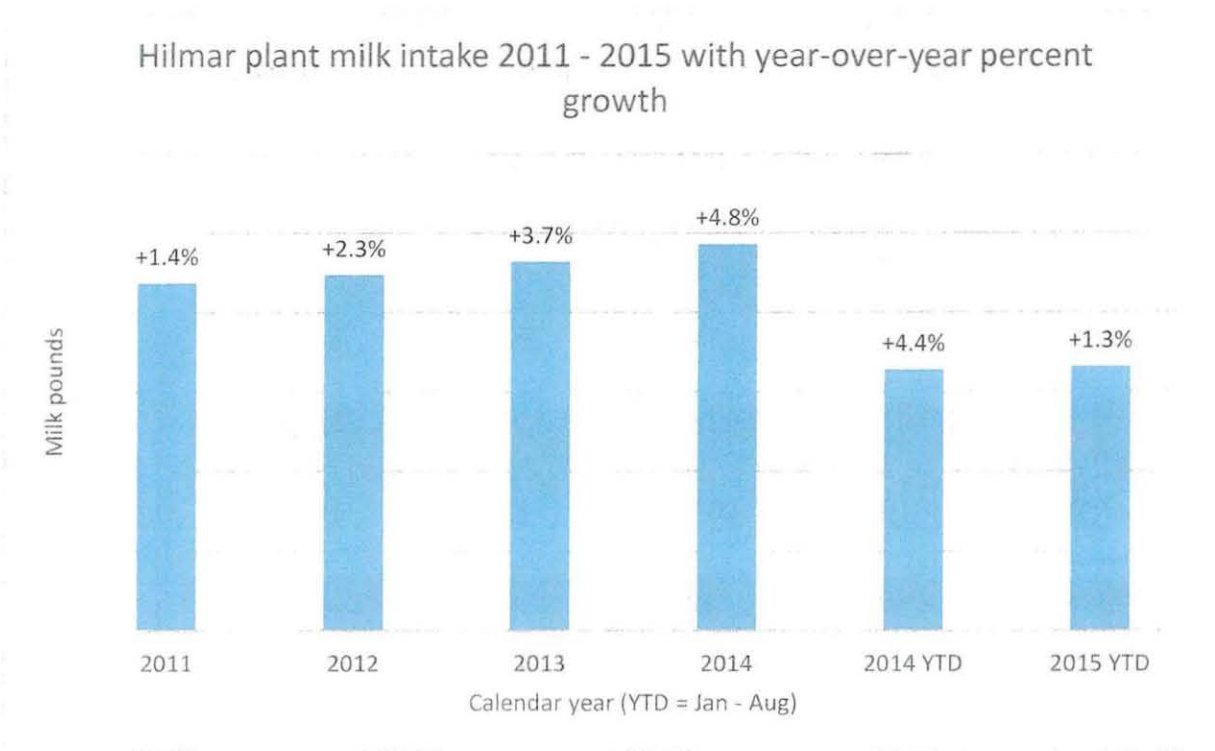


Figure 1: HCC's Hilmar plant has had no trouble increasing milk purchases*



Source: HCC, 2015.

*Volume amount confidential, axis not scaled (starts at 0 pounds)

Figure 2: California producer consolidation is not unique in the US

Change in number of licensed dairies			
	2010	2014	% change
TEXAS	590	440	-25%
MINNESOTA	4,540	3,605	-21%
WISCONSIN	12,710	10,290	-19%
US TOTAL	53,132	45,344	-15%
CALIFORNIA	1,715	1,485	-13%
MICHIGAN	2,230	1,950	-13%
IDAHO	585	530	-9%
NEW YORK	5,380	4,950	-8%
NEW MEXICO	140	130	-7%
PENNSYLVANIA	7,340	7,370	0%
WASHINGTON	460	480	4%

Source: USDA/NASS, 2015

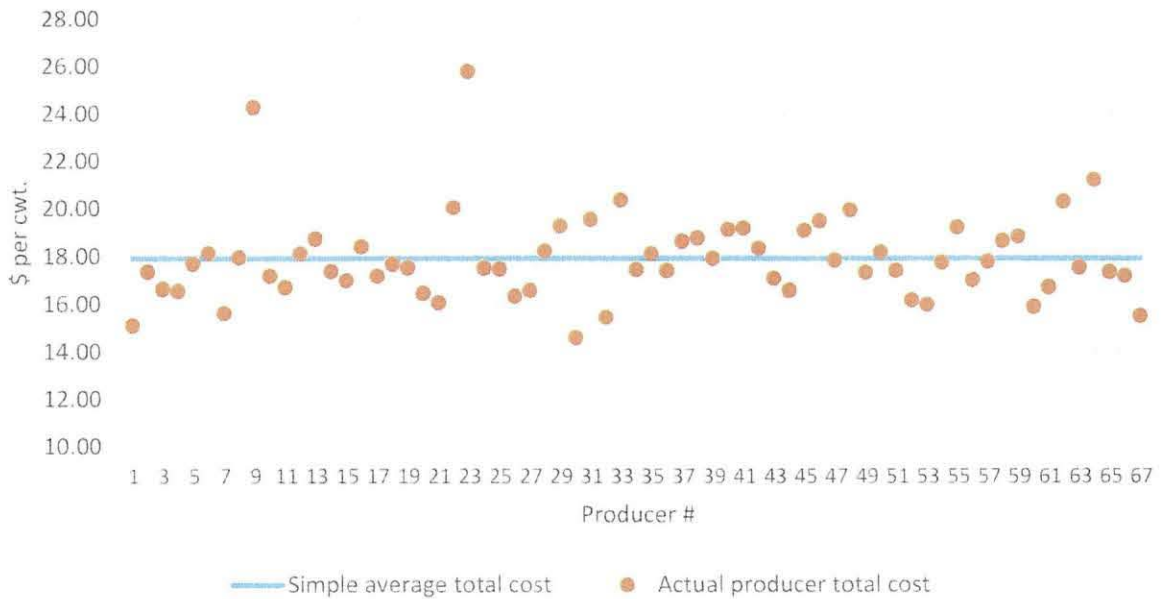
Figure 3: Producer consolidation is not unique around the world (CA = Canada)

Table 1. Near-identical decline in U.S. and Canada

Number of Dairy Farms				
	U.S.	EU-15	CA	NZ
'92	170,500	1,018,077	31,200	14,458
'00	105,055	690,140	19,411	14,025
'09	65,000	397,435	13,214	11,638
'92-'09	-62%	-61%	-58%	-20%

Source: IDFA

Figure 4: Cost of production varies between California producers. Total cost of production for conventional farms in CDFA's Cost of Production Feedback, Q4 2014*



Source: CDFA, HCC analysis, 2015

*Organic and producers with higher than 3.9% butter fat excluded, and only north and south valley included.

Figure 5: The California NASS All Milk price basis range compared to Class III is comparable to other major dairy states. 2010 – 2015 H1



Source: NASS, AMS/USDA, 2015

*Calculated by taking the spread between the minimum and maximum range between the NASS All Milk price for each state compared to Class III for each year 2010 to 2015 H1, then taking those max spreads for each year and averaging them. For example, if in the year 2010 the state's All Milk Price had a minimum of $-\$0.25$ per cwt spread to Class III in one month and a maximum price spread of $\$1.00$ per cwt to Class III in another month, for the year the max range in the spread would be $\$1.25$ per cwt. This is done for every year and averaged, with one half weighting for 2015 because it is a half year.

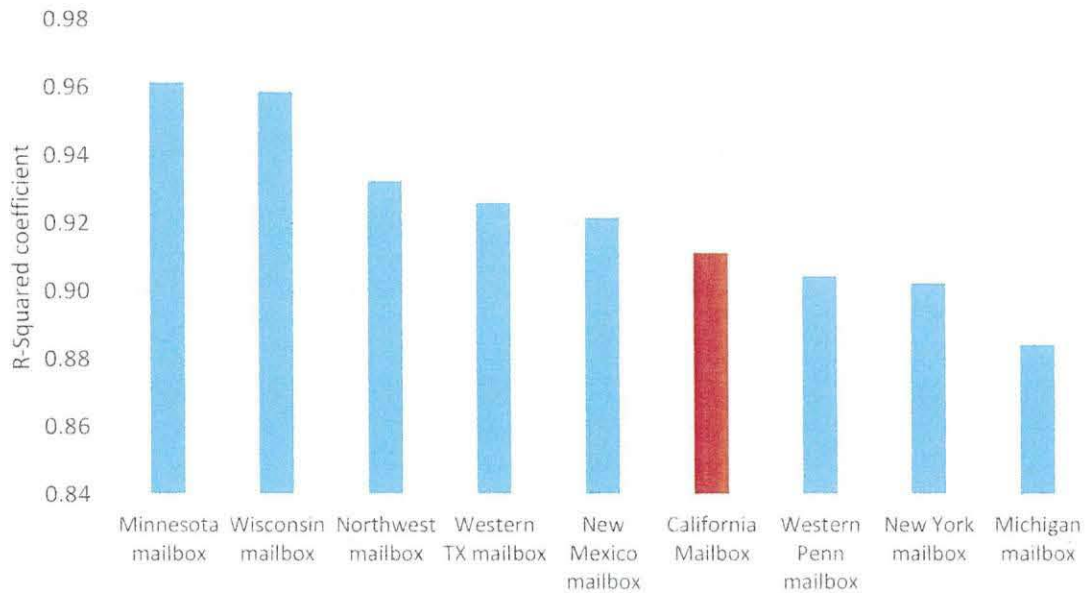
Figure 6: Average price spread versus Class III shows California ranks 1st. 2010 – 2015 H1



Source: NASS, AMS/USDA, 2015

*calculated by taking the spread between the All Milk Price between Class III for each month from 2010 to 2015 H1, then averaging this spread.

Figure 7: California mailbox prices correlation to Class III similar to other major dairy regions: R-squared coefficient Jan 2010 to May 2015



Source: AMS/USDA, 2015

Figure 8: The California NASS All Milk price basis range compared to a Class III & IV 50/50 split compares favorably to other major dairy states. 2010 – 2015 H1

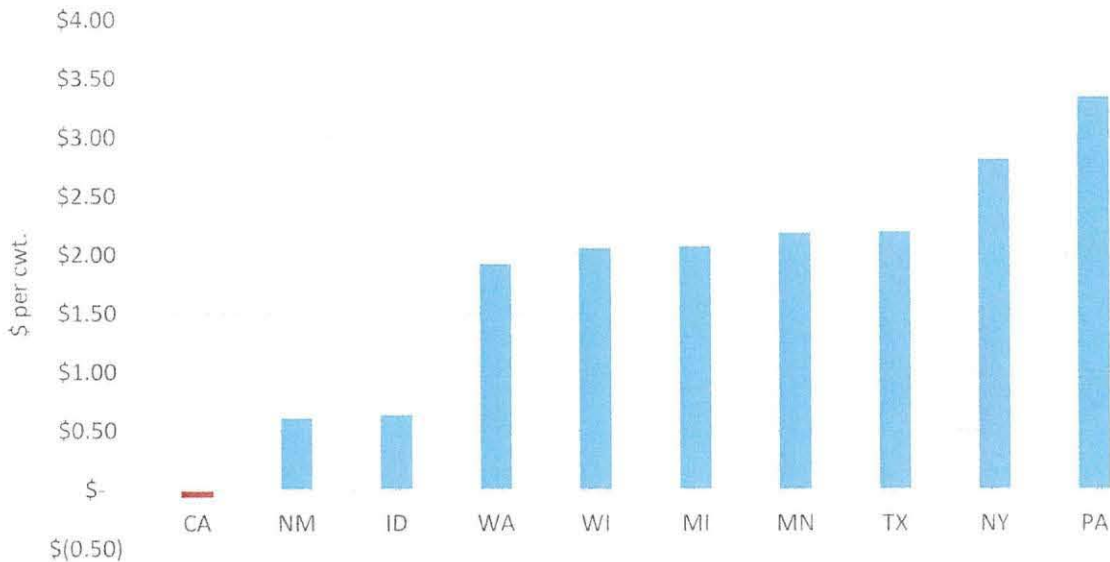


Source: NASS, AMS/USDA, 2015

*Calculated by taking the spread between the minimum and maximum range between the NASS All Milk price for each state compared to a Class III & IV 50/50 split for each year 2010 to 2015 H1, then taking those max spreads for each year and averaging them. For example, if in the year 2010 the state's All Milk Price had a minimum of -\$0.25 per cwt spread to a Class III & IV 50/50 split in one month and a maximum price spread of \$1.00 per cwt to a Class III & IV 50/50 split in another month, for the year the max range in the spread would be \$1.25 per cwt. This is done for every year and averaged, with one half weighting for 2015 because it is a half year.

and IV 50/50 split

Figure 9: Average price spread versus Class III shows California ranks 1st. 2010 – 2015 H1

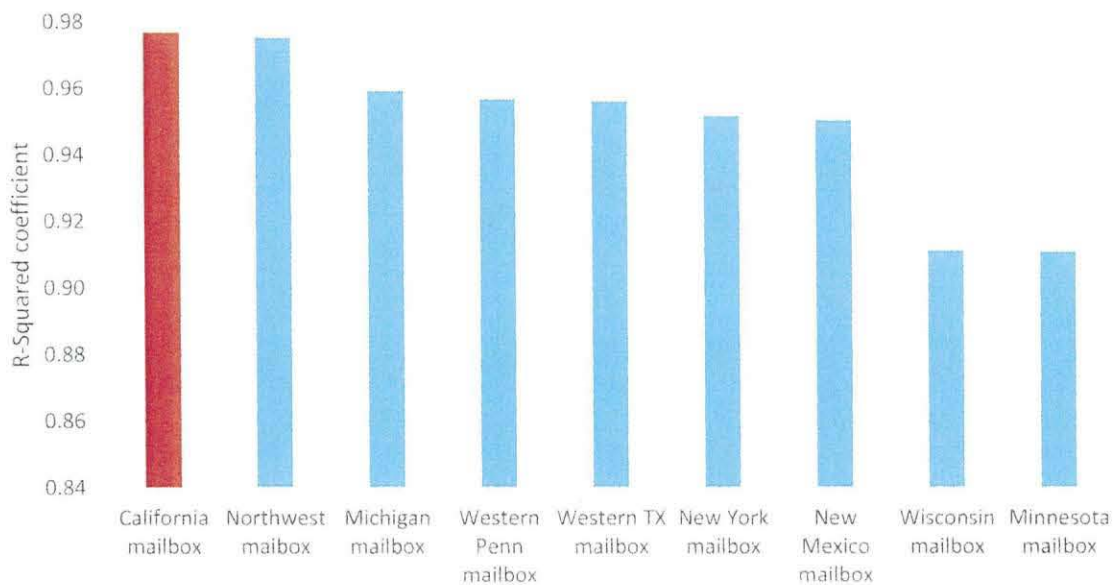


Source: NASS, AMS/USDA, 2015

*calculated by taking the spread between the All Milk price between Class III for each month from 2010 to 2015 H1, then averaging this spread.

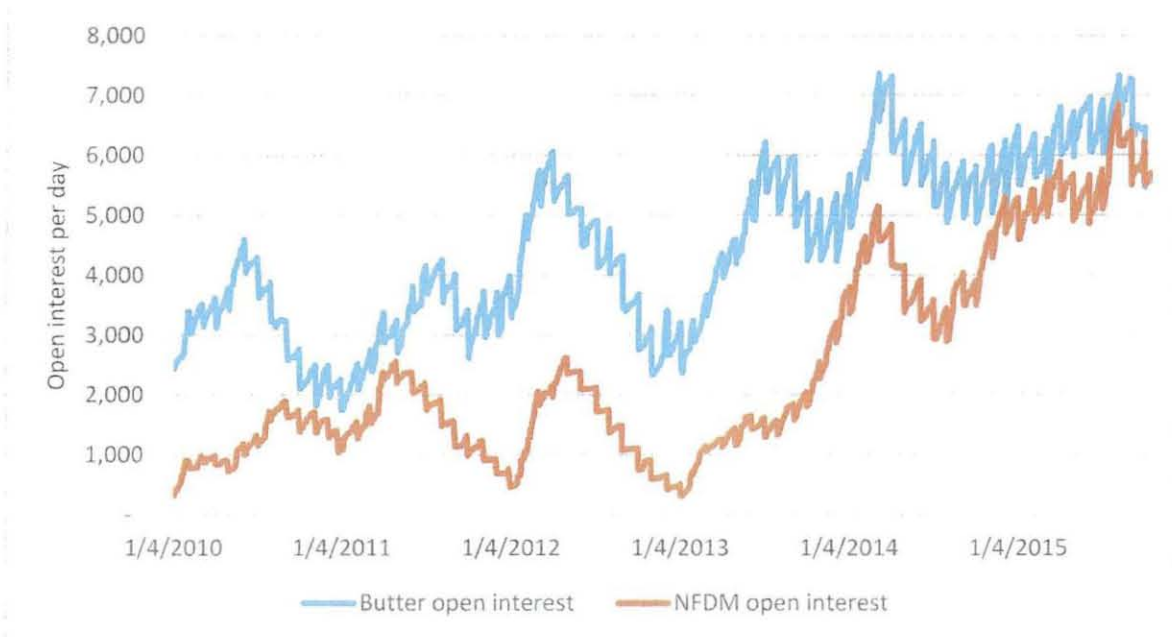
and IV 50/50 split

Figure 10: Mailbox prices correlation to a Class III & IV 50/50 split shows California risk management can be effective by adding a butter/powder element. Not surprisingly, Wisconsin shows a weaker correlation using Class IV, meaning Class III only is more appropriate. R-squared coefficient Jan 2010 to May 2015 (higher is better)



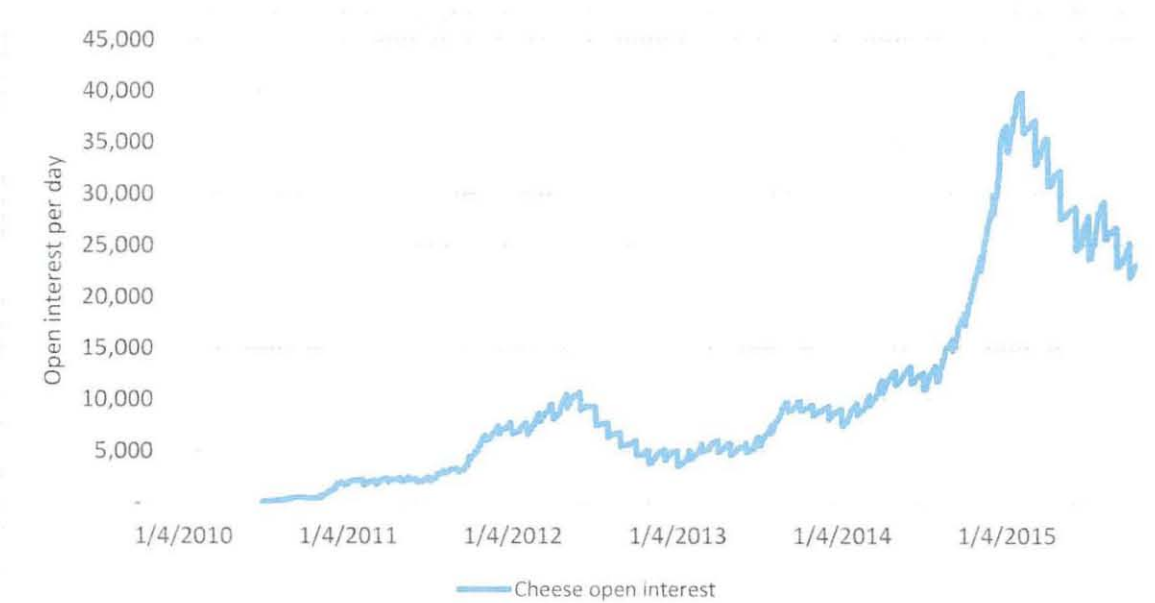
Source: AMS/USDA, 2015

Figure 11: Open interest in butter and NFDM futures has expanded rapidly in recent years, offering producers more effective risk management options. Open interest per day.



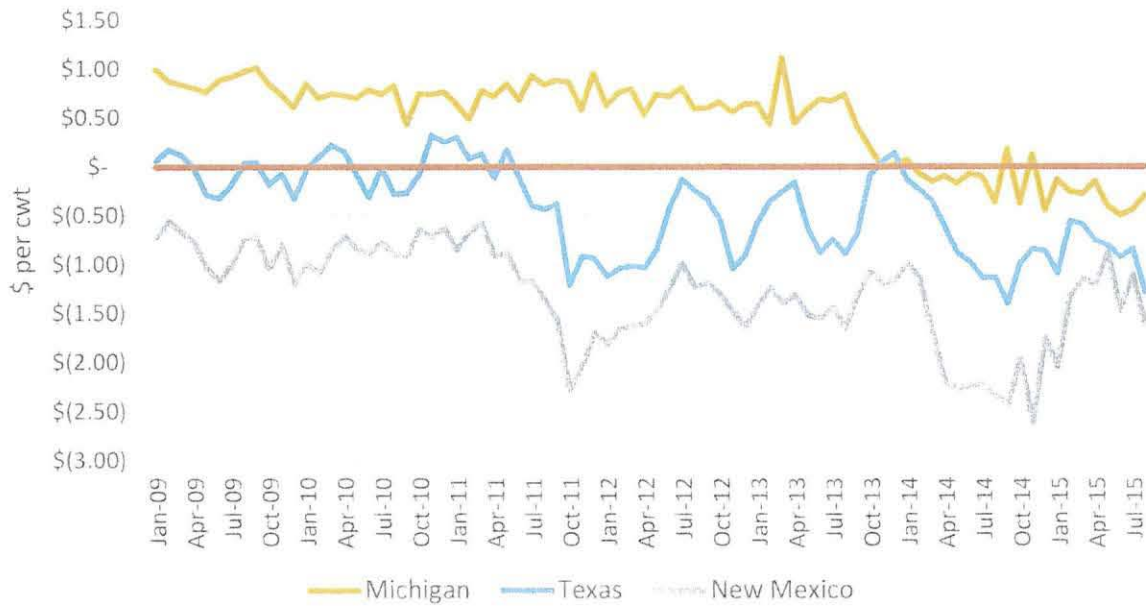
Source: Understanding Dairy Markets, 2015

Figure 12: Open interest in cheddar cheese futures has also expanded rapidly, thereby increasing California producer's risk management effectiveness. Open interest per day.



Source: Understanding Dairy Markets, 2015

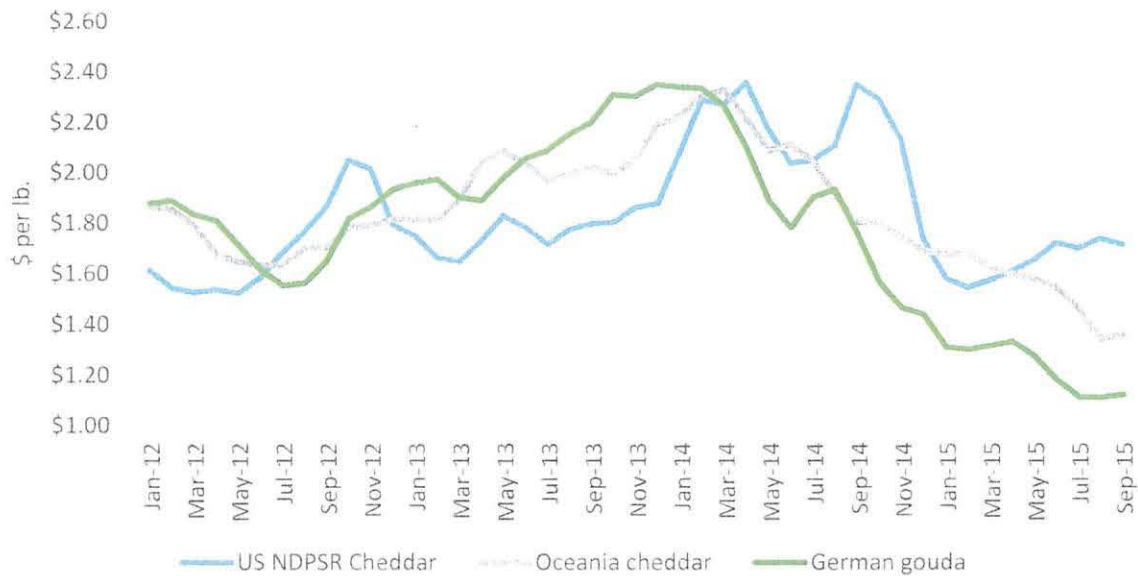
Figure 13: Producers in FMMOs are being ^{paid} under Class III: NASS State All Milk Prices versus Federal Order blend prices show negative premiums



Source: NASS, FMMO MA websites, HCC analysis, 2015

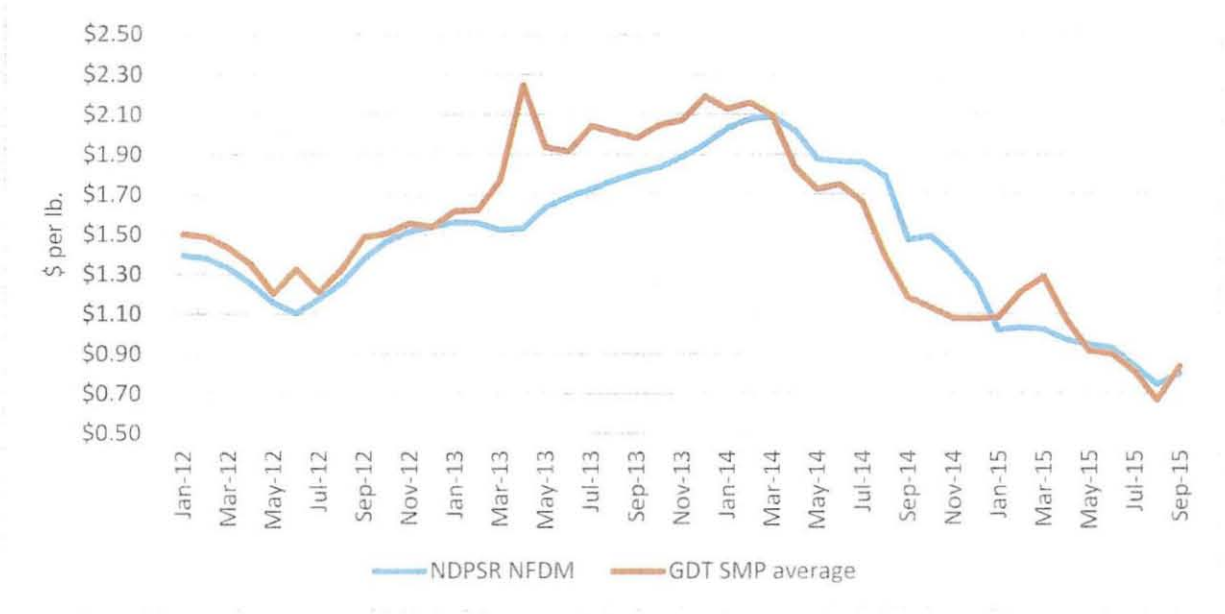
Note: calculated by: (NASS All Milk price – (Class III at test + PPD)). Milk test data for TX and NM was state specific, MI used Order 33 test data, PPD prices for TX & NM used the Dallas location, MI used the Cuyahoga, OH location.

Figure 14: NDPSR cheese, which drives milk costs, is often out of line with key international benchmarks, making being a consistent US supplier difficult



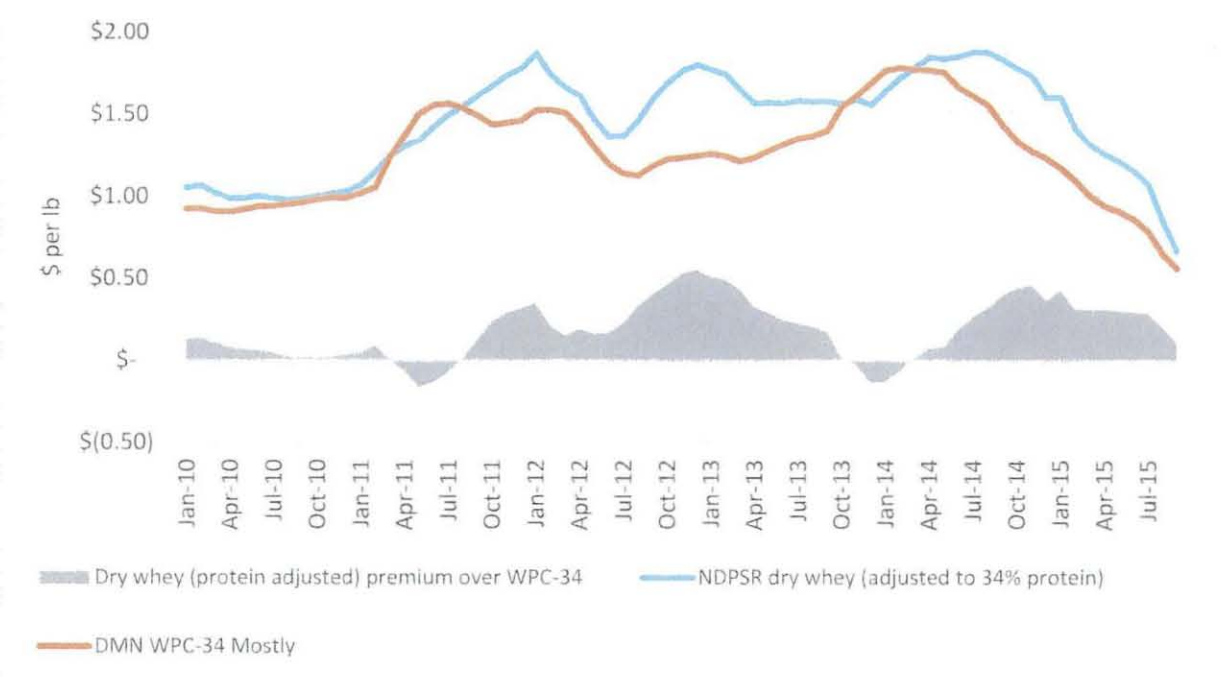
Source: USDA/AMS, CLAL.it, 2015

Figure 15: NDPSR NFDM, which drives milk costs, can be out of line with international SMP, making being a consistent US supplier difficult



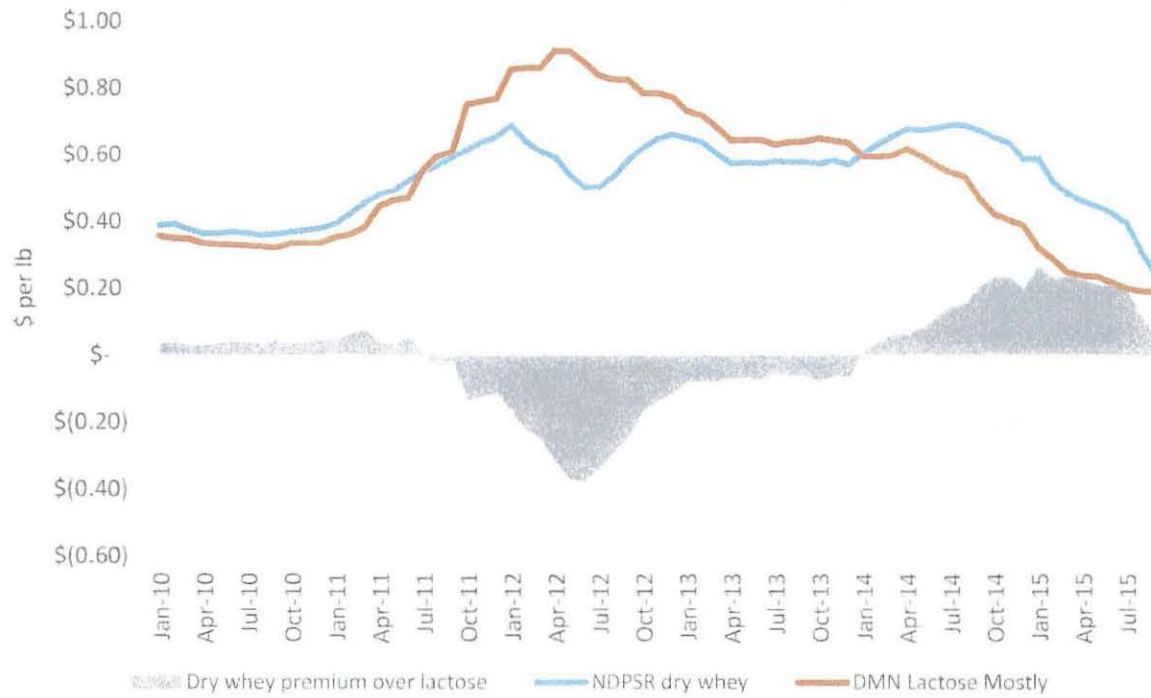
Source: USDA/AMS, Global Dairy Trade, 2015

Figure 16: NDPSR dry whey (adjusted from 12% to 34% protein) does not correlate well with WPC prices



Source: USDA/AMS (NDPSR for dry whey, DMN mostly for WPC-34), 2015

Figure 17: NDPSR dry whey (not protein adjusted) does not correlate well to lactose prices



Source: USDA/AMS (NDPSR for dry whey & DMN for lactose), 2015