

**Toward Reform of Fluid Milk Pricing in
Southern New England: Farm Level, Wholesale and Retail Prices in
the Fluid Milk Marketing Channel: 2003 - 2006**

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Executive Summary

- The University of Connecticut Food Marketing Policy Center has checked retail milk prices annually since 2002. This report summarizes findings; however, it focuses mostly on the most recent price check for November 2006.
- The survey area includes the three southern New England states, the Hudson river valley from Albany to the New York city line and suburban Long Island.
- Leading brand and private label milk prices are checked in four different channels, supermarkets including Wal-Mart Supercenters, convenience stores, wholesale club stores and limited assortment stores. A total of 192 stores were checked in November 2006.
- Since supermarkets account for approximately 75% of retail fluid milk sales this report focuses on that channel; price information for the other channels is in Appendix A.
- Dairy Technomics, a well known and reliable source that evaluates processor costs for supermarket milk buyers, has provided processor margins by brand and distribution costs to retail stores. These allow us to decompose retail prices into the amount kept by the retailers—their dollar or percent gross margin, the amount kept by the processors and the amount paid by processors to farmers or their cooperatives. This breakdown of channel revenues is very detailed. One has prices and margins by types of milk—whole, 2%, 1%, and skim—for each brand of milk including private label, in each of the stores surveyed.
- The top three supermarket chains capture 63% of supermarket sales in Connecticut. Stop & Shop dominates with 45.4%. Then one has Big Y with 9.5% and Shaw's with 7.7%.
- Wal-Mart is the seventh largest supermarket chain in Connecticut with four stores and 2.8% share.
- The average all milk retail price across the top three chains and Wal-Mart (65% of the state's supermarket sales) in November 2006 was \$3.83 per gallon.
- These four retailers kept \$1.81 for in-store costs and profits. This dollar gross margin is 47% of the retail price. The Food Marketing Institute reports that the average gross margin for all products in U.S. supermarkets is 27%. The 47% reported gross margin on milk in Connecticut is excessive. Since milk is a very high turnover item its percent margin should be lower than the average percent gross margin.
- Examining individual chain percent gross margins in Connecticut one finds the dominant firm, Stop & Shop, captures 49% of the retail price. Big Y captures 45% and Shaw's 47%. In contrast, Wal-Mart sells milk with a 27% gross margin.
- In-store costs including a competitive return, based upon research in Maine and Pennsylvania were approximately 60 cents per gallon in November 2006.

- The \$1.81 per gallon dollar gross margin is three times the amount that would be earned in a competitive market.
- $\$1.81 - 0.60 = \1.21 per gallon is the excessive or windfall profit that leading supermarkets capture in Connecticut.
- Farmers received only \$1.25 per gallon in November 2006.
- At \$1.21 per gallon, the excessive windfall profits of the supermarkets that make 65% of sales in Connecticut are effectively equal to the price paid to Connecticut farmers for the milk in the bottles: \$1.25 per gallon.
- The situation is even more striking if one examines Stop & Shop, the dominant chain in Connecticut, with 45% of the market. Hood milk, for example, sells at \$4.62 per gallon in Connecticut Stop & Shops. The farmer receives only \$1.26 per gallon, and the Hood milk company captures only 82 cents per gallon; so the wholesale price, delivered to Stop & Shop stores is \$2.08 per gallon. Stop & Shop retains for its in-store costs and profits, \$2.54 per gallon! Thus the percent gross margin on Hood milk sold in Stop & Shop is 55%. The excess windfall profits on Hood milk are $\$2.54 - 0.60 = \1.94 per gallon.
- These results for Hood milk indicate that Stop & Shop captures nearly all of the brand premium. Very little of the brand's value is returned to the company that has created and sustained the brand over time. This is economically inefficient. Economic efficiency requires that the revenues generated by brand creation be returned to the brand's company so that company can equate the marginal cost of brand development to the marginal revenue captured from consumers who are the ultimate arbiters of a brand's success. As it stands today Stop & Shop captures nearly all of the brand's equity. For what? For stocking the milk in its stores for a few hours or days so that consumers can buy it.
- Excess windfall profits at Stop & Shop in Connecticut are \$1.51 per gallon on Garelick milk and are 96 cents per gallon Stop & Shop private label milk.
- The other leading chains in Connecticut, Big Y, and Shaw's, price in a fashion similar to the leader, Stop & Shop. Their excess windfall profits are somewhat less; however, they are very substantial.
- Wal-Mart in Connecticut is a different story. Its weighted average dollar gross margin across the private label, Garelick, and Hood brands is only 81 cents per gallon. Allowing 60 cents for in-store costs and competitive profits leaves only 21 cents per gallon as excess windfall profits.
- Wal-Mart margins are even lower in upstate New York where it faces more competition. There its weighted average margin is 59 cents, an effectively competitive margin.

- The numbers and story are similar for all checked supermarkets in Rhode Island and for Stop & Shop and Shaw's supermarkets in Massachusetts.
- Not all supermarket chains have large excess windfall profits. In addition to Wal-Mart, DeMoulas and Hannaford stores (in Massachusetts only) have much lower prices.
- Supermarkets in the New York survey area have milk prices that are often as much as 60 cents per gallon below the prices in southern New England. This is due almost entirely to the New York price gouge law.
- The New York price gouge law, however, works best when raw milk prices are low or moderate not high. It needs to be revised to cover the high end of the raw milk cycle.
- Flat milk pricing is a serious problem in New York as well as southern New England. Flat pricing occurs when a supermarket charges the same price for whole, 2%, 1% and skim milk. Skim milk costs retailers as much as 40 cents per gallon less than whole milk. In a competitive market retail prices would reflect cost differences. Flat milk pricing is direct evidence of market failure, i.e. large firms—not market forces—set retail milk prices.
- Stop & Shop flat prices its private label milk in 31 of the 34 stores we checked. The three stores where it does not are stores that compete with nearby Wal-Marts. Wal-Mart does not flat price milk.
- Stop & Shop flat prices its branded milk (Garelick and Hood) in all 34 stores that we price checked.
- Flat milk pricing removes the economic incentive (lower prices) for consumers to switch to lower fat milk. This contributes to consumption of saturated fats that create health problems whose costs are borne by society at large and the state as well as individual milk drinkers.
- A retail threshold pricing policy applied by type of milk can eliminate flat milk pricing.
- Category management and milk promotion strategies do not explain the excessive margins of the leading supermarket chains in southern New England. After all, the lower priced chains use the same pricing techniques. The source of the excessive retail margins is the pricing power of the leading chains.
- Farmers Cow brand milk is a niche marketing strategy launched in 2005 by six eastern Connecticut farmers. Farmers Cow milk is sold only as half gallons. At \$2.87 per half gallon, it was the highest priced half gallon milk that we surveyed. Hood, the next highest averaged \$2.61, and private label half gallons are available at \$2.28 per half gallon or less.
- The distinctive difference is that Farmers Cow is produced by these six farmers. Other brands of milk are also fresh milk, BST free, or produced in Connecticut.

- Even if it proves successful for its six owners, the Farmers Cow high priced niche strategy is not a viable option for the other 163 farmers in CT. CT milk production equals 85% or retail fluid sales. This much milk can not be sold in half gallons at \$2.87 each.

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I. Introduction

Fluid milk is one of the most important foods in a healthy diet. Lowfat or skim milk is healthier than whole milk. Fluid milk is the second most important item (after soft drinks) sold in supermarkets when products are ranked by dollar sales volume (IRI 2004). Fluid milk has the highest turnover of any item except fresh meat and fresh seafood (Progressive Grocer 1992) in a supermarket. Gallons of leading brand milk rarely sit on the shelves for more than a few hours. Such milk is often delivered to stores every day or every other day to keep the stores' coolers in stock.

Nearly all the fluid milk that consumers in southern New England drink is produced within 300 miles of their supermarket. In today's global food system that qualifies as a "local" product. When a consumer buys fluid milk at a supermarket, it is fresh, possibly produced on a farm within three to four days of purchase. Modern processing and distribution, however, gives fresh pasteurized milk up to 20 days of shelf life.¹

The milk processing and distribution industries have experienced profound change since the end of World War II. Consider Connecticut. In 1946 the state had 1,220 milk dealers. Only 268 had pasteurizing plants. These pasteurized milk dealers sold 255.5 million quarts of milk (no gallon jugs back then) which was 86% of all fluid milk (Bressler 1952, p. 176).

In 2006, Connecticut consumers drank 69.5 million gallons (280 million quarts) of fluid milk. Just three fluid milk processors, Garelick Farms (Dean Foods), Hood, and Guida Seibert Dairy distribute more fluid milk for Connecticut consumers than the 1,200 dealers in 1946.

¹ Ultra High Temperature (UHT) milk, including organic milk sold in supermarkets, has a shelf life of several months, and need not be refrigerated until opened. In Europe UHT milk is stocked on shelves like canned soup. UHT milk is not fresh and has different flavor characteristics than fresh pasteurized milk.

Moreover, Garelick Farms alone distributes more than 60% of the fluid milk sold in the state and the top three combined account for over 85% of all fluid milk sold. Of these three, only Guida Seibert dairy operates a fluid plant in Connecticut. Garelick supplies southern New England from plants in Franklin and West Lynn, Massachusetts and one in Rensselaer, New York. Hood's main supply plant for the three southern New England states is in Agawam, Massachusetts.

This concentration in fluid milk processing into very few very large plants has produced huge gains in processing plant and route distribution efficiency. It means, however, that dairy farmers or their cooperative who would sell fluid milk in southern New England markets have only three primary buyers: Garelick Farms (Dean Foods), Hood and Guida Seibert. Moreover, the primary fluid market for New England dairy farmers, and many farmers in eastern and central New York, is southern New England.

The retailing of milk has also undergone massive concentration since the end of World War II. At that time most fluid milk was delivered by dealers in glass quart bottles direct to consumer doorsteps. As supermarkets became the primary grocery distribution format, home delivery of fluid milk all but disappeared. Sales concentration has also dramatically reduced the number of competing supermarkets in southern New England.

Table 1 gives the market shares by New England state for the region's leading supermarket chains. For example, in 2006 Stop & Shop supermarkets captured 45% of supermarket sales in Connecticut, 49% in Rhode Island, and 33% in Massachusetts. Market shares for any chain are often higher in local market areas which are much smaller than state areas because a chain's business is not uniformly distributed across all local market areas. For example, Stop & Shop makes 54% of the New Haven metro area supermarket sales (Trade

Dimensions, 2006). Note that the top three supermarket chains in a state capture a very high share of supermarket sales, ranging between 62% and 82% throughout New England. Again, concentration of sales among the top three chains in any local market area is higher than state level concentration.

Increased seller concentration in the fluid milk processing and food retailing industries have resulted in significant cost savings through economies of scale in processing and scope in multi product supermarket retailing. Such high concentration, however, reduces the number of competitors, confers market power to the remaining sellers, and elevates prices (Weiss, 1989; Cotterill, 2006). This is the case in the southern New England market channel. As documented here, farmers on one end of the market channel and consumers on the other have experienced a significant reduction in price competition.

This report uses fluid milk retail price data collected in November 2006 and for several months in earlier years dating from June 2003. These data are from leading supermarket chains, convenience stores, club stores such as BJ's, and limited assortment stores such as Aldi from Connecticut, Massachusetts, Rhode Island, the Hudson River Valley above New York City, the Albany area, and Long Island. The detailed price results for all types of stores and individual firms are provided in Appendix A. The main focus of the text will be on the dominant distribution channel: supermarkets

Dairy Technomics, a firm that evaluates processor plant and distribution costs for supermarket milk buyers, has provided us with estimates of plant and distribution costs for individual plants and the brands distributed from these plants to each of the leading retailers in the region. When combined with publicly available raw milk costs we are able to decompose retail prices for particular brands of milk sold in particular retail chains into the retailer's margin,

the processor's margin and the price that farmers received. Moreover, we are able to do this by type of milk. For example, we report here the price that consumers paid in CT (MA, RI, NY) for Hood (Garelick, private label) skim (1%, 2%, whole) milk in Stop & Shop (Shaw's, Big Y, Wal-Mart) supermarkets. For each of these combinations we also know the retailer's margin, the processor's margin, and the raw milk price farmers received.

This comprehensive analysis allows one to determine exactly how the consumer milk dollar is split among the milk channel players: farmers, processors and retailers. We also use estimates of supermarket retailers' in-store costs to identify the net profits of supermarket retailers by brand and type of milk. Since supermarkets make more than three fourths of the retail fluid milk sales in the areas surveyed, their performance is critical to market channel performance.

Next we will analyze the effectiveness of the New York price gouging law which forces retail prices down when farm prices drop to low levels. The factual evidence reported suggests that southern New England states need a similar law to promote pricing efficiency and equity.

This report also documents the existence of flat milk pricing, i.e. retailers' charge the same price for whole, 2%, 1%, and skim milk. Since the wholesale price of lower fat milk is much lower, this is prima facie evidence that supermarket retailers exercise pricing power in many stores. Competitive retail pricing would follow wholesale costs. Flat milk pricing removes the economic incentive for consumers to switch to lower fat milk. This is a health concern that goes beyond individual responsibility since diseases related to excess saturated fat consumption result in added health care costs on society in general and state governments in particular.

Finally, we explain that retailer category management and milk promotion practices do not account for observed high supermarket gross and net profit margins.

II. Retail Prices, Supermarket Margins, Processor Margins and Raw Milk Prices: November 2006

Figures 1 through 4c provide an analysis for each of the four states surveyed. Figure 1 focuses on the top three supermarket chains and Wal-Mart supercenters in Connecticut. The top three chains account for 63% of supermarket sales in the state. Wal-Mart with only four supercenters accounts for only 2.8%.

The first column in Figure 1 summarizes price conduct for the sale of gallons of all types (whole to skim) of private label, Garelick, Guida and Hood fluid milk. It is an effective indicator of supermarket milk price levels in the state.² The “all milk” column reveals that processors paid farmers or their cooperatives \$1.25 per gallon for the raw milk bottled.³ Fluid processors (Garelick, Hood, and Guida) received, on average, 76 cents for processing and delivering milk to the chain stores. The supermarket chains priced that milk on average at \$3.83 per gallon and kept \$1.81 to cover their in-store costs.

Criner (2003) reviewed studies of in-store costs in Pennsylvania, New York, and Maine. He concluded, based upon those studies, that in-store costs including a competitive return to all invested capital were 40-50 cents per gallon in 2003. If one uses a 6% annual cost inflation factor then in 2006 in-store costs plus a competitive return are at most 60 cents per gallon. Therefore, Connecticut supermarkets enjoy an excess or super competitive profit margin on each gallon of milk sold that is \$1.21 per gallon. Stated in another fashion, Connecticut supermarket retailers enjoy a gross profit margin that is three times a competitive profit margin. Or look at it from the farmers’ perspective. Supermarkets’ excess profits, profits above what they would earn

² These are retail market share weighted averages for the four chains in the Table. Also, private label, Garelick (Guida), and Hood milk are weighted at their estimated relative shares: .5, .3, and .2 respectively. The same method is used in all other figures and tables in this report and earlier reports.

³ This is net of proceeds from sale of excess cream. Farmers also received payment for that cream; however, that farm product did not go into the fluid milk channel so it is not included in this channel analysis.

in a competitive market, at \$1.21 per gallon, are almost equal to the price that farmers received for the raw milk, \$1.25 per gallon.

If one examines the individual chains' margins for the individual brands of milk their pricing power is even more astounding. Note that Stop & Shop, the dominant chain in Connecticut, has the highest prices. Stop & Shop pays Hood only \$2.08 per gallon for this milk delivered to their stores. Stop & Shop charges, on average in its Connecticut stores, \$4.62 per gallon for this Hood milk. At this high retail price Stop & Shop retains a huge margin, \$2.58 per gallon. Again, we have evidence of substantive retailer market power. Hood has established its brand franchise with consumers; however, Stop & Shop captures the lion's share of the brands' value. This is not an efficient economic arrangement because the company that creates brand value is not capturing the revenues due to that activity.

Similar pricing of Hood milk occurs at Shaw's and Big Y, but the retail margins are somewhat lower at \$2.09 and \$1.97 per gallon respectively. Recall however, that a competitive in-store margin is approximately 60 cents.

Figure 1 reveals similar margin performance for private label, Garelick and Guida milk in the top three supermarkets in Connecticut. The Wal-Mart Supercenters in Connecticut (we checked three of the four) have distinctly lower retail pricing. Its retail margins are below cost on private label milk and less than half the retail margins of the other chains for private label and Garelick milk. From a product category perspective the weighted average cost across the three brands in Wal-Mart is 81 cents per gallon. This is above our estimated in-store competitive cost level of 60 cents per gallon, but retail margins are no where near as high as in the top three chains.

Figure 2 reports similar prices and margins for Massachusetts. Column 1 indicates that all milk retail prices, at an average \$3.30 per gallon, are lower in Massachusetts than in Connecticut. Processor margins and raw milk prices are essentially identical to Connecticut so the lower retail price produces a significantly lower retail margin in Massachusetts, \$1.34 per gallon. Nonetheless, this is far higher than the competitive margin of 60 cents. Excess or super competitive supermarket profits in Massachusetts are 74 cents per gallon.

Note in Figure 2 that the top two chains, Stop & Shop and Shaw's, exercise pricing power much as they do in Connecticut. Hannaford and DeMoulas, however, are much more competitive with significantly lower milk prices. Given that private label milk routinely accounts for at least 50% of sales, the margins realized by these two chains across all three brands are effectively near the competitive 60 cents per gallon level. We estimate that for the product category Hannaford's costs average 65 cents per gallon and DeMoulas average 62 cents per gallon. These chains practice effectively competitive pricing of fluid milk in their Massachusetts stores. Hannaford is a recent entrant into the state and appears to be competing vigorously for expanded market share. DeMoulas has been a competitive price maverick in the dairy case for years. They do not follow the lead of the larger chains.

Figure 3 is for Rhode Island. The performance for Stop & Shop and Shaw's, the top two chains, mirrors their power plays in Connecticut. A&J Seabra, a local chain, is more competitive, however, not as low priced as Hannafords or DeMoulas in Massachusetts.

When analyzing prices and margins in the areas of New York State that we price checked we will decompose the results reported in Appendix A into three regions. Since the New York price gouge law sets a different threshold price for "upstate" and "downstate," Figure 4a reports prices for the Albany area that is in upstate. The announced threshold price was \$2.72 per gallon

in November 2006 for upstate. Price Chopper, Hannaford, and Wal-Mart have complied with the law because they offer at least one brand (private label) at prices below \$2.72. In fact, Wal-Mart prices all brands at or below the threshold. Note that the prices and retail margins in this area of New York are much lower than in southern New England.

Figure 4b is for the lower Hudson River Valley above New York City which is in the “downstate” retail price threshold area. The November 2006 downstate threshold price is \$2.94, 22 cents higher than upstate. Three of the four chains offer one or more brands below the threshold price. A&P/Waldbaums, at \$2.99 per gallon for its lowest brand milk (private label), is above the threshold and invites investigation. (See Section IV for more explanation of the New York law’s impact.)

Figure 4c reports prices for four chains in suburban Long Island. Private label milk at three of the four chains is exactly at the threshold price, with one chain slightly below. Prices and retail margins on Long Island are significantly lower than in southern New England.

III. Prices and Margins Over Time

Figures 5 through 8 give the all milk and chain brand level prices and margins for the top four supermarket chains in southern New England for November 2006, July 2005, May 2004, and June 2003. The pricing power explained in detail at the state level for November 2006 in the cost section is not a fluke. Figures 5-8 documents that this pricing power has persisted over the past five years. Raw milk prices have varied from a low of \$1.03 per gallon in June 2003 to a high of \$1.67 per gallon in May 2004. Variation in retail margins, however, is much less, ranging from \$1.45 to \$1.61 per gallon. The excess profit margin, i.e. the margin above that

needed to cover in-store costs and a competitive return on capital have remained at or above a \$1.00 per gallon since 2003.

IV. The Impact of the New York Retail Price Threshold (anti-price gouging) Law

Briefly, the state of New York each month sets a threshold price which is 200% of the announced Class 1 price for 3.5% butterfat milk plus any cooperative premiums that processors must pay.⁴ This price is announced in advance of each month. Retailers are allowed to price above the threshold price. If they do so the state, however, may request that they provide a cost justification for such higher prices. If the retailer is in a particular high cost area and can justify such high prices, then they are not in violation of the law. Otherwise, they are in violation and face fines unless they reduce the price to below the threshold price level. This process of finding a chain guilty occurs via initial investigation by the New York Department of Agriculture and Markets, referral to the state attorney general for prosecution and trial in court.

Research at the Food Marketing Policy Center since 2002 documents that the New York threshold price law clearly has an impact on retail prices. This impact, however, vanishes during the high part of the raw milk price cycle. Figure 9 illustrates the impact of the New York retail threshold price law on New York prices relative to southern New England. Retail prices in southern New England are represented by a diamond, and are for 3.25% whole milk. Each New York threshold price is identified by an “X” in Figure 9, and squares identify the actual New York prices for a 3.25% whole milk in our New York survey area. The line along the bottom with triangles is the announced Class 1 3.5% butterfat whole milk price at Boston across the period. (The corresponding price series for New York City is 10 cents lower.)

⁴ See Appendix B for an example from Huff (2003).

Over the past five years, the Food Marketing Policy Center has collected retail prices in southern New England and New York seven times. For the earliest price check in November of 2002 one can see in Figure 9 that the threshold price in downstate New York was \$2.57 a gallon, and the actual average retail price was below that at \$2.43 a gallon. By comparison, in southern New England, prices were 59 cents a gallon higher at \$3.02 a gallon for whole milk.

If one moves over in Figure 9 to July of 2003 one also has a similar result. The threshold price is \$2.44, the lowest observed threshold in Figure 9. New York prices are below it at \$2.31, and southern New England prices at \$2.97 are 66 cents a gallon higher.

At the next price check point in Figure 9 the raw milk prices move up and the threshold price moves all the way to \$3.25 a gallon. The actual New York price moves up to \$2.87 which compares to southern New England prices at \$3.17. As the raw price moves up, the gap between New York and New England decreases to 30 cents a gallon.

The next price check was in May of 2004 when raw milk prices were very high, in fact, the highest in this four year period. The threshold price sky rockets to \$4.18 a gallon. One can see that in this environment the threshold price law has very little impact on New York milk prices which move up to \$3.62 a gallon, only 14 cents a gallon below southern New England prices.

After mid 2004, the next two price checks indicate that as the threshold price level drops, the actual New York price level also drops. The gap between southern New England and New York widens because southern New England prices do not drop as much.

The last price check which was in November of 2006 again clearly demonstrates the impact of the New York law when raw milk prices are low. The announced retail threshold price at \$2.94 a gallon constrains the New York prices to be \$2.89 a gallon whereas in southern New

England whole milk prices averaged \$3.51 a gallon—over 60 cents a gallon higher than in New York.

The evidence in Figure 9 demonstrates conclusively that the New York Law does have an influence on retail prices; however, that influence exists only when milk prices are moderate or low in the raw milk market. To control retail margins when raw milk prices are high the public agency needs to adjust the 200% rate down.

If one seeks further evidence on the impact of a retail threshold price policy examine the chain level prices by state in Table A3 in Appendix A. Stop & Shop, for example, has stores in New York as well as Connecticut and other southern New England states. In November 2006 Stop & Shop's lowest priced whole milk (in most stores this is private label milk unless a brand is on very cheap promotion) in Connecticut was \$3.50 per gallon. Yet in nearby New York Stop & Shop's price for gallons of whole milk was \$2.89. This 61 cent difference in price is due to the New York threshold price that was \$2.94/gallon. Similarly, for A&P/Waldbaums, Connecticut price was \$3.52, 58 cents higher than the average New York price which was \$2.94.⁵ Shop Rite and Price Chopper also have lower prices in New York. Hannaford does not. Its recent expansion into Massachusetts by acquiring the Victory Supermarkets chain in 2004, and its drive to establish a franchise is offering Massachusetts consumers whole milk at \$2.39/gallon, which is below the price in their established New York stores, \$2.66 per gallon. Wal-Mart has the same price for whole milk in New York and Connecticut, \$2.66 per gallon which is well below the \$2.94 per gallon retail threshold price.

⁵ See Figures 4b and 4c for A&P pricing. We checked two stores in each area; the Long Island stores were below the threshold and the Hudson River Valley stores were above it.

The Hannaford and Wal-Mart examples indicate that the threshold price can be set in a fashion that eliminates most excess profit and allows competitive pricing to further lower prices. The state is not fixing the price, nor is it eliminating all competitive moves among chains.

V. Flat Milk Pricing

Table 2a indicates the extent of flat milk pricing in southern New England in November of 2006. Table 2b does the same for November of 2004. In 2006 we checked prices in 34 Stop & Shop stores. In 31 of those 34 stores private label milk had the same price for all four types of milk. In other words, there was flat milk pricing in 31 of these stores. The three stores where private label milk prices were lower for milk with less butterfat were in Norwich, Waterford, and Willimantic, Connecticut. Why there? Fact is Stop & Shop competes against Wal-Mart in those cities, and Wal-Mart does not practice flat milk pricing.

Flat milk pricing at Stop & Shop is worse for branded milk. For Garelick brand milk, flat milk pricing existed in all 33 Stop & Shop stores that we price checked in November 2006. Similarly, flat milk pricing also existed in the 34 Stop & Shops that we price checked for Hood brand milk. Therefore, the competitive impact of Wal-Mart occurs only on private label milk.

This is clear evidence that the Stop & Shop chain has market power when setting retail milk prices. The competitive forces in markets where Wal-Mart is not present are extremely weak, even non-existent. Evidence for Stop & Shop in November of 2004 is effectively the same. There are relatively few Stop & Shop stores where prices are lower for milk with less butterfat.

One has similar results in Tables 2a and 2b for Shaw's, Star Market, and Big Y both in November of 2006 and November of 2004. Among the leading supermarket chains in the region only Wal-Mart Supercenters price milk according to butterfat content.

This pervasive flat milk pricing in southern New England suggests that states need to institute a retail threshold price law based upon the value of the raw milk that goes into the bottle. For example, if skim milk is 40 cents a gallon cheaper than whole milk then one would apply the 200% markup rule to that lower value for skim milk. In this fashion, the retail threshold price law would ensure that milk prices, at least when raw milk prices were low, would reflect the value of the raw milk in the bottle. It also would encourage consumers to switch away from whole milk towards skim milk because it would be lower priced than whole milk. This clearly represents a health benefit, long term, for the states and their citizens.

Figures 10 and 11 reveal that flat milk pricing has been an issue for several years in New York as well as southern New England. They provide additional support for a flat milk pricing policy that institutes separate retail threshold prices for each type of milk based upon butterfat content. New York's law would benefit consumers more if it were revised to address flat milk pricing.

VI. Category Management and Milk Promotion Practices do not Explain Wide Retail Margins

At various times state level associations that represent supermarket retailers on public relations issues, such as milk pricing, have responded to our price and margin research (McNamara, 2007). A common response is that supermarkets practice category management techniques that justify wide margins on fluid milk. Yet if this is the case then why do several

large chains including Wal-Mart, Hannafords and DeMoulas have significantly lower prices and margins? Since they practice category management too, it can't be the cause of high margins.

There are two components to category management pricing. First, consider the percent gross margin on different product categories in a supermarket: for example, fluid milk and peanut butter. The average percent gross margin for supermarkets in the U.S. in 2004 was 27% (Food Marketing Institute 2005, p. 18). A profit maximizing firm will consider turnover when setting the margin for each category. Since milk is one of the highest turnover items in the store, a given gallon stays only a very short time on the shelf and thus has to pay "shelf rent," i.e., contribute to the store's overhead, for only a very short time. Thus milk's contribution to overhead should be much lower on a percent of price basis than slower moving products such as peanut butter. This means that the percent gross margin on milk should be lower than the 29% average margin reported. It clearly is not in all of the high priced chains in this study.

The second component of category management is to set individual product prices and margins in a fashion to maximize the profit of the entire category. Maximum profits depend not only on the turnover of the category relative to other categories, they depend on the pricing power (elasticity of demand) the supermarket can realize for each product. The fact is fluid milk is a necessity that has few substitutes, so if consumers must buy it in a particular store due to lack of alternative competing outlets then the supermarket has pricing power. Consider an example. A supermarket has a bank of coolers full of milk that is selling at \$2.50 per gallon because there is competition in the market place. The cooler is full and milk moves out rapidly. Now eliminate that competition. The price of milk increases to \$3.50 per gallon, but now the store sells only 75% of the amount of milk. The dollar increase in price is profitable even on the lower volume. Moreover, in addition to increased profits on the milk the supermarket now has 25% of

the cooler available for other items to further increase profits. This is category management in action; however, the driving force for the increased profitability is not the pricing technique; it is the diminution in competition.

Finally, at least one industry spokesperson has claimed that our prices do not include promotions, especially coupons. This is not so. When checking prices we always recorded the sales or promotion price, not the regular shelf price. Moreover, retailers rarely if ever issue coupons for milk purchases. Promoted prices are posted and discounts are received at check out.

VII. Niche Marketing: Farmers Cow

Niche Marketing is not selling to the entire market. It is targeting sales to a relatively small segment. This occurs in markets where products can be differentiated. White, fresh fluid milk is a homogenous commodity sold by butterfat content; however, branded milk sold at retail commands premiums due to different packaging, health claims, advertising, and even the location of farms supplying milk. Farmers Cow distinct point of difference is that it is from six eastern Connecticut farmers. Table 3 gives, for Connecticut, the number of dairy farms, milk production, and cow numbers for each year since 1994. Farm numbers have dropped by 49%, cow numbers have dropped 39% and milk production has dropped by 28% since 1954. Today, 169 dairy farms in Connecticut produce 384 million pounds of milk. We estimate that this represents 85% of the fluid milk sold at retail (Cotterill and Rabinowitz, Tables 2, 3, October 30, 2006).

Six dairy farmers in eastern Connecticut have formed a limited liability corporation to market their milk under their own label: Farmers Cow. This milk is processed and distributed by the Guida Seibert Company. Farmers Cow marketing stresses that the brand is owned and

managed by local Connecticut farmers. If consumers want local, fresh milk and if they want to help these six Connecticut farmers they can do so by buying Farmers Cow.

Farmers Cow started selling milk in October 2005. We have checked their milk prices across the state twice, once in November 2005 and again in November 2006. Here we report prices only for November 2006; however, the results were very similar in November 2005.

Farmers Cow milk is sold only in half gallon paper cartons. It is flat priced; a package of skim milk costs the same as 1%, 2%, and whole. Farmers Cow milk is not organic milk and is not labeled “organic”. It is BST free (cows are not injected with growth hormones); however, this is now the case for the leading white fluid milk brands sold in Connecticut—Hood and Garelick milk. Moreover, Garelick provides the same milk to its private label accounts: Stop & Shop, Shaw’s, A&P/Waldbaums, Cumberland Farms, BJ’s, and Wal-Mart, so nearly all milk sold in Connecticut is BST free. All of this white fluid milk also is fresh milk. Moreover, Guida and Big Y private label milk (packed by Guida for its Connecticut stores) is produced on Connecticut farms. Big Y has large very attractive overhead signs in the dairy aisle of its stores declaring its milk is from Connecticut. Therefore, the only clear point of difference for Farmers Cow milk is that the brand is owned and the milk comes from six of 169 Connecticut dairy farms.

Table 4 reports the prices for half gallons of whole milk in Connecticut supermarkets. Prices are ordered from the cheapest to the most expensive. A half gallon of private label whole milk at Wal-Mart is cheapest at \$1.57 per gallon. Big Y private label milk in Connecticut, bottled and delivered by Guida from Connecticut farms, costs only \$2.00. Guida brand milk, which comes from the same plant and Connecticut farms as Big Y private label, retails on average for only 17 cents per half gallon more, \$2.17. In contrast, Farmers Cow milk from the six Connecticut farms is the highest priced half gallon of fresh whole milk in the dairy cases that

we surveyed. It retails in the state's supermarkets for, on average, \$2.87 per half gallon. Hood milk at \$2.61 is 26 cents a half gallon cheaper and is the second most expensive.

New England Family Farms is owned by Hood and is third most expensive at \$2.55. Hood purchased the Vermont Family Farms label with its very attractive rural artwork from St. Albans farmer cooperative who had tried unsuccessfully to market milk locally in Vermont. Hood renamed it New England Family Farms and now use it as a niche brand to capture sentiment for, yup, New England Family Farms. It often sits next to Farmers Cow milk.

Table 5 provides a more direct look at the choices consumers face when shopping at a particular supermarket chain. The first column gives the market share of supermarket sales that each chain captures in Connecticut. Stop & Shop, for example, is the dominant force capturing 45.44% of Connecticut citizens' food purchases. In Stop & Shop private label milk is the cheapest half gallon at \$2.28. Again, Farmers Cow is the most expensive at \$2.87 per half gallon. Farmers Cow, in fact, is the most expensive in every chain except Shop Rite where it was more expensive than private label and Garelick but not Hood.

Why is Farmers Cow so expensive? If it is because the six dairy farmers are receiving large premiums, premiums for raw milk above and beyond the brand premiums that long established brands such as Hood can command, then this is a successful marketing endeavor for these six farmers. We doubt that they are receiving brand premiums above those that Hood captures, and Hood's brand premiums, as previously documented in this paper, are very low. There are other reasons for the high retail price on Farmers Cow. First is the added processing and distribution costs that come from processing a small volume niche product. Second is the documented high mark-ups that retailers put on such low turnover niche products. Earlier we

documented the huge retail margins, margins far in excess of in-store costs on Hood brand milk. A profit maximizing retailer will not place a lower mark-up on Farmers Cow.⁶

We conclude that buying Farmers Cow milk is a very inefficient way for consumers to support six Connecticut farmers. Most of the high price that they pay stays with the retailer and the processor to cover costs and profits. Consumers would be better off and the Cow farmers would be better off if consumers bought private label milk and sent one third of the difference between the Farmers Cow and private label prices to the six farms. This strategy would also save on the extra resources expended to process, package, distribute and shelve this niche product. This is an explicit example of a more efficient and equitable (fair) fluid milk policy than Farmers Cow.

This mail-in strategy of course is not practical because it has very high transaction costs for consumers. As documented in our companion report (Cotterill et al., 2007), the proposed market-wide fee, green price subsidy, and threshold price program is a different story. It enables consumers, as a group, to enact the same program not just for a Farmers Cow farmer but for all farmers in the state. It is triple efficient. The milk channel is more efficient in its use of resources and in its pricing, and consumers' transactions costs are minimized.

Even if Farmers Cow generates some incremental return to the six farmers, it is not a valid policy prescription for the remaining 163 Connecticut dairy farmers. Recall that Connecticut farm production equals 85% of retail fluid milk sales in the state. The state's farmers cannot sell all their milk as Farmers Cow milk at \$2.87 per half gallon. This niche

⁶ Farmers Cow seeks to differentiate its brand from Hood which means if successful its brand level demand elasticity would be less elastic than Hood thereby commanding a premium to Hood. In this case the optimum retail markup on Farmers Cow is higher than the Hood mark up. Higher processing costs at the Cow also raise retail price.

marketing strategy simply cannot grow enough to make dairy farming, as it exists in the state today, sustainable.

References

- Bressler, Raymond. 1952. "A Study of Fluid Milk Distribution." Harvard University Press: Cambridge.
- Cotterill, Ronald W. and Adam N. Rabinowitz 2007. "Toward Reform of Fluid Milk Pricing in Southern New England: Analysis of Proposed State Level Milk Regulation Policies in Connecticut and Massachusetts." Food Marketing Policy Center, University of Connecticut, Storrs, CT. available at <http://www.fmpc.uconn.edu>.
- Cotterill, Ronald W. and Adam N. Rabinowitz. 2006. Toward Reform of Fluid Milk Pricing in Southern New England: Milk Market Channel Policies for Connecticut and Other States. Food Marketing Policy Center, University of Connecticut, Storrs, CT. October 30, available at <http://www.fmpc.uconn.edu>.
- Cotterill, Ronald W. 2006. "Antitrust Analysis of Supermarkets: Global Concerns Playing out in Local Markets." *The Australian Journal of Agricultural and Resource Economics*, 50, pp. 17-32, available at <http://www.fmpc.uconn.edu>.
- Criner, George 2003. "Retail In-store Costs of Milk Distribution." Presented at the Northeast Dairy Policy and Prices Summit Meeting, November 17-18, at the University of Connecticut, Storrs, available at <http://www.fmpc.uconn.edu>.
- Food Marketing Institute, 2005. *The Food Retailing Industry Speaks*, Washington, DC., p. 18.
- Information Resources, Inc. 2004. *Marketing Factbook*, Chicago, IL.
- McNamara, Eileen. 2007. "As Milk Prices Soar, Farmers Don't Get to Share the Profits." *The Day*, New London, CT. January 28, p. 1, available at <http://www.fmpc.uconn.edu>.
- The Griffin Report. 2006. "Annual Market Share Survey for New England States." June.
- Progressive Grocer. 1992. "The Marsh Super Study" December.
- Trade Dimensions, 2005. *Progressive Grocer Market Scope 2006*, Danbury, CT.
- Weiss, Leonard W. 1989. *Concentration and Price*, MIT Press, Cambridge, MA.

Table 1. Leading Supermarket Market Shares by State

	Connecticut		Massachusetts		Rhode Island		New Hampshire		Maine		Vermont	
	Rank	Share	Rank	Share	Rank	Share	Rank	Share	Rank	Share	Rank	Share
Stop & Shop	1	45.44	1	33.23	1	49.16	5	4.71	-	-	-	-
Shaws	3	7.71	2	18.79	2	22.70	1	28.27	2	20.43	3	26.31
Big Y	2	9.51	4	6.36	-	-	-	-	-	-	-	-
Demoulas/Market Basket	-	-	3	9.91	-	-	3	23.44	-	-	-	-
Hannaford	-	-	5	4.42	-	-	2	24.76	1	44.39	2	26.80
Wal-Mart Supercenter	7	2.82	12	1.42	6	2.34	4	10.00	3	16.82	-	-
Price Chopper (Golub)	4	3.05	7	3.17	-	-	6	1.94	-	-	1	27.87
Price Rite (Wakefern)	9	1.34	14	1.13	3	3.92	-	-	-	-	-	-
Top Three Firms		62.66		61.93		75.78		76.47		81.64		80.98

Source: The Griffin Report: of Food Marketing; June 2006 Vol. 40 No.6

Table 2a. Flat Milk Pricing in Southern New England: November 2006

Chain	Stores Checked in Southern New England	Brand	Stores with Flat Pricing	Stores with Variable Pricing	Locations with Variable Pricing	
Stop & Shop	34	Private Label	31	3	Norwich, Waterford, and Willimantic, CT	
	33	Garelick	33	0		
	34	Hood	34	0		
Shaw's/Star Market	19	Private Label	19	0		
	19	Garelick	19	0		
	19	Hood	19*	0		
Big Y	12	Private Label	10	2	Norwich and Waterford, CT	
	8	Guida	8	0		
	4	Garelick	3	1		Ware, MA
	12	Hood	11	1		Ware, MA
Wal-Mart Supercenter	5	Private Label	0	5	Raynham and Ware, MA and Lisbon, North Windham, and Wallingford, CT	
	5	Garelick	0	5		
	4	Hood	0	4		

*Shaw's/Star Market in New Bedford, MA had Hood 2% milk priced 4 cents cheaper than Whole, 1%, and Skim.

Table 2b. Flat Milk Pricing in Southern New England: November 2004

Chain	Stores Checked in Southern New England	Brand	Stores with Flat Pricing	Stores with Variable Pricing	Locations with Variable Pricing	
Stop & Shop	32	Private Label	30	2	Norwich and Waterford, CT	
	32	Garelick	31	1		Norwich, CT
	32	Hood	30	2		Norwich and Waterford, CT
Shaw's/Star Market	18	Private Label	18	0		
	18	Garelick	18	0		
	17	Hood	17	0		
Big Y	12	Private Label	11	1	Ware, MA	
	12	Guida	11	1		
	12	Hood	11	1		
Wal-Mart Supercenter	2	Private Label	0	2	Ware, MA and Lisbon, CT	
	2	Garelick	0	2		
	2	Hood	0	2		

Table 3. Loss of Connecticut Dairy Farms, Milk Production, and Cows since 1994

Year	No. of Farms	Milk Production (Mil. Lbs)	Value (Mil. Dollars)	No. of Milking Cows (Thousands)
1994	334	530	\$75.416	33
1995	302	526	\$73.041	32
1996	289	499	\$80.830	30
1997	270	509	\$77.194	30
1998	250	529	\$87.285	30
1999	252	520	\$84.240	29
2000	240	480	\$67.680	27
2001	223	456	\$73.416	25
2002	212	447	\$59.004	24
2003	191	410	\$53.259	22
2004	180	390	\$67.124	20
2005	179	385	\$59.867	20
2006	169	384	\$51.710	20

Source: CT. Dept. of Agriculture and USDA National Agricultural Statistics Service

Table 4: Average Price of Half-Gallon Whole Milk in Connecticut Supermarket Chains, by Brand: November 2006

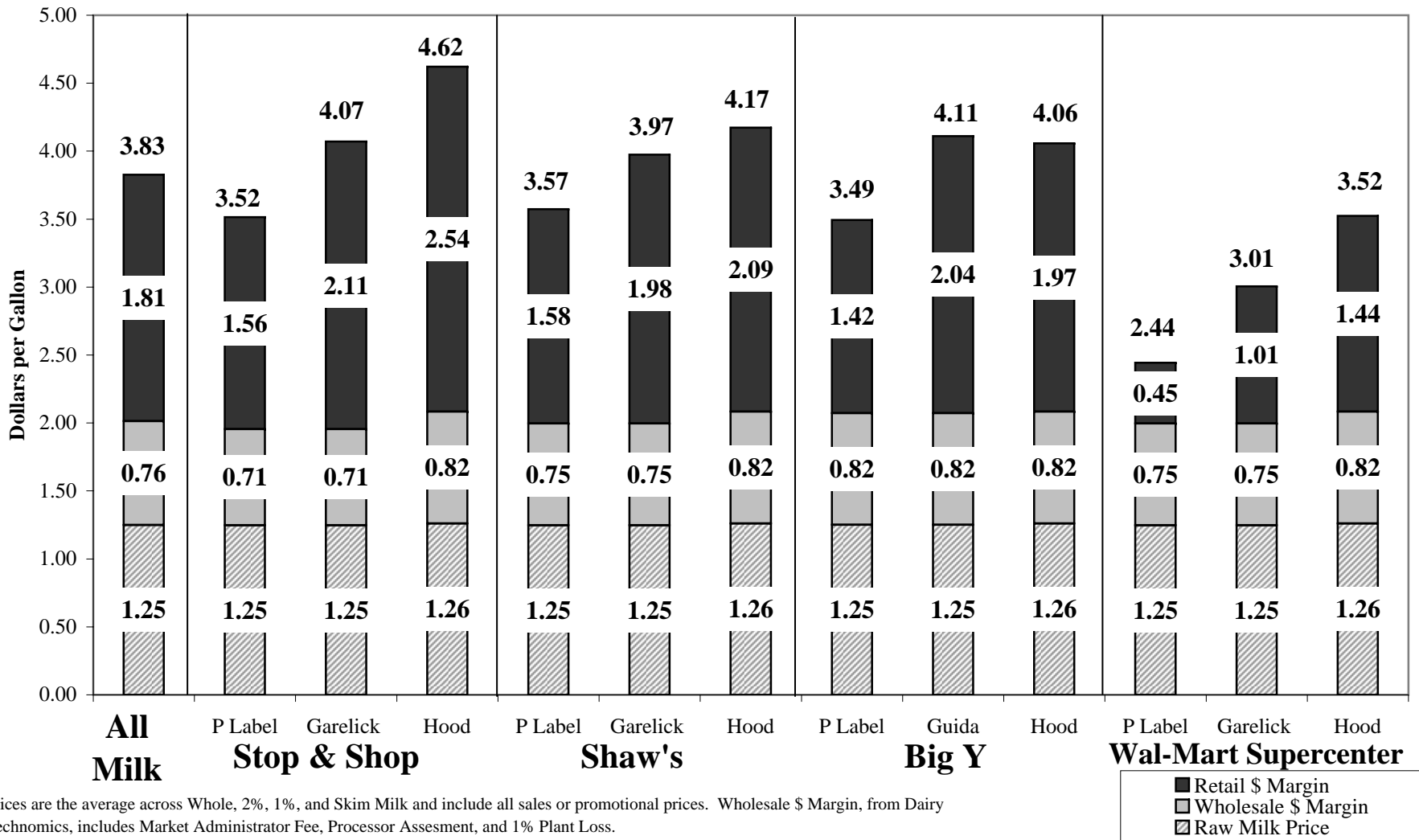
Brand	No. of Stores Price Checked	Average Price in November 2006
Private Label (Wal-Mart)	3	\$1.57
Private Label (Price Chopper)	3	\$1.96
Private Label (Big Y)	8	\$2.00
Private Label (A&P)	2	\$2.09
Guida	13	\$2.17
Private Label (Shaws)	6	\$2.19
Private Label (Shop Rite)	6	\$2.26
Private Label (Stop & Shop)	16	\$2.28
Garelick	31	\$2.45
New England Family Farms	10	\$2.55
Hood	40	\$2.61
Farmer's Cow	33	\$2.87

Table 5: Average Price of Half-Gallon Whole Milk in Connecticut Supermarket Chains, by Brand and Chain:
November 2006

Store Name	2005 Connecticut Market Share ¹	No. of Stores Price Checked	Private Label	Guida	Garellick	New England Family Farms	Hood	Farmer's Cow
Stop & Shop	45.44	16	\$2.28	\$2.19	\$2.64	\$2.77	\$2.80	\$2.87
Big Y	9.51	8	\$2.00	\$2.13	-	-	\$2.34	\$2.99
Shaw's/Star Market	7.71	6	\$2.19	\$2.29	\$2.41	\$2.41	\$2.55	\$2.89
Price Chopper	3.05	3	\$1.96	\$2.09	\$2.39	-	\$2.34	\$2.89
A & P/Waldbaums	3.03	3	\$2.09	-	\$2.19	-	\$2.74	-
Wal-Mart Supercenter	2.82	3	\$1.57	-	\$1.82	-	\$1.98	-
Shop Rite	0.91	6	\$2.26	-	\$2.29	-	\$3.04	\$2.56

¹ Supermarket All Food Market Shares from The Griffin Report: of Food Marketing; June 2006 Vol. 40 No. 6

Figure 1. Actual Raw Milk, Estimated Wholesale, and Actual Retail Milk Pricing by Brand for Four Leading Supermarket Chains in Connecticut: November 2006



Prices are the average across Whole, 2%, 1%, and Skim Milk and include all sales or promotional prices. Wholesale \$ Margin, from Dairy Technomics, includes Market Administrator Fee, Processor Assessment, and 1% Plant Loss.

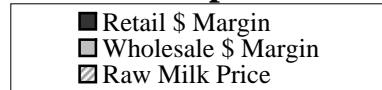


Figure 2. Actual Raw Milk, Estimated Wholesale, and Actual Retail Milk Pricing by Brand for the Four Leading Supermarket Chains in Massachusetts: November 2006

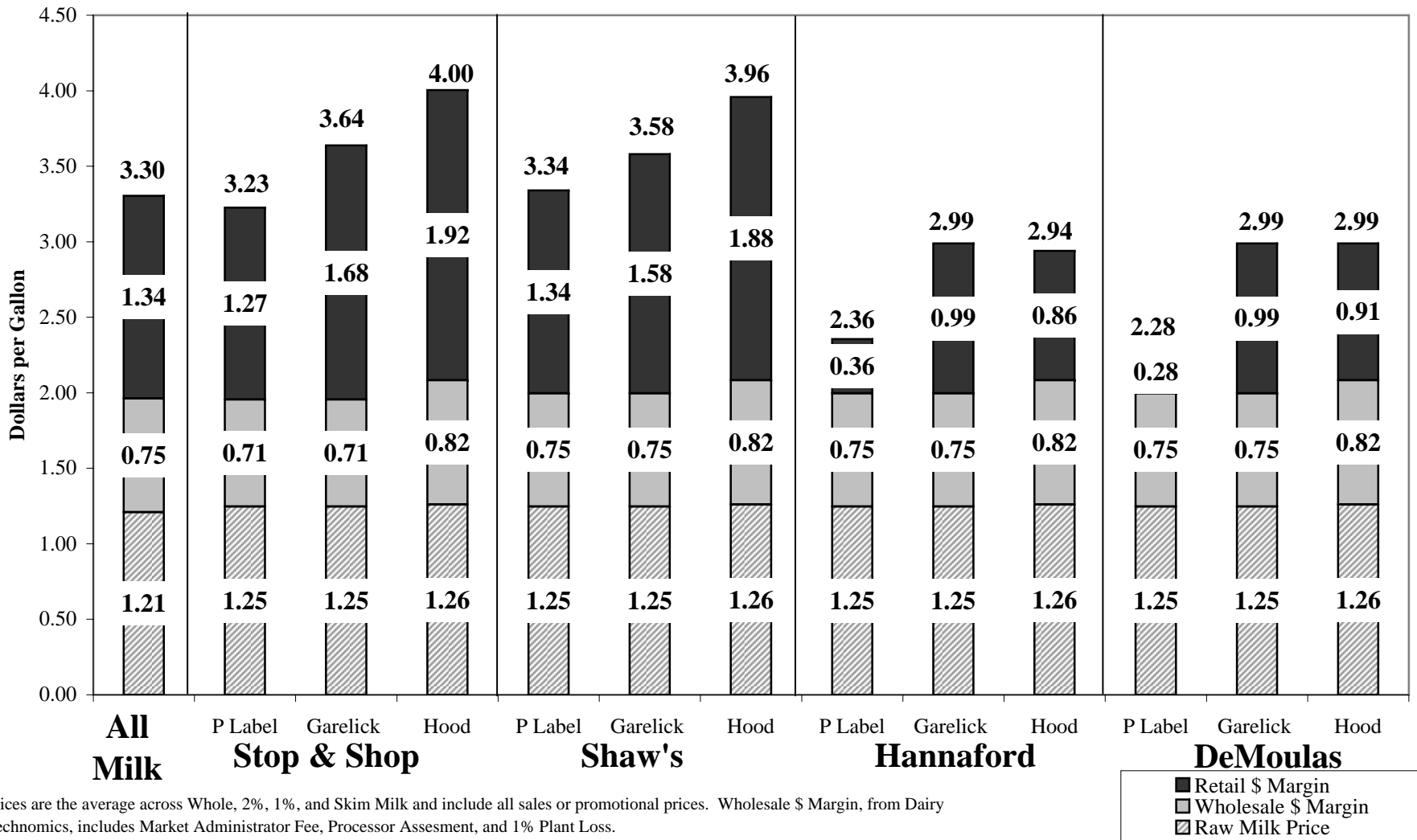


Figure 3. Actual Raw Milk, Estimated Wholesale, and Actual Retail Milk Pricing by Brand for Three Leading Supermarket Chains in Rhode Island: November 2006

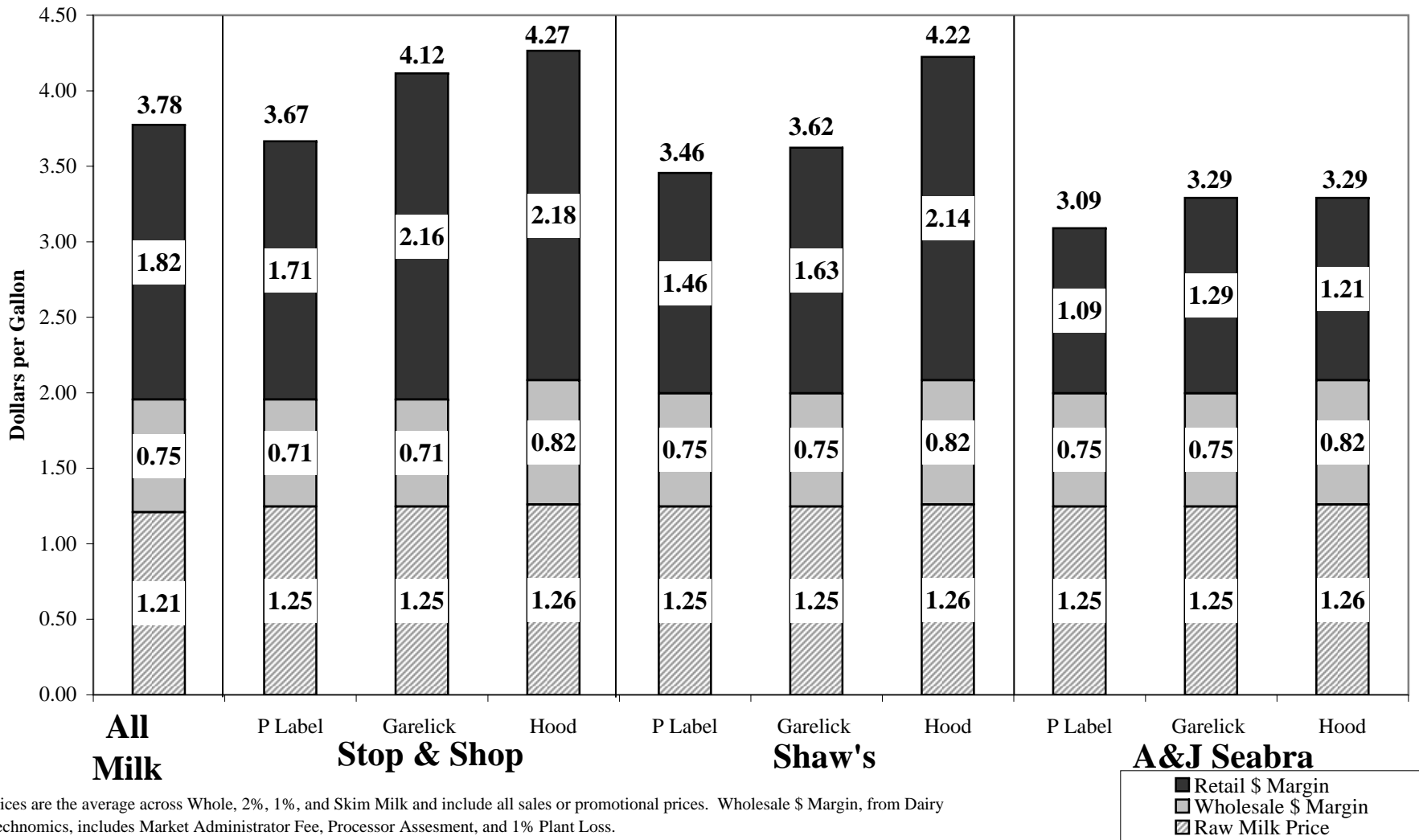
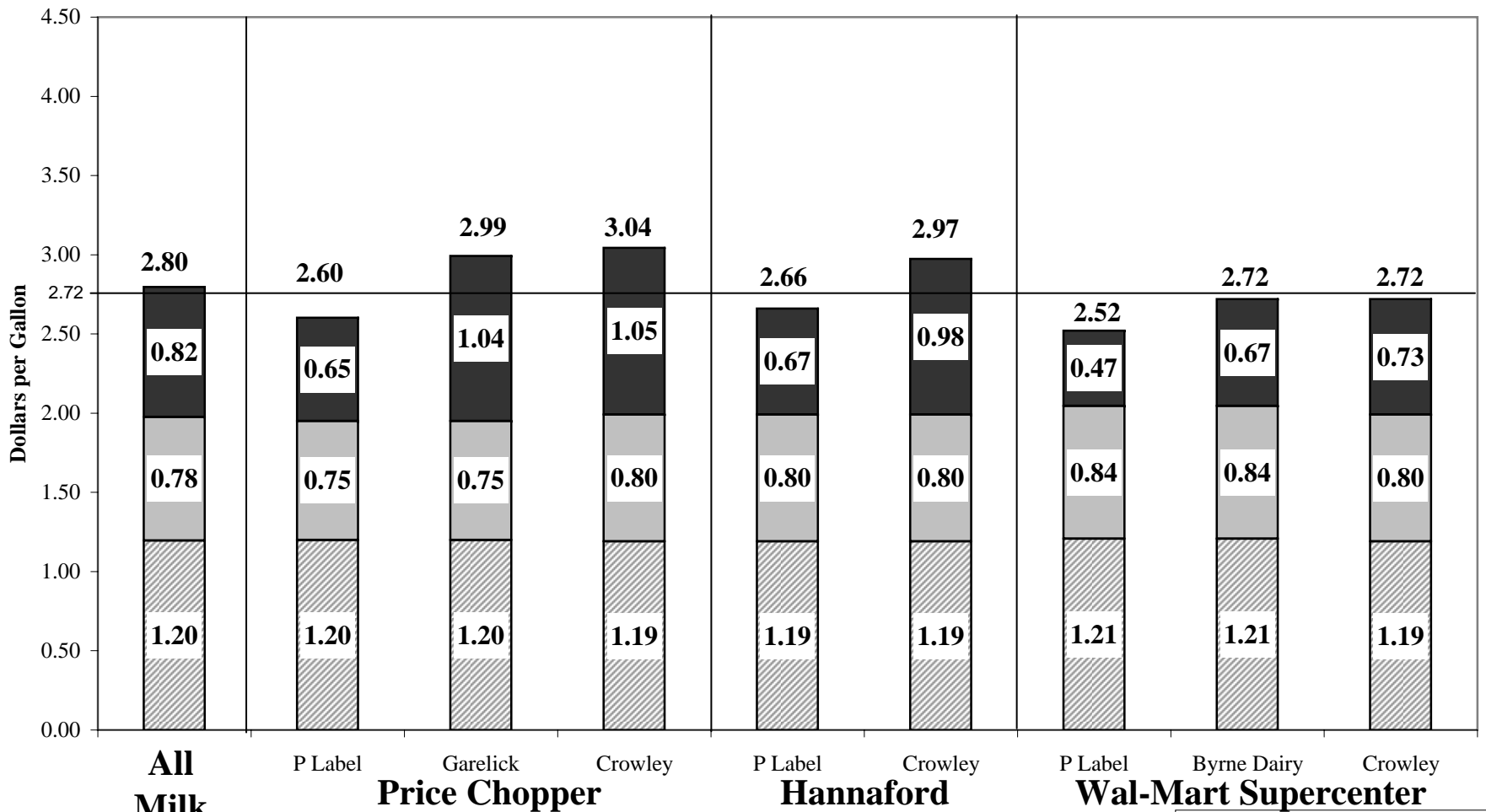


Figure 4a. Actual Raw Milk, Estimated Wholesale, and Actual Retail Milk Pricing by Brand for Three Leading Supermarket Chains in Albany Area New York: November 2006
Upstate Threshold Price = \$2.72



Prices are the average across Whole, 2%, 1%, and Skim Milk and include all sales or promotional prices. Wholesale \$ Margin, from Dairy Technomics, includes Market Administrator Fee, Processor Assessment, and 1% Plant Loss.

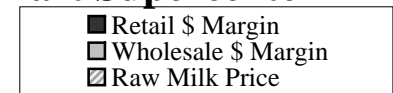
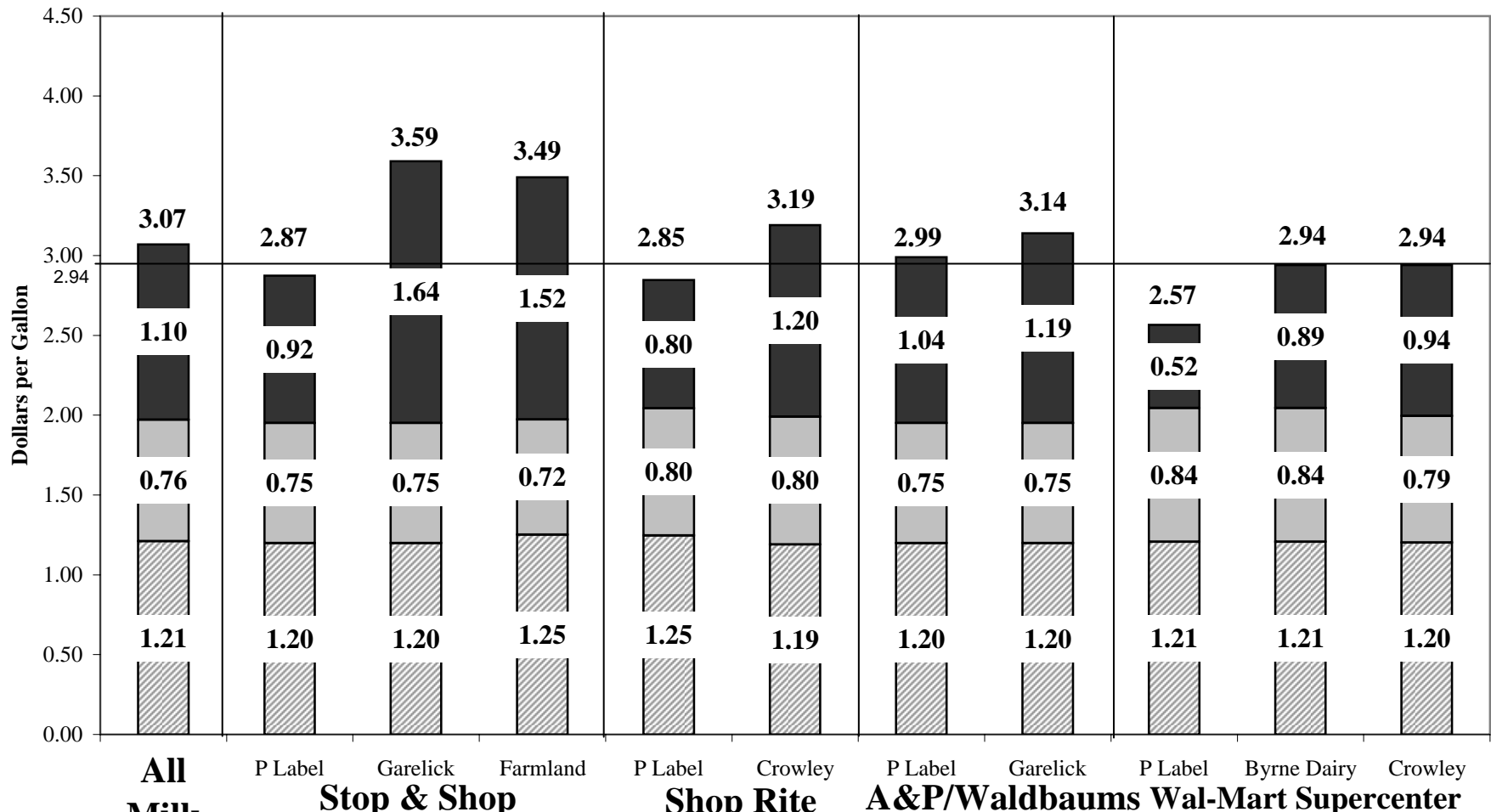


Figure 4b. Actual Raw Milk, Estimated Wholesale, and Actual Retail Milk Pricing by Brand for Four Leading Supermarket Chains in Hudson River Valley New York: November 2006
Metro Region Threshold Price = \$2.94



Prices are the average across Whole, 2%, 1%, and Skim Milk and include all sales or promotional prices. Wholesale \$ Margin, from Dairy Technomics, includes Market Administrator Fee, Processor Assessment, and 1% Plant Loss.

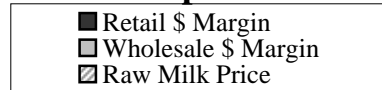


Figure 4c. Actual Raw Milk, Estimated Wholesale, and Actual Retail Milk Pricing by Brand for Four Leading Supermarket Chains in Long Island Area New York: November 2006
Metro Region Threshold Price = \$2.94

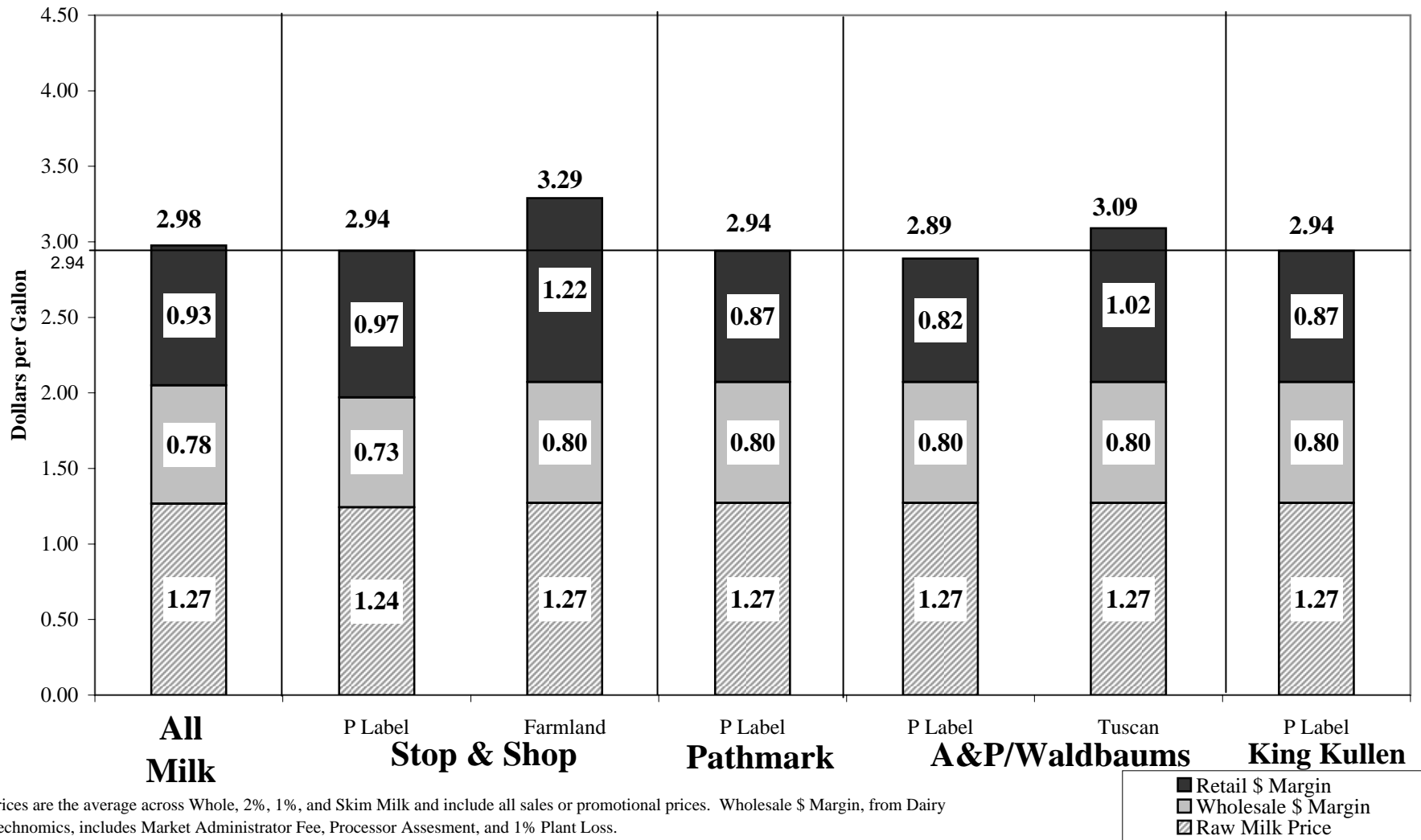
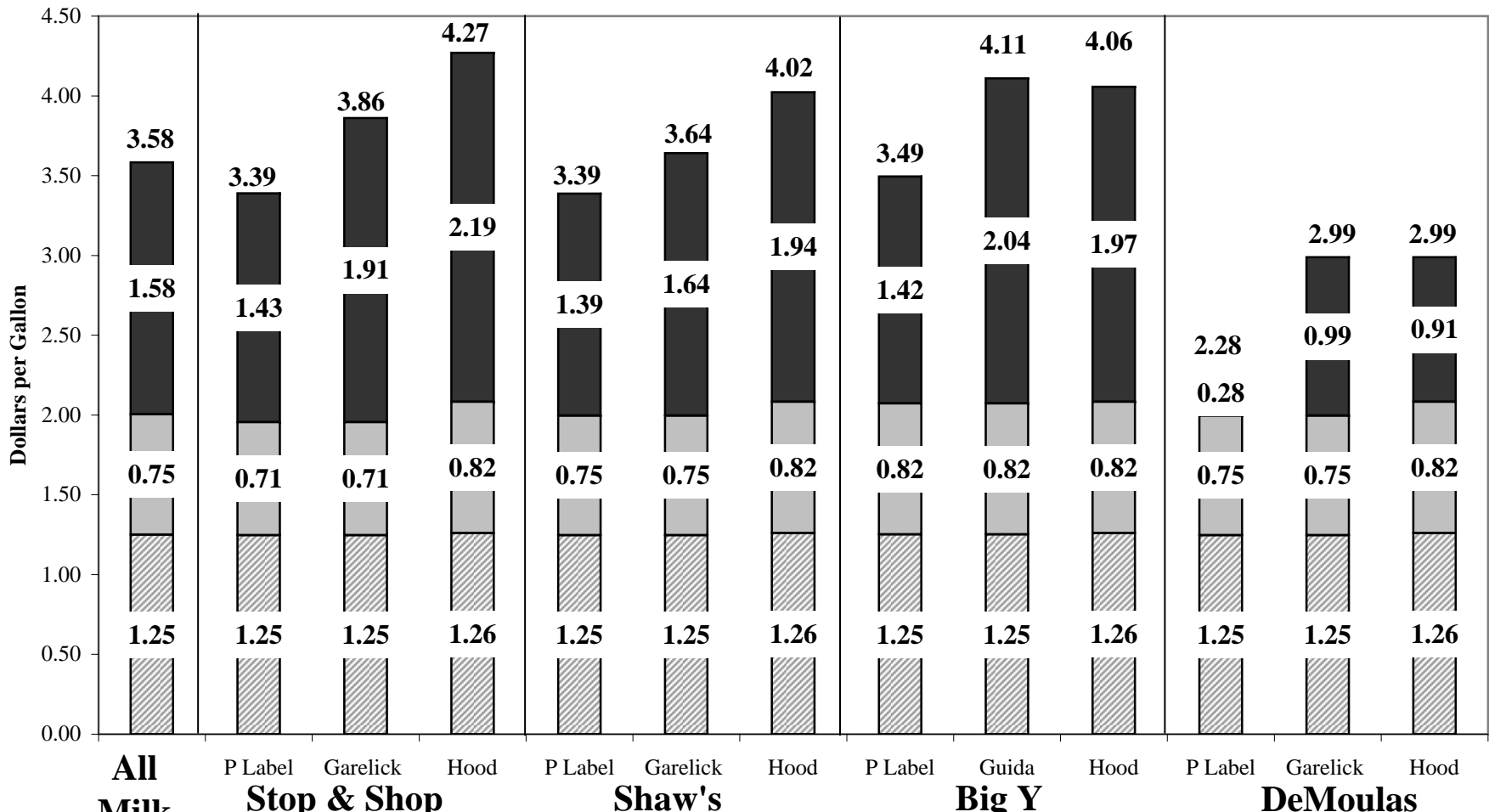


Figure 5. Actual Raw Milk, Estimated Wholesale, and Actual Retail Milk Pricing by Brand for the Four Leading Supermarket Chains in Southern New England: November 2006



Prices are the average across Whole, 2%, 1%, and Skim Milk and include all sales or promotional prices. Big Y prices are for CT only. Wholesale \$ Margin, from Dairy Technomics, includes Market Administrator Fee, Processor Assessment, and 1% Plant Loss.

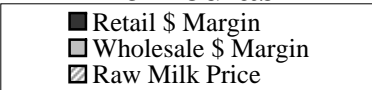
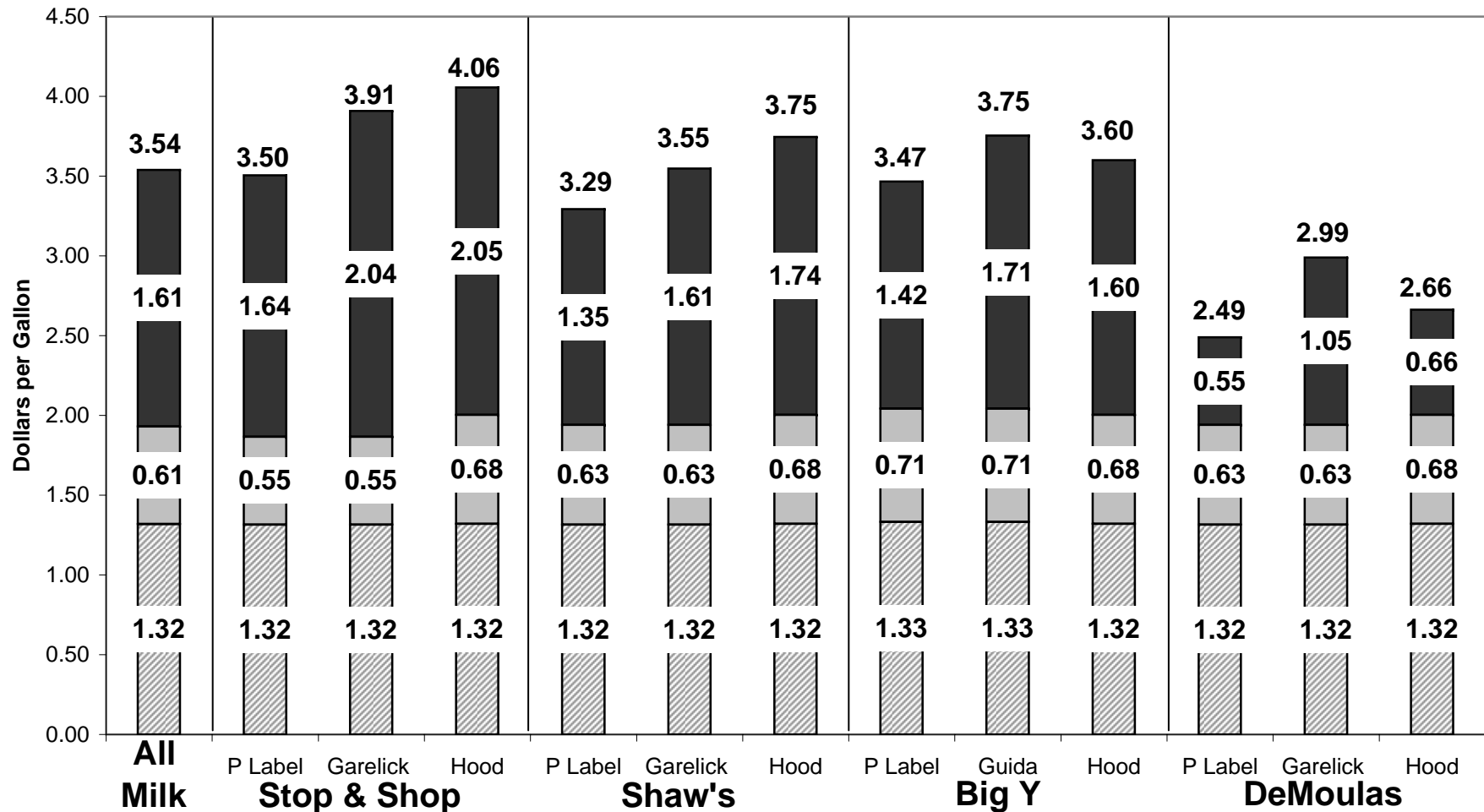


Figure 6: Actual Raw Milk, Estimated Wholesale, and Actual Retail Milk Pricing by Brand for the Four Leading Supermarket Chains in Southern New England: July 2005



Prices are the average across Whole, 2%, 1%, and Skim Milk and include all sales or promotional prices.

Wholesale \$ Margin, from Dairy Technomics, includes Market Administrator Fee, Processor Assessment, and 1% Plant Loss.

Raw milk prices include plant based cooperative premium estimate from Dairy Technomics for June 2004.

Source: Food Marketing Policy Center, University of Connecticut

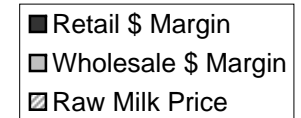
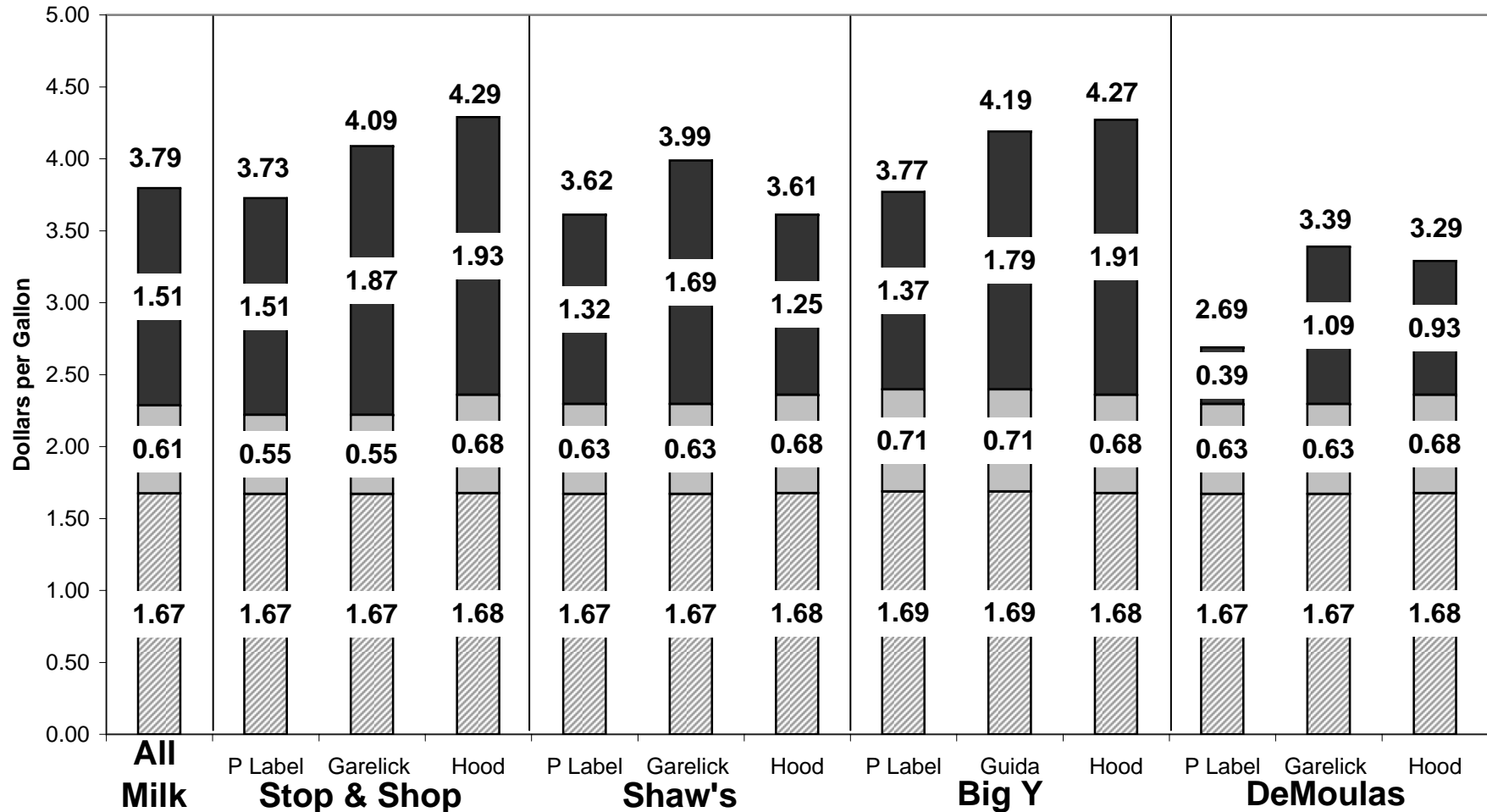


Figure 7: Actual Raw Milk, Estimated Wholesale, and Actual Retail Milk Pricing by Brand for the Four Leading Supermarket Chains in Southern New England: May 2004



Prices are the average across Whole, 2%, 1%, and Skim Milk and include all sales or promotional prices.

Wholesale \$ Margin, from Dairy Technomics, includes Market Administrator Fee, Processor Assessment, and 1% Plant Loss.

Raw milk prices include plant based cooperative premium estimate from Dairy Technomics for June 2004.

Source: Food Marketing Policy Center, University of Connecticut

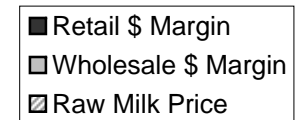
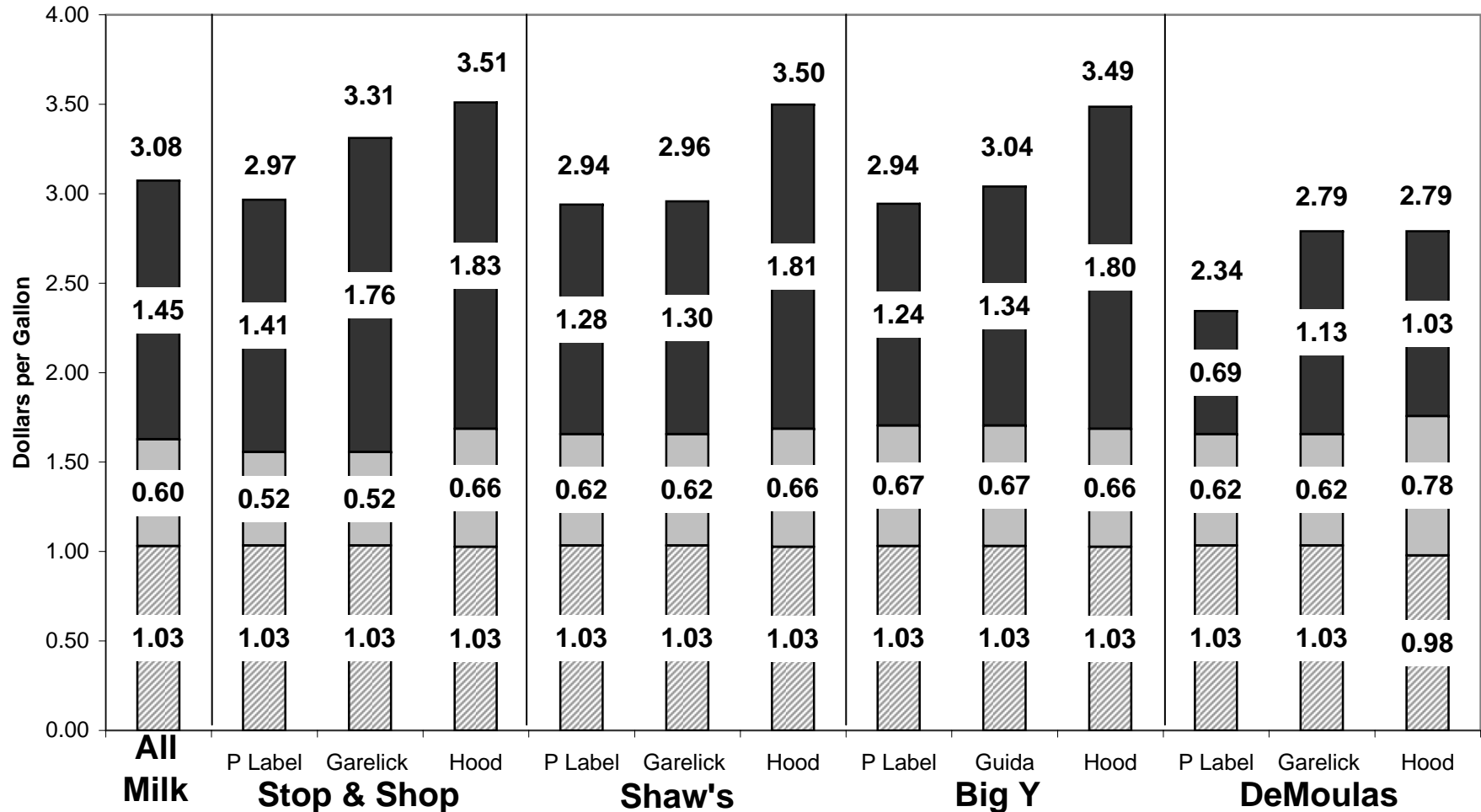


Figure 8: Actual Raw Milk, Estimated Wholesale, and Actual Retail Milk Pricing by Brand for the Four Leading Supermarket Chains in Southern New England: June 2003



Prices are the average across Whole, 2%, 1%, and Skim Milk and include all sales or promotional prices.
 Wholesale \$ Margin, from Dairy Technomics, includes Market Administrator Fee, Processor Assesment, and 1% Plant Loss.
 Raw milk prices include plant based cooperative premium estimate from Dairy Technomics for June 2003.
 Source: Food Marketing Policy Center, University of Connecticut

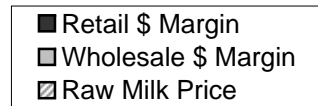
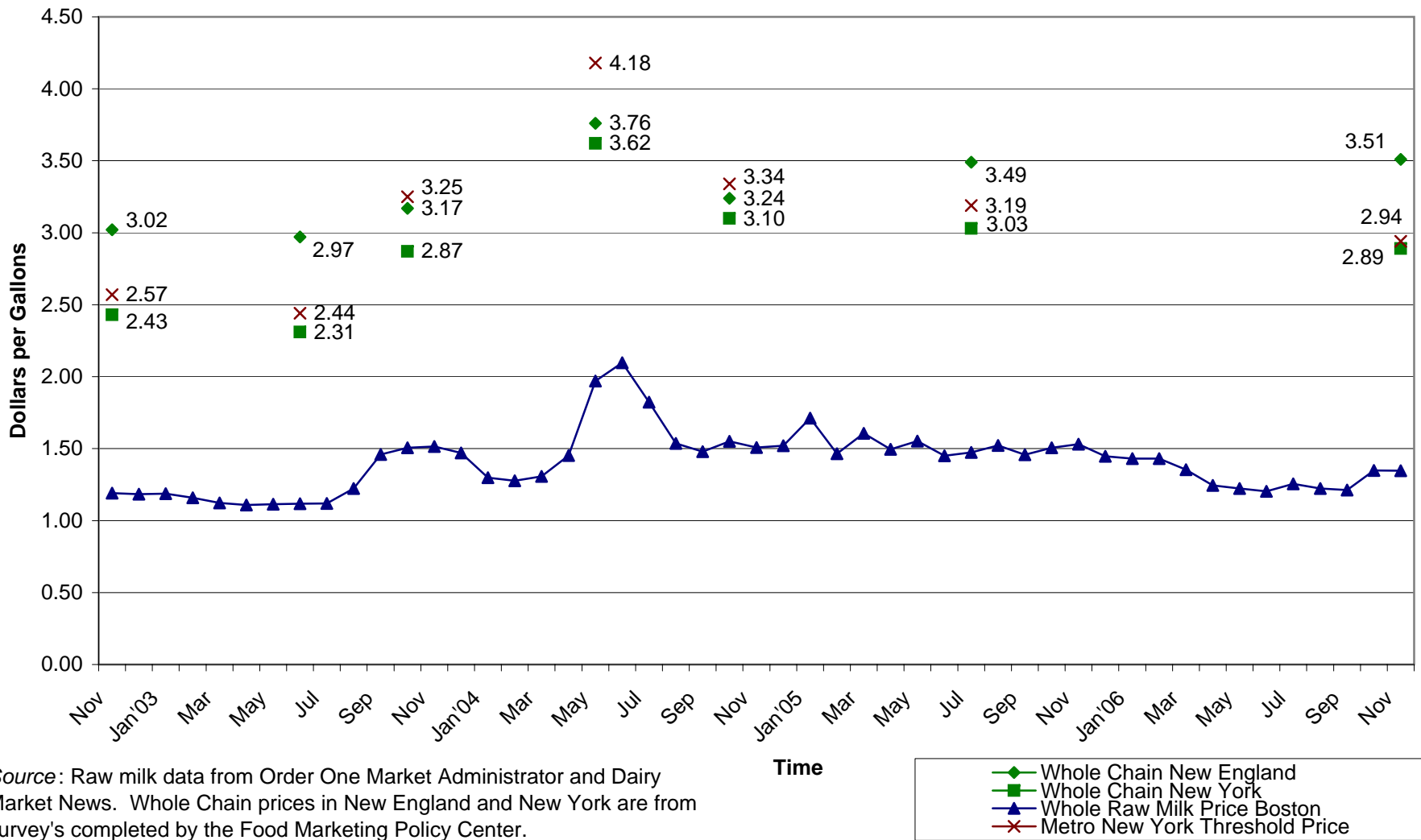
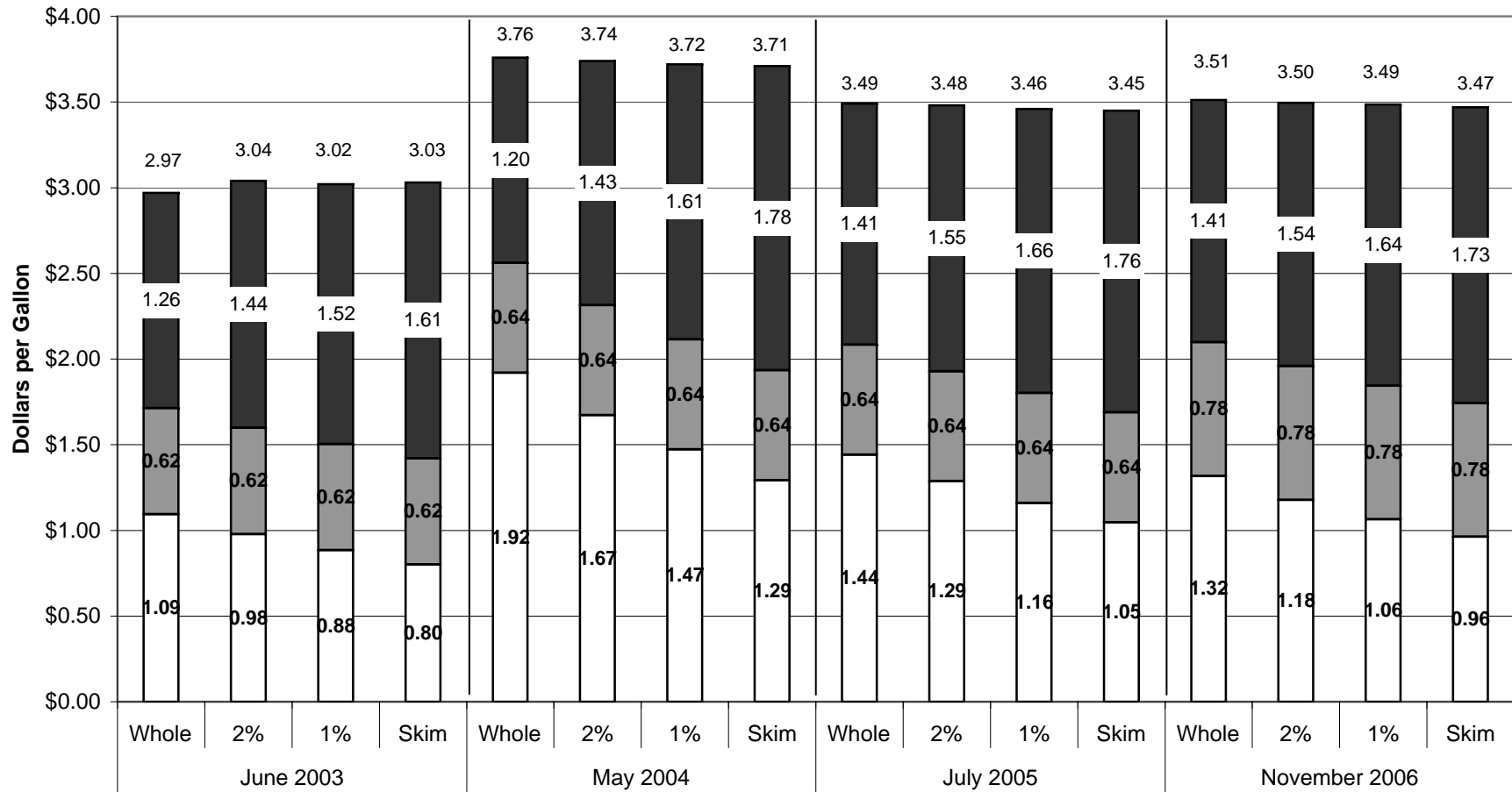


Figure 9. Weighted Average Chain Store 3.25% Whole Milk Prices in New York and New England and Respective 3.5% Whole Raw Milk Prices



Source: Raw milk data from Order One Market Administrator and Dairy Market News. Whole Chain prices in New England and New York are from survey's completed by the Food Marketing Policy Center.

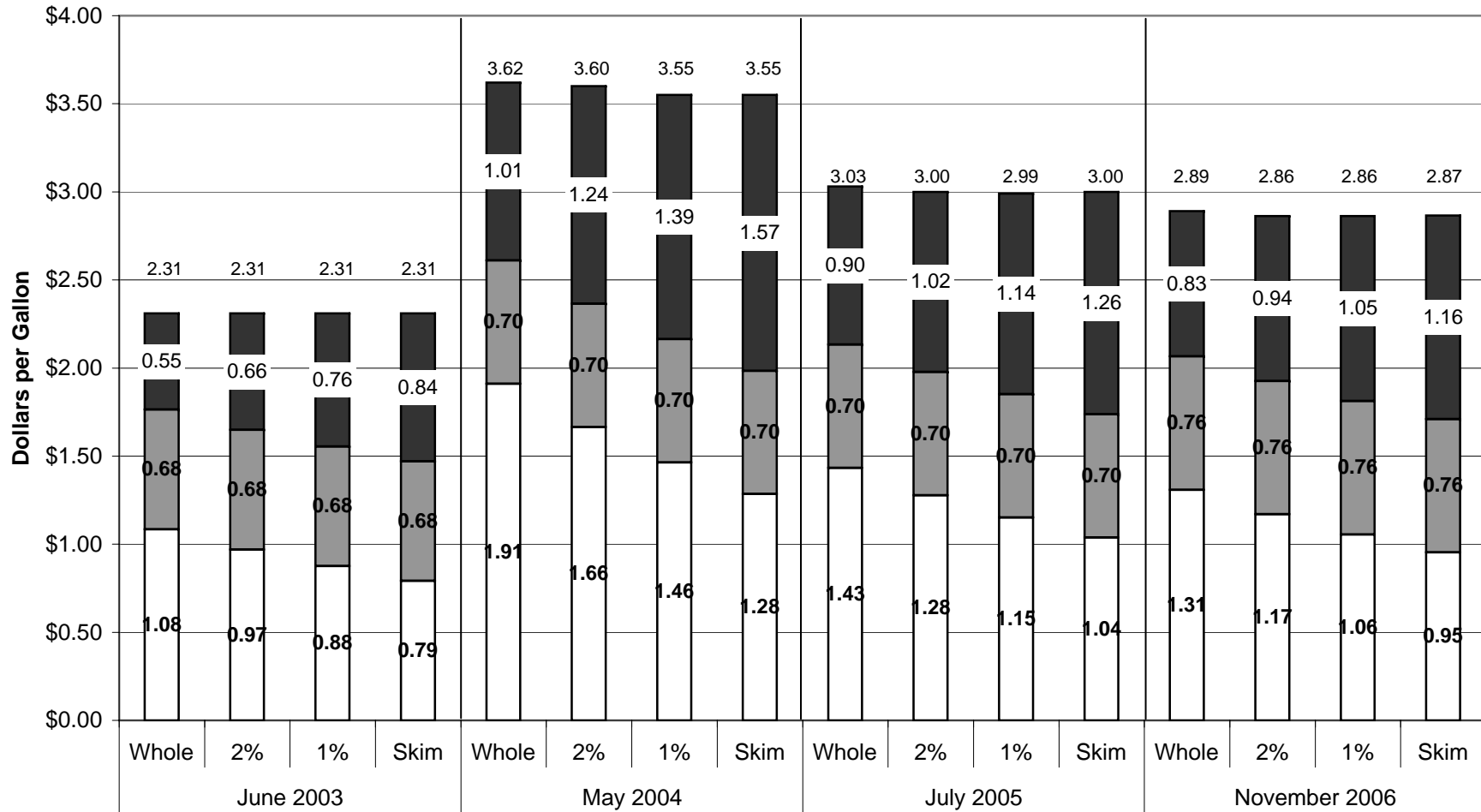
**Figure 10. Southern New England Weighted Average Price
Retail, Processor, and Raw Milk Prices and Retail Margins for Whole, 2%, 1%, and Skim Milk
June 2003, May 2004, July 2005, and November 2006**



Retail Prices are the weighted average price calculated by averaging the low cost milk price and the simple arithmetic average milk price for all brands. Processor Margins are a simple average of processor costs for Garelick (Stop & Shop and others), Hood, and Guida. These costs include the Market Administrator Fee, Processor Assessment, and 1% Plant Loss.

Raw Milk Price
 Processor Margin
 Retail Margin

**Figure 11. New York Weighted Average Price
Retail, Processor, and Raw Milk Prices and Retail Margins for Whole, 2%, 1%, and Skim Milk
June 2003, May 2004, July 2005, and November 2006**



Retail Prices are the weighted average price calculated by averaging the low cost milk price and the simple arithmetic average milk price for all brands. Processor Margins are a simple average of processor costs for Garelick, Farmland, Tuscan, and Crowley. These costs include the Market Administrator Fee, Processor Assessment, and 1% Plant Loss.

Raw Milk Price
 Processor Margin
 Retail Margin

Appendix A

November 2006 Milk Price Survey in Southern New England and New York

Table A1. Average Lowest Price By Channel and Final Raw Price, November 2006

Type	Channel	New England	New York	Massachusetts	Connecticut	Rhode Island	All States	Raw Price
Whole	Chain	\$3.28	\$2.80	\$3.06	\$3.46	\$3.43	\$3.14	\$1.32
Whole	Club	\$2.42	\$2.40	\$2.43	\$2.47	\$2.15	\$2.42	\$1.32
Whole	Convenience	\$3.20	\$2.85	\$3.13	\$3.26	\$3.19	\$3.12	\$1.32
Whole	Limited	\$2.25	-	\$2.31	\$2.16	\$2.29	\$2.25	\$1.32
Two	Chain	\$3.27	\$2.78	\$3.05	\$3.43	\$3.43	\$3.12	\$1.18
Two	Club	\$2.30	\$2.37	\$2.33	\$2.29	\$2.28	\$2.31	\$1.18
Two	Convenience	\$3.14	\$2.72	\$3.05	\$3.25	\$3.06	\$3.04	\$1.18
Two	Limited	\$2.35	-	\$2.31	\$2.16	\$2.74	\$2.35	\$1.18
One	Chain	\$3.26	\$2.76	\$3.04	\$3.41	\$3.43	\$3.11	\$1.06
One	Club	\$2.20	\$2.35	\$2.24	\$2.21	\$2.04	\$2.22	\$1.06
One	Convenience	\$2.73	\$2.69	\$2.70	\$2.94	\$2.39	\$2.72	\$1.06
One	Limited	\$2.31	-	\$2.31	\$2.16	\$2.56	\$2.31	\$1.06
Skim	Chain	\$3.24	\$2.77	\$3.03	\$3.39	\$3.43	\$3.10	\$0.96
Skim	Club	\$2.13	\$2.31	\$2.15	\$2.16	\$1.90	\$2.16	\$0.96
Skim	Convenience	\$3.04	\$2.70	\$3.20	\$3.03	\$2.83	\$2.96	\$0.96
Skim	Limited	\$2.21	-	\$2.31	\$2.05	\$2.29	\$2.21	\$0.96

Table A2. Weighted Average Price By Channel and Final Raw Price, November 2006

Type	Channel	New England	New York	Massachusetts	Connecticut	Rhode Island	All States	Raw Price
Whole	Chain	\$3.51	\$2.89	\$3.30	\$3.69	\$3.58	\$3.33	\$1.32
Whole	Club	\$2.42	\$2.40	\$2.43	\$2.47	\$2.15	\$2.42	\$1.32
Whole	Convenience	\$3.22	\$2.85	\$3.12	\$3.31	\$3.19	\$3.13	\$1.32
Whole	Limited	\$2.25	-	\$2.31	\$2.16	\$2.29	\$2.25	\$1.32
Two	Chain	\$3.50	\$2.86	\$3.28	\$3.67	\$3.59	\$3.31	\$1.18
Two	Club	\$2.30	\$2.37	\$2.33	\$2.29	\$2.28	\$2.31	\$1.18
Two	Convenience	\$3.16	\$2.72	\$3.04	\$3.30	\$3.06	\$3.06	\$1.18
Two	Limited	\$2.35	-	\$2.31	\$2.16	\$2.74	\$2.35	\$1.18
One	Chain	\$3.49	\$2.86	\$3.27	\$3.66	\$3.59	\$3.30	\$1.06
One	Club	\$2.20	\$2.35	\$2.24	\$2.21	\$2.04	\$2.22	\$1.06
One	Convenience	\$2.77	\$2.69	\$2.71	\$3.02	\$2.39	\$2.75	\$1.06
One	Limited	\$2.31	-	\$2.31	\$2.16	\$2.56	\$2.31	\$1.06
Skim	Chain	\$3.47	\$2.87	\$3.26	\$3.63	\$3.59	\$3.29	\$0.96
Skim	Club	\$2.13	\$2.31	\$2.15	\$2.16	\$1.90	\$2.16	\$0.96
Skim	Convenience	\$3.07	\$2.70	\$3.20	\$3.11	\$2.83	\$2.99	\$0.96
Skim	Limited	\$2.21	-	\$2.31	\$2.05	\$2.29	\$2.21	\$0.96

Table A3. Average Lowest Price By Chain, November 2006

Type	Chain	New England	New York	Massachusetts	Connecticut	Rhode Island	All States
Whole	Stop & Shop	\$3.46	\$2.89	\$3.20	\$3.50	\$3.67	\$3.31
Whole	Shaw's/Star Market	\$3.40	-	\$3.28	\$3.57	\$3.36	\$3.40
Whole	DeMoulas/Market Basket	\$2.28	-	\$2.28	-	-	\$2.28
Whole	Roche Brothers	\$2.99	-	\$2.99	-	-	\$2.99
Whole	Big Y	\$3.30	-	\$3.24	\$3.37	-	\$3.30
Whole	A&P/Waldbaums	\$3.52	\$2.94	-	\$3.52	-	\$3.23
Whole	Shop Rite	\$3.63	\$2.90	-	\$3.63	-	\$3.27
Whole	Price Chopper	\$3.31	\$2.64	\$2.99	\$3.62	-	\$3.08
Whole	A&J Seabra	\$3.09	-	\$3.09	-	\$3.09	\$3.09
Whole	Hannaford	\$2.39	\$2.66	\$2.39	-	-	\$2.53
Whole	King Kullen	-	\$2.94	-	-	-	\$2.94
Whole	Wal-Mart Supercenter	\$2.77	\$2.66	\$2.89	\$2.66	-	\$2.73
Whole	Pathmark	-	\$2.94	-	-	-	\$2.94
Two	Stop & Shop	\$3.45	\$2.89	\$3.20	\$3.48	\$3.67	\$3.31
Two	Shaw's/Star Market	\$3.40	-	\$3.28	\$3.57	\$3.36	\$3.40
Two	DeMoulas/Market Basket	\$2.28	-	\$2.28	-	-	\$2.28
Two	Roche Brothers	\$2.99	-	\$2.99	-	-	\$2.99
Two	Big Y	\$3.30	-	\$3.24	\$3.35	-	\$3.30
Two	A&P/Waldbaums	\$3.52	\$2.94	-	\$3.52	-	\$3.23
Two	Shop Rite	\$3.63	\$2.90	-	\$3.63	-	\$3.27
Two	Price Chopper	\$3.31	\$2.62	\$2.99	\$3.62	-	\$3.08
Two	A&J Seabra	\$3.09	-	\$3.09	-	\$3.09	\$3.09
Two	Hannaford	\$2.37	\$2.65	\$2.37	-	-	\$2.51
Two	King Kullen	-	\$2.94	-	-	-	\$2.94
Two	Wal-Mart Supercenter	\$2.58	\$2.55	\$2.68	\$2.48	-	\$2.57
Two	Pathmark	-	\$2.94	-	-	-	\$2.94
One	Stop & Shop	\$3.44	\$2.89	\$3.20	\$3.46	\$3.67	\$3.30
One	Shaw's/Star Market	\$3.40	-	\$3.28	\$3.57	\$3.36	\$3.40
One	DeMoulas/Market Basket	\$2.28	-	\$2.28	-	-	\$2.28
One	Roche Brothers	\$2.99	-	\$2.99	-	-	\$2.99
One	Big Y	\$3.29	-	\$3.24	\$3.34	-	\$3.29
One	A&P/Waldbaums	\$3.52	\$2.94	-	\$3.52	-	\$3.23
One	Shop Rite	\$3.60	\$2.68	-	\$3.60	-	\$3.14
One	Price Chopper	\$3.31	\$2.61	\$2.99	\$3.62	-	\$3.08
One	A&J Seabra	\$3.09	-	\$3.09	-	\$3.09	\$3.09
One	Hannaford	\$2.34	\$2.64	\$2.34	-	-	\$2.49
One	King Kullen	-	\$2.94	-	-	-	\$2.94
One	Wal-Mart Supercenter	\$2.48	\$2.63	\$2.58	\$2.38	-	\$2.53
One	Pathmark	-	\$2.94	-	-	-	\$2.94
Skim	Stop & Shop	\$3.43	\$2.89	\$3.20	\$3.43	\$3.67	\$3.30
Skim	Shaw's/Star Market	\$3.40	-	\$3.28	\$3.57	\$3.36	\$3.40
Skim	DeMoulas/Market Basket	\$2.28	-	\$2.28	-	-	\$2.28
Skim	Roche Brothers	\$2.99	-	\$2.99	-	-	\$2.99
Skim	Big Y	\$3.28	-	\$3.24	\$3.33	-	\$3.28
Skim	A&P/Waldbaums	\$3.52	\$2.94	-	\$3.52	-	\$3.23
Skim	Shop Rite	\$3.57	\$2.90	-	\$3.57	-	\$3.23
Skim	Price Chopper	\$3.31	\$2.60	\$2.99	\$3.62	-	\$3.07
Skim	A&J Seabra	\$3.09	-	\$3.09	-	\$3.09	\$3.09
Skim	Hannaford	\$2.32	\$2.63	\$2.32	-	-	\$2.48
Skim	King Kullen	-	\$2.94	-	-	-	\$2.94
Skim	Wal-Mart Supercenter	\$2.34	\$2.48	\$2.43	\$2.25	-	\$2.39
Skim	Pathmark	-	\$2.94	-	-	-	\$2.94

Table A4. Weighted Average Price By Chain, November 2006

Type	Chain	New England	New York	Massachusetts	Connecticut	Rhode Island	All States
Whole	Stop & Shop	\$3.64	\$3.07	\$3.42	\$3.78	\$3.84	\$3.53
Whole	Shaw's/Star Market	\$3.56	-	\$3.46	\$3.72	\$3.52	\$3.56
Whole	DeMoulas/Market Basket	\$2.52	-	\$2.52	-	-	\$2.52
Whole	Roche Brothers	\$3.38	-	\$3.38	-	-	\$3.38
Whole	Big Y	\$3.61	-	\$3.59	\$3.63	-	\$3.61
Whole	A&P/Waldbaums	\$3.73	\$2.98	-	\$3.73	-	\$3.30
Whole	Shop Rite	\$3.80	\$2.93	-	\$3.80	-	\$3.45
Whole	Price Chopper	\$3.70	\$2.79	\$3.41	\$3.79	-	\$3.15
Whole	A&J Seabra	\$3.16	-	\$3.16	-	\$3.16	\$3.16
Whole	Hannaford	\$2.56	\$2.76	\$2.56	-	-	\$2.72
Whole	King Kullen	-	\$2.94	-	-	-	\$2.94
Whole	Wal-Mart Supercenter	\$3.01	\$2.73	\$3.13	\$2.94	-	\$2.85
Whole	Pathmark	-	\$2.94	-	-	-	\$2.94
Two	Stop & Shop	\$3.63	\$3.03	\$3.42	\$3.77	\$3.84	\$3.52
Two	Shaw's/Star Market	\$3.55	-	\$3.44	\$3.71	\$3.55	\$3.55
Two	DeMoulas/Market Basket	\$2.52	-	\$2.52	-	-	\$2.52
Two	Roche Brothers	\$3.38	-	\$3.38	-	-	\$3.38
Two	Big Y	\$3.60	-	\$3.56	\$3.62	-	\$3.60
Two	A&P/Waldbaums	\$3.69	\$2.98	-	\$3.69	-	\$3.28
Two	Shop Rite	\$3.80	\$2.93	-	\$3.80	-	\$3.45
Two	Price Chopper	\$3.70	\$2.77	\$3.41	\$3.79	-	\$3.14
Two	A&J Seabra	\$3.16	-	\$3.16	-	\$3.16	\$3.16
Two	Hannaford	\$2.55	\$2.75	\$2.55	-	-	\$2.71
Two	King Kullen	-	\$2.94	-	-	-	\$2.94
Two	Wal-Mart Supercenter	\$2.78	\$2.65	\$2.91	\$2.69	-	\$2.71
Two	Pathmark	-	\$2.94	-	-	-	\$2.94
One	Stop & Shop	\$3.63	\$3.08	\$3.42	\$3.76	\$3.84	\$3.52
One	Shaw's/Star Market	\$3.56	-	\$3.45	\$3.72	\$3.55	\$3.56
One	DeMoulas/Market Basket	\$2.52	-	\$2.52	-	-	\$2.52
One	Roche Brothers	\$3.38	-	\$3.38	-	-	\$3.38
One	Big Y	\$3.59	-	\$3.56	\$3.61	-	\$3.59
One	A&P/Waldbaums	\$3.69	\$2.98	-	\$3.69	-	\$3.28
One	Shop Rite	\$3.77	\$2.73	-	\$3.77	-	\$3.35
One	Price Chopper	\$3.70	\$2.76	\$3.41	\$3.79	-	\$3.13
One	A&J Seabra	\$3.13	-	\$3.07	-	\$3.16	\$3.13
One	Hannaford	\$2.53	\$2.74	\$2.53	-	-	\$2.70
One	King Kullen	-	\$2.94	-	-	-	\$2.94
One	Wal-Mart Supercenter	\$2.69	\$2.70	\$2.83	\$2.61	-	\$2.70
One	Pathmark	-	\$2.94	-	-	-	\$2.94
Skim	Stop & Shop	\$3.61	\$3.08	\$3.41	\$3.73	\$3.84	\$3.51
Skim	Shaw's/Star Market	\$3.56	-	\$3.45	\$3.72	\$3.55	\$3.56
Skim	DeMoulas/Market Basket	\$2.52	-	\$2.52	-	-	\$2.52
Skim	Roche Brothers	\$3.38	-	\$3.38	-	-	\$3.38
Skim	Big Y	\$3.58	-	\$3.54	\$3.59	-	\$3.58
Skim	A&P/Waldbaums	\$3.73	\$2.98	-	\$3.73	-	\$3.30
Skim	Shop Rite	\$3.75	\$2.93	-	\$3.75	-	\$3.42
Skim	Price Chopper	\$3.70	\$2.73	\$3.41	\$3.79	-	\$3.12
Skim	A&J Seabra	\$3.16	-	\$3.16	-	\$3.16	\$3.16
Skim	Hannaford	\$2.51	\$2.74	\$2.51	-	-	\$2.69
Skim	King Kullen	-	\$2.94	-	-	-	\$2.94
Skim	Wal-Mart Supercenter	\$2.60	\$2.61	\$2.67	\$2.55	-	\$2.60
Skim	Pathmark	-	\$2.94	-	-	-	\$2.94

Table A5. Number of Observations (SKUs) by Channel, November 2006

Type	Channel	New England	New York	Massachusetts	Connecticut	Rhode Island	All States
Whole	Chain	281	71	123	131	27	352
Whole	Club	14	3	5	7	2	17
Whole	Convenience	28	9	9	15	4	37
Whole	Limited	12	0	5	5	2	12
Two	Chain	276	69	122	128	26	345
Two	Club	13	3	5	7	1	16
Two	Convenience	27	9	9	15	3	36
Two	Limited	12	0	5	5	2	12
One	Chain	277	71	122	129	26	348
One	Club	14	3	5	7	2	17
One	Convenience	27	6	9	14	4	33
One	Limited	13	0	5	5	3	13
Skim	Chain	278	71	121	131	26	349
Skim	Club	14	3	5	7	2	17
Skim	Convenience	22	8	7	13	2	30
Skim	Limited	10	0	5	4	1	10

Table A6. Number of Observations (SKUs) by Chain, November 2006

Type	Chain	New England	New York	Massachusetts	Connecticut	Rhode Island	All States
Whole	Stop & Shop	104	17	43	49	12	121
Whole	Shaw's/Star Market	60	-	30	21	9	60
Whole	DeMoulas/Market Basket	12	-	12	-	-	12
Whole	Roche Brothers	9	-	9	-	-	9
Whole	Big Y	37	-	12	25	-	37
Whole	A&P/Waldbaums	7	7	-	7	-	14
Whole	Shop Rite	10	5	-	10	-	15
Whole	Price Chopper	14	15	3	11	-	29
Whole	A&J Seabra	9	-	3	-	6	9
Whole	Hannaford	5	13	5	-	-	18
Whole	King Kullen	0	2	-	-	-	2
Whole	Wal-Mart Supercenter	14	11	6	8	-	25
Whole	Pathmark	0	1	-	-	-	1
Two	Stop & Shop	104	15	43	49	12	119
Two	Shaw's/Star Market	57	-	29	20	8	57
Two	DeMoulas/Market Basket	12	-	12	-	-	12
Two	Roche Brothers	9	-	9	-	-	9
Two	Big Y	37	-	12	25	-	37
Two	A&P/Waldbaums	6	7	-	6	-	13
Two	Shop Rite	10	5	-	10	-	15
Two	Price Chopper	14	15	3	11	-	29
Two	A&J Seabra	9	-	3	-	6	9
Two	Hannaford	5	13	5	-	-	18
Two	King Kullen	0	2	-	-	-	2
Two	Wal-Mart Supercenter	13	11	6	7	-	24
Two	Pathmark	0	1	-	-	-	1
One	Stop & Shop	104	18	43	49	12	122
One	Shaw's/Star Market	59	-	29	22	8	59
One	DeMoulas/Market Basket	12	-	12	-	-	12
One	Roche Brothers	9	-	9	-	-	9
One	Big Y	36	-	12	24	-	36
One	A&P/Waldbaums	6	7	-	6	-	13
One	Shop Rite	10	5	-	10	-	15
One	Price Chopper	14	15	3	11	-	29
One	A&J Seabra	9	-	3	-	6	9
One	Hannaford	5	13	5	-	-	18
One	King Kullen	0	2	-	-	-	2
One	Wal-Mart Supercenter	13	10	6	7	-	23
One	Pathmark	0	1	-	-	-	1
Skim	Stop & Shop	102	18	42	48	12	120
Skim	Shaw's/Star Market	59	-	29	22	8	59
Skim	DeMoulas/Market Basket	12	-	12	-	-	12
Skim	Roche Brothers	9	-	9	-	-	9
Skim	Big Y	36	-	12	24	-	36
Skim	A&P/Waldbaums	7	7	-	7	-	14
Skim	Shop Rite	10	5	-	10	-	15
Skim	Price Chopper	14	15	3	11	-	29
Skim	A&J Seabra	9	-	3	-	6	9
Skim	Hannaford	5	12	5	-	-	17
Skim	King Kullen	0	2	-	-	-	2
Skim	Wal-Mart Supercenter	15	11	6	9	-	26
Skim	Pathmark	0	1	-	-	-	1

Table A7. Number of Stores by Channel, November 2006

Type	Channel	New England	New York	Massachusetts	Connecticut	Rhode Island	All States
Whole	Chain	95	34	41	45	9	129
Whole	Club	14	3	5	7	2	17
Whole	Convenience	24	9	8	12	4	33
Whole	Limited	12	0	5	5	2	12
Two	Chain	95	34	41	45	9	129
Two	Club	13	3	5	7	1	16
Two	Convenience	23	9	8	12	3	32
Two	Limited	12	0	5	5	2	12
One	Chain	95	34	41	45	9	129
One	Club	14	3	5	7	2	17
One	Convenience	23	6	8	11	4	29
One	Limited	13	0	5	5	3	13
Skim	Chain	95	34	41	45	9	129
Skim	Club	14	3	5	7	2	17
Skim	Convenience	18	8	7	9	2	26
Skim	Limited	10	0	5	4	1	10

Table A8. Number of Stores by Chain, November 2006

Type	Chain	New England	New York	Massachusetts	Connecticut	Rhode Island	All States
Whole	Stop & Shop	34	8	14	16	4	42
Whole	Shaw's/Star Market	19		10	6	3	19
Whole	DeMoulas/Market Basket	4		4			4
Whole	Roche Brothers	3		3			3
Whole	Big Y	12		4	8		12
Whole	A&P/Waldbaums	3	4		3		7
Whole	Shop Rite	6	4		6		10
Whole	Price Chopper	4	5	1	3		9
Whole	A&J Seabra	3		1		2	3
Whole	Hannaford	2	6	2			8
Whole	King Kullen	0	2				2
Whole	Wal-Mart Supercenter	5	4	2	3		9
Whole	Pathmark	0	1				1
Two	Stop & Shop	34	8	14	16	4	42
Two	Shaw's/Star Market	19		10	6	3	19
Two	DeMoulas/Market Basket	4		4			4
Two	Roche Brothers	3		3			3
Two	Big Y	12		4	8		12
Two	A&P/Waldbaums	3	4		3		7
Two	Shop Rite	6	4		6		10
Two	Price Chopper	4	5	1	3		9
Two	A&J Seabra	3		1		2	3
Two	Hannaford	2	6	2			8
Two	King Kullen	0	2				2
Two	Wal-Mart Supercenter	5	4	2	3		9
Two	Pathmark	0	1				1
One	Stop & Shop	34	8	14	16	4	42
One	Shaw's/Star Market	19		10	6	3	19
One	DeMoulas/Market Basket	4		4			4
One	Roche Brothers	3		3			3
One	Big Y	12		4	8		12
One	A&P/Waldbaums	3	4		3		7
One	Shop Rite	6	4		6		10
One	Price Chopper	4	5	1	3		9
One	A&J Seabra	3		1		2	3
One	Hannaford	2	6	2			8
One	King Kullen	0	2				2
One	Wal-Mart Supercenter	5	4	2	3		9
One	Pathmark	0	1				1
Skim	Stop & Shop	34	8	14	16	4	42
Skim	Shaw's/Star Market	19		10	6	3	19
Skim	DeMoulas/Market Basket	4		4			4
Skim	Roche Brothers	3		3			3
Skim	Big Y	12		4	8		12
Skim	A&P/Waldbaums	3	4		3		7
Skim	Shop Rite	6	4		6		10
Skim	Price Chopper	4	5	1	3		9
Skim	A&J Seabra	3		1		2	3
Skim	Hannaford	2	6	2			8
Skim	King Kullen	0	2				2
Skim	Wal-Mart Supercenter	5	4	2	3		9
Skim	Pathmark	0	1				1

Appendix B

Example of New York State Threshold Milk Price Law

How we administer the law

- Calculate 200%, known as Threshold Price, for gallons, h-gal, qts. Do for two broad regions of the state: Upstate and Metro NYC. Based on milk at 3.5% butterfat.

Date: 7/18/03

THRESHOLD PRICE CALCULATION

(1) Threshold price: AUG 2003

	Cwt.	Cwt.	Gal	Hgal
	Metro	Upstate		
Base price: at NYC and Syracuse				
Class 1 at 3.5% bf	14.12	13.47		
Est. premium	1.50	0.90		
Total base	15.62	14.37		
Preliminary Threshold				
Metro	31.24		2.69	1.34
Upstate		28.74	2.47	1.24
Adjustment to align hgal & qt to gal *				0.05
Threshold				
Metro			2.69	1.39
Upstate			2.47	1.29
Change			0.21	0.10
			0.20	0.10