A Comparison of Wine Prices: State Liquor Stores and Major Grocery Chains

By: *SESRC – Puget Sound Division*
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December 2003

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DEFENDANT'S EXHIBIT
CASE NO. C04-0360P
EXHIBIT NO. 555

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December 2003

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Sponsorship

This project was sponsored by the Washington State Liquor Control Board.

About SESRC

The Social and Economic Sciences Research Center (SESRC) at Washington State University is a recognized leader in the development and conduct of survey research.

SESRC-Puget Sound Division provides technical services and consultation to assist clients in acquiring data, understanding what data means, and applying that information to solving problems. The SESRC Puget Sound Division specializes in research design, data collection and analysis, using both qualitative and quantitative methods. The Division also provides interpretive reports, policy studies, presentations and consulting services directly to individual clients, organizations and consortia.

Acknowledgements

The authors would like to thank the staff of stores where data collection was conducted for their willingness to accept unexpected data collectors in their stores. Endorsement of this study by an industry representative was greatly appreciated, and contributed to acceptance by store staff.

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EXECUTIVE SUMMARY

A Comparison of Wine Prices: State Liquor Stores and Major Grocery Chains

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December 2003

INTRODUCTION

Washington State University's Social and Economic Sciences Research Center (SESRC) collected and analyzed price data on wine to investigate the relationship between prices at stores operated by the Washington State Liquor Control Board and at major chain grocery retailers.

Concerns have been raised about the extent to which Liquor Control Board competition in the wine market affects private retailers, particularly those who carry many of the same wine products. It is understandable that retailers are concerned that Liquor Control Board pricing might take advantage of the agencies regulatory powers, or be cross-subsidized by the monopoly in spirits, or otherwise exploit the Liquor Control Board's status as a state agency.

PROJECT

The Washington State Liquor Control Board identified a selection of retail chains and a sample of 67 wine products. The overall methods for selecting both specific products and a sample of stores were discussed with a representative of the retail grocery industry. The wine products, on which prices were collected, were high-volume "mass-market" products, mostly standard 750 ml bottles, with prices in the $4-$15 range.

The nine sites at which price data was collected included eight grocery stores and one "price club" volume discount store. The eight grocery stores were selected from four major chains; with one store from each chain in Thurston and Pierce counties. The Liquor Control Board narrowed the candidate list to stores with large wine departments, but the final site selection was done by SESRC staff.

Price collection was conducted in a three-day period in early December 2003, during a single price week.

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RESULTS

Three of the four grocery chains offer additionally reduced prices to members of their "frequent shopper" programs. Large numbers of customers hold memberships at their usual stores. Also, the one high-volume discount store included in the study operates on a members-only basis, and unlike the grocery chains, charges an annual fee for membership. **It makes a major difference in the price comparisons whether or not these "member" prices are included in the analysis.**

Price Comparisons - Including Member Prices

Considering the member prices available to consumers who join stores' frequent shopper programs, the Liquor Control Board, while offering highly competitive prices, is not always the lowest price seller, nor do they significantly undersell the least expensive chain store.

- Liquor Control Board prices are about 5% below the average price offered by the stores in this sample, but the lowest price offered across nine stores averaged about 2% less than the Liquor Control Board prices.
- The Liquor Control Board beat or matched the lowest store price on over half the items, but on a quarter of the items, the Liquor Control Board price was at or above the highest store price.
- If a consumer bought all the products on the list at the one store with the lowest average prices, he/she could buy one each of the 64 wines for only very slightly more than the same total price they would pay at a Liquor Control Board store[1].

Price Comparisons - Excluding Member Prices

If member-only prices are not considered in the comparison, the Liquor Control Board's pricing looks much more aggressive.

- Liquor Control Board prices averaged 21% below non-member prices, as did the lowest prices offered by any of the included stores.
- For three out of five products the Liquor Control Board price was at or below the lowest non-member price offered.
- But, by choosing the right store, a consumer could still have bought one of each of the 64 items for very slightly more than the price they would pay at a Liquor Control Board store, <u>without</u> being a "frequent shopper program" member.

Price Competition and Volume Discounters

Price competition among grocery retailers appears to be more aggressive in products carried by volume discounters. In contrast, the Liquor Control Board does not appear to price these products differently from other products. The sample was too small to tell

[1] Three products, which were not carried by some of the stores, were not included in this comparison.

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whether this stronger competition applies to the general types of products carried by discounters, or is directed at the specific items in their limited offerings.

For the thirteen items carried by the one members-only, volume discount store in the sample, Liquor Control Board prices were about the same as the average price across all nine stores in the study. For only one item did the Liquor Control Board have a price that no store met or matched, and for three items, all nine stores charged less than the Liquor Control Board.

Competition and Market Share

Liquor Control Board data on the share of overall wine tax collections resulting form sales at Liquor Control Board stores is at about the 10% level, and has fluctuated +/- 2% around that level for nearly 20 years. Neither the share of wine tax collections nor the Liquor Control Board count of cases sold per year shows a significant upward trend.

SUMMARY

If membership program prices are included, Liquor Control Board prices are competitive, but within the range of prices offered by retail grocers.

If membership program prices are not considered, Liquor Control Board prices are significantly further towards the low end of the price distribution, while still not significantly lower than the lowest prices at the most aggressive of the stores included in the survey.

For the limited range of products carried by volume discount stores, price competition among retail grocers appears more vigorous, and Liquor Control Board pricing does not compete on price as strongly as it does on the other products included in this study. It appears that the grocery stores in this study may consider discount stores as more significant competitors than state stores.

Liquor Control Board data on cases sold and on the Liquor Control Board share of wine tax collections both indicate that the market position of the Liquor Control Board in the wine market is not expanding.

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INTRODUCTION

BACKGROUND

The Washington State Liquor Control Board is the exclusive retailer of packaged spirits in Washington State, through a network of "state stores" staffed by state employees. Package sales of lower-alcohol-content wine and beer are licensed to a wide variety of retail outlets, including many establishments carrying groceries. The state stores also carry some wine and beer products, as a convenience to their customers. The Liquor Control Board also has regulatory functions, notably maintenance of a system by which producers and wholesalers are required to post and adhere to uniform prices in their sales to the Washington State retail supply chain.

Concerns have been raised about the extent to which Liquor Control Board competition in the wine market may impinge on private sector retailers, particularly grocery retailers who carry many of the same wine products and whose customers are also often drawn to their stores by non-wine products. It is understandable that retailers are concerned that Liquor Control Board pricing might take advantage of the agency's regulatory powers, be cross-subsidized by the spirits monopoly, or otherwise exploit aspects of its status as a state agency.

PROCESS

The Washington State Liquor Control Board asked Washington State University's Social and Economic Sciences Research Center (SESRC) to analyze the relationship of wine prices between those charged in the state liquor stores and the range of prices offered by grocery chain stores. After development of options and consultation with an industry representative, the Liquor Control Board selected a survey of the prices charged during one week in a sample of major chain stores in Pierce and Thurston counties.

The Liquor Control Board's prices are uniform across the state and are changed monthly. Grocery chain prices are changed weekly, overnight between Tuesday and Wednesday. Different grocery chains have different degrees of price uniformity across stores.

The Sample

The Liquor Control Board decided on a sample structure including two stores each from four major grocery chains, plus one high-volume, member-only discount store of the "price-club" type. For reasons of economy, all the stores sampled were in Pierce or Thurston counties. The Liquor Control Board selected the retail chains, and assisted in identifying which of the store locations had large wine selections, but this only narrowed the list of possible data collection sites. Final site selection was done by SESRC staff.

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The Product List

Sixty-seven specific products from 28 vintners were selected by the Liquor Control Board in consultation with an industry representative. Products were chosen to represent high volume general market wines, mostly in the standard 750 ml size, with some larger sizes, across the common varieties of wine, as shown in Table 1.

Table 1
Products Included in the Sample

Variety	750 ml	1.5 liter	5 Liter	Total
Cabernet Sauvignon	9	4		13
Merlot	10	4		14
Syrah/Shiraz	4			4
Chardonnay	10	4	2	16
White Zinfandel	3	2	1	6
Riesling	7			7
Sauvignon Blanc	4			4
Generic (white/blush)			3	3
Total	47	14	6	67

The December Liquor Control Board prices of these products ranged between about $4.00 and $15.00, with average prices around $8.00 per unit.[2] These products were chosen because they are account for a substantial portion of grocery wine revenues. These products are therefore carried by most stores, which facilitated data collection.

The Multiple Price Problem

One of the problems encountered in several sources of market data is the confusion resulting from multiple prices. At some stores, a specific product may have as many as three prices: a regular or list price, a sale price, and a members-only price available only to enrolled members in a "frequent shopper" program.

In this study, regular, sale, and member-only price data was recorded separately. In analyzing and describing results, care was taken to distinguish which of the prices were used.

Volume Discounts

The Liquor Control Board stores offer a 10% volume discount for purchases of a case or more of wine. Data was not systematically collected on this issue, but some grocery stores also offer volume discounts.

[2] The range of prices found in grocery stores by the subsequent survey was slightly wider for the same products, approximately $3.50 to $17.00.

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DATA COLLECTION PROCEDURES

PREPARATION

The Liquor Control Board provided a training session for data collection staff in wine label recognition for the items on the product list. Data collection staff photographed the labels of all items for inclusion in a reference guide.

COLLECTION

The following procedures were used in data collection:

- Wine matches were verified using a photo of the label and UPC.
- UPC was verified using the shelf tag. If there was a discrepancy between the tag and the UPC provided by the Liquor Control Board, the UPC on the bottle was checked. If there was still a discrepancy, the variant UPC was noted.
- Actual prices displayed at the store were collected, using shelf tags.
- Regular, sale, and member prices were collected.
- If a shelf tag was found, but there was no wine on the shelf, information was gathered from the tag only.
- Where wine prices were not displayed, wine prices were checked by the cashier at the store. Care was taken to assure that regular, sale, and member prices were separately coded.

DATA COLLECTION RESULTS

Wine prices were collected from nine stores from December 3 through December 5, 2003, which fell entirely within the December 3, 2003 – December 9, 2003 grocers' price week. For each of the grocery chains, one location in Pierce County and one location in Thurston County were included.

The items on the product list proved to be relatively easy to identify, and generally available.[3]

For the eight chain grocery stores, out of the 67 products, only three items were not found in all of the stores. Sale prices and member prices were much less common, with some chains having no member pricing program. Grocery chain data averaged 66 regular

[3] UPC was used as confirming evidence in correctly identifying the specific products on the pricing list. However, not only are there variations in the label design of single product, but a product sometimes has more than one UPC. Problems in UPC variation occurred in only a few cases, and any possible errors that might have been made in resolving those cases are very unlikely to have affected the overall results.

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prices per store, 29 sale prices[4], and 33 member prices.[5] Sale prices were also prevalent on the Liquor Control Board price list for December, with 50 of the 67 items on "temporary price reduction".

Comparing the prices across the paired stores of the four grocery chains:

- one chain had exactly identical pricing at both stores
- one chain had substantial variance between the stores
- the other two chains had different prices between stores in only a few cases, and variance was almost exclusively confined to "regular" prices. Thus it is possible that these chains functionally have uniform pricing across stores, with occasional errors. Also possible is that "regular" price is so seldom charged for these items that they are not systematically updated.

The one volume discount store carried 13 of the items of the product list. All of its prices were recorded as member prices.

A few cases of "2-for-1" pricing were found, which were specially noted. In these cases, "2-for-1" prices were converted to per-unit prices for entry in the analytic database.

[4] Two of the chains have only regular and member prices, so across the two chains having sale prices, the average was 57 sale prices per store.
[5] One of the chains does not have a member price program, so across the chains with member price programs, the average was 44 member prices per store.

DATA ANALYSIS

The analysis presented relies upon some key assumptions:

- The specific products on the list are representative of a market.
- The five chains are representative of the overall grocery retail market.
- The Pierce/Thurston county prices are representative of the state.
- The particular week in which the price data were gathered was a representative week.
- The Liquor Control Board 10% discount for purchases larger than a case is not significantly greater than discounts at grocery stores.

This analysis approached the data in two basic ways.

- Lowest Price Comparisons - On a product-by-product basis, Washington State Liquor Control Board prices were compared with the lowest price (and average price) offered across all the retail grocery outlets in the sample.
- One-Stop Shopping Comparisons - If a consumer were to buy a large variety of wine products at a single store, how would a Washington State Liquor Control Board store compare to the lowest price store (and the average store) among the stores sampled?[6]

Each of these analyses were done twice, with and without including prices that are available only to enrolled members in a chain's frequent shopper program. Some of the analyses were then repeated, focusing on the more limited set of products carried by the one volume discount store in the sample.

LIMITATIONS ON APPLICATION OF THE RESULTS

Because the assumptions listed above are likely to be only approximately accurate, care should be taken to not over-interpret the data or its apparent precision. In particular, because the product list was assumed to be representative, the quantitative results should not be applied to overall estimated revenues or margins. Even limited to only the products on the list, the results could be precisely applied to revenues or margins only if the number of units each of the products sold was the same, across the market. Thus, the results should be considered no more than indicative of the level of competition.

NOTE ON ROUNDING

In general, sums of prices for multiple products are rounded to the nearest dollar in presenting these results, due to the small size of the sample.

[6] Because of the very limited selection at the volume discount store, this comparison includes only the eight grocery stores.

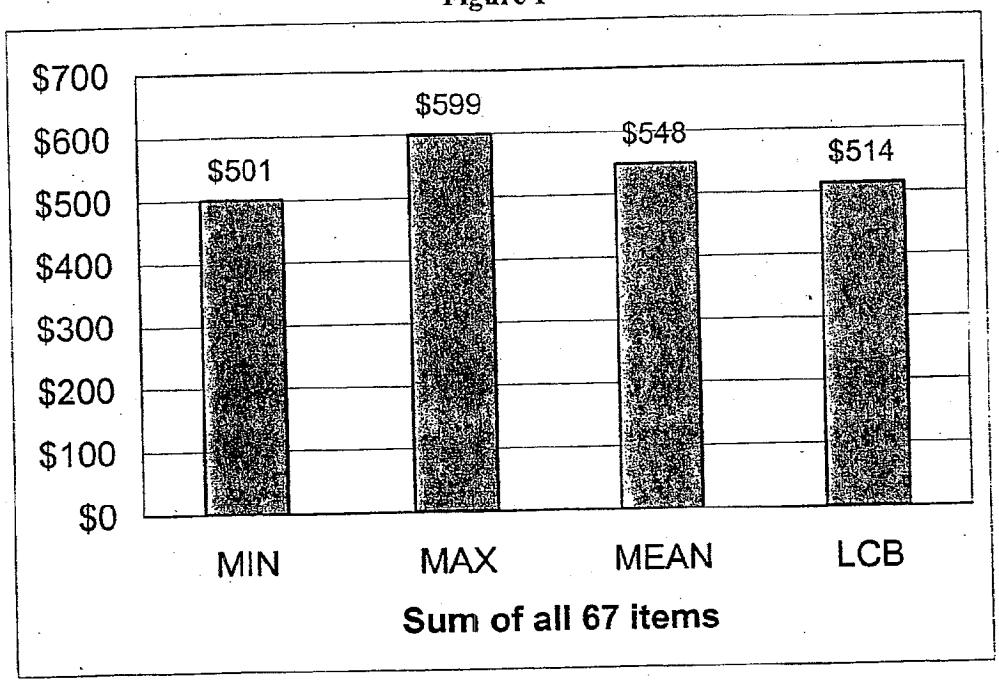
RESULTS

Lowest Price Comparisons - Including Member Prices

Assuming that consumers would buy at the lowest price offered, including member prices, the highest, lowest, and average prices available across the nine stores were computed for each product. These prices were compared with Liquor Control Board prices.

Averaged across all items, Liquor Control Board prices were 6% lower than the across-store[7] average price of the same items. However, the lowest price offered among the stores was lower yet, by over 2%. (See Figure 1)

Figure 1



This average difference is reflected in the distribution of the Liquor Control Board's item-specific prices relative to retail grocery prices. For one-third of the items, the Liquor Control Board price was lower than the prices at any of the nine stores. About two-thirds of the Liquor Control Board prices were below the average store prices. On the other hand, the Liquor Control Board was at or above the highest store price for almost one-quarter of the products. (See Figure 2)

[7] This was the average across all stores that carried the item; in all but three cases, that involved at least eight stores.

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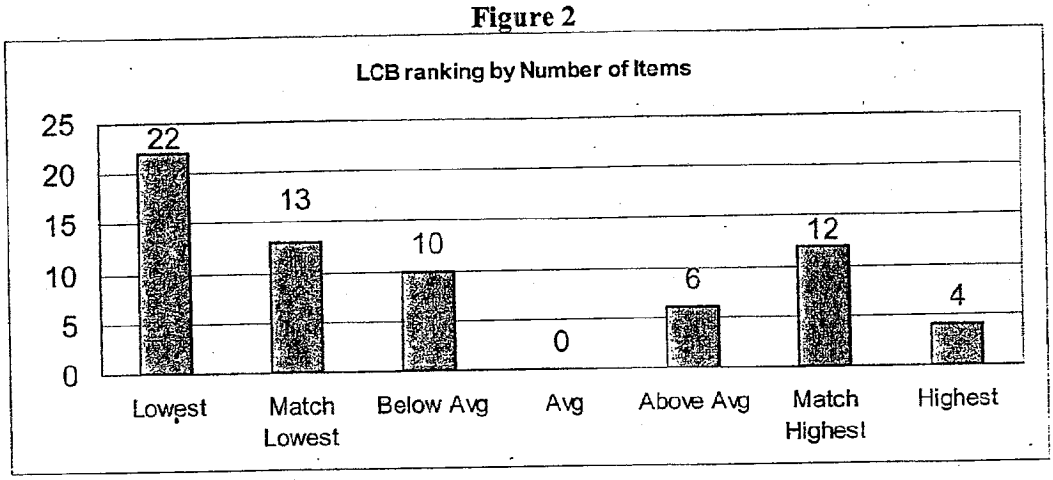
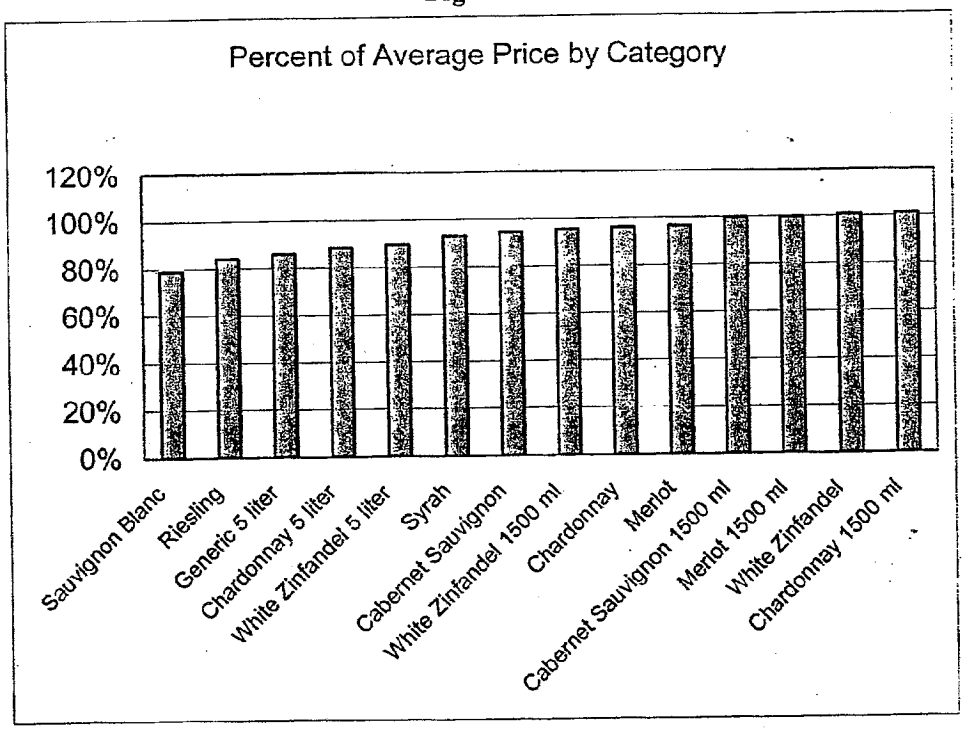
Figure 2



The price differential was not constant across types of wines, although the number of products in some categories was sufficiently small that results can only be considered suggestive. (See Figure 3)

Figure 3



This graph shows the importance of one of the assumptions about how well the data collected is representative the overall market. Data was averaged across types of wine in this report. However, that average would understate the difference between Liquor

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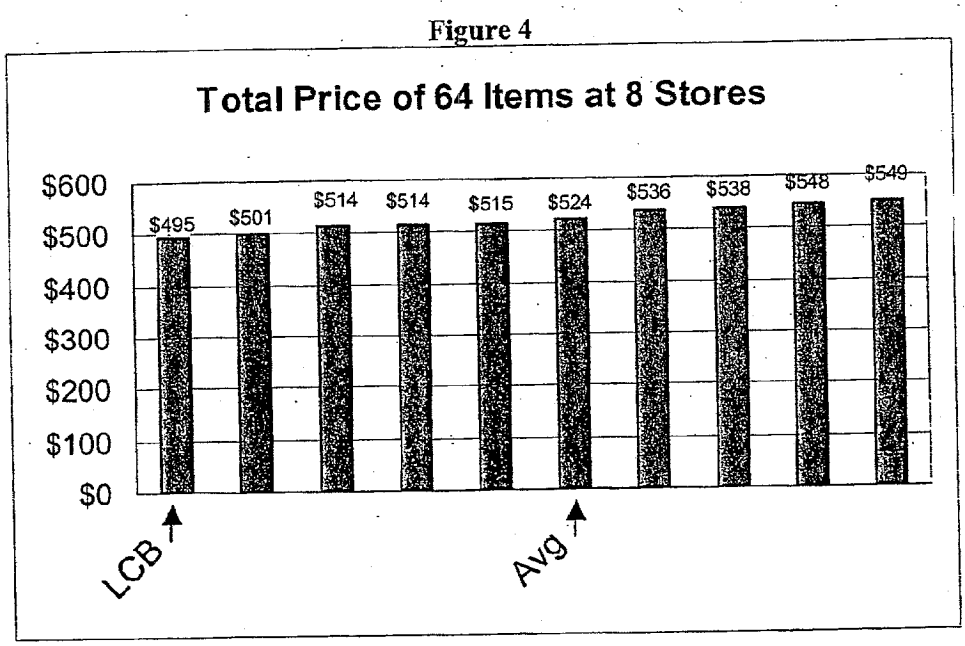
Control Board prices and retail grocery prices if prices were further apart in the heaviest selling categories than in categories in which fewer bottles were sold. However, in this particular instance, that does not appear to be a problem: the types of wine for which Liquor Control Board prices are furthest from the retail market, Sauvignon Blanc and Riesling, have lower sales volumes than the types in the middle of the spectrum.[8]

One-Stop Shopping Comparisons - Including Member Prices

An additional comparison-examined what a consumer would have paid to purchase a single bottle of each item at each store. To make this comparison feasible, the volume discount store was eliminated because of its limited number of products, as were three products that were not carried by all eight grocery stores.

While the Liquor Control Board's total price for 64 items is about 5.5% below the average, one of the stores was almost as low.[9] (See Figure 4)

Figure 4



Lowest Price Comparisons - Excluding Member Prices

If we assumed that frequent shopper prices are not generally available to the public, the pattern of pricing changes considerably. Again, the highest, lowest, and average prices available across the eight stores were computed and compared with Liquor Control Board prices.

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[8] Chardonnay and Merlot currently have the heaviest sales volumes, followed by Cabernet Sauvignon and White Zinfandel.

[9] The store with the lowest prices was about 4.5% below average..

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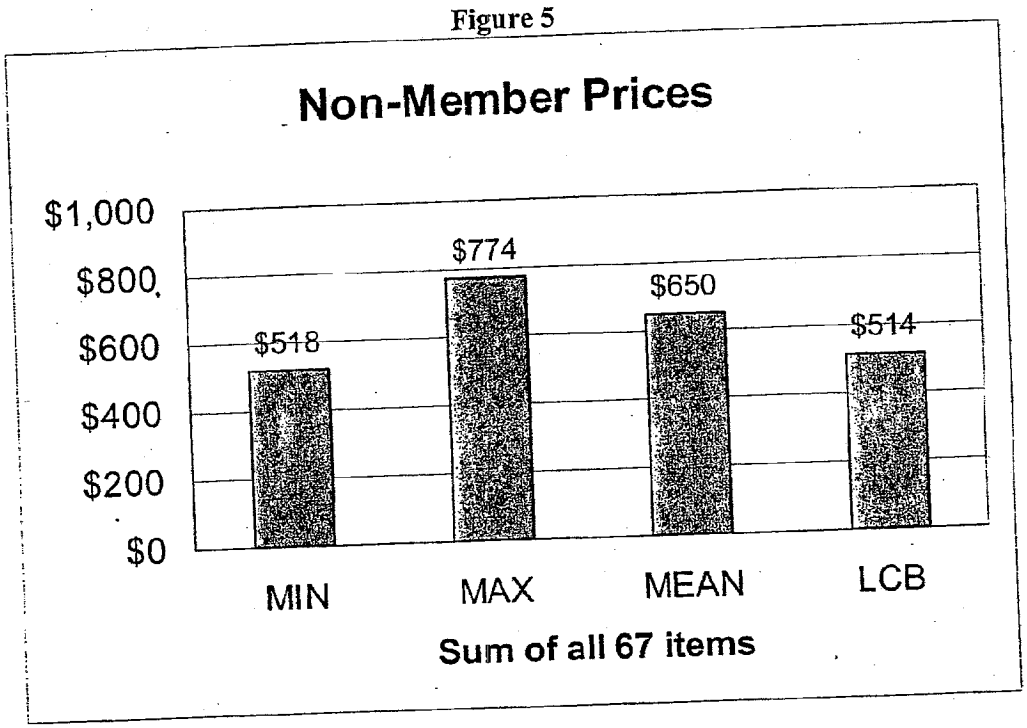
Averaged across all items, Liquor Control Board prices were 21% lower than the across-store[10] average non-member price of the same items. (See Figure 5) The lowest price offered by any of the stores, excluding member prices, was on average, very close to the Liquor Control Board price.[11]

Figure 5



The Liquor Control Board's price was lower than the average non-member price for every product. For 45% of the items, the Liquor Control Board price was lower than any of the eight stores' prices. For another 15% of the items, the Liquor Control Board prices equaled the lowest non-member price. (See Figure 6)

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[10] This was the average across all stores that carried the item; in all but three cases, that involved at least eight stores.
[11] The lowest store price averaged more than the Liquor Control Board price, but by less than ½ of 1%.

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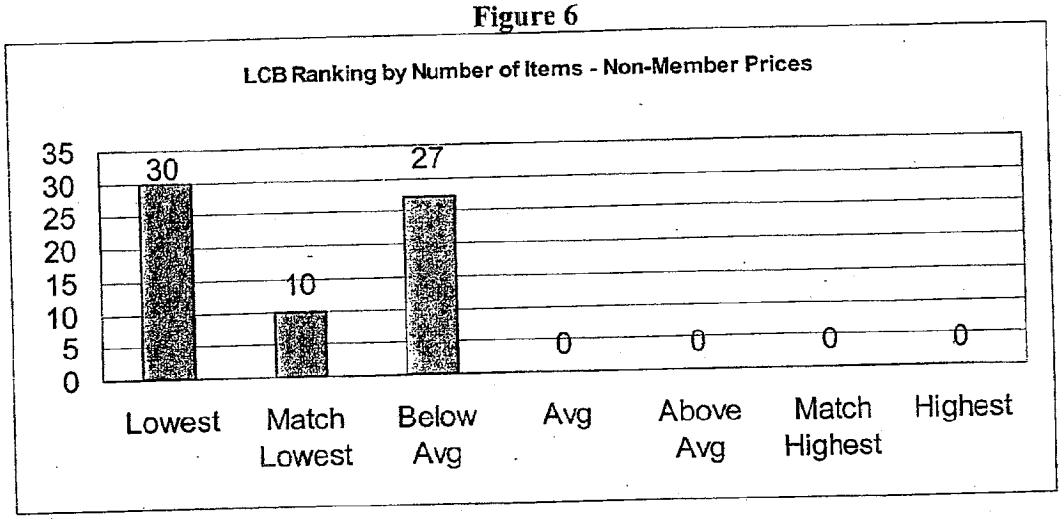
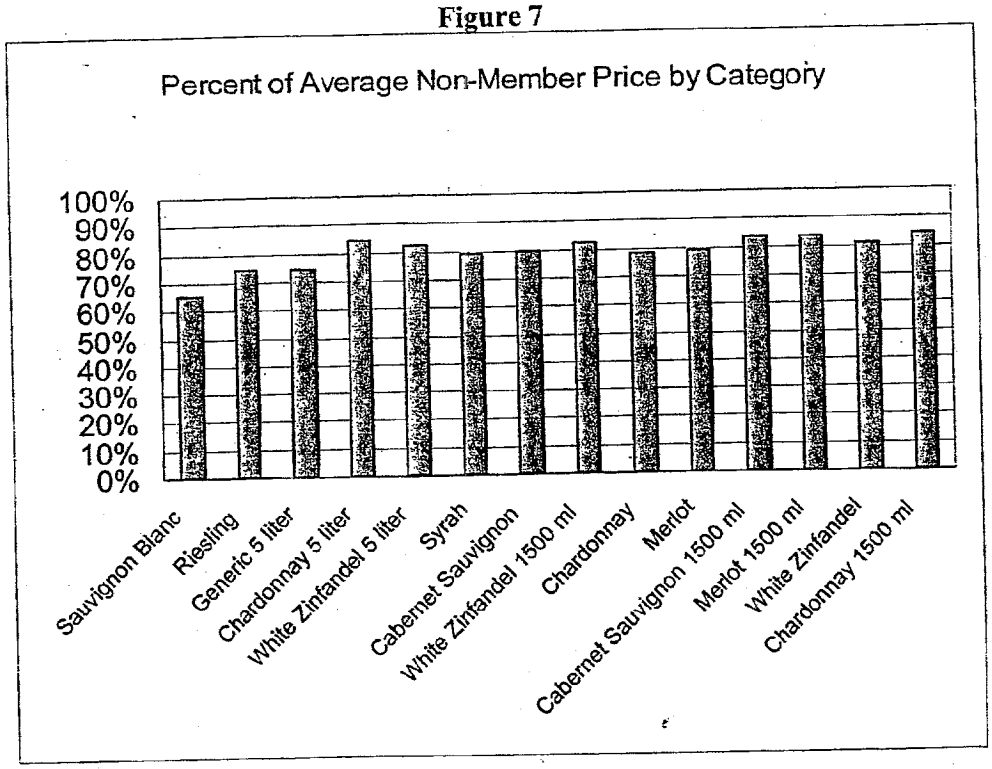
Figure 6



Considering only the non-member prices does not greatly change the pattern of price differences across types of products, so the categories are presented in the graph below in the same order as in the earlier section in which member prices are included. (See Figure 7) Again, the number of products in some categories was sufficiently small that results can only be considered suggestive.

Figure 7



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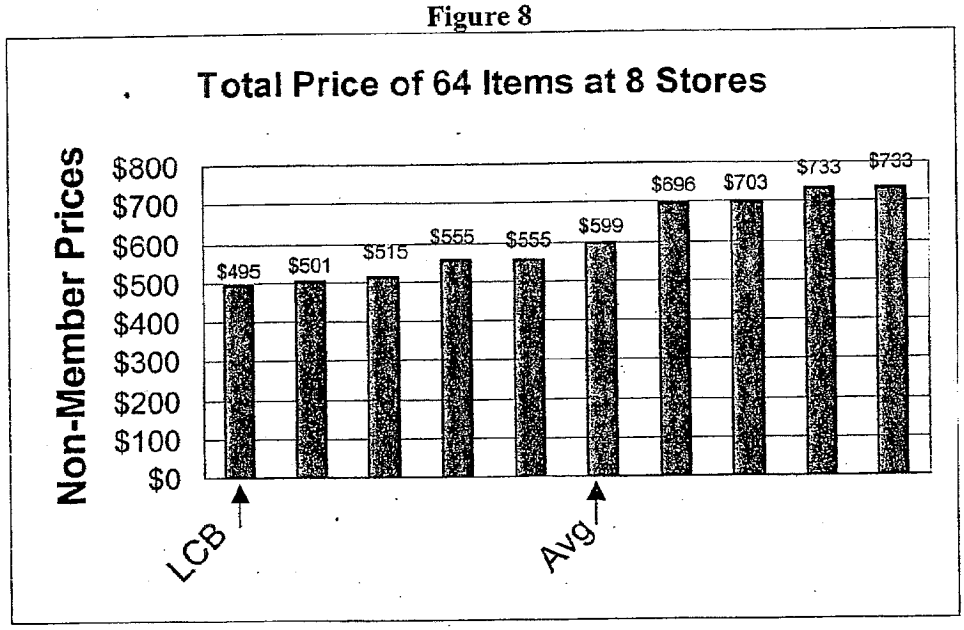
One-Stop Shopping Comparisons - Excluding Member Prices

In the comparison of what a consumer would have paid to purchase a single bottle of each item at each store the results also change. As in the preceding single-stop analysis, the volume discount store, and three products not carried by all eight grocery stores, were excluded.

While the Liquor Control Board's one-stop price for 64 items is about 17% below the average one-stop price, one of the stores almost matched the Liquor Control Board's pricing, at 16% below average. (See Figure 8)

Figure 8



Products Carried by the Volume Discount Store

Because volume discount stores are becoming more important sellers in the wine market, a separate analysis was done on prices for the 13 products found at the volume discount store.

Price patterns for this group of products were quite different.

Averaged across the 13 items, the Liquor Control Board price was equal to the average price charged in grocery stores.[12] (See Figure 9)

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[12] The sum of the Liquor Control Board prices was an insignificant $0.35 above the price averaged across the nine stores.

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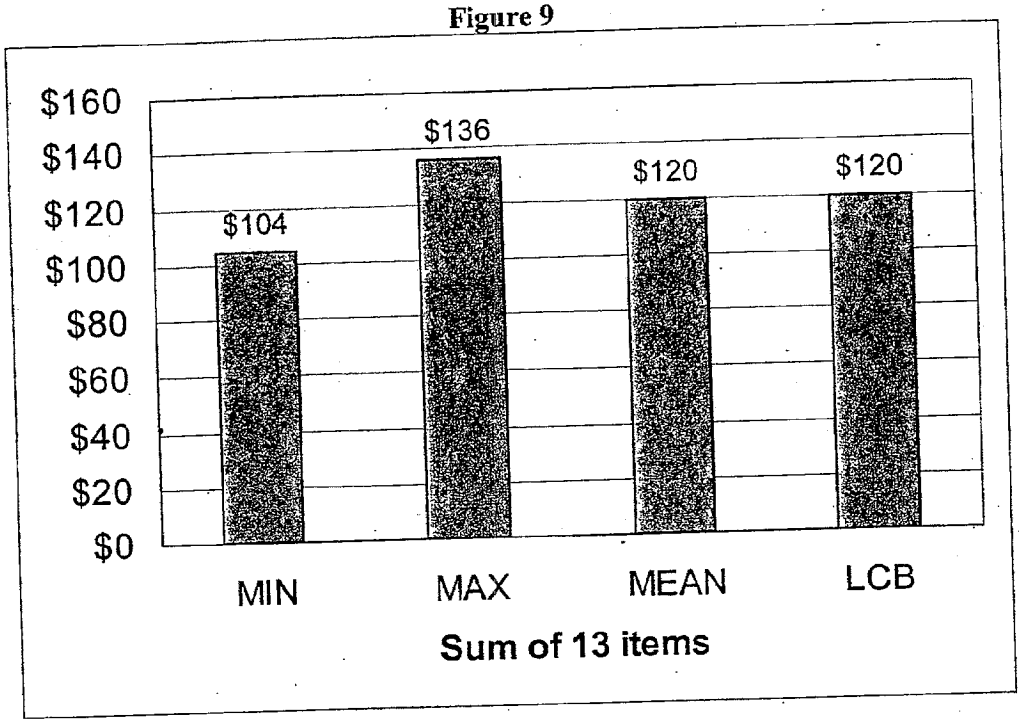
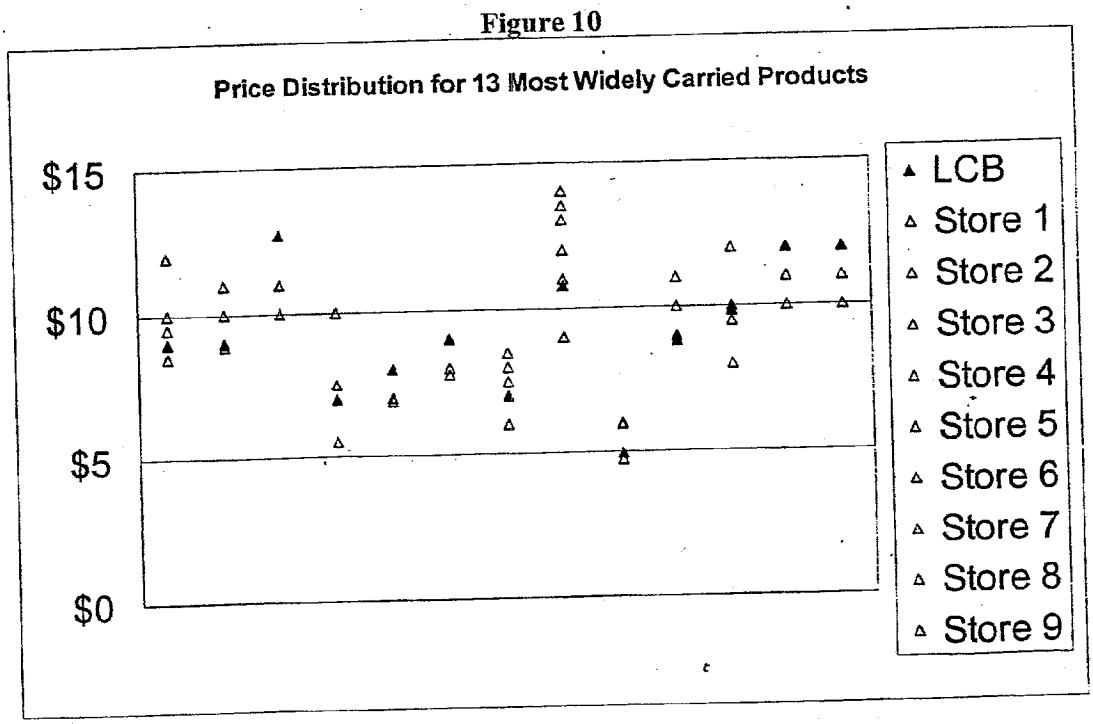
Figure 9



With this smaller list of products, the entire distribution can be graphed. (See Figure 10)

Figure 10



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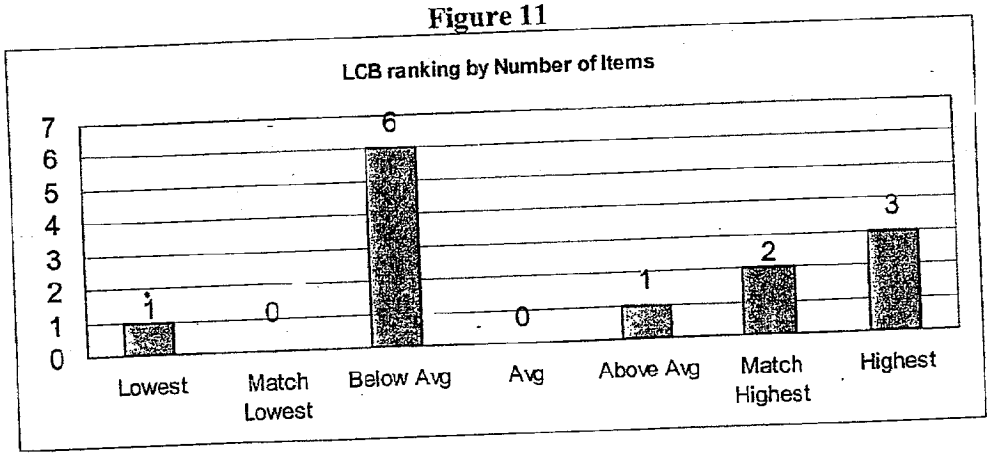
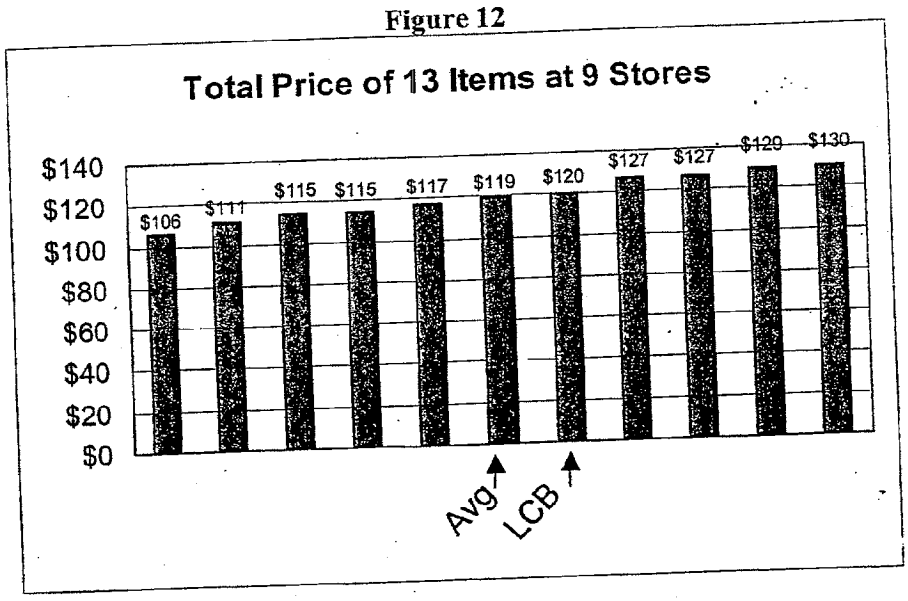
Although Liquor Control Board prices were below average for seven of the thirteen items, in only one case did the Liquor Control Board price match or exceed the lowest price offered at a retail grocery store. (See Figure 11) Further, for five products, all nine stores had equal or lower prices than the Liquor Control Board price.

Figure 11



A "one-stop" price comparison for these products also shows the Liquor Control Board prices to be in the middle of the price range for these items. (See Figure 12)

Figure 12



One possible explanation for the different pattern of pricing for these items would be that retail groceries closely monitor what products volume discount stores are carrying, and emphasize price competition in those items. Another possibility is that the general type of products carried by volume discounters is subject to more intense price competition for some generic reason, such as demographics or marketing through other types of retail outlets. Data gathered for this study are inadequate to identify the pattern of this more intense competition.

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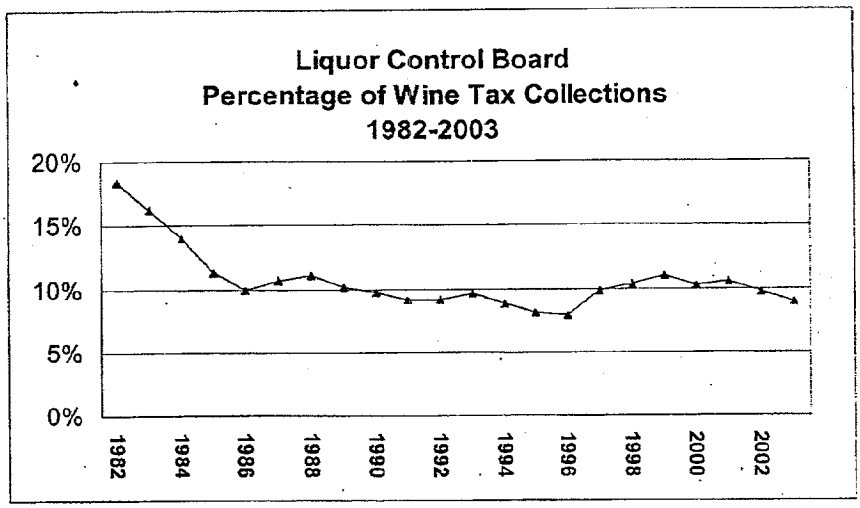
MARKET SHARE

The possibility that Liquor Control Board pricing might be affecting the wine market for other retailers needs to be seen in perspective. To address this question, the Liquor Control Board supplied sales and tax data on the size and role of the state stores in the wine market. Wine tax collections should be a reliable indicator of overall wine market share. According to this data, sales at Liquor Control Board stores currently produce about 10% of the retail wine tax collections in the state. Historically, this share has varied in the 7.9%-11.1% range since 1986, and shows no upward trend.

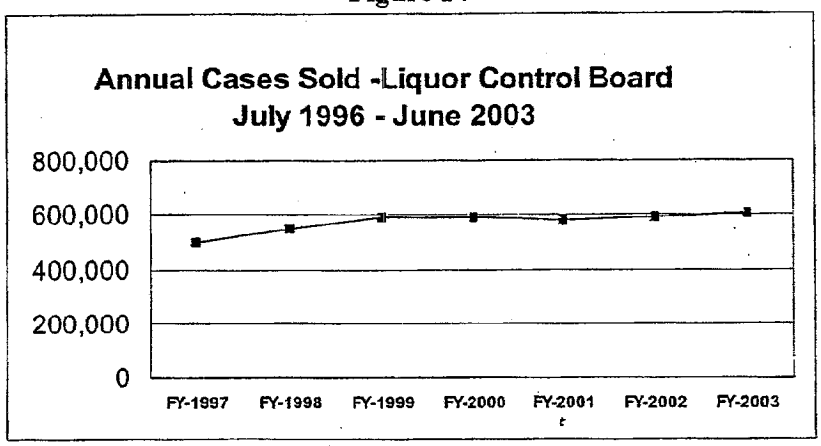
Figure 13



Liquor Control Board

Similarly, the graph of wine volume (cases) sold by the Liquor Control Board in recent years shows a relatively static volume of sales.

Figure 14



Liquor Control Board

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