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## Managing Price Risk: The Milk Price Basis in the Carolinas

Geoff Benson, Ph.D *Associate Professor and Extension Economist*

### Introduction

Milk prices are volatile, which creates financial risk for dairy farmers. Milk futures and options offer a price risk management tool to dairy farmers. However, milk pricing is complex, which influences the effectiveness of this risk management tool. This fact sheet explores the historic relationship between milk futures contract prices and producer milk prices in the Appalachian federal milk market order area, with a view to helping producers better evaluate and use the opportunities offered by milk futures and options.

Milk price volatility is illustrated in Figure 1. The Class III price is the price for milk used to make cheese and it is used most frequently as the reference point for milk prices nationally. The federal order blend price is the average value of milk used in the Appalachian federal milk market order (order 5), calculated at the announced minimum order prices. The "mailbox" price is an estimate of the average price dairy farmers actually received. These price series tend to move together, as the graph shows. By convention, the prices for all three price series are standardized to milk with 3.5% butterfat content.

Dairy futures contracts are offered by the Chicago Mercantile Exchange (CME). These futures contracts provide opportunities for dairy farmers to manage milk price risk and may be used for price forecasting purposes. Producers can hedge against downside price risk using futures or options. A producer can sell a futures contract when that producer wishes to lock in a price for milk to be sold

during a particular month in the future. Put options can be purchased when a producer seeks to establish a floor price while retaining the opportunity to benefit from a price increase, should it occur.

Understanding "basis" is crucial in any price risk management strategy that uses futures or options. Basis is the term used to describe the relationship between a futures price and the actual cash price received by a producer for a commodity, milk in this case. It reflects the economics of the place and time a commodity will be sold. Basis information is necessary in forecasting prices and in making hedging decisions. Specifically:

$$\text{Basis} = \text{Local Price} - \text{Futures Price}$$

The strict definition of basis refers to price relationships for an identical product. However, this concept cannot be strictly applied to milk prices because of the way in which milk prices are set under federal order regulations and the way producers are paid for their milk. Under federal order regulations, producer milk is used to produce dairy products in four different classes and each class price is different. These four classes are fluid use (Class I), soft product use (Class II), milk used for cheese production (Class III), and milk used to produce butter and milk powder (Class IV). There is a different monthly minimum price established for each class. The prices assigned to each of these classes are based on the wholesale prices of cheese, butter, nonfat dry milk powder and whey, which vary from month-to-month.

## How Prices Are Established Under Federal Orders

The federal order pricing mechanisms became more complex under the procedures implemented on January 1, 2000. Milk used in the various classes is priced on components and the value of these components is determined from wholesale prices of dairy products, using make (manufacturing cost) allowances and product yield factors. Most of the milk in the southeast is used in Class I (fluid) products. In the southeastern market orders, the minimum price for Class I milk is composed of a skim milk and a butterfat value. The skim milk value for a given month is based on the higher of the Class III or the Class IV skim value. The Class III and IV prices used in the Class I price calculations are based on wholesale dairy product prices obtained through a survey of manufacturers that is conducted during the first two weeks of every month. The Class I butterfat value also is based on the survey of wholesale butter prices. A fixed Class I differential or premium is added to this base price depending on the specific location of a milk plant. The order Class II skim milk price is announced in advance along with the Class I price. The Class II butterfat price and the prices for Class III and IV milk components are announced retroactively and are based on a survey of wholesale dairy product prices for the whole of the previous month. All announced order prices are minimum prices.

Federal order regulations require handlers regulated under a specific order to pay for milk at the minimum prices based on the volumes used in each of the four classes. The proportion of producer milk in each class varies from order to order and from month-to-month. Under federal order rules, producers share in the total value of the milk regulated under the order and the starting point for producer pay prices is the uniform or blend price that reflects the overall uses of milk in the market in a given month.

However, this is not the actual price a dairy farmer receives. The order minimum prices are quoted at 3.5% butterfat and the producer's price is adjusted to reflect differences in the butterfat content

of his or her milk. The mailbox price received by a producer is net of marketing costs and charges and may include other premiums or deductions. Most producers belong to co-operatives, which attempt to bargain for over-order premiums that are unregulated and not pooled. There are co-op operating costs and co-ops may re-blend member receipts. Farmers may receive quality premiums, volume incentives, etc. that also affect the mailbox price. The values of some of these items are fairly stable over time but others change monthly. Nevertheless, because most dairy farms are highly specialized and milk is the major source of income, changes in the price of milk have a major effect on the cash receipts available to pay the farm operating expenses, debt service, asset replacement, family living expenses, and for other uses. Managing this price risk is important for almost all dairy farm operations

Information on order mailbox prices has been available since 1995 but new federal order rules were introduced on January 1, 2000. From 1995 until 1999, the pricing rules were different. Under the previous rules, the Class I price was based on the Basic Formula Price (BFP) with a two-month lag. However, the BFP and the Class III price were one and the same. Furthermore, on January 1, 2000 the Class I and II price differentials changed somewhat.

The January 1, 2000 changes also redefined the number, size and geographic area covered by federal order markets. From 1990 through 1999, the Carolinas and part of Tennessee formed one federal order marketing area, federal order 5. A larger federal order market was created on January 1, 2000 that encompassed the Carolinas, most of Virginia, Tennessee, and Kentucky, and a few counties in southern Indiana.

## Hedging and Price Forecasting

Southeastern producers interested in risk management can use the dairy futures market. Some producers may be able to establish a price through their co-operative, which in turn relies on the futures market to offset this risk. The CME offers a 200,000-pound futures contract for both Class III

and Class IV milk. A different futures contract is available for each calendar month. Class III contracts are available up to 24 months into the future and Class IV futures are available 18 months out. All dairy futures contracts are cash settled at the expiry date. Options are available on all active futures contracts and a 100,000-pound "mid-size" option is available on Class III futures contracts as well.

Southeastern producers would like to hedge the price they actually receive at the farm, the so-called mailbox price. However, as discussed above, this mailbox milk price is the result of many factors. The Class III price is only one factor but it is the most important one. It is the price that is used most frequently to establish minimum Class I prices under federal milk market orders and Class I uses account for the largest proportion of producer milk. Also, Class III futures are the most actively traded of the dairy contract, so the market is more liquid and the prices are more robust. Therefore, in spite of the complexities of milk pricing, the most appropriate futures contract for producers of Grade A milk in the Southeast is the Class III contract.

The federal order Class I price is announced in advance and the Class III price is announced retroactively. Therefore, for price forecasting and hedging purposes, it is appropriate to lag the relationship between a producer's mailbox price and the Class III price by one month when calculating the basis. The most appropriate basis for producers in the high fluid use markets of the Southeast is the difference between the monthly mailbox price and the Class III price for the preceding month. The Class IV contract is a second alternative because it too can enter into the federal order pricing mechanism but this occurs infrequently and it is a more thinly traded contract.

## Basis Risk

Basis risk refers to unexpected and unpredictable changes in basis. If the relationship between the futures price and the local price is stable, producers can manage price risk with a high degree of confidence in their actions. However, if the price relationship varies and is unpredictable, the usefulness of basis in price forecasting and hedging is reduced. In the case of milk,

the price relationship between the futures price and the mailbox price can vary for other reasons, creating additional risk. In the following discussion, both types of risk are combined when examining the relationship between futures and mailbox prices.

A key question is how the complexities of milk pricing and producer payment affect basis risk. A producer's basis is likely to be somewhat unique and should be calculated from the history of milk prices for that particular farm. The following discussion examines milk price relationships based on two publicly reported price series, the federal order uniform or blend price and the federal order mailbox price, in order to identify potential problems, including basis risk. Both series are published by the Market Administrator for the order but the calculation of the uniform price is more transparent and it is published on a more timely basis.

The graph in Figure 1 shows the monthly Class III price along with the Appalachian federal milk market order (order 5) blend price in the base zone and the federal order mailbox price. The base zone runs through the piedmont region of the southeast, from North Carolina to Alabama and beyond. Producers to the north and west of this zone receive lower prices and producers to the south and east receive more. In the chart, the Class III and order uniform (blend) prices run from 1989 through 2006 but mailbox price estimates were not available before 1995. The federal order structure and rules changed on January 1, 2000, as noted above, but in general, these three prices series move together.

Figure 2 shows the difference between the monthly Class III and the order uniform price. The uniform price is an important component of the mailbox price. There appears to be a seasonal pattern but the most striking feature is the range in this price difference. This variability is a source of basis risk

because it suggests the actual basis can vary significantly from the average basis.

Figure 3 shows the federal order mailbox price and the difference between it and the Class III price. The Class I price is lagged one month in calculating this difference to account for the larger part of the leads and lags that are built into the federal order pricing formulas. There is considerable variability in the difference between the mailbox price and the Class III price. Figure 4 shows the average price difference by month and the range in this difference. There is somewhat of a seasonal pattern, but with a considerable range. Although the order mailbox price does not represent the price received by an individual producer, it is likely that actual producer mailbox prices exhibit similar variability. This variability represents basis risk.

Tables 1 through 5 present historic data that may be helpful to producers when making price forecasts or hedging decisions. Table 1 shows the difference between the order 5 uniform blend price and the monthly Class III price lagged one month. It shows the monthly and yearly average differences, the monthly high and low, and the difference between the monthly average and the high and low monthly difference. It also shows the standard deviations by year and by month for these monthly differences. On average, the difference was \$2.60 per 100 lb. The monthly averages ranged from a low of \$2.17 in October to a high of \$3.15 in March. Ideally, for hedging and price forecasting purposes, the basis should be stable and predictable. However, there is considerable variability in the data in the table. The lowest single monthly basis was a -\$0.04 in July 2004 and the highest was \$7.93 in March 1999. These extremes usually occur when there are abnormally large monthly Class III price moves.

Table 2 shows the difference between the order 5 mailbox price and the lagged Class III price. As for Table 1, Table 2 shows monthly and yearly average differences, the monthly high and low, and the standard deviations for these monthly price differences. On average, the difference was \$2.12

per 100 lb. The monthly averages ranged from a low of \$1.77 in October to \$2.66 in March. As for the data in Table 1, there is considerable variability. The lowest single monthly basis was -\$1.19 in June 2004 and the highest was \$7.79 in March of the same year. Both series show similar price effects but, as noted above, these may not be a reliable substitute for calculating the basis from the historic data for a particular farm.

Tables 3-5 show the Class III, order 5 uniform blend and order 5 mailbox prices used to calculate the price differences shown in Tables 1 and 2 and to create the graphs. These prices are reported by the order 5 Market Administrator.

The conclusion to be drawn from this discussion is that there is considerable basis risk associated with hedging or forecasting farm mailbox prices from the prices for Class III futures market contracts. A second conclusion is that there is a seasonal pattern to the average basis. One approach to estimating the mailbox price for a particular month from the corresponding Class III futures contract is to use the monthly average reported in the tables. A more conservative approach is to use a basis estimate that is somewhat smaller than the average. For example, the average basis for a month minus the standard deviation for that same month should result a 2 in 3 chance of receiving the estimated mailbox price or more. The calculations should allow for the lags in the federal order pricing rules. In other words, the basis for a given month's mailbox price should be added to the futures contract for the preceding month. For example, if you are pricing December milk, the basis for December should be added to the November Class III futures price.

The figures presented here are intended as a guide. The basis for an individual farm should be based on that farm's mailbox price history because there are pricing zone adjustments, butterfat and quality premiums, hauling costs, co-op over-order premiums and operating costs, co-op re-blending, and the like that affect the mailbox price. Therefore, the farm mailbox price may differ significantly from the order average price.

## Some Concluding Remarks

The data presented in the tables and graphs illustrate that there is considerable basis risk associated with using the Class III for hedging. This variability in the basis is the result of many factors. Some of these affect all producers regulated under a given federal order, some affect producers selling to a particular milk handler (buyer), and others affect an individual producer. Some factors change infrequently, others are very volatile. An understanding of these factors may help producers better evaluate the reliability of price forecasts for their situation.

### Changes affecting the market-wide basis are as follows:

- Federal orders classify milk based on use and establish different minimum prices for the various classes of milk, as explained above. The proceeds from the sale of milk in the different classes are pooled to create a blend price payable to producers regulated under an order. Seasonal variation in the proportions of milk used in the different classes will cause the blend price to change relative to the Class III price.
- The Class III price is volatile and sharp swings will cause the basis to change because Class I and II prices are based on a complex pricing formula with both advance and retroactive pricing components.
- The Class I mover, federal order minimum class prices and pool blend prices are quoted for milk of 3.5 percent butterfat. Federal orders establish a monthly butterfat differential to be paid to producers for milk with a different butterfat percentage and this differential is based on wholesale butter prices. Changes in butter prices are only one component of the order minimum prices and changes in butterfat differentials do not mirror the full changes in these prices.
- From time-to-time there have been government assessments that must be paid by producers, which affects the mailbox price.

### Changes affecting the price paid by an individual handler to milk producers are:

- The federal order rules that establish which handlers, which producers and which portion of a producer's milk are qualified to participate in the order pool, because this affects the money to be paid to the producers who supply that handler.
- Handlers may supply milk to more than one federal order market, which affects the value of the producer milk and the average price paid to producers.
- Co-operatives are permitted to re-blend the proceeds received on behalf of their members, subject to the bylaws.
- There are Class I pricing zones within federal order markets. Prices paid by individual processors depend upon the zones where they are located. Proprietary plants and co-operatives operate under different rules that determine who bears certain marketing costs, which, in turn, affects the net price paid to producers supplying that handler.
- Federal orders set and enforce minimum prices but co-operatives commonly negotiate over-order premiums with milk processors to defray the costs of marketing services, including the added costs of obtaining milk during periods when local supplies are inadequate. These premiums are unregulated and can vary from month-to-month and from handler to handler in the same month, depending on the competitive situation in the market.
- Individual handlers establish the milk hauling charges paid by their producers.
- Handlers establish quality and volume premiums paid to their producers.

### Individual producers can influence the mailbox price they receive through their choice of milk buyer and by their ability to take advantage of the following factors:

- Order minimum prices are quoted in terms of milk of 3.5 percent butterfat. Farmers can influence the butterfat content of the milk they produce by their choice of breed of cow, the genetics within breeds and cow nutrition.

### Seasonal incentive premiums earned, if the buyer offers such premiums.

- Quality premiums earned, if the buyer offers premiums.
- Volume premiums earned, if the buyer offers premiums.
- At certain times, incentive payments and penalties have been offered under certain federal orders and by the federal government. These included seasonal incentive (base) plans and voluntary supply management plans.

In closing, multiple factors combine to affect the mailbox prices received by producers and, therefore, the basis for an individual producer. These factors shed some light on the unpredictable nature of the basis but there is insufficient information to quantify the individual effects of all of them in order make the basis more predictable. For this reason, producers should calculate their own monthly basis over a lengthy period and use this information when setting price targets to manage price risk.

Table 1. Federal Order Uniform Price - Class III with a one-month lag.

Month	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Average	High	Hi Diff	Low	Lo Diff	STD DEV
J	2.63	2.62	2.96	2.27	1.77	3.69	5.63	2.61	3.20	2.66	1.20	2.15	2.78	5.63	2.85	1.20	1.58	1.10
F	2.28	2.81	1.98	2.64	2.97	3.08	4.49	2.17	2.74	2.88	1.76	1.62	2.62	4.49	1.87	1.62	1.00	0.76
M	2.29	2.54	1.85	2.45	7.93	3.61	4.89	1.97	2.41	3.91	2.04	1.93	3.15	7.93	4.78	1.85	1.30	1.77
A	1.80	2.44	2.32	2.93	1.18	3.69	4.42	2.78	2.93	2.27	1.84	1.90	2.54	4.42	1.88	1.84	0.70	0.89
M	3.00	2.27	3.32	3.12	2.10	4.45	4.71	2.24	2.70	0.52	1.24	2.12	2.65	4.71	2.06	0.52	2.13	1.19
J	2.48	1.82	3.13	3.82	2.96	4.64	3.50	2.01	2.33	-0.04	1.72	2.01	2.53	4.64	2.11	-0.04	2.57	1.20
J	2.18	2.55	2.59	0.46	2.44	5.00	2.59	2.79	2.74	1.26	2.34	2.04	2.42	5.00	2.58	0.46	1.96	1.06
A	2.91	2.01	2.48	1.00	0.44	3.74	2.55	3.54	1.74	1.31	2.30	2.59	2.22	3.74	1.52	0.44	1.78	0.98
S	2.40	2.09	1.52	2.52	0.31	4.28	2.62	3.22	1.77	2.48	2.77	2.57	2.38	4.28	1.90	0.31	2.07	0.96
O	2.17	2.20	2.02	2.58	1.46	3.51	0.83	2.99	1.79	1.97	2.18	2.29	2.17	3.51	1.34	0.83	1.34	0.68
N	2.15	3.61	2.46	1.69	6.55	4.74	2.16	2.34	1.37	2.62	1.95	2.36	2.83	6.55	3.72	1.37	1.46	1.47
D	2.14	4.83	2.48	1.78	3.97	6.26	2.85	3.12	2.20	2.09	2.16	1.78	2.97	6.26	3.29	1.78	1.19	1.39
<b>Average</b>	2.37	2.65	2.43	2.27	2.84	4.22	3.44	2.65	2.33	1.99	1.96	2.11	2.60					
<b>STD DEV</b>	0.34	0.83	0.53	0.92	2.33	0.87	1.40	0.51	0.56	1.08	0.45	0.30						

Table 2. Federal Order Mailbox Price - Class III with a one-month lag.

Month	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Average	High	Hi Diff	Low	Lo Diff	STD DEV
J	1.43	1.85	3.62	2.22	1.77	3.47	5.27	2.15	2.75	2.22	0.46	1.57	2.40	5.27	2.87	0.46	1.94	1.25
F	1.06	2.05	2.86	2.78	2.91	2.82	4.05	1.70	2.42	2.53	1.10	1.10	2.28	4.05	1.77	1.06	1.22	0.91
M	0.80	1.84	2.13	2.31	7.79	3.39	4.44	1.37	1.95	3.24	1.31	1.37	2.66	7.79	5.13	0.80	1.86	1.92
A	0.50	1.63	1.98	2.82	1.27	3.44	3.88	1.99	2.24	1.52	0.98	1.29	1.96	3.88	1.92	0.50	1.46	1.00
M	1.61	1.73	2.95	2.98	1.84	3.85	3.97	1.52	1.97	-0.62	0.04	1.46	1.94	3.97	2.03	-0.62	2.56	1.37
J	1.28	1.91	2.78	3.88	2.95	4.22	2.66	1.35	1.68	-1.19	0.19	1.34	1.92	4.22	2.30	-1.19	3.11	1.52
J	0.86	2.47	2.35	0.39	2.54	4.53	1.83	2.19	2.21	0.50	1.12	1.33	1.86	4.53	2.67	0.39	1.47	1.14
A	1.46	2.20	2.25	0.44	0.47	3.44	1.73	3.06	1.24	0.31	1.07	1.89	1.63	3.44	1.81	0.31	1.32	1.00
S	1.15	2.50	1.22	2.50	0.19	4.04	1.98	2.76	0.93	1.74	1.79	2.11	1.91	4.04	2.13	0.19	1.72	1.00
O	1.12	2.58	1.97	2.68	0.91	3.32	0.37	2.60	1.01	1.28	1.34	2.11	1.77	3.32	1.55	0.37	1.40	0.90
N	1.34	3.65	2.60	1.84	6.07	4.53	1.60	1.95	0.62	1.93	1.32	2.26	2.48	6.07	3.59	0.62	1.86	1.55
D	1.23	4.75	2.37	1.73	4.11	6.04	2.34	2.68	1.53	1.48	1.60	1.60	2.62	6.04	3.42	1.23	1.39	1.53
<b>Average</b>	1.15	2.43	2.42	2.21	2.74	3.92	2.84	2.11	1.71	1.25	1.03	1.62	2.12					
<b>STD DEV</b>	0.31	0.91	0.61	1.01	2.29	0.85	1.45	0.57	0.66	1.29	0.54	0.38						

Table 3. Class III Prices.

Month	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Average	High	Hi Diff	Low	Lo Diff	STD DEV
J	11.79	12.73	11.94	13.25	16.27	10.05	9.99	11.87	9.78	11.61	14.14	13.39	12.23	16.27	4.04	9.99	2.24	1.89
F	11.89	12.59	12.46	13.32	10.27	9.54	10.27	11.63	9.66	11.89	14.70	12.20	11.70	14.70	3.00	9.54	2.16	1.54
M	11.16	12.70	12.49	12.81	11.62	9.54	11.42	10.65	9.11	14.49	14.08	11.11	11.77	14.49	2.73	9.11	2.66	1.64
A	11.12	13.09	11.44	12.01	11.81	9.41	12.06	10.85	9.41	19.66	14.61	10.93	12.20	19.66	7.46	9.41	2.79	2.75
M	11.42	13.77	10.70	10.88	11.26	9.37	13.83	10.82	9.71	20.58	13.77	10.83	12.25	20.58	8.34	9.37	2.88	3.03
J	11.23	13.92	10.74	13.10	11.42	9.46	15.02	10.09	9.75	17.68	13.92	11.29	12.30	17.68	5.38	9.46	2.84	2.47
J	11.55	14.49	10.86	14.77	13.59	10.66	15.46	9.33	11.78	14.85	14.35	10.92	12.72	15.46	2.74	9.33	3.39	2.08
A	12.08	14.94	12.07	14.99	15.79	10.13	15.55	9.54	13.80	14.04	13.60	11.06	13.13	15.55	2.42	9.54	3.59	2.12
S	12.61	15.37	12.79	15.10	16.26	10.76	15.90	9.92	14.30	14.72	14.30	12.29	13.69	16.26	2.57	9.92	3.77	2.02
O	12.87	14.13	12.83	16.04	11.49	10.02	14.60	10.72	14.39	14.16	14.35	12.32	13.16	16.04	2.88	10.02	3.14	1.78
N	12.91	11.61	12.96	16.84	9.79	8.57	11.31	9.84	13.28	14.89	13.35	12.84	12.35	16.84	4.49	8.57	3.78	2.30
D	14.10	11.34	13.29	17.34	9.63	9.37	11.80	9.74	11.59	16.14	13.37	13.47	12.60	17.34	4.74	9.37	3.23	2.52
<b>Average</b>	12.06	13.39	12.05	14.20	12.43	9.74	13.10	10.42	11.38	15.39	14.05	11.89	12.51					
<b>STD DEV</b>	0.90	1.26	0.92	1.97	2.45	0.61	2.18	0.81	2.07	2.74	0.45	0.99						

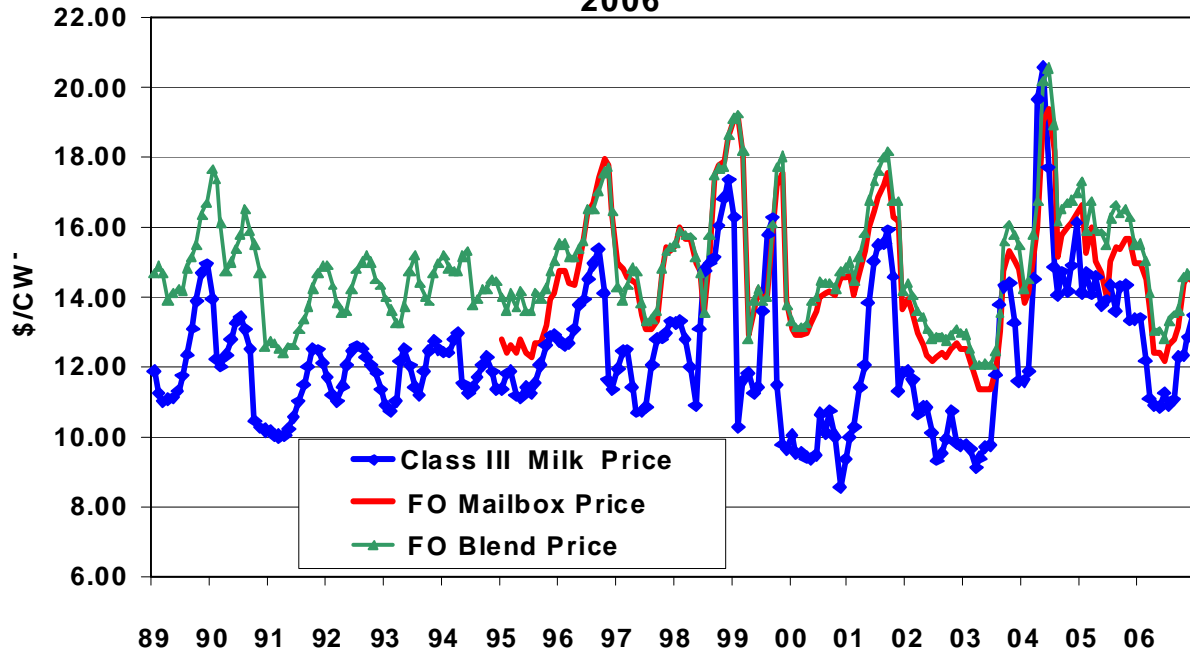
Table 4. Federal Order Uniform (Blend) Prices.

Month	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Average	High	Hi Diff	Low	Lo Diff	STD DEV
J	14.01	15.53	14.30	15.56	19.11	13.32	15.00	14.41	12.94	14.25	17.34	15.52	15.11	19.11	4.00	12.94	2.17	1.72
F	13.63	15.54	13.92	15.89	19.24	13.13	14.48	14.04	12.52	14.49	15.90	15.01	14.82	19.24	4.42	12.52	2.30	1.75
M	14.08	15.13	14.31	15.77	18.20	13.15	15.16	13.60	12.07	15.80	16.74	14.13	14.85	18.20	3.36	12.07	2.78	1.66
A	13.69	15.14	14.81	15.74	12.80	13.23	15.84	13.43	12.04	16.76	15.92	13.01	14.37	15.74	1.37	12.04	2.33	1.52
M	14.16	15.36	14.76	15.13	13.91	13.86	16.77	13.09	12.11	20.18	15.85	13.05	14.85	16.77	1.92	12.11	2.74	2.12
J	13.60	15.59	13.83	14.70	14.22	14.01	17.33	12.83	12.04	20.54	15.49	12.84	14.75	17.33	2.58	12.04	2.71	2.32
J	13.60	16.48	13.33	13.56	13.86	14.46	17.61	12.88	12.49	18.94	16.26	13.33	14.73	17.61	2.88	12.88	1.85	2.07
A	14.14	16.50	13.34	15.77	14.03	14.40	18.01	12.87	13.52	16.16	16.65	13.51	14.91	18.01	3.10	12.87	2.04	1.64
S	13.95	17.03	13.59	17.51	16.10	14.41	18.17	12.76	15.57	16.52	16.37	13.63	15.47	18.17	2.70	12.76	2.71	1.76
O	14.25	17.57	14.81	17.68	17.72	14.27	16.73	12.91	16.09	16.69	16.48	14.58	15.82	17.57	1.76	12.91	2.91	1.60
N	14.76	17.74	15.29	17.73	18.04	14.76	16.76	13.06	15.76	16.78	16.30	14.68	15.97	17.73	1.76	13.06	2.91	1.52
D	15.01	16.44	15.44	18.62	13.76	14.83	14.16	12.96	15.48	16.98	15.51	14.62	15.32	18.62	3.30	12.96	2.36	1.51
<b>Average</b>	14.07	16.17	14.31	16.14	15.92	13.99	16.34	13.24	13.55	17.01	16.23	13.99	15.08					
<b>STD DEV</b>	0.45	0.92	0.72	1.46	2.40	0.63	1.38	0.53	1.67	1.97	0.54	0.88						

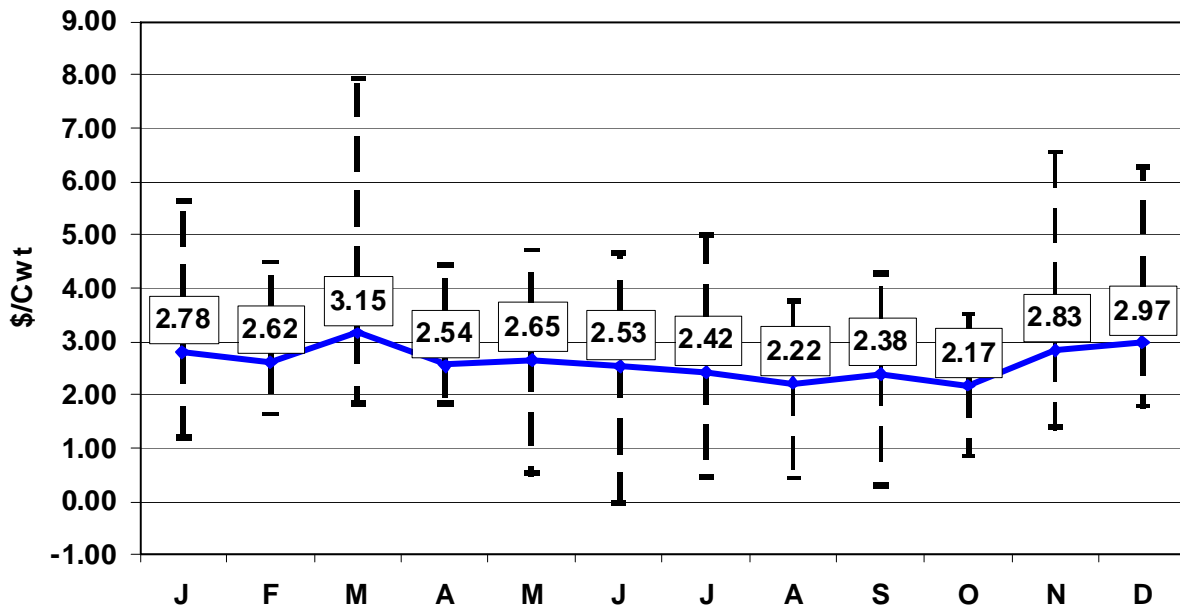
Table 5. Federal Order Mailbox Prices.

Month	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Average	High	Hi Diff	Low	Lo Diff	STD DEV
J	12.81	14.76	14.96	15.51	19.11	13.10	14.64	13.95	12.49	13.81	16.60	14.94	14.72	19.11	4.39	12.49	2.23	1.81
F	12.41	14.78	14.80	16.03	19.18	12.87	14.04	13.57	12.20	14.14	15.24	14.49	14.48	19.18	4.70	12.20	2.28	1.87
M	12.59	14.43	14.59	15.63	18.06	12.93	14.71	13.00	11.61	15.13	16.01	13.57	14.36	18.06	3.71	11.61	2.75	1.76
A	12.39	14.33	14.47	15.63	12.89	12.98	15.30	12.64	11.35	16.01	15.06	12.40	13.79	16.01	2.22	11.35	2.44	1.53
M	12.77	14.82	14.39	14.99	13.65	13.26	16.03	12.37	11.38	19.04	14.65	12.39	14.15	19.04	4.90	11.38	2.77	2.04
J	12.40	15.68	13.48	14.76	14.21	13.59	16.49	12.17	11.39	19.39	13.96	12.17	14.14	19.39	5.25	11.39	2.75	2.24
J	12.28	16.39	13.09	13.49	13.96	13.99	16.85	12.28	11.96	18.18	15.04	12.62	14.18	16.85	2.67	11.96	2.22	2.02
A	12.69	16.69	13.11	15.21	14.06	14.10	17.19	12.39	13.02	15.16	15.42	12.81	14.32	17.19	2.87	12.39	1.93	1.61
S	12.70	17.44	13.29	17.49	15.98	14.17	17.53	12.30	14.73	15.78	15.39	13.17	15.00	17.53	2.53	12.30	2.70	1.90
O	13.20	17.95	14.76	17.78	17.17	14.08	16.27	12.52	15.31	16.00	15.64	14.40	15.42	17.95	2.53	12.52	2.90	1.73
N	13.95	17.78	15.43	17.88	17.56	14.55	16.20	12.67	15.01	16.09	15.67	14.58	15.61	17.88	2.27	12.67	2.94	1.60
D	14.10	16.36	15.33	18.57	13.90	14.61	13.65	12.52	14.81	16.37	14.95	14.44	14.97	18.57	3.60	12.52	2.45	1.57
<b>Average</b>	12.91	16.19	14.19	16.14	15.14	13.83	16.02	12.49	13.06	16.72	15.18	13.26	14.44					
<b>STD DEV</b>	0.64	1.34	0.89	1.67	1.87	0.61	1.18	0.24	1.72	1.56	0.59	0.93						

**Figure 1. Federal Order 5 Price Relationships, 1989-2006**

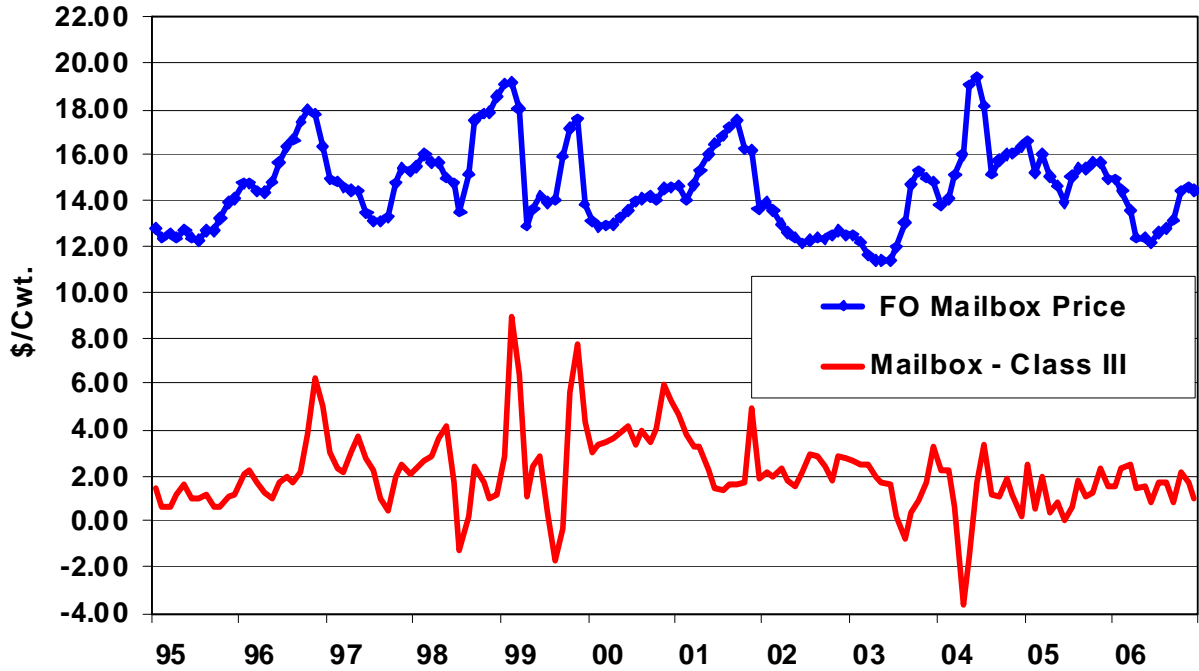


**Figure 2. Difference Between Class III\* and Federal Order 5 Uniform Prices, Monthly Average and Range, 1995-2006**



\*Class III price is lagged 1 month

**Figure 3. Federal Order 5 Mailbox Price and Class III Price Difference, monthly, 1995-2006**



**Figure 4. Difference Between Class III\* and Federal Order 5 Mailbox Prices, Monthly Average and Range, 1995-2003**

