue an update to any of the product yields as part of our comprehensive package."); Hearing Exh. 227 (IDFA Exh. 43) at p. 2, testimony of A. Krebs (Leprino Foods) ("If Congress grants USDA the authority to conduct regular, mandatory cost of processing studies, yield data (including butterfat recovery) could become part of this process, as well. When that study data is available, the industry would then have broad publicly available data from which to update these factors.”); Hearing Exh. 196 (IDFA Exh. 22) at p. 12, testimony of J. DeJong (Glanbia) (“We support the status quo until audited plant cost studies can be completed that show real world yields, shrink, and dairy solids recovery.”).

The Dairy Institute of California similarly opposed modifications to the yield factors absent broader data. Hearing Exh. 249 (Dairy Institute Exh. 1) at pp. 7-8, testimony of W. Schiek (Dairy Institute)).

“Unlike multiple studies over the past several decades that collected data from multiple different manufacturing facilities, owned by many different companies, with respect to the costs of manufacture, for purposes of setting make allowances, Select presents no such studies with respect to its yield assumptions and losses, both before and after plant receipt and throughout the production process. Instead, Select simply relies upon its own internal data regarding its own facilities.” (Hearing Exh. 228 (IDFA Exh. 44) at p. 3, testimony of M. Brown (IDFA); Hearing Exh. 237 (NMPF Exh. 102), p. 2, testimony of R. Vandenheuvel (CDI); Hearing Exh. 227 (IDFA Exh. 43) at p. 2, testimony of A. Krebs (Leprino Foods)).

Select focuses its attention on only three elements of yield factors rather than seeking to take a more comprehensive approach. This kind of “cherry-picking” of formulas would if accepted likely result in an overstatement of the value of milk used to produce cheese, butter, nonfat dry milk and whey, contradicting the need to establish minimum prices for these products that are market-clearing. Milk in the New England and Other Marketing Area; Decision on Proposed Amendments to Marketing Agreements and Orders, 64 Federal Register 16026, 16094 (April 2, 1999). “If some of the yield factors are to be evaluated, then all yield factors should be considered.

Finally, if this hand-picked group of factors is updated without broad, publicly available data, it would directly conflict with the logic USDA provided in the following quote from the 2013 Final Decision regarding the valuation of whey cream." (Hearing Exh. 227 (IDFA Exh. 43) at p. 1, testimony of A. Krebs (Leprino Foods)). As USDA then concluded:

> While there is record evidence from some manufacturers as to their individual saleable volumes and values of whey cream, that limited data does not provide for a reasonably complete assessment of the national market for whey cream and its various competing uses. Accordingly, Proposals 9 and 10 are not proposed to be adopted.

Milk in the Northeast and Other Marketing Areas; Final Decision on Proposed Amendments to Marketing Agreements and Orders and Termination of a Portion of the Proceeding, 78 Federal Register 9248, 9274 (February 7, 2013).

The Glanbia Nutritionals witness concurred that USDA should not "cherry-pick the formula." (J. DeJong (Glanbia) Tr. 3827 lines 5-13). Nor should data from one, uniquely situated industry participate dictate formula pricing:

> USDA should not rely on one data set provided by a most efficient and large farm cooperative without considering the broader industry. Select is known for its innovative approaches and very large farms that likely generate more efficient results and lower losses than are found industrywide. Just as with make allowances, it is critical that AMS examine yields across the entire dairy industry, recognizing that others do not experience the same efficiencies, and likely experience greater losses. And it costs money to achieve many of those efficiencies, which in turn impacts plant costs, although we acknowledge that there would also be an adjustment for per-pound product costs resulting from those investments.

(Hearing Exh. 228 (IDFA Exh. 44) at pp. 4-5, testimony of M. Brown (IDFA)). "Select is in a unique position in the marketplace." (Hearing Exh. 237 (NMPF Exh. 102) at p. 2, testimony of R. Vandenheuvel (CDI)).

USDA should maintain the status quo until a much broader based plant study is completed that establish real world yields, shrinkage, and dairy solids recovery, including values for that recovery. There are many complicated issues including fat recovery, plant loss, and other factors across the dairy industry. Studies will need to take into account plant ages, investments, and processing techniques. This would facilitate making yield adjustments in a comprehensive, rather than piecemeal fashion. (Hearing Exh. 228 (IDFA Exh. 44) at p. 3, testimony of M. Brown (IDFA); Hearing Exh. 227 (IDFA Exh. 43) at pp. 2-3, testimony of A. Krebs (Leprino Foods)). "Given the vast complexity of these issues, difference in plant equipment and operations, and the fact critical parts of the Class III formula overvalue milk, we should wait for a USDA audited cost study to be completed so we can accurately measure real world yield factors across a variety of plants." (Hearing Exh. 196 (IDFA Exh. 22) at p. 13, testimony of J. DeJong (Glanbia)).

USDA has repeatedly found that the current yield factor formula "values continue to reflect current market conditions." Milk in California; Proposal To Establish a Federal Milk Marketing Order; Proposed Rule; order for referendum; notice of public hearing, 83 Fed. Reg. 14110, 14145 (April 2, 1999); Milk in the Northeast and Other Marketing Areas; Decision on Proposed Amendments to Tentative Marketing Agreement and to the Order; Proposed Rule, 67 Federal Register 67906, 67918, 67291-67923, 67929 (November 2, 2002); Milk in the Northeast and Other Marketing Areas; Final Decision on Proposed Amendments to Marketing Agreements and Orders and Termination of a Portion of the Proceeding, 78 Federal Register 9248, 9273 (February 7, 2013). Nothing in this record alters those conclusions. As discussed more fully below, Select's reliance on similar arguments and data from prior proceedings, rejected by USDA, does not carry the day today.

Select fails to present evidence demonstrating that these decisions were wrong when made or are no longer valid. Select criticizes opponents for suggesting that changing yield factors should be deferred until a broader, comprehensive study of yield factors can be conducted, asserting that such opponents should have themselves summitted proposals to consider those other components. *See e.g.*, Tr. 3843, lines 22-25, question by Select counsel. This is wrong for two reasons. First, as a proponent, Select had the responsibility to conduct a sufficiently comprehensive yield factor survey, just as IDFA itself did (in conjunction with WCMA) in connection with its own make allowances proposals. Second, Select submitted its yield factor proposal to USDA on June 14, 2023,, the deadline USDA had set for the submittal of proposals. Until that happened, others would not have even known that yield factors would be open for consideration. (J. DeJong (Glanbia) Tr. 3843 lines 26-28, 3844 lines 1-2) (referencing "the tight time constraints" and that "we didn't know what the scope of the hearing would be").

B. The Butterfat Recovery Factor In The Class III Protein Formula Should Not Be Increased (Proposal 10).

Proposal 10 would increase the butterfat recovery factor in the Class III formula to 93%, resulting in a corresponding increase in the butterfat yield in cheese to 1.624. According to Select's analysis, adoption of this proposal would have increased the Class III price by $0.04/per cwt as compared to both a five- and ten-year average. (Hearing Exh. 228 (IDFA Exh. 44) at p. 2, testimony of M. Brown (IDFA)).

Proposal 10's 93% butterfat recovery conclusion assumes that theoretical achievable higher fat capture is actually achieved by industry generally and that all butterfat recovered has equal value. Neither assumption is correct, and in any event without USDA studies, the conclusions cannot be accepted by USDA. (Hearing Exh. 228 (IDFA Exh. 44) at p. 5, testimony of M. Brown (IDFA)).

The analysis of butterfat recovery and Proposal 10 must begin with a review of USDA's prior discussions and conclusions regarding butterfat recovery. Select, among others, sought in the 2000 FMMO hearing a butterfat recovery factor of 91 or 92 percent. USDA considered testimony very similar to Select's today, but rejected the proposal, concluding that the record supported that cheese manufacturers should be able to obtain 90 percent butterfat recovery:

> Suggestions to increase the butterfat recovery factor of 1.582 (to 1.6 or 1.617) were made by DFA; Select, Elite, et. al; and National All-Jersey, Inc. These commenters relied on hearing testimony that butterfat recovery in cheddar cheese generally ranges between 90 and 93 percent, although Kraft testified that their butterfat recovery is lower. The commenters favored use of a factor that reflected 91 or 92 percent fat recovery because that level of recovery is common. In a comment filed by Leprino, the cheese manufacturer urged that the 1.582 factor not be increased, as any increase would exacerbate the overvaluation of whey fat in the current formula and because the 90 percent recovery factor reflects results from many cheese vats installed prior to the late 1980's.
>
> The recommended decision stated that even though many cheese makers may be able to achieve a higher fat retention in cheese, the use of the 1.582 factor representing 90 percent fat recovery in cheese continued to be appropriate. The recommended decision also stated that as a result of the 90 percent level, butterfat in cheese was not overvalued, and those cheese makers who fail to recover more than 90 percent of the fat would not suffer a competitive disadvantage. The preponderance of the record indicates that most cheese manufacturers should be able to obtain a 90 percent butterfat recovery.

Milk in the Northeast and Other Marketing Areas; Decision on Proposed Amendments to Tentative Marketing Agreement and to the Order; Proposed Rule, 67 Federal Register 67906, 67918, 67291-67923, 67929 (November 2, 2002).

Select as a member of Dairy Producers of New Mexico in 2007 again sought to increase the butterfat recovery percentage, from 90 to 94 percent, making the identical argument that it advanced in this proceeding, namely, "that new cheesemaking technology has increased the amount of butterfat that manufacturers can potentially recover when making cheese." Final Decision on Proposed Amendments to Marketing Agreements and Orders and Termination of a Portion of the Proceeding, 78 Federal Register 9248, 9273 (February 7, 2013). Select then as now (Hearing Exh. 224 (Select Exh. 7) at p. 6, testimony of Dr. N. Farkye (Select)) relied on theoretically achievable, and not actually industry achieved results. Select further, then as in this proceeding, sought to rely on equipment manufacturer advertisements making claims about achievable butterfat recovery from particular vats. (Hearing Exh. 225 (Select Exh. 8) and Hearing Exh. 224 (Select Exh. 7) at pp. 4-5, testimony of Dr. N. Farkye (Select)). USDA rejected the contentions then and should do so again today:

> While the record contains evidence of what butterfat recovery rate in cheese production is possible through the use of more modern manufacturing methods and technology, the preponderance of evidence reflects that many cheese manufacturers generally achieve butterfat recovery near 90 percent. DPNM et al. failed to make a compelling argument for an increase in the butterfat recovery rate in their exceptions to the tentative partial final decision. While they did offer several references to articles published by dairy scientists providing examples of cheese yields with higher butterfat retention rates, they did not provide examples of manufacturing facilities currently experiencing those higher rates. Furthermore, the use of advertisements claiming that a specific cheese vat will result in higher butterfat retention rates does not merit the conclusion that those rates are, on average, achieved. It is important that the product-price formulas reflect current plant conditions, not plant conditions that may be possible but not reflective of general industry wide conditions. Accordingly, this final decision continues to reject adoption of this feature of Proposal 6.
>
> Proponents also commented that plants whose butterfat recovery rate is greater than 90 percent are not paying for all of the protein used to make cheese. This final decision rejects that assertion. All of the protein contained in producer milk, regardless of if its end use in cheese or in the whey stream, is priced at the protein price. The protein price is not reduced to reflect a lower value for the protein in the whey stream.

Final Decision on Proposed Amendments to Marketing Agreements and Orders and Termination of a Portion of the Proceeding, 78 Federal Register 9248, 9273 (February 7, 2013).

While Select's expert, Dr. Farkye is a scientist who can and does opine on achievable yields, USDA has instead repeatedly relied upon actual industry experience. This policy is entirely consistent with the need to set minimum regulated manufacturing prices at market-clearing levels. Milk in the New England and Other Marketing Area; Decision on Proposed Amendments to Marketing Agreements and Orders, 64 Federal Register 16026, 16094 (April 2, 1999). Unlike Dr.

Farkye, Mr. Sommer has decades of hands-on, real plant experience in a number of manufacturing plants. Mr. Sommer testified from this real-world perspective, contrasting predictive yield equations "that will always be an overestimation of reality." (Hearing Exh. 306 (IDFA Exh. 50) at p. 7, testimony of D. Sommer (Center for Dairy Research)). His best real-world estimates taking into account his personal experience over several decades in many cheese plants is that actual achieved butterfat recovery ranges from 88-93 percent depending on the equipment used and management techniques. *Id*. In sum, "actual yield and fact recovery is normally significantly less than predicted yield and fact recovery." *Id.*

While the Van Slyke formula from early in the 20th Century estimated that perfect cheese production could result in 93 percent butterfat recovery, actual results have long been known to be less. For instance, in a 1984 published study by Dr. David Barbano relying on newer technology, actual results in four large cheese plants in New York ranged only from 82.8 to 87.2 percent. While even newer vats today can achieve lower fat losses after cutting (ranging from a best of 5% to 9-10%), fat losses after cutting do not account for other point of fat loss. (Hearing Exh. 306 (IDFA Exh. 50) at pp. 1-2, testimony of D. Sommer (Center for Dairy Research)).

Moreover, older "OO" vats and open vats remain in widespread use today. *Id.* p. 2. Older "OO" vats are vats with two chambers that are interlocked:

> They are side by side, two circles interwoven like a Venn diagram. And they have vertical shafts that rotate, and on those rotating vertical shafts are knives that rotate like this, and they – they agitate the milk, and they cut the cheese that is created inside the vat.

(J. Umhoefer (WCMA) Tr. 5573 lines 22-28). Further the WCMA witness knows of at least five such "OO" vats operating in medium sized plants in Wisconsin receiving from a half million to two million pounds of milk per day. (J. Umhoefer (WCMA) Tr. 5574 lines 6-16).

Further, when one manufacturer converts to the newest horizontal vats, the older “OO” vats are inevitably refurbished and installed elsewhere. Small artisan cheese makers also continue to use open vats. Thus, industry use ranges from the most modern plants using horizontal vats to smaller facilities continuing to use “OO” and open vats. (Hearing Exh. 306 (IDFA Exh. 50) at pp. 2-3, testimony of D. Sommer (Center for Dairy Research)).

Butterfat losses in the vat at cutting explain only part of actual butterfat losses in cheesemaking. Dean Sommer concludes that many operators of plants he visits mistakenly consider only fat lost at the cutting of the coagulum, significantly overestimating their butterfat recoveries. *Id*. at pp. 6-7. For example, most operators only think of the loss of sweet whey after the cutting of the coagulum. Other losses include fat losses left in the silo and lines; filter rotation and flushing; milk clarifier desludging; pasteurizer start up and shutdowns which collectively can account for up to 1% of total butterfat loss. *Id*. at p. 3. Other losses accounted for by Mr. Sommer in his testimony include: the failure to account for the salty whey created late in the cheesemaking process; during the salting process of cheddar cheese curds that can account for up to 10% of butterfat loss; “cheese fines” created during the process that cannot be returned to the cheese that can account for 0.5-0.6% losses in total cheese volume; product lost on the facility floor or downgraded (up to another 1% loss); and inevitably the skill of the cheesemaker. *Id*. at pp. 3-5.

Separately, those plants that use whey cream in cheddar cheese manufacturing will not achieve optimum fat recoveries. The milk globules that escape in the whey are smaller and damaged and can leak out of the curd matrix. Repeated use of such whey cream over a period of time will further erode fat recovery. *Id*. at p. 6.

Without actual USDA or industry-wide studies, the problem with Select’s achievable results compared to Dean Sommer’s extensive actual experience is that “we do not have data regarding fat recovery levels across many plants representative of the cheddar manufacturing industry." (Hearing Exh. 249 (Dairy Institute Exh. 1) at pp. 7-8, testimony of W. Schiek (Dairy Institute); *see also* Hearing Exh. 227 (IDFA Exh. 43) at pp. 1-2, testimony of A. Krebs (Leprino Foods); Hearing Exh. 196 (IDFA Exh. 22) at p. 12, testimony of J. DeJong (Glanbia)).

Even with such USDA studies, there are at least three critical issues that must still be resolved: (1) any mandatory studies must use standardized yield factors; (2) there remain incorrect suppositions that all excess fat from cheese is recovered; and (3) prior assumptions by USDA about the value of whey cream in establishing fat recovery and value of butterfat are no longer true or the original assumptions are incorrect – whey cream no longer has alternative higher value uses and, as discussed above, often is no longer used in cheesemaking for quality and safety purposes.

First, the Leprino witness expressly and cogently noted the reasons why standardization of yield factors is required:

> Vat component data needs to be detailed in order to accurately identify yield drivers, including from fortification ingredients, rather than assuming that the vat components mirror those of the incoming raw milk. Fortification is the process of including other, more concentrated milk products such as NFDM, condensed skim, or ultra-filtered milk in the cheese vat along with milk. Fortifying the cheese make process with these products enables cheese makers to improve productivity and plant utilization, manage raw ingredient inventories, and manage input economics based on market price relationships.

(Hearing Exh. 227 (IDFA Exh. 43), at p. 2, testimony of A. Krebs (Leprino Foods); *see also*, Hearing Exh. 196 (IDFA Exh. 22) at p. 13, testimony of J. DeJong (Glanbia) (need to consider the "difference in plant equipment and operations")).

Second, and consistent with Dean Sommer's testimony discussed above, the Glanbia Nutritionals witness contested the assumption that all excess fat from cheese is recovered:

> Specifically, at 2.9915% protein and 3.5% fat (standard Class III test) the current formula stipulates 90% of fat goes towards cheese

> making, with the remaining 10% being recovered as sweet cream which is valued using the NDPSR Grade AA butter price. The 90% cheese fat recovery plus the 10% sweet cream fat recovery add to 100% recovery.
>
> The first problem here is that there is no such thing as a lossless manufacturing system. All plants lose milk solids, which in our case go into wastewater (and often recovered as biogas). While we do not measure farm-to-plant losses, for simplicity we do measure total loss from farm through our entire manufacturing system, primarily through the measurement of milk solids in our wastewater. Even with highly efficient plant equipment and mostly full milk tanker loads, in our experience modern cheese plants are expected to lose about 1.5% of the purchased milk solids. Specifically for fat, about 1.5% of farm test fat ends up in wastewater primarily because of equipment cleanouts and the milk ultrafiltration process prior to entering the vat. This lost fat is completely unmarketable. To quantify the impact to Class III at standard components (2.9915% protein, 3.5% fat), using $2.3475 per lb. butter (the same 10-year markets as used in the petitioner's analysis), and the current make allowance and butter yield factors, this loss would equal $0.14 per cwt. of milk.

(Hearing Exh. 196 (IDFA Exh. 22) at pp. 12-13, testimony of J. DeJong (Glanbia)).

Third, it is no longer accurate to conclude as USDA has in the past that whey cream can be valued the same as AA Butter, because prior hearing witnesses have testified that "other higher-value uses for whey cream exist that are not recognized." Final Decision on Proposed Amendments to Marketing Agreements and Orders and Termination of a Portion of the Proceeding, 78 Federal Register 9248, 9274 (February 7, 2013). Mr. Sommer concludes that it is "important to note that the skim portion of sweet cream is skim milk which contains caseins and whey proteins, while the skim portion of whey cream is whey which contains no caseins. (Hearing Exh. 307 (IDFA Exh. 51) at p. 1, testimony of D. Sommer (Center for Dairy Research)).

Since USDA made its decisions in the 2000 and 2007 hearings, the handling of whey cream and its use has changed for at least two significant reasons. First, while the sale of whey cream to butter manufacturers used to be a source of significant revenue, this is no longer the case. *Id*. at pp. 1-2; *see also* R. Vandenheuvel (CDI) Tr. 4862 lines 24-28, 4863 lines 1-7 (whey cream cannot be sold as AA Butter, and CDI does not purchase any whey cream). Second, Dean Sommer testified that there are significant problems with utilizing whey cream in cheese production. "Whey cream is a potent source of bacteriophage, viruses that destroy bacterial cheese cultures with the resultant loss of acid producing capacity." Hearing Exh. 307 (IDFA Exh. 51) at p. 2, testimony of D. Sommer (Center for Dairy Research)).

Solving for this problem creates other flavor defects. Further, "[t]he fat in whey cream is physically damaged due to the processes employed during cheesemaking." *Id*. The recycling of whey cream into cheese manufacture makes "optimum fat recoveries at coagulum cutting such as 93-94% unachievable. *Id*. at p. 3. "Reusing whey cream in cheddar cheese manufacture runs the risk of cheese off flavor development. *Id*. The reuse of damaged fat in whey cream "sets off a vicious cycle of damaged fat simply recycling through the system, and leading cheese factories to greatly overestimate the value they are getting from reuse of whey cream." *Id*. at p. 4. Given this information, USDA cannot simply accept a single set of data from Select and amend the yield factor by adjusting butterfat recovery. A complete reanalysis is necessary.

The Glanbia Nutritionals witness bolsters this conclusion:

> The second problem is that the Class III formula values the remaining 10% of the vat fat not going into cheese (which is called whey cream) using the NDPSR Grade AA butter price. Per USDA regulations, butter with a whey flavor would be assigned as Grade B butter. As such, we see about 20% discounts or more for whey fat versus Grade A sweet cream due to its limited marketability. This discrepancy can easily overvalue Class III fat another $0.17 per cwt (see Figure 6). Further, included in Figure 7 is an algebraically simplified version of the current Class III protein price and fat value explanation that may make this topic easier to understand.

(Hearing Exh. 196 (IDFA Exh. 22) at pp. 13, 18-19 (Figures 6 and 7), testimony of J. DeJong (Glanbia)). Finally, the IDFA witness also corroborates that whey cream is over-valued in the current formula.

> With 20% or greater discounts on whey cream compared to fresh cream, the Class III fat assigned to whey cream is simply over-valued under the current formula. This is in addition to in-plant losses of milk fat during processing, which the current formula does not recognize. These defects would need to be fixed as part of any revision to current formula yield factors.

(Hearing Exh. 228 (IDFA Exh. 44) at p. 5, testimony of M. Brown (IDFA)).

Proposal 10 should not be adopted by USDA.

C. Farm to Plant Shrink Should Not Be Eliminated (Proposal 11).

Proposal 11 would eliminate farm to plant shrink and thus increase the yield factors for butterfat to 1.22, the protein value in cheese to 1.386, and the butterfat value in cheese to 1.582. Select asserts that the yield factors for nonfat solids and other solids remain unchanged due to rounding. (Hearing Exh. 228 (IDFA Exh. 44) at p. 3, testimony of M. Brown (IDFA)).

Any discussion of the treatment of farm to plant shrink must include a discussion of USDA's prior final decisions finding that an adjustment for farm to plant shrink is necessary. While USDA's original recommended decision from the 2000 FMMO hearing did not include such an adjustment, the final decision in 2002 reversed course:

> After reevaluation of the hearing testimony and comments, this final decision reverses the recommended decision by including an adjustment for farm-to-plant losses of butterfat and nonfat solids. It is necessary to include such an adjustment in using end-product pricing formulas for determining component prices. Since the handlers receiving milk from producers pay the producers on the basis of farm weights and tests, handlers do not receive all of the milk components due to farm-to-plant losses. An adjustment to the price formulas to account for the difference in milk components paid for versus components actually received is appropriate. Based on the hearing record and comments filed by numerous parties, the farm-to-plant adjustment will reflect a 0.25 percent loss of nonfat

> solids, including protein and other solids, and a 0.25 percent loss of butterfat plus a 0.015 pounds loss of butterfat. These adjustments are reasonable and are reflected in the respective yield factors used for computing the milk component prices.
>
> These loss allowances are adopted into the Class III and IV pricing formulas. The farm-to-plant losses are reflected on the end-products that result from Class III and IV milk, namely, cheese, dry whey, nonfat dry milk, and butter. They are reflected in this way to ease the concerns raised by Select Milk and Continental Dairy who indicated that reflecting farm-to-plant losses on the front-end of the product formulas (based on farm milk) may cause confusion.

Milk in the Northeast and Other Marketing Areas; Decision on Proposed Amendments to Tentative Marketing Agreement and to the Order; Proposed Rule, 67 Federal Register 67906, 67918 (November 2, 2002).

Select, as part of Dairy Producers of New Mexico, made another run at this issue in the next USDA proceedings in 2006 and 2007, making virtually identical arguments to those made in this proceeding. As USDA described Select's position in those proceedings:

> DPNM et al. witness testified in support of Proposal 7 seeking to eliminate the farm-to-plant shrinkage factor. The witness was of the opinion that accounting for farm-to-plant shrinkage allows producers and processors to mask inefficiencies. According to the DPNM et al. witness their farm-to-plant shrinkage is well below the 0.25 percent assumed in the pricing formulas. The witness attributed lower farm-to-plant shrinkage to large producers who ship tanker loads of milk. The witness insisted that shrinkage is not a result of milk solids being unrecoverable from the milk tanker and hoses but rather the result of imprecise measuring at the farm.

Milk in the Northeast and Other Marketing Areas; Final Decision on Proposed Amendments to Marketing Agreements and Orders and Termination of a Portion of the Proceeding, 78 Federal Register 9248, 9256 (February 7, 2013).

USDA rejected Select's proposal:

> Record evidence supports concluding that farm-to-plant shrinkage remains a reality for manufacturers. Numerous witnesses testified regarding actual average farm-to-plant shrinkage experienced at their plants: LOL (0.343 percent); MMPA (0.3 percent); Leprino (0.25 percent); and HP Hood (1.5 percent including in-plant losses). While DPNM argued at the hearing and in its exceptions that its members' farm-to-plant shrinkage is well below the 0.25 percent

> contained in the Class III and Class IV product-price formulas, no evidence was offered for examination as an alternative other than its elimination. Furthermore, while proponents assert that shipping full tanker loads of milk is common in the southwest where they operate, record evidence does not demonstrate this reality in the rest of the country.
>
> This final decision continues to find that the Class III and Class IV product-price formulas should recognize the loss of milk that occurs when milk is moved from the farm to a receiving plant.

Milk in the Northeast and Other Marketing Areas; Final Decision on Proposed Amendments to Marketing Agreements and Orders and Termination of a Portion of the Proceeding, 78 Federal Register 9248, 9273 (February 7, 2013).

USDA should again reject Select's proposal in this proceeding, Select's contention that it is able to achieve much lower farm to plant shrink levels is again a single data point from an extremely efficient and unique entity that can rely almost exclusively on full tanker loads of milk picked up from a single dairy farm. Indeed, Select openly admits that its position as to the absence of farm to plant losses is entirely predicated on the use of full tanker loads from a single farm to a single plant. (Hearing Exh. 216 (Select Exh. 1) at pp. 9-11, testimony of C. Allen (Select) ("The more farms included on a milk route, the greater the chance for discrepancies between farm weights and plant weights to differ. That is simply a truism. Each time a milk truck stops to pick up milk, there is potential spillage, loss within piping, and even errors in measurement. All of Select's members are of sufficient size to ship a full tanker load of milk at each pickup. As a result, Select is not subject to the risk of additional losses that can occur on routes with multiple stops.")).

But as fellow cooperative CDI testified for itself and NMPF, this is not the universe faced by most in the industry, and makes a number of assumptions that simply do not hold up industry wide. (Hearing Exh. 237 (NMPF Exh. 102) at pp. 2-4, testimony of R. Vandenheuvel (CDI)).

Leprino Foods testified that the proposal to eliminate the existing allowance for farm to plant to plant shrink ignores the reality that the majority of farms do not produce a tanker load of milk a day and suffer real world losses of both milk and butterfat before the milk is received at the manufacturing plant. These are real and unavoidable losses. And since the yield factors assumed under the VanSlyke formula are based upon the components in the cheese vat at the start of cheesemaking, the failure to account for these losses would overvalue the milk:

> The starting point of the VanSlyke yield formula is the dairy components in a cheese vat at the start of cheesemaking. However, milk priced under Federal Milk Marketing Orders is sampled for components and measured for volume at the farm. Elimination of the allowance for the farm-to-plant shrink denies the reality that not all volume or components measured at the farm make it into cheese vats.

(Hearing Exh. 227 (IDFA Exh. 43) at pp. 2-3, testimony of A. Krebs (Leprino Foods)).

Leprino and others recognize Select's industry leading approaches and ability to limit (although not eliminate) their own farm-to-plant losses, but Select is not the industry norm given that their members deliver an average of 231,898 pounds a day on multiple full truckloads from single locations daily. *Id.* This experience cannot be reflective of industry where less than 9.0% of farms produced enough milk to fill single tanker loads. *Id.* According to the Leprino witness this means that the majority of trucks hauling milk today from multiple farms necessarily continue to suffer the same losses that existed when the formula was established. *Id.*

The WCMA supported the idea that the Upper Midwest for instance is a very different market from the Select business model. He testified that there are 5,644 farms that are under 99 cows. The daily morning and afternoon deliveries of milk from farms can range from two to eight pickups. Six pickups are a reasonable average. (J. Umhoefer (WCMA) Tr. 5572 lines 19- 26, 5573 lines 3-6, 13-15).

The witness for CDI further distinguished Select's experience and "unique position in the marketplace" with respect to farm to plant shrink. Hearing Exh. 237 (NMPF Exh. 102) at p. 2, testimony of R. Vandenheuvel (CDI)). The CDI witness agreed with the Leprino witness that because handlers by regulation "account to producers and the pool on the basis of farm bulk tank weights and tests," "it is appropriate to account for reasonable" farm to plant shrink. *Id.* The witness noted that even Select's witness testified that for Select's Michigan facility there was on a weighted average basis a difference of 0.20 percent below reported farm weights. *Id.* Further, Select reported that deliveries from other cooperatives to the Michigan facility "were as much as 0.32 percent below reported farm weights." *Id*.

The CDI witness also contested Select's analysis assuming that a "vast majority" of farms could fill tanker loads of milk assuming other day pick-ups at those farms:

> First, in order for a farm to facilitate every-other-day pickups, the farm must have the available milk storage capacity to hold 48 hours of production. Second, to achieve the intended efficiencies, that on-farm milk storage must include at least one tank or silo that is capable of holding enough volume to completely fill a milk tanker. To illustrate this point, I would like to explore a sample herd with 375 milking cows producing an average of 67 pounds per day, as referenced in Select's testimony (Select-1 or Exhibit 216). That dairy, producing an annual average of 25,000 pounds per day, may currently have on-farm capacity holding 30,000-35,000 pounds, in order to handle the seasonal ebbs and flows of their daily milk production. Accordingly, the idea of every-other-day pickups would not work in this case without additional investment on the farm. For the sake of this example, I will assume that there is adequate space within the milkhouse to add additional on-farm capacity. Adding another tank that could hold 30,000-35,000 pounds, or a second day of milk production, and may allow for better hauling efficiencies, as a truck could fully load their tanker in a single stop. However, such an investment by the farm would do nothing to improve the farm-to-plant shrink, as unloading two separate on-farm tanks back-to-back would likely have no improvement to shrink when compared to unloading one of those tanks each day. Instead, the farm would need to replace their current on-farm holding tank with a tank or silo that could hold at least 50,000 pounds (or larger, in order to handle the seasonal swings in milk production). Only then, with a single hose used to completely unload the tank into the milk tanker, could the improvement in farm-to-plant shrink be realized.

Id. p.3.

The CDI witness further opined that Select's every other day pickup "solution" would impose additional costs and regulatory safety risk on smaller dairy farms:

> Beyond the detailed logistics of holding up to 48 hours of milk, there are also other considerations that must be taken into account. Every-other-day pickups mean that some of the milk in that tank may be up to 47 hours old at the time of pickup. While that may still meet Grade A requirements, it adds additional cost and risk to the farm. First, that milk must be held at 45 degrees or colder for up to 47 hours, resulting in higher cooling costs. Second, the longer the time between milk production and pickup, the more opportunity for any bacteria present in that milk to grow.

Id.

In opposing Proposal 11, the Dairy Institute of California witness also noted that "[g]iven the smaller farm sizes in the Northeast and Midwest, farm to plant shrink there is likely even higher" than in California as discussed by the CDI witness. Hearing Exh. 249 (Dairy Institute Exh. 1) at p. 8, testimony of W. Schiek (Dairy Institute of California)).

IDFA's opposition testimony reiterated that Select in likely an industry leader with experience not translatable to broader industry:

> Select again may be an industry leader in reducing farm to plant loss, but AMS should not base yield factors on one company's experience, especially given the fact that Select's dairy farmer members are large enough that they can and do deliver full tanker loads of milk, reducing the risk of leakage from farm tank to plant silo. But less than 10% of all farms produce enough milk to fill tanker loads of milk, meaning the vast majority of trucks hauling milk are still delivering multiple loads of milk. It is therefore reasonable to conclude that the losses experienced when the formulas were adopted are still happening today.

(Hearing Exh. 228 (IDFA Exh. 44) at p. 6, testimony of M. Brown (IDFA)).

The Leprino witness further discussed other significant real-world impacts of farm to plant milk volume and fat loss:

> Milk volume and fat loss may differ significantly between the largest farms and smaller operations. For much of the equipment

> that is used even today, a hose full of milk is still lost on every farm between the farm's bulk tank and the truck. For cheese makers buying milk from smaller farms where a load includes multiple stops, this volume loss remains significant. Some milksheds are solely comprised of small farms, and those losses are consistent. Others have more diversity in size. If the current volume allowance is removed, this would incentivize cheese makers to buy from larger farms or penalize farms that fail to provide a full load of milk. Creating this motivation would be detrimental to the smaller farms across our rural communities.

(Hearing Exh. 227 (IDFA Exh. 43) at pp. 2-3, testimony of A. Krebs (Leprino Foods)).

The IDFA witness agreed that adoption of Proposal 11 presented regulatory risks and costs to smaller farms:

> Failure to account for the diversity of farm size and the implications for farm to plant loss based upon less than full tanker loads of milk would further incentivize manufacturers to prefer large farms over smaller farms. The implications to USDA's necessary small business regulatory analysis we leave to USDA, but it appears to be detrimental to smaller farms and the rural communities that depend on those farms. As discussed in IDFA member testimony, fat clings to stainless tankers just the same today as it did when the formulas were last updated. Again, milksheds dominated by smaller farms continue to experience larger loss of fat as a result.

(Hearing Exh. 228 (IDFA Exh. 44) at p. 6, testimony of M. Brown (IDFA)).

The testimony of CDI, Leprino Foods and IDFA is more than academic. USDA must consider the implications of Select's proposed regulatory change under the RFA economic impact analysis required for small businesses both because of the likely detrimental effect that risks imposing losses of market on small farms, but also because Select's proposed "cure" for smaller farms is to have the small dairy farms install new, expensive equipment and use new technologies on their farms, permitting them to store milk longer so that they can provide full tanker loads of milk or provide more accurate loaded tanker weights. (Hearing Exh. 216 (Select Exh. 1), pp. 13-14, testimony of C. Allen (Select)). For instance, the Select witness on cross-examination by NMPF's counsel acknowledged that for a small producer adding a farm scale would be "a large fixed cost." (C. Allen (Select) Tr. 4374, lines 12-14). If the RFA requirements have actual meaning, USDA must reject outright this required usage of "available technologies" approach for smaller farms.

Leprino also opined on the loss of butterfat that inherently sticks to the inside of stainless-steel tankers. This loss, too, is unavoidable and must be recognized as a real-life fat loss before milk is physically received at a manufacturing plant:

> The characteristic of fat clinging to the inside of stainless is no different today for most farms than when the farm-to-fat plant loss was first acknowledged in the formula. Many milksheds are still dominated by smaller farms where the fat that remains on the inside walls of the farm bulk tank is meaningful relative to the volume of milk. Flushing farm bulk tanks with water is considered adulteration and is therefore illegal so the fat clinging to the inside of the bulk tank remains at the farm.
>
> Similar to the volume loss differences across farm sizes, Select Milk can be considered an anomaly with regards to fat losses. Many of these large dairies sample each tanker for components directly from the tanker immediately after loading since the tanker is either being direct-filled or may represent a portion of the volume of a milk silo. Consequently, one would expect lower differences in fat tests than typically occur when components are sampled in the bulk tank and fat is left clinging to the interior surface of the tank, as is the case across most farms in the US.

(Hearing Exh. 227 (IDFA Exh. 43) at p. 3, testimony of A. Krebs (Leprino Foods)).

The witness for CDI noted that Select provided no direct data comparing farm-to-plant butterfat shrink, other than a general assumption that butterfat losses do not occur at a greater rate than milk. The CDI witness expressly endorsed the testimony of the Leprino witness that "butterfat losses occur as butterfat 'clings' to the walls of both the farm tank and/or the milk tanker in the process of loading and unloading tankers at the farm as well as the plant." Hearing Exh. 237 (NMPF Exh. 102), p. 2, testimony of R. Vandenheuvel (CDI)).

In conclusion Proposal 11 should not be adopted:

> There is no evidence that volume and fat losses do not occur between the farms and plants. While milksheds dominated by large dairies shipping full truckloads of milk tend to have less significant losses than their smaller counterparts, those reduced losses are not universal across all milksheds or Orders. The evidence clearly does not support adoption of Proposal 11; volume and fat loss still exist across the industry, even at today's most efficient and innovative plants. It is important that the farm to plant loss assumption embedded in the cheddar yield calculation continue to recognize these losses to maintain orderly marketing.

(Hearing Exh. 227 (IDFA Exh. 43) at p. 3, testimony of A. Krebs (Leprino Foods)).

D. USDA Should Not Increase The Nonfat Solids Yield Factor (Proposal 12).

Proposal 12 would increase the nonfat solids yield factor from its current 0.99 to 1.03. According to Select's analysis, adoption of this proposal would have increased the Class IV price from $0.35 to $0.36/per cwt as compared to both a five- and ten-year average. (Hearing Exh. 228 (IDFA Exh. 44) at p. 3, testimony of M. Brown (IDFA)).

In addition to generalized proposal flaws discussed in Section VII(A) above with respect to all three of Select's proposals, Proposal 12 does not reflect the realities of marketing and over-values the net value of buttermilk powder.

First, as both Leprino and IDFA testified, rather than reflecting actual industry achieved results, Select's proposal relies on theoretical results. (Hearing Exh. 227 (IDFA Exh. 43) at p. 3, testimony of A. Krebs (Leprino Foods)); Hearing Exh. 228 (IDFA Exh. 44) at p. 7, testimony of M. Brown (IDFA)). "This is not true even with the most modern and efficient facilities, let alone average plants, often today operating without the margin necessary to make the investments that would be industry leading." (Hearing Exh. 228 (IDFA Exh. 44) at p. 7, testimony of M. Brown (IDFA)).

One example of this problem is that cream includes both nonfat solids as well as fat and water. This is unavoidable. It cannot be assumed that nonfat solids make its way to the NFDM.

Id. ; see also Hearing Exh. 227 (IDFA Exh. 43) at p. 3, testimony of A. Krebs (Leprino Foods)). "Since cream is sold on fat value, there is no direct value assigned to the skim solids in cream." *Id.* "Overvaluing the volume of SNF and thus NFDM that can be manufactured will overvalue and overprice the NFDM that is market clearing and contribute to disorderly marketing." (Hearing Exh. 228 (IDFA Exh. 44) at p. 7, testimony of M. Brown (IDFA)).

As to the issue of the value of buttermilk, as with the other Select proposals, USDA's decision in 2002 after the 2000 FMMO remains relevant today:

> The tentative and recommended decisions included buttermilk solids in the value of nonfat milk solids. However, a reevaluation of the Class IV nonfat solids pricing formula finds that recognizing a minimum value for buttermilk powder does not materially affect the Class IV skim milk price. Record evidence indicates that the price of buttermilk powder can be a low of 70 percent of the nonfat dry milk price for the same period. In addition, according to the record, the make allowance of buttermilk powder is an additional 2 cents per pound higher than the nonfat dry milk make allowance. . . .
>
> …..
>
> Using the 2-cent higher make allowance for buttermilk and prices for nonfat dry milk and buttermilk powder for the period of January 2000 through May 2002 it was determined that the effect of including buttermilk powder in the nonfat solids price and the Class IV skim milk price was negligible. Therefore, this decision eliminates the consideration of nonfat solids that end up in buttermilk powder from the Class IV nonfat solids pricing formula.

Milk in the Northeast and Other Marketing Areas; Decision on Proposed Amendments to Tentative Marketing Agreement and to the Order; Proposed Rule, 67 Federal Register 67906, 67921-67922 (November 2, 2002) (internal citation to a dead link omitted).

Notwithstanding Select's efforts to rely on a limited market report and its own limited sales that may not be representative of the broader market, there is insufficient evidence for USDA to justify making a change in this calculation. Summarizing CDI's testimony on this subject: buttermilk powder is a byproduct that "has different uses in the market with different costs of manufacturing and different price points;" there is a lack of validated price data including the fact that Select's sales under that limited data set include months for which Select had no sales when its butter churn was not operated; and there is a lack of validating processing cost data. (Hearing Exh. 237 (NMPF Exh. 102) at pp. 5-6, testimony of R. Vandenheuvel (CDI)). CDI also noted efficiency losses with drying buttermilk powder, the need to run the dryer at a lower speed because there is three times the amount of butterfat, and different regional utility costs likely resulting in an increasing cost basis with a smaller volume of processed product over which to spread these increased costs. *Id*. at p. 6. In short, the lack of a comprehensive study is fatal to any consideration of Proposal 12.

Proposal 12 should not be adopted by USDA.

VIII. USDA SHOULD ADOPT IDFA CLASS I SKIM MILK MOVER PROPOSAL 14, OR IF USDA PREFERS, MIG PROPOSAL 15, AND REJECT PROPOSALS 13, 16, 17, AND 18.

PROPOSED CONCLUSIONS REGARDING PROPOSALS 13-18

Based upon the Proposed Findings that follow, IDFA's Proposed Conclusions Regarding Proposals 13-18 are:

a. Hedging, such as a futures contract, gives a processor the right to purchase a specified quantity of a commodity at a specified price at a specified point in the future. A properly designed hedge can allow a fluid milk processor to know what it is going to pay in the future for its raw milk ingredients. A properly designed hedge will allow the processor to offer its customer a fixed price, because any change in the FMMO regulated minimum milk price over time will be offset by an offsetting change in the value of the hedge.

b. Hedging is increasingly critical to Class I processors, especially of Extended Shelf Life ("ESL") or other higher value products, because companies making competitive plant-based beverages can and do offer long term stable pricing to their customers. The value-added milk bottler's choice is not between offering stable pricing or moving prices monthly, but the choice increasingly is between offering stable pricing or losing their space in the beverage case or the restaurant menu to other non-dairy products.

c. Customers much prefer stable pricing, because it helps them achieve predictable margins, put in place long term promotion campaigns, rationally allocate shelf space, and prevent customer sticker shock from volatile pricing changes. Processors can themselves make investments in facilities, product line extensions and the like with reasonable confidence that their financial results will reasonably reflect their own financial projections.

d. In the 2000 order reform, USDA set the Class I skim milk price equal to the higher of the advanced Class III or IV price (known as the "Class I mover") plus the applicable Class I differential. Under this "higher of" pricing formula, whether the Class I mover would be the Class III or Class IV price in any given month is quite unpredictable. That made it difficult if not impossible for Class I handlers to engage in effective hedging, because the processor had no way of knowing whether it should hedge off the Class III price or the Class IV price, not knowing which one would be the "higher of" and set the Class I regulated minimum price at the time the hedge neared expiration.

e. To ameliorate this situation while preserving farmer receipts, IDFA and NMPF came together in 2017 to secure legislation that effective May 1, 2019 established the Class I mover as the average of the Class III and IV price plus $0.74. $0.74 was the average amount over time by which the "higher of" Class I mover exceeded the average of the Class III and Class IV price, and the revised formula was intended to be revenue neutral to the previous "higher of" formula, while at the same time providing a predictable, hedgeable Class I price. Both IDFA and NMPF touted the benefits of hedging in public statements, materials placed on their websites, and presentations to Congress.

f. The switch to "average of" lead to a bonanza in Class I hedging. Major players such as Nestlé, Fairlife ((owned by Coca-Cola), Schreiber, HP Hood, Shamrock, and others began to hedge at serious levels.

g. As a result of Government efforts during the Covid pandemic and subsequent events – much of it directly aimed at benefitting dairy farmers – the difference between Class III and Class IV prices began to exceed historical levels, such that the current "average of" plus $0.74/cwt formula started to result in Class I prices lower than would have adhered under the "higher of" formula. Proposals 13 through 19 all address this phenomenon in some fashion.

h. NMPF Proposal 13 would simply revert to the prior "higher of" formula, abandoning the effort to facilitate Class I hedging that NMPF had fully embraced, not only during the 2017 legislative effort but as recently as 2021. Proposal 13 would throw out the proverbial baby with the bath water. NMPF's contentions at the hearing that hedging is possible under the higher of formula is belied by NMPF's prior position to the contrary, actual historic practices, published referred articles, industry publications and seminars, expert analytics, and common sense.

i. IDFA Proposal 14 by contrast would preserve hedging, while adopting a pricing formula ensuring that dairy farmers will over time receive even more money than under the "higher of" formula. MIG Proposal 15 would likewise preserve hedging while ensuring that farmers would receive the same money over time as they would have under the "higher of" formula.

i. Under Proposal 14, $0.74 will be the ***minimum*** amount added each month to the simple average of the Class III and Class IV advanced skim milk price. This will be the case even in those months in which the Class I skim milk price (and thus payments to dairy farmers) would have been

lower if based on the old “higher of” system — which NMPF proposal 13 would reinstate — that sets the Class I mover as the higher of the Class III or Class IV advanced price. In these months, IDFA Proposal 14 will result in a higher Class I skim milk price over time than NMPF Proposal 13..

j. In addition, under this IDFA “Floored Class I Mover” proposal, there will be a “look back and make whole” process. If over the two prior twelve month periods from August through July adding $0.74 to the simple average of the Class III and Class IV advanced price resulted in a lower Class I skim price than would have resulted had the Class I skim price been based upon the old “higher of Class I mover” (the higher of the Class III or Class IV advanced prices), then the Class I mover will increase to be equal to the difference between the simple average of the advanced Class III and Class IV price over those two prior twelve month periods.

k. Sound analytics demonstrate that IDFA Proposal 14 will not create class price inversions or lead to depooling; increase volatility; fail to send an important price signal to farmers; fail to reflect the value of milk; or inhibit Class I handlers’ ability to attract milk.

l. MIG Proposal 15 provides an alternative approach to the Class I skim milk mover. MIG’s approach, like IDFA’s, is designed to facilitate hedging. MIG Proposal 15 uses a somewhat different look back period, and a rolling adjuster that would change monthly (rather than annually under the IDFA proposal). MIG Proposal 15 would ensure that famers over time received as much as they would have under the “higher of” approach, without containing a “snubber” floor. While IDFA prefers its own proposal, MIG Proposal 15 would be an acceptable alternative should USDA prefer it.

m. Edge proposal 16 would set the Class I mover at the Class III skim price plus an adjuster equal to the 36-month average difference between the higher of the advanced Class III skim price or advanced IV skim price, and the Class III skim milk price. The Edge proposal would create a predictable and hedgeable Class I price, because it would be based off a hedgeable Class III price plus a knowable adjuster. That is an important positive attribute (and something IDFA Proposal 14 itself achieves). However, other aspects of Edge Proposal 16 are more problematic. Under the current system, the Class I price that will be in effect in a given month is announced by the 23rd day of the previous month, based upon the advanced Class III skim price or advanced IV skim price. Unhedged Class I handlers therefore know what their milk cost will be before the start of the pricing month. This is an important part of marketing planning for customers of fluid milk, particularly grocery stores selling traditional milk, which use the advanced price as part of their marketing efforts for the following month. Edge Proposal 16 would use the announced rather than advanced price. The Class I price for a given price would be the Class III price for that month (plus an adjuster). Given that the Class III price of a given month is not announced until the 5th day of the following month, Class I handlers would not know that cost until after the month was already over. In other words, Class I handlers would have to price and sell their milk without knowing what the cost of the key ingredient (raw milk) would be.

n. For several very important segments of the fluid milk industry, such as ESL products, higher value-added products and food service, entering longer term fixed price sales contracts before the price of the raw milk is known is becoming an essential part of their business. That is why Class I pricing that facilitates hedging, as set forth in IDFA Proposal 14 (as well as MIG Proposal 15) is so critical, because hedging is what makes such longer-term price contracts feasible. But for other important segments of the business, including many Class I sales to grocery stores, longstanding business practice has been to change prices monthly, such that the prices charged in a given month for packaged milk reflect the actual regulated raw milk costs for that month.

o. Edge Proposal 16 would eliminate the ability to price milk that way, because as noted, the price of the raw milk would not be known until after the month was over. This change would represent an upheaval to established practice, even though hedging would be available. For this reason, Edge Proposal 16 is opposed by both IDFA and NMPF, and should be rejected.

p. Edge Proposal 17 would re-instate the "higher of" approach to setting Class I prices that existed before May 1, 2019., which would have the very harmful impact of eliminating any practical ability to engage in hedging, for all the reasons explained in addressing NMPF's Proposal 13. Edge Proposal 17 is made even worse because it substitutes the use of actual Class III and IV prices to set the Class I price in a given month, in place of the current use of advanced Class III and IV prices that are announced before the start of the month. Thus, Edge Proposal 17 would mean that Class I handlers everywhere would always have to price their milk at a time they did not yet know their raw milk costs, and they would not be able to mitigate their pricing risks by engaging in hedging. For these reasons, USDA should reject Edge Proposal 17.

q. AFBF Proposal 18 would eliminate the advanced pricing of both Class I milk and components and Class II skim milk and components, and like Edge Proposal 17, would re-instate the "higher of" approach to setting Class I prices that existed before May 1, 2019. This would have the very harmful impact of eliminating any practical ability to engage in hedging, for all the reasons already explained in opposing NMPF's Proposal 13 and Edge Proposal 17 (both of which do the same thing). But like Edge Proposal 17, AFBF Proposal 18 would make things even worse by basing Class I prices on actual Class III and IV prices to set the Class I price, in place of the current use of advanced Class III and IV prices. And because AFBF Proposal 18 would also eliminate hedging. Class I handlers could not use that tool to mitigate the pricing risks created by the use of actual versus advanced Class III and IV prices to set Class I. AFBF Proposal 18 would extend most of these defects to Class II, by basing the Class II skim price on the actual Class IV price, rather than the current use of the advanced Class IV price.

r. For these reasons, USDA should reject AFBF Proposal 18.

PROPOSED FINDINGS REGARDING PROPOSALS 13-18

A. What Is Hedging.

Hedging is a process to secure today a price in the future. It can take different forms. A futures contract is a contract giving one the right to purchase a specified quantity of a commodity at a specified price at a specified point in the future. An options contract, instead of locking in a specified price, provides that if the market price goes above or below a certain price, the buyer of the option (who has paid a premium for the option) has the right to purchase the product at that certain price. (T. Doelman (Fairlife) Tr. 6019 line 26 - 6021 line 3).

By locking in prices or the option to trade at a specified price, hedging allows a processor to know what it is going to pay in the future for its raw milk ingredients. From the processor's perspective, hedging is neither gambling nor an effort to secure a speculative return. Rather, it is a way to de-risk the potential price volatility associated with the commodity the processor needs for its business. (T. Doelman (Fairlife) Tr. 6024 lines 1-17).

Hedging it is not about making a higher return. It is about making an investment in insurance to reduce price risk and achieve a more predictable input price. This insurance removes some input price volatility and increases margin certainty for end product sales. (Hearing Exh. 270 (MIG Exh. 11) at p. 4, testimony of M. Newell (HP Hood)).

B. How Hedging Works For A Class I Processor.

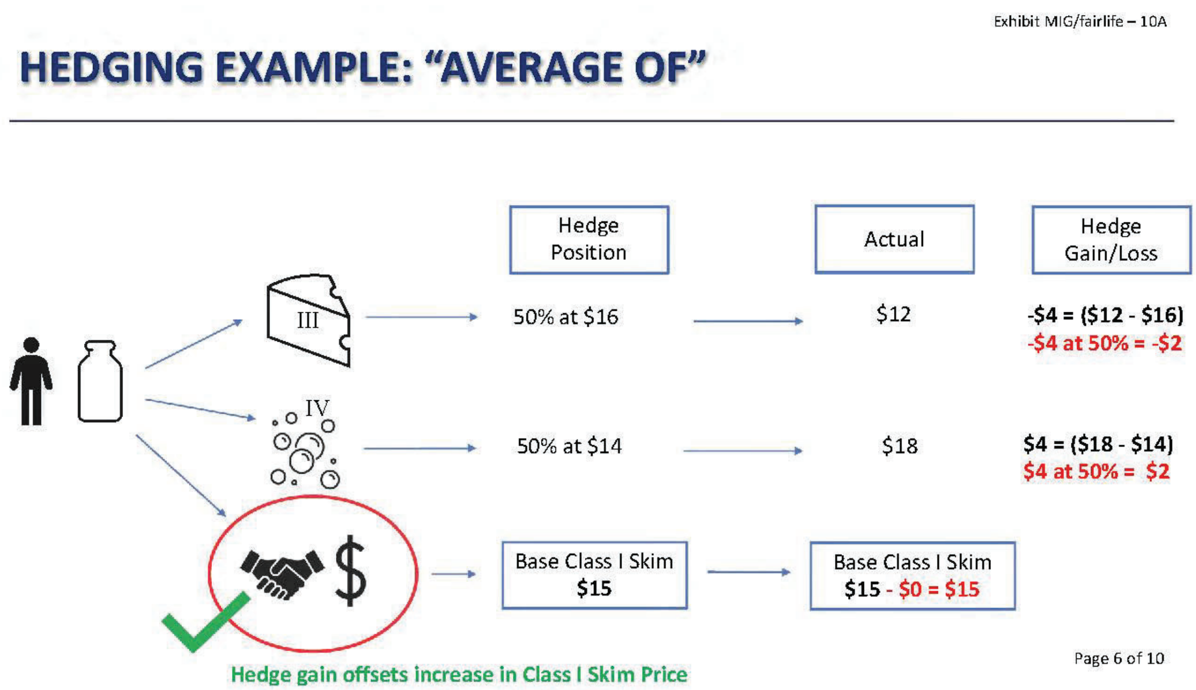
The current Class I base skim milk price formula, in effect since May 1, 2019, allows processors to hedge their milk input costs with certainty. Currently, the Class I base skim milk price is the average of the Class III and Class IV prices plus a $0.74 adjuster. In other words: 50% Class III and 50% Class IV pricing, plus a known amount. A processor can buy Class III and Class IV futures at a 1:1 ratio and know exactly the price to be paid for Class I skim during the time period covered by the futures contract. This gives the processor the ability to set the pricing to its customers on its own finished products. In other words, the processor can agree to sell at a stable price of $X.XX, knowing that it has locked in a price for the milk going into that product that will make a selling price of $X.XX high enough to cover its costs. The result is that the pricing of Class I products to customers can be fixed and guaranteed for some time into the future. (Hearing Exh. 273 (MIG Exh. 10) at p. 5, testimony of T. Doelman (Fairlife)).

Price certainty and stability is good for the farmer, the processor, the customer, and the end consumer. More price stability, through the use of hedging, in Class I processors' number one input cost - raw milk - allows processors to undertake long-term planning, reliably develop plant capacity, invest capital in processing that has more certainty in creating a return on that investment, and attract customers for whom long term steady prices are a must. Dairy farmers directly benefit from the expansion of production capacity that will make use of their milk, and from the increased sale of dairy products through the opportunity to offer fixed pricing. When Class I processors sell products to both retailers and, from there, ultimate consumers, price stability helps the entire dairy industry. (Hearing Exh. 273 (MIG Exh. 10) at p. 3, testimony of T. Doelman (Fairlife)).

Retail customers are frequently looking to set prices out for 6 to 12 months. When price uncertainty does not allow processors to set prices for that long, fluid milk processors risk losing shelf space to plant-based and other alternative beverage products who can offer such fixed prices. (Hearing Exh. 273 (MIG Exh. 10) at p. 3, testimony of T. Doelman (Fairlife)).

Second, the more companies that participate in hedging, the more effective the hedging actually becomes. The more processors who participate in hedging, the more liquid the futures market becomes. The more liquid the futures market, the more likely it will accurately reflect of market conditions. The more accurate it reflects market conditions, the better the futures market serves as a tool for farmers to hedge their milk sales and lock in pricing. Everyone wins with a highly active futures market, from the farmer to the processor to the customer to the consumer. (Hearing Exh. 273 (MIG Exh. 10) at pp. 3-4, testimony of T. Doelman (Fairlife)).

An example of hedging is as follows. A milk processor desires to set a stable price for its milk products for the next six months. The processor buys 50% Class III and 50% Class IV contracts of the same volume of milk anticipated to buy during those six months to make the products it intends to sell. The processor's underlying milk cost driver is now set for those six months. The processor now goes to its customer and sets its own milk product price to their customer. That way if, for example, Class III prices were to rise significantly the processor could still honor that milk price to its customer. Because although the processor would pay more for its raw milk, it would get the benefit of those higher prices through the Class III contracts it purchased (thereby offsetting its increased milk costs). (Hearing Exh. 273 (MIG Exh. 10) at p. 4, testimony of T. Doelman (Fairlife)).



Hearing Exh. 274 (MIG Exh. 10A) at p. 6, testimony of testimony of T. Doelman (Fairlife)); T. Doelman (Fairlife) Tr. 6028 line 5 - 6035 line 5; 6056 line 6- 6058 line 9; 6066 line 4 - 6071 line 10; 6073 line 17- 6074 line 1). Additional examples of similar calculations are found in Hearing Exh. 255 (IDFA Exh. 48) at pp. 1-7, testimony of C. Herlache (Schreiber); Hearing Exh. 275 (IDFA Exh 37) at p. 12, testimony of M. Brown (IDFA).

C. Why Class I Product Hedging Is So Important.

The primary competitors to Class I products: bottled waters, soft drinks, plant-based beverages, etc., all offer stable pricing (often an entire year) to retailers, which allows those retailers in turn to (a) provide the stable shelf pricing preferred by consumers, and (b) maintain their own predictable margins. The value-added milk bottler's choice is not between offering stable pricing or moving prices monthly. But rather, the choice increasingly is between offering stable pricing or losing their space in the beverage case or the restaurant menu to other non-dairy products. (Hearing Exh. 275 (IDFA Exh. 37), at p. 15; testimony of M. Brown (IDFA)). Indeed, a flat price contract for these alternative beverages may be as long as two years (subject only to a transportation cost adjuster). (M. Brown (IDFA) Tr. 6355 line 18 - 6357 line 11). Class I Dairy product manufactures must market value-added milk products against a growing array of sophisticated beverage competitors. (Hearing Exh. 275 (IDFA Exh. 37), at p. 7; testimony of M. Brown (IDFA)).

However, Class I milk is typically the most volatile and difficult to forecast dairy derivative in the United States because of the FMMO's complex calculation methodology and its pricing linkages to four different derivatives, cheese, whey, nonfat dry milk, and butter. Each of these four commodity derivatives has its individual market fundamentals, which independently impact the regulated price of Class I milk. (Hearing Exh. 257 (IDFA Exh. 38) at pp. 2-3, testimony of K. Greenbaum (Nestlé)).

Forward price hedging is especially important in today's world because in growing segments of the fluid milk product market, including those segments that are demonstrating the greatest growth and potential future growth, customers are demanding that processors provide long-term fixed price contracts, rather than contracts with prices that fluctuate month to month to reflect changes in the Class I regulated milk price. This is especially prevalent with respect to extended shelf life products, higher value-added products, and food service. Meaningful access to risk management tools such as hedging are important today and will become even more important going forward as demand for more dairy product price stability represents a disproportionately large percentage of the growth opportunities in the fluid space. (Hearing Exh. 275 (IDFA Exh. 37), at p. 9; testimony of M. Brown (IDFA)).

Retailers seek out and tend to dedicate shelf space to products with flat and consistent pricing. Retailers demand, and receive, 1-to-2-year pricing contracts with suppliers on most, if not all of the alternative beverages to milk that compete in the dairy case or the coffee shop. (Hearing Exh. 275 (IDFA Exh. 37), at pp. 7-8; testimony of M. Brown (IDFA)).

As one Class I processor explained, Hood's ESL customers who buy through grocery warehouses would like stable and predictable prices with minimal price changes, dependable trade plans, and minimal supply disruptions. More food service customers may be interested in hedging to be able to keep menu prices steady and also to promote dairy based products for an extended period. (Hearing Exh. 270 (MIG Exh. 11) at p. 6, testimony of M. Newell (HP Hood)).

But without the ability to effectively hedge, the cost of Class I milk is subject to drastic price swings. This creates substantial financial risk if the processor offers fixed prices, which can only be mitigated by increasing prices to customers to ensure that a reasonable return on investment is achievable in the event of price volatility. (Hearing Exh. 257 (IDFA Exh. 38) at p. 3, testimony of K. Greenbaum (Nestlé)). This can result in outright lost sales, or in higher consumer prices and reduced consumption, because a higher risk mitigation premium must be built into purchasing agreements, driving up the cost. (Hearing Exh. 257 (IDFA Exh. 38) at p. 3, testimony of K. Greenbaum (Nestlé)).

To meet these growing customer demands and competition, a processor must offer a competitive, fixed price for its fluid milk products over an extended period, at a point in time when the processor does not yet know the FMMO regulated price it will have to pay for the raw milk used to make that product. The processor cannot enter into a fixed purchase price for that raw milk with their milk supplier, because the FMMO program requires that the processor pay at least the minimum Class I price in effect during the month of purchase. Hedging is what allows a fluid milk processor to take on the risk of entering into a fixed sales price for its end-products, without jeopardizing its financial well-being if raw milk prices rise during the period covered by the contract. All other classes of milk can manage price risk through futures, direct producer contracts, or depooling. But Class I milk located within or distributing over 25% of its sales volume in any one FMMO must participate in the Federal order pool. (Hearing Exh. 275 (IDFA Exh. 37), at p. 9; testimony of M. Brown (IDFA)).

The solution is hedging. The most common way to offer a flat price for a period of months in an industry where costs change materially on a monthly basis is to lock in forward-looking costs using futures markets. For example, in the second half of one calendar year, retailers are contracting their beverage purchases for the following calendar year. Under the current Class I pricing structure and under IDFA Proposal 14, the bottler would convert their volume commitment to hundredweights of milk and go to the futures markets to purchase futures contracts for 50% of their volume in each of the Class III and Class IV futures markets. They can then use the average of those futures prices as the base price for their pricing offer to the retailer. (Hearing Exh. 275 (IDFA Exh. 37), at p. 8; testimony of M. Brown (IDFA)).

Each month of the calendar year they would purchase their physical milk in the market at the regulated Class I price that using the Class III and Class IV as a base. At the same time, they would be settling their futures contracts at those same prices (or roughly the same since futures use announced prices and physical purchases will be based on advanced prices). The gain or loss on the hedge positions each month would offset any favorability/unfavorability in the physical milk price relative to the contract price with the retail customer. This is a very straightforward process under the current pricing structure as well as IDFA proposal 14. (Hearing Exh. 275 (IDFA Exh. 37), at p. 8; testimony of M. Brown (IDFA)).

Absent this ability to hedge, the bottler's choice is between missing out on the sale to avoid taking the margin risk or building in sufficient margin to cover the expected risk over the longer term and risk being uncompetitively priced on the shelf causing sales to suffer. (Hearing Exh. 275 (IDFA Exh. 37), at p. 8; testimony of M. Brown (IDFA)).

In the report and testimony discussed in greater detail in Section IX(B) below, Dr. Oral Capps presenting results from a new and updated study by Texas A&M University finding both high "own price" elasticity of demand for most value-added dairy products (i.e., a 1% price increase results in greater than a 1% decline in volume sales), and high "cross price" elasticity with their non-dairy alternatives. Without the necessary tools to manage flat pricing of fluid milk products, bottlers must either forgo the business or accept the margin risk. Offering flat fluid milk product pricing with fluctuating input costs typically leads to additional margin being built into pricing to cover the risk of fluctuating input costs, resulting in less competitive shelf pricing leading to declining sales. Declining sales mean less producer milk sold at Class I prices, more milk forced into Class IV channels, and declining blend prices for producers. (Hearing Exh. 275 (IDFA Exh. 37), at pp. 15-16, testimony of M. Brown (IDFA)).

The current Class I base skim milk price formula allows for processors to hedge their milk costs with certainty. A processor can buy Class III and Class IV futures at a 1:1 ratio and know exactly the price to be paid for Class I skim during that same time period. This gives the processor the ability to set pricing to customers with certainty. The result is that pricing is fixed and guaranteed for some time into the future. (Hearing Exh. 273 (MIG Exh. 10) at p. 3, testimony of T. Doelman (Fairlife)).

D. The Need For Class I Hedging Is Greater Than Ever.

Prior to the 2019 change in the Class I formula (and as discussed in greater detail in Sections VIII(F) - VIII(H) below), creating an effective hedge of Class I milk was extremely challenging because the higher of formula meant that when a hedge position was initially put on, it would not be clear whether that should be done with a Class III or Class IV derivative. After the change was made in 2019, it became clear that an acceptable hedge for Class I milk could be achieved by using a combination of both Class III and Class IV derivatives. (Hearing Exh. 254 (IDFA Exh. 39) at p. 2, testimony of C. Herlache (Schreiber Foods)).

That inherent defect in the "higher of" formula — not knowing whether the Class I price would be based off of the Class III price or the Class IV price — has only grown worse. The "higher of" switched back between Class III and Class IV ***seven times*** in the three and a half years starting January 2020, with high price volatility. (M. Brown (IDFA) Tr. 6357 line 27 - 6358 line 21).

The growing need for Class I milk hedging can be measured. "Basis" is the difference between the price of a physical commodity and the underlying derivative price being used to hedge that commodity. A processor engaged in hedging attempts to: (a) enter into an agreement to provide the physical Class I product to its customer at a specified point in the future at a specified price, and (b) simultaneously enter into a derivative transaction (e.g., a contract giving one the right to purchase the product's inputs in the future at a specified price) such that the change over time in the value of the derivative right to purchase (which will go up if the value of the inputs goes up in the meantime) will offset the change in the actual cost to the processor of the input to the physical product. If the value/cost of the input has gone up, the processor's loss in selling the product to the customer at the specified price will be offset by the gain in the value of the derivative (which the processor will realize by selling the derivative at the higher value). (Herlache (Schreiber) Tr. 5411 line 25 - 5412 line 26). Here, basis risk is the risk that the change in the value of the derivative purchased (be it a Class III or a Class IV futures contract) did not match the change in the value of the input (milk for use in Class I) being hedged. C. Herlache (Schreiber) Tr. 5414 line 4- 5415 line 25).

Looking at data from 2010 to 2019, under the "higher of" world, using either the Class III or Class IV derivative markets, basis risk (i.e., the amount the processor would lose by engaging in its effort to hedge) was significant in that the range of basis risk was over $4/cwt from the high to the low with a standard deviation of $.79-1.04/cwt. And, things have only gotten worse; since 2020, basis risk under the "higher of" world increased substantially with the range of over $7/cwt. for Class III, over $12/cwt. for Class IV and a standard deviation of $1.63-$3.02/cwt.

Higher of Basis	**Min**	**Average**	**Max**	**Range**	**Std Dev**
2010-2019					
Class III	-0.60	0.48	3.80	4.40	0.79
Class IV	-0.53	0.85	4.32	4.85	1.04
2020-present					
Class III	-1.91	1.03	5.21	7.12	1.63
Class IV	-0.94	1.66	11.58	12.52	3.02

This variability and magnitude of basis risk is too large for a Class I processor to be able to offer customers an opportunity to lock in a price, in a "higher of" world. (Herlache (Schreiber) Tr. 5411 line 25 - 5418 line 2; 5459 lines 18-27; Hearing Exh. 255 (IDFA Exh. 48) at p. 1 (testimony of C. Herlache (Schreiber)).

As shown in the following table, basis risk was significantly reduced by the May 1, 2019 adoption of the "average of plus $0.74" Class I skim milk mover, under which a Class I processor knows that the minimum price will be based 50-50 on the Class III and Class IV prices:

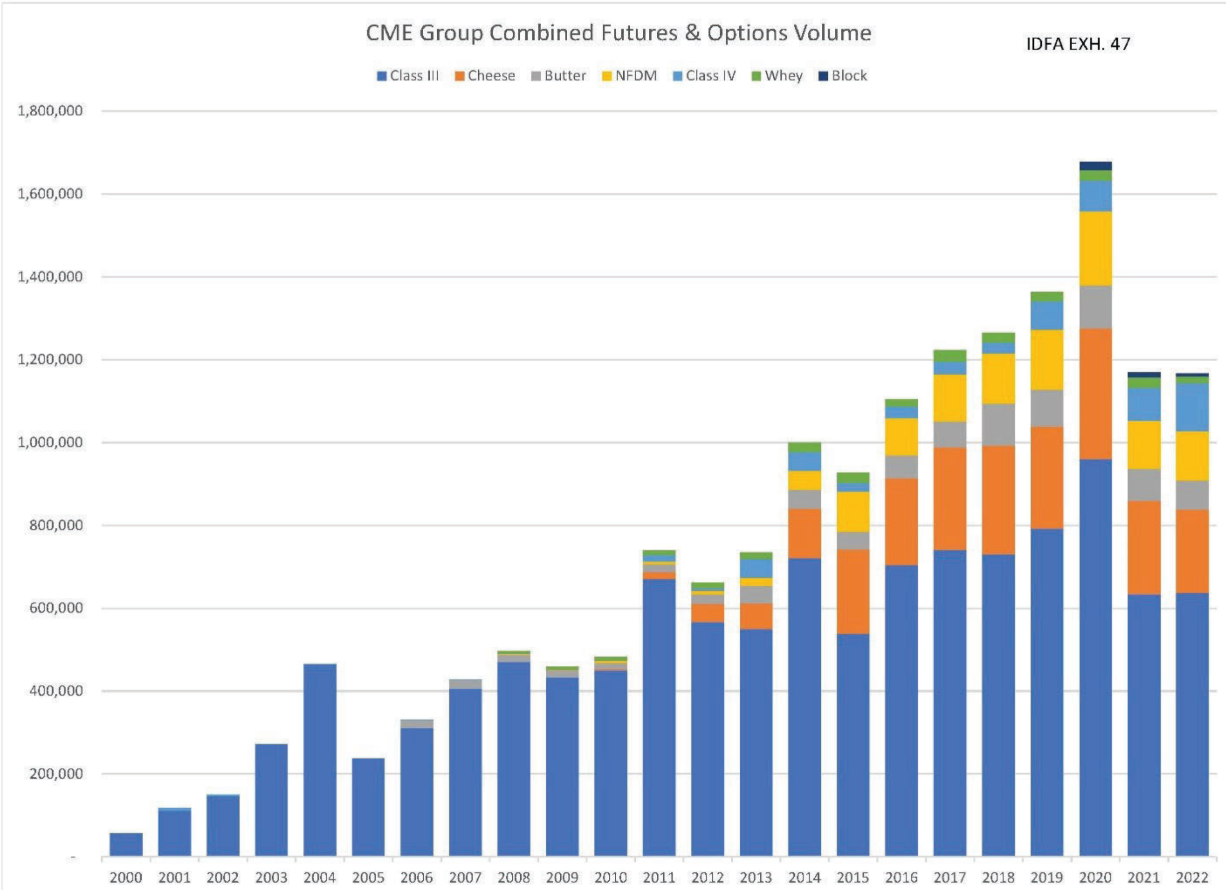
Average of Basis	**Min**	**Average**	**Max**	**Range**	**Std Dev**
2010-2019					
Class III/IV Avg	0.10	0.72	1.55	1.45	0.21
2020-present					
Class III/IV Avg	-0.42	0.72	2.29	2.71	0.41

Hearing Exh. 254 (IDFA Exh. 39) at p. 3, testimony of C. Herlache (Schreiber Foods)).

Thus, from 2000 forward, the basis risk (i.e., the amount the processor would lose by engaging in its effort to hedge) would have only been a maximum of $1.45 for cwt for Class III/cwt and $2.71/cwt for Class IV, with a standard deviation over the entire time period of only $0.21/cwt for Class III and $0.41/cwt for Class IV. This presents a variability that is perfectly acceptable to a processor. Indeed, the basis risk is even lower than for cheese or butter. (Herlache (Schreiber) Tr. 5419 line 1 - 5422 line 10; Hearing Exh. 255 (IDFA Exh. 48) at p. 1, testimony of C. Herlache (Schreiber)). And, the "look back" built into IDFA Proposal 14 will have no effect on the ability to hedge, as one will know months in advance exactly how much the "lookback" will add to the Class I price. (Herlache (Schreiber) Tr. 5431 line 23 - 5432 line 18).

E. Are Class I Processors Engaging In Hedging Under The Current Class I Skim Milk Pricing Formula?

It often takes years for a new hedging opportunity to become widely used. Hedging Class I only became effectively available in 2019 and is effectively still in its infancy (especially since the Covid years were somewhat "lost" years). One can see that visually by tracking the growth of the use of other dairy hedges as they were introduced onto the Chicago Mercantile Exchange over time:



(Herlache (Schreiber) Tr. 5429 line 28 - 5431 line 22; Hearing Exh. 256 (IDFA Exh. 47) at p. 1, testimony of C. Herlache (Schreiber)).

Nonetheless, despite this still being the early innings of the Class I hedging game, the hearing record includes multiple examples of Class I handlers engaging in hedging since it first became practically available May 1, 2019. In this regard, we note that, after the close of the hearing, NMPF's President and CEO posted to its Website the following statement: "While processors continually talked about how important the current mover is for their risk management strategies, no one in months of testimony ever presented definitive proof that such risk management is occurring at any meaningful level." FMMO Modernization Needs to Move - And

So Does the Class I Mover - NMPF (Feb. 5, 2024).[13] It is, to state it mildly, challenging to reconcile that statement with the extensive sworn testimony to the contrary.

Nestlé. One can start (and could probably end) with Nestlé. Nestlé is the world's largest food and beverage company. Nestlé is the largest purchaser of dairy in the world. Dairy is Nestlé's largest raw ingredient purchase category, both in the United States and in the world. Nestlé purchases over 90 percent of its U.S. dairy needs from domestic sources. (Hearing Exh. 257 (IDFA Exh. 38) at p. 1, testimony of K. Greenbaum (Nestlé); K. Greenbaum (Nestlé) Tr. 5504 line 19-5505 line 4)).

Nestlé's largest beverage facility, in Anderson, Indiana, employs 880 people. It is an FMMO Class I fully regulated pool distributing plant. The facility utilizes U.S. dairy to produce a large number of well-known brands such as Nesquik Ready-to Drink milk, Coffee Mate Creamer, Starbucks Creamer, Natural Bliss Creamer, Boost Nutritional Drink, and Carnation Instant Breakfast. However, between 80 and 90% of the milk purchased for that plant is purchased for use in Nesquik Ready-to Drink, the sole Class I product made there. (Hearing Exh. 257 (IDFA Exh. 38) at p. 1, testimony of K. Greenbaum (Nestlé); K. Greenbaum (Nestlé) Tr. 5506 lines 17-19; 5523 lines 16-25)).

Nesquik Ready-to Drink has a six-month shelf life. Nestlé offers customers (grocery stores, convenience stores, all the major retailers) the opportunity to obtain Nesquik on a flat price basis, under annual contracts. While Nestlé is offering these products to its customers on a flat price basis, Nestlé must pay its farmer cooperative suppliers the FMMO Class I regulated minimum price (or more) in effect each month. That is where hedging comes in for Nestlé: allowing it to offer customers a fixed price over a long-term basis, while protecting itself from

[13] This NMPF statement is of course not in evidence.

loses if the regulated price of raw milk spikes. (K. Greenbaum (Nestlé) Tr. 5505 line 4 - 5506 line 8; 5526 lines 8 - 18)).

In the pre- May 2019 time period, when the Class I skim mover was the "higher of" Class III and IV, Nestlé did not engage in hedging. In the "higher of "scenario, it was not known in advance which "higher of" mover (Class III or Class IV) would be in effect at the expiration of the right to exercise the futures/options. This created unmanageable uncertainty, making it difficult to know which contract to use to hedge. And once hedges were placed, if the higher of Class I mover switched from Class III to Class IV, or vice versa, the result would have been an unexpected loss. The risk was too high. Nestlé compliance officers simply refused to allow hedging. (Hearing Exh. 257 (IDFA Exh. 38) at pp. 2-3, testimony of K. Greenbaum (Nestlé); K. Greenbaum (Nestlé) Tr. 5508 line 28 - 5509 line 15)).

But the world changed in 2019, the first year that the "average of" Class I skim milk pricing formula was implemented. Under average of, Nestlé knew what the basis would be of future Class I prices: 50% Class III and 50% Class IV. That enabled hedging as a risk mitigation tool for the first time for Class I. Nestlé began engaging in hedging using Class III and IV futures, and it has done so ever since. (Hearing Exh. 257 (IDFA Exh. 38) at p. 2, testimony of K. Greenbaum (Nestlé); (K. Greenbaum (Nestlé) Tr. 5509 lines 1 - 11; 5510 lines 6-11; 5511 lines 18-22; 5522 line 22 -5534 line 8)).

Nestlé buys $200 million of raw milk a year in the United States, 80-90% of which goes into Class I product Nesquik. All of those purchases are hedged. All of them. (K. Greenbaum (Nestlé) Tr. 5517 line 28 – 5518 line 22; 5519 line 5, 5524 lines 4-25)).

If USDA were to return to using the "higher of," Nestlé would have to cease Class I hedging. Ultimately, that would pose threats to Nesquik Ready-to Drink business viability. The “higher of” approach would introduce new price volatility and undermine consistent product supply. This also carries the risk of eroding consumer confidence in the availability or accessibility of milk products that are an affordable daily staple for millions of households across the United States. (Hearing Exh. 257 (IDFA Exh. 38) at p. 3, testimony of K. Greenbaum (Nestlé); K. Greenbaum (Nestlé) Tr. 5511 lines 13 - 17)).

Fairlife. Fairlife is a wholly owned subsidiary of the Coca-Cola Company. Fairlife markets value added dairy products throughout the US and Canada. Fairlife has four plants in the U.S. and one in Canada, with the U.S. plants located in Coopersville, Michigan (Order 33); Dexter, New Mexico (Order 126); Goodyear, Arizona (Order 131); and Fair Oaks, Indiana (Order 33). Fairlife purchase 100% of its milk from cooperatives. (Hearing Exh. 273 (MIG Exh. 10) at p. 2, testimony of T. Doelman (Fairlife)).

Fairlife has an active hedging program. It only recently was able to participate in any kind of hedging for Class I products, with the change in the Base Class I Skim Price from the “higher of” to the “average of” in 2019. Hedging has become an important part of Fairlife’s risk management, and a tool Fairlife hopes to be able to continue using in the future. Its hedging program allows Fairlife to know what it will pay or a range of what it will pay in the future. Its customers do not like lots of price volatility for various reasons. Hedging allows Fairlife to set pricing with customers with more certainty. Erratic pricing turns consumers off, while more stable pricing is good for maintaining and growing sales. (Hearing Exh. 273 (MIG Exh. 10) at p. 4, testimony of T. Doelman (Fairlife)).

Fairlife first began hedging in 2019. Before that, Fairlife did not hedge at all, and there was no way to protect against risks. One could try hedging under the “higher of” Class I pricing formula that existed prior to that time, but given that you did not know whether the regulated price at a future point in time would be based upon the Class III or Class IV price, there was no way definitely to hedge. Fairlife in 2019 started off hedging perhaps 10% of its milk purchases, and it has gone up from there. This year, it intends to hedge a majority of its raw milk purchases, and would like to go as high as 80% next year. Fairlife's parent company Coca Cola probably hedges 80% of what it sells. (T. Doelman (Fairlife) Tr. 6027 lines 6-24; 6046 lines 1-7; 6050 line 12 - 6051 line 9; 6054 lines 21-26).

HP Hood. Founded in 1846, HP Hood is one of the largest family-owned fluid milk bottling companies in the United Sates, with 2022 annual sales in excess of $3 billion. Hood currently operates five ESL plants and four high temperature-short time ("HTST") plants, all of which process Class I milk. Hood's ESL business is the largest segment of its business, and Hood distributes major ESL brands nationally. (Hearing Exh. 270 (MIG Exh. 11) at p. 2, testimony of M. Newell (HP Hood)).

Hood's largest brand is Lactaid Lactose Free Milk, whose sales exceeded 108 million gallons for the 52 weeks ending July 30, 2023, making it the largest specialty milk brand in the U.S. (Hearing Exh. 270 (MIG Exh. 11) at p. 3, testimony of M. Newell (HP Hood)). Hood's Lactaid fluid milk product has annual sales of approximately $900 million. (M. Newell (HP Hood) Tr. 5902 line 15 - 5903 line 27).

Hood currently hedges. Specifically, it utilizes futures contracts to fix the cost of a portion of the milk it utilizes for Lactaid, and other ESL products, in order to create a level of predictability on the cost of the milk ingredients. This helps remove some volatility from the cost of goods and allows the company to execute its annual marketing and trade promotional plan and reduce the need for frequent product price changes. Wholesale price changes on ESL products take place infrequently (over the past 10 years the average is less than annually). (Hearing Exh. 270 (MIG Exh. 11) at p. 4, testimony of M. Newell (HP Hood)).

The option to hedge has only existed since Congress included the “average of” alternative to the old higher-of skim milk price standard in the 2018 Farm Bill and the USDA implemented this change in May 2019. Prior to that time, when the “higher of” formula was in effect, Hood could not hedge because it did not know whether Class III or Class IV would be the Class I skim milk mover. It would not be affordable to hedge given that uncertainty. (M. Newell (HP Hood) Tr. 5904 line 15 - 5906 line 1; 5921 lines 5-14).

Unlike HTST milk, which is direct store delivery (DSD), ESL delivery is through customer warehouses. Price changes require 60 to 90 days notice, and thus cannot be changed monthly as with DSD milk. As a result, for ESL products, Hood uses fixed prices over an extended time. (M. Newell (HP Hood) Tr. 5906 line 11 - 5907 line 21; 5918 line 27 - 5919 line 5). Because Hood plans out sale programs for ESL products on an annual basis, it needs to know in advance what the price will be, and sometimes a couple of years will pass without a price increase. Hedging allows Hood to limit price increases and avoid price volatility. (M. Newell (HP Hood) Tr. 5907 line 22 - 5908 line 21; 5910 line 11- 5911 lines 15; 5918 line 27 - 5919 line 5).

This allows ESL dairy products to compete with plant-based beverages, which typically offer stable prices. (M. Newell (HP Hood) Tr. 5907 line 22 - 5908 line 21; 5910 line 11- 5911 lines 15; 5918 line 27 - 5919 line 5). While Hood does many things that have contributed to the success of Lactaid, the ability to hedge and thereby offer flat, consistent pricing is an important part of that success and a contributing factor to increasing sales. (M. Newell (HP Hood) Tr. 5930 line 21- 5931 line 3; 5938 lines 2-13). Hedging helps Hood grow the market, which is positive for dairy farmers as well as for Hood. (M. Newell (HP Hood) Tr. 5934 lines 1-8).

The pandemic created a proliferation of supply chain challenges for manufacturers, and likely slowed the adoption of the risk management opportunity offered by the "average of." Hood is still exploring ways in which it can best use risk management tools, and other processors are interested in hedging even if they have not begun doing so yet. (Hearing Exh. 270 (MIG Exh. 11) at p. 4, testimony of M. Newell (HP Hood)).

Schreiber. Schreiber hedges millions of pounds a year of dairy products. While Class I is a relatively small portion of its operations, Schreiber does engage in hedging to allow it to offer fixed prices to more than five Class I ESL and aseptic product customers. (Herlache (Schreiber) Tr. 5434 line 19 - 5436 line 25; 5486 line 20 - 5487 line 4).

Shamrock. Class I processor Shamrock currently hedges for its ESL customers, including food service, and has recently hired an employee devoted to hedging, having previously relied upon outside agencies. (T. Kelly (Shamrock) Tr. 10892 line 23- 10893 line 6, 10940 lines 10 -28).

Kroger. Kroger, one of the country's three largest grocery store chains, is an example of hedging on the customer side. Kroger has engaged in risk management in its purchases of Class I "national brands," such as Nestlé's Nesquik, Fairlife, and Lactose free milk, including but not limited to Lactaid. Kroger wants to pay a fixed price for these products, and these entities engage in risk management including hedging to be able to meet Kroger's needs. This did not occur until the "higher of" pricing formula was replaced with the "average of" formula in 2019. (M. Brown (IDFA) Tr. 6140 line 14 - 6141 line 20; 6174 lines 10-23).

End Use Customers. Class I hedging is also being performed directly by the ultimate customers for Class I products, such as a very large, well-known chain of coffee shops. Some end use customers had tried to such hedging before 2019, but the practice is much bigger and more successful now that the “average of” formula has replaced the “higher of” formula. (M. Brown (IDFA) Tr. 6358 line 22 - 6359 line 16).

More foodservice buyers of Class I products are hedging, independently of their fluid milk product suppliers. IDFA witness Brown is personally aware of such buyers doing so, on HTST milk. Given that a restaurant chain with nationwide locations may have Class I supply product agreements with multiple cooperative or other suppliers, it is much easier for the chain to hedge its risks itself through the Chicago Mercantile Exchange or over the counter markets than to seek multiple hedging arrangements through their multiple suppliers. (M. Brown (IDFA) Tr. 6182 line 18 - 6183 line 24; 6190 line 23 - 6191 line 3; 6320 line 28 - 6321 line 10; 6338 line 23 - 6341 line 22; (Hearing Exh. 275 (IDFA Exh. 37), at p. 17; testimony of M. Brown (IDFA)).

F. IDFA Proposal 14 Would Preserve Hedging, While Paying Farmers More Than Proposal 13.

IDFA Proposal 14, which IDFA calls “the Floored Class I Mover,” will increase the Class I skim milk price over the current “average of plus $0.74 Class I mover. Proposal 14 will increase the Class I skim milk price over NMPF Proposal 13’s proposed return to the pre-2019 “higher of” Class I mover. Proposal 14 will do all that while fostering Class I hedging, which NMPF Proposal 17 would destroy. (Hearing Exh. 275 (IDFA Exh. 37), at p. 2; testimony of M. Brown (IDFA)).

Under Proposal 14, $0.74 will be the ***minimum*** amount added each month to the simple average of the Class III and Class IV advanced skim milk price. This will be the case even in those months in which the Class I skim milk price (and thus payments to dairy farmers) would have been ***lower*** if based on the old “higher of” system — which NMPF proposal 13 would reinstate — that sets the Class I mover as the higher of the Class III or Class IV advanced price. In these months, IDFA Proposal 14 will result in a higher Class I skim milk price over time than NMPF Proposal 13. (Hearing Exh. 275 (IDFA Exh. 37), at p. 2; testimony of M. Brown (IDFA)).

In addition, under this IDFA "Floored Class I Mover" proposal, there will be a "look back and make whole" process. If over the two prior twelve month periods from August through July adding $0.74 to the simple average of the Class III and Class IV advanced price resulted in a lower Class I skim price than would have resulted had the Class I skim price been based upon the old "higher of Class I mover" (the higher of the Class III or Class IV advanced prices), then the Class I mover will increase to be equal to the difference between the simple average of the advanced Class III and Class IV price over those two prior twelve month periods. (Hearing Exh. 275 (IDFA Exh. 37), at p. 2; testimony of M. Brown (IDFA)).

During the hearing, certain witnesses expressed concern over the lookback period being two years in length. As IDFA indicated during the hearing (M. Brown (IDFA) Tr. 6161 lines 5-18; 6345 lined 14-21), and as IDFA now reiterates, if USDA were to prefer that the lookback period only be one year in length, IDFA is amenable.

Regardless of whether the lookback is one year or two years, the Class I skim milk price paid over time will never fall below the Class I skim milk price that would have adhered upon the old "higher of Class I mover" (which NMPF seeks to reinstate). Rather, the Class I skim milk price over time will be higher whenever the "higher of Class I mover" would have been less than the simple average of the Class III and Class IV advanced price plus $0.74. (Hearing Exh. 275 (IDFA Exh. 37), at p. 3; testimony of M. Brown (IDFA)).

The formula works as follows. For each of the 24 months during the prior two calendar years, (1) one first selects the higher of the Class III or IV advanced prices, and then calculates the simple average of the 24 prices so selected. One then (2) calculates for each of those 24 months the average of the Class III and IV advanced prices, and then the simple average of the 24 averages. One then determines the difference between (1) and (2). If that difference is greater than $0.74, then that difference is the adder used, instead of $0.74. (Hearing Exh. 275 (IDFA Exh. 37), at pp. 4-5; testimony of M. Brown (IDFA)).

Chart 1 below shows the Floored Class I Mover adjuster calculation for calendar year 2023 (had it then been in effect). In Chart 1, Columns A and B are the actual Class III and Class IV advanced prices over the 24-month period from August 2020 through July 2022. Column C is whichever of those two advanced prices is higher each month, with the simple average of those prices set forth in the last row. Column D is the average of the Class III and Class IV advanced prices by month, and the simple average of those prices appears in the last row.

The simple average in Column C is $12.90, while the simple average in Column D is $11.38. The difference is $1.52. Because $1.52 is greater than $0.74, the adder to the Class I mover in all months in calendar year 2023 will be $1.52:

CHART 1

Proposal Example: 2023 Mover Adjuster - Effective January 2023

<u>Base Period for 2023</u>	**Column A** Class III	**Column B** Class IV	**Column C** Higher of III-IV	**Column D** Simple Avg. III-IV
August-2020	18.08	7.12	18.08	12.60
September-2020	17.43	7.13	17.43	12.28
October-2020	11.01	7.45	11.01	9.23
November-2020	16.07	8.00	16.07	12.04
December-2020	20.07	8.21	20.07	14.14
January-2021	10.25	8.33	10.25	9.29
February-2021	10.68	8.57	10.68	9.63
March-2021	11.10	8.66	11.10	9.88
April-2021	10.19	8.33	10.19	9.26
May-2021	10.75	8.88	10.75	9.82
June-2021	12.73	9.42	12.73	11.08
July-2021	10.59	9.83	10.59	10.21
August-2021	10.04	9.67	10.04	9.86
September-2021	9.68	9.75	9.75	9.72
October-2021	9.90	9.93	9.93	9.92
November-2021	11.45	10.53	11.45	10.99
December-2021	11.40	11.52	11.52	11.46
January-2022	10.73	12.21	12.21	11.47
February-2022	10.43	12.97	12.97	11.70
March-2022	10.59	13.71	13.71	12.15
April-2022	11.97	14.51	14.51	13.24
May-2022	13.68	14.82	14.82	14.25
June-2022	15.04	14.80	15.04	14.92
July-2022	13.07	14.72	14.72	13.90 24
Month Average (*Rounded to two Decimals*)	$12.37	$10.38	$12.90	$11.38
Difference Between the 24 Mo. Average Higher-of III-IV and the 50:50 III-IV				
		Higher-Of	- Simple Avg =Difference	Higher-Of
		$12.90	- $11.38	$1.52
2023 Class I Skim Mover Adjusterer =	Greater of	Minimum Base	- or -	Higher of vs Average Of
2023 Class I Skim Mover Adjusterer =	Greater of	$0.74	- or -	$1.52
Class I Skim Mover Adjuster for 2023 = 50:50 Advance III:IV Skim plus				**$1.52**

(Hearing Exh. 275 (IDFA Exh. 37), at pp. 4, 27; testimony of M. Brown (IDFA)).

Chart 3 below shows the Floored Class I Mover adjuster calculation for calendar year 2021. This is an example where the floor exceeds the actual difference between higher of and the average of the Class III and Class IV advanced prices. The difference between Column C and Column D is $0.70. Because $0.70 is lower than the $0.74 floor, the Floored Class I mover in all months in calendar year 2021 would be the average of the Class III and Class IV advanced prices plus $0.74. Dairy farmers would not be required to "give back" the extra $0.04.

CHART 3

IDFA Proposal Example: 2021 Mover Adjuster - Effective January 2021				
Base Period for 2021	**Column A** Class III	**Column B** Class IV	**Column C** Higher of III-IV	**Column D** Simple Avg. III-IV
August-2018	5.39	5.46	5.46	5.43
September-2018	5.92	5.73	5.92	5.83
October-2018	7.71	6.11	7.71	6.91
November-2018	6.81	6.26	6.81	6.54
December-2018	5.85	6.42	6.42	6.14
January-2019	5.16	6.52	6.52	5.84
February-2019	5.47	6.80	6.80	6.14
March-2019	4.97	7.25	7.25	6.11
April-2019	6.35	7.05	7.05	6.70
May-2019	7.14	7.02	7.14	7.08
June-2019	7.74	7.56	7.74	7.65
July-2019	7.09	7.78	7.78	7.44
August-2019	8.27	7.87	8.27	8.07
September-2019	8.49	7.76	8.49	8.13
October-2019	9.26	7.84	9.26	8.55
November-2019	10.42	8.32	10.42	9.37
December-2019	13.01	8.73	13.01	10.87
January-2020	12.65	9.28	12.65	10.97
February-2020	9.90	9.54	9.90	9.72
March-2020	10.47	9.68	10.47	10.08
April-2020	10.04	8.85	10.04	9.45
May-2020	8.93	7.03	8.93	7.98
June-2020	6.68	5.99	6.68	6.34
July-2020	13.29	6.46	13.29	9.88 24
Month Average (*Rounded to two Decimals*)	$8.21	$7.39	$8.50	$7.80
Difference Between the 24 Mo. Average Higher-of III-IV and the 50:50 III-IV				
		Higher-Of	- Simple Avg =Difference	Higher-Of
		$8.50	- $7.80	$0.70
2021 Class I Skim Mover Adjusterer =	Greater of	Minimum Base	- or -	Higher of vs Average Of
2021 Class I Skim Mover Adjusterer =	Greater of	$0.74	- or -	$0.70
Class I Skim Mover Adjuster for 2021 = 50:50 Advance III:IV Skim plus $0.74				

(Hearing Exh. 275 (IDFA Exh. 37), at pp. 5, 29; testimony of M. Brown (IDFA)).

IDFA Proposal 14's pricing is not based on a ***prediction*** of the future relationship between Class III and Class IV prices, but on the ***actual relationship*** between Class III and Class IV prices as they occur over time. (Hearing Exh. 275 (IDFA Exh. 37), at pp. 4-5; testimony of M. Brown (IDFA); (Hearing Exh. 276 (IDFA Exh. 49), at p. 10; testimony of M. Brown (IDFA)). Dairy farmers will inherently be paid more under IDFA Proposal 14 than NMPF Proposal 13, because Proposal 14 snubs the adder so that it cannot fall below $0.74, which NMPF Proposal 13 does not do, and because Proposal 14 has a "look back" that will always make up any shortfall if the adder would have been higher under the NMPF formula. (M. Brown (IDFA) Tr. 6101 line 6 - 6102 line 27; 6367 line 26 - 6369 line 1).

Table 4 shows how IDFA Proposal 14 and NMPF Proposal 13 compare over time, had each been in effect. Overall, Proposal 14 would have outpaid Proposal 13 in 14 out of the past 21 years, as well as on average over the entire time period.

CHART 4

Comparison of IDFA and NMPF Base Skim Price Formulas

Year		IDFA Proposal 14 Formula with Floor	NMPF Proposal 13 Higher Of Mover	IDFA vs NMPF Difference
2003		$7.39	$7.47	-$0.08
2004		$8.04	$8.44	-$0.41
2005		$8.67	$8.54	$0.13
2006		$8.29	$7.47	$0.82
2007		$13.59	$13.47	$0.12
2008		$12.42	$12.94	-$0.52
2009		$7.68	$7.40	$0.28
2010		$9.79	$9.26	$0.53
2011		$11.90	$12.02	-$0.13
2012		$11.79	$11.82	-$0.04
2013		$13.71	$13.50	$0.21
2014		$15.48	$15.57	-$0.10
2015		$8.58	$8.91	-$0.33
2016		$7.07	$6.75	$0.32
2017		$7.82	$7.60	$0.22
2018		$6.56	$6.23	$0.32
2019		$8.40	$8.31	$0.09
2020		$11.13	$12.89	-$1.76
2021		$10.83	$10.75	$0.08
2022		$14.01	$13.64	$0.37
2023F		$10.15	$9.39	$0.75
Pre Covid	2003-2019	$9.83	$9.75	$0.08
20 Years	2004-2023	$10.29	$10.25	$0.05

Data Source: Hearing Exhibit USDA 37

(Hearing Exh. 275 (IDFA Exh. 37) at pp. 5, 30, testimony of M. Brown (IDFA)).

IDFA support this approach, recognizing that it will slightly raise the minimum Class I prices paid by its Class I processor members, because, unlike the NMPF "higher of Class I mover" Proposal 13, the IDFA "Floored Class I Mover" Proposal 14 will preserve the purposes that underlay the original decision to switch away from the "higher of Class III or Class IV advanced price" approach: providing greater price predictability and allowing both farmers and Class I processors to engage in hedging with little basis risk, to the benefit of all participants in the dairy industry. (Hearing Exh. 275 (IDFA Exh. 37), at p. 6; testimony of M. Brown (IDFA)).

The IDFA proposal will do so because in advance of any calendar year, both dairy processors and dairy farmers will know that the Class I price during each month of that calendar year will be the average of the Class III and Class IV advance prices plus a fixed amount (plus the Class I differential). That fixed amount in each month of that calendar year will either be $0.74 or a higher number, with that higher number equal to the difference between the average Class III and Class IV advance prices over the previous two August through July time periods (or, if USDA prefers, over the previous two August through July time period. (Hearing Exh. 275 (IDFA Exh. 37), at p. 6; testimony of M. Brown (IDFA)).

IDFA Proposal 14 bases the "make whole adder" upon Class I skim milk prices over the two (or if USDA prefers, one) most recent August through July twelve month periods, rather than over the most recent calendar years, because long term Class I product sales contracts between processors and retailers are often negotiated and entered during the months immediately prior to the beginning of each calendar year. In order to engage in effective hedging in connection with those contracts, Class I processors need to know at the time of those contract negotiations the amount of the "make up adder" that will be in effect during the calendar year for which Class I product sales prices are being negotiated. (Hearing Exh. 275 (IDFA Exh. 37), at p. 6; testimony of M. Brown (IDFA)).

G. Nmpf Repeatedly Endorsed The Approach Taken In Idfa Proposal 14.

NMPF previously accepted all of the benefits of hedging, and the need to get rid of the "higher of" pricing in order to accommodate hedging. When IDFA and NPMF in 2017 and 2018 successfully lobbied Congress to replace the old "higher of Class I mover" with the new average of Class III and Class IV plus $0.74 mover, their joint "NMPF and IDFA Dairy Price Risk Management Recommendations" to Congress explained that "changing the Class I Mover to the [simple average of the Class III and Class IV advanced price plus $0.74] would:

- “allow the use of existing Class Ill and Class IV futures and options to manage Class I price risk with minimal changes to the FMMO system.
- provide several benefits that can result from the ability to hedge longer-term costs for fluid milk products.
- allow processors to manage price risk for dairy beverage ingredients, as they currently can for non-dairy ingredients.
- allow dairy producers to effectively hedge the Class I portion of their producer milk payments, as they currently can for the other portion of their payments.
- encourage and promote the use of dairy ingredients in new fluid milk and dairy-based beverages that meet Class I specifications.”

(Attachment A to Hearing Exh. 275 (IDFA Exh. 37); testimony of M. Brown (IDFA)).

When USDA adopted the new Class I mover effective May 1, 2019, USDA similarly recognized that “[u]ntil now, uncertainty about which Class price will end up being higher each month has made effective hedging difficult.” USDA, Agricultural Marketing Service, Federal Milk Marketing Orders— Amending the Class I Skim Milk Price Formula, 84 Fed. Reg. 8590, 8591 (Mar. 11, 2019).

Even after the divergence between Class III and IV prices caused by the pandemic had been experienced, NMPF “developed internally” in February 2021 and proposed a revision to the Class I skim milk mover “very similar” to what is now IDFA Proposal 14. This proposal (Hearing Exh. 235 (IDFA Exh. 46) was developed by NMPF’s Economic Policy Committee, comprised of executive and dairy producer members of NMPF’s member cooperatives, and approved by the NMPF Executive Committee, made up of the elected farmer chairperson or CEO general manager of the member cooperatives. The Proposal, like IDFA Proposal 14, based the Class I skim move mover on the average of the Class III and IV prices, with a look-back and make whole provision. (P. Vitaliano (NMPF) 4766 Line 18 - 4773 line 6; 4774 lines 1-4).

Indeed, as late as December 2021, NMPF posted this proposal to its Website under the heading “Class I Mover,” describing it as “the most balanced approach to address the existing disparities.” NMPF did not until October 2022 abandon the position that this constituted “the most balanced approach.” And that decision to abandon NMPF’s repeatedly stated position was not made at the behest of NMPF’s professional staff, but rank and file dairy farmer members, who apparently felt that they were entitled to more money even if the unprecedented divergence between Classes III and IV resulted from Government action designed to help dairy farmers themselves, and were simply unwilling even to entertain a proposal like IDFA’s that would pay them more money while preserving Class I hedging. (Hearing Exh. 236 (IDFA Exh. 236); P. Vitaliano (NMPF) Tr. 4774 line 17 - 4779 Line 6).

Moreover, at the hearing, Dr. Vitaliano, NMPF’s Chief Economist, Dr. Vitaliano acknowledged that “NMPF does not discount or dismiss the importance of a Class I mover that is more hedgeable,” but “we would like to see some data from those who wish to -- who claim they are hedging Class I with the average-of to see what the extent of that is, what a rough economic value of that ability is.” (P. Vitaliano (NMPF) 4701 Line 22 - 4702 line 11). While for proprietary reasons many processors are unwilling to share the details of their hedging strategies, the testimony of Nestlé, Lifeway (Coca-Cola), HP Hood, Saputo, and former Kroger employee Mike Brown discussed above clearly explain the practices and value of hedging.

At the time when the new Class I skim milk mover was introduced in 2019, there was no widespread negative reaction by dairy producers, dairy press or academic researchers. (Hearing Exh. 289 (Edge Exh. 6) at p. 2, testimony of M. Bozic (Edge)). Jordan Clark, today a very well-respected dairy economist, president of the Dairy Institute of California and Chair of the IDFA Economic Policy Committee, was at that time a master's student at the University of Minnesota, and Dr. Bozic was his thesis supervisor. In his 2019 thesis, he concluded: "We find that between January 2000 to December 2017, average uniform prices for each federal milk marketing order would have differed by less than $0.01/cwt when comparing the previous and current Class I pricing formulas. We also find that that uniform prices are more volatile in federal milk marketing orders with the highest Class I utilizations and, had the newly reformed pricing formula been in place, would have reduced volatility in all FMMOs between 2000 and 2017. We also find that the basis risk of varying hedging strategies is significantly reduced under the reformed formula as compared to the previous formula. Clark, J. (2019). "Quantifying Impacts of Class I Milk Price Formula Reform: A Study of FMMO Uniform Milk Price Volatility and Class I Milk Hedging." URL: https://conservancy.umn.edu/handle/11299/243054 (Hearing Exh. 289 (Edge Exh. 6) at p. 2, testimony of M. Bozic (Edge)).

H. Effective Hedging Is Impossible Under Nmpf Proposal 13.

1. Multiple Analytics Confirm That Effective Hedging Is Impossible Under NMPF Proposal 13.

The fact that Nestlé, Fairlife, HP Hood, etc. all found it impossible to hedge under the old "higher of" regime, and did not attempt it, is proof enough of its shortcomings. But many analytics prove the same point.

The "higher of Class I mover," in effect before May 1, 2019, and which NMPF Proposal 13 seeks to reinstate, re-sets Class I raw milk prices each month based upon the "higher of" the Class III or IV advanced price for the month (plus a Class I differential). This makes effective hedging extremely difficult, with far more basis risk than under the current Class I base price system.

- Use of “the higher of Class I mover” increases Class I price volatility, meaning additional risk, as the “higher of mover” switches back and forth between Class III and IV, causing the Class I price to fluctuate more wildly. Increased cost volatility equates with greater price risk and that increased risk increases the cost of the hedge.

- Increased hedge costs result in higher consumer prices, and reduced consumption, because the increased cost of the hedge must be built into the processor’s product pricing.

- Price risk management (hedging) for Class I generally involves direct participation in CME Class III and IV futures, or over-the-counter fixed price agreements, usually backed with the sell side using CME futures. However, in a “higher of Class I mover” world, the utility of hedging with futures/options is severely limited, given that which “higher of” mover (Class III or Class IV) will be in effect at the expiration of the right to exercise the futures/options is not known in advance. This creates insurmountable chaos:

- Which contract do you use to hedge: Class III or Class IV? You cannot know in advance which will be relevant.

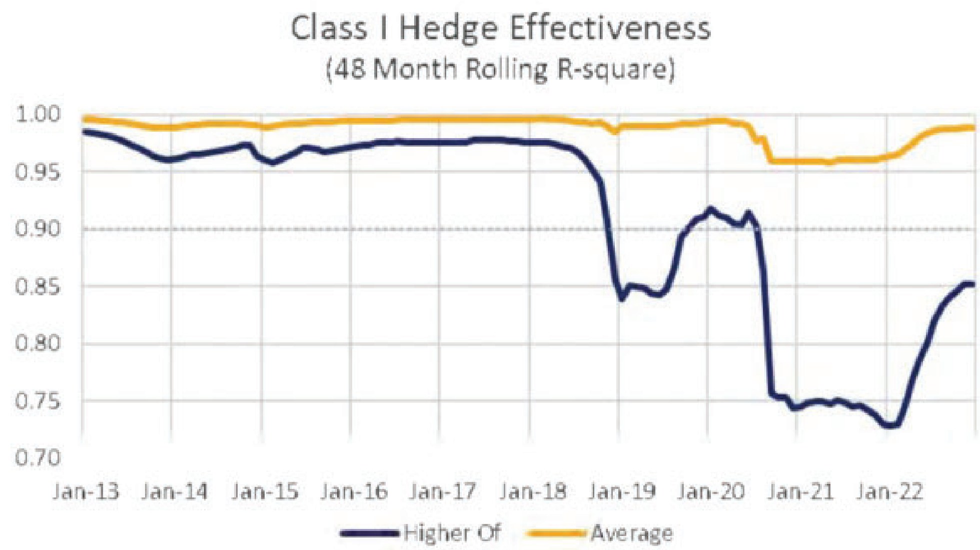
- One cannot effectively switch mid-hedge whenever the expected mover changes. Class III and Class IV futures markets are simply not liquid enough to simultaneously buy/sell significant volumes of Class III/Class IV futures at identical prices precisely as the higher of the futures prices is switching.

- Once the hedges are placed, if the higher of Class I mover switches from Class III to Class IV, or vice versa, so that the hedger is protected with the wrong contract, the result is an unexpected loss to the long-hedger (the processor) and an unexpected gain to the short-hedger (the counterparty). (Hearing Exh. 275 (IDFA Exh. 37), at pp. 11-12; testimony of M. Brown (IDFA)).

Difficulties with hedging under the previous "higher-of" system are well documented in academic literature. Newton and Threan (2012) concluded: "The basis exposure prevents class III and IV milk futures contracts from directly managing the milk price and limits potential risk reduction and revenue stability for fluid market participants. Removing these roadblocks to risk management would provide avenues for farm, processor, and retailer profitability in an increasing volatile market."[14] Newton, J. and C.S. Threan (2012) "Road Block to Risk Management — Investigating Class I Milk Cross-Hedging Opportunities." Applied Economics Perspectives and Policy, volume35, number3, pp.550-564, https://doi.org/10.1093/aepp/ppt017. (Hearing Exh. 289 (Edge Exh. 6) at p. 2, testimony of M. Bozic (Edge)).

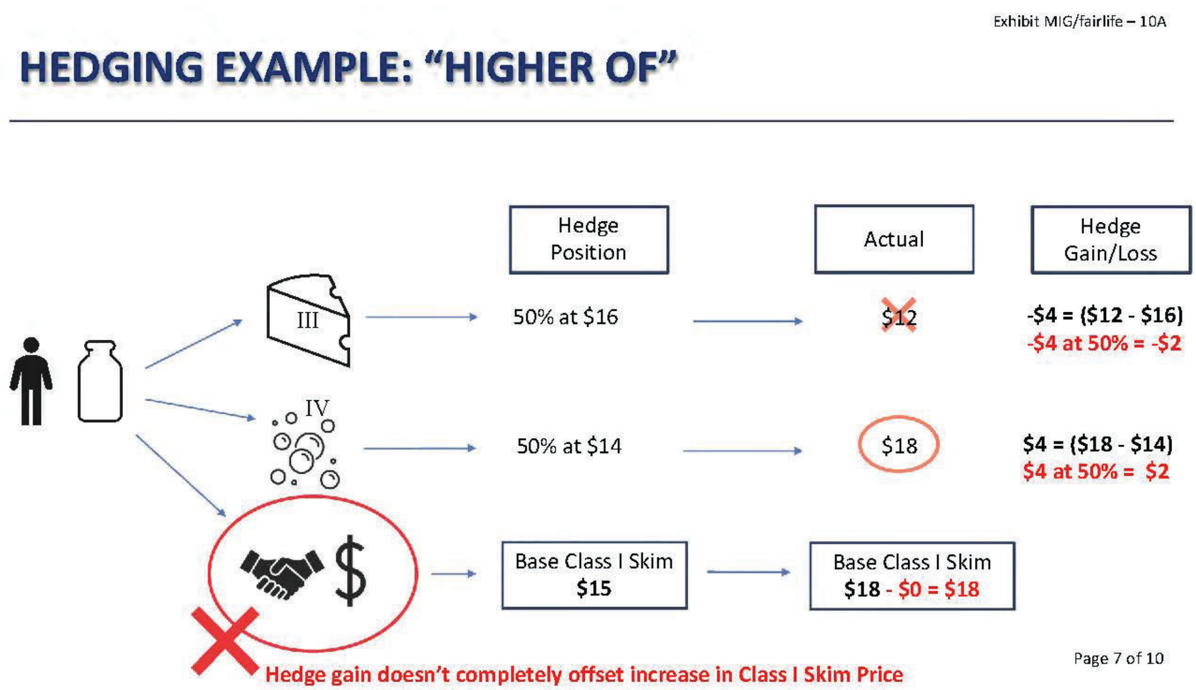
Hedging practitioners saw it the same way. At the 2023 StoneX Agriculture Outlook Conference in Las Vegas, Director of Dairy Market Insight Nate Donnay reviewed the Federal Order reform discussions at the time and displayed a chart showing the greater reliability of hedging Class I prices under the current program versus a return to the "higher of " Class I move, using a 48-month rolling average R square statistic to represent the reliability of the Class I hedge under an average vs. higher-of mover base. The upper line shows very high correlations between a hedged and a 50:50 weighted "average of" mover base, and therefore high "Class I Hedge Effectiveness"):

[14] Newton, J. and C.S. Threan (2012) "Road Block to Risk Management — Investigating Class I Milk Cross-Hedging Opportunities." Applied Economics Perspectives and Policy, volume35, number3, pp.550-564, https://doi.org/10.1093/aepp/ppt017



The lower line shows the much greater difficulty of hedging the "higher-of" mover base, particularly in times of volatile markets. (Hearing Exh. 275 (IDFA Exh. 37), at p. 13; testimony of M. Brown (IDFA)).

The reason is that whereas Class II, III, and IV can all be effectively hedged, the "higher of" concept for Class I is incompatible with hedging. (Hearing Exh. 273 (MIG Exh. 10) at p. 7, testimony of T. Doelman (Fairlife)). As the following example of hedging under the "higher of" formula demonstrates, one cannot know what to hedge and so one gets it wrong, the exact opposite of the result achieved under the exact same assumption but using the "average of" pricing formula, see p. 211 above:



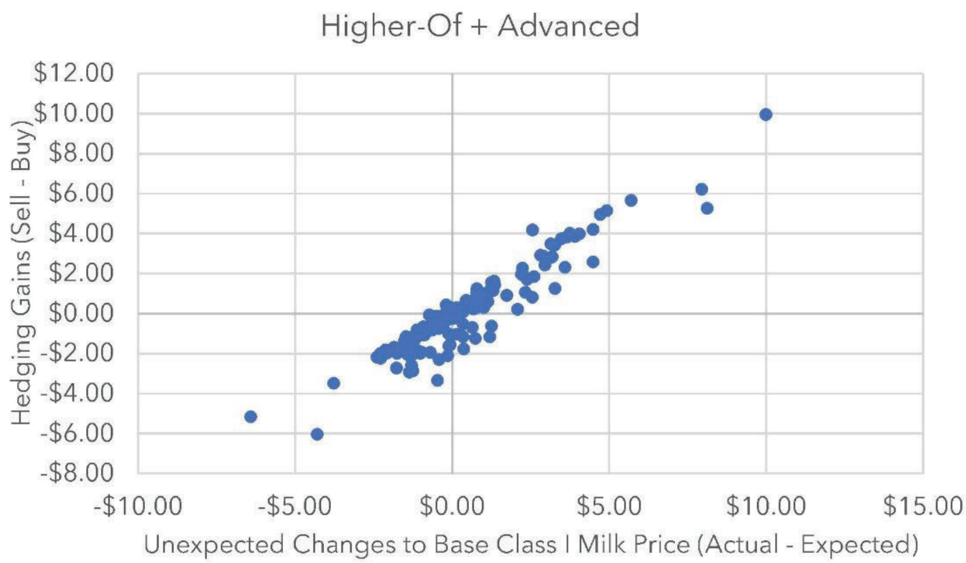
(Hearing Exh. 275 (MIG Exh. 10A) at p. 7, testimony of T. Doelman (Fairlife)); T. Doelman (Fairlife) Tr. 6028 line 5 - 6035 line 5; 6056 line 6- 6058 line 9; 6066 line 4 - 6071 line 10; 6073 line 17- 6074 line 1).

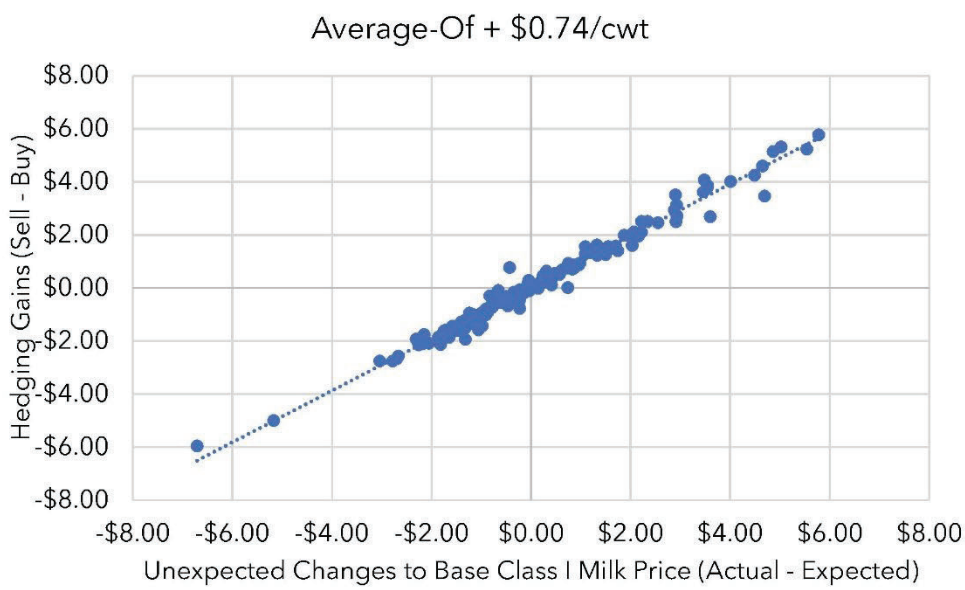
Again, the inescapable problem is that under the "higher of" formula, there is "mover" risk, i.e. the risk that the hedge will be based on the "wrong" contract. For example, at the time when the hedge is initiated, the Class III futures price may be higher than the Class IV futures price. However, once that future date is reached, the published Class IV Skim Milk Price is higher than Class III Skim Milk Price. This risk is only encountered under a "higher of" regime. (Hearing Exh. 297 (Edge Exh. 15 Updated) at p. 3, testimony of M. Bozic (Edge)).

To assess the relative effectiveness of hedging under higher-of vs average-of, Dr. Bozic built a hedging program, the full calculation of which is included in Hearing Exh. 290 (Edge Exh. 15A). The conclusions of that program are:

1. Residual basis risk (measured as a standard deviation of the sum of unexpected changes in Base Class I Milk Price and hedging gains) under "higher-of" is $0.75/cwt, vs. only $0.27/cwt under "average of". In other words, basis risk is nearly three times as large under the higher-of than under the average-of regime. (Hearing Exh. 297 (Edge Exh. 15 Updated) at p. 4, testimony of M. Bozic (Edge)).
2. "Mover" risk is substantial under the "higher-of" regime. Specifically, under the Bozic hedging program, the hedging horizon is assumed to be 120 days. The date when the hedge is initiated is the latest trade date that is more than 90 calendar days before the start of the month that is prior to the month when milk will be hedged. For example, for milk that will be sold during the month of June 2023, the prior month starts on May 1, 2023, and the last trading date that is more than 90 calendar days before May 1, 2023, was January 30, 2023, which is the date the hedge in initiated. (Hearing Exh. 297 (Edge Exh. 15 Updated) at pp. 4, 12-15 testimony of M. Bozic (Edge)).
3. Applying this approach, from January 2011 through June 2023, over 150 months, the ***actual*** mover class turned out to be different than the ***expected*** mover class in 49 months, or 32.6% of the time. In other words, on the date the hedge was initiated, the futures market projected that one of the two classes (III or IV) would be the higher value and hence the mover on the date the hedge would be exercised, but in fact, by that point in time, the other class was the mover. (Hearing Exh. 297 (Edge Exh. 15 Updated) at pp. 4, 12-15, testimony of M. Bozic (Edge)).
4. The "mover" effect is visually shown by scattergrams that relate to the unexpected changes to the Base Class I Milk Price to hedging gains under a program designed to offset such unexpected changes. If there were no unexpected changes, the scattergram would line up

along the 45-degree line. But in the higher-of regime, which is the top scattergram, close to a third of the dots are substantially removed from the 45-degree line. In most of these cases, the unexpected changes in the base Class I milk price were accompanied by the unexpected changes in the mover class. In the average-of regime, which is presented as the bottom scattergram, the dots are much closer to the 45-degree line:





(Hearing Exh. 297 (Edge Exh. 15 Updated) at pp. 4-5, testimony of M. Bozic (Edge)); M. Bozic (Edge) Tr. 6446 line 11 to 6448 line 12).

In response to NMPF's assertion that an "average-of" pricing regime is not necessary to facilitate hedging because Class I can be hedged under "higher-of" pricing approach using Over-The- Counter (OTC) swamp contracts, Dr. Bozic reached out to OTC providers and brokers with deep understanding of the OTC market and asked them to "give me a quote"' assuming that we are back in the higher-of pricing regime. The cost they quoted was $0.30/cwt. Thus, if a Class I handler wanting to lock in the Class I Skim Milk Price, at a time when expected prices for Class III Skim Price and Class IV Skim Milk Price, implied from milk and butter futures prices, are respectively $14.00 and $13.00, then the OTC provider may offer a swap at $14.30 - the higher of two futures prices plus $0.30/cwt.

That is akin to buying a futures contract that settles on the higher-of Advanced Class III Skim Price and Advanced Class IV Skim Price, except that the buyer does not need to post margin calls if prices decline. The difference between the higher-of the two expected prices and the swap price is the cost of hedging that must be absorbed by Class I handler. Expected profit margin is reduced by $0.30/cwt. If the Class I handler has a profit margin that is small relative to the swap premium, they would simply not be able to hedge - even if hedging instruments are technically available. (Hearing Exh. 297 (Edge Exh. 15 Updated) at p. 2, testimony of M. Bozic (Edge)).

By contrast, under the average-of approach, Class I handler does not need to go to the swap dealer. They can hedge using the CME futures directly. Brokerage commissions vary from $5 to $30 per contract per transaction. Contract size is 200,000 pounds (2,000 cwt). If the handler needs two contracts to create an average-of hedge, and closes the futures position (rather than waiting for contracts to expire), the cost, at the high end, would be 2 x $60 per 400,000 pounds of milk.

That translates to $0.03/cwt. The cost is 10 times lower than under OTC. (Hearing Exh. 297 (Edge Exh. 15 Updated) at p. 2, testimony of M. Bozic (Edge)).

The difference between a $0.03/cwt hedging cost and a $0.30/cwt hedging cost is not a small difference. It is a world of difference. $0.30/cwt would represent a large share of a processor's margin. (M. Bozic (Edge) Tr. 6437 lines 14-26; 6578 lines 4-15). See generally M. Brown (IDFA) Tr. 10325 lines 16-18 (when purchasing packaged milk for Kroger he never had an occasion when the top two bids were more than a penny and a half apart, and usually the difference is under a penny).

There is no natural seller of a higher of Class III or IV OTC contract. Such a seller would have to be an arbitrageur that would protect itself by going to the CME to buy futures every time the "higher of" switched between Class III and Class IV. The seller would make the buyer pay through the nose for such a contract. ((M. Bozic (Edge) Tr. 6473 line 6 - 6475 line 7; 6594 line 23 -6595 line 5)). Anyone offering such a product would be able to reproduce the above calculations of basis risk and recognize the very high price it would have to demand to take on that risk, a price customers would not be willing to pay. (C. Herlache (Schreiber) Tr. 5479 line 21 - 5481 line 13; 5484 line 28 - 5485 line 3).

Hedging under "higher of" has the additional severe disadvantage that it will likely fail the test for hedge accounting status. Under General Accepted Accounting Principles ("GAAP"), a test is made as to the extent to which changes in cash flows of the hedging instrument offset changes in the cash flows of the hedged item. The range is expected to fall within 80% to 125%. For example, if the Class I skim price is projected to be $18.00/cwt based on current futures prices, and the actual value turns out to be $21.00/cwt, then the change in the hedged item is $3.00/cwt. Using a "dollar-offset method," an evaluation would be made to assess if the hedging instrument would usually result in hedging gains equal to 80% to 125% of $3.00/cwt, i.e. $2.40/cwt to $3.75/cwt. (Hearing Exh. 297 (Edge Exh. 15 Updated) at pp. 2-3, 6, testimony of M. Bozic (Edge)).

When hedge accounting is satisfied, a company does not have to report as a loss in its quarterly public financial reports changes in the value of a derivative used for hedging purposes. When hedge accounting is not satisfied, it must be reported as a loss, which would result in increased earnings volatility and be viewed as a negative in the stock market. Companies are therefore motivated to engage only in hedging that satisfies the requirements for hedge accounting. (M. Bozic (Edge) Tr. 6459 line 21 - 6460 line 27).

If one (appropriately) restricts the sample to months in which the change, either positive or negative, to the base Class I price was higher than $0.375 per hundredweight, which is half of the daily price limit move, then under the average-of regime, hedges fall in the 80 to 125% range in 102 out of 123 months, or 83% of the time. This is an acceptable result for hedge accounting purposes. By contrast, under the "higher of" formula, the number of months in which hedging gains do not fall in the range of 80% to 125% is 25% higher. "A hedging program with futures contracts, under higher-of pricing regime, would have major difficulties achieving" hedge accounting status. (Hearing Exh. 297 (Edge Exh. 15 Updated) at p. 6, testimony of M. Bozic (Edge)).

2. NMPF's "Evidence" Purporting To Support The Availability Of Effective Hedging Under "Higher Of" Is Not Credible.

The principal witness for NMPF on these issues was Ms. Dorland. Her testimony that effective hedging is possible under the "higher of" regime was not credible.

a. She had no real response to the multiple analytics set forth above demonstrating conclusively why effective hedging is not possible under the "higher of" because one does not know in advance which hedgeable item (Class III or Class IV) will be the mover. At best, she made highly generalized comments about the supposed ability to find someone to enter into a bespoke hedging agreement with a Class I processor, with no analytics demonstrating what the price would be or whether that price would be financially supportable from the perspective of the processor. (S. Dorland Tr. 4905 line 1-3; 4949 lines 7-8 ("We have very creative market makers and folks who will put together customized tools"); 4950 line 28 - 4951 line 2 ("What I would tend to say when it comes to Class I hedging, that is a product that lends itself to a market maker, somebody who can customize that product for them"); 5321 lines 22-27 ("there are other people who are willing to take the other side of that transaction, customize it exactly for my needs, which the futures and options market won't.· They will tailor it for 2%, 1%, what -- and that's the beauty of the over-the-counter market.")

To be practicable, the cost of hedging cannot be a significant fraction of the processor's profit margin. (M. Bozic (Edge) Tr. 6475 line 8 - 6477 line 6). No processor witness testified that they had a well-established, comprehensive hedging program for a Class I price exposure prior to 2019. The economics that counseled against that are summarized in Section IX(H)(1) above.

b. Ms. Dorland exhibited fundamental misunderstanding of basic principles. She asserted that GAAP require a "correlation coefficient" between 0.8 and 1.25 for risk management activities to be recognized as hedging for accounting purposes. Dorland testified under oath that the claimed correlation should be between 80% and 125%, and that is what GAAP prescribes. (Hearing Exh. 238 (NMPF Exh. 32) at p. 10, testimony of S. Dorland (NMPF); Dorland (NMPF) Tr. 4916 lines 18-28). She was quite insistent: Q. "So GAPP says specifically about correlation coefficient being higher than 100%? A. "It does." (Dorland (NMPF) Tr. 4917 lines 26-28).

This is not correct and a violation of basic statistics. Correlation coefficient is defined as follows:

$$\rho = \frac{cov(x,y)}{\sigma(x)\sigma(y)}$$

where x and y are some stochastic variables, such as prices. If x and y tend to "move together", then covariance between them, $c$ov(x, y), will be positive and high, and the correlation coefficient will be positive and high. In the extreme case, if x and y are exactly the same, then cov(x, y) $=\sigma^2(xx)$, in that case, the correlation coefficient is equal to:

$$\rho = \frac{\sigma^2(x)}{\sigma(x)\sigma(x)} = 1$$

It is not mathematically possible for correlation be higher than 1, or lower than -1. A correlation can never be above 100%. Ms. Dorland's misunderstanding was fundamental. (Hearing Exh. 297 (Edge Exh. 15 Updated) at pp. 2-3, testimony of M. Bozic (Edge)).

As. Dr. Bozic explained further: "It is not mathematically possible for a correlation coefficient to be higher than 1 or to be lower than negative And that's just basic statistics. Any introductory course in statistics, even if -- you know, you don't have to be an econ major. Even if you are in business school, everybody covers that. As for GAAP accounting principles, the number cited, 80% to 125%, they do not refer to the correlation coefficient. Accounting standards are focused on the extent to which changes in the cash flows of the hedging instrument offset changes in the cash flows of the hedged item." (M. Bozic (Edge) Tr. 6440 lines 3-14).

c. Ms. Dorland admitted to mistakes in her calculations, inserting an extra digit of unknown origin in her butterfat numbers; including a correction factor that should not be there; and leaving out a producer price differential. (Hearing Exh. 242 (Edge Exh. 242) and Hearing Exh. 243 (Edge Exh. 243); Dorland (NMPF) Tr. 4921 line 13 - 4934 line 15).

d. Ms. Dorland presented an extended analysis of why organic milk producers could not successfully hedge the producer settlement fund, an endeavor that no one has apparently even thought about doing, much less actually attempted. (Hearing Exh. 238 (NMPF Exh. 32) at p. 11, testimony of S. Dorland (NMPF)); S. Dorland (NMPF)Tr. 4961 lines 6-10) ("So this was one of the models, okay?· Under the umbrella of Class I hedging.· So it's a very small -- extremely small demonstration of what may or may not happen.· I'm actually personally not aware that anybody does that."); Tr. 5280 lines 15-19 ("Somebody said that potentially organic processors may attempt to hedge their obligation to the pool for any milk that was basically pooled on the Federal Order system, so it's a very small subset of what an organic processor may or may not attempt to hedge.")

e. She reached sweeping conclusions without any evident support. For example, she asserted that IDFA Proposal 14 or MIG Proposal 15 diminish the "effectiveness of" and "defeated" hedging because they incorporate a "look back" mechanism that uses an adjuster that changes over time, as opposed to the $0.74 adjuster found in the current "average of" formula. (S. Dorland (NMPF) Tr. 5289 line 2 - 5290 line 1). To the contrary, as long as the hedging horizon is shorter than the lag at which the adjuster is recalibrated, hedging effectiveness from the Class I handler perspective will equal to hedging effectiveness of the current pricing regime, which is the average-of plus $0.74. In other words, since one will know in advance to the penny how much the adjuster is, the fact that the adjuster may well be something other than $0.74 has no relevance to the ability to hedge against the movement in the Class III and IV prices to which the adjusted is added. So the claim from Ms. Dorland that we cannot properly evaluate them because of the moving average adjuster does not correspond to facts. (M. Bozic (Edge) Tr. 6445 lines 15-23).

f. Ms. Dorland's analysis of the purported difficulties of hedging 2% milk under "average of" simply ignored that in her example the processor is over-hedged on butterfat (given that its product has lower butterfat than farmer milk) and would take that into account in its actual hedging. Yet Class I handlers can easily hedge the butterfat component of milk through butter futures. (M. Bozic Tr. 6542 line 11 - 6544 line 1). As Ms. Dorland admitted, the processor can either sell the excess butter into the future market, or enter into swaps for smaller quantities. (S. Dorland (NMPF) Tr. 5319 line 8 - 5320 line 17; 5321 lines 22-27). Yet she insisted, without support, that it was forbidden to look at how the two hedges would actually work in combination. (S. Dorland (NMPF) Tr. 4934 line 28 - 4938 line 14).

To the extent there were any entities participating in Class I hedging prior to 2019, they did it using futures and options and collars, the costs for and complexity of which can be prohibitive, and the entities hedging would have been dealing with very high profit Class I products that would make such hedging affordable. (M. Bozic (Edge) Tr. 6529 line 15 - 6530 line 14; M. Brown (IDFA) Tr. 6183 line 25 - 6188 line 6). NMPF did not introduce into evidence any proof that such hedging or any other kind of Class I hedging in fact commonly occurred prior to 2019, or call any witnesses who had themselves either participated in such hedging or examined that question.

Furthermore, we do know that in 2018, the year before the "average of" formula came into effect, only 26 million pounds of the 44 billion pounds of packaged milk products were being hedged on the OTC market. (M. Bozic (Edge) Tr. 6539 lines 13-21, citing Dr, Bozic's August 26, 2019 article "Fluid Milk: A Better hedge," Attachment B at p. 3 to Hearing Exh. 275 (IDFA Exh. 37)).

As detailed by Dr. Bozic in his 2019 article, Fluid Milk, A Better Hedge, written at the same time the "average of" formula was first going into effect:

> Under the previous formula, the "higher of" factor meant either of the two advanced milk prices —Class III or Class IV— could end up driving the Class I skim milk price each month. A minority of organizations with Class I price exposure chose to hedge by using the highest-priced futures contract -Class III or Class IV - and accepted the basis risk. By the time USDA announced the Class I price, the driver of milk costs may have changed. If so, the hedge under-performed. For many Class I hedgers, the strategy of using futures failed to adequately reduce price risk. Another small number of hedgers chose to hedge Class I milk exposure by utilizing futures and options. These participants would hedge with the higher-priced futures contract and also pay the premium for an option on the other futures contract. While the strategy was effective at reducing price risk, for many fluid milk buyers it was also cost-prohibitive.
>
> Lastly, a few manufacturers and end-users utilized the OTC markets to hedge Class I price risk. But risk premiums in these markets tended to be prohibitively expensive. In 2018, just 26 million lbs. of the 44 billion lbs. (0.0006%) of packaged milk produced were hedged using OTC Class I milk contracts.
>
> In summary, with the previous Class I formula in place, basis risk was often too high or too expensive to mitigate.

Fluid Milk: A Better Hedge (Aug. 26, 2019) (Attachment B to Hearing Exh. 275 (IDFA Exh. 37).

By contrast, Dr. Bozic had concluded that under the "average of" Class I mover that had gone into effect May 1, 2019, "[t]he newly reformed Class I skim milk formula dramatically improves the effectiveness of hedging Class I price risk with already available futures contracts." Id.

I. NMPF's Criticisms Of IDFA Proposal 14 Are Not Valid.

NMPF also asserts several alleged defects in the "average of" formulas. Some of these points attempt to rely on comments made by USDA in 2000 order reform, but (a) IDFA Proposal 14 and MIG Proposal 15 have look back provisions that were not in play then, (b) we now have almost 25 years real world experience with both the higher of and average of formulas, and (c) the industry has changed in ways that make some comment that may have been valid then no longer so.

1. The "Average Of" Formula Does Not Create Class Price Inversions Or Lead To Depooling.

Negative producer price differentials ("PPD"s), plus lax pooling requirements, are the leading causes of depooling, i.e., when it is more advantageous for a non-Class I handler to be out of the pool than in it. (Hearing Exh. 275 (IDFA Exh. 37), at p. 20; testimony of M. Brown (IDFA)). Depooling is all about price relationships between classes. And the time it becomes most likely is when the Class III or Class IV price is higher than other classes including Class I, and participation in the pool by that higher class would actually reduce revenues for the producers supplying that class. (M. Brown (IDFA) Tr. 6110 lines 17-27).

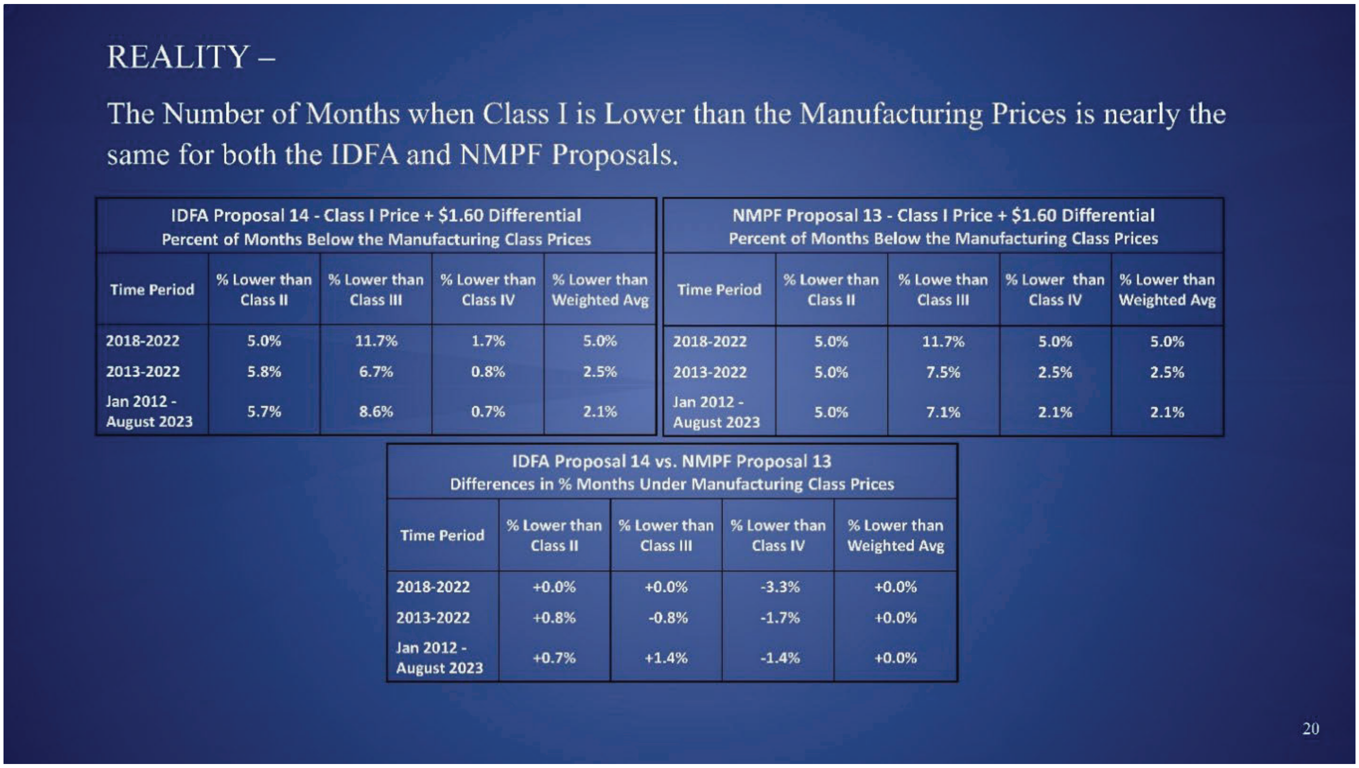
USDA data shows that 77% of total depooled milk from 2016 through 2022 was depooled by Section 9(c) dairy cooperatives. (Hearing Exh. 30 (USDA Exh. 30) (Column F, "Total 9(c)Milk Not Pooled Estimated," years 2016-2022 combined, divided by Column D, "Total Eligible Milk Not Pooled, Estimated," years 2016-2022 combined).

IDFA analyzed the effect of the "average of" formula on depooling in Hearing Exh. 276 (IDFA Exh. 49) slide 19, and Hearing Exh. 286 (IDFA Hearing Exh. 49 Corrected).[15] The analysis was based upon an assumed Class I differential of $1.60 per cwt. This is the lowest differential in the country, and thus the one most likely to result in depooling because Class I minimum prices are the lowest as compared to the prices of other classes.

Even under that scenario, there was very little difference between NMPF Proposal 13 and IDFA Proposal 14 in their effect on depooling. To the extent that there was a difference, IDFA

[15] Hearing Exh. 286 (Corrected IDFA Hearing Exh. 49) is a corrected version of slide 20 of Hearing Exhibit 276 (Original IDFA Exh. 49)).

Proposal 14 would tend to cause depooling a smaller percentage of the time. (M. Brown (IDFA) Tr. 6363 line 14 -6366 line 5; 6311 line 13- 6314 line 5):



IDFA Proposal 14 - Class I Price + $1.60 Differential Percent of Months Below the Manufacturing Class Prices				
Time Period	% Lower than Class II	% Lower than Class III	% Lower than Class IV	% Lower than Weighted Avg
2018-2022	5.0%	11.7%	1.7%	5.0%
2013-2022	5.8%	6.7%	0.8%	2.5%
Jan 2012 - August 2023	5.7%	8.6%	0.7%	2.1%

NMPF Proposal 13 - Class I Price + $1.60 Differential Percent of Months Below the Manufacturing Class Prices				
Time Period	% Lower than Class II	% Lowe than Class III	% Lower than Class IV	% Lower than Weighted Avg
2018-2022	5.0%	11.7%	5.0%	5.0%
2013-2022	5.0%	7.5%	2.5%	2.5%
Jan 2012 - August 2023	5.0%	7.1%	2.1%	2.1%

IDFA Proposal 14 vs. NMPF Proposal 13 Differences in % Months Under Manufacturing Class Prices				
Time Period	% Lower than Class II	% Lower than Class III	% Lower than Class IV	% Lower than Weighted Avg
2018-2022	+0.0%	+0.0%	-3.3%	+0.0%
2013-2022	+0.8%	-0.8%	-1.7%	+0.0%
Jan 2012 - August 2023	+0.7%	+1.4%	-1.4%	+0.0%

(Hearing Exh. 286 (Corrected IDFA Exh. 49), at p. 2; testimony of M. Brown (IDFA); Hearing Exh. 287 (Corrected IDFA Exh. 49A); testimony of M. Brown (IDFA)).

Dr. Bozic performed his own extensive, month by month analysis of the causes of depooling (Hearing Exh. 297 (Edge Exh. 15 Updated) at pp. 6-11, testimony of M. Bozic (Edge)), and concluded: "Looking at all of these diagrams, for the life of me I cannot find a decisive convincing evidence that Class I reform [the 2019 adoption of the "average of" formula] caused depooling. Did it cause slightly negative PPD that would have been negative already in some months? Yes. Did it cause depooling? Draw your own conclusions. I -- I would have a hard time agreeing with that statement." (M. Bozic (Edge) Tr. 6459 lines 2-9).

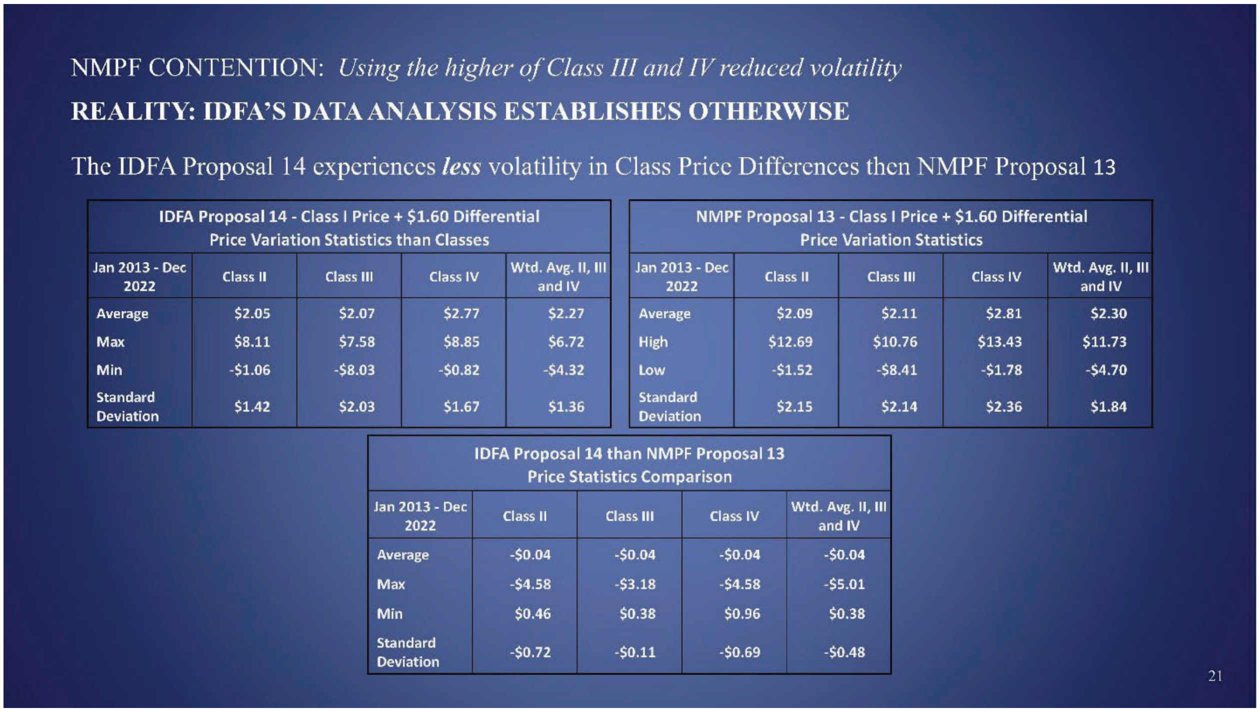
Dr. Bozic was not surprised by Mr. Brown's depooling analysis discussed immediately above. If the choice between higher of versus average of has any effect on depooling, it is a third order level effect. (M. Bozic (Edge) Tr. 6496 lines 8-21).

Indeed, as NMPF's Chief Economist conceded, the market conditions that drive Class III and IV process apart are the supply and demand for Class III and IV products, and how they intersect and may differ. USDA cannot control those conditions. Raising the Class I minimum price does not change those conditions. (P. Vitaliano (NMPF) 4711 lines 10-20; 4712 lines 13-16).

2. The "Average Of" Does Not Increase Volatility.

A Class I mover like the NMPF proposal, which routinely and unpredictably switches between Class III and Class IV, creates, rather than reduces, volatility. The joint "IDFA-NMPF Dairy Price Risk Management Recommendations" itself recognized "the uncertain basis that occurs when the mover shifts between Class III and Class IV" under the "higher of" Class I mover. And the more volatile the price, the higher the price a retailer needs to charge to protect against margin loss, resulting in diminished sales. (Hearing Exh. 275 (IDFA Exh. 37), at p. 20, testimony of M. Brown (IDFA)).

The proper way to measure volatility under NMPF Proposal 13 versus IDFA Proposal 14 is to look at the standard deviation over time in class pricing under the respective proposals. A smaller standard deviation means that the average variation (volatility) is lower, and the proposal with a negative number when comparing the two proposals means that proposal has less volatility than the other. Examining that question over a 10-year period, IDFA Proposal 14 has lower standard deviations than Proposal 13 in Class II (negative $0.72); Class III (negative $0.11); Class IV (negative $0.69), and the weighted average of all three (negative $0.48). In short, IDFA Proposal 14 is less volatile than NMPF Proposal 13:



NMPF CONTENTION: *Using the higher of Class III and IV reduced volatility*

REALITY: IDFA'S DATA ANALYSIS ESTABLISHES OTHERWISE

The IDFA Proposal 14 experiences ***less*** volatility in Class Price Differences then NMPF Proposal 13

IDFA Proposal 14 - Class I Price + $1.60 Differential Price Variation Statistics than Classes				
Jan 2013 - Dec 2022	Class II	Class III	Class IV	Wtd. Avg. II, III and IV
Average	$2.05	$2.07	$2.77	$2.27
Max	$8.11	$7.58	$8.85	$6.72
Min	-$1.06	-$8.03	-$0.82	-$4.32
Standard Deviation	$1.42	$2.03	$1.67	$1.36

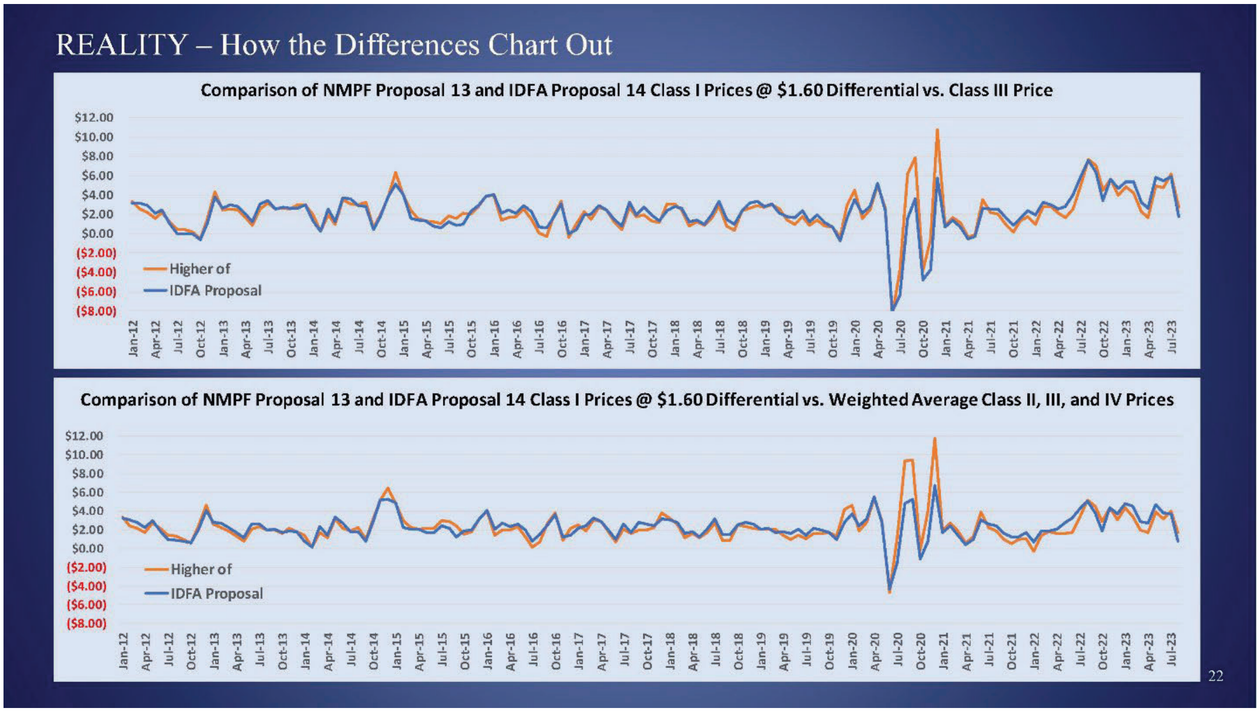
NMPF Proposal 13 - Class I Price + $1.60 Differential Price Variation Statistics				
Jan 2013 - Dec 2022	Class II	Class III	Class IV	Wtd. Avg. II, III and IV
Average	$2.09	$2.11	$2.81	$2.30
High	$12.69	$10.76	$13.43	$11.73
Low	-$1.52	-$8.41	-$1.78	-$4.70
Standard Deviation	$2.15	$2.14	$2.36	$1.84

IDFA Proposal 14 than NMPF Proposal 13 Price Statistics Comparison				
Jan 2013 - Dec 2022	Class II	Class III	Class IV	Wtd. Avg. II, III and IV
Average	-$0.04	-$0.04	-$0.04	-$0.04
Max	-$4.58	-$3.18	-$4.58	-$5.01
Min	$0.46	$0.38	$0.96	$0.38
Standard Deviation	-$0.72	-$0.11	-$0.69	-$0.48

21

Hearing Exh. 276 (IDFA Exh. 49), at p. 21; testimony of M. Brown (IDFA); M. Brown (IDFA) Tr. 6116 line 12 - 6119 line 28).

Charting prices under the two proposals over time similarly does not suggest increased volatility:



Hearing Exh. 276 IDFA (Exh. 49), at p. 22; testimony of M. Brown (IDFA).

3. The "Average Of" Does Not Fail To Send An Important Price Signal To Farmers.

The price signal received by farmers is sent by the blend price, not the Class I price. Proposal 14 could materially change the "price signal" only if the use of "average of" affects the blend price materially differently than "higher of."

Hearing, Exh. 286 (corrected IDFA Exh. 49), which contains a corrected version of slide 23 of Hearing Exhibit 276 (original IDFA Exh. 49), demonstrates that there is almost no difference in the blend price between NMPF Proposal 13 and IDFA Proposal 14. This is largely because: Class I is only a minority of the milk that goes into calculating the blend price; the cost of manufacturing milk makes up the largest part of the Class I pricing formula regardless of whether one is using "higher of" or "average of with a look back;" and the identical Class I differential is part of the Class I price, and thus part of the blend price, regardless of whether one is using a "higher of" or an "average of." (M. Brown (IDFA) Tr. 6360 line 26 - 6363 line 11).

Specifically, the Class I share of the blend price was 31.8% under IDFA Proposal 14 and 31.9% under NMPF Proposal 13. Under the IDFA proposed Class I skim milk mover, the amount added to the average of the Class III and Class IV price only represented 1.41% of the blend price; while under the NMPF proposed Class I skim milk mover the amount by which the higher of Class III or IV exceeded the average of Class III and IV only represented 1.49% of the blend price. (Hearing, Exh. 286 (corrected IDFA Exh. 49), slide 23), testimony of M. Brown (IDFA)).

The difference between the two is not material, in terms of the price signal being sent via the blend price. (M. Brown (IDFA) Tr. 6123 line 22 - 6124 line 13). The spreadsheet calculations underlying the foregoing analyses are set forth in Hearing Exh. 277 (IDFA Exh. 49A) and explained further in the hearing testimony. (M. Brown (IDFA) Tr. 6129 line 7 - 6135 line 7).

4. The "Higher Of" Does Not Better Reflect The Value Of Milk.

NMPF contends that basing Class I on the higher of Class III or Class IV would more accurately reflect the value of milk in the different categories of use in a four-class system. But the value of Class I products is not necessarily related to the value of Class III or IV products. This is obvious in the fact that the markets for butter and cheese have been growing, while the market for Class I products has been falling. The Class I differential is a regulatory construct, not a reflection of the relative value of the products that fall within it as compared to other classes. (Hearing Exh. 275 (IDFA Exh. 37), at p. 19; testimony of M. Brown (IDFA)).

While NMPF contends that basing Class I on the higher of III or IV would more accurately reflect the value of milk in these different categories of use in a four-class system, the average value of milk is a function of all product markets, not just the highest commodity, and the 2018-2022 average Producer milk utilizations across all Federal Orders by Class are as follows:

Class I - 29.2% Class II - 12.4% Class III - 38.4% Class IV - 20.0%

Class II, III and IV prices are not affected by the choice between higher of and average of, and IDFA's "average of" with a look back ensures that shifts in demand for any manufactured product will not lower Class I prices over time; farmers will be paid as much for Class I as they would have under the higher of. (Hearing Exh. 276 IDFA (Exh. 49), at p. 25, testimony of M. Brown (IDFA)).

5. The "Average Of" Does Not Inhibit Class I Handlers' Ability To Attract Milk.

The dairy industry has lived under the "average of" formula for almost five years, since May 2019, and there have been no significant reported problems in Class I handlers obtaining enough milk, except perhaps in the Southeast, which presents a regional issue already addressed by USDA through its recent decision addressing transportation and delivery credits. (Hearing Exh. 276 IDFA (Exh. 49), at p. 24; testimony of M. Brown (IDFA)). For example, Kroger never had any problems procuring milk under the "average of" regime in place since 2019, including in the Southeast. (M. Brown (IDFA) Tr. 6124 line 14 - 6134 line 22). As discussed further below in Section IX addressing Proposal 19, the FMMO system, and the country as a whole, have far more milk, and far more of a reserve supply of milk, than is needed to meet Class I needs.

6. Handlers Will Pay, And Farmers Will Be Paid, Under IDFA Proposal 14's "Look Back And Make Whole" Formula.

Although NMPF contends that handlers may go out of business and never make the "make up" payment, the make up obligation is part of regulated price setting. It is added into the Class I skim milk mover, and it becomes an obligation of all handlers, with the payments received by all farmers supplying milk. (Hearing Exh. 276 IDFA (Exh. 49), at p. 26; testimony of M. Brown (IDFA)). So even if some handlers go out of business, IDFA Proposal 14 will impose the "look back and make whole" obligation on whatever existing, or for that matter, new, handlers are in business when any milk purchase is made. The "make up" payment will be made regardless.

Conversely, the "make up" payment will be made to whichever farmers are being pooled at the time the purchase is made. (M. Brown (IDFA) Tr. 6126 line 18 - 6127 line 18). NMPF contends that some farmers may go out of business and never receive the make up" payments, but farmers go out of business for many reasons. The make up obligation is part of price setting, being added into the Class I skim milk mover, and is shared by all farmers supplying milk under the Federal Order. Farmers who have gone into the dairy business, or expanded production, will receive the higher payments even though this is "new" milk production. These timing issues are different than the potential that some handlers will go out of business during the period before make allowances have been raised to appropriate levels. (Hearing Exh. 276 IDFA (Exh. 49), at p. 27; testimony of M. Brown (IDFA)).

7. The Economic Shock Of The Pandemic Is No Excuse To Throw The Baby Out With The Bathwater.

NMPF, or at least its farmer members, are fixated on the economic shocks in 2020 resulting from the Covid pandemic having caused anomalous divergent impacts on Class III versus Class IV prices, such that the use of the simple average of the Class III and Class IV advanced price plus $0.74 produced a Class I skim price materially less than would have resulted under the previous "higher of" approach and resulted in substantial depooling. This is both an oversimplification and a very weak justification for destroying Class I hedging, which NMPF Proposal 13 will surely do for the reasons already discussed.

The "average of" formula implemented in May 2019 started out benefitting farmers. In the first six months of actual operation, farmers were paid $100 million more than they would have been under the prior "higher of" formula. (P. Vitaliano (NMPF) 4747 Line 16 - 4753 line 23).

The divergence between Class III and Class IV prices largely resulted from the COVID-era Farmers to Families Food Box Program. That Program distributed more than 173 million food boxes to Americans across the country, at a cost of over $5 billion, and led to booming cheddar cheese sales. This program greatly benefitted cooperatives and independent farmers supplying milk to, or owning, those cheese plants. (Hearing Exh. 275 (IDFA Exh. 37), at p. 19; testimony of M. Brown (IDFA)). Yet the proponents of NMPF Proposal 13 rarely acknowledge this offsetting benefit to them.

Furthermore, recognizing the temporary but material dislocations suffered by some dairy farmers, the federal government stepped in. The United States government paid producers $400 million ($300 million in the first tranche and another $100 million more recently) to compensate dairy farmers. (Hearing Exh. 275 (IDFA Exh. 37) at p. 19; testimony of M. Brown (IDFA)).

USDA also retroactively changed the Dairy Margin Coverage Safety Net Program in a way that put an additional $100 million in farmers' pockets, and forecast an additional $800 million to farmers over the next 10 years. (P. Vitaliano (NMPF) Tr. 4720 Line 5 - 4721 line 2; Hearing Exh. 234 (IDFA Exh. 234) (USDA Press release); P. Vitaliano (NMPF) Tr. 4762 line 23 - 4765 line 28).

It also bears remembering that the $941 million in alleged farmer "losses" from the application of "average of" rather than "higher of" during the pandemic would have ultimately been paid for by consumers. (P. Vitaliano (NMPF) Tr. 4714 Line 10 - 4715 line 7). For example, Upstate Niagara is a New York milk cooperative with Class I operations. Its minimum milk price obligation would have been $5/cwt higher in December 2020 if the "higher of" formula had still been in effect, given the higher cheese prices setting the Class III price. That extra $5/cwt would have been past straight through to the customer. (C. Alexander (Upstate Niagara Cooperative) Tr. 5030 line 16 - 5031 line 13). Would that truly have been a good thing, at the height of the Covid pandemic?

Nonetheless, despite these counter considerations, IDFA's goal in drafting Proposal 14 is to produce an alternative that will preserve the hedging attributes of the current pricing formula while guaranteeing farmers at least as much money as they would receive under the "higher of' Class I mover to which NMPF wishes to return. (Hearing Exh. 275 (IDFA Exh. 37), at p. 19, testimony of M. Brown (IDFA)). Proposal 14 will accomplish that goal and should be adopted.

J. Alternative Proposals 15, 16, 17 And 18.

Several other amendments to the Class I skim milk mover have been proposed.

a. MIG Proposal 15. MIG Proposal 15 provides an alternative approach to the Class I skim milk mover. MIG's approach that, like IDFA's, is designed to facilitate hedging. MIG Proposal 15 uses a somewhat different look back period, and a rolling adjuster that would change monthly (rather than annually under the IDFA proposal). MIG Proposal 15 would ensure that famers over time received as much as they would have under the "higher of" approach, without containing a "snubber" floor. (Hearing Exh. 275 (IDFA Exh. 37), at p. 22, testimony of M. Brown (IDFA)).

While IDFA prefers its own proposal, MIG Proposal 15 would be an acceptable alternative should USDA prefer it.

b. Edge Proposal 16. Edge proposal 16 would set the Class I mover at the Class III skim price plus an adjuster. The adjusted mover would be equal to the 36-month average difference between the higher of the advanced Class III skim price or advanced IV skim price, and the Class III skim milk price.

The Edge proposal would create a predictable and hedgeable Class I price, because it would be based off a hedgeable Class III price plus a knowable adjuster. That is an important positive attribute (and something IDFA Proposal 14 itself achieves). (Hearing Exh. 275 (IDFA Exh. 37), at p. 22, testimony of M. Brown (IDFA)).

However, other aspects of Edge Proposal 16 are more problematic. Under the current system, the Class I price that will be in effect in a given month is announced by the 23rd day of the previous month, based upon the advanced Class III skim price or advanced IV skim price. 7 C.F.R. 1000.53(b). Unhedged Class I handlers therefore know what their milk cost will be before the start of the pricing month. This is an important part of marketing planning for customers of fluid milk, particularly grocery stores, which use the advanced price as part of their marketing efforts for the following month. Not knowing that price would increase uncertainty. Increased uncertainty of cost generally will lead to higher prices to protect an uncertain margin. (Hearing Exh. 275 (IDFA Exh. 37) at pp. 22-23, testimony of M. Brown (IDFA)).

Edge Proposal 16 would use the announced rather than advanced price. The Class I price for a given price would be the Class III price for that month (plus an adjuster). Given that the Class III price of a given month is not announced until the 5th day of the following month, 7 C.F.R. 1000.53(a), Class I handlers would not know that cost until after the month was already over. (Hearing Exh. 275 (IDFA Exh. 37) at pp. 22-23, testimony of M. Brown (IDFA)). In other words, Class I handlers would have to price and sell their milk without knowing what the cost of the key ingredient (raw milk) would be.

For several very important segments of the fluid milk industry, such as ESL products, higher value-added products and food service, entering longer term fixed price sales contracts before the price of the raw milk is known is becoming an essential part of their business. That is why Class I pricing that facilitates hedging, as set forth in IDFA Proposal 14 (as well as MIG Proposal 15) is so critical, because hedging is what makes such longer-term price contracts feasible. (Hearing Exh. 275 (IDFA Exh. 37) at p. 23, testimony of M. Brown (IDFA)).

But for other important segments of the business, including many Class I sales to grocery stores, longstanding business practice has been to change prices monthly, such that the prices charged in a given month for packaged milk reflect the actual regulated raw milk costs for that month. Edge proposal 16 would eliminate the ability to price milk that way, because as noted, the price of the raw milk would not be known until after the month was over. This change would represent an upheaval to established practice, even though hedging would be available. (Hearing Exh. 275 (IDFA Exh. 37) at p. 23; testimony of M. Brown (IDFA)).

It is important to preserve advanced pricing for Class I given the standard terms of trade with retailers for traditional white jug milk. (Hearing Exh.463 (MIG Exh. 23A) at p. 4, testimony of T. Kelly (Shamrock). Traditional fluid milk retail customers are not yet using hedging sufficiently to permit this regulatory change. USDA policy should reflect market conditions, not mandate a change for which the Class I traditional market is not yet prepared. (Hearing Exh. 263 (MIG Exh. 9) at p. 8; testimony of S. Keefe (MIG)).

NMPF likewise opposes Proposals 16, 17 and 18 to the extent they would eliminate advanced pricing. Conventional packaged fluid milk, processed using HTST pasteurization, is the most perishable dairy product in the dairy case. In practical terms, packaged fluid milk is marketed using "just-in-time" strategies. Most buyers of packaged fluid milk, especially large retail grocers receive fluid milk deliveries multiple times per week. It is common for retail grocers to refresh their dairy cases with packaged fluid milk frequently throughout the day. There is no practical method to store HTST packaged fluid milk for more than what would represent a few days of a retailer's needs. This is unlike many Class III and Class IV retail products, such as butter and cheese, which can be stored for longer periods. (Hearing Exh. 296 (NMPF Exh. 104) at p. 2, testimony of C. Covington (Southeast Milk)).

When dealing with a product with a relatively short shelf life, especially compared to other dairy products, it makes sound economic and business sense to know the price of the principal ingredient prior to the time the product is to be sold to the customer. FMMO advanced pricing of Class I milk provides this price. Most HTST packaged fluid milk, especially private label sales, and institutional sales (schools) is priced by fluid processors to their customers monthly, based on some type of pricing formula. In simple terms, the formula has as its base, the raw milk cost. The raw milk cost is the highest single item cost of the total expense to process and package a unit of conventional HTST fluid milk, representing at least 75% of the total package milk cost. Waiting until most of the product is already distributed, and much of it consumed, before knowing the price of the core ingredient, would not be a prudent business practice. (Hearing Exh 296 (NMPF Exh. 104) at pp. 2-3, testimony of C. Covington (Southeast Milk)).

Edge Proposal 16 should be rejected.

c. **Edge Proposal 17 and AFBF Proposal 18.** These two proposals would re-instate the "higher of" approach to setting Class I prices that existed before May 1, 2019. This would have the very harmful impact of eliminating any practical ability to engage in hedging, for all the reasons explained above in opposing NMPF's Proposal 13 (which does the same thing). (Hearing Exh. 275 (IDFA Exh. 37) at pp. 23-24; testimony of M. Brown (IDFA)).

Edge Proposal 17 is even worse because it substitutes the use of actual Class III and IV prices to set the Class I price in a given month, in place of the current use of advanced Class III and IV prices that are announced before the start of the month. As described immediately above in discussing Proposal 16, the actual Class III and Class IV prices for a given month are not known until the 5th day of the following month. Thus, Edge Proposal 17 would mean that Class I handlers everywhere would always have to price their milk at a time they did not yet know their raw milk costs. But unlike Edge Proposal 16, Edge Proposal 17 would, for the reasons just explained, also have eliminated hedging. As a result, Class I handlers could not use that tool to mitigate the pricing risks created by the use of actual versus advanced Class III and IV prices to set the Class I price. (Hearing Exh. 275 (IDFA Exh. 37), at p. 24; testimony of M. Brown (IDFA)).

For these reasons, USDA should reject Edge Proposal 17.

AFBF Proposal 18 would eliminate the advanced pricing of both Class I milk and components and Class II skim milk and components. The Class II skim milk price would be equal to the announced Class IV skim milk price plus the Class II differential; the Class II nonfat solids price would be equal to the Announced Class IV nonfat solids price plus one-hundredth of the Class II differential; the Class I skim milk price would be the "higher of" the Announced Class III or Class IV skim milk prices plus the Class I differential; and the Class I butterfat price would be equal to the butterfat price plus one-hundredth of the Class I differential. (Hearing Exh. 275 (IDFA Exh. 37) at p. 24, testimony of M. Brown (IDFA)).

Like Edge Proposal 17, AFBF Proposal 18 would re-instate the "higher of" approach to setting Class I prices that existed before May 1, 2019. This would have the very harmful impact of eliminating any practical ability to engage in hedging, for all the reasons already explained in opposing NMPF's Proposal 13 and Edge Proposal 17 (both of which do the same thing).

But like Edge Proposal 17, AFBF Proposal 18 would make things even worse by basing Class I prices on actual Class III and IV prices to set the Class I price, in place of the current use of advanced Class III and IV prices. As already described in discussing Edge Proposal 16, the actual Class III and Class IV price for a given month are not known until the 5th day of the following month. Thus, as with Edge Proposals 17, all Class I handlers would always have to price their milk at a time they did not yet know their raw milk costs. But as with Edge Proposal

17, AFBF Proposal 18 would, for the reasons explained, also eliminate hedging. As a result, Class I handlers could not use that tool to mitigate the pricing risks created by the use of actual versus advanced Class III and IV prices to set Class I. (Hearing Exh. 275 (IDFA Exh. 37) at p. 25, testimony of M. Brown (IDFA)).

AFBF Proposal 18 would extend most of these defects to Class II, by basing the Class II skim price on the actual Class IV price, rather than the current use of the advanced Class IV price. As just explained, actual Class IV prices for a given month are not known until the 5th day of the following month. Thus, all Class II handlers would always have to price their products made during a given month at a time they did not yet know their raw milk costs for those products.

For these reasons, USDA should reject Edge Proposal 17 and AFBF Proposal 18.

K. Conclusion.

For all of these reasons, USDA should adopt IDFA Proposal 14, as set forth in which Hearing Exhs. 12 and 13 (USDA Exhs. 12 and 13), except that USDA, should, if it so prefers, substitute the word "twelve" in place of "twenty-four" everywhere it appears in Proposal 14. USDA alternatively should adopt MIG Proposal 15. Proposals 13, 16, 17 and 18 should be rejected.

IX. USDA SHOULD REJECT PROPOSAL 19, WHICH WOULD MATERIALLY RAISE CLASS I DIFFERENTIALS.

Proposals 19 would materially raise Class I differentials. IDFA urges USDA to reject Proposal 19. Based upon the Proposed Findings that follow, IDFA's Proposed Conclusions Regarding Proposal 19 are as follows:

PROPOSED CONCLUSIONS REGARDING PROPOSAL 19

a. Proposal 19 would materially raise Class I differentials, by an average of 60% and as high as 124%, and the average proposed of $1.49/cwt represents an approximately 8.6% increase in the Class I price.

b. Fluid milk products face unprecedented competitive threats and elasticity of demand. Plant-based beverages occupy an increasing large share of the market, in excess of 15% by some reliable sources. The price elasticity work of Dr. Oral Capps, based upon weekly grocery store sales data, indicates that all segments of fluid milk other than flavored milk now have elasticities greater than one: traditional white milk (-1.40); organic milk (-1.73); traditional flavored milk (-0.58); health enhanced milk (-2.05); and lactose free milk (-1.68). Dr. Capps' conclusions were matched by two similar 2023 studies performed by other eminent agricultural economists.

c. While earlier works had suggested lower fluid milk elasticities, they fail to meet four critical requirements, because they did not: (1) address current market conditions, (2) utilize weekly data that matches actual consumer behavior rather than quarterly, monthly, or annual data, (3) address the impacts, or moving past the impacts of, the pandemic, and (4) account for the primary competitors of various milk products including bottled waters, sports drinks, juices, refrigerated yogurt, various plant-based milk alternatives, and protein beverages.

d. Applying proponent's expert's calculations of the impact of Proposal 19 on farm level prices and the transmission of those farm level price increase to retail prices, Dr. Capps calculated that Proposal 19 would result in a 5.9% decline in fluid milk product sales. Taking Proposal 1's additional Class I price increase into account, the decline in fluid milk product sales rises to 8.06%. And taking into account the decline in Class IV prices resulting from the need to dispose of the unused Class I milk in manufactured products, Proposal 19 is unlikely to provide any net financial benefit to dairy farmers: the increase in Class I prices would likely be more than set off by the combined effect of the decline in Class I product sales and the decline in Class IV prices due to the extra milk now having to be disposed of in Class IV products. Proposal 19 would *indisputably* cause significant disruption in dairy markets: higher fluid milk prices; reduced fluid milk consumption; harm to fluid milk consumers; and diversion of milk from Class I uses to manufacturing uses.

e. The fundamental purpose of the federal order system is to attract an adequate supply of milk to meet fluid needs, thus achieving orderly marketing, and then share the proceeds of minimum regulated prices among all pooled dairy farmers. There is a much more than adequate supply of milk to serve Class I needs. U.S. milk production grew from 165 billion pounds in 2001 to 226 billion pounds in 2022, an increase of 37%, while the quantity of Class I milk declined by 11% from 2000 through 2022 across all Marketing Order regions, falling as much as 46% in the Upper Midwest and 41% in the Southeast. USDA has assessed that a "reserve supply" of milk serving non-fluid milk needs is sufficient to ensure an adequate supply of milk to serve fluid needs if the reserve supply comprises 30-35% of an order's total milk supply. Today, 73% of total milk pooled fell into the "reserve supply" category, more than twice the 30-35% supply reserve that USDA deems to constitute a "reasonable reserve." The adequacy of the current milk supply to meet Class I needs is further established by the history of downward adjustments to federal order shipping requirements, i.e., the percentage of its milk a supplier must ship for Class I use in order to qualify for pooling on the order.

f. Proposal 19 reflects an amalgamation of disparate, unevenly applied criteria, many of which bear no relevance to Class I pricing, which would in many areas adversely affect proprietary Class I processors and benefit coop owned Class I processors. Proponents rely upon data regarding the general costs of producing milk - that is, the costs of producing milk that are not tied specifically to the costs of producing milk for Class I purposes – even though USDA has repeatedly stated (in a position that the courts have endorsed) that such costs are reflected in the normal operation of supply and demand in the marketplace, and captured by the regulated minimum prices for milk being used for Class III and IV products.

g. While Proposal 19 purports to endorse the USDSS model, 92% of the USDSS results were changed. 45% of the changes (1,290 out of 2,865) were not at the "nickels, dimes [and] quarters" level described by Dr. Stephenson with respect to what happened during the 2000 order reform, but were in excess of $0.25/cwt. 442 of the changes exceeded $0.50/cwt.

h. The rationales advanced by the proponent witnesses in support of these revisions were frequently contradictory and often divorced from the considerations USDA has identified as relevant to setting Class I differentials. NMPF's use of multiple geographic "committees" whose members identified "anchor cities" to set Class I differentials that would then "fan out" across broader geographic areas might sound logical in principle but was incoherent in application. The cities selected were discordant, with no coherent principle. NMPF used some large anchor cities like Los Angeles and the metropolis of Chicago, but also the borough of Sharpsville and the small city of Yuma, Arizona. NMPF included as anchor cities two Arizona cities, but not one city in the Northeast or the Pacific Northwest. NMPF then took wholly different approaches with each of the anchor cities it had selected. NMPF materially *increased* the Class I differentials in western cities, *decreased* the model's proposed Class I differentials in Chicago and Asheville, and in still other cities followed the USDSS average without change.

i. NMPF Proposal 19 was also defended on the purported need to raise Class I differentials high enough that the blend price in California would be similar to the blend price in the Upper

Midwest. No such concept has previously been identified, much less adopted, by USDA with respect to the setting of Class I differentials. Indeed, these proponents' focus on "regional competitiveness *at the farm level*" is the exact opposite of the federal order system's focus on setting Class I differentials based on each region's need and cost to secure an adequate supply of Class I milk.

j. Other witnesses supported higher Class I differentials because their cooperative had contractually committed to sell most of its milk to a large Class III cheese plant and a higher differential was needed to attract additional milk to serve Class I customers; or because they wanted to disincentivize the movement of milk to serve Class I needs elsewhere. They also refused to allow the "fundamental determinants" of changes in milk supply locations and costs of transportation actually to play a role in setting Class I differentials.

k. Proposal 19 also proposes a number of Class I differential revisions that stray significantly from the USDSS model in ways that would competitively disadvantage proprietary Class I Handlers.

l. Increasing Class I differentials cannot be justified as a means to reduce or eliminate depooling. Analytics show that regardless of whether one regards depooling as good, bad, or neutral, Proposal 19's increases in Class I differentials would have little effect on depooling

m. Any proposed increase in the Class I differentials in the three Southeastern orders should be offset by the amount by which USDA recently increased those orders' transportation credits and established delivery credits, given that both Class I differentials and transportation and delivery credits exist for the purpose of attracting a sufficient quantity of milk to meet Class I needs.

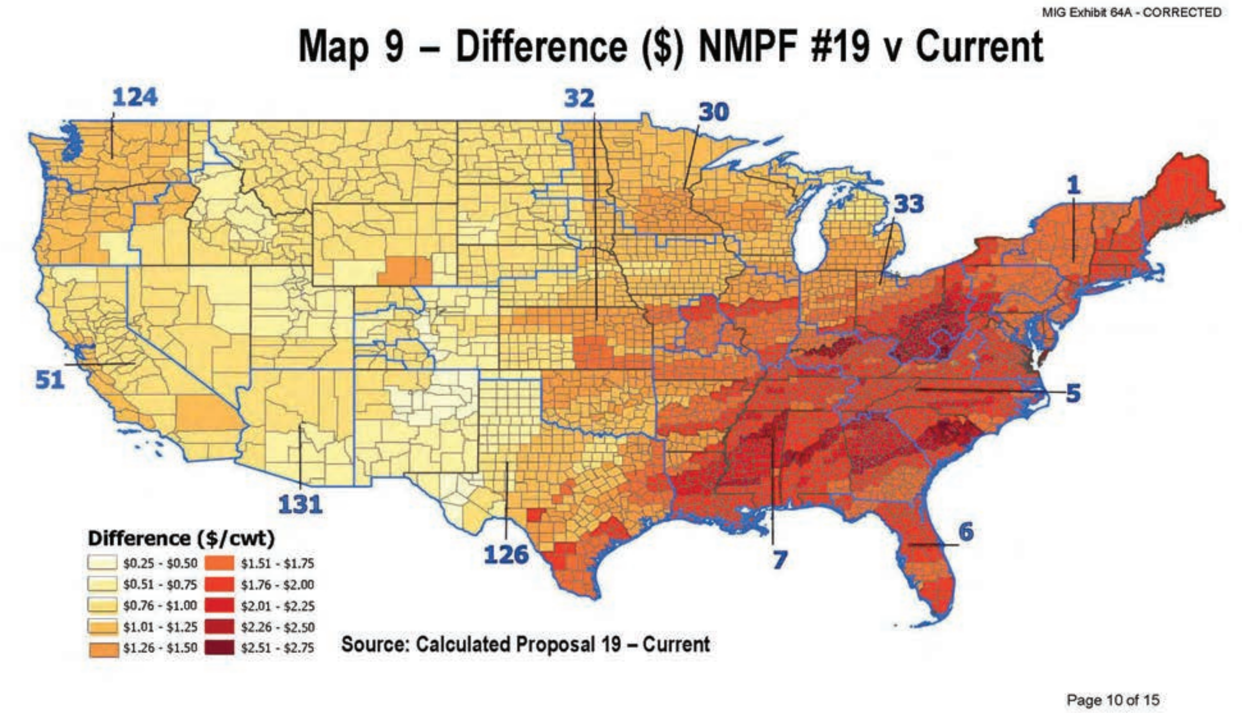
n. Any proposed increase in Class I differentials should be offset by a $0.40/cwt decrease, because the $0.40/cwt Class I differential component relating to the cost of becoming or maintaining a Grade A Farm is both obsolete and inaccurate. Over 99% of all milk produced today is Grade A milk, and there is no longer any need to incentivize farmers to become Grade A. Furthermore, attaining and maintaining Grade A status is no longer tied to fluid milk, because farmers are now Grade A for many reasons other than being able to serve the fluid market. Furthermore, the costs of maintaining Grade A status are far less than $0.40/cwt.

o. Proposal 19 should not be adopted.

PROPOSED FINDINGS REGARDING PROPOSAL 19

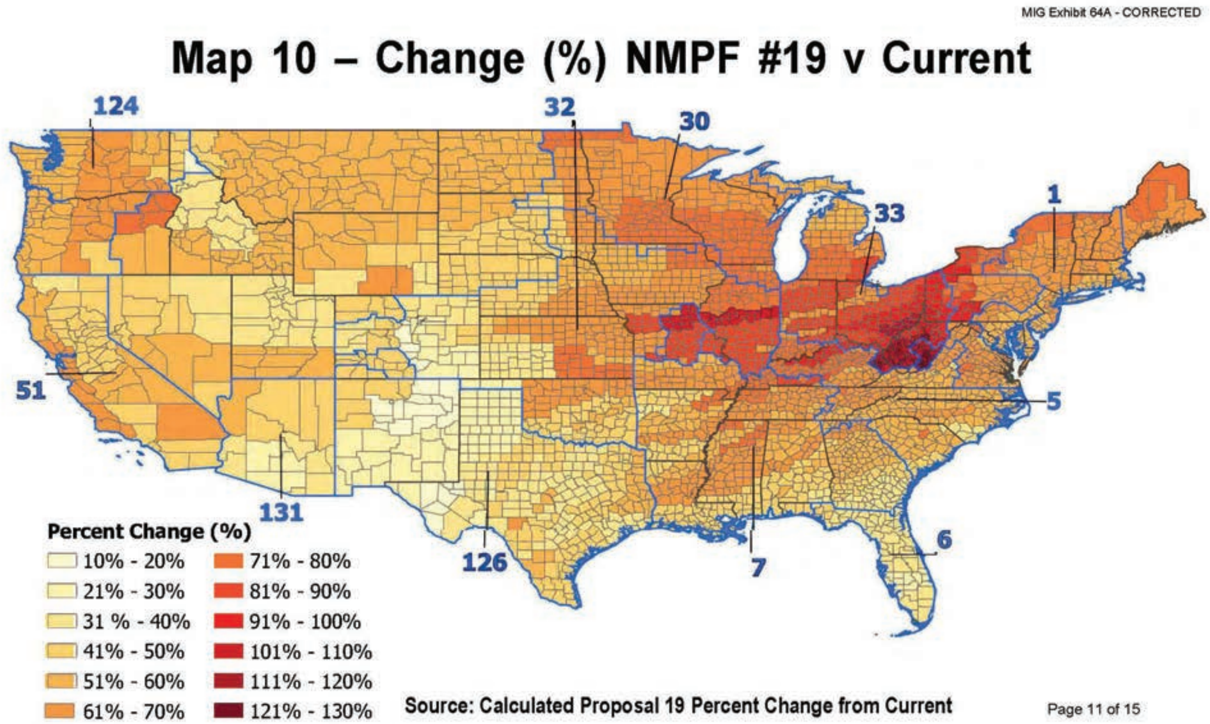
A. Proposal 19 Would Materially Raise Class I Prices.

Proposal 19 would adopt a new set of Class I differentials. The proposed Class I differentials range from a low of $2.20/cwt in some Idaho counties, to a high of $7.90/cwt in Southern Florida. The simple average proposed differential is $4.07/cwt. These proposed Class I differentials are substantially higher than the current Class I differentials, representing an increase ranging from $0.25/cwt to $2.70/cwt with an average increase of $1.50/cwt. (Hearing Exh. 435 (IDFA Exh. 61) at p. 3, testimony of J. Balagtas (Purdue); see also Hearing Exh. 115 (NMPF Exh. 48) at p. 3, testimony of H. Kaiser (Cornell) (testifying for NMPF and calculating the average increase as $1.49/cwt.) The following map shows the increases on a dollar basis:



Hearing Exh. 441 (MIG Exh. 64A) at p. 10, testimony of S. Keefe (MIG).

In percentage terms, Proposal 19 would increase Class I differentials by an average of 60 percent, ranging from 10 percent to as high as 124 percent. (Hearing Exh. 435 (IDFA Exh. 61) at p. 4, testimony of J. Balagtas (Purdue). The following map shows the increases on a percentage basis:



Hearing Exh. 441 (MIG Exh. 64A) at p. 11, testimony of S. Keefe (MIG)).

By NMPF's own calculations, the average proposed increase in Class I differentials, \$1.49/cwt, represents an approximately 8.6% increase in the Class I price. (Hearing Exh. 115 (NMPF Exh. 48) at p. 3, testimony of H. Kaiser (Cornell).

Starting from the premise that USDA set Class I differentials in 2000 that were appropriate for market conditions during that time to support an adequate supply of fluid milk and dairy farm income, one can then ask the question: do current market conditions, or changes in market conditions since 2000, justify the higher Class I differentials proposed in Proposal 19. (Hearing Exh. 435 (IDFA Exh. 61) at p. 6, testimony of J. Balagtas (Purdue)). In addressing that question, one must bear in mind that, with fluid milk consumption having been in decline for multiple decades, and FMMO Class I utilization falling from 38% in 2001 to 27% in 2022, raising Class I prices is increasingly an ineffective way to raise average farmer milk revenue. (Hearing Exh. 435 (IDFA Exh. 61) at p. 14, testimony of J. Balagtas (Purdue)).

B. Fluid Milk Products Face Unprecedented Competitive Threats And Elasticity Of Demand, Which Militate Strongly Against Any Increase In Class I Differentials.

1. Fluid Milk Products Now Inhabit A Highly Competitive, Price Elastic World.

In its nearly 90 years setting FMMO Class I differentials, USDA has never previously confronted the situation now presented. USDA previously could assess proposed Class I differential increases with little regard to whether, as a result of consumer demand response, or competition from other products, minimum regulated fluid milk price increases would significantly impact the quantity of fluid milk sales.

Fluid milk was deemed a unique product, and demand thought to be highly inelastic, such that both processors selling the product, and farmers providing the milk to make it, would suffer little fallout from a regulated price increase. See, e.g., USDA, Milk in the New England and Other Marketing Areas; Decision on Proposed Amendments to Marketing Agreements and to Orders, 64 Fed. Reg. 16026, 16102 (Apr. 2, 1999) ("This [FMMO classification] system allows a higher price to be applied to milk used for Class I uses due to inelastic demand for Class I products.")

Jarring hearing evidence, coming from 2023 studies conducted by not one, not two, but three eminent sets of agricultural economic experts, now tell a completely different story. Class I sales are not only in long decline, but they are besieged by plant-based beverages calling themselves milk. And, consumer demand response to fluid milk product price increases has become so pronounced that the fluid milk product demand response is now elastic, i.e., a 1% increase in price will result in more than a 1% decline in sales volumes.

Dr. Oral Capps is Executive Professor and Regents Professor, Co-Director, Agribusiness, Food, and Consumer Economics Research Center, and Holder of the Southwest Dairy Marketing Endowed Chair, in the Department of Agricultural Economics at Texas A&M University.

(Hearing Exh. 386 (IDFA Exh. 52) at p. 1, testimony of O. Capps (Texas A&M)). Dr. Capps received bachelor's degrees in both mathematics and statistics, a master's degree in agricultural economics, and a Ph.D. degree in agricultural economics. An agricultural economist for over 40 years, Dr. Capps' principal area of expertise is demand and price analysis (including price elasticity), marketing economics, quantitative analysis and applied econometrics. (O. Capps (Texas A&M) Tr. 8989 lines 16-27; 8991 lines 7-20).

Own price elasticity measures the percentage change in quantity demanded due to a 1% change in the price of the product. The own-price elasticity of demand is not only negative but also unitless. If greater than 1 in absolute value, then the demand for the product is characterized as elastic (sensitive to changes in price). If less than 1 in absolute value, then the demand for the product is characterized as inelastic (not sensitive to changes in price). (Hearing Exh. 387 (IDFA Exh. 53) at p. 3, testimony of O. Capps (Texas A&M)).

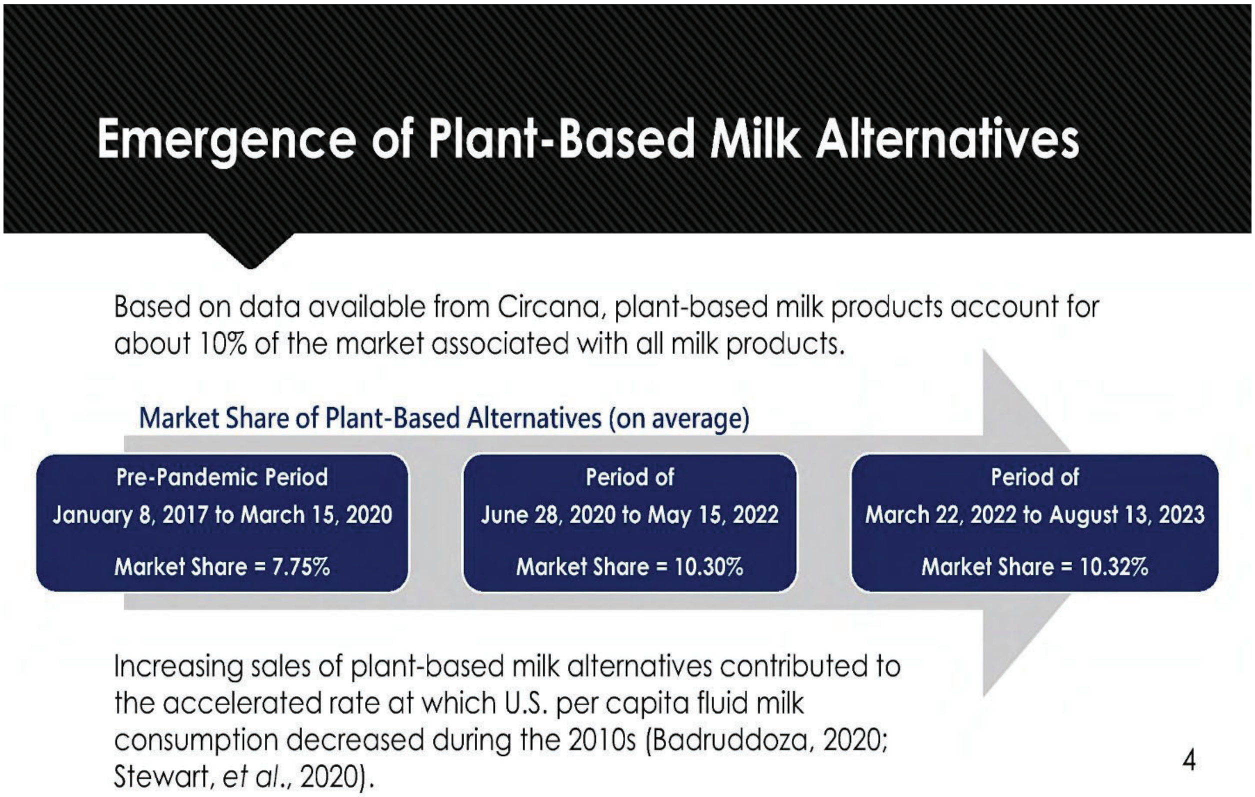
While conventional wisdom, as reported by Dr. Harry Kaiser in his FMMO testimony on behalf of proponent NMPF, suggests that the own-price elasticity of demand for milk is inelastic, only 2 of the 38 studies cited by Dr. Kaiser were published after 2021. (Hearing Exh. 115 (NMPF Exh. 48) at pp. 4-5, testimony of H. Kaiser (Cornell)). The remaining articles were published over the period 1964 to 2020. And only a few of the studies dealt with milk by fat type or organic milk. (Hearing Exh. 386 (IDFA Exh. 52) at p.1, testimony of O. Capps (Texas A&M)).

Dr. Capps concluded that Dr. Kaiser's cited studies are too dated and do not reflect the current retail marketplace for milk. (Hearing Exh. 386 (IDFA Exh. 52) at p. 1, testimony of O. Capps (Texas A&M)). Dr. Balagtas similarly opined that much of the literature on the elasticity of milk demand cited by Dr. Kaiser is irrelevant for the evaluation of Proposition 19. The market for fluid milk has changed dramatically over time, and studies that rely on data that do not reflect current market conditions to estimate behavior are simply not relevant for evaluating the effects of Proposal 19. (Hearing Exh. 435 (IDFA Exh. 61) at p. 13, testimony of J. Balagtas (Purdue)).

NMPF witness Dr. Kaiser had not conducted a refereed published price elasticity of demand study since 2012, more than ten years ago, and his last report to Congress addressing elasticity was in 2011. (H. Kaiser (Cornell), Tr. 1641 line 15 - 1642 line 6; 1642 line 23 - 1643 line 20). Dr. Kaiser admitted that the plant-based beverage competitors to milk emerged subsequently to the most recent elasticity studies in which he had been personally involved. Dr. Kaiser was also personally unfamiliar with which plant beverages are the most popular. (H. Kaiser (Cornell), Tr. 1652 line 11- 1653 line 17).

2. The Proliferation Of Plant Based Beverage Competitors And The Decline In Fluid Milk Consumption.

Data from grocery store sales data tracker Circana (formerly Information Resources, Inc. (IRI)) suggests that the market share of plant-based milk alternatives had risen to 10.32% over the period March 22, 2022, to August 13, 2023, on average, and studies indicate that increasing sales of plant-based milk alternatives contributed to the accelerated rate at which U.S. per capita fluid milk consumption decreased during the 2010s:



(Hearing Exh. 386 (IDFA Exh. 52) at p. 2, testimony of O. Capps (Texas A&M); Hearing Exh. 387 (IDFA Exh. 53) at p. 4, testimony of O. Capps (Texas A&M)).[16]

Other information sources indicate that plant-based beverages have captured an even larger market share. An industry study by Mintel Group showed that sales of non-dairy milk grew by 67% between 2017 and 2022, and that by 2022, non-dairy milk accounted for 17% of all "milk" sales. A study by researchers at the Center for Food Demand Analysis and Sustainability computed "milk" expenditure shares from Nielsen scanner data farm March 2018 to December 2022, and estimated that the expenditure share of non-dairy milks grew by 19% from 12.9% in 2018 to 15.4% in 2022. (Hearing Exh. 435 (IDFA Exh. 61) at p. 14, testimony of J. Balagtas (Purdue)).

[16] The "May 15, 2022" date was corrected during testimony to March 15, 2022. (O. Capps (Texas A&M) Tr. 8996 lines 10-28).

In a separate study published by the Center for Food Demand Analysis and Sustainability, Lusk et al. (2023) surveyed 1200 U.S. consumers to elicit preferences for dairy and non-dairy milks. They found that 40% of respondents had tried soy-based milk in the past 6 months, and 47% had tried other plant-based milks in the past 6 months. For those that had not tried nondairy milks, the authors asked whether they would try nondairy milks if the price was the same. Fifteen percent of respondents said they were "somewhat likely" or "very likely" to try the nondairy milks. Of those, half the respondents were Millennials or Generation Z. Thus, younger consumers are especially open to nondairy milks as a substitute for dairy milk. This underscores the fact that these nondairy milks are substitutes for dairy milk, and only will become more so as younger generations are more open to nondairy milks. (Hearing Exh. 435 (IDFA Exh. 61) at p. 15, testimony of J. Balagtas (Purdue)).

3. The Objectives Of The Capps Report.

The objective of Dr. Capps' research leading to his report at the FMMO hearings was to investigate demand interrelationships among fluid milk and various alternatives. The fluid milk category addressed in this study was disaggregated into five segments: traditional white milk, traditional flavored milk, organic milk, lactose-free milk, and health-enhanced milk (products with added protein, calcium, or other health benefits). (Hearing Exh. 386 (IDFA Exh. 52) at p. 3, testimony of O. Capps (Texas A&M)).

This disaggregation more accurately captures what consumers face when shopping at various retail outlets. Alternative products to fluid milk include plant-based milk alternatives (the aggregate of almond, oat, cashew, coconut, rice, and soy), bottled water, refrigerated juices and drinks as well as shelf-stable bottled juices, sports drinks, refrigerated yogurt, and protein beverages. (Hearing Exh. 386 (IDFA Exh. 52) at p. 3, testimony of O. Capps (Texas A&M)).

Dr. Capps' research served to provide a more up-to-date demand systems analysis for fluid milk products as well as for plant-based beverages and other alternatives to milk currently lacking in extant literature. Importantly, this research was the first to deal with a granular array of fluid milk product segments as well as alternatives to fluid milk. Also, Dr. Capps' research addresses the impact of the pandemic concerning own-price and cross-price elasticities associated with the previously mentioned product categories. Further, his work addressed not only the national market but also eight regional markets. Hence, this study added measurably to the economic literature associated with the demand for fluid milk. (Hearing Exh. 386 (IDFA Exh. 52) at p. 3, testimony of O. Capps (Texas A&M)).

4. Dr. Capps' Reliance Upon Detailed, Objective Information Regarding Actual Consumer Behavior.

Weekly grocery stores sales data procured from Circana over the period January 8, 2017, to August 13, 2023, were used in Dr. Capps analysis. The Circana data provided information on volume, dollar sales, average price per volume, and total points of distribution (a measure associated with market reach). To discern the impact of the COVID-19 pandemic, the data were divided into three periods: (1) the pre-COVID period—January 8, 2017, to March 15, 2020; (2) the COVID-affected period— June 28, 2020, to May 15, 2022; and (3) the moving-past COVID period—May 22, 2022, to August 13,2023. Hearing Exh. 386 (IDFA Exh. 52) at p. 3, testimony of O. Capps (Texas A&M)).

Retail sales constitute 76% of fluid milk sales, and 84% of those retail sales are captured by Circana data. The remaining 24% of fluid milk sales volume is attributed to: (1) foodservice (15%); (2) schools (8%); and (3) shrink/other (1%). (O. Capps (Texas A&M) Tr. 9137 line 7 -

9138 line 17).[17] The foodservice category encompasses limited-service restaurants, full-service restaurants, and other establishments including but not limited to colleges/universities, long-term care and senior living, hospitals, and correctional institutions. (Hearing Exh. 386 (IDFA Exh. 52) at p. 3, testimony of O. Capps (Texas A&M)).

As detailed at length in Dr. Capps study report (Hearing Exh. 386 (IDFA Exh. 52), applying well-recognized and widely used techniques for measuring price demand response, Dr. Capps determined that the "own price elasticity" at retail for every category except traditional flavored milk exceeded -1. In other words, for all of these categories, a 1% increase in price results in a greater than 1% decline in quantity sold. This is detailed in the following table:

Table 2. Own-Price Elasticities for the United States Estimated Using the Eleven-Product Demand Model for the Pre-COVID Period (January 8, 2017-March 15, 2020), for the COVID-Affected Period (June 28, 2020-May 15, 2022), and for the Moving Past COVID Period (May 22, 2022-August 13, 2023)

	Own-Price Elasticity		
	Pre- COVID-	**COVID Affected**	**Moving Past COVID**
Fluid Milk Category			
Traditional White Milk	-0.77	-0.30	-1.40
Organic Milk	-0.94	-1.61	-1.73
Traditional Flavored Milk	-1.33	-1.66	-0.58
Health-Enhanced Milk[18]	-1.55	-1.81	-2.05
Lactose-Free Milk	-0.51	-4.11	-1.68

(Hearing Exh. 386 (IDFA Exh. 52) at p. 7, testimony of O. Capps (Texas A&M)).

[17] The relevant excerpts of the Prime Consulting study upon which Dr. Capps relied to determine the relative percentages of milk products sold at retail outlets, schools, and food service appear in Attachment B to Hearing Exh. 433 (IDFA Exh. 57), testimony of M. Brown (IDFA).

[18] Health-enhanced milk are products with added protein, calcium, or other health benefits.

Dr. Capps' study further showed that plant-based milk alternatives are substitutes for traditional white milk and organic milk in the three respective periods for the United States. In addition, sports drinks and refrigerated yogurt are substitutes for traditional flavored milk, health-enhanced milk, and lactose-free milk across the three periods. Further, bottled water and protein beverages are substitutes for traditional white milk, organic milk, traditional flavored milk, health-enhanced milk, and lactose-free milk. (Hearing Exh. 386 (IDFA Exh. 52) at p. 10, testimony of O. Capps (Texas A&M)).

Several major takeaways were evident from Dr. Capps' research concerning the own-price elasticities of milk products. First, to better understand the demand for fluid milk, it is necessary to disaggregate the category into various segments, namely traditional white milk, traditional flavored milk, organic milk, lactose-free milk, and health-enhanced milk. This disaggregation more accurately captures the reality of what consumers face when shopping at various retail outlets. (Hearing Exh. 386 (IDFA Exh. 52) at p. 10, testimony of O. Capps (Texas A&M)).

Additionally, it is necessary to consider the interrelationships with plant-based milk alternatives, bottled water, juices, sports drinks, refrigerated yogurt, and protein beverages. The prices of these alternative beverages and refrigerated yogurt had statistically significant impacts on the quantities purchased of the respective milk sub-categories. (Hearing Exh. 386 (IDFA Exh. 52) at pp. 10-11, testimony of O. Capps (Texas A&M)). Dr. Capps' separate work as the Texas A&M Southwest Dairy Marketing Endowed Chair, performed on behalf of Southwest and Southland Dairy Farmers, a Qualified Regional Promotion Program under the dairy farmer checkoff program, had similarly established that plant-based beverages are viewed by consumers as milk substitutes. (O. Capps (Texas A&M) Tr. 9107 line 13 - 9109 line 18; Tr, 9134 lines 11-23 ("it's abundantly clear that fluid milk and plant-based milk alternatives are substitutes").

The frequency of the time-series data in Dr. Capps' analysis was also critical. The data was weekly, whereas in the majority of studies cited in the economic literature, the frequency of the time-series data was either monthly, quarterly, or annual. (Hearing Exh. 386 (IDFA Exh. 52) at p. 11, testimony of O. Capps (Texas A&M)).

Consumers are presumed to shop at retail outlets on a weekly basis rather than on a monthly, quarterly, or annual basis, especially for perishable milk and beverages. Consequently, own-price elasticities based on weekly data represent a more realistic picture of consumer shopping behavior. (Hearing Exh. 386 (IDFA Exh. 52) at p. 11, testimony of O. Capps (Texas A&M)); O. Capps (Texas A&M) Tr. 9043 line 12 - 9043 line 21) ("I can't imagine it [grocery shopping] would be on a quarterly or annual basis. I mean, if you are talking about grocery shopping and not just the purchase of turkeys around Thanksgiving or Christmas… So to me, the weekly timeframe, again, to get the picture of what's happening in terms of consumer behavior at the retail marketplace, the weekly timeframe makes a lot of sense to me. And not just me, other -- other analysts have done the same thing."); Tr. 9115 line 9 - line 13) ("the weekly presumption makes the most sense to me as opposed to, well, I'm only going to shop once a month. There may be people that do that. Or, I'm only going to shop once a quarter, and I can't imagine anybody that shops once a year.")

5. Two Other 2023 Fluid Milk Price Elasticity Studies Reached Very Similar Results.

Dr. Capps' conclusions in his 2023 report were matched by similar studies performed by other eminent agricultural economists:

Ghazaryan, Bonanno, and Carlson (2023). Using a demand systems analysis (the Exact Affine Stone Index ("EASI") model) and weekly data from IRI over the period 2012 to 2017, Ghazaryan, Bonanno, and Carlson (2023) estimated own-price elasticities to be -1.30 for skim milk, -1.67 for reduced fat milk, and -1.45 for whole milk. In other words, a 1% increase in the price of each of these milk products resulted in a significantly greater than 1% decline in quantity sold. (Hearing Exh. 390 (IDFA Exh. 56), at Table 5, Armen Ghazaryan, Alessandro Bonanno, and Andrea Carlson, *I Say Milk, You Say Mylk: Substitution Patterns and Separability in a Broadened Milk Category*).[19]

The authors of this reports are highly qualified. Dr. Ghazaryan is a PhD recipient; Dr. Bonanno is an associate professor in the Department of Agricultural and Resource Economics at Colorado State University; and Dr. Carlson is an economist at the Economic Research Service of the U.S. Department of Agriculture and a prominent agricultural economist. (Hearing Exh. 390 (IDFA Exh. 56), at p. 1; O. Capps (Texas A&M) Tr. 9008 line 28 - 9009 line 15; 9147 line 16 - 9148 line 3).

Son and Lusk (2023). Using a demand systems analysis (the Almost Ideal Demand System ("AIDS") model) and weekly data from Nielsen from the second week of March 2018 to the first week of December 2022, Son and Lusk estimated the own-price elasticity for regular dairy milk to be -0.95 and for lactose-free milk to be -1.39. (Hearing Exh. 389 (IDFA Exh. 55), Table 3, Miyeon Son and Jayson, *An Analysis of U.S. Dairy and Non-Dairy Milk Demand*).

These authors are also highly credentialed. Dr. Lusk at the time of publication was the head and Distinguished Professor of Agricultural Economics at Purdue, and Dr. Son a postdoctoral fellow. (Hearing Exh. 389 (IDFA Exh. 55) at p. 1. Dr. Lusk is now the Dean of the College of Agriculture at Oklahoma State University. He is a prominent agricultural economist. (O. Capps (Texas A&M) Tr. 9008 line 28 - 9009 line 15).

[19] The relevant price elasticities set forth in this report are those reported as Marshallian Price Elasticity Estimates, which are the ones most comparable to Dr. Capps' own price elasticity estimates. (Capps (Texas A&M) Tr. 9148 lines 4-10).

All three studies employed a demand systems approach coupled with the use of weekly data from either Circana (IRI) or Nielsen. The two data sources capture the same types of retail outlets. (O. Capps (Texas A&M) Tr. 9197 line 26 – 9198 line 7). Hence, the Carlson et al. and Lusk et al. studies further support Dr. Capps' conclusion that the demands for disaggregated milk products are quite sensitive to changes in prices.

All three studies (Capps, Carlson et al. and Lusk et al.) used well-recognized price elasticity models. Dr. Capps prefers the Barten Synthetic Demand Model because its employment of log differences means that one does not have to worry about collinearity in trends in the mean and variance of prices, quantities, and total expenditure. The Almost Ideal Demand System and the Exact Affine Stone Index Demand System used in the other two studies are also prime candidates for demand systems, but they do require some extra attention to avoid collinearity. (O. Capps (Texas A&M) Tr. 9032 line 24 - 9034 line 13).

Taken together, these studies provide evidence that, under current market conditions, it can no longer be assumed that demand for Class I products is inelastic, To the contrary, demand is elastic and is likely to become more elastic over time. (Hearing Exh. 435 (IDFA Exh. 61) at p. 15, testimony of J. Balagtas (Purdue)).

6. Earlier Studies Are Far Less Reliable And Unlikely To Be Accurate.

Recognizing that earlier works had suggested lower elasticities, Dr. Capps identified four shortcomings that rendered them outdated and unreliable for purposes of determining FMMO formulas. As Dr. Capps explained, "the more accurate measurement, in my view, of the own-price elasticity that the FMMO system needs to consider, needs to [1] view the current market conditions, [2] [be based on] more frequent information, i.e., weekly data regarding consumer behavior rather than quarterly, monthly, annual, [3] [include] a consideration of the impacts, or moving past the impacts of the pandemic, and importantly, [4] [account for] the primary competitors of various milk products like bottled waters, sports drinks, juices, refrigerated yogurt, plant-based milk alternatives, and protein beverages. And my research at present is the only study which fulfills these conditions." (O. Capps (Texas A&M) Tr. 9018 lines 4-19).

AMS economist Dr. Carlson herself identified the shortcomings in trying to estimate milk price elasticities without accounting for plant-based beverage competitors. Her co-authored published 2023 study, which did account for that competition, reached elasticity estimates similar to those of Dr. Capps. See Section IX(B)(5) above.

Dr. Carlson's study states: "This study tests the assumption of weak separability between demand for dairy and nondairy milk products by using food scanner data from 2012 to 2017, and estimating linear approximate EASI demand systems. Our results show that the weak separability structures can be rejected. First, the findings show that nondairy milk products compete with dairy milk for consumers' budget allocated to milk. Second, although milk demand studies often do not include nondairy milk or assume weak separability, the exclusion of these products -- or the separability assumptions -- may lead to biased estimates." The study concludes: "[Dairy and nondairy milk are not considered separate categories of products. Rather, consumers consider all six types of milk included in this study (skim, reduced-fat, whole-fat, soy, almond, and other nondairy milk) jointly when making a purchase decision." (Hearing Exh. 390 (IDFA Exh. 56) at p. 14).

Because the AMS data used for earlier elasticity analyses did ***not*** capture the competition posed by plant-based beverages, Dr. Carlson's observations suggest that reliance upon such data would miss significant components of milk competition. (O. Capp (Texas A&M) Tr. 9150 line 11 - 9152 line 14).

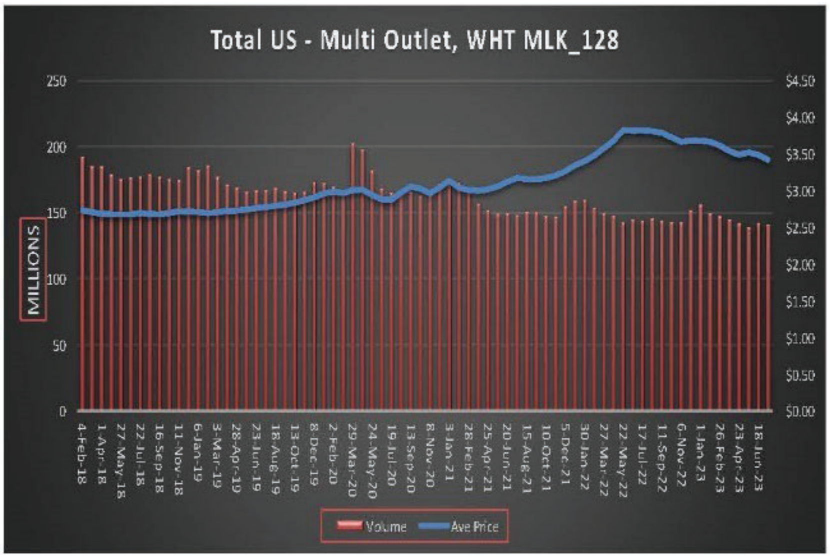
Similarly, Dr. Capps' own work assessing the impacts of advertising and promotion efforts of Dairy Management, Inc. (DMI), MilkPEP, and Qualified Programs (QPs) are materially less predictive of actual current elasticities. First, the advertising and promotion expenditure data are based upon quarterly AMS USDA data, with elasticity looked at on a quarterly timeframe going all the way back to 1995, rather than on a weekly time frame. Second, in the reports to Congress, there was no consideration of the effect of the prices of juices, bottled waters, sports drinks, protein beverages, plant-based milk alternatives, or refrigerated yogurt. Third, and probably most importantly, own-price elasticity was not the primary objective in that analysis for Congress. The question being asked was the impact of advertising and promotion. The reports to Congress were concerned about elasticities, but many elasticities were generated with a single-equation model, with own-price elasticity being one, but income elasticity another, and the most important ones being the promotion and expenditure elasticities. (O. Capps (Texas A&M) Tr. 9055 line 6 - 9059 line 27; 9076 line 20 - 9077 line 11; 9144 line 28 - 9145 line 21).

Fourth, Capps' FMMO study included the addition of a detailed list of additional products that affect the demand for either total milk or even the five milk segments (juices, bottled waters, sports drinks, protein beverages, plant-based milk alternatives, or refrigerated yogurt). Fifth, Capps' FMMO study broke down milk into five segments in order to assess each's elasticity, while the USDA data only addresses organic and flavored and white milk. Sixth, the Capps FMMO study was able to understand, at least when it comes to the measurement of elasticities, the impact of the pandemic. Id.

Grocery store chain Kroger sells both fluid milk products and plant-based beverages, and based on its experience selling both, including internal elasticity analyses, Dr. Capps' elasticity of demand numbers were not surprising. (M. Brown (IDFA) Tr. 10308 line 13 - 10309 line 3).

A real-world comparison of retail milk price increases versus retail milk sales volume further supports the elasticity of fluid milk demand:

- Total U.S. Multi Outlet Sale data of the 1 Gallon size of milk from Feb 2018 – May 2023 show the negative impact that higher retail price have on milk. This supports the information provided by Dr. Capps



Source: Circana, Total U.S. Multi Outlet Sales, Feb. 2018- May 2023

(Hearing Exh. 459 (MIG Exh. 21B) at p. 5 (excerpt), testimony of M. Newell (HP Hood)); M. Newell (HP Hood) Tr. 10787 line 16 – 10789 line 6).

C. The Quantification Of The Impact Of Fluid Milk's Price Elasticity.

Dr. Kaiser, appearing on behalf of NMPF in support of NMPF Proposal 19, calculated that Proposal 19 would increase the Class I price by an average of $1.49/cwt, which he equated to an 8.6% increase in the Class I price. (Hearing Exh. 115 (NMPF Exh. 48) at p. 9, testimony of H. Kaiser (Cornell)); H. Kaiser (Cornell) Tr. 1655 lines 2-9). Dr. Kaiser also performed an econometric regression analysis demonstrating that the "elasticity of price transmission" from the farm level to the retail level is 0.54929%. (Hearing Exh. 115 (NMPF Exh. 48) at pp. 3, 9, testimony of H. Kaiser (Cornell)). The "elasticity of price transmission" denotes the percentage change in the retail price that will result from a 1% change in the farm price. (H. Kaiser (Cornell), Tr. 1571 line 18- 1571 line 20) (".54929, that basically means that … a 1% increase in the Class I price would result in a little over a half a percent increase in the retail price. That's the price transmission."); O. Capps (Texas A&M) Tr. 9110 line 26 - 9111 line 3) ("it's the percentage change in the retail price attributed to a 1% change in the farm price, or Class I price in this case.")

Dr. Kaiser also applied R-squared "statistical diagnostic measures" [a measure of the proportion of the variation in the dependent variable that is predictable from the independent variable] that determined that the variation in the Class I price explains 74% of the change in the retail price of milk. "That's a "very reasonable R-squared." (H. Kaiser (Cornell), Tr. 1572 line 25- 1573 line 3).

The percentage change in the retail price of milk is equal to the product of the percentage change in the Class I price times the elasticity of price transmission from the farm level to the retail level. his. Hence, Dr. Kaiser testified that the 8.6% increase in the Class I price proposed by Proposal 19 would result in a 4.72% increase in the retail price for milk products. (Hearing Exh. 115 (NMPF Exh. 48) at p. 3, testimony of H. Kaiser (Cornell); H. Kaiser (Cornell) Tr. 1655 lines 2-19).

Dr. Capps and Dr. Balagtas both accepted all of the forgoing Dr. Kaiser analyses for purposes of their analyses of the impact of Proposal 19 on the sale of Class I products. (Hearing Exh. 386 (IDFA Exh. 52) at p. 12, testimony of O. Capps (Texas A&M); O. Capps (Texas A&M) Tr. 9011 line 17 - 9012 line 16); (Hearing Exh. 435 (IDFA Exh. 61) at p. 16, testimony of J. Balagtas (Purdue)). Dr. Capps took three additional steps.

First, one needs to determine the impact of this 4.72% increase in the ***overall*** retail price of milk on the retail price of **each** of the five milk segments that Dr Capps was addressing. To obtain each of these five retail percentage price increases, one multiplies the 4.72% increase by the percentage change in each of the respective five segments from a 1% change in the price of the aggregate category of milk. (Hearing Exh. 386 (IDFA Exh. 52) at p. 12, testimony of O. Capps (Texas A&M)).

To determine these percentages, Dr. Capps regressed each of the respective milk price segments on the retail price of the aggregate category of milk, accounting for seasonality, based on the Circana data over the period January 8, 2017 through August 13, 2023. The results of the regression analyses are as follows:

Traditional White milk 0.949887%

Traditional Flavored milk 0.876239%

Lactose-free milk 0.346271%

Organic milk 0.502453%

Health-enhanced milk 0.585540%

These figures represent the percentage change in each of the respective five segments due to a 1% change in the price of the aggregate category of milk. (Hearing Exh. 386 (IDFA Exh. 52) at p. 12, testimony of O. Capps (Texas A&M)).

Consequently, the 8.6% increase in the Class I price resulting from Proposal 19 translates into the following percentage increases in the retail prices of the five milk segments:

Traditional White milk 4.49%

Traditional Flavored milk 4.14%

Lactose-free milk 1.64%

Organic milk 2.37%

Health-enhanced milk 2.77%

(Hearing Exh. 386 (IDFA Exh. 52) at p. 12, testimony of O. Capps (Texas A&M)).

Applying Dr. Capps' estimated own-price elasticities of traditional white milk, traditional flavored milk, organic milk, lactose-free milk, and health-enhanced milk from the moving-past COVID period, set forth on p. 278 above, these respective percentage increases in the retail prices for the five milk product segments translate to a:

6.28% decrease in the quantity purchased of traditional white milk.

2.40% decrease in the quantity purchased of traditional flavored milk.

4.11% decrease in the quantity purchased of organic milk.

2.75% decrease in the quantity purchased of lactose-free milk; and

5.67% decrease in the quantity purchased of health-enhanced milk.

For the aggregate total milk category, the 4.72% increase in retail price translates into a 5.98% decrease in the quantity of milk purchased. (Hearing Exh. 386 (IDFA Exh. 52) at p. 13, testimony of O. Capps (Texas A&M)).

D. Other NMPF Proposals Would Even Further Decrease Class I Consumption, And Further Harm Consumers And Farmers.

As just discussed, Dr. Capps' analysis demonstrates that the 8.6% increase in the Class I price and the 4.72% increase in the price of retail fluid milk products that Dr. Kaiser indicated would result from Proposal 19 would cause a nearly 5.98% decline in the quantity of fluid milk purchased at retail. But that very substantial decline is actually understated, because Dr. Kaiser was explicit that the 8.6% Class I price increase he had calculating ***only*** addressed the price increase resulting from Proposal 19, the NMPF proposal to increase the Class I differentials. Dr. Kaiser explained that "NMPF's proposal recommends a nationwide increase of the Class I price differential by an average of $1.49 per cwt. At current Class I prices, this is an 8.6% increase." (Hearing Exhibit 115 (NMPF 48) at p. 3, testimony of H. Kaiser (Cornell)).

However, Proposal 19 is not the only NMPF proposal designed to increase Class I prices. Although other proposals could also affect the Class I price, Proposal 1's changes to the milk component factors in the FMMO formulas would directly increase Class I minimum regulated prices by an additional $0.52/cwt. (Hearing Exh. 98 (IDFA Exh. 4) at pp. 30-39, testimony of M. Brown (IDFA)).

Given Dr. Kaiser's analysis that Proposal 19's $1.49/cwt increase in the Class I differential represents an 8.6% increase in the Class I price, Proposal 1's additional $0.57/cwt increase in the Class I price represents an additional 3.0% increase in Class I prices. Applying Dr. Kaiser's 0.55% elasticity of price transmission from the farm level to the retail level, this additional 3.0% increase in the Class I price translates to an additional 1.65% increase in the retail price of total fluid milk products. Applying Dr. Capps' determination that the own-price elasticity for total fluid milk at retail is -1.26 in the moving-past COVID period, this means that Proposal 1 would result in an additional 2.08% decline in total retail milk sales, on top of the 5.98% decline calculated by Dr. Capps as caused by Proposal 19's Class I differentials increases. Thus, the total decline in Class I sales would be 8.06% from Proposals 1 and 19 combined. (Hearing Exh. 433 (IDFA Exh. 57) at pp. 9-10, testimony of M. Brown (IDFA)).

E. The Diversion Of Milk From Class I To Manufacturing Milk Would Cause Dairy Farmers Further Harm.

One more aspect of Proposal 19's effects must be considered. Dr. Capps calculated that Proposal 19's 8.6% increase in the Class I price, when offset by the 6.0% decline in Class I sales, would result in a net 2% increase in farmer gross revenues. However, Dr. Capps was explicit that this calculation did not take into account the effect on Class III or IV prices resulting from the milk no longer being sold as Class I having to find a home in Class III or IV. (O. Capps (Texas A&M) Tr. 9014 line 18 - 9015 line 18).

That question was addressed by Dr. Joseph V. Balagtas. Dr. Balagtas is a Professor in the Department of Agricultural Economics at Purdue, and Interim Director of the Center for Food Demand Analysis and Sustainability. He teaches and conducts research on the economics of agricultural markets and agricultural policy, with a B.A. in Economics from Miami University, an M.S. in Agricultural Economics from Iowa State University, and a Ph.D. in Agricultural Economics from the University of California, Davis. (Hearing Exh. 435 (IDFA Exh. 61) at p. 1, testimony of J. Balagtas (Purdue)).

While having published peer review articles on FMMO issues, Dr. Balagtas' expertise ranges far beyond FMMOs and includes dozens of peer-reviewed articles and reports covering a broad range of issues including regulation and competition in U.S. dairy markets, impacts of U.S. farm policy in agricultural markets, consumer behavior and competition in retail food markets, agricultural commodity storage, agricultural technology adoption, and rural poverty. (Hearing Exh. 435 (IDFA Exh. 61) at p. 12, testimony of J. Balagtas (Purdue)). Dr. Balagtas was recognized at the hearing as an expert in consumer behavior, competition, and public policy in agricultural and food markets. (Tr. 10077 line 23 - 10078 line 5). His academic work specific to dairy includes his doctoral dissertation, which addressed FMMOs; papers on dairy trade, the New England Dairy Compact, and dairy markets; a published paper on consumer response to changes in ice cream packaging sizes; and a paper addressing Competition and Market Power in Fluid Milk -- U.S. Fluid Milk Supply Chains. (J. Balagtas (Purdue) Tr. 10100 line 19 - 10103 line 8).

Focusing solely on the effects of Proposal 19, and not including the effects of other proposals such as Proposal 1, the reduction in fluid milk consumption resulting from higher retail prices would leave substantial quantities of milk without a home. This milk would have to find a home in manufacturing classes. (Hearing Exh. 435 (IDFA Exh. 61) at pp. 17-18, testimony of J.

Balagtas (Purdue)). And, continued excess supply due to declining Class I demand will depress prices in the Class III and Class IV categories. (Hearing Exh. 501 (IDFA Exh. 65) at p. 2, testimony of S. Galbraith (Saputo)).

Dr. Balagtas calculated that Proposal 19 would increase Class I prices by 7.8%. Using Professor Harry Kaiser's price transmission elasticity of 0.55, that translates to a 4.3% increase in retail milk prices. Applying Professor Capps, Jr.'s demand elasticity estimates for single category milk of -1.26, a 4.3%-increase in the retail price of milk causes a reduction in consumption of Class I products of approximately 5.4% and, assuming fixed proportions production of fluid products, a 5.4% reduction in the quantity of Class I milk.

In 2022, 41 billion lbs. of producer milk were used in Class I products. Accordingly, that 5.4% reduction in Class I utilization is equivalent to 2.2 billion pounds of milk. In calculating that reduction in Class I milk, Dr. Balagtas applied Professor Capps, Jr.'s estimate to all fluid milk products, including those sold in food service. (Hearing Exh. 435 (IDFA Exh. 61) at p. 16, testimony of J. Balagtas (Purdue)).

The 2.2 billion pounds of displaced Class I milk would need to find a home in manufactured products. Reallocation of farm milk from fluid uses to manufacturing is costly, including search costs associated with finding new buyers, differential transportation costs to manufacturing milk plants, and the effect of additional manufactured dairy products on prices dairy commodities and on the prices of milk used in production of those commodities. While Dr. Balagtas did not have estimates of the costs associated with search or transportation, he could calculate the potential impact on commodity market prices and on prices of farm milk. (Hearing Exh. 435 (IDFA Exh. 61) at p. 17, testimony of J. Balagtas (Purdue)).

If all of the 2.2 billion pounds of displaced milk were allocated to Class IV uses, that would translate to an additional 201.0 million pounds of nonfat dry milk and an additional 62.9 million pounds of butter. Given 2022 US production data, this additional production is equivalent of a 7.6% increase in annual production of nonfat dry milk and a 3.1% increase in annual production of butter. This additional production would cause lower prices of nonfat dry milk and butter, the magnitude of which depends on the elasticities of demand for US nonfat dry milk and butter. (Hearing Exh. 435 (IDFA Exh. 61) at p. 17, testimony of J. Balagtas (Purdue)).

In the absence of any published estimates of relevant elasticities of wholesale demand for US nonfat dry milk and butter, Dr. Balagtas calculated the effects of increased production of nonfat dry milk and butter under a range of elasticity scenarios. In each scenario, he assumed demand for nonfat dry milk is more elastic than demand for butter, because as much as 70% of US nonfat dry milk is exported onto world markets, while butter is primarily a domestic market. (Hearing Exh. 435 (IDFA Exh. 61) at p. 17 and Table 5, testimony of J. Balagtas (Purdue)).

Under the relatively inelastic scenario, relatively large reductions in dairy commodity prices drive relatively large reductions in farm component prices. As a result, a large reduction in revenue from manufacturing milk more than offsets the additional revenue from the higher Class I differentials, resulting in a net reduction in the All-Milk Price of $0.28/cwt. In the relatively elastic scenario, increased production results in smaller reductions in commodity prices and component values, resulting in a net gain in the All-Milk Price of $0.12/cwt:

Effects of a 7.6%-increase in NFDM and 3.1%-increase in Butter Production under Alternative Demand Elasticity Scenarios

	Elasticity Scenarios		
	Inelastic	Mid-range	Elastic
Elasticity of demand for US NFMD	-4.0	-8	-10.0
Elasticity of demand for US Butter	-0.25	-0.6	-1.0
Change in NFDM price	-1.9%	-0.95%	-0.76%
Change in Butter price	-12.23%	-5.09%	-3.06%
Change in FMMO skim price	-\$0.20/cwt	-\$0.10/cwt	-\$0.08/cwt
Change in FMMO butterfat price	-\$0.385/lb	-\$0.1589/lb	-\$0.0954/lb
Net change in All Milk Price	-\$0.28/cwt	\$0.03/cwt	\$0.12/cwt

(Hearing Exh. 436 (IDFA Exh. 62) at p. 29, testimony of J. Balagtas (Purdue) (as corrected per Balagtas testimony at Tr. 10184 line 27 - 10185 line 20); Hearing Exh. 435 (IDFA Exh. 61) at Table 5 and attached spreadsheets, testimony of J. Balagtas (Purdue)).

Thus, under the relatively inelastic scenario, dairy farmers suffer material losses from Proposal 19's increase in Class I differentials. The increase in Class I prices is more than offset by the combined effect of the decline in Class I product sales, and the decline in Class IV prices due to the extra milk now having to be disposed of in Class IV products. Id.

Given the absence of published estimates of relevant elasticities of wholesale demand for US nonfat dry milk and butter, there is uncertainty about how Proposal 19 would actually play out. In general, the more inelastic the demand for nonfat dry milk and butter, the less effective higher Class I differentials are at increasing farm milk prices. The main takeaway from the calculations above is that it is not assured that Proposal 19 would benefit farmers at all. Farmers could easily be net losers. Meanwhile, Proposal 19 would *indisputably* cause significant disruption in dairy markets: materially higher fluid milk prices; materially reduced fluid milk consumption; material harm to fluid milk consumers; and material diversion of milk from Class I uses to manufacturing uses. (Hearing Exh. 435 (IDFA Exh. 61) at p. 18, testimony of J. Balagtas (Purdue); (J. Balagtas (Purdue) Tr. 10098 line 1 - 10099 line 18).

As noted above, Dr. Balagtas calculated that Proposal 19 increases Class I prices by 7.8%, based upon what Dr. Balagtas understood to be the average Class I price for 2023. During cross examination, it was revealed that Dr. Balagtas had inadvertently used incorrect 2023 Class I price information in performing this calculation, and that using the correct 2023 figure results in a calculated Class I price increase of 6.9%. (J. Balagtas (Purdue) Tr. 10136 lines 19-21). That lower percentage price increase would reduce the negative Net Change in All Milk Price shown in the chart above.

However, NMPF's own expert, Dr. Kaiser, used a different time frame to calculate Class I prices, and using that time frame, he calculated that Proposal 19 would increase Class I prices by 8.6%. (Hearing Exh. 115 (NMPF Exh. 48) at p. 3, testimony of H. Kaiser (Cornell)); H. Kaiser (Cornell) Tr. 1655 lines 2-9). Substituting Dr. Kaiser's 8.6% Class I price increase for Dr. Balagtas' 7.8% Class I price would materially *increase* the negative Net Change in All Milk Price shown in the chart above.

In short, notwithstanding the error regarding 2023 Class I prices, Dr. Balagtas' analysis demonstrates that it is not assured that Proposal 19 would actually benefit farmers at all, and that Proposal 19 would *indisputably* cause significant disruption in dairy markets: higher fluid milk prices; reduced fluid milk consumption; harm to fluid milk consumers; and diversion of milk from Class I uses to manufacturing uses.

F. Higher Class I Differentials Would Harm Consumers.

"Consumer surplus" is a standard economic concept used to measure consumer well-being in markets. If consumers have to pay a higher price for any given item, the additional price is money out of their pockets, and that money represents a reduction in consumer surplus. (J. Balagtas (Purdue) Tr. 10091 line 28 - 10092 line 11; 10157 line 23 - 10158 line 1).

To estimate the reduction in consumer surplus resulting from Proposal 19, Dr. Balagtas used data and demand elasticity estimate from Professor Oral Capps, Jr.'s testimony, as well as the price transmission elasticity from Professor Harry Kaiser's testimony, as follows. (Hearing Exh. 435 (IDFA Exh. 61) at p. 16, testimony of J. Balagtas (Purdue)).

Dr. Capps' Circana data shows an average price of $4.95 per gallon and 56.9 million gallons per week purchased by consumers. The harm to consumers from Proposal 19 would be $11.8 million per week (4.2% retail price increase per Dr. Kaiser times $4.95/gallon price times 56.9 million gallons). If one further assumes that that the price increase and Capps' elasticity data also applied to the 12% of untracked retail purchases (retail purchases not tracked by Circana), then harm to consumer would increase to $14 million per week (11.8 x 76/64)). If one further assumes that Professor Capps' data applies to the 24% of milk volume that is sold in foodservice, the total loss in consumer surplus is $18.4 million per week. ($14 x 100/76) (J. Balagtas (Purdue) Tr. 10092 line 12- 10093 line 13; Hearing Exh. 435 (IDFA Exh. 61) at p. 16, testimony of J. Balagtas (Purdue)).

This equates to a $962 million per year reduction in Consumer Surplus ($18.4 million per week times 52 weeks equals $962 million).

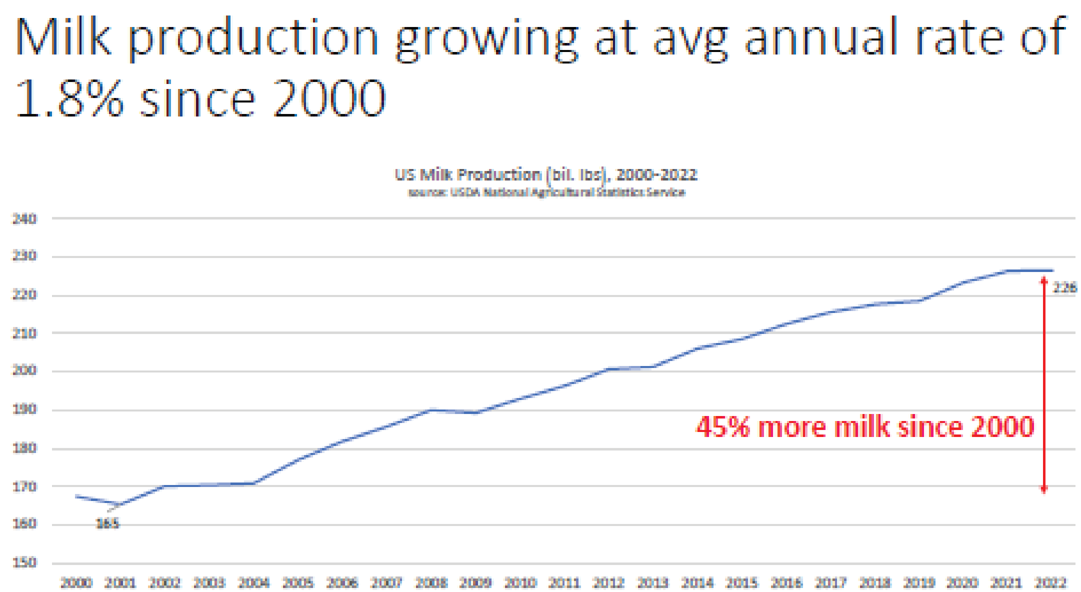
G. The More Than Ample Milk Supply Also Counsels Against An Increase In Class I Differentials.

The fundamental purpose of the federal order system is to attract an adequate supply of milk to meet fluid needs, thus achieving orderly marketing, and then share the proceeds of minimum regulated prices among all pooled dairy farmers. The AMAA explicitly references the need "to insure a sufficient quantity of pure and wholesome milk," which has consistently been interpreted by USDA to refer to milk for fluid consumption. See January 31, 2003 letter from USDA AMS Deputy Director for Dairy Programs to Congressman Sherwood listing as the first objective of the FMMO program "to assure an adequate supply of milk for the fluid market..." (Hearing Exh. 433 (IDFA Exh. 57), Attachment A, testimony of M. Brown (IDFA); USDA, Milk in the New England and Other Marketing Areas; Decision on Proposed Amendments to Marketing Agreements and to Orders, 64 Federal Register 16026,16102 (Apr. 2, 1999) ("the purpose of the minimum Class I differential is to generate enough revenue to assure that the fluid market is adequately supplied.").

USDA has recently reiterated that "[e]nsuring Class I demand is met is essential to the FMMO system in meeting its objective of maintaining orderly marketing conditions." Milk in the Appalachian, Florida, and Southeast Marketing Areas; Final Decision on Proposed Amendments to Marketing Agreements and to Orders, 88 Federal Register 84038, 84050 (December 1, 2023).

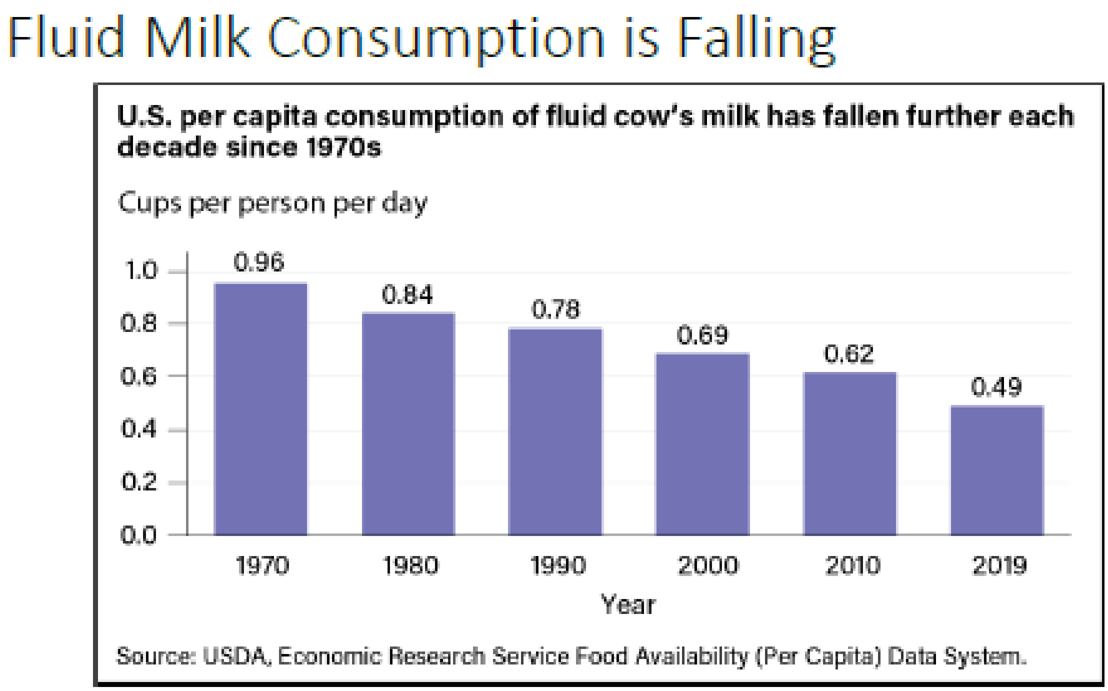
1. There Is A Much More Than Adequate Supply Of Milk To Serve Class I Needs.

U.S. milk production grew from 165 billion pounds in 2001 to 226 billion pounds in 2022, an increase of 37% and an average annual growth rate of 1.8%. Increased milk production has been driven in part by increased milk yields. In the decade from 2013 to 2022, U.S. average milk production per cow grew by 10%, from 21,813 pounds to more than 24,000 pounds per year. In the same decade the number of dairy cows in the country increased by 1.9%, from to 9.2 million head to 9.4 million head. (Hearing Exh. 435 (IDFA Exh. 61) at p. 6, testimony of J. Balagtas (Purdue)):



(Hearing Exh. 436 (IDFA Exh. 62) at p. 11, testimony of J. Balagtas (Purdue)).

While U.S. milk production has grown, fluid milk consumption in the United States has been in decline for more than half a century. Data from the USDA Economic Research Service shows that U.S. per capita milk consumption has fallen from approximately one cup per person per day in 1970 to less than half a cup per person per day in 2019. Data from Cornell's Dairy Markets and Policy Program shows that the decline in fluid milk sales has been particularly steep in the years since 2010. (Hearing Exh. 435 (IDFA Exh. 61) at p. 7, testimony of J. Balagtas (Purdue)). Specifically, U.S. per capita fluid milk consumption fell by 7.4% in the 1950s, 8.4% in the 1960s, 9.9% in the 1970s, 5.4% in the 1980s, 10.9% in the 1990s, 7.9% in the 2000s, and 20.2% in the 2010s (Stewart and Dong, 2023). (Hearing Exh. 386 (IDFA Exh. 52) at p. 2, testimony of O. Capps (Texas A&M)). A graphic portrayal is as follows:



(Hearing Exh. 436 (IDFA Exh. 62) at p. 12, testimony of J. Balagtas (Purdue)).

As a result of declining consumption of fluid milk, the quantity of milk in Class I uses has also declined across all Marketing Order regions. The quantity of Class I milk has declined by 11% from 2000 through 2022 across all Marketing Order regions and fell by as much as 46% in the Upper Midwest and 41% in the Southeast. (Hearing Exh. 435 (IDFA Exh. 61) at p. 7, testimony of J. Balagtas (Purdue)):

10% Reduction in Producer Milk in Class I since 2001

Class I Milk (million pounds)			
Marketing Order Region	2001	2022	% Change
Appalachian	4,352	3,818	-12.27
Central	4,881	4,363	-10.61
Florida	2,492	2,061	-17.30
Mideast	6,633	6,211	-6.36
Northeast	10,642	7,963	-25.17
Pacific Northwest	2,098	1,622	-22.69
Southeast	4,805	2,833	-41.04
Southwest	4,029	3,864	-4.10
Upper Midwest	4,092	2,192	-46.43
All Markets Combined	45,887	40,986	-10.68

(Hearing Exh. 436 (IDFA Exh. 62) at p. 13, testimony of J. Balagtas (Purdue)).

With growing milk production and declining fluid milk consumption, Class I utilization rates have also been declining. Across all Marketing Orders, Class I utilization fell by 29%, from 38% in 2001 to 27% in 2022. Class I utilization fell in seven of the nine Marketing Order regions reported in the table. In addition, Class I utilization fell in the California Milk Marketing Order, from 22% in 2018 to 21% in 2022, and through June of 2023, Class I utilization in California is only 17%. In the Arizona Milk Marketing Order, Class I utilization fell from 37% in 2007 to 27% in 2022 (USDA Agricultural Marketing Service). (Hearing Exh. 435 (IDFA Exh. 61) at p. 10, testimony of J. Balagtas (Purdue)). Current Class I utilization is the lowest it has ever been, based on statistics going back to 1932. (C. Covington (Southeast Milk) Tr. 439 line 16 - 440 line 7)). The reduction since 2001 is shown below:

30% Reduction in Share of Producer Milk in Class I since 2001

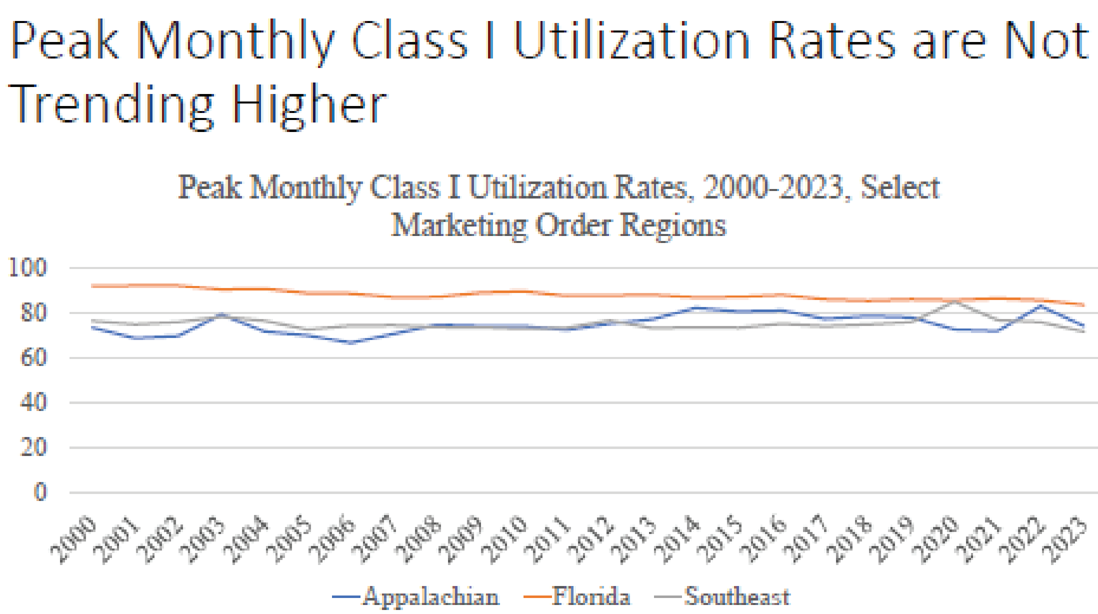
Class I Utilization (%)			
Marketing Order Region	2001	2022	% Change
Appalachian	65.22	70.43	7.99
Central	27.37	27.90	1.94
Florida	89.90	83.01	-7.66
Mideast	38.50	36.98	-3.95
Northeast	43.34	29.62	-31.66
Pacific Northwest	29.60	21.40	-27.70
Southeast	61.85	72.40	17.06
Southwest	46.83	28.17	-39.85
Upper Midwest	17.47	6.88	-60.62
All Markets Combined	38.17	27.03	-29.19

(Hearing Exh. 436 (IDFA Exh. 62) at p. 14, testimony of J. Balagtas (Purdue)).

The fragility of the Class I market is exemplified by the fact that the average purchase price for entire Class I plants sold as part of the Dean Foods bankruptcy was $8-10 million. This would barely cover the cost of installing a single new production line. (J. Ellis (Shehadey) Tr. 11205 line 28 - 11207 line 1).

Based on the premise that there were adequate milk supplies in 2000 based upon the FMMO reforms then put in place, combined with the fact that we have subsequently had a 40% increase in milk production and a material decrease in fluid milk consumption since then, it follows that there is already an adequate milk supply for Class I purposes. (J. Balagtas (Purdue) Tr. 10144 lines 19-27).

Only two orders have experienced Class I utilization increases since 2001: Appalachian (+2.4%) and Southeast (+11.4%). These regions, together with Florida, also had the highest Class I Utilization rates in 2022: Appalachia (70%), Southeast (72%), and Florida (83%). For these three regions, the relatively high or rising Class I utilization rates potentially suggest an inadequate quantity of milk available to serve the market for fluid products. However, for these three Marketing Order regions, when one plots the peak monthly Class I utilization rate in each year since 2000, one sees that in the Florida Marketing Order, monthly Class I utilization rates frequently exceeded 90% in 2000-2004, but have remained below 90% since 2004, and below 86% since 2016. In the Southeast and Appalachian Marketing Order regions, peak monthly Class I utilization rates have remained below that of Florida for the entire period, and do not exhibit a clear rising trend. Thus, even in the Marketing Order regions with the relatively high or rising Class I utilization, milk production during the months of peak Class I utilization is in excess of Class I uses and increasingly so. (Hearing Exh. 435 (IDFA Exh. 61) at p. 11, testimony of J. Balagtas (Purdue)):



(Hearing Exh. 436 (IDFA Exh. 62) at p. 16, testimony of J. Balagtas (Purdue).

For the Appalachian and Southeast regions, fluid milk supplies are supplemented by producer milk from outside of the marketing order boundaries with the assistance of the Federal

Order Transportation Credits. Federal Order Transportation Credits effectively subsidize the transportation of milk from surplus regions to fluid milk processors in the Appalachian and Southeast regions for those months of the year when Class I utilization rates tend to be highest. Further, USDA has now issued a final decision to expand Transportation Credits program to cover the Florida region, and to also include producer milk originating within marketing order boundaries. Thus the Federal Order Transportation Credit program already encourages movement of producer milk to these regions, and under USDA's decisions, further encourage milk deliveries to fluid milk plants in these regions. (Hearing Exh. 435 (IDFA Exh. 61) at p. 11, testimony of J. Balagtas (Purdue)).

Furthermore, Class I utilization rates in the Appalachian, Southeast, and Florida Marketing Orders have not led to retail prices of milk that are unreasonably high. In Atlanta, Georgia the average price of milk was lower than the 30-city average in three of the past five years and is below the 75% percentile price in each of the past five years. In Louisville, Kentucky, the average price of milk is well below the 30-city average in each of the five years. In Miami, Florida, the average milk price is higher than the 30-city average in each year, but lower than the 75th percentile price in four of the five years, and for four years running. Thus the relatively high Class I utilization rates in these Marketing Order regions do not correlate with relatively high retail prices for fluid milk. This fact suggests that milk supplies in these regions are sufficient to provide adequate supplies of fluid milk to consumers at reasonable prices. (Hearing Exh. 435 (IDFA Exh. 61) at p. 13, testimony of J. Balagtas (Purdue)).

Put differently, one measure of inadequate supply is whether there is so little milk that we end up with high prices of milk. These three cities, in the three FMMOs with high Class I utilization rates, do not based on the foregoing analysis have a particularly high retail milk price. (J. Balagtas (Purdue) Tr. 10173 line 22 - 10174 line 3).

High Class I Utilization Has Not Resulted in Higher Retail Milk Prices

	2019	2020	2021	2022	2023
	(US$/gallon)				
30-City Average	3.25	3.47	3.62	4.21	4.29
75th Percentile	3.75	3.85	4.02	4.61	4.59
Atlanta, GA (Southeast)	3.56	3.37	3.45	4.07	4.42
Louisville, KY (Appalachian)	2.07	2.38	2.70	2.53	2.81
Miami, FL (Florida)	3.91	3.83	3.60	4.34	4.21

(Hearing Exh. 436 (IDFA Exh. 62) at p. 17, testimony of J. Balagtas (Purdue)).

2. The Reserve Supply Of Milk Far Exceeds The 30% Level Identified As Necessary By USDA.

It has long been recognized that temporal fluctuations in, and incongruity between, milk production and fluid milk consumption require a sufficient "reserve supply" of milk serving non-fluid milk needs in order to ensure an adequate supply of milk to serve fluid needs. USDA has also recognized that "[b]ecause some milk is produced just about everywhere, a Class I differential needs only to be high enough to bring forth enough milk—'local' and milk from alternative and more distant supply areas—at any location to meet Class I demand. At all locations, the Class I differential value needs to represent a reasonable sum of such factors that, taken as a whole, accomplish the goal of assuring an adequate supply of milk to meet demands." "USDA, Milk in the New England and Other Marketing Areas; Proposed Rule on Proposed Amendments to Marketing Agreements and to Orders, 63 Federal Register 4802, 4896 (Jan. 30, 1998). "The purpose of the minimum Class I differential is to generate enough revenue to assure that the fluid market is adequately supplied." USDA, Milk in the New England and Other Marketing Areas; Decision on Proposed Amendments to Marketing Agreements and to Orders, 64 FR 16026,16102 (Apr. 2, 1999). (Hearing Exh. 433 (IDFA Exh. 57), at p. 2, testimony of M. Brown (IDFA)).

USDA previously assessed at some length how large such a reserve supply is needed and concluded that the reserve supply is adequate if it comprises at least 30-35% of an order's milk total supply. As USDA explained:

> The record indicates that in order to serve the varying needs of a Class I market on a year-round basis, reserve milk supplies equal to about 30 percent of the total milk in the market are needed. The views on this point varied from 15 percent to 40 percent, with a fairly persuasive argument for at least 30 percent. Thus, a reserve milk supply equal to 30 to 35 percent of the total milk in the market appears to be a reasonable reserve requirement. Milk in the New England and Other Marketing Areas; Decision on Proposed Amendments to Tentative Marketing Agreements and Orders, 58 FR 12634, 12646 (March 5, 1993).[20]

(Hearing Exh. 433 (IDFA Exh. 57), at p. 3, testimony of M. Brown (IDFA)).

On a national basis, Class I utilization in 2022 was only 27% of pooled milk. USDA, Market Summary and Utilization 2022 Annual Report at p. 2, available at https://www.ams.usda.gov/sites/default/files/media/2022AnnualPriceandPoolReport.pdf. Thus, a full 73% of total milk pooled fell into the "reserve supply" category. This is more than twice the 30-35% supply reserve that USDA deemed to constitute a "reasonable reserve." (Hearing Exh. 433 (IDFA Exh. 57), at p. 4, testimony of M. Brown (IDFA)). There can be no justification to

[20] In order reform, USDA assumed, without resolving, similar numbers, i.e., "that markets with Class I use equal to or below 70 percent have an adequate reserve supply of milk to meet fluid needs and that markets with Class I use about 70 percent require additional milk supplies to meet fluid demand." USDA, Milk in the New England and Other Marketing Areas; Proposed Rule on Proposed Amendments to Marketing Agreements and to Orders, 63 Federal Register 4802, 4823 (Jan. 30,1998).

increase Class I differentials for the purpose or with the effect of stimulating a larger milk supply given the presence of an already far more than adequate milk supply. (Hearing Exh. 433 (IDFA Exh. 57), at p. 3, testimony of M. Brown (IDFA)).

Indeed, the foregoing analysis is arguably understated because it only focuses on federally regulated milk. In 1947, Class I milk represented about two thirds of regulated milk. Today, as noted, Class I milk is only 27% of federally regulated milk, and it is only 18% of all milk produced in the United States (40,986 million pounds of milk pooled in Class I, see Market Summary and Utilization 2022 Annual Report at p. 1, available at https://www.ams.usda.gov/sites/default/files/media/2022AnnualPriceandPoolReport.pdf, divided by 226,462 million pounds of milk produced, see NASS, Milk Cows and Production by Quarter United States: 2022-2023, available at Milk Production | National |September 2023 | National Agricultural Statistics Service (usda.gov). (Hearing Exh. 433 (IDFA Exh. 57), at pp. 4-5, testimony of M. Brown (IDFA)).

There is simply no basis to increase Class I differentials, to meet the statutory purpose of securing an adequate supply of milk for Class I needs, when the milk supply is ***more than five times higher*** than the amount necessary to satisfy fluid milk needs. More than 99% of that milk is Grade A see USDA NASS, Milk Production, Disposition, and Income 2022 Summary (April 27, 2023) at p. 11, available at Publication | Milk Production, Disposition, and Income Annual Summary | ID: 4b29b5974 | USDA Economics, Statistics and Market Information System (cornell.edu)., and thus qualified for Class I use. (Hearing Exh. 433 (IDFA Exh. 57), at p. 5, testimony of M. Brown (IDFA)).

3. Class I Processors Have Been Able To Obtain A Sufficient Supply.

In addition to being a retailer, Kroger operates 15 Company-owned dairy plants, as well as 2 cheese packaging plants. The former Director of Dairy Supply Chain, responsible for a four-member team buying all raw dairy materials for all 17 plants, as well as for buying Kroger-branded dairy products co-packed for Kroger by third parties, testified with confidence and from personal experience that there was never an occasion during those more than seven years when he found himself unable to secure sufficient farmer milk to meet Kroger's Class I processing needs. The necessary supply was always there. And this includes the four Kroger plants located in the Southeastern Orders, which are located in Virginia, Georgia, Tennessee and Kentucky. (Hearing Exh. 433 (IDFA Exh. 57), at pp. 5-6, testimony of M. Brown (IDFA)).

4. The Consistent Decline In Shipping Requirements Confirms The Adequacy Of The Milk Supply For Class I Needs.

The adequacy of the current milk supply to meet Class I needs is further established by the history of adjustments to federal order shipping requirements, i.e., the percentage of its milk a supplier must ship for Class I use in order to qualify for pooling on the order. A USDA hearing exhibit reveals that since 2010, not a single federal milk order has increased that percentage. Rather, at the behest of suppliers, the requisite Class I shipping percentage was during that time period lowered, not raised, in Orders 1, 30, 33, 124, and 131. (Hearing Exh. 39, p. 1; Hearing Exh. 433 (IDFA Exh. 57), at p. 6, testimony of M. Brown (IDFA)).

This phenomenon can only be attributed to the degree to which the milk supply is increasingly more than adequate to serve Class I needs. Relatedly, USDA during that time period never once was asked to direct that any milk shipments be made to a Class I plant: "No order received any call for or had any issuance of milk to be shipped to Class I plants in their order." Id. (Hearing Exh. 39, p. 1; Hearing Exh. 433 (IDFA Exh. 57), at p. 6, testimony of M. Brown (IDFA)).

5. When A Consumer Product Like Fluid Milk Is Suffering Continuing, Massive Sales Declines, Materially Raising Its Price Makes No Sense.

The notion that the price for milk going to fluid use should be raised so that, once blended with the price of milk for other purposes, farmers will reap a financial benefit, no longer matches reality.

The numbers are truly disheartening. On a total gallon basis, national fluid milk sales have fallen over 21% from their peak of 55,165 million pounds in 1991 to only 43,448 million pounds in 2022. USDA ERC Fluid Beverage Milk Sales Quantities By Product (Annual), available at USDA ERS - Dairy Data. (Hearing Exh. 39, p. 1; Hearing Exh. 433 (IDFA Exh. 57), at p. 6, testimony of M. Brown (IDFA)).

But even those discouraging numbers mask the true decline, because the United States' population grew significantly those years. On a per capita basis, which is a truer measure of demand, annual per capita fluid milk consumption fell from 247 pounds in 1975, to 218 pounds in 1991, to 134 pounds in 2021. USDA ERC Dairy Products: Per Capita Consumption, United States (Annual), available at USDA ERS - Dairy Data. Thus, per capita fluid milk consumption fell by a massive 45% over this time frame. Per capita pounds then fell from 134 pounds in 2021 to 130 pounds in 2022, an additional 3% decline in a single year. USDA ERS Dairy Products per Capita Consumption, United States, available at_ https://www.ers.usda.gov/data products/dairy data. (Hearing Exh. 39, p. 1; Hearing Exh. 433 (IDFA Exh. 57), at p. 7, testimony of M. Brown (IDFA)).

These steady, regrettable declines are not entirely attributable to price. But choosing to impose by government edict a very material price increase on a product suffering these sales declines would be unthinkable to anyone making ordinary pricing decisions in the retail marketplace. (Hearing Exh. 39, p. 1; Hearing Exh. 433 (IDFA Exh. 57), at p. 7, testimony of M. Brown (IDFA)). Choosing to raise prices for any product category that is experiencing steadily declining volume has not proven to be a recipe for growth. Structural increases in costs and/or prices is not a path for building brands or creating consumer value. (Hearing Exh. 501 (IDFA Exh. 65) at pp. 1-2, testimony of S. Galbraith (Saputo)).

H. Proposal 19 Should Be Rejected Because It Reflects An Ill-Conceived Amalgamation Of Disparate, Unevenly Applied Criteria, Many Of Which Bear No Relevance To Class I Pricing, And Would In Many Areas Adversely Affect Proprietary Class I Processors And Benefit Coop Owned Class I Processors.

Proponents of federal order amendments have an obligation to present a coherent, cohesive justification for their proposals. Proposal 19's Class I differentials fall far short.

1. The Factors That Properly Go Into Setting Class I Differentials.

As detailed in IDFA's Post-Hearing Brief at pp. 1-31, USDA's consistent position has been that the ***general costs*** of producing milk - that is, the costs of producing milk that are not tied specifically to the costs of producing milk for Class I purposes - are reflected in the normal operation of supply and demand in the marketplace. "[T]he costs of producing milk are reflected in the supply and demand conditions for the dairy products." Milk in the Northeast and Other Marketing Areas; Tentative Partial Final Decision on Proposed Amendments and Opportunity To File Written Exceptions to Tentative Marketing Agreements and Orders, 73 Federal Register 35,305, 35,324 (June 20, 2008).

These general costs of producing milk are captured through the regulated minimum prices for milk being used for Class III and IV products. "In the aggregate, the costs of producing milk are reflected in the supply and demand conditions for the dairy products. When the supply of milk is insufficient to meet the demand for Class III and Class IV products, the prices for these products increase as do regulated minimum milk prices paid to dairy farmers because the milk is more valuable, and this greater milk value is captured in the pricing formulas." Id.

The Class I price is set by adding on top of the Class III and IV prices adjustments unique to Class I. This is comprised of two elements, the first being a base differential, currently $1.60, which historically has been made up of the cost of obtaining and maintaining a Grade A supply (although as shown in Section IX(L) below, that factor is no longer appropriate for inclusion); any special balancing costs attendant to serving Class I processors; and a portion of the actual competitive costs incurred by fluid plants to simply compete with manufacturing plants for a supply of milk.[21] (Hearing Exh. 433 (IDFA Exh. 57), at pp. 12-13, testimony of M. Brown (IDFA)).

Added to the base differential is a location differential reflecting some of the costs of moving milk from areas of production to Class I processing facilities. USDA, Milk in the New England and Other Marketing Areas; Decision on Proposed Amendments to Marketing Agreements and to Orders, 64 FR 16026, 16112 et seq. (Apr. 2, 1999).

[21] USDA explained this approach as follows during order reform:

““Option 1A [which was ultimately adopted] utilizes $1.60 as the minimum price in the three base zones. Currently, the lowest differential in Federal orders is $1.04 ($1.20 in Minneapolis) in the Upper Midwest order. A review of current marketing practices has revealed that the $1.04 per hundredweight base zone differential may not be established at a level high enough to ensure adequate milk supplies for fluid use. First, a portion of the Class I differential must reflect the value associated with maintaining Grade A milk supplies since this is the only milk available for fluid use. It has been estimated that this value may be worth approximately $0.40 per hundredweight. Traditionally, the additional portion of the Class I differential reflects the marketing costs incurred in supplying the Class I market. These marketing costs include such things as seasonal and daily reserve balancing of milk supplies, transportation to more distant processing plants, shrinkage, administrative costs, and opportunity or “give-up” charges at manufacturing milk plants that service the fluid Class I markets. This value has typically represented approximately $0.60 per hundredweight. Option 1A establishes an additional competitive factor into the development of the base zone Class I differential. Option 1A values this competitive factor to be worth about $0.60 per hundredweight. This value reflects approximately two-thirds of the actual competitive costs incurred by fluid plants to simply compete with manufacturing plants for a supply of milk.” USDA, Milk in the New England and Other Marketing Areas; Proposed Rule on Proposed Amendments to Marketing Agreements and to Orders, 63 Federal Register 4802, 4908-09 (Jan. 30,1998).

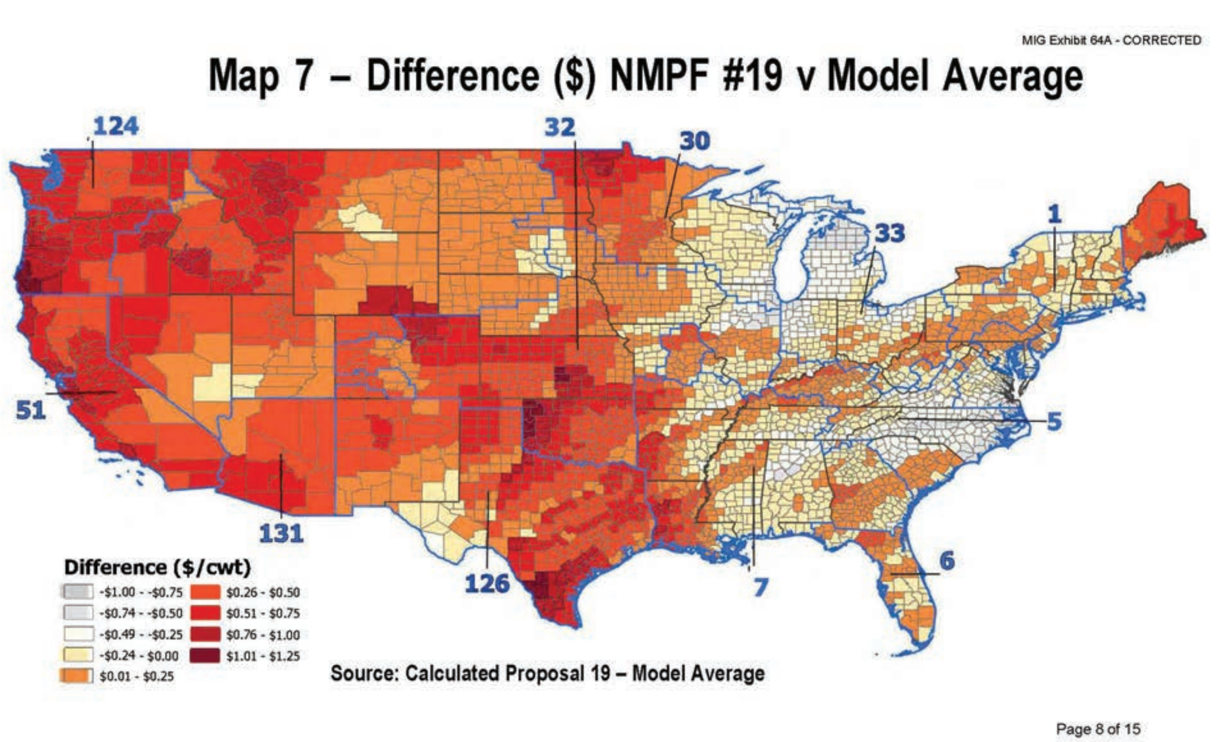
USDA has also recognized that the price elasticity of Class I products may limit the Class I differentials that would otherwise be set. USDA, Milk in the New England and Other Marketing Areas; Decision on Proposed Amendments to Marketing Agreements and to Orders, Id at 16102. At that time, USDA viewed Class I price increases appropriate given its then-view that the demand for fluid milk products was price "inelastic." Id. That conclusion is no longer valid, as discussed in Sections IX(B) above, and provides an independent reason not to increase Class I differentials. But this Section IX(H) of the Proposed Findings will focus on whether Proposal 19 has justified its proposed Class I differential increases when judged against these historic criteria.

The University of Wisconsin U.S. Dairy Sector Simulator (USDSS) study results submitted in this proceeding did not address how much the base differential should be. Rather, the study looked at location differentials by addressing e.g., the costs of moving milk from supply areas to processing facilities. See Hearing Exh. 300 (MIG Exh. 28) and Hearing Exh. 301 (MIG Exh. 29) for a county-by-county summary of its conclusions. However, the USDSS study did not consider the own-price elasticity of finished fluid milk products or whether that elasticity was sufficiently great that it would be imprudent to increase Class I differentials given the resulting sales decline. (Hearing Exh. 433 (IDFA Exh. 57), at p. 14, testimony of M. Brown (IDFA)).

The discussion in Section IX(C) above indicated that it would in fact be imprudent to do so. And, leaving aside that issue, it is clear that Proposal 19 is itself ill-conceived.

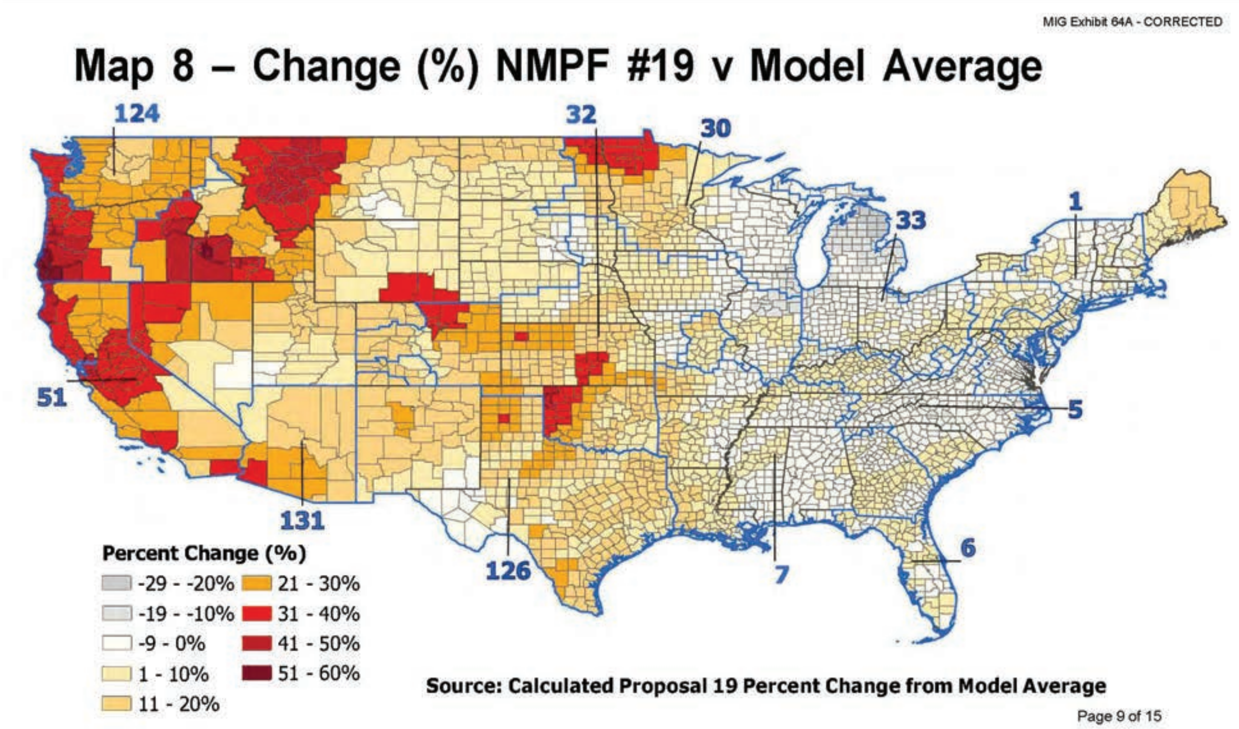
2. Proposal 19 Constitutes A Massive Re-Write Of The USDSS Model Results.

While Proposal 19 purports to endorse the USDSS model, the Proposal in actual operation proposes hundreds of often quite substantial revisions to the model's results. (Hearing Exh. 300 (MIG Exh. 28) and Hearing Exh. 301 (MIG Exh. 29). This can be seen on both a dollars and cents basis:



Hearing Exh. 441 (MIG Exh. 64A) at p. 8, testimony of S. Keefe (MIG)).

And on a percentage basis:



Hearing Exh. 441(MIG Exh. 64A) at p. 9, testimony of S. Keefe (MIG)).

3. Proposal 19 Bears No Resemblance To What Happened During The 2000 Order Reform.

While proponents observe that revisions were also made to the USDSS model results during the 2000 order reform, Dr. Stephenson, who was directly involved, explained that "it was my memory that, you know, they were relatively small changes, as I said, something like nickels, dimes, quarters, and they were in places where a Market Administrator simply said, there's something here that wasn't considered in the model that really ought to be considered." (Stephenson (U. Wisconsin) Tr. 10210-line 17-10211 line 2).

Thus, what happened in the 2000 order reform was nothing like Proposal 19's massive revisions to the USDSS model results. Proposal 19 makes revisions to the USDSS model results with respect to 2,865 of the 3,108 counties encompassed in the model. (Hearing Exh. 441 (MIG Exh. 64A) at p. 14, testimony of S. Keefe (MIG)).

Thus, 92% of the USDSS results were changed. And 45% of the changes (1,290 out of 2,865) were not at the "nickels, dimes [and] quarters" level described by Dr. Stephenson with respect to the 2000 order reform, but were in excess of plus or minus $0.25/cwt. 442 of the changes exceeded plus $0.50/cwt. (Hearing Exh. 446 (MIG Exh. 64D), testimony of S. Keefe (MIG)).

Proponents made these wholesale, substantial deviations from the USDSS model results even though the current model is far superior to the one used during the 2000 order reform. As Dr. Stephenson explained: over the last 30 years "we have refined the [USDSS] model and made it much more sophisticated, and we have addressed concerns that folks have expressed through many iterations." (Stephenson (U. Wisconsin) Tr. 10199 lines 21-28). Dr. Stephenson would not have expected revisions to the current model results that would have "alter[ed] the values [except] by nickels, dimes, or possibly quarters over small areas." (Stephenson (U. Wisconsin) Tr. 10200 lines 8-22). Proposal 19's revisions far exceed that.

Furthermore, the rationales advanced by the proponent witnesses in support of these revisions were frequently contradictory and often divorced from the considerations USDA has identified as relevant to setting Class I differentials. (Hearing Exh. 433 (IDFA Exh. 57), at p. 14, testimony of M. Brown (IDFA)). Examples include the following:

4. The Unexplained And Inconsistent Use Of "Anchor Cities."

NMPF's purported use of multiple geographic "committees" whose members identified "anchor cities" to set Class I differentials that would then "fan out" across broader geographic areas might sound logical in principle but was incoherent in application. As detailed in the analysis set forth in Hearing Exh. 440 (MIG Exh. 64), at pp. 7-8, testimony of S. Keefe (MIG)), with the underlying data points set forth in Hearing Exh. 442 (MIG 64B), testimony of S. Keefe (MIG)):

- The cities selected were discordant, with no coherent principle. NMPF used some large anchor cities like Los Angeles and the metropolis of Chicago, but also the borough of Sharpsville (population appx. 4,300) and the small city of Yuma, Arizona (population appx. 93,000). NMPF included as anchor cities two Arizona cities, but not one city in the Northeast or the Pacific Northwest. Indeed, the closest anchor city to the Northeast is population 28,000 Winchester, Virginia, even though the state of New York produces over 10 times as much milk as Virginia and the Northeast has a population over 6.5 times that of Virginia. (Hearing Exh. 458 (MIG Exh. 21A) at p. 7, testimony of M. Newell (HP Hood).
- NMPF took wholly different approaches with each of the anchor cities it had selected. NMPF *increased* the Class I differentials in western cities (Phoenix, Yuma, Los Angeles, and San Francisco) \$0.60/cwt to \$0.80/cwt from the USDSS model average, which represents a 25-38% increase from the USDSS model. In contrast, NMPF *decreased* the model's proposed Class I differentials in Chicago and Asheville, North Carolina by \$0.60/cwt and \$0.30/cwt, respectively, from the USDSS average (a 16% and 5% decrease). And in still other cities - Kansas City, Missouri and Winchester, Virginia - NMPF followed the USDSS average without change. The rationale behind this approach was never explained.

5. Revisions Improperly Based Upon The General Costs Of Producing Milk.

Professor Stephen Koontz devoted his entire testimony to the costs to produce milk in Colorado and as compared to other states, including the costs of corn and alfalfa and the costs of transporting that feed to Colorado, profitability of milk production in the state, the costs and availability of irrigation water, and the like. (Hearing Exh. 304 (NMPF Exh. 55), testimony of S.

Koontz (Colorado State). All of this information relates to the costs of dairy production in general. None relates to any special costs of producing milk for Class I purposes, which as discussed in Section IX(H)(1) above, are the only kinds of costs that have been considered by USDA in setting Class I differentials themselves. (Hearing Exh. 433 (IDFA Exh. 57), at pp. 14-15, testimony of M. Brown (IDFA)).

This broad and ultimately off-point general cost related testimony was repeated over and over and over by the proponents of Proposal 19. Additional examples (among many) include Hearing Exh. 334 (NMPF Exh. 59) at p. 1, testimony of H. Jensen) (J.D. Heiskell and Company) (I was "asked to provide data on corn basis, soybean meal basis, and DDG (Dried Distillers grains) price delivered into Colorado and California"); Hearing Exh. 376 (NMPF Exh. 46) at pp. 3-5, testimony of B. Butcher (UDA) (the costs of water and the effect of drought, worker housing and farmland costs in Arizona).

6. Revisions Improperly Based Upon Considerations Of "Regional Competition."

NMPF Proposal 19 proposes Class I differentials in California markedly different than those recommended by the University of Wisconsin U.S. Dairy Sector Simulator (USDSS) model. Witness Vandenheuvel insisted that Class I differentials need to reflect regional competition at the farm level and insisted that California needed to have Class I differentials high enough that the blend price in California would be similar to the blend price in the Upper Midwest. (Hearing Exhibit 345 (NMPF Exh. 39) at pp. 2-3, testimony of R. Vandenheuvel (CDI)). While acknowledging that "virtually no milk moves between California's milk supply region of the Central Valley and the Upper Midwest milksheds of Wisconsin, Minnesota and South Dakota," he argued that "these regions have some functional similarities," and that the "on-farm competitiveness of similar regions across the U.S. is not something the USDSS model is designed to solve for, but it is an important factor for USDA and the industry to consider." Id.

In other words, NMPF contends that Class I differentials need have nothing to do with any costs of producing milk for fluid needs or serving Class I facilities, but should be set based upon the competitive relationship between regions 1,500 miles apart: "[W]e needed to keep a regional reasonable relationship for competitive reasons, from the bottom of the slope in the West to the bottom of the slope on the east side of the country, which is the Upper Midwest." (R. Vandenheuvel (CDI) Tr. 8100 lines 11-16; see also R. Vandenheuvel Tr. 8101 lines 3-8 ("we looked at the bottom of the slope and -- or at the bottom of the trough, where is that area of significant milk supply and what is the relationship in that region to a similar situated region in a competitive area of the country"); R. Vandenheuvel Tr. 8115 lines 21-26 ("Blend prices are a combination of price and utilization. So you are not going to have similar utilization in different regions, but -- but the prices paid into the pool, which ultimately turn into farmer revenue, it is important to keep some alignment in our opinion."); R. Vandenheuvel Tr. 8145 Lines 14-19 ("because this all, ultimately, results in a pool that determines blend price values for the farms, we thought it was appropriate that we not endorse a proposal that would put our farms at a competitive disadvantage because pool price -- pool revenues were enhanced in one area and not enhanced in our region"); R. Vandenheuvel Tr. 8147 Lines 1-4 ("we don't think it's unreasonable to ask for a meaningful adjustment to the California differentials, even if the USDSS did not recommend those changes").

The same propositions were advanced by other proponent witnesses. (Hearing Exh. 397 (NMPF Ex. 47) at p. 2, testimony of M. Schilter (NDA) ('Regional competitiveness at the farm level needs to be maintained in areas and regions similar to each other across the United States.")

No such concept has previously been identified, much less adopted, by USDA with respect to the setting of Class I differentials. Indeed, these proponents' focus on "regional competitiveness ***at the farm level***" is the exact opposite of the federal order system's focus on setting Class I differentials based on the cost to secure an adequate supply of milk to serve Class I needs. (Hearing Exh. 433 (IDFA Exh. 57), at pp. 16-17, testimony of M. Brown (IDFA)).

NMPF advanced regional competitiveness and alignment as a justification for sharply raising prices in Minnesota (see the map on p. 312 above), an area where the milk supply dwarfs Class I needs, and then increasing Colorado, the mountain west, and ultimately California and the Pacific Northwest from there. "Regional competitiveness" is thus being invoked in a circular or self-fulfilling approach that allows Class I differential increases in large areas to be driven by distant changes elsewhere, none of it having anything to do with the costs of serving Class I milk. (Hearing Exh. 440 (MIG Exh. 64), at pp. 10-11, testimony of S. Keefe (MIG)).

The Class I differential increases are often disconnected from what the USDSS model suggests an efficient market would do in these areas. For example, NMPF's proposed Class I differentials in the California (51) and Pacific Northwest (124) orders are more than $0.60/cwt above the model average. Similarly, the changes in the Central (32), Southwest (126), and Arizona (131) orders are remarkably higher than the model average on an absolute basis. But none of these areas are known or generally believed to be milk deficit. (Hearing Exh. 440 (MIG Exh. 64), at p. 13, testimony of S. Keefe (MIG); Hearing Exh. 441 (MIG Exh. 64A), Table 1 at p. 12, testimony of S. Keefe (MIG)).

7. Revisions Improperly Based Upon The Milk Supply For Manufacturing Plants.

Other witnesses supported higher Class I differentials in specific locations because their cooperative had contractually committed to sell most of its milk to a large Class III cheese plant and a higher differential was needed to attract additional milk to serve Class I customers. (Hearing Exh. 403 (NMPF Exh. 53) at pp. 9-10, testimony of S. Stout (DFA)). While it is certainly a good thing that a major processor secured a reliable milk supply by mutual agreement with its cooperative supplier, USDA has never seen this as a basis to increase ***via a federal legal mandate*** the amount Class I handlers in the order would otherwise have to pay for their milk supply. (Hearing Exh. 433 (IDFA Exh. 57), at p. 17, testimony of M. Brown (IDFA)).

8. Establishing Differentials That Would Improperly Raise Blend Price Levels In Areas With Limited Class I Needs In Order To Discourage Milk Movement.

Two witnesses discussed the need to discourage milk from moving from Minnesota and Maine, respectively, in order to maintain blend price equivalence in their local markets, even though milk in both locations is needed to the south of those locations for Class I purposes. (Hearing Exh. 352 (NMPF Exh. 40) at p. 7, testimony of C. Hoeger (Prairie Farms); S. Werme (Agrimark) Tr. 8601 line 12-17).

For example, some milk currently moves from Maine to a Class I plant in Franklin, Massachusetts, and the University of Wisconsin USDSS model called for the difference between the Class I differentials in Cumberland, Maine and Franklin, Massachusetts to increase from its current $0.25/cwt to $0.75/cwt. (S. Werme (Agrimark) Tr. 8612 lines 8-19; Hearing Exh. 369 (MIG Exh. 55), Columns H and K, Rows 1146 and 1194). That $0.50/cwt increase would have incentivized milk movement to the Class I plant due to its relatively higher Class I price.

But NMPF Proposal 19 would maintain the difference in Class I differentials between these two locations at its current $0.25/cwt, even though hauling costs between the two locations has increased since differentials were set in 2000. (Hearing Exh. 369 (MIG Exh. 55), Column N, Rows 1146 and 1194). As Mr. Werme candidly explained, "if the [University of Wisconsin USDSS] model results were adopted unchanged, the respective differentials would have incentivized Maine milk to leave the state for plants in Eastern Massachusetts." (S. Werme (Agrimark) Tr. 8612 lines 16-21). "[H]auling costs have risen, but the purpose of [the alternative] NMPF Proposal this was to flatten the -- call it the run, from Maine and out to -- out of Maine, to disincentivize the movement of milk." (S. Werme (Agrimark) Tr. 8617 lines 5-13).

Mr. Hoeger's testimony was similar. Asked "wouldn't you then want or need the slope north of Chicago to be greater in order to help move the milk south?," and answering: "Yes. You -- when you get to the point of what we'll call equilibrium, and then it comes down to -- in our analysis, it comes down to blend price and that. And so that's really, once you get north of Chicago, our whole thought process was -- was analyzing blend price." (C. Hoeger (Prairie Farms) Tr. 8251 lines 14-21).

These positions contradict the fundamental purpose of establishing Class I differentials in order to encourage the movement of milk to where fluid milk is needed, not to discourage such movement.

9. The Improper Use Of An Inconsistent Base Differential.

Proposal 19 is inconsistent as to whether the proponents even think the base differential should be raised. As the lead "umbrella" witness, Dr. Vitaliano suggested the base differential should be raised from $1.60 to $2.20. (Hearing Exh. 299 (NMPF Exh. 35) at p. 5, testimony of P. Vitaliano (NMPF)). But other proponents rejected that approach and Proposal 19 did not include any change from USDSS model estimate average (which used the $1.60 base differential) for 285 counties (Hearing Exh. 441 (MIG Exh. 64A), testimony of S. Keefe (MIG). Among the anchor cities, Proposal 19 and the model average are the same for Kansas City, Missouri, Nashville, Tennessee, Winchester, Virginia, and Charleston, West Virginia. (Hearing Exh. 442 (MIG Exh. 64B), testimony of S. Keefe (MIG). This inconsistent approach pervades Proposal 19, notwithstanding that the base differential has always been a specific dollar amount applied uniformly throughout the order system.

10. Reliance Upon Inconsistent Approaches To Transportation Cost Data.

Acting as NMPF's lead, "umbrella" witness, Dr. Vitaliano indicated that Proposal 19 was conservative because the USDSS study (and Proposal 19 itself) utilized 2021 transportation cost data, even though 2022 or later transportation cost data would supposedly show higher transportation costs. (P. Vitaliano (NMPF) Tr. 6844 line 27 - 6945 line 6 ("We wanted to include to -- to include a -- you know, a recent period, but we wanted to avoid using 2022 numbers that were probably subject to this recent bout of inflation that I illustrated in Figure 2, on the assumption that that might be a little non-representative. We may end up being wrong there. But we intentionally did not take the most recent highest cost in that current bout of inflation. We intentionally limited it to 2021.")

But many subsequent proponent witnesses then proceeded in their own testimony to rely upon 2022 and 2023 transportation cost data as justification for Proposal 19, including in support of Class I differentials in excess of those that the University of Wisconsin USDSS study itself supported. See, e.g., Hearing Exh. 309 (NMPF Exh. 49) at p. 1, testimony of S. Zalar (DFA) (discussing changes in hauling costs through 2023), p. 5 (discussing wage rates in 2022), p. 6 (diesel prices from Sept. 2022 through July 2023); Hearing Exh. 310 (NMPF Exh. 37) at p. 8, testimony of J. Sims (Lone Star) (2023 update of hauling costs), p. 11 (2023 fuel costs); Hearing Exh. 342 (NMPF Exh. 44) at p. 4, testimony of C. Covington (Southern Milk) (diesel fuel costs through 2023 and the price of 2023 model and 2024 model milk tankers); Hearing Exh. 356 (NMPF Exh. 52) at p. 2, testimony of J. Brinker (DFA) (2022 transportation costs); Hearing Exh. 359 (NMPF Exh. 41) at p. 4, testimony of M. John (Maryland Virginia) (January 2023 hauling rates).

Of equal concern, while acknowledging that the costs of transportation lay at the heart of the University of Wisconsin USDSS model, the proponents argued that the model does not account for traffic delays. E.g., Hearing Exh. 376 (NMPF Exh. 46) at p. 4, testimony of B. Butcher (United Dairymen of Arizona)). Yet the proponents never provide any specific analysis of the dollar amount by which the study's transportation costs are allegedly understated for this reason. In other words, while Proposal 19 generally calls for Class I differentials higher than those identified by the University of Wisconsin USDSS study, when it comes to elements like traffic delays, the proponents fail to provide any analysis of any specific cost associated with that component.

11. A Refusal To Allow The "Fundamental Determinants" Of Changes In Milk Supply Locations And Costs Of Transportation Actually To Play A Role In Setting Class I Differentials.

Dr. Nicholson, the USDSS model's co-developer, noted that during the nearly three decades since nationwide spatial values of milk have been systematically evaluated using the USDSS model, "there have been considerable changes to where milk is produced and where population growth has taken place. There have also been substantial changes to transportation costs. Milk supply, demand, and transportation costs all have an impact on the spatial value of milk. The USDSS captures many aspects of these fundamental determinants of values in U.S. dairy supply chains to estimate spatial milk values that can inform the setting of Class I differentials." (Hearing Exh. 303 (NMPF Exh. 36A) at p. 7, testimony of (University of Wisconsin)).

Yet many proponents abjured Class I differential changes that would reflect these new realities in the location and quantity of milk production and the impacts of higher transportation costs, demanding instead that the new differentials preserve existing relationships, although this principle was not uniformly applied as to areas such as Western Pennsylvania. Examples include Hearing Exh. 370 (NMPF Exh. 43), testimony of S. Werme (Agrimark) at p. 3 (setting Class I differentials at a level that would keep milk in Maine even though it is needed in Boston); identical pricing across long distances both the I-95 (Philadelphia to Washington, D.C.) and I-5 (from Canada to California) corridors; and maintaining the same price relationship between the Shenandoah Valley and Tidewater, Virginia. See Hearing Exh. 441 (MIG Exh. 64A) at p. 3, testimony of S. Keefe (MIG)).

12. Proposal 19 Proposes A Number Of Class I Differential Revisions That Stray Significantly From The USDSS Model In Ways That Would Competitively Disadvantage Proprietary Class I Handlers.

Many of Proposal 19's revisions to the USDSS model would disadvantage proprietary Class I handlers against their coop owned Class I plant competitors or otherwise cause inexplicable financial harm. The absence of clear justification for these results renders them unacceptable, and it is no answer for NMPF to point out other geographic locations where this did not occur.

First, some overall numbers.

Ten pool distributing plants are located in counties where Proposal 19 proposes a Class I differential increase 35% or more greater than the USDSS model average. None of these 10 distributing plants is coop owned (0%).[22]

Eight pool distributing plants are located in counties where Proposal 19 proposes a Class I differential increase 100% or more than the current Class I differential. None of these 8 plants are coop owned (0%).[23]

---

[22] Hearing Exh. 443 (MIG Exh. 64C-Corrected): GH, Yuma AZ FMMO 131 (Row 83); Sarah Farms, Yuma AZ FMMO 131 (Row 83); Alexandre, San Leandro CA FMMO 51 (Row 159); Safeway, San Leandro CA FMMO 51 (Row 159); Straus, Marshall CA FMMO 51 (Row 179); Producers, Fairfield CA FMMO 51 (Row 206); Clover-Stornetta, Petaluma CA FMMO 51 (Row 207); Aurora Organic, Platteville CO FMMO 32 (Row 279); Kroger Jackson, Hutchinson KS FMMO 32 (Row 933); Producers Umpqua, Roseburg OR FMMO 124 (Row 2185).

[23] Hearing Exh. 443 (MIG Exh. 64C-Corrected): United, Martins Ferry OH (Row 2017); Kroger Tamarack, Newark OH (Row 2055); Schneiders, Pittsburgh PA (Row 2213); Turner Special-T, Pittsburgh PA (Row 2213); Turner, Pittsburgh PA (Row 2213); Marburger, Evans City PA (Row (continued…)

By sharp contrast, coop-owned pool distributing plants make up the majority (15 out of 28, or 54%) of the fully regulated Class I distributing plants for which Proposal 19 proposes a Class I differential 5% or more ***lower*** than the USDSS model average.[24]

A few specific examples of proprietary plants being disadvantaged are the following.

United Dairy. Under Proposal 19, United Dairy's three Class I plants would receive the highest Class I differential increases in the country, with increases higher than every other competitor in its region. (Hearing Exh. 425 (United Exh. DF-1) at p. 3, testimony of J. Carson (United Dairy)). As one example, all seven of the Ohio Class I plants currently have a Class I differential of $2.20, but under Proposal 19, United Dairy's differential would increase more than every other plant: by $1.00 more than one plant, by $0.70 more than four other plants, and by $0.40 more than the remaining plant:

2221); United, Charleston WV (Row 2979); Mountaintop, Morgantown WV (Row 2990). All are in the Mideast (33) FMMO.

[24] Hearing Exh. 443 (MIG Exh. 64C-Corrected), coop owned plants in bold: Oberweis, North Aurora IL (Row 607); **Prairie Farms, Rockford IL (Row 663)**; Rockview Ninth Avenue, Columbus IN (Row 667); **DFA Schenkels, Huntington IN (Row 699)**; Pleasant View, Highland IN (Row 709); Nestle, Anderson IN (Row 712); **PF East Side Jersey, Anderson IN (Row 712); Prairie Farms, Dubuque IA (Row 787); Prairie Farms, Battle Creek MI (Row 1237); DFA Country Fresh, Grand Rapids MI (Row 1239);** Schreiber, Grand Rapids MI (Row 1239); **DFA Country Fresh, Marquette MI (Row 1250);** Fairlife, Coopersville MI (Row 1259); Meijer, Holland MI (Row 1268); Milkco, Asheville NC (Row 1868); **DFA Dairy Fresh, Winston-Salem NC (Row 1891); DFA Dairy Fresh, High Point NC (Row 1898)**; Homeland, Julian NC (Row 1898); **MD-VA Hunter Farms, High Point NC (Row 1898)**; New Dairy, Cleveland OH (Row 2028); Toft, Sandusky OH (Row 2032); **MI Milk Superior, Canton OH (Row 2086);** Hartzler, Wooster OH (Row 2095); Smith Foods, Orrville OH (Row 2095); **DFA Dean, Sharpsville PA (Row 2254); DFA PET, Spartanburg SC (Row 2325); MD-VA Marva Maid, Newport News VA (Row 2872); DFA Kemps, Cedarburg WI (Row 3060).**

CHANGE VS CURRENT			CURRENT DIFFERENTIAL	PROPOSED DIFFERENTIAL	CWT CHANGE	VS. MF	VS. UT	VS. CHAS		GALLON	VS. MF	VS. UT	VS. CHAS
MICHIGAN	GRANDRAPIDS	DFA CO-OP	1.80	3.10	1.30	(1.10)	(0.80)	(1.20)			(0.095)	(0.069)	(0.103)
	BATTLECREEK	PF CO-OP	1.80	3.10	1.30	(1.10)	(0.80)	(1.20)			(0.095)	(0.069)	(0.103)
INDIANA	FORT WAYNE	PF CO-OP	1.80	3.30	1.50	(0.90)	(0.60)	(1.00)			(0.078)	(0.052)	(0.086)
	HUNTINGTON	DFA CO-OP	1.80	3.30	1.50	(0.90)	(0.60)	(1.00)			(0.078)	(0.052)	(0.086)
	ANDERSON	PF CO-OP	2.00	3.40	1.40	(1.00)	(0.70)	(1.10)			(0.086)	(0.060)	(0.095)
	FORTWAYNE	WALMART	1.80	3.30	1.50	(0.90)	(0.60)	(1.00)			(0.078)	(0.052)	(0.086)
	HOLLAND	PF CO-OP	2.30	4.00	1.70	(0.70)	(0.40)	(0.80)			(0.060)	(0.034)	(0.069)
OHIO	ORVILLE	SMITH	2.00	3.70	1.70	(0.70)	(0.40)	(0.80)			(0.060)	(0.034)	(0.069)
	SANDUSKY	TOFT	2.00	3.40	1.40	(1.00)	(0.70)	(1.10)			(0.086)	(0.060)	(0.095)
	CLEVELAND	BORDEN	2.00	3.70	1.70	(0.70)	(0.40)	(0.80)			(0.060)	(0.034)	(0.069)
	CANTON	MM SUPERIOR CO-OP	2.00	3.70	1.70	(0.70)	(0.40)	(0.80)			(0.060)	(0.034)	(0.069)
	SPRINGFIELD	DFA CO-OP	2.00	3.70	1.70	(0.70)	(0.40)	(0.80)			(0.060)	(0.034)	(0.069)
	NEWWARK	KROGER	2.00	4.00	2.00	(0.40)	(0.10)	(0.50)			(0.034)	(0.009)	(0.043)
	MARTINS FERRY	UNITED DAIRY	2.00	4.40	2.40								

(Hearing Exh. 428 (United Exh. DF-4) at p. 1, testimony of J. Carson (United Dairy)). United's Martins Ferry, Ohio plant would have its Class I differential increased by a whopping 120%, \$0.30/cwt greater than the USDSS model, while coop competitors, DFA/Reiter Springfield, Ohio and Michigan Milk/Superior Canton, Ohio are under Proposal 19 at \$0.10/cwt and \$0.30/cwt below the USDSS model, respectively. Id.

While United's Charlestown, West Virginia and nearby Kroger's Lynchburg Virginia plants' Class I differentials are under Proposal 19 within \$0.05/cwt of the USDSS model average, coop competitors' Maryland-Virginia /Marva Maid Newport News, Virginia plant's Class I differential is \$0.55/cwt less than the USDSS model, and the DFA and Maryland Virginia plants' Class I differentials in High Point, North Carolina are \$0.40/cwt less than the USDSS model. (Hearing Exh. 443 (MIG Corrected Exh. 64C) at Rows 1898, 2861, 2872, 2979).

In Pennsylvania, United's Uniontown plant's Class I differential is \$0.15/cwt greater than the USDSS model, while cooperative competitor DFA/Dean Sharpsville's Class I differential is \$0.20/cwt less than the model. (Hearing Exh. 443 (MIG Corrected Exh. 64C) at Rows 2237, 2254). With retailer milk supply contracts switching suppliers for less than a penny a gallon (M. Brown (IDFA) Tr. 10325 lines 16-18), these differences are very meaningful.

Plains Dairy. Plains Dairy is a single plant Class I processor located in the Texas Panhandle city of Amarillo, with distribution hundreds of miles away to its affiliated small town grocery store owners. The Texas Panhandle has been the site of explosive milk production growth over the last 20 years, so much so that the USDSS model calls for a $0.15/cwt reduction in Plains' Class I differential, from its current $2.40/cwt to $2.25/cwt. But Proposal 19 would inexplicably raise Plains' current Class I differential by $0.60 to $3.00/cwt, a $0.07 per gallon increase. (Hearing Exh. 500 (IDFA Exh. 67) at pp. 5-6, 8, testimony of M. Giles (Plains Dairy)).

Such a cost increase is particularly hard for a company like Plains, because while milk sales by mass merchandisers like Walmart, Costco, and Sams are up about 1%, drug store, convenience store, and traditional grocery store milk sales are all down, by 4-5% at traditional grocery stores, and by over 10% at convenience stores. Proposal 19's Class I differential increase would jeopardize Plains' business and the competitiveness of its members' stores. (Hearing Exh. 500 (IDFA Exh. 67) at p. 11, testimony of M. Giles (Plains Dairy)).

Kroger plant in Hutchinson Kansas. Kroger's Hutchison, Kansas Class I plant is located closer to the milk supply than the coop-owned Hiland Class I plant in the heart of Wichita. Based on the relative costs of delivering milk to Hutchison versus Wichita, the USDSS model logically proposed that the Class I differential in Hutchison be $0.15/cwt lower than in Wichita. But Proposal 19 wipes out that difference and would have the two plants pay the identical Class I differentials. (Hearing Exh. 443 (MIG Corrected Exh. 64C) at Rows 933, 942).

13. Faulty Data As To Whether Supplying Class I Plants Is Incentivized Under The Current Class I Differentials.

In contending that increased Class I differentials are necessary, Proposal 19 proponents made a bold claim: that current regulations and economics made it financially disadvantageous to deliver to urban area Class I plants and thereby be a pool participant, as compared to keeping their milk local and unpooled and delivering to a local manufacturing plant (many coop owned or joint ventures). NMPF argued:

> "By comparing the returns after deducting hauling costs for delivering milk to hard product manufacturing plants at the Class III and Class IV prices in Amarillo, Texas, versus delivering to pool distributing plants in Dallas or Houston and collecting the Order blend, the choice becomes abundantly clear: It is more advantageous for farmers to keep their milk local and forego the order pool. Over the past four and a half years, there has not been a single month where the minimum blend price as announced by Order 126 incentivized delivering milk to Dallas or Houston versus the Class III price. Texas Panhandle producers have incurred substantial net losses when delivering milk to these cities."

(Hearing Exh. 310 (NMPF Exh. 37) at p. 15, testimony of J. Sims (Lone Star)); see also Hearing Exh. 318 (NMPF Exh. 37H) at pp. 34-35 (purporting to show calculations establishing this point using the month of June 2023 as an example), testimony of J. Sims (Lone Star).

The facts are otherwise. Corrected Hearing Exh. 332 (Corrected IDFA Exh. 332) traces, step by step, the economics of delivering milk to an unpooled local Class III product manufacturing plant versus a distant Class I plant in the month of June 2023. Corrected Hearing Exh. 333 (Corrected IDFA Exh. 333) does the same analysis but using a Class IV product plant rather than a Class III product plant.

These analyses show that if a cooperative faces the choice of supplying all of its Texas Panhandle-produced farmer milk at the announced Class III or Class IV plant to an unregulated Class III or Class IV plant in the Texas panhandle, or instead supplying that milk to a Class I plant in either Houston or Dallas in quantities sufficient to meet Class I needs (defined by actual Class I usage in the order in the month), and supplying the rest of its milk to the local Class III or Class IV plant, the economics in all cases supports supplying the milk to the Class I plants:

Comparison of Individual Producer vs. Pooled Cooperative Returns

Statistical Uniform Price (Statistical Uniform Price) vs. Class III — **June 2023**

Federal Order 126 Prices	June 2023	Milk Pounds Pooled:	June 2023
Average Prices for FMMO 126:		Producer Milk	1,070,870,489
Statistical Uniform Price for Dallas:	$17.25	Class I Milk	285,594,250
Statistical Uniform Price for Houston:	$17.85	Class I Utilization	26.67%
Class III Price:	$14.91	Class II Milk	73,590,254
Class IV Price:	$18.26	Class III Milk	702,600,428
		Class IV Milk	9,085,557

Non-Pooled Amarillo Class III Plant	Single Producer	Cooperative
Miles Hereford to Amarillo	48	48
Hauling cost	($0.41)	($0.41)
Share of Milk Delivered to Amarillo	100.00%	100.00%
Milk Haul to Amarilllo	($0.41)	($0.41)
Class III Price	$14.91	$14.91
Net Class III Price at Amarillo	**$14.50**	**$14.50**

Dallas Class I Plant	Single Producer	Cooperative
Miles Hereford to Dallas	407	407
Share of Pooled Milk Delivered to Dallas	100.00%	26.67%
Hauling cost per Cwt. Milk Delivered to Dallas	($4.21)	($4.21)
FMMO Statistical Uniform Price at Dallas	*$17.25*	*$17.25*
Net Delivered Price to Dallas	*$13.04*	*$13.04*
Share of Pooled Manufacturing Milk Delivered to Amarillo	0.00%	73.33%
Milk Haul to Amarilllo	$0.00	($0.41)
FMMO Statistical Uniform Price at Amarillo	--	*$16.65*
Net Delivered Price to Amarillo	--	*$16.24*
Weighted Average Hauling Cost	($4.21)	($1.42)
Weighted Averaged Statistical Uniform Price	$17.25	$16.81
Net Weighted Statistical Uniform Price after Hauling	**$13.04**	**$15.39**
Gain / Loss Per Cwt. vs. Class III	**($1.46)**	**$0.89**

Houston Class I Plant	Single Producer	Cooperative
Miles Hereford to Houston	635	635
Share of Pooled Milk Delivered to Houston	100.00%	26.67%
Hauling cost per Cwt. Milk Delivered to Houston	($6.57)	($6.57)
FMMO Statistical Uniform Price at Houston	$17.85	$17.85
Net Delivered Price to Houston	$11.28	$11.28
Share of Pooled Manufacturing Milk Delivered to Amarillo	0.00%	73.33%
Milk Haul to Amarilllo	$0.00	($0.41)
FMMO Statistical Uniform Price at Amarillo	--	$16.65
Net Delivered Price to Amarillo	--	$16.24
Weighted Average Hauling Cost	($6.57)	($2.05)
Weighted Averaged Statistical Uniform Price	$17.85	$16.97
Net Weighted Statistical Uniform Price after Hauling	**$11.28**	**$14.92**
Gain / Loss Per Cwt. vs. Class III	**($3.22)**	**$0.42**

Sources: Southwest Marketing Order Price Data for May 2023 and June 2023
https://www.dallasma.com/file_map/producer_price/SOUTHWEST+FO+126/2023/26PD0523.PDF
https://www.dallasma.com/file_map/producer_price/SOUTHWEST+FO+126/2023/26PD0623.PDF
FMMO 126 Statistical Uniform Priceply Plants for June 2023 (2)
GSA-Southwest Cheese Clovis, NM, Lone Star Milk Producers, L.C. Dalhart, TX
Ex. 318 (NMPF 37H) pages 34-37
Ex. 44 FMMO_USDA_Exhibit44MilkComponentsbyClassandOrder20082023YTD.xlsx

Comparison of Individual Producer vs. Pooled Cooperative Returns

Statistical Uniform Price (Statistical Uniform Price) vs. Class IV — **June 2023**

Federal Order 126 Prices	June 2023	Milk Pounds Pooled:	June 2023
Average Prices for FMMO 126:		Producer Milk	1,070,870,489
Statistical Uniform Price for Dallas:	$17.25	Class I Milk	285,594,250
Statistical Uniform Price for Houston:	$17.85	Class I Utilization	26.67%
Class III Price:	$14.91	Class II Milk	73,590,254
Class IV Price:	$18.26	Class III Milk	702,600,428
		Class IV Milk	9,085,557

Non-Pooled Amarillo Class IV Plant	Single Producer	Cooperative
Miles Hereford to Amarillo	48	48
Hauling cost	($0.41)	($0.41)
Share of Milk Delivered to Amarillo	100.00%	100.00%
Milk Haul to Amarilllo	($0.41)	($0.41)
Class IV Price	$18.26	$18.26
Net Class IV Price at Amarillo	**$17.85**	**$17.85**

Dallas Class I Plant	Single Producer	Cooperative
Miles Hereford to Dallas	407	407
Share of Pooled Milk Delivered to Dallas	100.00%	26.67%
Hauling cost per Cwt. Milk Delivered to Dallas	($4.21)	($4.21)
FMMO Statistical Uniform Price at Dallas	$17.25	$17.25
Net Delivered Price to Dallas	$13.04	$13.04
Share of Pooled Manufacturing Milk Delivered to Amarillo	0.00%	73.33%
Milk Haul to Amarilllo	$0.00	($0.41)
FMMO Statistical Uniform Price at Amarillo	--	$16.65
Net Delivered Price to Amarillo	--	$16.24
Weighted Average Hauling Cost	($4.21)	($1.42)
Weighted Averaged Statistical Uniform Price	$17.25	$16.81
Net Weighted Statistical Uniform Price after Hauling	**$13.04**	**$15.39**
Gain / Loss Per Cwt. vs. Class IV	**($4.81)**	**($2.46)**

Houston Class I Plant	Single Producer	Cooperative
Miles Hereford to Houston	635	635
Share of Pooled Milk Delivered to Houston	100.00%	26.67%
Hauling cost per Cwt. Milk Delivered to Houston	($6.57)	($6.57)
FMMO Statistical Uniform Price at Houston	$17.85	$17.85
Net Delivered Price to Houston	$11.28	$11.28
Share of Pooled Manufacturing Milk Delivered to Amarillo	0.00%	73.33%
Milk Haul to Amarilllo	$0.00	($0.41)
FMMO Statistical Uniform Price at Amarillo	--	$16.65
Net Delivered Price to Amarillo	--	$16.24
Weighted Average Hauling Cost	($6.57)	($2.05)
Weighted Averaged Statistical Uniform Price	$17.85	$16.97
Net Weighted Statistical Uniform Price after Hauling	**$11.28**	**$14.92**
Gain / Loss Per Cwt. vs. Class IV	**($6.57)**	**($2.93)**

Sources: Southwest Marketing Order Price Data for May 2023 and June 2023
https://www.dallasma.com/file_map/producer_price/SOUTHWEST+FO+126/2023/26PD0523.PDF
https://www.dallasma.com/file_map/producer_price/SOUTHWEST+FO+126/2023/26PD0623.PDF
FMMO 126 Statistical Uniform Priceply Plants for June 2023 (2)
GSA-Southwest Cheese Clovis, NM, Lone Star Milk Producers, L.C. Dalhart, TX
Ex. 318 (NMPF 37H) pages 34-37
Ex. 44 FMMO_USDA_Exhibit44MilkComponentsbyClassandOrder20082023YTD.xlsx

The coop is incentivized to ship to the Class I plant because by delivering a sufficient quantity of milk to the Class I plants to meet the order's Class I demands and satisfy pooling obligations, the supplying cooperative will receive the statistical uniform price at location of delivery not only on the milk it hauls to the Class I plant in Houston or Dallas (incurring extra hauling costs to do so), but on the milk it delivers to the local Texas Panhandle Class III or IV plant. Even accounting for the extra hauling costs incurred in shipping milk to the Houston or Dallas Class I plants, the net amount received by the cooperative will exceeds the amount if would have received if it had stayed out of the pool and delivered all its milk to the local Texas Panhandle Class III or IV plant at the Class III or Class IV announced price. (Sims (Lone Star) Tr. 7668 line 16 - 7699 line 14). And this is true even without accounting for the over order premiums that cooperatives frequently receive on deliveries to Class I plants. (C. Covington (Southeast Milk) Tr. 5158 line 13 - 5159 line 20).

* * *

In short, much of the testimony presented was irrelevant to the question to be answered, and the Class I differentials that Proposal 19 proposes often do not reflect the salient considerations.

I. USDA Should Not Raise Class I Differentials In A Misguided And Doomed Effort To Reduce Or Eliminate Depooling.

USDA should not adopt Proposal 19 under the misapprehension that its Class I differential increases would reduce or eliminate depooling. Regardless of whether one regards depooling as good, bad, or neutral, Proposal 19's increases in Class I differentials would have little effect on depooling, while resulting in the substantial decline in fluid milk sales (and farmer receipts from those sales) detailed in Sections IX(A) –(C) above. Raising Class I differentials with the intended goal of decreasing depooling would be a fool's errand. (Hearing Exh. 433 (IDFA Exh. 57), at p. 21, testimony of M. Brown (IDFA)).

Proof of this is set forth in Attachment C to Hearing Exh. 433 (IDFA Exh. 57), testimony of M. Brown (IDFA)). Attachment C identifies for each order those months from January 2020 through October 2023 in which depooling was realistic because the Class III or Class IV price exceeded the blend price. In those circumstances, the Class III or Class IV handler facing a higher class price than blend price would be incentivized to depool, be paid by its customer the higher class price (Class III or IV, as the case may be) and keep that money for itself rather than participating in the pool and only receiving the blend price. (Hearing Exh. 433 (IDFA Exh. 57), at p. 21, testimony of M. Brown (IDFA)).

The order with the largest amount of milk pooled over the past 10 years (2013-2022) was the Upper Midwest Order, Order 30. On the "Upper Midwest" tab in Attachment C, Columns C through P set forth the pool volume by class and total, utilization rate by class, and class prices, with Column Q setting forth the blend price. Out of the 46 total months between January 2020 and October 2023, there were 34 months in which either the Class III or Class IV price exceeded the blend price and depooling was therefore incentivized. These are shown in Column R of the "Upper Midwest" tab, with 34 months with exceedances denominated as "yes," and 12 months with no exceedances denominated as "no." (Hearing Exh. 433 (IDFA Exh. 57), at p. 21, testimony of M. Brown (IDFA)).

Columns AC through AR of the Upper Midwest tab then repeat the same analysis, but this time assuming that the average Class I differential in the Upper Midwest Order has been increased by $1.26/cwt, as Proposal 19 proposes. Column AP shows that notwithstanding this $1.26/cwt increase in the Class I price, there remain 33 months in which either the Class III or Class IV price exceed the blend price. These are shown in Column R of the “Upper Midwest” spreadsheet with 33 months with exceedances denominated as “yes,” and 13 months with no exceedances denominated as “no.” (Hearing Exh. 433 (IDFA Exh. 57), at pp. 21-22, testimony of M. Brown (IDFA)),

In other words, the proposed increase in the Class I differential only decreases by one the number of months in which depooling is incentivized in the Upper Midwest order. Depooling was still incentivized in 33 months. The percentage of total months in which depooling was incentivized is only reduced by 2%, from 79% (34 out of 46) to 77% (33 out of 46). (Hearing Exh. 433 (IDFA Exh. 57), at p. 22, testimony of M. Brown (IDFA)).

This is a trivial impact and insufficient basis to support the adoption of Proposal 19.

The Northeast Order 1 tab of Attachment C to Hearing Exh. 433 (IDFA Exh. 57) is also quite illuminating. Column R of the Northeast Order tab shows that out of the 46 total months between January 2020 and October 2023, there were 16 months in which either the Class III or Class IV price exceeded the blend price and depooling was therefore incentivized. However, as the number of pounds pooled on the Northeast order shown in Columns C through G demonstrates, there was in fact no actual depooling in the Northeast Order in any month except for some partial depooling in June 2020. This is because the Northeast Order has adopted special rules that make it difficult for a depooled plant to rejoin the pool. Northeast Order plants therefore do not depool in the first place. (Hearing Exh. 433 (IDFA Exh. 57), at p. 22, testimony of M. Brown (IDFA)).

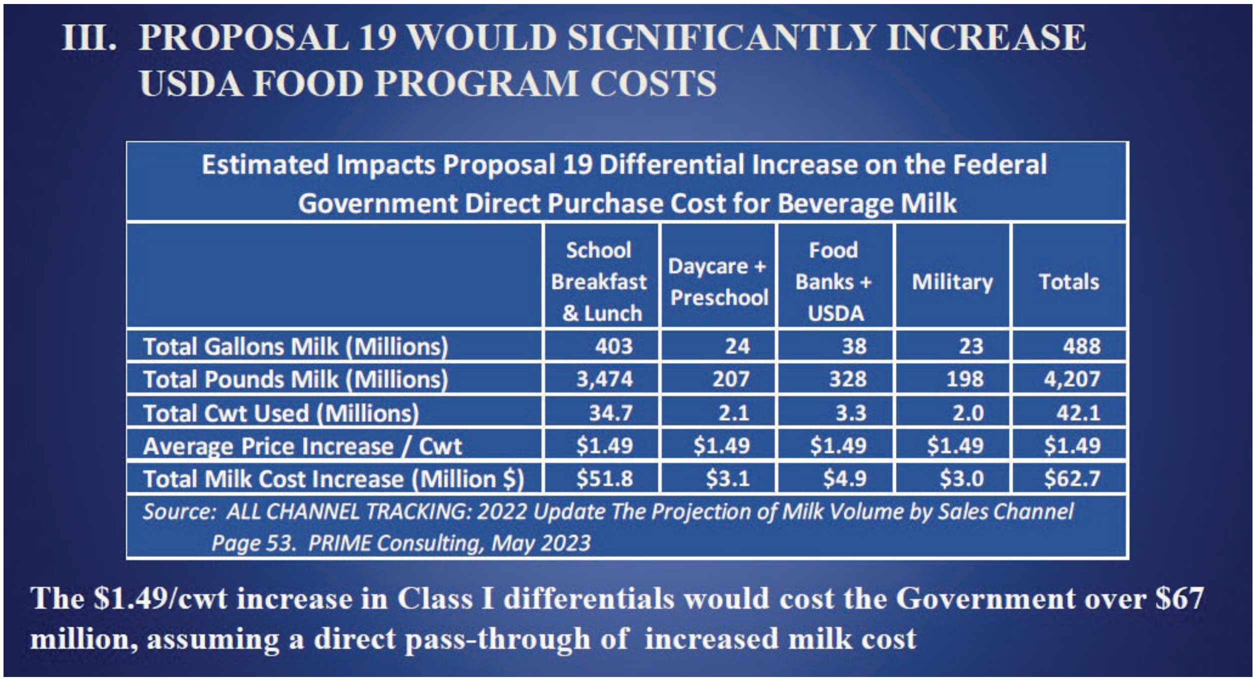
Whether the Northeast Order rules are good or bad is beyond the scope of this hearing. But the example of the Northeast Order clearly shows that if depooling is deemed a sufficiently negative phenomenon, there are far more direct and efficacious ways to deal with it than raising

Class I differentials. (Hearing Exh. 433 (IDFA Exh. 57), at pp. 22-23, testimony of M. Brown (IDFA)).

Indeed, if one wanted to raise Class I differentials sufficiently to increase the blend price to a level at which depooling would no longer be incentivized, one would need to increase the average Class I differential in the Upper Midwest Order from its current $1.80/cwt in Cook County, Illinois to an unimaginable $25.39/cwt. It would only be at that point that the blend price in July 2020 would have exceeded the Class III price in that order. (Hearing Exh. 433 (IDFA Exh. 57), at p. 23, testimony of M. Brown (IDFA)). Likewise, in July 2023, Class I prices would have had to go up $37.00/cwt in California before it would be economically rational for Class IV handlers to pool their milk. That would require an enormous $1.57 per gallon increase in the cost of fluid milk. J. Schuelke (Crystal Creamery) Tr. 5817 lines 3 - 21; 5820 line 19 - 5822 line 23).

J. Proposal 19 Would Cost The Government Significant Amounts Of Money.

Proposal 19 would impose significant costs upon the United States, due to its own purchases of milk and subsidization of milk purchases by other. The financial impacts are set forth in the following chart:



III. PROPOSAL 19 WOULD SIGNIFICANTLY INCREASE USDA FOOD PROGRAM COSTS

Estimated Impacts Proposal 19 Differential Increase on the Federal Government Direct Purchase Cost for Beverage Milk					
	School Breakfast & Lunch	Daycare + Preschool	Food Banks + USDA	Military	Totals
Total Gallons Milk (Millions)	403	24	38	23	488
Total Pounds Milk (Millions)	3,474	207	328	198	4,207
Total Cwt Used (Millions)	34.7	2.1	3.3	2.0	42.1
Average Price Increase / Cwt	$1.49	$1.49	$1.49	$1.49	$1.49
Total Milk Cost Increase (Million $)	$51.8	$3.1	$4.9	$3.0	$62.7

Source: ALL CHANNEL TRACKING: 2022 Update The Projection of Milk Volume by Sales Channel Page 53. PRIME Consulting, May 2023

The $1.49/cwt increase in Class I differentials would cost the Government over $67 million, assuming a direct pass-through of increased milk cost

(Hearing Exh. 434 (IDFA Exh.58) at p. 10, testimony of M. Brown (IDFA)).

* * *

The foregoing discussion addresses why Proposal 19 should be rejected in its entirety. The following discussion addressed specific shortcomings in Proposal 19, were USDA nonetheless to consider adopting any aspects of it.

K. Any Proposed Increase In The Class I Differentials In The Three Southeastern Orders Should Be Offset By The Amount Of The Recent USDA Decision Increasing Those Orders' Transportation Credits And Establishing Delivery Credits.

In 2023, AMS held a FMMO hearing in Nashville, Tennessee to consider amending the transportation credit provisions of the Appalachian and Southeast orders and establishing distributing plant delivery credits in those two orders and the Florida order. Subsequently, AMS on July 18, 2023 published a recommended decision, 88 Federal Register 46016, and a final decision was published in the Federal Register on December 1, 2023, 88 Federal Register 84038. Following a successful producer referendum, the final rule was issued February 1, 2024, and became effective March 1, 2024. Final Rule, Milk in the Appalachian, Florida, and Southeast Marketing Areas; Amendments to Marketing Agreements and to Orders. 89 Federal Register 6401 (February 1, 2024). The new decision (referred to herein as the "USDA Southeastern Orders decision") both increases the existing transportation credits in two orders and adds for the first time distributing plant delivery credits in all three orders.

The testimony and analysis in support of NMPF Proposal 19 barely acknowledges, much less squarely addresses the significance of these decisions. Granted, at the time the hearing commenced, there was only a recommended decision, but based upon past history, that recommended decision was overwhelmingly likely to be adopted in full with only small changes, as has now happened.

The underlying University of Wisconsin USDSS study that Proposal 19 started with but substantially modified did not reflect in any manner USDA's adoption of transportation credit increases, and creation of delivery credits, in the Appalachian, Florida, and Southeast orders. That is not a criticism of the University of Wisconsin USDSS study, which significantly predated the July 2023 recommended decision and does not consider existing differentials in its model. But the impact of these credits needs to be considered as part of evaluation of Proposal 19. (Hearing Exh. 433 (IDFA Exh. 57), at p. 24, testimony of M. Brown (IDFA)).

The USDA Southeastern Orders decision significantly increases the amount of money Class I handlers must pay farmers and farmer organizations to bring sufficient supplies of milk to meet Class I needs, the very purpose also served by Class I differentials. The bottom line is as follows:

Current Credits vs. Combined New Transportation and Distributing Plant Delivery Credits ($/cwt)			
FMMO	**Current**	**New**	**Increase**
Order 5, Appalachian	$0.07	$0.90	$0.83
Order 6, Florida	none	$0.85	$0.85
Order 7, Southeast	$0.30	$1.10	$0.80

NMPF Proposal 19 would increase the county Class I differentials in the three Southeastern orders from between $1.10 and $2.70 per cwt.:

NMPF Proposal #19 Class I Differential Increase from Current			
FMMO	**Minimum Increase**	**Average Increase**	**Maximum Increase**
Order 5, Appalachian	$1.40	$1.93	$2.70
Order 6, Florida	$1.50	$1.84	$2.00
Order 7, Southeast	$1.10	$1.91	$2.55

(Hearing Exh. 433 (IDFA Exh. 57), at pp. 24-25, testimony of M. Brown (IDFA)).

The transportation and delivery credit increase for the three Southeastern orders average between 42% and 46% of Proposal 19's proposed increases in the Class I differentials in those orders:

Table 6 **Increase in Credits for Orders 5, 6 and 7 versus NMPF Proposal 19**			
FMMO	**New Transportation & Delivery Credit Increases**	**Average Proposal 19 Class I Differential Increase**	**Percent that the New Credits Represent of the Proposal 19 Class I Differential Increases**
Order 5, Appalachian	$0.83	$1.93	43%
Order 6, Florida	$0.85	$1.84	46%
Order 7, Southeast	$0.80	$1.91	42%

(Hearing Exh. 433 (IDFA Exh. 57), at p. 25, testimony of M. Brown (IDFA)).

These transportation and delivery credit payment obligations are separate from, and on top of, Class I payment obligations in these three orders. Some proponent testimony may have implied otherwise, suggesting that these credits are deducted when calculating Class I payment obligations or pool payment obligations. That is not correct. (Hearing Exh. 433 (IDFA Exh. 57), at p. 25, testimony of M. Brown (IDFA)).

Because the newly adopted transportation and delivery credit payment increases serve the same function as Class I differentials, they should be deducted from any Class I differential increase (if any) that USDA would otherwise be inclined to adopt.

L. Any Proposed Increase In Class I Differentials Should Be Offset By A $0.40/Cwt Decrease In Class I Differentials Because The $0.40/Cwt Class I Differential Component Relating To The Cost Of Becoming Or Maintaining A Grade A Farm Is Both Obsolete And Inaccurate.

Milk for fluid milk purposes must be produced on a Grade A farm, per the requirements of the "Grade A Pasteurized Milk Ordinance" (the "PMO"), Hearing Exh. 340 (IDFA Exh. 340), which sets forth “provisions governing the processing, packaging, and sale of Grade “A” milk and milk products.” (p. iv). Among other things, the PMO sets forth various standards for a farm to be certified as a Grade A farm, a prerequisite to its milk being used for fluid milk purposes. (Hearing Exh. 433 (IDFA Exh. 57), at p. 25, testimony of M. Brown (IDFA)).

As discussed in Section IX(H)(1) above, the current Class I base differential of $1.60 is intended to reflect the additional costs relevant to serving Class I needs, above and beyond the costs necessary to serve dairy product needs in general. USDA, Milk in the New England and Other Marketing Areas; Proposed Rule on Proposed Amendments to Marketing Agreements and to Orders, 63 Federal Register 4802, 4908-09 (Jan. 30,1998). The current base Class I differential of $1.60/cwt includes a $0.40 component that purportedly reflects a farm’s cost to achieve and maintain Grade A status, and paying that extra amount supposedly incentivized farmers to upgrade to Grade A. Id.

There are, however, many reasons why this component of the Class I base differential is now obsolete. Any increase in Class I differentials that USDA might otherwise entertain should be offset by a $0.40/cwt decrease.

1. Virtually All Milk Is Now Grade A Milk.

In earlier times, only a fraction of milk produced in the United States was Grade A and eligible for fluid use. As recently as 1950 only 60% of U.S. milk sold was Grade A and eligible for fluid use. See USDA, Measure of Growth in Federal Orders, at p. 5 (May 17, 2023) (dividing the 1950 figure for “all milk” by the figure for “fluid grade”), available at https://www.ams.usda.gov/sites/default/files/media/DairyMeasuresofGrowth19472022.pdf. In 1980, that percentage was still only 84%. See USDA, Statistical Reporting Service, Milk and Final Estimates for 1979-82 at p. 29, available at milkincomeest_Milk__Final_Estimates__1979-82.pdf (cornell.edu).

Today, by contrast, over 99% of all milk produced is Grade A milk, and in the vast majority of states, there is no Grade B milk whatsoever:

Milk Used and Marketed by Producers – States and United States: 2022
[May not add due to rounding]

State	Milk used where produced			Milk marketed by producers	
	Fed to calves [1]	Milk, cream, and butter	Total	Total [2]	Fluid grade [3]
	(million pounds)	(million pounds)	(million pounds)	(million pounds)	(percent)
Alabama	0.7	0.3	1.0	31.0	100
Alaska	(D)	(D)	(D)	(D)	(D)
Arizona	10.0	1.0	11.0	4,761.0	100
Arkansas	1.7	0.3	2.0	43.0	100
California	26.0	4.0	30.0	41,757.0	97
Colorado	22.0	1.0	23.0	5,291.0	100
Connecticut	3.5	0.5	4.0	426.0	100
Delaware	0.8	0.1	0.9	47.2	100
Florida	4.0	1.0	5.0	1,928.0	100
Georgia	7.0	1.0	8.0	2,020.0	100
Hawaii	(D)	(D)	(D)	(D)	(D)
Idaho	33.0	1.0	34.0	16,594.0	100
Illinois	9.0	2.0	11.0	1,703.0	98
Indiana	26.0	4.0	30.0	4,383.0	100
Iowa	17.0	1.0	18.0	5,752.0	100
Kansas	12.0	1.0	13.0	4,130.0	100
Kentucky	5.0	1.0	6.0	920.0	100
Louisiana	2.0	1.0	3.0	109.0	100
Maine	3.0	1.0	4.0	550.0	100
Maryland	7.0	1.0	8.0	834.0	100
Massachusetts	2.5	0.5	3.0	185.0	100
Michigan	34.0	2.0	36.0	11,704.0	100
Minnesota	96.0	3.0	99.0	10,378.0	100
Mississippi	1.0	1.0	2.0	88.0	100
Missouri	16.0	3.0	19.0	922.0	97
Montana	2.0	1.0	3.0	220.0	100
Nebraska	5.5	0.5	6.0	1,410.0	100
Nevada	5.0	1.0	6.0	788.0	100
New Hampshire	1.5	0.5	2.0	217.0	100
New Jersey	2.5	0.5	3.0	84.0	100
New Mexico	42.0	3.0	45.0	7,103.0	100
New York	60.0	3.0	63.0	15,597.0	100
North Carolina	5.0	1.0	6.0	906.0	100
North Dakota	4.5	0.5	5.0	314.0	99
Ohio	25.0	5.0	30.0	5,489.0	97
Oklahoma	4.0	1.0	5.0	710.0	100
Oregon	20.0	1.0	21.0	2,615.0	100
Pennsylvania	65.0	9.0	74.0	9,875.0	100
Rhode Island	0.1	-	0.1	9.9	100
South Carolina	2.0	1.0	3.0	158.0	100
South Dakota	7.0	1.0	8.0	4,153.0	100
Tennessee	4.0	1.0	5.0	489.0	100
Texas	24.0	1.0	25.0	16,499.0	100
Utah	12.0	1.0	13.0	2,156.0	100
Vermont	15.0	2.0	17.0	2,537.0	100
Virginia	9.0	2.0	11.0	1,413.0	100
Washington	18.0	1.0	19.0	6,220.0	100
West Virginia	1.0	1.0	2.0	73.0	100
Wisconsin	239.0	10.0	249.0	31,633.0	99
Wyoming	1.3	0.1	1.4	238.2	100
Other States [4]	0.2	0.3	0.5	4.5	100
United States	914.0	80.0	994.0	225,468.0	99

\- Represents zero.
(D) Withheld to avoid disclosing data for individual operations.
[1] Excludes milk sucked by calves.
[2] Milk sold to plants and dealers as whole milk and equivalent amounts of milk for cream. Includes milk produced by dealers' own herds and milk sold directly to consumers. Also includes milk produced by institutional herds.
[3] Percentage of milk sold that is eligible for fluid use (Grade A in most States). Includes fluid grade milk used in manufacturing dairy products.
[4] Other States includes Alaska and Hawaii.

USDA NASS, Milk Production, Disposition, and Income 2022 Summary (April 27, 2023) at p. 11, reproduced in Hearing Exh. 433 (IDFA Exh. 57) at p. 28, testimony of M. Brown (IDFA)).

Even those USDA Grade A numbers are understated, because much of the purportedly non-Grade A milk is California milk that farmers are designating as non-Grade A to avoid certain pooling or quota requirements. Specifically, California farms elect to be treated as a Grade B farm even if they qualify as a Grade A farm because "if you can find a buyer that will buy your milk year round, and you can contract with that buyer at a price that is acceptable to you, it allows you to escape funding the California quota program that only applies to Grade A or market milk." (R. Vandenheuvel (CDI) Tr. 8151 lines 1-6).

With 99% of all United States produced milk already being Grade A, there is obviously no longer any need to incentivize farmers to become Grade A. That battle has been won and there is no need to keep producing grapeshot. (Hearing Exh. 433 (IDFA Exh. 57), at p. 29, testimony of M. Brown (IDFA); E. Erba (DFA) Tr. 7895 lines 6-12 ("If you are talking about converting from Grade B to Grade A dairy, then, yes, I would say that's a battle that has been won.")

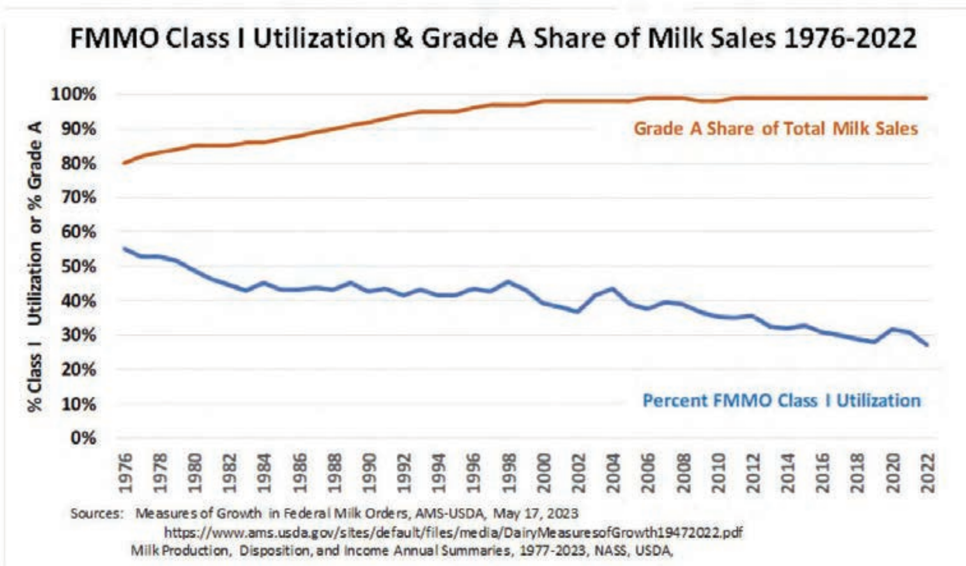
2. Milk Has To Be Grade A Milk For Many Uses Other Than Fluid Milk.

Furthermore, as noted, the original concept had been that the Class I differential should incorporate the cost of attaining and maintaining Grade A status because this was a special prerequisite tied to the farmer milk being used for fluid milk purposes. USDA, Milk in the New England and Other Marketing Areas; Proposed Rule on Proposed Amendments to Marketing Agreements and to Orders, 63 Federal Register 4802, 4908 (Jan. 30,1998) ("a portion of the Class I differential must reflect the value associated with maintaining Grade A milk supplies since this is the only milk available for fluid use").

Even if this were once true, it no longer is. Farmers now are Grade A for many reasons other than being able to serve fluid needs. There is accordingly no longer any reason to burden Class I milk with the cost of attaining Grade A status. (Hearing Exh. 433 (IDFA Exh. 57), at p. 29, testimony of M. Brown (IDFA)).

The fact that the increase in the percentage of milk that is Grade A milk is ***not*** tied in any way to its required use in fluid milk products can be readily discerned by plotting the percentage of milk that is Grade A against the percentage of milk that is Class I. If the impetus for being Grade A was driven by the need for Class I milk to be Grade A, then the percentage of each should track each other over time. In fact, the percentage of milk that is Grade A has steadily risen (from

80% in 1976 to 99% in 2022) even as the percentage of FMMO milk that is Class I has steadily fallen (from 55% in 1976 to 27% in 2022):



(Hearing Exh. 433 (IDFA Exh. 57), at p. 30 and Attachment D, testimony of M. Brown (IDFA)).

In fact, many, many uses of milk other than Class I products require Grade A milk, either as a matter of law or customer demands.

First, the PMO itself defines Grade A milk products to include specific products other than fluid milk products, including cottage cheese and whey and whey products. (Hearing Exh. 340 (IDFA Ex. 340), at p. 8). The PMO on that page defines Grade A products also to include all milk products with a standard of identity provided for in 21 Code of Federal Regulations Part 131 (excluding sweetened condensed milk). This means that the following products must also be made using Grade A milk, even though many are not Class I products:

21 C.F.R. § 131.110 Milk
§ 131.111 Acidified milk
§ 131.112 Cultured milk
§ 131.115 Concentrated milk
§ 131.120 Sweetened condensed milk
§ 131.125 Nonfat dry milk
§ 131.127 Nonfat dry milk fortified with vitamins A and D
§ 131.130 Evaporated milk

§ 131.147 Dry whole milk
§ 131.149 Dry cream
§ 131.150 Heavy cream
§ 131.155 Light cream
§ 131.157 Light whipping cream
§ 131.160 Sour cream
§ 131.162 Acidified sour cream
§ 131.170 Eggnog
§ 131.180 Half-and half
§ 131.200 Yogurt

(Hearing Exh. 433 (IDFA Exh. 57), at pp. 30-31, testimony of M. Brown (IDFA)).

Furthermore, many plants producing manufactured products, including for example cheese plants, end up with extra butterfat (cream). If they themselves use that cream to make packaged cream products, or sell the cream to customers that do so, then the plant's milk needs to have been Grade A milk, because as noted in the list above, packaged cream products must be made using Grade A milk. (Hearing Exh. 433 (IDFA Exh. 57), at p. 31, testimony of M. Brown (IDFA)).

Similarly, if the plant makes whey products that then go into a product that must be Grade A (such as yogurt), the whey must be made from Grade A milk. (Hearing Exh. 433 (IDFA Exh. 57), at p. 31, testimony of M. Brown (IDFA)).

Furthermore, many manufacturers of Grade AA butter require that their supply be Grade A, whether the milk comes directly from farmers or their cooperatives or from a manufacturing plant that has extra cream to sell. (Hearing Exh. 433 (IDFA Exh. 57), at p. 31, testimony of M. Brown (IDFA)). Major producers of manufactured products have stopped accepting Grade B milk. By way of example only, Hilmar stopped receiving Grade B milk two years ago (W. Eveland (Hilmar) Tr. 3868 lines 10-15), and Saputo stopped accepting Grade B milk in 2015 or 2016. (T. Brockman (Saputo) Tr. 4055 line 28 - 4056 line 7).

The ubiquity of these reasons why farms must be Grade A, even though their milk is not destined for fluid consumption, can be readily demonstrated. The U.S. Food and Drug Administration maintains the "Interstate Milk Shippers (IMS) List," which is a list of all—

> "[i]nterstate milk shippers who have been certified by Milk Sanitation Rating Officers (SROs) as having attained the identified milk sanitation compliance and enforcement ratings. These ratings/certifications are based on compliance with the requirements of the latest revision of the USPHS/FDA Grade "A" Pasteurized Milk Ordinance (PMO) and were made in accordance with the procedures set forth in the latest revision of the Methods of Making Sanitation Rating of Milk Shippers and the Certifications/Listings of Single Service Containers and/or Closures for Milk and/or Milk Products Manufacturers (MMSR).

https://www.fda.gov/food/federalstate-food-programs/interstate-milk-shippers-list#rules

In other words, to be on the IMS list means that the plant uses Grade A milk, per PMO requirements. (Hearing Exh. 433 (IDFA Exh. 57), at pp. 31-32, testimony of M. Brown (IDFA)).

The October 2023 IMS list (available at Interstate Milk Shippers (IMS) List for Printing Archive | FDA) lists at least 131 plants that primarily manufacture Class III and Class IV products. In other words, these plants use only Grade A milk, even though they are not fluid milk plants. (Hearing Exh. 433 (IDFA Exh. 57), at p. 32, testimony of M. Brown (IDFA)).

Many large plants are listed, including all of the large mozzarella plants (mozzarella being a low-fat cheese product, these plants end up with extra cream to sell); the large Hilmar and Glanbia cheddar cheese plants (Hilmar and Glanbia being the country's largest cheddar cheese manufacturers); and all of the large butter-powder plants. The list of the 131 Grade A certified plants that primarily manufacture cheese, butter and dry milk products and appear on the IMS list is set forth in Attachment E to Hearing Exh. 433 (IDFA Exh. 57), testimony of M. Brown (IDFA)).

Furthermore, in addition to these 131 manufacturing plants, there also appear on Attachment E 1,748 Bulk Tank Unit (BTU) facilities that appear on the IMS list. A bulk tank unit is a dairy farm or group of dairy farms from which raw milk is collected for pasteurization and for which a single entity sanitation compliance rating is issued. All dairies producing Grade A milk are members of a BTU. FMMOs are restricted to suppliers of Grade A milk, so appearance on the IMS list is necessary to qualify the farmer milk being supplied to the manufacturing plant for participation in FMMO pools. (Hearing Exh. 433 (IDFA Exh. 57), at pp. 32-33, testimony of M. Brown (IDFA)).

In short, there are many, many compelling reasons for the milk supply to be Grade A, as 99 plus percent of it is, going well beyond servicing the Class I market.

3. The Costs Of Maintaining Grade A Status Are Far Less Than $0.40/Cwt.

For the reasons just explained, the cost of a farm attaining and maintaining Grade A status should no longer be included in setting Class I differentials because it is no longer a Class I issue. But even if there were some justification for doing that, the amount would be far less than $0.40/cwt.

While Mr. Erba attempted to quantify these costs on behalf of NMPF, he was not familiar with the USDA guidelines establishing the requirements applicable to Grade ***B*** milk farms, see USDA AMS, "Milk for Manufacturing Purposes and its Production and Processing Recommended Requirements," available at Milk for Manufacturing Purposes and its Production and Processing | Agricultural Marketing Service (usda.gov). (E. Erba (DFA) Tr. 7897 lines 6-24). Without knowing the requirements applicable to Grade B plants, it is impossible to identify, and then quantify the costs, of the ***additional*** requirements that apply only to Grade A farms. When asked "Did you start with an investigation of what requirements apply to a Grade B farm?," Mr. Erba answered "No." (E. Erba (DFA) Tr. 7895 line 26 - 7896 line 3).

In addition, Mr. Erba cited certain physical facilities, such as milk barn restrooms and lagoons, which are not required for either Grade B or Grade A status, and therefore should not be considered at all. (E. Erba (DFA) Tr. 7901 line 23 -7904 line 25; 7907 line 25 - 7908 line 25; Hearing Exh. 340 (IDFA Exh. 340) (the PMO) at pp. 46, 60).

With over 99% of milk already having attained Grade A status for over 10 years - far in excess of the amount needed to supply Class I needs - the only possibly relevant consideration is the cost of ***maintaining*** Grade A status. Only two such costs have been identified, neither of which is material:

1. The requirement that Grade A farms be inspected two times a year rather than one time a year. But most of the time, those inspections are paid for by the plant that buys the milk, or by the state. Some states do the inspection for free. Or, the inspection may be done as part of obtaining a milk shipper license, in which case, it is not necessarily an additional cost. (M. Brown (IDFA) Tr. 10345 line 13 - 10346 line 20).

2. The requirement that any barn walls with permeable surfaces be painted once a year. (Hearing Exh. 433 (IDFA Exh. 57), at p. 34, testimony of M. Brown (IDFA)).

4. Other Alleged, Non-Mandatory Costs Are A Red Herring.

Perhaps recognizing that the Grade A versus Grade B issue no longer supports their position on Class I differentials, proponents have attempted to switch the discussion to additional requirements that some Class I processors have allegedly imposed on their suppliers that go beyond Grade A requirements. But now we are dealing with privately negotiated “extras,” not mandatory requirements. It is hard to see why those costs should be the subject of government mandate when the underlying requirements are not. (Hearing Exh. 433 (IDFA Exh. 57), at p. 34, testimony of M. Brown (IDFA)).

In any event, once again, these alleged additional costs are not specific to Class I. The requirement most frequently mentioned by the proponents is the requirement of some Class I processors that the milk supplied have somatic cell counts ("SCC") lower than the 750,000 cell limit imposed by the PMO. E.g, Hearing Exh. 310 (NMPF Exh. 37) at p. 7, testimony of J. Simms (Lone Star)). But there are at least two reasons why farmers achieve such lower somatic cell counts that have nothing to do with fluid milk:

a. Many farmers supply milk to manufacturing facilities, including coop-owned facilities, that participate in the export market. 18% of U.S. milk production is exported, 80% in the form of skim milk ingredients, including nonfat dry milk, skim milk powder, whey protein concentrates and the like. Most of the exports are Class IV, although the United States does export 7% of its cheese production. (P. Vitaliano (NMPF) 4694 Line 5 - 4695 line 28).

As confirmed during the testimony of the proponents, anyone exporting dairy products of any kind (not just Class I) to any of 27 European countries must meet the European standard of a somatic cell count of no more than 400,000 somatic cell/ml. (C. Hoeger (Prairie Farms) Tr. 8330 lines 21-24; "Frequently Asked Questions (FAQ) AMS Dairy Program European Union Health Certificate Program (January 2022)," available at https://www.ams.usda.gov/sites/default/files/media/FrequentlyAskedQuestionsEUHealth CertificationProgram.pdf ("[T]he regulatory limit for somatic cells counts in milk is 750,000 cells/mL in the United States as established by the Pasteurized Milk Ordinance (PMO). The regulatory limit for somatic cell counts in the EU is 400,000 cell/ml."); Hearing Exh. 433 (IDFA Exh. 57), at p. 35, testimony of M. Brown (IDFA)).

b. Lower somatic cell counts benefit any farmer seeking to maximize his or her milk production and cow health. For example, reducing somatic cell counts from 400,000 to 200,000 increases milk production by 312 pounds per cow. See "Effect of Increased Somatic Cell Count on Herd Level Yield of Milk and Milk Components," Buckeye Dairy News Volume 19, Issue 5 at Table 3, available at https://dairy.osu.edu/newsletter/buckeye-dairy-news/volume-19-issue-5/effect- increased-somatic-cell-count-herd-level-yield. (Hearing Exh. 433 (IDFA Exh. 57), at p. 35, testimony of M. Brown (IDFA)). And, cheese quality goes up because protein quality is better if SCC are low. (M. Brown (IDFA) Tr. 10304 line 22- 10305 lines 20). Thus, SCC levels are not a Class I issue.

Data from the six FMMOs for which USDA gathers SCC information further so demonstrates. Farmers clearly understand the general economic benefits of better cow health and have been very successful in maintaining low somatic cell counts in both high ***and low*** Class I utilization markets, and with both cooler and hotter temperatures. The table below shows the somatic cell count averages over the past five years. All six orders have average cell counts well below both the FDA limit of 750,000 cells/ml and the EU limit of 400,000 cells/ml. All six orders average below 250,000 cells/ml., and three are under 200,000 cells/ml.:

Averages for Federal Orders with Somatic Cell Count Programs, 2018-2022

Order	Average SCC	Class I Utilization	Class I Milk	Total Milk
Appalachian	216	71.0%	320,435,162	451,546,891
Florida	232	82.9%	172,796,460	208,514,202
Southeast	240	70.0%	271,871,936	388,439,710
Upper Midwest	173	9.6%	217,260,718	2,261,676,939
Central	197	31.0%	380,783,333	1,230,146,815
Mideast	176	35.2%	539,583,339	1,532,144,118

Source: USDA Exhibit 44, Milk Components by Class and Order 2008-2023 YTD (Table 1)

(Hearing Exh. 433 (IDFA Exh. 57), at p. 36, testimony of M. Brown (IDFA)).

The fact that these low SCC levels are being achieved in both high Class I utilization orders (Appalachia, Florida and Southeast) as well as low and medium Class I utilization orders (Upper Midwest, Central and Mideast) makes clear that SCC levels are not a Class I issue. There is no reason for fluid milk processors to bear the cost of farmers attaining low SCC counts through the Class I differential when there is obviously no significant relationship between SCC counts and milk going to Class I needs. (Hearing Exh. 433 (IDFA Exh. 57), at p. 36, testimony of M. Brown (IDFA)).

X. USDA SHOULD REJECT PROPOSAL 21, WHICH WOULD INCREASE THE CLASS II DIFFERNTIAL FROM $0.70/CWT. TO $1.56/CWT.

For the reasons explained in the Proposed Findings that follow, the Proposed Conclusions Regarding Proposal 21 are:

PROPOSED CONCLUSIONS REGARDING PROPOSAL 21

a. No evidence suggests a need to raise the Class II differential in order to attract an adequate supply of milk for Class I or Class II needs. To the contrary, the supply is more than adequate. USDA has previously rejected proposed Class II differential increases on this basis in the National Hearing decision announced in 1993.

b. Raising the Class II differential would lead to the substitution of nonfat dry milk for fresh farm milk in many Class II products. This opportunity already exists and is already used to some extent. An increase in the Class II differentials as is now being proposed would further shift the economics dramatically in that direction. This would mean that in terms of net milk price, farmers would likely be made worse off by Proposal 21. Rather than receiving $0.86 more via the proposed higher Class II differential, they will be receiving $0.70 less by only being paid the Class IV price for their milk. This concern was one of the reasons that NMPF also opposes Proposal 21.

c. The significant cost advantage of using nonfat dry milk instead of Class II nonfat solids creates a very uneven competitive surface between stand-alone Class II plants compared to Class I distributing plants that also manufacture Class II products. Class I handlers would not be able to take advantage of the lower priced nonfat dry milk, because they are not allowed to depool, and would still have to account to the pool at the Class II price. This concern was one of the reasons that NMPF also opposes Proposal 21.

d. Class II has many unique aspects that collectively dictate that Class II regulated minimum pricing provides maximum flexibility to ensure that market forces can match supply with needs throughout the FMMO system. This is particularly important because a uniform Class II minimum price applies in both surplus and deficit milk supply markets. That system is working very well under current Class II pricing and should not be changed.

e. Proposal 21 should be rejected.

PROPOSED FINDINGS REGARDING PROPOSAL 21

A. Class II Differentials Should Not Be Raised In Light Of The More Than Adequate Milk Supply.

Current market conditions have created a more than sufficient supply of milk to serve Class I (fluid) needs, the principal impetus behind the FMMO system, as well as Class II needs. Class I milk only constitutes 27% of the milk pooled on federal orders, and only 20% of all milk. This is the lowest utilization rate in the ninety-year history of the FMMO system. (Hearing Exh. 489 (IDFA Exh. 64) at p. 3, testimony of M. Brown (IDFA)).

Class II only comprises an additional 9% of federal order milk usage. The total FMMO milk supply thus greatly exceeds Class I needs, as well as Class I and II needs combined. See USDA Market Summary and Utilization 2022 Annual Report, available at https://www.ams.usda.gov/sites/default/files/media/2022AnnualPriceandPoolReport.pdf. (Hearing Exh. 489 (IDFA Exh. 64) at p. 3, testimony of M. Brown (IDFA)).

The reserve supply of milk, i.e., that milk currently being used to make manufactured Class III and IV products, dwarfs the 30-35% of total milk level USDA has deemed adequate.

See Milk in the New England and Other Marketing Areas; Decision on Proposed Amendments to Tentative Marketing Agreements and Orders, 58 FR 12634, 12646 (March 5, 1993) ("a reserve milk supply equal to 30 to 35 percent of the total milk in the market appears to be a reasonable reserve requirement.") (Hearing Exh. 489 (IDFA Exh. 64) at p. 3, testimony of M. Brown (IDFA)).

Accordingly, Class II differentials do ***not*** need to be raised because farmers need a financial incentive to produce more milk to meet unmet needs. Proposal 21 should be rejected on that ground alone. (Hearing Exh. 489 (IDFA Exh. 64) at p. 3, testimony of M. Brown (IDFA)).

This rationale is squarely based in USDA's own thinking when in 1990 it held "national hearings" to consider a wide variety of proposals to amend various provisions of FMMOs. One set of proposals sought to increase the-then $0.10 Class II differential to either $0.50, $1.00 or $1.20. (Hearing Exh. 489 (IDFA Exh. 64) at p. 4, testimony of M. Brown (IDFA)).

The proponents of these Class II differential increases pointed to a variety of factors to try to convince USDA to increase Class II differentials. They argued that handlers "were willing to pay much more than the minimum Class II prices," with over-order prices for Class II milk "common throughout the country, often ranging from 50 cents to $1.00 or more over the Class III price." Milk In the New England and Other Marketing Areas; Decision on Proposed Amendments to Tentative Marketing Agreements and Orders, 58 Fed. Reg. 12634, 12652 (Mar. 5, 1993).[25] Proponents also contended that Class II products were claimed to "show greater strength and profitability relative to dairy products in general." Id. at 12653.

The proponents also sought to justify an increase in Class II differentials based on handlers' purported relative disincentive instead to use nonfat dry milk. Id. Proponents further

[25] Class III at that time included those products now found in Classes III and IV.

claimed that Class II uses “should bear, along with fluid milk products, a reasonable part of the cost of attracting a sufficient supply of high-quality milk to the market.” Id at 12652-53. In addition, they contended that “the cost of moving producer milk to Class II outlets far exceeds the order Class II differentials and that only through over-order prices can milk be attracted away from the more remunerative Class III outlets, which are usually located within the milkshed.” Id. at 12653.

USDA rebuffed all of these arguments. USDA did acknowledge that “the present Class II prices under the orders substantially understate[d] the price that regulated handlers are paying for Class II milk,” given that “handlers in most areas are paying much more than this to get a supply of milk for the soft product uses.” Id. USDA further acknowledged that “handlers want a regular supply of Grade A milk for such uses, which requires essentially all of the costly supply services associated with procuring milk for the Class I market,” including “moving the milk long distances from the milkshed to the city processing plants and balancing milk supplies with demand,” and that “handlers also often want milk delivered in a standardized form.” USDA acknowledged that the current Class II differential “does not cover the cost of these services.” Id.

Nonetheless, none of this was enough to convince USDA, which rejected all of the proposals to increase Class II differentials. USDA’s reasoning was telling and remains highly relevant today. In rejecting the proposals to increase Class II differentials, USDA focused on the fact that over order premiums “in conjunction with Class I prices are generating adequate supplies of Grade A milk for both Class I and Class II uses.” Specifically, “an analysis of supply and demand conditions under the orders indicates that there are adequate reserves of Class III milk to balance both Class I and Class II needs:” Accordingly, USDA “concluded that an increase in Class II differentials under all orders is not needed.” Id.

All of the reasons USDA advanced then in rejecting Class II differential increases apply fully today. Today, as then, over order premiums "in conjunction with Class I prices are generating adequate supplies of Grade A milk for both Class I and Class II uses." Today, as then, "an analysis of supply and demand conditions under the orders indicates that there are adequate reserves of Class III [and IV] milk to balance both Class I and Class II needs." Accordingly, today, as then, "an increase in Class II differentials under all orders is not needed." (Hearing Exh. 489 (IDFA Exh. 64) at pp. 4-5, testimony of M. Brown (IDFA)).

Proposal 21 proponent AFBF admitted that it had not analyzed the adequacy of the current milk supply to serve Class II needs. (R. Cryan (AFBF) Tr. 8810 lines 1-4).

B. Proposal 21 Would Cause Class II Handlers To Switch To Class IV Products, Reducing Farmer Revenues.

Proposal 21 would greatly incentivize the substitution of Class IV dry milk products for farm milk in the production of Class II products. Rather than receiving $0.86 more via the proposed higher Class II differential, farmers would be receiving $0.70 less by only being paid the Class IV price for their milk. (M. Brown (IDFA) Tr. 11354 line 17 - 11355 line 3).

The following chart set forth the economics of making Class II product using: (a) purchased nonfat dry milk, versus (b) purchased farm milk at the current Class II differential of $0.70, versus (c) purchased farm milk at Proposal 21's proposed Class II differential of $1.56. The chart uses average actual 2023 NDPSR advanced nonfat dry milk and Federal Order Class II nonfat solids prices to provide for consistent timing of comparisons, actual average delivery costs and service charges based upon data received from actual market participants, and a carrying cost for storing the powder:

2023 Market Based Cost Comparison for Delivered Class II Skim Solids

Purchased Nonfat Dry Milk		Value	Description
NDPSR ADVANCE NONFAT DRY MILK	$	1.2181	2023 Monthly NDPSR ADVANCE Average Price
+ Delivery Cost	$	0.0375	Average 2023 Bid Premium and Hauling for Full Loads
Delivered NFDM per Pound	$	1.2556	Advance Price + Delivery Cost
Delivered Nonfat Solids Cost per Pound	**$**	**1.2944**	Delivered NDM per Pound ÷ 97% Solids

Farm Milk, Current Class II Differential		Value	Description
NDPSR ADVANCE NONFAT DRY MILK	$	1.2181	2023 Monthly NDPSR ADVANCE Average Price
Class IV SNF Per Pound	$	1.0398	(NDPSR NDM-0.1678)*0.99
Current Class II Differential	$	0.7000	
Class II SNF per CWT	$	10.06	Advanced Class IV SNF * 9 + $0.70
+ Delivered Service Charge Class II	$	1.3000	Average Class II Service Charge
Delivered Class II Skim per CWT	$	11.36	Class IV Skim + Class II Differential + Delivered Service Charge
Delivered Nonfat Solids Cost per Pound	**$**	**1.2620**	Delivered Skim per Cwt / 9 Pounds Yield/Cwt

Farm Milk, Proposed Class II Differential		Value	Description
NDPSR ADVANCE NONFAT DRY MILK	$	1.2181	2023 Monthly NDPSR ADVANCE Average Price
Class IV SNF Per Pound	$	1.0398	(NDPSR NDM-0.1678)*0.99
Proposal 21's Proposed Class II Differential	$	1.5600	
Class II SNF per CWT	$	10.92	Advanced Class IV SNF * 9 + $1.56
+ Delivered Service Charge Class II	$	1.3000	Average Class II Service Charge
Delivered Class II Skim per CWT	$	12.22	Class IV Skim + Class II Differential + Delivered Service Charge
Delivered Nonfat Solids Cost per Pound	**$**	**1.3576**	Delivered Skim per Cwt / 9 Pounds Yield/Cwt

Source: USDA Announcement of Advanced Prices and Pricing Factors, November 23, 2023

(Hearing Exh. 489 (IDFA Exh. 64) at p. 8, testimony of M. Brown (IDFA); M. Brown (IDFA) Tr. 11355 line 11- 11361 line 8; 11377 lines 22-27).

This analysis shows that under the current Class II differential of $0.70/cwt, it is on average cheaper for a Class II processor to use farm milk, priced at the Class II price, to make its products. Specifically, the delivered nonfat solids cost per pound using Class II farm milk is on average $1.2620, as compared to a cost of $1.2944 using nonfat dry milk.

However, were the Class II differential to be increased to $1.56/cwt as Proposal 21 suggests, the delivered nonfat solids cost using Class II farm milk would on average increase to $1.3576/pound, 6.32 cents per pound of nonfat solids higher than the cost of $1.2944/pound of nonfat solids using nonfat dry milk. This would incentivize Class II processors materially to increase their use of nonfat dry milk, a Class IV product, rather than Class II farm milk. (Hearing Exh. 489 (IDFA Exh. 64) at p. 8, testimony of M. Brown (IDFA)).

This is precisely the kind of computation that dairy product manufacturers routinely perform to decide whether to make a given product from Class II farmer milk or from milk powder. (M. Brown (IDFA) Tr. 11355 lines 11-20; 11361 lines 9-20). And, purchase decisions in the dairy industry are made based on far small price differences than 6.32 cents per pound of nonfat solids. (M. Brown Tr. 11362 line 21 - 11363 line 12).

NMPF decided it would not submit a proposal to support an increase in the Class II differential at this hearing, and it testified in opposition to Proposal 21. NMPF's chief concern is that Proposal 21's increase might incentivize the substitution of Class IV powder for fresh Class II milk ingredients. NMPF concluded that encouraging substitution of lower cost ingredients for higher value fresh milk ingredients is counter-productive to the basic purpose of the FMMO program. (Hearing Exh. 499 (NMPF Exh. 113) at p. 1, testimony of C. Rasch (Michigan Milk Producers)).

While substitution of current nonfat dry milk values for Class II Skim solids in raw milk does not currently make much economic sense, Proposal 19's proposed $0.95/cwt increase in the price of Class II skim solids would change the economic dynamics behind substitution. That substitution could take place at various levels in the supply chain from the condensed skim manufacturing process to the mixing plant itself where the finished product is made. The net result would be the same amount of milk solids used, with no additional revenues for dairy farmers. Hearing Exh. 502 (IDFA Exh. 66) at p. 2, testimony of S. Galbraith (Saputo).

In fact, in 111 out of 134 months since June 2012 (82.8% of the time), a processor buying a six-month supply of nonfat dry milk would have had a lower cost than if it had bought Class II nonfat solids as priced in Proposal 21. (Hearing Exh. 489 (IDFA Exh. 64) at p. 9, testimony of M. Brown (IDFA)). This means that consistently and over the long-term, buying nonfat dry milk under the Proposal 21 would be a much better cost option than buying Class II skim. (M. Brown (IDFA) Tr. 11367 lines 12-19).

Indeed, the incentives can actually be even greater. If the processor had bought the six-month supply of nonfat dry milk in the most advantageous month during this time period, the cost advantage over Class II nonfat solids would have been a little more than $0.21 per pound, an enormous savings. Hearing Exh. 489 (IDFA Exh. 64) at p. 9 and Appendix 1, testimony of M. Brown (IDFA)).

NMPF similarly observed that because milk powder is relatively non-perishable, it can be purchased at an attractive price, stored under proper conditions, and utilized within twelve months when it more financially advantageous. In other words, the original cost of the ingredient may be less than the current cost of that same ingredient. In addition, because milk powder has nearly all the water removed, it is much cheaper per pound of milk solids to transport than fresh milk ingredients. This difference in transportation cost also contributes to the incentive to substitute milk powder for fresh milk ingredients. (Hearing Exh. 499 (NMPF Exh. 113) at p. 2, testimony of C. Rasch (Michigan Milk Producers)).

For the foregoing reasons identified by IDFA and NMPF: (a) powder may be bought at a different time and cheaper price than the time and price when the alternative fresh milk would have been bought, and (b) nonfat milk powder has huge advantages over fresh milk in terms of transportation costs, it is simplistic and inaccurate to believe that substitution can be avoided by setting the Class II differential equal to the cost of drying milk, as Proposal 21 proposes to do. (R. Cryan (AFBF) Tr. 8810 lines 10-21).

AFBF was also under the mistaken notion that nonfat dry milk could only be stored for a couple of months (R. Cryan (AFBF) Tr. 8814 lines 19-28), when as established by the above testimony, it can be stored at least a year, and potentially as long as two years. (M. Brown (IDFA) Tr.11362 lines 11-17).

Not every Class II processor would switch to Class IV nonfat dry milk for 100% of their needs. Some processors consider farm milk to provide a better tasting product. Others are far less convinced. But the cost disparity resulting from Proposal 21 would predictably cause many Class II processors to make the change. (Hearing Exh. 489 (IDFA Exh. 64) at p. 9, testimony of M. Brown (IDFA)). Indeed, AFBF itself ultimately acknowledged that "for some processors, for some products," the "economic balance of the choice will be different and more in favor of substitution of powder if the Class II differential is more than double, all other things being equal." (R. Cryan (AFBF) Tr. 8817 lines 9-14). However, unlike the detailed analysis performed by IDFA ad set forth on p. 352 above, AFBF acknowledged that it had not "done any analysis, even rough analysis, to determine if there's a price point or a differential point at which uneconomic substitutions might be incentivized." (R. Cryan (AFBF) Tr. 8821 lines 7-14).

When the Class II price was tied to the Class III cheese price during the 1990s, many retail and ice cream mix manufacturers switched to dry dairy solids and anhydrous milkfat due to the vast discrepancy in price between Class II and Class III. (Hearing Exh. 439 (IDFA Exh. 63) at p. 2, testimony of T. Galloway (Galloway Company). During that time period, a consulting firm advised a large Class II manufacturer when to buy nonfat dry milk vs Class II Condensed milk, in an effort to minimize cost. It saved money for the buyer, while at the same time made production planning for the Class II condensed skim supplier more difficult. The Class II supplier was losing sales and losing predictability. (Hearing Exh. 489 (IDFA Exh. 64) at p. 9, testimony of M. Brown

(IDFA)). Similarly, while one of the very largest U.S. makers of candy (a Class II product) has stuck with using farmer milk, the other switched to dry dairy solids decades ago, due to cost considerations; both companies continue to be successful. (Hearing Exh. 439 (IDFA Exh. 63) at p. 2, testimony of T. Galloway (Galloway Company)).

Proposal 21 therefore will not attract more milk to Class II uses, increase the blend price, or reduce de-pooling and negative PPDs. In fact, Proposal 21 is likely to reduce the blend price, by taking more Class II milk out of the pool, replaced by lower priced regulated Class IV ingredients, or by milk ingredients from unregulated markets. (Hearing Exh. 439 (IDFA Exh. 63) at pp. 1-2, testimony of T. Galloway (Galloway Company)).

C. Class II Manufacturers Already Commonly Use At Least Some Nonfat Dry Milk.

Switching from fresh farm milk to nonfat milk powder is not a huge step. Class II manufacturers already commonly maintain a pre-purchased inventory of nonfat dry milk, obtained if possible when nonfat dry milk market prices are low. They can use those solids anytime they provide a cheaper source of solids than buying Class II milk. Again, it is convenient for processors to do this because nonfat dry milk can be stored without refrigeration in a dry location and used for at least a year after purchase. Given its storability, nonfat dry milk is easier to manage than farm milk, which must be kept refrigerated and has a short shelf life. (Hearing Exh. 489 (IDFA Exh. 64) at p. 10, testimony of M. Brown (IDFA)).

In fact, it is common to obtain and maintain a pre-purchased inventory of nonfat dry milk without necessarily knowing what specific Class II product will be manufactured from it. Nonfat dry milk is being used in extensively in yogurt, cottage cheese ice cream and confections, mostly chocolate candy. (Hearing Exh. 489 (IDFA Exh. 64) at p. 10, testimony of M. Brown (IDFA)). Processors will look to pile up on nonfat dry milk in times of surplus and purchase condensed skim milk at less than desired premium levels. (Hearing Exh.504 (IDFA Exh. 68) at p. 2, testimony of K. Powell (Lakeview Farms)).

The circumstances in which this occurs are increased by the fact that Class II and Class IV are priced on a different schedule, with Class II skim being priced on an advanced basis and Class IV after the fact. This leads to price disparities between Class IV powder and Class II farm milk that can make switching economically advantageous. The circumstances in which this would occur would be vastly increased were the economics to be changed as Proposal 21 indicates. (Hearing Exh. 489 (IDFA Exh. 64) at p. 10, testimony of M. Brown (IDFA)).

D. Substitution Would Be A Risk For Many Products.

Proponent AFBF's notion that displacement can be avoided due to the cost of re-wetting dry milk solids is not correct. For example, to make ice cream, one must combine a number of ingredients both liquid and dry, hydrate to the proper total solids, and pasteurize. No rewetting needs to be performed because the corn sweetener and liquid sugar are at a temperature sufficiently high to fully hydrate the dry milk solids. (Hearing Exh. 439 (IDFA Exh. 63) at p. 2, testimony of T. Galloway (Galloway Company)).

The same concern for substitution applies to the Class II product sweetened condensed milk (SCM), which is used as an ingredient in the manufacturing of unregulated food products. The competitor to sweetened condensed milk is a combination of butter and powder. Customers are unlikely to stay with SCM at a differential of $1.56/cwt on raw milk, particularly when that equates to $2.58/cwt of finished SCM. And, when a food manufacturer makes the decision to put processing equipment in place to blend and hydrate butter and powder, it does not switch back and forth with liquid ingredients. The capital investment in the equipment is now a sunk cost that needs to be amortized over time. (Hearing Exh. 439 (IDFA Exh. 63) at p. 2, testimony of T. Galloway (Galloway Company)).

Galloway Company two years ago decided to build the first sweetened condensed milk evaporator since 1988, which was also built by Galloway Company. Galloway Company did the design work, purchased the equipment, purchased the concrete panels and on August 22, 2023 had the groundbreaking ceremony for a $65,000,000 expansion. If Proposal 21 prevails, all this effort and expense may be for naught. (Hearing Exh. 439 (IDFA Exh. 63) at p. 5, testimony of T. Galloway (Galloway Company)).

Another potential loss would be to competitors who have replaced dairy fat in the past with successful oil-based formulations (e.g., palm, soy). Retailers are asking for more oil-based formulations to offset the price volatility of dairy fat. Overall consumer tolerance of substitute dairy fats will cross when the price of non-standard identity dairy products (e.g., dairy dips, dairy dessert) exceeds the value to the customer. (Hearing Exh. 504 (IDFA Exh. 68) at p. 2, testimony of K. Powell (Lakeview Farms)). AFBF had not performed any study of the impact of increasing the Class II differential on the ability of fluid cream products to compete against nondairy fluid cream products. (R. Cryan (AFBF) Tr. 8839 lines 16-20).

E. Proposal 21 Also Creates A Significant Disadvantage For Class I Processors That Also Manufacture Class II Products In Their Class I Distributing Plant.

A growing number of large stand-alone plants make a growing share of the variety of Class II products sold today. Because these plants are not required to be pooled, they can take full advantage of the lower skim solids price that nonfat dry milk would provide compared to Class II skim solids under Proposal 21. (Hearing Exh. 489 (IDFA Exh. 64) at pp. 10-11, testimony of M. Brown (IDFA)).

However, this benefit would not apply to all Class II processors, leading to regulation-based competitive disadvantages. Class I distributing plants that make Class II products cannot depool. And, they cannot take advantage of the lower priced nonfat dry milk, because they will be required to account to the pool as if they had used fresh milk to make the Class II products. The 6.6 cents (or more) advantage that the free-standing Class II plant would have over the Class I plant making Class II products would be a very significant competitive advantage. Class II price contracts can be awarded based on differences of small fractions of a cent. (Hearing Exh. 489 (IDFA Exh. 64) at p. 11, testimony of M. Brown (IDFA)).

NMPF voiced the same concern. Many pool distributing plants generate excess cream which is not utilized in the production of packaged Class I products. This excess cream is used to produce butterfat intensive byproducts such as half & half, whipping cream, sour cream, cottage cheese, and ice cream mixes, all of which are categorized as Class I. Any distributing plant that is fully regulated has this Class II utilization included in the calculation of its obligation to the producer settlement fund. However, if these same Class I products are made at a partially regulated or completely unregulated plant, including a plant that has depooled based in the relationship between Class II versus Class III and IV prices, those plants would have no obligation to the pool. (Hearing Exh. 499 (NMPF Exh. 113) at p. 3, testimony of C. Rasch (Michigan Milk Producers)). Any increase in the Class II price is unavoidable for a plant that also bottles a significant amount of Class I fluid milk) but can be easily avoided by its major competitors who can depool their Class II only dedicated plants. (Hearing Exh. 455 (MIG Exh. 17A) at p. 7, testimony of W. Erickson (Anderson Erickson)).

F. Class II Is A Uniquely Dynamic Market That Is Functioning Well And Does Not Warrant A Higher Differential.

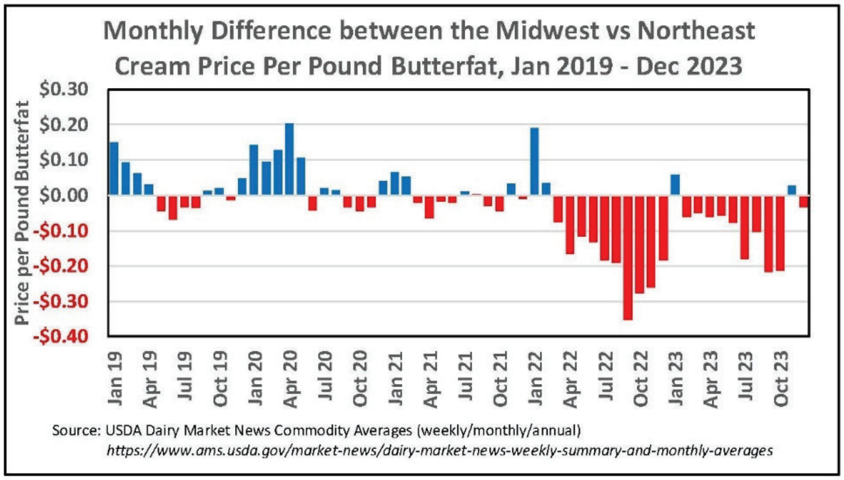
There are additional considerations weighing against an increase in the Class II differentials.

Class II is unique in several respects. Class II is the smallest class. Its price is based off of the supply and demand for another class (Class IV) whose supply and demand does not match that of Class II products. Class II products containing skim milk solids can be manufactured with either fresh milk and dried milk products like nonfat dry milk, and buttermilk, both of which are Class IV products. Dry whey may also be used in some Class II products when the price spread between Class II nonfat solids and alternative solids sources is wide enough. (Hearing Exh. 489 (IDFA Exh. 64) at p. 11, testimony of M. Brown (IDFA)).

Furthermore, dairy farmers are not incentivized to serve Class II needs in the way they are incentivized to serve Class I needs. A farmer is not required to serve Class II needs as a prerequisite to having his or her milk pooled and sharing in the pool draw. Finally, unlike Class I milk, the Class II milk price is uniform throughout the federal order system, even though the milk supply available to serve Class II needs varies greatly by location and temporally depending upon local supply conditions. (Hearing Exh. 489 (IDFA Exh. 64) at p. 12, testimony of M. Brown (IDFA)).

All of these unique attributes dictate that Class II regulated pricing provide maximum flexibility to ensure that market forces can work throughout the FMMO system to match supply with needs, regardless of the wide variability in milk supply conditions either geographically or seasonally. That system is currently working very well and should not be changed. (Hearing Exh. 489 (IDFA Exh. 64) at p. 12, testimony of M. Brown (IDFA)).

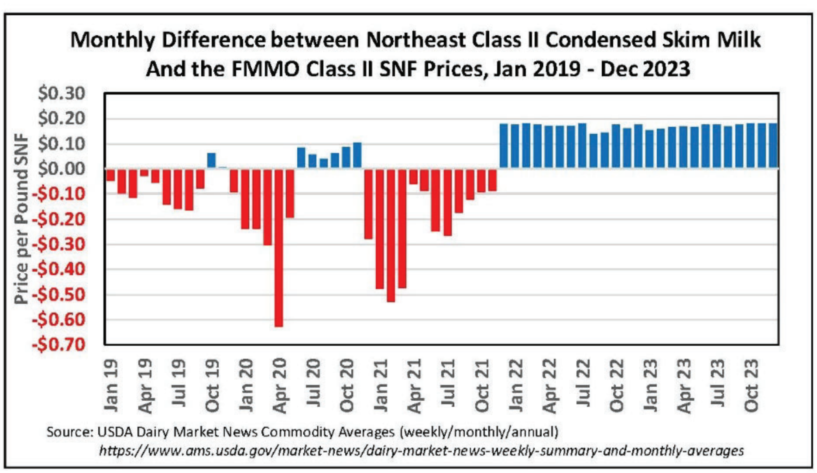
In fact, the market has done an admirable job of developing a variable Class II price surface across time and space through variable premiums layered on top of the regulated Class II price. Only a dynamic marketplace can fill that role. The dynamism in the market is exemplified by the regional variations in the market price for Class II cream over the past five years, based on prices reported in USDA's AMS Dairy Market News:



(Hearing Exh. 489 (IDFA Exh. 64) at p. 12 and Appendix 2, testimony of M. Brown (IDFA)).

As shown, the relationship of Class II cream values between the Midwest and the Northeast varied substantially in 2022 from month to month, and from more than 35 cents lower to more than 20 cents higher, all as established by supply and demand factors. The two regional cream prices adjusted, often independently, as necessary to balance supplies. (Hearing Exh. 489 (IDFA Exh. 64) at p. 13, testimony of M. Brown (IDFA)).

Like cream, condensed skim milk, an intermediate dairy ingredient often used in Class II products, is subject to significant market forces outside of the small Class II market, particularly shifts in supply relative to demand:



(Hearing Exh. 489 (IDFA Exh. 64) at p. 13 and Appendix 3, testimony of M. Brown (IDFA)).

While tighter supplies of skim milk solids have helped stabilize condensed skim costs over the past two years, earlier periods of surplus milk supplies, well before the COVID epidemic, created significant negative margins on Class II condensed skim sales - a factor caused by imbalances of manufacturing milk and completely independent of the Class II regulated differential. Clearly the market should, and will, determine the ultimate price, and not the regulated minimum. (Hearing Exh. 489 (IDFA Exh. 64) at p. 14, testimony of M. Brown (IDFA)).

Proposal 21 should not be adopted.

CONCLUSION

Proposals 8 and 9 (which are identical) and Proposal 14 (or, if USDA prefers, Proposal 15) should be adopted. Proposals 1, 2, 3, 4, 5, 6, 7, 10, 11, 12, 13, 16, 17, 18, 19 and 21 should be rejected. IDFA is neutral on Proposal 20.

Respectfully submitted,

/s/Steven J. Rosenbaum
Steven J. Rosenbaum
Covington & Burling LLP
850 10th Street, N.W.
Washington, D.C. 20001
(202) 662-5568
srosenbaum@cov.com
Counsel for the International Dairy Foods Association

April 1, 2024

CERTIFICATE OF SERVICE

Milk in the Northeast and Other Marketing Areas
Docket No.: 23-J-0067

Having personal knowledge of the foregoing, I declare under penalty of perjury that the information herein is true and correct, and this is to certify that a copy of the PROPOSED FINDINGS AND CONCLUSIONS OF THE INTERNATIONAL DAIRY FOODS ASSOCIATION has been furnished and was served by electronic mail upon the following parties on April 1, 2024 by the following:

USDA (OGC)
Brian Hill, OGC
Brian.Hill1@usda.gov
Michelle McMurtray, OGC
Michelle.McMurtray@usda.gov
Donna Erwin, OGC
Donna.Erwin@usda.gov
Carla Wagner, OGC
Carla.Wagner@usda.gov

USDA (AMS) Dairy Programs
Dana H. Coale, Deputy Administrator
Dana.Coale@usda.gov
Erin Taylor, Director Order Formulation and Enforcement Division
Erin.Taylor@usda.gov

AMS - FMMO Hearing
FMMOHearing@usda.gov

USDA (OSEC)
Katharine Ferguson
Katharine.Ferguson@usda.gov

Lucas S. Sjostrom, Executive Director
Minnesota Milk Producers Association
P.O. Box 65
Brooten, MN 56316
E-mail: lucas@mnmilk.org

Mike Stranz, Vice President of Advocacy
National Farmers Union
20 F Street NW, Suite 300
Washington, DC 20001
E-mail: mstranz@nfudc.org

Erick Metzger, General Manager
National All-Jersey, Inc.
6486 East Main Street
Reynoldsburg, OH 43068
E-mail: emetzger@usjersey.com

Counsel for Milk Innovations Group
Davis Wright Tremaine LLP
920 Fifth Avenue, Suite 3300
Seattle, WA 98104
Charles M. English, Jr.
E-mail: chipenglish@dwt.com
Ashley L. Vulin
E-mail: ashleyvulin@dwt.com
Grace Bulger
E-mail: gracebulger@dwt.com

John H. Vetne
E-mail: johnvetne@gmail.com

Counsel for National All-Jersey, Inc.
Wendy M. Yoviene
Baker, Donelson, Berman, Caldwell, & Berkowitz PC
901 K Street, NW, Suite 900
Washington, DC 20001
E-mail: wyoviene@bakerdonelson.com

Mark Lamers
Lamers Dairy, Inc.
N410 Speel School Rd.
Appleton, WI 54915
E-mail: mark.lamers@lamersdairyinc.com

Peter Vitaliano
National Milk Producers Federation
2107 Wilson Blvd., Suite 600
Arlington, VA 22201
E-mail: pvitaliano@nmpf.org

Counsel for National Milk Producers Federation
Stoel Rives LLP
101 S. Capitol Blvd., Suite 1900
Boise, ID 83702
Bradley R. Prowant
E-mail: bradley.prowant@stoel.com
Nicole C. Hancock
E-mail: nicole.hancock@stoel.com

Marvin Beshore
Johnson, Duffie, Stewart & Weidner
301 Market Street,
P.O. Box 109
Lemoyne, PA 17043
E-mail: embeshore@johnsonduffie.com

Mike Brown, Chief Economist
International Dairy Foods Association
1250 H Street, NW, Suite 900
Washington, DC 20005
E-mail: mbrown@idfa.org

Counsel for International Dairy Foods Association
Steven J. Rosenbaum
Covington & Burling LLP
1201 Pennsylvania Avenue, NW
Washington, DC 20004
E-mail: srosenbaum@cov.com

Counsel for Select Milk Producers, Inc.
Ryan K. Miltner
The Miltner Law Firm, LLC
100 North Main Street
P.O. Box 477
New Knoxville, OH 45871
E-mail: ryan@miltnerlawfirm.com
ryan@miltner-reed.com

Counsel to Dairy Cooperative Marketing Association, Inc.
John A. St. Peter
Dempsey Law Firm, LLP
10 Forest Avenue, Suite 200
Fond du Lac, WI 54935
E-mail: jsp@dempseylaw.com

American Farm Bureau Federation
600 Maryland Avenue SW, Suite 1000W
Washington, DC 20024
Sam Kieffer
E-mail: sk@fb.org
Roger Cryan
E-mail: rogerc@fb.org
Danny Munch
E-mail: dmunch@fb.org
Erin M. Anthony
E-mail: erin@fb.org
Mike Tomko
E-mail: miket@fb.org

Alison L. Krebs
Director, Dairy and Trade Policy
Leprino Foods Company
1830 W. 38th Avenue
Denver, CO 80211
E-mail: akrebs@leprinofoods.com

CERTIFICATE OF SERVICE (cont'd)
Milk in the Northeast and Other Marketing Areas
Docket No.: 23-J-0067

Marin Bozic
Edge Dairy Farmer Coop
E-mail: marin@bozic.io

Daniel Smith
E-mail: dsmith@gmavt.net
dsmith@dairycompact.org

Jim Sleper
Sleper Consulting, LLC
E-mail: sleperjp@gmail.com

Respectfully Submitted,

WANDA MOSBY Digitally signed by WANDA MOSBY Date: 2024.04.01 12:39:40 -04'00'

Wanda Mosby, Legal Assistant
USDA/Office of Administrative Law Judges
Hearing Clerk's Office, Room 1031-S
1400 Independence Ave., SW
Washington, DC 20250-9203