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ANALYSIS OF CONCURRENT SEASONAL ADJUSTMENT FOR RETAIL AND WHOLESALE SERIES

by

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I. Introduction and Summary

This paper compares the present method of seasonal adjustment to different methods of concurrent seasonal adjustment for various retail and wholesale sales and inventory series. Various measures were used to determine which method of concurrent adjustment was the best and whether the best concurrent adjustment method was better than the present method of seasonal adjustment. The time span of this study was from October 1977 through December 1979, inclusive.

For the present method, the X-11 seasonal adjustment program was executed twice a year and the last observation was the June or December unadjusted final estimate. The projected seasonal factors 2/ computed from these executions of the X-11 program were used to adjust advance, preliminary, and final estimates as they became available.

For concurrent adjustment, the X-11 program was executed each month included in the time span of this study. The last estimate input to the X-11 program was dependent upon the type of series and method of concurrent adjustment. Therefore, the last estimate input to the

1/ The author is a mathematical statistician who works in Business Division at the Bureau of the Census. The views expressed in this paper are those of the author and do not represent official Census Bureau Policy.

2/ In this paper, the term seasonal factor is defined as the product of the seasonal, trading day, and holiday factors.

X-11 program was either a final, preliminary, or advance estimate. If the advance estimate was the last observation, the observation one month prior to this estimate was a preliminary estimate. All observations prior to the preliminary estimate were final estimates.

With the exception of retail sales series with advance estimates, the following three methods of concurrent adjustment were evaluated:

1. Only the last estimate (preliminary or final) was adjusted.
2. The last two estimates were adjusted.
3. The last two estimates and the estimate one year prior to the last estimate were adjusted. For this method, various current month-to-previous month and current year-to-previous year adjusted trends were derived from adjusted estimates which were computed by using seasonal factors generated from the same execution of the X-11 program.

For retail sales series with advance estimates, five methods of concurrent adjustment were evaluated. For the first three methods, the last observation input to the X-11 program was the preliminary estimate.

1. The last observation, or preliminary estimate, was adjusted and the one month ahead seasonal factor was used to adjust the advance estimate.

2. The last two observations (preliminary and final estimates) were adjusted and the one month ahead seasonal factor was used to adjust the advance estimate.

3. Same as method 2, except that the estimates one year prior to the preliminary and advance estimates were also adjusted.

For methods 4 and 5, each time the the X-11 program was executed, the last observation input to the program was an advance estimate.

4. The advance estimate was adjusted by the seasonal factor computed for the month with the advance estimate. However, the preliminary and final estimates and the estimates one year prior to the advance and preliminary estimates were adjusted by the seasonal factors computed from the X-11 execution for which the preliminary estimate was the last observation. Therefore, this method was equivalent to the third method, except for the computation of the adjusted advance estimate. With this method, adjusted preliminary and final estimates were not dependent upon the advance estimate.

5. The last three observations; or advance, preliminary, and final estimates; and the estimates one year prior to the advance and preliminary estimates were adjusted.

For all methods of concurrent adjustment and the present method of seasonal adjustment, various measures were computed that compared advance, preliminary, and final adjusted estimates and various month-to-month and year-to-year adjusted trends to "ideal" final adjusted estimates and trends. The X-11 program used all final estimates for the period January 1967 through December 1982 to compute seasonal factors which were used to derive "ideal" final adjusted estimates and trends for the time span of this study.

By using the advance and preliminary adjusted estimates in the comparisons instead of all final estimates, this study provides a realistic analysis of concurrent adjustment. These adjusted estimates and the month-to-month and year-to-year adjusted trends, derived from these estimates, are given the most attention by the users of these data.

For all series, excluding the retail series with advance estimates, method 3 was the best according to the various measures used in this study. For the retail sales series with advance estimates, method 5 had the best results for the various measures. Both these methods of concurrent adjustment were better than the present method of using projected factors. These results were expected as the adjusted estimates used in the various measures were derived from the seasonal factors computed from the same X-11 execution which used all available estimates.

If these methods of concurrent adjustment are implemented, final adjusted estimates will be computed from different X-11 executions. Therefore, it is possible that some trends, derived from these adjusted estimates, can be worse than the trends that would be computed if the present method of seasonal adjustment was used. Research will be implemented to study the magnitude of this problem.

Until research of this problem is completed, the present method of seasonal adjustment will continue to be used for all retail and wholesale sales and inventory series.

Section II of this paper describes the data and the design of the study. Section III shows the various measures used for determining the best method of concurrent adjustment and whether the best concurrent method is better than the present method of seasonal adjustment. Section IV discusses the results, and Section V describes the conclusions and recommendations.

II. Description of the Data and Design of the Study

All of the kinds-of-businesses (KB's) that had inventory and/or sales estimates evaluated were included under one classification. For each classification used in this study, the following shows the classification along with the estimates that were computed for each month during the time span of this study:

Classification	Estimates
1. Retail Sales--Category 1	Advance, Preliminary and Final
2. Retail Sales--Category 2	Preliminary and Final
3. Retail Sales--Category 3	Advance, Preliminary and Final
4. Retail Inventory	Final 3/
5. Wholesale Sales	Preliminary and Final
6. Wholesale Inventory	Preliminary and Final

Attachment 1 shows and describes the KB's that were used in this study for each classification.

3/ For KB's classified under retail inventory, a preliminary estimate for a particular month is released one month prior to the final estimate. However, the same ratio estimation procedure is used for both estimates. The only difference between the two estimates is that the final estimate is derived from more respondents.

For a particular month, the advance estimate is released approximately 10 to 15 days after the last day of the respective month. The preliminary estimate is released approximately 40 to 45 days after the last day of the respective month, and the initial final estimate is released approximately 70 to 75 days after the last day of the respective month. The final estimate that replaces the preliminary estimate will be referenced as the initial final estimate throughout the remainder of this study. Also, the advance estimate is derived from a smaller sample than the sample used to compute preliminary and final estimates.

The KB's that were classified under Retail Sales—Category 1 obtained their advance, preliminary, and final adjusted estimates directly by dividing the undjusted estimates by their respective seasonal factors. The KB's classified under Retail Sales—Category 3 had their adjusted preliminary and final estimates computed by summing the adjusted preliminary and final estimates across all component KB's (classified under Retail Sales—Category 2) that comprise the respective KB. Also, their adjusted advance estimates were computed directly.

The final unadjusted estimates used in this study were derived by benchmarking unadjusted estimates to the 1977 Census of Retail and Wholesale Trade and the 1978 through 1980 annual estimates obtained from annual surveys of Retail and Wholesale Trade. Advance and preliminary unadjusted estimates were derived in a manner that maintained the same advance to preliminary and preliminary to final unadjusted trends originally published. The formulas used to derive advance and preliminary estimates are shown in Attachment 2.

The "ideal" seasonal factors were derived by using final unadjusted estimates for the period January 1967 4/through December 1982 as input to the X-11 program. A seasonal factor is considered "ideal" for a particular month when there are at least three years of data prior to and following the respective month and the filter used for the month is no longer than the seven-term filter, or the "3 x 5 moving average filter". The "ideal" final adjusted estimates were derived by dividing the final unadjusted estimates by their respective "ideal" seasonal factors. However, KB's classified under Retail Sales—Category 3 obtained their "ideal" final adjusted estimates by summing the "ideal" final adjusted estimates across all component KB's that comprise the respective KB. The estimates and trends, computed from these "ideal" adjusted estimates, were compared to the adjusted estimates and trends computed for the present method of seasonal adjustment and the various methods of concurrent adjustment.

A. Present Method (Method A)

The X-11 program was executed twice a year and the June and December final unadjusted estimates were the last observations. Projected seasonal factors were used to adjust advance, preliminary, and final unadjusted estimates as they became available.

4/ All of the executions of the X-11 program used the January 1967 final unadjusted estimate as the first observation input into the X-11 program.

When the X-11 program was executed with the December final unadjusted estimate as the last observation, the last seven full years of data were used for deriving trading day factors 5/ and shorter moving average filters were selected for each month, when appropriate. The option to derive holiday factors for the months affected by Easter, Labor Day, and Thanksgiving were used for the following KB's classified under one of the categories in retail: 531100, 541100, 554100, 580000, 591200, 560000, 561100, 560001, 566100, and 560002. Projected seasonal factors were used to derive advance adjusted estimates for the months February through August of the following year and to derive preliminary and final adjusted estimates for the months January through August of the following year. Also, the seasonal factors generated for all the months in the year containing the December final estimate were used to derive revised final adjusted estimates for the months January through November and the initial final adjusted estimate for the month of December. These adjusted estimates were compared to the advance, preliminary, and final adjusted estimates that were computed in the following year. Because the December final estimate was computed after the January advance estimate of the following year became available, the January adjusted final estimate one year prior to the January adjusted advance estimate was not revised.

5/ Trading day factors were not derived for any KB's classified under retail and wholesale inventory.

When the X-11 program was executed with the June final unadjusted estimate as the last observation, the same trading day and holiday options used for the previous December execution were repeated. Also, shorter moving average filters were selected for each month, when appropriate. Projected factors were used to derive advance adjusted estimates for the months September through December of the current year and January of the following year, to derive preliminary adjusted estimates for the months September through December of the current year, and to derive final adjusted estimates for the months September through November of the current year.

For this method, the following should be noted:

1. For each month used in this study; advance, preliminary, and final adjusted estimates were derived from the same seasonal factor.

2. For most months; the adjusted estimates, used to calculate current-to-previous month adjusted trends, were derived by using seasonal factors computed from the same X-11 execution.

3. For the months January through August, almost all of the adjusted estimates, used to calculate current-to-previous year adjusted trends, were derived by using seasonal factors computed from the same X-11 execution.

For each month in 1979, the following table shows the month with the last unadjusted final estimate that was input to the X-11 program to derive the seasonal factors used to adjust various current and previous year estimates. This table is also repeated for each method of concurrent adjustment.

Month in 1979	Current Year Estimates			Previous Year Estimates Compared to 1979 Estimates		
	Advance	Preliminary	Final	Advance	Preliminary	Final
Jan.	June 1978	Dec. 1978	Dec. 1978	Dec. 1977	Dec. 1978	Dec. 1978
Feb.	Dec. 1978	"	"	Dec. 1978	"	"
Mar.	"	"	"	"	"	"
April	"	"	"	"	"	"
May	"	"	"	"	"	"
June	"	"	"	"	"	"
July	"	"	"	"	"	"
Aug.	"	"	"	"	"	"
Sept.	June 1979	June 1979	June 1979	"	"	"
Oct.	"	"	"	"	"	"
Nov.	"	"	"	"	"	"
Dec.	"	"	Dec. 1979	"	"	"

The following shows the classifications for which each of the estimates, or columns headings, in the preceding display were computed:

Estimates	Classifications for Which Estimates Were Computed
Advance	Retail sales—categories 1 and 3
*Preliminary	Retail sales—all categories and Wholesale sales and inventory
*Final	Retail sales—all categories, Retail inventory, and Wholesale sales and inventory
*Previous Year Estimate Compared to 1979 Advance	Retail sales—categories 1 and 3
*Previous Year Estimate Compared to 1979 Preliminary	Retail sales—all categories and Wholesale sales and inventory
Previous Year Estimate Compared to 1979 Final	Retail inventory

*For KB's classified under Retail Sales—Category 3, adjusted estimates were derived by aggregation; while the adjusted estimates for KB's in all other categories were obtained directly.

B. Concurrent Seasonal Adjustment (Methods B1, B2, B3, B4, and B5)

1. Methods B1, B2 and B3

For the period September 1977 through January 1980, the X-11 program was executed each month and the last observation was the preliminary estimate for all KB's classified under Retail Sales—all categories and Wholesale Sales and Inventory. For the KB's classified under Retail Inventory, the last observation was the final estimate. The January through June concurrent executions of the X-11 program for a given year used the same trading-day, holiday, and moving average options that were used when the December final unadjusted estimate of the previous year was the last observation under Method A. The July through

December concurrent executions of the X-11 program for a given year used the same options that were used when the June final unadjusted estimate of the given year was the last observation under Method A.

a. Method B1

This method duplicated the method of concurrent adjustment that was implemented for other studies done at the Census Bureau.

(1) Retail Sales—All Categories and Wholesale Sales and Inventory

The seasonal factor computed for the last observation, or the month with the preliminary unadjusted estimate, was used to obtain the adjusted preliminary estimate and the projected seasonal factor for the following month was used to compute the adjusted advance estimate. The previous month initial final adjusted estimate was derived by dividing the unadjusted estimate by the seasonal factor that was computed for its preliminary estimate. When the January preliminary unadjusted estimate was the last observation input into the X-11 program, the seasonal factors computed for all months in the prior year were used to derive revised final adjusted estimates. These revised final adjusted estimates were compared to advance and preliminary adjusted estimates of the following year. Because

the January preliminary estimate was computed after the January advance estimate, the January final adjusted estimate one year prior to the January advance estimate was not revised.

For this method, the following should be noted:

1. For each month used in this study, the preliminary and initial final adjusted estimates were derived from the same seasonal factor.

2. The adjusted estimates, used to calculate the current month advance to previous month preliminary trends, were derived by using seasonal factors computed from the same X-11 execution. However, the adjusted advance estimates were derived by using one month ahead projected factors.

For each month in 1979, the following table shows the month with the last unadjusted preliminary estimate that was input to the X-11 program to derive the seasonal factors used to adjust various current and previous year estimates.

Month in 1979	Current Year Estimates			Previous Year Estimates Compared to 1979 Estimates	
	Advance	Preliminary	Final	Advance	Preliminary
Jan.	Dec. 1978	Jan. 1979	Jan. 1979	Jan. 1978	Jan. 1979
Feb.	Jan. 1979	Feb. 1979	Feb. 1979	Jan. 1979	"
Mar.	Feb. 1979	Mar. 1979	Mar. 1979	"	"
April	Mar. 1979	Apr. 1979	Apr. 1979	"	"
May	Apr. 1979	May 1979	May 1979	"	"
June	May 1979	Jun. 1979	Jun. 1979	"	"
July	Jun. 1979	Jul. 1979	Jul. 1979	"	"
Aug.	Jul. 1979	Aug. 1979	Aug. 1979	"	"
Sept.	Aug. 1979	Sept. 1979	Sept. 1979	"	"
Oct.	Sept. 1979	Oct. 1979	Oct. 1979	"	"
Nov.	Oct. 1979	Nov. 1979	Nov. 1979	"	"
Dec.	Nov. 1979	Dec. 1979	Dec. 1979	"	"

(2) Retail Inventory

The seasonal factor computed for the last observation was used to obtain the final adjusted estimate. When the December final unadjusted estimate was the last observation input into the X-11 program, the seasonal factors computed for all months in the year with the December estimate were used to derive revised final adjusted estimates. These revised final adjusted estimates were compared to final adjusted estimates of the following year.

For each month in 1979, the following table shows the month with the last unadjusted final estimate that was input to the X-11 program to derive the seasonal factors used to adjust various current and previous year estimates.

Month in 1979	Final (Last Observation)	Previous Month Final	Previous Year Estimate Compared to 1979 Final
Jan.	Jan. 1979	Jan. 1979	Dec. 1978
Feb.	Feb. 1979	Feb. 1979	"
Mar.	Mar. 1979	Mar. 1979	"
April	Apr. 1979	Apr. 1979	"
May	May 1979	May 1979	"
June	Jun. 1979	Jun. 1979	"
July	Jul. 1979	Jul. 1979	"
Aug.	Aug. 1979	Aug. 1979	"
Sept.	Sept. 1979	Sept. 1979	"
Oct.	Oct. 1979	Oct. 1979	"
Nov.	Nov. 1979	Nov. 1979	"
Dec.	Dec. 1979	Dec. 1979	"

b. Method B2

(1) Retail Sales--All Categories and Wholesale Sales and Inventory

The only difference from Method B1 was the computation of the initial final adjusted estimates. For each execution of the X-11 program, the seasonal factor computed for the month prior to the last observation, or the preliminary estimate, was used to obtain the initial final adjusted estimate.

For this method, the adjusted estimates, used to calculate the current month advance to previous month preliminary trends and the current month preliminary to previous month final trends, were derived by using seasonal factors computed for the same X-11 execution. Also, the calculation of the seasonal factor computed for the initial final estimate took into account the initial final estimate, or the revision of the preliminary estimate, and the following month's preliminary estimate.

This method would be the easiest to implement because seasonal factors are only used to adjust initial and revised estimates.

For each month in 1979, the following table shows the month with the last unadjusted preliminary estimate that was input to the X-11 program to derive the seasonal factors used to adjust various current and previous year estimates.

Month in 1979	Current Year Estimates			Previous Year Estimates Compared to 1979 Estimates	
	Advance	Preliminary	Final*	Advance	Preliminary
Jan.	Dec. 1978	Jan. 1979	Feb. 1979	Feb. 1978**	Jan. 1979
Feb.	Jan. 1979	Feb. 1979	Mar. 1979	Jan. 1979	"
Mar.	Feb. 1979	Mar. 1979	Apr. 1979	"	"
April	Mar. 1979	Apr. 1979	May 1979	"	"
May	Apr. 1979	May 1979	Jun. 1979	"	"
June	May 1979	Jun. 1979	Jul. 1979	"	"
July	Jun. 1979	Jul. 1979	Aug. 1979	"	"
Aug.	Jul. 1979	Aug. 1979	Sept. 1979	"	"
Sept.	Aug. 1979	Sept. 1979	Oct. 1979	"	"
Oct.	Sept. 1979	Oct. 1979	Nov. 1979	"	"
Nov.	Oct. 1979	Nov. 1979	Dec. 1979	"	"
Dec.	Nov. 1979	Dec. 1979	Jan. 1980	"	"

*All periods under this column are different from the periods that were displayed for method B1.

**This period is different from the period that was displayed for method B1.

(2) Retail Inventory

The only difference from method B1 was the computation of the previous month final adjusted estimates. For each execution of the X-11 program, the seasonal factor computed for the last two observations were used to adjust the estimates of these observations.

For this method, the adjusted estimates, used to calculate the current month to previous month trends, were derived by using seasonal factors computed from the same X-11 execution. Also, the calculation of the seasonal factor, computed for the previous month's estimate, took into account the following month's estimate.

For each month in 1979, the following table shows the month with the last unadjusted final estimate that was input to the X-11 program to derive the seasonal factors used to adjust various current and previous year estimates.

Current Year Estimates

Month in 1979	Final (Last Observation)	Previous Month to Final*	Previous Year Estimate Compared to 1979 Final
Jan.	Jan. 1979	Feb. 1979	Dec. 1978
Feb.	Feb. 1979	Mar. 1979	"
Mar.	Mar. 1979	Apr. 1979	"
April	Apr. 1979	May. 1979	"
May	May 1979	Jun. 1979	"
June	Jun. 1979	Jul. 1979	"
July	Jul. 1979	Aug. 1979	"
Aug.	Aug. 1979	Sept. 1979	"
Sept.	Sept. 1979	Oct. 1979	"
Oct.	Oct. 1979	Nov. 1979	"
Nov.	Nov. 1979	Dec. 1979	"
Dec.	Dec. 1979	Jan. 1980	"

*All periods under this column are different from the periods that were displayed for method B1.

c. Method B3

(1) Retail Sales—All Categories and Wholesale Sales and Inventory

The only difference from method B2 was the computation of the previous year adjusted final estimates that were compared to the adjusted preliminary and advance estimates of the following year. For each execution of the X-11 program, the seasonal factor one year prior to the last observation was used to derive a revised final adjusted estimate that was compared to the adjusted preliminary estimate. Also, the seasonal factor one year prior to the month following the last observation, or the month with the advance estimate, was used to derive a revised final adjusted estimate.

This method was equivalent to method B2 for deriving seasonal factors for computing advance, preliminary, and initial final adjusted estimates.

For this method the adjusted estimates, used to calculate various current month to previous month and current year to previous year trends, were derived by using seasonal factors computed from the same X-11 execution. However, the adjusted advance estimates used to compute month-to-month and year-to-year trends, were derived by using one month ahead projected factors. Also, the calculation of the seasonal factors that were computed for estimates one year prior to the advance and preliminary estimates took

into account the initial final and preliminary estimates of the following year.

For each month in 1979, the following table shows the month with the unadjusted preliminary estimate that was input to the X-11 program to derive the seasonal factors used to adjust various current and previous year estimates.

Month in 1979	Current Year Estimates			Previous Year Estimates Compared to 1979 Estimates	
	Advance	Preliminary	Final	Advance*	Preliminary*
Jan.	Dec. 1978	Jan. 1979	Feb. 1979	Dec. 1978	Jan. 1979
Feb.	Jan. 1979	Feb. 1979	Mar. 1979	Jan. 1979	Feb. 1979
Mar.	Feb. 1979	Mar. 1979	Apr. 1979	Feb. 1979	Mar. 1979
April	Mar. 1979	Apr. 1979	May 1979	Mar. 1979	Apr. 1979
May	Apr. 1979	May 1979	Jun. 1979	Apr. 1979	May 1979
June	May 1979	Jun. 1979	Jul. 1979	May 1979	Jun. 1979
July	Jun. 1979	Jul. 1979	Aug. 1979	Jun. 1979	Jul. 1979
Aug.	Jul. 1979	Aug. 1979	Sept. 1979	Jul. 1979	Aug. 1979
Sept.	Aug. 1979	Sept. 1979	Oct. 1979	Aug. 1979	Sept. 1979
Oct.	Sept. 1979	Oct. 1979	Nov. 1979	Sept. 1979	Oct. 1979
Nov.	Oct. 1979	Nov. 1979	Dec. 1979	Oct. 1979	Nov. 1979
Dec.	Nov. 1979	Dec. 1979	Jan. 1980	Nov. 1979	Dec. 1979

*All periods under this column are different from the periods that were displayed for method B2.

(2) Retail Inventory

The only difference from method B2 was the computation of the previous year adjusted estimates that were compared to the adjusted final estimates of the following year. For each execution of the X-11 program, the seasonal factor one year prior to the last unadjusted final estimate was used to derive the revised final adjusted estimate.

For this method, the adjusted estimates, used to calculate current month to previous month and current year to previous year trends, were derived by using seasonal factors from the same X-11 execution. Also, the computation of the seasonal factor calculated for the estimate one year prior to the final estimate took into account the final estimate of the following year.

For each month in 1979, the following table shows the month of the last unadjusted final estimate that was input to the X-11 program to derive the seasonal factors used to adjust various current and previous year estimates.

Month in 1979	Final (Last Observation)	Previous Month to Final	Previous Year Estimate Compared to 1979 Final*
Jan.	Jan. 1979	Feb. 1979	Jan. 1979
Feb.	Feb. 1979	Mar. 1979	Feb. 1979
Mar.	Mar. 1979	Apr. 1979	Mar. 1979
April	Apr. 1979	May. 1979	Apr. 1979
May	May 1979	Jun. 1979	May 1979
June	Jun. 1979	Jul. 1979	Jun. 1979
July	Jul. 1979	Aug. 1979	Jul. 1979
Aug.	Aug. 1979	Sept. 1979	Aug. 1979
Sept.	Sept. 1979	Oct. 1979	Sept. 1979
Oct.	Oct. 1979	Nov. 1979	Oct. 1979
Nov.	Nov. 1979	Dec. 1979	Nov. 1979
Dec.	Dec. 1979	Jan. 1980	Dec. 1979

*All periods under this column are different from the periods that were displayed for method B2.

2. Methods B4 and B5

Methods B1, B2, and B3 used projected factors to compute adjusted advance estimates. Because advance estimates are released almost as soon as they become available, using projected factors would be the most expedient way to derive adjusted advance estimates.

Methods B4 and B5 used the concurrent factor that was computed for the advance estimate instead of the projected factor to derive adjusted advance estimates. These methods are only applied to the KB's classified under Retail Sales--Categories 1 and 3.

For the period October 1977 through February 1980, the X-11 program was executed each month and the last observation, or unadjusted estimate, was the advance estimate. The February through July concurrent executions of the X-11 program for a given year used the same trading-day, holiday, and moving average options that were used when the December final unadjusted estimate of the previous year was the last observation under method A. The August through January concurrent executions of the X-11 program used the same options that were used when the June final unadjusted estimate was the last observation under method A.

(a) Method B4

This method is identical to method B3, except for the computation of the advance estimate. The advance estimate used the seasonal factor that was computed for the advance estimate, to derive the adjusted advance estimate.

For this method, the adjusted estimates, used to derive adjusted advance to preliminary trends and adjusted advance to previous year trends, were derived from seasonal factors computed from different X-11 executions. However, the seasonal factors used to derive the adjusted estimates, used in the computation of the trends described above, were derived from concurrent seasonal factors. For this method, the computation of seasonal factors, that would be used to derive preliminary and final adjusted estimates and adjusted estimates one year prior to the advance and preliminary estimates, would not be dependent on the advance estimate.

The following table shows for each month in 1979 the month with the last unadjusted advance estimate input to the X-11 program (current year advance column only) and the month with the last unadjusted preliminary estimate that was used to derive other current year and previous year estimates.

Month in 1979	Current Year Estimates			Previous Year Estimates Compared to 1979 Estimates	
	Advance*	Preliminary	Final	Advance	Preliminary
Jan.	Jan. 1979	Jan. 1979	Feb. 1979	Dec. 1978	Jan. 1979
Feb.	Feb. 1979	Feb. 1979	Mar. 1979	Jan. 1979	Feb. 1979
Mar.	Mar. 1979	Mar. 1979	Apr. 1979	Feb. 1979	Mar. 1979
April	Apr. 1979	Apr. 1979	May 1979	Mar. 1979	Apr. 1979
May	May 1979	May 1979	Jun. 1979	Apr. 1979	May 1979
June	Jun. 1979	Jun. 1979	Jul. 1979	May 1979	Jun. 1979
July	Jul. 1979	Jul. 1979	Aug. 1979	Jun. 1979	Jul. 1979
Aug.	Aug. 1979	Aug. 1979	Sept. 1979	Jul. 1979	Aug. 1979
Sept.	Sept. 1979	Sept. 1979	Oct. 1979	Aug. 1979	Sept. 1979
Oct.	Oct. 1979	Oct. 1979	Nov. 1979	Sept. 1979	Oct. 1979
Nov.	Nov. 1979	Nov. 1979	Dec. 1979	Oct. 1979	Nov. 1979
Dec.	Dec. 1979	Dec. 1979	Jan. 1980	Nov. 1979	Dec. 1979

*All periods under this column are different from the periods that were displayed for method B3. Also, all periods represent the month with the last unadjusted advance estimate input to the X-11 program.

(b) Method B5

This method was only used for the KB's in Retail Sales—Category 1 6/. When the advance estimate was the last observation input to the X-11 program, the seasonal factors computed for the advance, preliminary, and final estimates, and the estimates one year prior to the advance and preliminary estimates were derived from the same X-11 execution. Therefore, the adjusted estimates, used to compute various current month to previous month and current year to previous year trends, were derived from the same X-11 execution.

6/ This method was not used for the KB's classified under Retail Sales—Category 3 because all preliminary and final estimates for KB's in this classification were derived by aggregation.

For this method, the seasonal factors used to derive adjusted preliminary and final adjusted estimates are dependent upon the advance estimates. Also, the advance, preliminary, and initial final estimates affected the computation of the seasonal factors that were used to derive adjusted estimates one year prior to the advance and preliminary estimates.

The following table shows for each month in 1979, the month with the last unadjusted advance estimate input to the X-11 program to derive seasonal factors used to compute various current year and previous year adjusted estimates.

Month in 1979	Current Year Estimates			Previous Year Estimates Compared to 1979 Estimates	
	Advance	Preliminary	Final	Advance	Preliminary
Jan.	Jan. 1979	Feb. 1979	Mar. 1979	Jan. 1979	Feb. 1979
Feb.	Feb. 1979	Mar. 1979	Apr. 1979	Feb. 1979	Mar. 1979
Mar.	Mar. 1979	Apr. 1979	May. 1979	Mar. 1979	Apr. 1979
April	Apr. 1979	May 1979	Jun. 1979	Apr. 1979	May 1979
May	May 1979	Jun. 1979	Jul. 1979	May 1979	Jun. 1979
June	Jun. 1979	Jul. 1979	Aug. 1979	Jun. 1979	Jul. 1979
July	Jul. 1979	Aug. 1979	Sept. 1979	Jul. 1979	Aug. 1979
Aug.	Aug. 1979	Sept. 1979	Oct. 1979	Aug. 1979	Sept. 1979
Sept.	Sept. 1979	Oct. 1979	Nov. 1979	Sept. 1979	Oct. 1979
Oct.	Oct. 1979	Nov. 1979	Dec. 1979	Oct. 1979	Nov. 1979
Nov.	Nov. 1979	Dec. 1979	Jan. 1980	Nov. 1979	Dec. 1979
Dec.	Dec. 1979	Jan. 1980	Feb. 1980	Dec. 1979	Jan. 1980

III. Measures for Analyzing Concurrent Adjustment

The following notation will be used in this section:

$FINIDL_t$ = The "ideal" final adjusted estimate for month t.

FIN_t = The final adjusted estimate for month t.

PRE_t = The preliminary adjusted estimate for month t.

ADV_t = The advance adjusted estimate for month t.

Month t represents a month in the time span that was used for analyzing the results from this study (October 1977 through December 1979, a total of 27 months).

There were thirteen measures, shown below, used to compare the results from the various methods of concurrent adjustment to the present method of seasonal adjustment. These measures used both absolute percent change and root mean square error computations. The first five measures dealt with various comparisons of the adjusted estimates. Measures 6 through 9 dealt with various comparisons of current month to previous month adjusted trends, and measures 10 through 14 dealt with various comparisons of current year to previous year adjusted trends. The measures were as follow:

Absolute Percent Change Computations

Level Comparisons

Measures

1. $1/27 \sum_t |(((FIN_t/FINIDL_t)-1)*100)|$

2. $1/27 \sum_t |(((PRE_t/FINIDL_t)-1)*100)|$

3. $1/27\sum_{t} |(((ADV_t/FINIDL_t)-1)*100)|$

4. $1/27\sum_{t} |(((PRE_t/FIN_t)-1)*100)|$

5. $1/27\sum_{t} |(((ADV_t/PRE_t)-1)*100)|$

Current Month to Previous Month Comparisons

Measures

6. $1/27\sum_{t} |(((PRE_t/FIN_{t-1}) - (FINIDL_t/FINIDL_{t-1}))*100)|$

7. $1/27\sum_{t} |(((FIN_t/FIN_{t-1}) - (FINIDL_t/FINIDL_{t-1}))*100)|$

8. $1/27\sum_{t} |(((ADV_t/PRE_{t-1}) - (FINIDL_t/FINIDL_{t-1}))*100)|$

9. $1/27\sum_{t} |(((ADV_t/PRE_{t-1}) - (PRE_t/FIN_{t-1}))*100)|$

Current Year to Previous Year Comparisons

Measures

10. $1/27\sum_{t} |(((PRE_t/FIN_{t-12}) - (FINIDL_t/FINIDL_{t-12}))*100)|$

11. $1/27\sum_{t} |(((FIN_t/FIN_{t-12}) - (FINIDL_t/FINIDL_{t-12}))*100)|$

12. $1/27\sum_{t} |(((ADV_t/FIN_{t-12}) - (FINIDL_t/FINIDL_{t-12}))*100)|$

13. $1/27\sum_{t} |(((ADV_t/FIN_{t-12}) - (PRE_t/FIN_{t-12}))*100)|$

Root Mean Square Error Computations

Level Comparisons

Measures

1. $(1/27\sum_t ((((FIN_t/FINIDL_t)-1)*100)**2))**1/2$

2. $(1/27\sum_t ((((PRE_t/FINIDL_t)-1)*100)**2))**1/2$

3. $(1/27\sum_t ((((ADV_t/FINIDL_t)-1)*100)**2))**1/2$

4. $(1/27\sum_t ((((PRE_t/FIN_t)-1)*100)**2))**1/2$

5. $(1/27\sum_t ((((ADV_t/PRE_t)-1)*100)**2))**1/2$

Current Month to Previous Month Comparisons

Measures

6. $(1/27\sum_t ((((PRE_t/FIN_{t-1}) - (FINIDL_t/FINIDL_{t-1}))*100)**2))**1/2$

7. $(1/27\sum_t ((((FIN_t/FIN_{t-1}) - (FINIDL_t/FINIDL_{t-1}))*100)**2))**1/2$

8. $(1/27\sum_t ((((ADV_t/PRE_{t-1}) - (FINIDL_t/FINIDL_{t-1}))*100)**2))**1/2$

9. $(1/27\sum_t ((((ADV_t/PRE_{t-1}) - (PRE_t/FIN_{t-1}))*100)**2))**1/2$

Current Year to Previous Year Comparisons

Measures

10. $(1/27\sum_t ((((PRE_t/FIN_{t-12}) - (FINIDL_t/FINIDL_{t-12}))*100)**2))**1/2$

11. $(1/27\sum_t ((((FIN_t/FIN_{t-12}) - (FINIDL_t/FINIDL_{t-12}))*100)**2))**1/2$

12. $(1/27\sum_t ((((ADV_t/FIN_{t-12}) - (FINIDL_t/FINIDL_{t-12}))*100)**2))**1/2$

13. $(1/27\sum_t ((((ADV_t/FIN_{t-12}) - (PRE_t/FIN_{t-12}))*100)**2))**1/2$

Most of the measures shown above used adjusted advance and preliminary estimates. The various adjusted estimates and trends included in these measures are given the most attention by many of the users of these data.

A. Level Comparisons

Measures 1 through 3 listed under each computation method (absolute percent change and root mean square error) show how close the adjusted final, preliminary, and advance estimates are to the "ideal" adjusted final estimate. The fourth and fifth measures for each computation method show how close the adjusted preliminary estimates are to the adjusted final estimates and how the adjusted advance estimates compare to the adjusted preliminary estimates.

B. Current Month to Previous Month Comparisons

Measures 6 through 8 listed under each computation method show how close various month-to-month adjusted trends are to the "ideal" month-to-month adjusted trend. Measure 9 compares the adjusted advance to preliminary trend to the adjusted preliminary to final trend. These four measures are considered to be the most important measures for evaluating whether one of the methods of concurrent seasonal adjustment should be implemented. Month-to-month adjusted estimates are given the most attention by the mass media.

C. Current Year to Previous Year Comparisons

Measures 10 through 12 listed under each computation method show how close various year-to-year adjusted trends are to the "ideal" year-to-year adjusted trend. Measure 13 compares the adjusted advance to previous year trend to the adjusted preliminary to previous year trend.

For each measure (absolute percent computation or root mean square error computation) one of the following three notations is shown in the following table for each classification used in this study:

1. The measure is denoted with an "X". This implies that the measure was not computed for any KB under the classification.

   or

2. The methods of concurrent seasonal adjustment that will have identical results for the measure (e.g., B1=B2=B3). This is because all the variables used in the measure are computed identically.

   or

3. The measure is denoted with an "N". This implies that the measure was computed for the classification and none of the different methods of concurrent seasonal adjustment have identical results for the measure.

Classification

Measure	Retail Inventory	Retail Sales-Category 2 and Wholesale sales and Inventory	Retail Sales Category 1	Retail Sales Category 3
1	B1=B2=B3	B2=B3	B2=B3=B4	B2=B3=B4
2	X	B1=B2=B3	B1=B2=B3=B4	B1=B2=B3=B4
3	X	X	B1=B2=B3 and B4=B5	B1=B2=B3
4	X	B2=B3	B2=B3=B4	B2=B3=B4
5	X	X	B1=B2=B3	B1=B2=B3
6	X	B2=B3	B2=B3=B4	B2=B3=B4
7	B2=B3	X	X	X
8	X	X	B1=B2=B3	B1=B2=B3
9	X	X	B2=B3	B2=B3
10	X	B1=B2	B1=B2 and B3=B4	B1=B2 and B3=B4
11	B1=B2	X	X	X
12	X	X	N*	N*
13	X	X	N*	N*

*B1 is approximately equal to B2. All of the months will have the same results except, possibly, for January as the previous year initial final adjusted estimates for these two methods were computed from seasonal factors derived from different X-11 executions (see section II).

IV. Results of the Study

Attachments 3 and 4 show the results from this study. Attachment 3 shows various results for all KB's comprising each classification. For all classifications, the following results for each applicable measure (using both absolute percent change and root mean square error computations) are shown for each KB comprising the respective classification:

1. The first line shows the results of the measure for each method of seasonal adjustment (methods A, B1, B2, B3, B4, and B5).

2. For each method of seasonal adjustment, the result was divided by the result computed for method A and expressed as a percent. These results are shown on the second line. A value less than 100 indicates the method shows an improvement over method A. The best method of concurrent adjustment would have the smallest value.

3. For methods B1, B2, B3, B4, and B5; the number of observations for which the results of the measure had a value less than the value obtained for method A was divided by 27 and expressed as a percent.

Attachment 4 shows various results for each classification. For each classification, the following results for each applicable measure (absolute percent change and root mean square error computations) are displayed:

1. The geometric mean (computed across all KB's that comprise the classification) of the measure was calculated for each method of seasonal adjustment and is shown on the first line.

2. The geometric mean of the measure, computed in 1 above, for each method was divided by the result computed for method A and expressed as a percent. This result is shown on the second line. A value less than 100 indicates the method shows an improvement over method A.

3. The average, or mean, of the percent of observations (computed across all KB's that comprise the classification) that methods B1, B2, B3, B4, and B5 had a value less than the value obtained for method A. These results are shown on the third line.

For all classifications, excluding Retail Sales--Categories 1 and 3, method B3 should be the best method of concurrent adjustment. For Retail Sales--Categories 1 and 3, the best methods should be respectively, methods B5 and B4 7/. These results are expected because the adjusted estimates, used in the computation of the various measures, are derived from seasonal factors computed from the same X-11 execution which takes into account all available estimates. For each concurrent execution of the X-11 program, initial and revised estimates have an effect on the computation of seasonal factors for all back months. This effect diminishes for months further back in time. Even though it was expected that the best method of concurrent adjustment would be method B3, B4, or B5 the other methods were evaluated because they would be easier to implement.

7/ For Retail Sales--Category 3, the only difference between method B4 and B3 is that method B4 used the concurrent seasonal factor instead of the one month ahead projected factor to derive adjusted advance estimates. Adjusted preliminary and final estimates were derived by aggregation. The use of the concurrent factor should provide better results for all measures that use the adjusted advance estimates in the computation.

The following will be shown for each classification:

1. The measure shown in Section III that was calculated by using the absolute percent change computation 8/.

2. For the "best" method of concurrent adjustment (Method B3, B4, or B5), the percent improvement over method A. The percent improvement is computed in the following manner.

$$\left(1 - \frac{\text{GM of "Best" Method}}{\text{GM of Method A}}\right) * 100 \quad \text{where}$$

GM = the geometric mean. Also the geometric mean for both methods are displayed in Attachment 4.

If the "best" method did not have the best percent improvement over method A, the following will be shown for the next two columns:

3. The method or methods that actually had the best percent improvement over method A.

4. For the method shown in column 3, the percent improvement over method A.

8/ The results computed for the measures that used the root mean square error computations will not be shown as the results are similar to the results that used the absolute percent change computations.

Retail Sales—Category 1

Measure From Section III	For Method B5 Percent Improvement Over Method A	Other Than Method B5 Method With Best Percent Improvement Over Method A: Method	Percent Improvement Over Method A
Level Analysis			
1	30.9		
2	19.9		
3	8.6		
4	11.6		
5	8.3	B4	12.3
Month-to-Month Analysis			
6	31.5		
8	18.3		
9	18.1		
Year-to-Year Analysis			
10	12.9	B1 or B2	13.8
12	8.5	B4	8.8
13	6.7		

Retail Sales—Category 2

Measure From Section III	For Method B3 Percent Improvement Over Method A
Level Analysis	
1	20.5
2	17.5
4	6.7
Month-to-Month Analysis	
6	32.1
Year-to-Year Analysis	
10	11.3

Retail Sales—Category 3

Measure From Section III	For Method B4 Percent Improvement Over Method A	Other Than Method B4 Method With Best Percent Improvement Over Method A: Method	Percent Improvement Over Method A
Level Analysis			
1	18.7		
2	13.5		
3	6.6		
4	8.2		
5	15.3		
Month-to-Month Analysis			
6	34.3		
8	14.4		
9	21.3		
Year-to-Year Analysis			
10	16.3		
12	9.2		
13	9.1	B2	11.1

Retail Inventory

Measure From Section III	For Method B3 Percent Improvement Over Method A
Level Analysis	
1	3.0
Month-to-Month Analysis	
7	10.0
Year-to-Year Analysis	
11	20.2

Wholesale Sales

Measure From Section III	For Method B3 Percent Improvement Over Method A
Level Analysis	
1	16.4
2	8.1
4	3.2
Month-to-Month Analysis	
6	15.9
Year-to-Year Analysis	
10	.5

Wholesale Inventory

Measure From Section III	For Method B3 Percent Improvement Over Method A
Level Analysis	
1	23.9
2	.8
4	4.5
Month-to-Month Analysis	
6	4.3
Year-to-Year Analysis	
10	0

V. Conclusions and Recommendations

According to the measures used in this study, the best advance, preliminary, initial final, and previous year adjusted estimates were derived by using the concurrent adjustment method which used all available estimates as input to the X-11 program. The best method of concurrent adjustment for the various classifications included in this study were as follow:

Classification	Best Concurrent Method
Retail Sales--Category 2, Retail Inventory, and Wholesale Sales and Inventory	Method B3
Retail Sales--Category 1	Method B5
Retail Sales--Category 3	Method B4

For all classifications the best method of concurrent adjustment was proven to be better than the present method of seasonal adjustment.

If the best method of concurrent adjustment is implemented, many of the final adjusted estimates will be derived from different X-11 executions instead of the X-11 execution that included all available estimates. Therefore, month-to-month and year-to-year adjusted trends can be distorted, or worse than the trends derived from the present method of seasonal adjustment.

The following measures, used in this study, showed the distortion or possible distortion of adjusted trends when adjusted final estimates were not derived from the seasonal factors computed from the X-11 execution that included all available estimates:

1. Measure 10 or 11 (The result of year-to-year trends compared to the results of the year-to-year trends computed from the "ideal" adjusted estimates).

For all classifications used in this study, method B3 had the better results for the geometric mean of this measure when compared to the results computed for method B2 or B1. The previous year final adjusted estimate was not revised for method B2. For the following classifications; Retail Inventory, Wholesale Sales, and Wholesale Inventory, method A had better results for the geometric mean of this measure when compared to the results computed for method B1 or B2.

2. Measure 7 9/ (The results of month-to-month trends compared to the results of the month-to-month trends computed from the "ideal" adjusted estimates).

For retail inventory series, method B2 or B3 had a 10 percent improvement over the present method. However, method B1 only had a 1 percent improvement over method A. Method B1 used seasonal factors from two different X-11 executions to derive the month-to-month trends derived from final adjusted estimates.

9/ For this measure the KB's classified under Retail Inventory were the only KB's in this study to derive month-to-month trends from adjusted final estimates.

These results indicate that if the best method of concurrent adjustment is implemented for each classification, other adjusted trends that were not analyzed in this study can be worse than the adjusted trends derived by using the present method of seasonal adjustment. Research should be done to study the magnitude of this problem. If research shows the problem is not significant, the best concurrent adjustment method for each classification should be implemented for all KB's comprising the respective classification. Otherwise, the results from studying the magnitude of this problem should be used to determine how far back in time seasonal factors are to be used to derive adjusted estimates for each concurrent execution of the X-11 program. Also, the following question must be answered:

> Will the users of these data accept adjusted estimates being revised each month even though their corresponding unadjusted estimates remain the same?

Until research of this problem is completed, the present method of seasonal adjustment will continue to be used for all retail and wholesale sales and inventory series.

Retail Sales—Category 1

	KB	Description
1.	531100	Department stores
2.	541100	Grocery stores
3.	554100	Gasoline service stations
4.	580000	Eating and drinking places
5.	591200	Drug stores

Retail Sales—Category 2

	KB	Description
1.	550001*	Motor vehicle dealers (automobile, boats, airplanes, motorcycles, and recreational vehicles)
2.	553100*	Auto and home supply stores
3.	561100	Men's clothing
4.	560001	Women's clothing
5.	566100	Shoe stores
6.	560002	Miscellaneous apparel (children's, family, custom tailors, and novelty shops)
7.	57001	Furniture, floor covering, drapery, and upholstery stores
8.	570002	Household appliances and radio and television stores
9.	573300	Music stores

Retail Sales—Category 3

	KB	Description
1.	550000*	Motor vehicle dealers (550001 + 553100)
2.	560000	Apparel and accessories stores (561100 + 560001 + 566100 + 560002)
3.	570000	Furniture and home funding stores (570001 + 570002 + 573300)

*Commencing in 1982 advance estimates were tabulated directly for KB's 550001 and 553100 as these KB's were sampled separately for the advance survey.

Retail Inventory

	KB	Description
1.	KB's 531100, 550000, 560000, and 570000 have previously been defined.	
2.	540000	Total food stores (541100 + 542000 + 543100 + 544100 + 54510 + 546000 + 549900)

Wholesale Sales and Inventory

	KB	Description
1.	501000	Automobiles and other motor vehicles (501200 + 501300 + 501400)
2.	506000	Electrical goods (506300 + 506400 + 506500)
3.	508000	Machinery, equipment and supplies (508100 + 508200 + 508300 + 508400 + 508500 + 508600 + 508700 + 508800)
4.	514000	Groceries and related products (514100 + 514200 + 514300 + 514400 + 514500 + 514600 + 514700 + 514800 + 514900)
5.	518000	Beer, wine and distilled alcoholic beverages (518100 + 518200)

Let

ADV_t^o = the initial unadjusted advance estimate published for month t.

PRE_t^o = the initial unadjusted preliminary estimate published for month t.

FIN_t^o = the initial unadjusted final estimate published for month t.

ADV_t^r = the unadjusted advance estimate for month t used in this study.

PRE_t^r = the unadjusted preliminary estimate for month t used in this study.

FIN_t^r = the final unadjusted estimates for month t used in this study. The estimates were derived by benchmarking the unadjusted estimates to the 1977 Census of Retail and Wholesale Trade and the 1978 through 1980 estimates obtained from the annual survey of Retail and Wholesale Trade.

Month t = represents an estimate in the time span of this study; October 1977 through December 1979, inclusive.

1. Deriving unadjusted preliminary estimates used in this study

$$PRE_t^r = PRE_t^o / FIN_{t-1}^o * FIN_{t-1}^r$$

Note: This formula maintains the following relationship:

$$\frac{PRE_t^r}{FIN_{t-1}^r} = \frac{PRE_t^o}{FIN_{t-1}^o}$$

2. Deriving unadjusted advance estimates used in this study

$$ADV_t^r = ADV_t^o / PRE_{t-1}^o * PRE_{t-1}^r$$

Note: This formula maintains the following relationship:

$$\frac{ADV_t^r}{PRE_{t-1}^r} = \frac{ADV_t^o}{PRE_{t-1}^o}$$

ATTACHMENT 3

RETAIL SALES

CATEGORY 1

PART A LEVEL ANALYSIS

ABSOLUTE PERCENT CHANGE

ABS(FIN / FINIDL)

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA	METH B5 MB5/MA %MB5<MA
531100	0.992	0.720	0.762	0.762	0.762	0.632
	100.0	72.6	76.8	76.8	76.8	63.8
		66.7	66.7	66.7	66.7	74.1
541100	0.553	0.466	0.386	0.386	0.386	0.376
	100.0	84.2	69.8	69.8	69.8	68.0
		51.9	66.7	66.7	66.7	66.7
554100	0.516	0.407	0.340	0.340	0.340	0.344
	100.0	79.0	65.9	65.9	65.9	66.6
		48.1	66.7	66.7	66.7	55.6
580000	1.095	0.918	0.873	0.873	0.873	0.840
	100.0	83.8	79.7	79.7	79.7	76.7
		55.6	63.0	63.0	63.0	63.0
591200	0.620	0.539	0.464	0.464	0.464	0.442
	100.0	87.0	74.8	74.8	74.8	71.3
		48.1	63.0	63.0	63.0	44.4

ROOT MEAN SQUARE ERROR

(FIN / FINIDL) ** 2

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA	METH B5 MB5/MA %MB5<MA
531100	1.172	0.864	0.983	0.983	0.983	0.904
	100.0	73.8	83.9	83.9	83.9	77.2
		66.7	66.7	66.7	66.7	74.1
541100	0.654	0.543	0.492	0.492	0.492	0.474
	100.0	83.0	75.1	75.1	75.1	72.4
		51.9	66.7	66.7	66.7	66.7
554100	0.734	0.530	0.475	0.475	0.475	0.484
	100.0	72.2	64.6	64.6	64.6	65.9
		48.1	66.7	66.7	66.7	55.6
580000	1.334	1.081	1.047	1.047	1.047	1.010
	100.0	81.1	78.5	78.5	78.5	75.7
		55.6	63.0	63.0	63.0	63.0
591200	0.814	0.709	0.574	0.574	0.574	0.527
	100.0	87.1	70.5	70.5	70.5	64.7
		48.1	63.0	63.0	63.0	44.4

RETAIL SALES

CATEGORY 1

ABSOLUTE PERCENT CHANGE

ABS(PRE / FINIDL)

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA	METH B5 MB5/MA %MB5<MA
531100	1.399 100.0	0.968 69.2 70.4	0.968 69.2 70.4	0.968 69.2 70.4	0.968 69.2 70.4	0.993 71.0 66.7
541100	0.584 100.0	0.506 86.7 48.1	0.506 86.7 48.1	0.506 86.7 48.1	0.506 86.7 48.1	0.458 78.5 63.0
554100	0.922 100.0	0.792 85.9 51.9	0.792 85.9 51.9	0.792 85.9 51.9	0.792 85.9 51.9	0.822 89.1 48.1
580000	1.355 100.0	1.109 81.8 44.4	1.109 81.8 44.4	1.109 81.8 44.4	1.109 81.8 44.4	1.179 87.0 48.1
591200	0.824 100.0	0.669 81.2 59.3	0.669 81.2 59.3	0.669 81.2 59.3	0.669 81.2 59.3	0.627 76.1 63.0

ROOT MEAN SQUARE ERROR

(PRE / FINIDL) ** 2

METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA	METH B5 MB5/MA %MB5<MA
1.887 100.0	1.239 65.7 70.4	1.239 65.7 70.4	1.239 65.7 70.4	1.239 65.7 70.4	1.280 67.9 66.7
0.675 100.0	0.596 88.2 48.1	0.596 88.2 48.1	0.596 88.2 48.1	0.596 88.2 48.1	0.551 81.7 63.0
1.092 100.0	0.942 86.3 51.9	0.942 86.3 51.9	0.942 86.3 51.9	0.942 86.3 51.9	0.999 91.5 48.1
1.606 100.0	1.362 84.9 44.4	1.362 84.9 44.4	1.362 84.9 44.4	1.362 84.9 44.4	1.388 86.5 48.1
1.078 100.0	0.839 77.9 59.3	0.839 77.9 59.3	0.839 77.9 59.3	0.839 77.9 59.3	0.783 72.6 63.0

RETAIL SALES

CATEGORY 1

ABSOLUTE PERCENT CHANGE

ABS(ADV / FINIDL)

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA	METH B5 MB5/MA %MB5<MA
531100	1.745	1.783	1.783	1.783	1.553	1.553
	100.0	102.2	102.2	102.2	89.0	89.0
		40.7	40.7	40.7	63.0	63.0
541100	0.976	1.001	1.001	1.001	0.948	0.948
	100.0	102.6	102.6	102.6	97.1	97.1
		29.6	29.6	29.6	44.4	44.4
554100	1.986	1.889	1.889	1.889	1.778	1.778
	100.0	95.1	95.1	95.1	89.5	89.5
		59.3	59.3	59.3	51.9	51.9
580000	1.788	1.723	1.723	1.723	1.733	1.733
	100.0	96.4	96.4	96.4	96.9	96.9
		48.1	48.1	48.1	40.7	40.7
591200	1.414	1.402	1.402	1.402	1.204	1.204
	100.0	99.1	99.1	99.1	85.1	85.1
		33.3	33.3	33.3	63.0	63.0

ROOT MEAN SQUARE ERROR

(ADV / FINIDL) ** 2

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA	METH B5 MB5/MA %MB5<MA
531100	2.109	2.125	2.125	2.125	1.907	1.907
	100.0	100.7	100.7	100.7	90.4	90.4
		40.7	40.7	40.7	63.0	63.0
541100	1.293	1.270	1.270	1.270	1.179	1.179
	100.0	98.2	98.2	98.2	91.1	91.1
		29.6	29.6	29.6	44.4	44.4
554100	2.436	2.358	2.358	2.358	2.188	2.188
	100.0	96.8	96.8	96.8	89.8	89.8
		59.3	59.3	59.3	51.9	51.9
580000	2.076	2.005	2.005	2.005	1.969	1.969
	100.0	96.6	96.6	96.6	94.8	94.8
		48.1	48.1	48.1	40.7	40.7
591200	1.777	1.740	1.740	1.740	1.510	1.510
	100.0	97.9	97.9	97.9	85.0	85.0
		33.3	33.3	33.3	63.0	63.0

RETAIL SALES

CATEGORY 1

ABSOLUTE PERCENT CHANGE

ABS(PRE / FIN)

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA	METH B5 MB5/MA %MB5<MA
531100	0.686	0.562	0.582	0.582	0.582	0.585
	100.0	81.9	84.9	84.9	84.9	85.2
		37.0	40.7	40.7	40.7	40.7
541100	0.355	0.300	0.309	0.309	0.309	0.283
	100.0	84.5	87.2	87.2	87.2	79.9
		37.0	48.1	48.1	48.1	63.0
554100	0.696	0.746	0.641	0.641	0.641	0.676
	100.0	107.2	92.1	92.1	92.1	97.2
		33.3	48.1	48.1	48.1	51.9
580000	0.816	0.826	0.696	0.696	0.696	0.751
	100.0	101.2	85.3	85.3	85.3	92.0
		48.1	63.0	63.0	63.0	55.6
591200	0.502	0.499	0.497	0.497	0.497	0.444
	100.0	99.5	99.1	99.1	99.1	88.5
		48.1	48.1	48.1	48.1	51.9

ROOT MEAN SQUARE ERROR

(PRE / FIN) ** 2

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA	METH B5 MB5/MA %MB5<MA
531100	1.197	0.824	0.774	0.774	0.774	0.822
	100.0	68.8	64.7	64.7	64.7	68.6
		37.0	40.7	40.7	40.7	40.7
541100	0.457	0.398	0.411	0.411	0.411	0.377
	100.0	87.0	89.9	89.9	89.9	82.4
		37.0	48.1	48.1	48.1	63.0
554100	0.880	0.928	0.792	0.792	0.792	0.901
	100.0	105.5	90.0	90.0	90.0	102.4
		33.3	48.1	48.1	48.1	51.9
580000	0.946	0.953	0.893	0.893	0.893	0.869
	100.0	100.7	94.4	94.4	94.4	91.9
		48.1	63.0	63.0	63.0	55.6
591200	0.638	0.624	0.642	0.642	0.642	0.551
	100.0	97.9	100.7	100.7	100.7	86.4
		48.1	48.1	48.1	48.1	51.9

RETAIL SALES

CATEGORY 1

ABSOLUTE PERCENT CHANGE

ABS(ADV / PRE)

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA	METH B5 MB5/MA %MB5<MA
531100	1.694	1.395	1.395	1.395	1.355	1.503
	100.0	82.4	82.4	82.4	80.0	88.8
		66.7	66.7	66.7	74.1	66.7
541100	0.843	0.861	0.861	0.861	0.738	0.753
	100.0	102.1	102.1	102.1	87.5	89.3
		37.0	37.0	37.0	51.9	63.0
554100	1.645	1.714	1.714	1.714	1.570	1.623
	100.0	104.2	104.2	104.2	95.4	98.7
		44.4	44.4	44.4	66.7	44.4
580000	1.477	1.416	1.416	1.416	1.347	1.343
	100.0	95.9	95.9	95.9	91.2	91.0
		55.6	55.6	55.6	63.0	63.0
591200	1.144	1.146	1.146	1.146	0.974	1.040
	100.0	100.2	100.2	100.2	85.1	91.0
		44.4	44.4	44.4	81.5	63.0

ROOT MEAN SQUARE ERROR

(ADV / PRE) ** 2

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA	METH B5 MB5/MA %MB5<MA
531100	2.378	1.864	1.864	1.864	1.873	2.027
	100.0	78.4	78.4	78.4	78.8	85.2
		66.7	66.7	66.7	74.1	66.7
541100	1.075	1.024	1.024	1.024	0.898	0.941
	100.0	95.2	95.2	95.2	83.5	87.5
		37.0	37.0	37.0	51.9	63.0
554100	2.165	2.262	2.262	2.262	2.064	2.086
	100.0	104.5	104.5	104.5	95.3	96.4
		44.4	44.4	44.4	66.7	44.4
580000	1.810	1.640	1.640	1.640	1.634	1.610
	100.0	90.6	90.6	90.6	90.3	88.9
		55.6	55.6	55.6	63.0	63.0
591200	1.506	1.439	1.439	1.439	1.270	1.324
	100.0	95.5	95.5	95.5	84.4	87.9
		44.4	44.4	44.4	81.5	63.0

RETAIL SALES

CATEGORY 1

PART B MONTH-TO-MONTH ANALYSIS

ABSOLUTE PERCENT CHANGE

ABS((PRE/FIN) - (FINIDL/FINIDL(-1)))

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA	METH B5 MB5/MA %MB5<MA
531100	1.716	1.118	1.053	1.053	1.053	0.987
	100.0	65.1	61.4	61.4	61.4	57.5
		77.8	77.8	77.8	77.8	85.2
541100	0.869	0.812	0.729	0.729	0.729	0.696
	100.0	93.4	84.0	84.0	84.0	80.2
		55.6	59.3	59.3	59.3	59.3
554100	1.156	0.993	0.875	0.875	0.875	0.911
	100.0	85.9	75.6	75.6	75.6	78.8
		63.0	66.7	66.7	66.7	74.1
580000	1.373	1.053	1.005	1.005	1.005	1.008
	100.0	76.7	73.2	73.2	73.2	73.4
		63.0	59.3	59.3	59.3	70.4
591200	1.136	0.850	0.742	0.742	0.742	0.644
	100.0	74.9	65.3	65.3	65.3	56.7
		70.4	77.8	77.8	77.8	88.9

ROOT MEAN SQUARE ERROR

((PRE/FIN) - (FINIDL/FINIDL(-1))) ** 2

METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA	METH B5 MB5/MA %MB5<MA
2.083	1.399	1.344	1.344	1.344	1.316
100.0	67.2	64.5	64.5	64.5	63.2
	77.8	77.8	77.8	77.8	85.2
1.025	0.915	0.862	0.862	0.862	0.802
100.0	89.2	84.1	84.1	84.1	78.3
	55.6	59.3	59.3	59.3	59.3
1.326	1.137	1.023	1.023	1.023	1.089
100.0	85.8	77.1	77.1	77.1	82.2
	63.0	66.7	66.7	66.7	74.1
1.844	1.409	1.293	1.293	1.293	1.231
100.0	76.4	70.1	70.1	70.1	66.8
	63.0	59.3	59.3	59.3	70.4
1.321	1.005	0.888	0.888	0.888	0.763
100.0	76.0	67.2	67.2	67.2	57.8
	70.4	77.8	77.8	77.8	88.9

RETAIL SALES

CATEGORY 1

ABSOLUTE PERCENT CHANGE

ABS((ADV/PRE) - (FINIDL/FINIDL(-1)))

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA	METH B5 MB5/MA %MB5<MA
531100	1.569	1.573	1.573	1.573	1.340	1.261
	100.0	100.3	100.3	100.3	85.5	80.4
		37.0	37.0	37.0	66.7	59.3
541100	1.189	1.055	1.055	1.055	0.991	0.946
	100.0	88.7	88.7	88.7	83.3	79.5
		66.7	66.7	66.7	70.4	74.1
554100	1.724	1.696	1.696	1.696	1.550	1.501
	100.0	98.3	98.3	98.3	89.9	87.0
		59.3	59.3	59.3	74.1	66.7
580000	1.303	1.258	1.258	1.258	1.215	1.164
	100.0	96.5	96.5	96.5	93.3	89.3
		55.6	55.6	55.6	55.6	55.6
591200	1.538	1.487	1.487	1.487	1.253	1.127
	100.0	96.6	96.6	96.6	81.5	73.3
		59.3	59.3	59.3	63.0	74.1

ROOT MEAN SQUARE ERROR

((ADV/PRE) - (FINIDL/FINIDL(-1))) ** 2

METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA	METH B5 MB5/MA %MB5<MA
2.053	1.995	1.995	1.995	1.642	1.496
100.0	97.2	97.2	97.2	80.0	72.9
	37.0	37.0	37.0	66.7	59.3
1.418	1.290	1.290	1.290	1.193	1.132
100.0	91.0	91.0	91.0	84.1	79.8
	66.7	66.7	66.7	70.4	74.1
2.039	2.067	2.067	2.067	1.883	1.816
100.0	101.3	101.3	101.3	92.3	89.0
	59.3	59.3	59.3	74.1	66.7
1.621	1.614	1.614	1.614	1.530	1.442
100.0	99.5	99.5	99.5	94.4	89.0
	55.6	55.6	55.6	55.6	55.6
1.869	1.794	1.794	1.794	1.522	1.374
100.0	96.0	96.0	96.0	81.4	73.5
	59.3	59.3	59.3	63.0	74.1

RETAIL SALES

CATEGORY 1

ABSOLUTE PERCENT CHANGE

ABS((ADV/PRE) - (PRE/FIN))

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA	METH B5 MB5/MA %MB5<MA
531100	1.342	1.218	1.311	1.311	1.091	1.113
	100.0	90.7	97.7	97.7	81.3	82.9
		55.6	55.6	55.6	66.7	74.1
541100	0.861	0.843	0.882	0.882	0.738	0.681
	100.0	98.0	102.5	102.5	85.7	79.2
		40.7	40.7	40.7	55.6	74.1
554100	1.458	1.560	1.566	1.566	1.384	1.345
	100.0	107.0	107.4	107.4	94.9	92.3
		37.0	51.9	51.9	63.0	51.9
580000	1.224	0.979	1.063	1.063	0.992	0.991
	100.0	80.0	86.8	86.8	81.1	80.9
		59.3	55.6	55.6	63.0	70.4
591200	1.162	1.222	1.168	1.168	0.970	0.874
	100.0	105.2	100.5	100.5	83.5	75.2
		44.4	51.9	51.9	74.1	77.8

ROOT MEAN SQUARE ERROR

((ADV/PRE) - (PRE/FIN)) ** 2

METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA	METH B5 MB5/MA %MB5<MA
1.763	1.503	1.630	1.630	1.457	1.492
100.0	85.3	92.5	92.5	82.7	84.7
	55.6	55.6	55.6	66.7	74.1
1.146	1.071	1.069	1.069	0.885	0.850
100.0	93.4	93.2	93.2	77.2	74.1
	40.7	40.7	40.7	55.6	74.1
1.912	1.998	2.055	2.055	1.837	1.787
100.0	104.5	107.5	107.5	96.1	93.4
	37.0	51.9	51.9	63.0	51.9
1.551	1.326	1.400	1.400	1.325	1.212
100.0	85.5	90.2	90.2	85.4	78.1
	59.3	55.6	55.6	63.0	70.4
1.462	1.536	1.464	1.464	1.225	1.106
100.0	105.1	100.1	100.1	83.8	75.6
	44.4	51.9	51.9	74.1	77.8

RETAIL SALES

CATEGORY 1

PART C YEAR-TO-YEAR ANALYSIS

ABSOLUTE PERCENT CHANGE

ABS((CYPRE/PYFIN) - (FINIDL/FINIDL(-12))

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA	METH B5 MB5/MA %MB5<MA
531100	1.191	0.895	0.895	0.940	0.940	0.970
	100.0	75.1	75.1	78.9	78.9	81.5
		55.6	55.6	70.4	70.4	74.1
541100	0.710	0.620	0.620	0.586	0.586	0.616
	100.0	87.3	87.3	82.6	82.6	86.8
		55.6	55.6	74.1	74.1	63.0
554100	1.033	0.972	0.972	0.942	0.942	0.954
	100.0	94.2	94.2	91.2	91.2	92.4
		48.1	48.1	66.7	66.7	70.4
580000	1.059	0.937	0.937	1.018	1.018	0.966
	100.0	88.5	88.5	96.1	96.1	91.2
		55.6	55.6	51.9	51.9	66.7
591200	0.713	0.621	0.621	0.601	0.601	0.601
	100.0	87.1	87.1	84.4	84.4	84.4
		66.7	66.7	51.9	51.9	59.3

ROOT MEAN SQUARE ERROR

((CYPRE/PYFIN) - (FINIDL/FINIDL(-12)) ** 2

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA	METH B5 MB5/MA %MB5<MA
531100	1.616	1.205	1.205	1.325	1.325	1.379
	100.0	74.5	74.5	82.0	82.0	85.3
		55.6	55.6	70.4	70.4	74.1
541100	0.828	0.745	0.745	0.708	0.708	0.709
	100.0	90.0	90.0	85.5	85.5	85.7
		55.6	55.6	74.1	74.1	63.0
554100	1.179	1.196	1.196	1.104	1.104	1.131
	100.0	101.5	101.5	93.7	93.7	96.0
		48.1	48.1	66.7	66.7	70.4
580000	1.332	1.189	1.189	1.218	1.218	1.162
	100.0	89.2	89.2	91.5	91.5	87.2
		55.6	55.6	51.9	51.9	66.7
591200	0.862	0.770	0.770	0.702	0.702	0.689
	100.0	89.3	89.3	81.4	81.4	79.9
		66.7	66.7	51.9	51.9	59.3

RETAIL SALES

CATEGORY 1

ABSOLUTE PERCENT CHANGE

ABS((CYADV/PYFIN) - (FINIDL/FINIDL(-12))

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA	METH B5 MB5/MA %MB5<MA
531100	1.976	1.751	1.757	1.762	1.774	1.729
	100.0	88.6	88.9	89.1	89.8	87.5
		55.6	55.6	59.3	59.3	66.7
541100	1.150	1.166	1.153	1.154	1.068	1.082
	100.0	101.4	100.3	100.3	92.8	94.1
		33.3	33.3	40.7	59.3	70.4
554100	2.305	2.209	2.200	2.245	2.122	2.184
	100.0	95.8	95.4	97.4	92.0	94.8
		63.0	59.3	44.4	59.3	66.7
580000	2.008	1.862	1.843	1.826	1.921	1.806
	100.0	92.7	91.8	90.9	95.7	89.9
		70.4	70.4	63.0	51.9	74.1
591200	1.548	1.489	1.475	1.496	1.329	1.417
	100.0	96.2	95.2	96.6	85.8	91.5
		40.7	40.7	44.4	66.7	63.0

ROOT MEAN SQUARE ERROR

((CYADV/PYFIN) - (FINIDL/FINIDL(-12)) ** 2

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA	METH B5 MB5/MA %MB5<MA
531100	2.571	2.236	2.246	2.321	2.289	2.260
	100.0	87.0	87.4	90.3	89.0	87.9
		55.6	55.6	59.3	59.3	66.7
541100	1.348	1.331	1.323	1.334	1.274	1.260
	100.0	98.7	98.1	99.0	94.5	93.5
		33.3	33.3	40.7	59.3	70.4
554100	2.821	2.749	2.748	2.755	2.617	2.704
	100.0	97.4	97.4	97.7	92.8	95.8
		63.0	59.3	44.4	59.3	66.7
580000	2.245	2.103	2.086	2.036	2.140	2.021
	100.0	93.7	92.9	90.7	95.3	90.0
		70.4	70.4	63.0	51.9	74.1
591200	2.007	1.846	1.843	1.872	1.694	1.769
	100.0	92.0	91.8	93.3	84.4	88.1
		40.7	40.7	44.4	66.7	63.0

RETAIL SALES

CATEGORY 1

ABSOLUTE PERCENT CHANGE

ABS((CYADV/PYFIN) - (CYPRE/PYFIN))

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA	METH B5 MB5/MA %MB5<MA
531100	1.934	1.570	1.576	1.778	1.847	1.745
	100.0	81.2	81.5	91.9	95.5	90.2
		70.4	70.4	63.0	59.3	74.1
541100	0.993	0.965	0.952	0.986	0.891	0.905
	100.0	97.2	95.9	99.3	89.7	91.1
		48.1	48.1	40.7	44.4	55.6
554100	1.968	2.049	2.042	1.946	1.844	1.902
	100.0	104.1	103.7	98.9	93.7	96.6
		51.9	51.9	48.1	70.4	59.3
580000	1.693	1.642	1.623	1.667	1.711	1.631
	100.0	97.0	95.9	98.5	101.1	96.4
		51.9	51.9	51.9	51.9	55.6
591200	1.298	1.289	1.275	1.251	1.149	1.197
	100.0	99.2	98.2	96.4	88.5	92.2
		44.4	44.4	55.6	63.0	48.1

ROOT MEAN SQUARE ERROR

((CYADV/PYFIN) - (CYPRE/PYFIN)) ** 2

METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA	METH B5 MB5/MA %MB5<MA
2.856	2.152	2.165	2.440	2.604	2.431
100.0	75.3	75.8	85.4	91.2	85.1
	70.4	70.4	63.0	59.3	74.1
1.245	1.121	1.109	1.237	1.172	1.130
100.0	90.0	89.1	99.4	94.2	90.8
	48.1	48.1	40.7	44.4	55.6
2.571	2.698	2.694	2.596	2.414	2.524
100.0	104.9	104.8	101.0	93.9	98.2
	51.9	51.9	48.1	70.4	59.3
2.047	1.881	1.867	1.987	2.084	1.984
100.0	91.9	91.2	97.1	101.8	96.9
	51.9	51.9	51.9	51.9	55.6
1.763	1.609	1.605	1.621	1.494	1.542
100.0	91.3	91.1	91.9	84.8	87.4
	44.4	44.4	55.6	63.0	48.1

RETAIL SALES

CATEGORY 2

PART A LEVEL ANALYSIS

ABSOLUTE PERCENT CHANGE

ABS(FIN / FINIDL)

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
550001	2.420	2.118	2.019	2.019
	100.0	87.5	83.4	83.4
		55.6	74.1	74.1
553100	1.702	1.234	1.211	1.211
	100.0	72.5	71.1	71.1
		77.8	74.1	74.1
561100	2.797	2.402	2.150	2.150
	100.0	85.9	76.9	76.9
		59.3	66.7	66.7
560001	1.829	1.359	1.089	1.089
	100.0	74.3	59.6	59.6
		66.7	74.1	74.1
566100	1.637	1.165	1.121	1.121
	100.0	71.2	68.5	68.5
		59.3	63.0	63.0
560002	1.278	1.184	1.110	1.110
	100.0	92.6	86.9	86.9
		48.1	48.1	48.1
570001	1.039	0.886	1.004	1.004
	100.0	85.3	96.7	96.7
		51.9	48.1	48.1
570002	1.766	1.330	1.482	1.482
	100.0	75.3	83.9	83.9
		63.0	51.9	51.9
573300	2.115	2.091	2.050	2.050
	100.0	98.8	96.9	96.9
		44.4	40.7	40.7

ROOT MEAN SQUARE ERROR

(FIN / FINIDL) ** 2

METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
2.980	2.685	2.515	2.515
100.0	90.1	84.4	84.4
	55.6	74.1	74.1
2.008	1.463	1.441	1.441
100.0	72.8	71.7	71.7
	77.8	74.1	74.1
3.494	2.906	2.527	2.527
100.0	83.2	72.3	72.3
	59.3	66.7	66.7
2.371	1.690	1.416	1.416
100.0	71.3	59.7	59.7
	66.7	74.1	74.1
2.290	1.539	1.460	1.460
100.0	67.2	63.7	63.7
	59.3	63.0	63.0
1.645	1.440	1.386	1.386
100.0	87.6	84.3	84.3
	48.1	48.1	48.1
1.370	1.167	1.222	1.222
100.0	85.2	89.1	89.1
	51.9	48.1	48.1
2.113	1.709	1.759	1.759
100.0	80.9	83.2	83.2
	63.0	51.9	51.9
2.804	2.876	2.637	2.637
100.0	102.6	94.1	94.1
	44.4	40.7	40.7

RETAIL SALES

CATEGORY 2

ABSOLUTE PERCENT CHANGE

ABS(PRE / FINIDL)

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
550001	2.454	2.160	2.160	2.160
	100.0	88.0	88.0	88.0
		59.3	59.3	59.3
553100	2.220	1.703	1.703	1.703
	100.0	76.7	76.7	76.7
		81.5	81.5	81.5
561100	2.108	1.743	1.743	1.743
	100.0	82.7	82.7	82.7
		63.0	63.0	63.0
560001	2.098	1.504	1.504	1.504
	100.0	71.7	71.7	71.7
		74.1	74.1	74.1
566100	1.412	1.171	1.171	1.171
	100.0	82.9	82.9	82.9
		48.1	48.1	48.1
560002	1.972	1.704	1.704	1.704
	100.0	86.4	86.4	86.4
		59.3	59.3	59.3
570001	1.539	1.328	1.328	1.328
	100.0	86.3	86.3	86.3
		55.6	55.6	55.6
570002	2.541	2.230	2.230	2.230
	100.0	87.7	87.7	87.7
		51.9	51.9	51.9
573300	4.371	3.570	3.570	3.570
	100.0	81.7	81.7	81.7
		70.4	70.4	70.4

ROOT MEAN SQUARE ERROR

(PRE / FINIDL) ** 2

METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
3.216	2.667	2.667	2.667
100.0	82.9	82.9	82.9
	59.3	59.3	59.3
2.792	2.190	2.190	2.190
100.0	78.4	78.4	78.4
	81.5	81.5	81.5
2.672	2.151	2.151	2.151
100.0	80.5	80.5	80.5
	63.0	63.0	63.0
2.634	1.965	1.965	1.965
100.0	74.6	74.6	74.6
	74.1	74.1	74.1
1.935	1.485	1.485	1.485
100.0	76.8	76.8	76.8
	48.1	48.1	48.1
2.697	2.497	2.497	2.497
100.0	92.6	92.6	92.6
	59.3	59.3	59.3
1.903	1.654	1.654	1.654
100.0	86.9	86.9	86.9
	55.6	55.6	55.6
3.036	2.694	2.694	2.694
100.0	88.7	88.7	88.7
	51.9	51.9	51.9
5.490	4.927	4.927	4.927
100.0	89.7	89.7	89.7
	70.4	70.4	70.4

RETAIL SALES

CATEGORY 2

ABSOLUTE PERCENT CHANGE

ABS(PRE / FIN)

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
550001	0.753	0.640	0.744	0.744
	100.0	85.0	98.8	98.8
		51.9	51.9	51.9
553100	1.533	1.506	1.234	1.234
	100.0	98.2	80.5	80.5
		37.0	74.1	74.1
561100	1.683	1.697	1.397	1.397
	100.0	100.8	83.0	83.0
		48.1	70.4	70.4
560001	0.628	0.619	0.721	0.721
	100.0	98.6	114.7	114.7
		48.1	48.1	48.1
566100	0.887	0.894	1.031	1.031
	100.0	100.8	116.3	116.3
		51.9	40.7	40.7
560002	1.410	1.432	1.265	1.265
	100.0	101.6	89.7	89.7
		33.3	66.7	66.7
570001	0.861	0.831	0.794	0.794
	100.0	96.5	92.2	92.2
		40.7	51.9	51.9
570002	1.548	1.410	1.318	1.318
	100.0	91.1	85.2	85.2
		51.9	59.3	59.3
573300	3.400	3.318	2.939	2.939
	100.0	97.6	86.4	86.4
		44.4	51.9	51.9

ROOT MEAN SQUARE ERROR

(PRE / FIN) ** 2

METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
0.910	0.761	0.898	0.898
100.0	83.7	98.6	98.6
	51.9	51.9	51.9
1.775	1.760	1.391	1,391
100.0	99.1	78.4	78.4
	37.0	74.1	74.1
2.236	2.245	1.930	1.930
100.0	100.4	86.3	86.3
	48.1	70.4	70.4
0.780	0.779	0.925	0.925
100.0	99.9	118.6	118.6
	48.1	48.1	48.1
1.036	1.048	1.242	1.242
100.0	101.2	119.9	119.9
	51.9	40.7	40.7
1.940	1.967	1.805	1.805
100.0	101.4	93.0	93.0
	33.3	66.7	66.7
1.176	1.153	1.054	1.054
100.0	98.1	89.7	89.7
	40.7	51.9	51.9
1.902	1.728	1.601	1.601
100.0	90.8	84.2	84.2
	51.9	59.3	59.3
4.530	4.442	4.122	4.122
100.0	98.1	91.0	91.0
	44.4	51.9	51.9

RETAIL SALES

CATEGORY 2

PART B MONTH-TO-MONTH ANALYSIS

ABSOLUTE PERCENT CHANGE

ABS((PRE/FIN) - (FINIDL/FINIDL(-1)))

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
550001	2.756	2.248	1.996	1.996
	100.0	81.6	72.4	72.4
		70.4	77.8	77.8
553100	2.386	1.829	1.518	1.518
	100.0	76.7	63.6	63.6
		66.7	85.2	85.2
561100	3.360	2.822	2.371	2.371
	100.0	84.0	70.6	70.6
		63.0	66.7	66.7
560001	2.499	1.683	1.561	1.561
	100.0	67.3	62.5	62.5
		77.8	81.5	81.5
566100	2.498	1.588	1.488	1.488
	100.0	63.6	59.6	59.6
		77.8	70.4	70.4
560002	2.031	1.762	1.684	1.684
	100.0	86.8	82.9	82.9
		59.3	55.6	55.6
570001	1.776	1.285	1.205	1.205
	100.0	72.3	67.8	67.8
		74.1	81.5	81.5
570002	2.450	1.776	1.558	1.558
	100.0	72.5	63.6	63.6
		74.1	74.1	74.1
573300	4.307	3.105	3.069	3.069
	100.0	72.1	71.3	71.3
		70.4	66.7	66.7

ROOT MEAN SQUARE ERROR

((PRE/FIN) - (FINIDL/FINIDL(-1))) ** 2

METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
3.476	2.864	2.612	2.612
100.0	82.4	75.1	75.1
	70.4	77.8	77.8
2.736	2.132	1.865	1.865
100.0	77.9	68.2	68.2
	66.7	85.2	85.2
4.016	3.319	2.849	2.849
100.0	82.7	71.0	71.0
	63.0	66.7	66.7
3.188	2.217	2.095	2.095
100.0	69.5	65.7	65.7
	77.8	81.5	81.5
2.972	1.965	1.805	1.805
100.0	66.1	60.7	60.7
	77.8	70.4	70.4
2.798	2.556	2.583	2.583
100.0	91.4	92.3	92.3
	59.3	55.6	55.6
2.060	1.649	1.536	1.536
100.0	80.0	74.6	74.6
	74.1	81.5	81.5
2.873	2.302	1.985	1.985
100.0	80.1	69.1	69.1
	74.1	74.1	74.1
5.617	4.470	4.215	4.215
100.0	79.6	75.0	75.0
	70.4	66.7	66.7

RETAIL SALES

CATEGORY 2

PART C YEAR-TO-YEAR ANALYSIS

ABSOLUTE PERCENT CHANGE

ABS((CYPRE/PYFIN) - (FINIDL/FINIDL(-12))

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
550001	2.079	1.698	1.698	1.718
	100.0	81.7	81.7	82.6
		51.9	51.9	59.3
553100	2.068	1.821	1.821	1.835
	100.0	88.0	88.0	88.7
		55.6	55.6	63.0
561100	1.928	1.816	1.816	1.676
	100.0	94.2	94.2	87.0
		63.0	63.0	66.7
560001	1.360	1.449	1.449	1.202
	100.0	106.5	106.5	88.4
		40.7	40.7	55.6
566100	1.337	1.526	1.526	1.117
	100.0	114.1	114.1	83.6
		48.1	48.1	63.0
560002	1.716	1.622	1.622	1.587
	100.0	94.5	94.5	92.5
		55.6	55.6	51.9
570001	1.515	1.363	1.363	1.376
	100.0	90.0	90.0	90.9
		63.0	63.0	59.3
570002	1.927	1.819	1.819	1.817
	100.0	94.4	94.4	94.3
		55.6	55.6	55.6
573300	3.970	3.409	3.409	3.609
	100.0	85.9	85.9	90.9
		59.3	59.3	66.7

ROOT MEAN SQUARE ERROR

((CYPRE/PYFIN) - (FINIDL/FINIDL(-12)) ** 2

METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
2.638	2.185	2.185	2.172
100.0	82.8	82.8	82.3
	51.9	51.9	59.3
2.765	2.384	2.384	2.400
100.0	86.2	86.2	86.8
	55.6	55.6	63.0
2.419	2.336	2.336	2.162
100.0	96.5	96.5	89.4
	63.0	63.0	66.7
1.773	1.665	1.665	1.528
100.0	93.9	93.9	86.2
	40.7	40.7	55.6
1.588	2.017	2.017	1.487
100.0	127.0	127.0	93.6
	48.1	48.1	63.0
2.472	2.407	2.407	2.348
100.0	97.4	97.4	95.0
	55.6	55.6	51.9
1.982	1.743	1.743	1.746
100.0	87.9	87.9	88.1
	63.0	63.0	59.3
2.436	2.348	2.348	2.281
100.0	96.4	96.4	93.6
	55.6	55.6	55.6
5.093	4.696	4.696	4.733
100.0	92.2	92.2	92.9
	59.3	59.3	66.7

RETAIL SALES

CATEGORY 3

PART A LEVEL ANALYSIS

ABSOLUTE PERCENT CHANGE

ABS(FIN / FINIDL)

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA
550000	2.298	1.971	1.901	1.901	1.901
	100.0	85.8	82.7	82.7	82.7
		66.7	77.8	77.8	77.8
560000	1.368	1.031	0.956	0.956	0.956
	100.0	75.4	69.9	69.9	69.9
		70.4	70.4	70.4	70.4
570000	1.148	1.013	1.066	1.066	1.066
	100.0	88.3	92.9	92.9	92.9
		55.6	59.3	59.3	59.3

ROOT MEAN SQUARE ERROR

(FIN / FINIDL) ** 2

METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA
2.812	2.494	2.358	2.358	2.358
100.0	88.7	83.9	83.9	83.9
	66.7	77.8	77.8	77.8
1.814	1.310	1.181	1.181	1.181
100.0	72.2	65.1	65.1	65.1
	70.4	70.4	70.4	70.4
1.464	1.275	1.318	1.318	1.318
100.0	87.1	90.0	90.0	90.0
	55.6	59.3	59.3	59.3

RETAIL SALES

CATEGORY 3

ABSOLUTE PERCENT CHANGE

ABS(PRE / FINIDL)

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA
550000	2.341	2.045	2.045	2.045	2.045
	100.0	87.3	87.3	87.3	87.3
		59.3	59.3	59.3	59.3
560000	1.315	1.051	1.051	1.051	1.051
	100.0	80.0	80.0	80.0	80.0
		66.7	66.7	66.7	66.7
570000	1.403	1.302	1.302	1.302	1.302
	100.0	92.8	92.8	92.8	92.8
		59.3	59.3	59.3	59.3

ROOT MEAN SQUARE ERROR

(PRE / FINIDL) ** 2

METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA
3.057	2.518	2.518	2.518	2.518
100.0	82.4	82.4	82.4	82.4
	59.3	59.3	59.3	59.3
1.638	1.307	1.307	1.307	1.307
100.0	79.8	79.8	79.8	79.8
	66.7	66.7	66.7	66.7
1.733	1.606	1.606	1.606	1.606
100.0	92.7	92.7	92.7	92.7
	59.3	59.3	59.3	59.3

RETAIL SALES

CATEGORY 3

ABSOLUTE PERCENT CHANGE

ABS(ADV / FINIDL)

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA
550000	2.850 100.0	2.757 96.8 55.6	2.757 96.8 55.6	2.757 96.8 55.6	2.712 95.2 59.3
560000	2.040 100.0	2.088 102.3 37.0	2.088 102.3 37.0	2.088 102.3 37.0	1.856 91.0 66.7
570000	2.246 100.0	2.215 98.6 29.6	2.215 98.6 29.6	2.215 98.6 29.6	2.111 94.0 66.7

ROOT MEAN SQUARE ERROR

(ADV / FINIDL) ** 2

METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA
3.582 100.0	3.488 97.4 55.6	3.488 97.4 55.6	3.488 97.4 55.6	3.418 95.4 59.3
2.702 100.0	2.721 100.7 37.0	2.721 100.7 37.0	2.721 100.7 37.0	2.523 93.4 66.7
2.885 100.0	2.871 99.5 29.6	2.871 99.5 29.6	2.871 99.5 29.6	2.750 95.3 66.7

RETAIL SALES

CATEGORY 3

ABSOLUTE PERCENT CHANGE

ABS(PRE / FIN)

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA
550000	0.748	0.653	0.671	0.671	0.671
	100.0	87.4	89.7	89.7	89.7
		51.9	63.0	63.0	63.0
560000	0.631	0.624	0.622	0.622	0.622
	100.0	98.9	98.6	98.6	98.6
		33.3	55.6	55.6	55.6
570000	0.702	0.648	0.614	0.614	0.614
	100.0	92.3	87.5	87.5	87.5
		40.7	63.0	63.0	63.0

ROOT MEAN SQUARE ERROR

(PRE / FIN) ** 2

METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA
0.888	0.769	0.841	0.841	0.841
100.0	86.6	94.6	94.6	94.6
	51.9	63.0	63.0	63.0
0.807	0.798	0.781	0.781	0.781
100.0	98.9	96.7	96.7	96.7
	33.3	55.6	55.6	55.6
0.849	0.823	0.785	0.785	0.785
100.0	97.0	92.5	92.5	92.5
	40.7	63.0	63.0	63.0

RETAIL SALES

CATEGORY 3

ABSOLUTE PERCENT CHANGE

ABS(ADV / PRE)

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA
550000	2.397	2.007	2.007	2.007	1.976
	100.0	83.7	83.7	83.7	82.4
		70.4	70.4	70.4	81.5
560000	2.122	1.931	1.931	1.931	1.763
	100.0	91.0	91.0	91.0	83.1
		66.7	66.7	66.7	74.1
570000	2.187	2.047	2.047	2.047	1.939
	100.0	93.6	93.6	93.6	88.6
		63.0	63.0	63.0	59.3

ROOT MEAN SQUARE ERROR

(ADV / PRE) ** 2

METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA
3.095	2.617	2.617	2.617	2.603
100.0	84.6	84.6	84.6	84.1
	70.4	70.4	70.4	81.5
2.680	2.445	2.445	2.445	2.218
100.0	91.2	91.2	91.2	82.8
	66.7	66.7	66.7	74.1
2.846	2.656	2.656	2.656	2.439
100.0	93.3	93.3	93.3	85.7
	63.0	63.0	63.0	59.3

RETAIL SALES

CATEGORY 3

PART B MONTH-TO-MONTH ANALYSIS

ABSOLUTE PERCENT CHANGE

ABS((PRE/FIN) - (FINIDL/FINIDL(-1)))

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA
550000	2.635	2.133	1.899	1.899	1.899
	100.0	80.9	72.1	72.1	72.1
		70.4	77.8	77.8	77.8
560000	1.864	1.209	1.090	1.090	1.090
	100.0	64.8	58.5	58.5	58.5
		85.2	81.5	81.5	81.5
570000	1.471	1.137	0.989	0.989	0.989
	100.0	77.3	67.3	67.3	67.3
		74.1	85.2	85.2	85.2

ROOT MEAN SQUARE ERROR

((PRE/FIN) - (FINIDL/FINIDL(-1))) ** 2

METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA
3.279	2.695	2.457	2.457	2.457
100.0	82.2	74.9	74.9	74.9
	70.4	77.8	77.8	77.8
2.127	1.482	1.373	1.373	1.373
100.0	69.7	64.5	64.5	64.5
	85.2	81.5	81.5	81.5
1.738	1.416	1.304	1.304	1.304
100.0	81.4	75.0	75.0	75.0
	74.1	85.2	85.2	85.2

RETAIL SALES

CATEGORY 3

ABSOLUTE PERCENT CHANGE

ABS((ADV/PRE) - (FINIDL/FINIDL(-1)))

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA
550000	2.750	2.691	2.691	2.691	2.505
	100.0	97.9	97.9	97.9	91.1
		51.9	51.9	51.9	59.3
560000	2.218	2.083	2.083	2.083	1.794
	100.0	93.9	93.9	93.9	80.9
		59.3	59.3	59.3	66.7
570000	2.023	1.886	1.886	1.886	1.720
	100.0	93.2	93.2	93.2	85.0
		70.4	70.4	70.4	70.4

ROOT MEAN SQUARE ERROR

((ADV/PRE) - (FINIDL/FINIDL(-1))) ** 2

METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA
3.298	3.270	3.270	3.270	3.214
100.0	99.1	99.1	99.1	97.4
	51.9	51.9	51.9	59.3
2.771	2.664	2.664	2.664	2.306
100.0	96.1	96.1	96.1	83.2
	59.3	59.3	59.3	66.7
2.533	2.455	2.455	2.455	2.252
100.0	96.9	96.9	96.9	88.9
	70.4	70.4	70.4	70.4

RETAIL SALES

CATEGORY 3

ABSOLUTE PERCENT CHANGE

ABS((ADV/PRE) - (PRE/FIN))

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA
550000	2.481	2.003	2.001	2.001	1.879
	100.0	80.8	80.6	80.6	75.7
		74.1	55.6	55.6	77.8
560000	2.008	1.895	1.951	1.951	1.664
	100.0	94.4	97.1	97.1	82.9
		59.3	55.6	55.6	66.7
570000	2.303	2.118	1.985	1.985	1.786
	100.0	92.0	86.2	86.2	77.5
		63.0	70.4	70.4	77.8

ROOT MEAN SQUARE ERROR

((ADV/PRE) - (PRE/FIN)) ** 2

METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA
3.058	2.513	2.373	2.373	2.262
100.0	82.2	77.6	77.6	73.9
	74.1	55.6	55.6	77.8
2.702	2.531	2.484	2.484	2.186
100.0	93.7	92.0	92.0	80.9
	59.3	55.6	55.6	66.7
2.952	2.716	2.570	2.570	2.315
100.0	92.0	87.1	87.1	78.4
	63.0	70.4	70.4	77.8

RETAIL SALES

CATEGORY 3

PART C YEAR-TO-YEAR ANALYSIS

ABSOLUTE PERCENT CHANGE

ABS((CYPRE/PYFIN) - (FINIDL/FINIDL(-12))

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA
550000	1.985	1.637	1.637	1.623	1.623
	100.0	82.5	82.5	81.7	81.7
		63.0	63.0	59.3	59.3
560000	1.081	1.045	1.045	0.842	0.842
	100.0	96.6	96.6	77.9	77.9
		48.1	48.1	74.1	74.1
570000	1.252	1.209	1.209	1.153	1.153
	100.0	96.6	96.6	92.1	92.1
		59.3	59.3	66.7	66.7

ROOT MEAN SQUARE ERROR

((CYPRE/PYFIN) - (FINIDL/FINIDL(-12)) ** 2

METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA
2.515	2.081	2.081	2.060	2.060
100.0	82.7	82.7	81.9	81.9
	63.0	63.0	59.3	59.3
1.223	1.252	1.252	1.020	1.020
100.0	102.4	102.4	83.4	83.4
	48.1	48.1	74.1	74.1
1.542	1.469	1.469	1.380	1.380
100.0	95.3	95.3	89.5	89.5
	59.3	59.3	66.7	66.7

RETAIL SALES

CATEGORY 3

ABSOLUTE PERCENT CHANGE

ABS((CYADV/PYFIN) - (FINIDL/FINIDL(-12))

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA
550000	2.834	2.686	2.665	2.581	2.601
	100.0	94.8	94.0	91.1	91.8
		48.1	48.1	48.1	59.3
560000	2.669	2.589	2.581	2.418	2.312
	100.0	97.0	96.7	90.6	86.6
		63.0	59.3	63.0	70.4
570000	2.654	2.572	2.553	2.607	2.504
	100.0	96.9	96.2	98.2	94.3
		63.0	63.0	63.0	66.7

ROOT MEAN SQUARE ERROR

((CYADV/PYFIN) - (FINIDL/FINIDL(-12)) ** 2

METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA
3.699	3.582	3.567	3.544	3.571
10 0	96.8	96.4	95.8	96.5
	48.1	48.1	48.1	59.3
3.495	3.386	3.352	3.141	3.043
100.0	96.9	95.9	89.9	87.1
	63.0	59.3	63.0	70.4
3.285	3.221	3.197	3.226	3.076
100.0	98.1	97.3	98.2	93.6
	63.0	63.0	63.0	66.7

RETAIL SALES

CATEGORY 3

ABSOLUTE PERCENT CHANGE

ABS((CYADV/PYFIN) - (CYPRE/PYFIN))

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA
550000	2.637	2.211	2.189	2.342	2.388
	100.0	83.8	83.0	88.8	90.5
		66.7	70.4	70.4	63.0
560000	2.425	2.165	2.157	2.208	2.142
	100.0	89.3	88.9	91.0	88.3
		66.7	66.7	55.6	55.6
570000	2.422	2.324	2.305	2.417	2.275
	100.0	96.0	95.2	99.8	94.0
		55.6	55.6	40.7	59.3

ROOT MEAN SQUARE ERROR

((CYADV/PYFIN) - (CYPRE/PYFIN)) ** 2

METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA	METH B4 MB4/MA %MB4<MA
3.342	2.841	2.817	3.018	3.100
100.0	85.0	84.3	90.3	92.8
	66.7	70.4	70.4	63.0
3.210	2.867	2.836	2.776	2.666
100.0	89.3	88.3	86.5	83.0
	66.7	66.7	55.6	55.6
3.172	2.971	2.956	3.097	2.890
100.0	93.7	93.2	97.7	91.1
	55.6	55.6	40.7	59.3

RETAIL INVENTORY

PART A LEVEL ANALYSIS

ABSOLUTE PERCENT CHANGE

ABS(FIN / FINIDL)

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
531100	0.550	0.528	0.528	0.528
	100.0	96.0	96.0	96.0
		40.7	40.7	40.7
540000	0.348	0.327	0.327	0.327
	100.0	94.1	94.1	94.1
		44.4	44.4	44.4
550000	0.769	0.829	0.829	0.829
	100.0	107.8	107.8	107.8
		37.0	37.0	37.0
560000	0.851	0.731	0.731	0.731
	100.0	85.8	85.8	85.8
		55.6	55.6	55.6
570000	0.510	0.525	0.525	0.525
	100.0	102.9	102.9	102.9
		40.7	40.7	40.7

ROOT MEAN SQUARE ERROR

(FIN / FINIDL) ** 2

METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
0.658	0.627	0.627	0.627
100.0	95.3	95.3	95.3
	40.7	40.7	40.7
0.409	0.399	0.399	0.399
100.0	97.6	97.6	97.6
	44.4	44.4	44.4
0.965	1.106	1.106	1.106
100.0	114.6	114.6	114.6
	37.0	37.0	37.0
0.937	0.839	0.839	0.839
100.0	89.5	89.5	89.5
	55.6	55.6	55.6
0.634	0.665	0.665	0.665
100.0	104.9	104.9	104.9
	40.7	40.7	40.7

RETAIL INVENTORY

PART B MONTH-TO-MONTH ANALYSIS

ABSOLUTE PERCENT CHANGE

ABS((FIN/FIN(-1)) - (FINIDL/FINIDL(-1)))

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
531100	0.534	0.508	0.473	0.473
	100.0	95.1	88.5	88.5
		48.1	63.0	63.0
540000	0.477	0.383	0.308	0.308
	100.0	80.3	64.7	64.7
		59.3	59.3	59.3
550000	0.711	0.815	0.734	0.734
	100.0	114.5	103.1	103.1
		40.7	44.4	44.4
560000	0.597	0.526	0.493	0.493
	100.0	88.3	82.6	82.6
		59.3	70.4	70.4
570000	0.369	0.455	0.448	0.448
	100.0	123.3	121.4	121.4
		29.6	33.3	33.3

ROOT MEAN SQUARE ERROR

((FIN/FIN(-1)) - (FINIDL/FINIDL(-1))) ** 2

METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
0.615	0.590	0.569	0.569
100.0	96.1	92.6	92.6
	48.1	63.0	63.0
0.593	0.515	0.425	0.425
100.0	86.9	71.8	71.8
	59.3	59.3	59.3
0.904	1.002	0.960	0.960
100.0	110.8	106.1	106.1
	40.7	44.4	44.4
0.765	0.716	0.667	0.667
100.0	93.7	87.2	87.2
	59.3	70.4	70.4
0.528	0.591	0.621	0.621
100.0	111.9	117.5	117.5
	29.6	33.3	33.3

RETAIL INVENTORY

PART C YEAR-TO-YEAR ANALYSIS

ABSOLUTE PERCENT CHANGE

ABS((CYFIN/PYFIN) - (FINIDL/FINIDL(-12))

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
531100	0.247	0.315	0.315	0.230
	100.0	127.6	127.6	93.1
		18.5	18.5	44.4
540000	0.098	0.248	0.248	0.113
	100.0	252.1	252.1	115.4
		14.8	14.8	40.7
550000	0.443	0.647	0.647	0.398
	100.0	146.0	146.0	89.7
		22.2	22.2	37.0
560000	0.379	0.366	0.366	0.230
	100.0	96.5	96.5	60.5
		48.1	48.1	63.0
570000	0.243	0.407	0.407	0.135
	100.0	167.4	167.4	55.6
		22.2	22.2	48.1

ROOT MEAN SQUARE ERROR

((CYFIN/PYFIN) - (FINIDL/FINIDL(-12)) ** 2

METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
0.388	0.428	0.428	0.291
100.0	110.2	110.2	75.1
	18.5	18.5	44.4
0.137	0.323	0.323	0.144
100.0	235.4	235.4	105.2
	14.8	14.8	40.7
0.546	0.830	0.830	0.505
100.0	152.1	152.1	92.4
	22.2	22.2	37.0
0.492	0.509	0.509	0.266
100.0	103.4	103.4	54.0
	48.1	48.1	63.0
0.333	0.548	0.548	0.172
100.0	164.6	164.6	51.7
	22.2	22.2	48.1

WHOLESALE SALES

PART A LEVEL ANALYSIS

ABSOLUTE PERCENT CHANGE

ABS(FIN / FINIDL)

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
501000	2.654	2.304	2.095	2.095
	100.0	86.8	79.0	79.0
		66.7	74.1	74.1
506000	1.247	1.156	1.045	1.045
	100.0	92.7	83.8	83.8
		48.1	66.7	66.7
508000	0.901	0.969	0.858	0.858
	100.0	107.5	95.2	95.2
		44.4	48.1	48.1
514000	0.993	0.913	0.870	0.870
	100.0	92.0	87.6	87.6
		51.9	51.9	51.9
518000	1.202	1.037	0.887	0.887
	100.0	86.3	73.8	73.8
		66.7	74.1	74.1

ROOT MEAN SQUARE ERROR

(FIN / FINIDL) ** 2

METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
3.266	2.794	2.542	2.542
100.0	85.5	77.8	77.8
	66.7	74.1	74.1
1.697	1.582	1.416	1.416
100.0	93.2	83.4	83.4
	48.1	66.7	66.7
1.235	1.310	1.198	1.198
100.0	106.1	97.0	97.0
	44.4	48.1	48.1
1.215	1.083	0.994	0.994
100.0	89.2	81.8	81.8
	51.9	51.9	51.9
1.464	1.247	1.132	1.132
100.0	85.2	77.3	77.3
	66.7	74.1	74.1

WHOLESALE SALES

ABSOLUTE PERCENT CHANGE

ABS(PRE / FINIDL)

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
501000	2.760	2.331	2.331	2.331
	100.0	84.5	84.5	84.5
		74.1	74.1	74.1
506000	1.505	1.466	1.466	1.466
	100.0	97.4	97.4	97.4
		55.6	55.6	55.6
508000	1.386	1.456	1.456	1.456
	100.0	105.1	105.1	105.1
		48.1	48.1	48.1
514000	1.118	0.978	0.978	0.978
	100.0	87.5	87.5	87.5
		48.1	48.1	48.1
518000	2.645	2.297	2.297	2.297
	100.0	86.8	86.8	86.8
		63.0	63.0	63.0

ROOT MEAN SQUARE ERROR

(PRE / FINIDL) ** 2

METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
3.390	[illegible]	3.029	3.029
100.0	[illegible]	[illegible]	89.3
	74.1	74.1	74.1
1.985	1.967	1.967	1.967
100.0	99.1	99.1	99.1
	55.6	55.6	55.6
1.693	1.879	1.879	1.879
100.0	111.0	111.0	111.0
	48.1	48.1	48.1
1.264	1.192	1.192	1.192
100.0	94.3	94.3	94.3
	48.1	48.1	48.1
4.757	4.386	4.386	4.386
100.0	92.2	92.2	92.2
	63.0	63.0	63.0

WHOLESALE SALES

ABSOLUTE PERCENT CHANGE

ABS(PRE / FIN)

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
501000	2.194	2.214	2.130	2.130
	100.0	100.9	97.1	97.1
		55.6	55.6	55.6
506000	0.915	0.905	0.916	0.916
	100.0	98.9	100.1	100.1
		29.6	55.6	55.6
508000	1.102	1.067	1.122	1.122
	100.0	96.9	101.8	101.8
		33.3	51.9	51.9
514000	0.485	0.531	0.489	0.489
	100.0	109.5	100.8	100.8
		63.0	63.0	63.0
518000	2.153	2.115	1.834	1.834
	100.0	98.2	85.2	85.2
		59.3	81.5	81.5

ROOT MEAN SQUARE ERROR

(PRE / FIN) ** 2

METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
2.592	2.597	2.424	2.424
100.0	100.2	93.5	93.5
	55.6	55.6	55.6
1.229	1.225	1.273	1.273
100.0	99.7	103.6	103.6
	29.6	55.6	55.6
1.343	1.331	1.345	1.345
100.0	99.1	100.2	100.2
	33.3	51.9	51.9
0.588	0.646	0.557	0.557
100.0	109.9	94.7	94.7
	63.0	63.0	63.0
4.626	4.615	4.312	4.312
100.0	99.8	93.2	93.2
	59.3	81.5	81.5

WHOLESALE SALES

PART B MONTH-TO-MONTH ANALYSIS

ABSOLUTE PERCENT CHANGE

ABS((PRE/FIN) - (FINIDL/FINIDL(-1)))

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
501000	3.359	2.607	2.434	2.434
	100.0	77.6	72.5	72.5
		81.5	81.5	81.5
506000	1.877	1.720	1.691	1.691
	100.0	91.6	90.1	90.1
		48.1	51.9	51.9
508000	1.776	1.643	1.636	1.636
	100.0	92.5	92.1	92.1
		59.3	59.3	59.3
514000	0.992	0.874	0.801	0.801
	100.0	88.1	80.8	80.8
		55.6	63.0	63.0
518000	2.837	2.539	2.458	2.458
	100.0	89.5	86.6	86.6
		66.7	63.0	63.0

ROOT MEAN SQUARE ERROR

((PRE/FIN) - (FINIDL/FINIDL(-1))) ** 2

METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
3.991	3.038	2.831	2.831
100.0	76.1	70.9	70.9
	81.5	81.5	81.5
2.625	2.473	2.450	2.450
100.0	94.2	93.4	93.4
	48.1	51.9	51.9
2.044	1.929	1.882	1.882
100.0	94.4	92.1	92.1
	59.3	59.3	59.3
1.227	1.156	1.045	1.045
100.0	94.2	85.1	85.1
	55.6	63.0	63.0
4.687	4.360	4.119	4.119
100.0	93.0	87.9	87.9
	66.7	63.0	63.0

WHOLESALE SALES

PART C YEAR-TO-YEAR ANALYSIS

ABSOLUTE PERCENT CHANGE

ABS((CYPRE/PYFIN) - (FINIDL/FINIDL(-12))

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
501000	2.470	2.619	2.619	2.380
	100.0	106.0	106.0	96.4
		44.4	44.4	55.6
506000	1.644	1.738	1.738	1.693
	100.0	105.7	105.7	103.0
		44.4	44.4	48.1
508000	1.492	1.648	1.648	1.437
	100.0	110.5	110.5	96.3
		33.3	33.3	51.9
514000	0.704	0.979	0.979	0.733
	100.0	139.1	139.1	104.2
		25.9	25.9	51.9
518000	2.755	2.713	2.713	2.704
	100.0	98.5	98.5	98.2
		44.4	44.4	48.1

ROOT MEAN SQUARE ERROR

((CYPRE/PYFIN) - (FINIDL/FINIDL(-12)) ** 2

METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
3.215	3.370	3.370	3.100
100.0	104.8	104.8	96.4
	44.4	44.4	55.6
2.161	2.255	2.255	2.099
100.0	104.4	104.4	97.2
	44.4	44.4	48.1
1.793	1.978	1.978	1.810
100.0	110.3	110.3	100.9
	33.3	33.3	51.9
0.857	1.192	1.192	0.915
100.0	139.1	139.1	106.8
	25.9	25.9	51.9
5.418	5.080	5.080	5.343
100.0	93.8	93.8	98.6
	44.4	44.4	48.1

WHOLESALE INVENTORY

PART A LEVEL ANALYSIS

ABSOLUTE PERCENT CHANGE

ABS(FIN / FINIDL)

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
501000	0.540 100.0	0.454 84.0 59.3	0.413 76.4 63.0	0.413 76.4 63.0
506000	0.480 100.0	0.531 110.7 37.0	0.368 76.7 59.3	0.368 76.7 59.3
508000	0.621 100.0	0.553 89.0 44.4	0.513 82.6 55.6	0.513 82.6 55.6
514000	0.681 100.0	0.600 88.2 51.9	0.583 85.6 55.6	0.583 85.6 55.6
518000	1.143 100.0	0.917 80.2 55.6	0.706 61.8 70.4	0.706 61.8 70.4

ROOT MEAN SQUARE ERROR

(FIN / FINIDL) ** 2

METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
0.649 100.0	0.594 91.4 59.3	0.527 81.2 63.0	0.527 81.2 63.0
0.633 100.0	0.711 112.3 37.0	0.494 78.1 59.3	0.494 78.1 59.3
0.796 100.0	0.666 83.7 44.4	0.628 78.9 55.6	0.628 78.9 55.6
0.854 100.0	0.814 95.3 51.9	0.749 87.7 55.6	0.749 87.7 55.6
1.448 100.0	1.212 83.7 55.6	0.931 64.3 70.4	0.931 64.3 70.4

WHOLESALE INVENTORY

ABSOLUTE PERCENT CHANGE

ABS(PRE / FINIDL)

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
501000	1.752 100.0	1.831 104.5 51.9	1.831 104.5 51.9	1.831 104.5 51.9
506000	0.743 100.0	0.836 112.6 40.7	0.836 112.6 40.7	0.836 112.6 40.7
508000	0.851 100.0	0.768 90.3 51.9	0.768 90.3 51.9	0.768 90.3 51.9
514000	1.247 100.0	1.172 94.0 59.3	1.172 94.0 59.3	1.172 94.0 59.3
518000	1.629 100.0	1.565 96.1 48.1	1.565 96.1 48.1	1.565 96.1 48.1

ROOT MEAN SQUARE ERROR

(PRE / FINIDL) ** 2

METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
2.047 100.0	2.146 104.8 51.9	2.146 104.8 51.9	2.146 104.8 51.9
1.031 100.0	1.119 108.6 40.7	1.119 108.6 40.7	1.119 108.6 40.7
1.017 100.0	0.947 93.1 51.9	0.947 93.1 51.9	0.947 93.1 51.9
1.451 100.0	1.398 96.3 59.3	1.398 96.3 59.3	1.398 96.3 59.3
1.984 100.0	1.893 95.4 48.1	1.893 95.4 48.1	1.893 95.4 48.1

WHOLESALE INVENTORY

ABSOLUTE PERCENT CHANGE

ABS(PRE / FIN)

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
501000	1.851 100.0	1.868 100.9 29.6	1.812 97.9 59.3	1.812 97.9 59.3
506000	0.785 100.0	0.793 101.0 51.9	0.775 98.8 51.9	0.775 98.8 51.9
508000	0.709 100.0	0.758 106.9 51.9	0.727 102.5 63.0	0.727 102.5 63.0
514000	1.382 100.0	1.381 99.9 51.9	1.265 91.5 70.4	1.265 91.5 70.4
518000	1.397 100.0	1.325 94.8 37.0	1.223 87.5 59.3	1.223 87.5 59.3

ROOT MEAN SQUARE ERROR

(PRE / FIN) ** 2

METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
2.205 100.0	2.220 100.6 29.6	2.188 99.2 59.3	2.188 99.2 59.3
1.070 100.0	1.073 100.3 51.9	0.985 92.1 51.9	0.985 92.1 51.9
0.897 100.0	0.915 102.0 51.9	0.898 100.0 63.0	0.898 100.0 63.0
1.569 100.0	1.573 100.3 51.9	1.433 91.3 70.4	1.433 91.3 70.4
1.803 100.0	1.756 97.4 37.0	1.593 88.3 59.3	1.593 88.3 59.3

WHOLESALE INVENTORY

PART B MONTH-TO-MONTH ANALYSIS

ABSOLUTE PERCENT CHANGE

ABS((PRE/FIN) - (FINIDL/FINIDL(-1)))

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
501000	1.657	1.956	1.892	1.892
	100.0	118.0	114.2	114.2
		44.4	44.4	44.4
506000	0.923	0.980	0.936	0.936
	100.0	106.2	101.4	101.4
		51.9	51.9	51.9
508000	0.677	0.650	0.606	0.606
	100.0	96.0	89.6	89.6
		51.9	55.6	55.6
514000	1.048	1.014	0.954	0.954
	100.0	96.7	91.0	91.0
		55.6	66.7	66.7
518000	1.938	1.876	1.646	1.646
	100.0	96.8	85.0	85.0
		59.3	59.3	59.3

ROOT MEAN SQUARE ERROR

((PRE/FIN) - (FINIDL/FINIDL(-1))) ** 2

METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
2.022	2.302	2.256	2.256
100.0	113.9	111.5	111.5
	44.4	44.4	44.4
1.235	1.305	1.237	1.237
100.0	105.7	100.2	100.2
	51.9	51.9	51.9
0.845	0.827	0.776	0.776
100.0	97.9	91.8	91.8
	51.9	55.6	55.6
1.246	1.207	1.164	1.164
100.0	96.9	93.4	93.4
	55.6	66.7	66.7
2.398	2.295	2.076	2.076
100.0	95.7	86.6	86.6
	59.3	59.3	59.3

WHOLESALE INVENTORY

PART C YEAR-TO-YEAR ANALYSIS

ABSOLUTE PERCENT CHANGE

ABS((CYPRE/PYFIN) - (FINIDL/FINIDL(-12))

KB	METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
501000	2.157	2.339	2.339	2.150
	100.0	108.4	108.4	99.7
		44.4	44.4	55.6
506000	0.866	1.036	1.036	0.883
	100.0	119.7	119.7	102.0
		37.0	37.0	59.3
508000	0.794	0.816	0.816	0.828
	100.0	102.8	102.8	104.3
		48.1	48.1	48.1
514000	1.431	1.404	1.404	1.454
	100.0	98.1	98.1	101.6
		63.0	63.0	63.0
518000	1.565	1.708	1.708	1.449
	100.0	109.1	109.1	92.6
		48.1	48.1	63.0

ROOT MEAN SQUARE ERROR

((CYPRE/PYFIN) - (FINIDL/FINIDL(-12)) ** 2

METH A MA/MA	METH B1 MB1/MA %MB1<MA	METH B2 MB2/MA %MB2<MA	METH B3 MB3/MA %MB3<MA
2.546	2.743	2.743	2.544
100.0	107.7	107.7	99.9
	44.4	44.4	55.6
1.211	1.375	1.375	1.217
100.0	113.6	113.6	100.5
	37.0	37.0	59.3
0.937	1.044	1.044	0.974
100.0	111.5	111.5	104.0
	48.1	48.1	48.1
1.634	1.634	1.634	1.668
100.0	100.0	100.0	102.1
	63.0	63.0	63.0
2.122	2.224	2.224	2.084
100.0	104.8	104.8	98.2
	48.1	48.1	63.0

ATTACHMENT 4

RETAIL SALES

CATEGORY 1

ABSOLUTE PERCENT CHANGE

MEASURE	GM OF METHA GMMA/GMMA	GM OF METHB1 GMMB1/GMMA AV %MB1<MA	GM OF METHB2 GMMB2/GMMA AV %MB2<MA	GM OF METHB3 GMMB3/GMMA AV %MB3<MA	GM OF METHB4 GMMB4/GMMA AV %MB4<MA	GM OF METHB5 GMMB5/GMMA AV %MB5<MA
LEVEL ANALYSIS						
ABS(FIN / FINIDL)	0.719	0.583	0.527	0.527	0.527	0.497
	100.0	81.1	73.2	73.2	73.2	69.1
		54.1	65.2	65.2	65.2	60.7
ABS(PRE / FINIDL)	0.966	0.780	0.780	0.780	0.780	0.773
	100.0	80.7	80.7	80.7	80.7	80.1
		54.8	54.8	54.8	54.8	57.8
ABS(ADV / FINIDL)	1.536	1.521	1.521	1.521	1.404	1.404
	100.0	99.0	99.0	99.0	91.4	91.4
		42.2	42.2	42.2	52.6	52.6
ABS(PRE / FIN)	0.586	0.553	0.525	0.525	0.525	0.518
	100.0	94.3	89.5	89.5	89.5	88.4
		40.7	49.6	49.6	49.6	52.6
ABS(ADV / PRE)	1.317	1.273	1.273	1.273	1.155	1.208
	100.0	96.6	96.6	96.6	87.7	91.7
		49.6	49.6	49.6	67.4	60.0
MONTH-TO-MONTH ANALYSIS						
ABS((PRE/FIN) - (FINIDL/FINIDL(-1)))	1.219	0.958	0.871	0.871	0.871	0.835
	100.0	78.6	71.5	71.5	71.5	68.5
		65.9	68.1	68.1	68.1	75.6
ABS((ADV/PRE) - (FINIDL/FINIDL(-1)))	1.452	1.394	1.394	1.394	1.257	1.186
	100.0	96.0	96.0	96.0	86.6	81.7
		55.6	55.6	55.6	65.9	65.9
ABS((ADV/PRE) - (PRE/FIN))	1.191	1.139	1.176	1.176	1.014	0.976
	100.0	95.6	98.7	98.7	85.1	81.9
		47.4	51.1	51.1	64.4	69.6

RETAIL SALES

CATEGORY 1

ABSOLUTE PERCENT CHANGE

MEASURE	GM OF METHA GMMA/GMMA	GM OF METHB1 GMMB1/GMMA AV %MB1<MA	GM OF METHB2 GMMB2/GMMA AV %MB2<MA	GM OF METHB3 GMMB3/GMMA AV %MB3<MA	GM OF METHB4 GMMB4/GMMA AV %MB4<MA	GM OF METHB5 GMMB5/GMMA AV %MB5<MA
YEAR-TO-YEAR ANALYSIS						
ABS((CYPRE/PYFIN) - (FINIDL/FINIDL(-12))	0.920	0.793	0.793	0.795	0.795	0.802
	100.0	86.2	86.2	86.4	86.4	87.1
		56.3	56.3	63.0	63.0	66.7
ABS((CYADV/PYFIN) - (FINIDL/FINIDL(-12))	1.747	1.657	1.647	1.656	1.593	1.599
	100.0	94.8	94.3	94.8	91.2	91.5
		52.6	51.9	50.4	59.3	68.1
ABS((CYADV/PYFIN) - (CYPRE/PYFIN))	1.527	1.457	1.447	1.481	1.429	1.424
	100.0	95.4	94.7	96.9	93.6	93.3
		53.3	53.3	51.9	57.8	58.5

RETAIL SALES

CATEGORY 1

ROOT MEAN SQUARE ERROR

MEASURE	GM OF METHA GMMA/GMMA	GM OF METHB1 GMMB1/GMMA AV %MB1<MA	GM OF METHB2 GMMB2/GMMA AV %MB2<MA	GM OF METHB3 GMMB3/GMMA AV %MB3<MA	GM OF METHB4 GMMB4/GMMA AV %MB4<MA	GM OF METHB5 GMMB5/GMMA AV %MB5<MA
LEVEL ANALYSIS						
(FIN / FINIDL) ** 2	0.906	0.718	0.673	0.673	0.673	0.643
	100.0	79.2	74.2	74.2	74.2	71.0
		54.1	65.2	65.2	65.2	60.7
(PRE / FINIDL) ** 2	1.192	0.955	0.955	0.955	0.955	0.948
	100.0	80.1	80.1	80.1	80.1	79.6
		54.8	54.8	54.8	54.8	57.8
(ADV / FINIDL) ** 2	1.896	1.859	1.859	1.859	1.710	1.710
	100.0	98.0	98.0	98.0	90.2	90.2
		42.2	42.2	42.2	52.6	52.6
(PRE / FIN) ** 2	0.781	0.710	0.679	0.679	0.679	0.668
	100.0	91.0	87.0	87.0	87.0	85.6
		40.7	49.6	49.6	49.6	52.6
(ADV / PRE) ** 2	1.721	1.591	1.591	1.591	1.484	1.533
	100.0	92.5	92.5	92.5	86.3	89.1
		49.6	49.6	49.6	67.4	60.0
MONTH-TO-MONTH ANALYSIS						
((PRE/FIN) - (FINIDL/FINIDL(-1))) ** 2	1.471	1.156	1.063	1.063	1.063	1.016
	100.0	78.5	72.3	72.3	72.3	69.0
		65.9	68.1	68.1	68.1	75.6
((ADV/PRE) - (FINIDL/FINIDL(-1))) ** 2	1.782	1.728	1.728	1.728	1.537	1.435
	100.0	97.0	97.0	97.0	86.3	80.5
		55.6	55.6	55.6	65.9	65.9
((ADV/PRE) - (PRE/FIN)) ** 2	1.544	1.456	1.490	1.490	1.309	1.249
	100.0	94.3	96.5	96.5	84.8	80.9
		47.4	51.1	51.1	64.4	69.6

RETAIL SALES

CATEGORY 1

ROOT MEAN SQUARE ERROR

MEASURE	GM OF METHA GMMA/GMMA	GM OF METHB1 GMMB1/GMMA AV %MB1<MA	GM OF METHB2 GMMB2/GMMA AV %MB2<MA	GM OF METHB3 GMMB3/GMMA AV %MB3<MA	GM OF METHB4 GMMB4/GMMA AV %MB4<MA	GM OF METHB5 GMMB5/GMMA AV %MB5<MA
YEAR-TO-YEAR ANALYSIS						
((CYPRE/PYFIN) - (FINIDL/FINIDL(-12)) ** 2	1.126	0.997	0.997	0.976	0.976	0.976
	100.0	88.5	88.5	86.7	86.7	86.7
		56.3	56.3	63.0	63.0	66.7
((CYADV/PYFIN) - (FINIDL/FINIDL(-12)) ** 2	2.132	1.997	1.992	2.007	1.943	1.941
	100.0	93.7	93.4	94.1	91.1	91.0
		52.6	51.9	50.4	59.3	68.1
((CYADV/PYFIN) - (CYPRE/PYFIN)) ** 2	2.012	1.815	1.809	1.907	1.871	1.842
	100.0	90.2	89.9	94.8	93.0	91.5
		53.3	53.3	51.9	57.8	58.5

RETAIL SALES

CATEGORY 2

ABSOLUTE PERCENT CHANGE

MEASURE	GM OF METHA GMMA/GMMA	GM OF METHB1 GMMB1/GMMA AV %MB1<MA	GM OF METHB2 GMMB2/GMMA AV %MB2<MA	GM OF METHB3 GMMB3/GMMA AV %MB3<MA
LEVEL ANALYSIS				
ABS(FIN / FINIDL)	1.770 100.0	1.454 82.1 58.4	1.408 79.5 60.1	1.408 79.5 60.1
ABS(PRE / FINIDL)	2.188 100.0	1.805 82.5 62.6	1.805 82.5 62.6	1.805 82.5 62.6
ABS(PRE / FIN)	1.240 100.0	1.197 96.5 45.3	1.157 93.3 57.2	1.157 93.3 57.2
MONTH-TO-MONTH ANALYSIS				
ABS((PRE/FIN) - (FINIDL/FINIDL(-1)))	2.590 100.0	1.939 74.9 70.4	1.760 67.9 73.3	1.760 67.9 73.3
YEAR-TO-YEAR ANALYSIS				
ABS((CYPRE/PYFIN) - (FINIDL/FINIDL(-12))	1.884 100.0	1.770 93.9 54.7	1.770 93.9 54.7	1.671 88.7 60.1

RETAIL SALES

CATEGORY 2

ROOT MEAN SQUARE ERROR

MEASURE	GM OF METHA GMMA/GMMA	GM OF METHB1 GMMB1/GMMA AV %MB1<MA	GM OF METHB2 GMMB2/GMMA AV %MB2<MA	GM OF METHB3 GMMB3/GMMA AV %MB3<MA
LEVEL ANALYSIS				
(FIN / FINIDL) ** 2	2.256	1.843	1.743	1.743
	100.0	81.7	77.3	77.3
		58.4	60.1	60.1
(PRE / FINIDL) ** 2	2.796	2.328	2.328	2.328
	100.0	83.3	83.3	83.3
		62.6	62.6	62.6
(PRE / FIN) ** 2	1.568	1.518	1.483	1.483
	100.0	96.8	94.6	94.6
		45.3	57.2	57.2
MONTH-TO-MONTH ANALYSIS				
((PRE/FIN) - (FINIDL/FINIDL(-1))) ** 2	3.184	2.501	2.291	2.291
	100.0	78.5	72.0	72.0
		70.4	73.3	73.3
YEAR-TO-YEAR ANALYSIS				
((CYPRE/PYFIN) - (FINIDL/FINIDL(-12)) ** 2	2.436	2.312	2.312	2.184
	100.0	94.9	94.9	89.7
		54.7	54.7	60.1

RETAIL SALES

CATEGORY 3

ABSOLUTE PERCENT CHANGE

MEASURE	GM OF METHA GMMA/GMMA	GM OF METHB1 GMMB1/GMMA AV %MB1<MA	GM OF METHB2 GMMB2/GMMA AV %MB2<MA	GM OF METHB3 GMMB3/GMMA AV %MB3<MA	GM OF METHB4 GMMB4/GMMA AV %MB4<MA
LEVEL ANALYSIS					
ABS(FIN / FINIDL)	1.534	1.272	1.246	1.246	1.246
	100.0	83.0	81.3	81.3	81.3
		64.2	69.1	69.1	69.1
ABS(PRE / FINIDL)	1.628	1.409	1.409	1.409	1.409
	100.0	86.5	86.5	86.5	86.5
		61.7	61.7	61.7	61.7
ABS(ADV / FINIDL)	2.355	2.336	2.336	2.336	2.198
	100.0	99.2	99.2	99.2	93.4
		40.7	40.7	40.7	64.2
ABS(PRE / FIN)	0.692	0.642	0.635	0.635	0.635
	100.0	92.7	91.8	91.8	91.8
		42.0	60.5	60.5	60.5
ABS(ADV / PRE)	2.233	1.994	1.994	1.994	1.890
	100.0	89.3	89.3	89.3	84.7
		66.7	66.7	66.7	71.6
MONTH-TO-MONTH ANALYSIS					
ABS((PRE/FIN) - (FINIDL/FINIDL(-1)))	1.933	1.431	1.270	1.270	1.270
	100.0	74.0	65.7	65.7	65.7
		76.5	81.5	81.5	81.5
ABS((ADV/PRE) - (FINIDL/FINIDL(-1)))	2.311	2.195	2.195	2.195	1.977
	100.0	95.0	95.0	95.0	85.6
		60.5	60.5	60.5	65.4
ABS((ADV/PRE) - (PRE/FIN))	2.255	2.003	1.979	1.979	1.774
	100.0	88.8	87.7	87.7	78.7
		65.4	60.5	60.5	74.1

RETAIL SALES

CATEGORY 3

ABSOLUTE PERCENT CHANGE

YEAR-TO-YEAR ANALYSIS

MEASURE	GM OF METHA GMMA/GMMA	GM OF METHB1 GMMB1/GMMA AV %MB1<MA	GM OF METHB2 GMMB2/GMMA AV %MB2<MA	GM OF METHB3 GMMB3/GMMA AV %MB3<MA	GM OF METHB4 GMMB4/GMMA AV %MB4<MA
ABS((CYPRE/PYFIN) - (FINIDL/FINIDL(-12))	1.390	1.274	1.274	1.163	1.163
	100.0	91.6	91.6	83.7	83.7
		56.8	56.8	66.7	66.7
ABS((CYADV/PYFIN) - (FINIDL/FINIDL(-12))	2.718	2.615	2.599	2.534	2.469
	100.0	96.2	95.6	93.2	90.8
		58.0	56.8	58.0	65.4
ABS((CYADV/PYFIN) - (CYPRE/PYFIN))	2.493	2.233	2.216	2.321	2.266
	100.0	89.6	88.9	93.1	90.9
		63.0	64.2	55.6	59.3

RETAIL SALES

CATEGORY 3

ROOT MEAN SQUARE ERROR

MEASURE	GM OF METHA GMMA/GMMA	GM OF METHB1 GMMB1/GMMA AV %MB1<MA	GM OF METHB2 GMMB2/GMMA AV %MB2<MA	GM OF METHB3 GMMB3/GMMA AV %MB3<MA	GM OF METHB4 GMMB4/GMMA AV %MB4<MA
LEVEL ANALYSIS					
(FIN / FINIDL) ** 2	1.955 100.0	1.609 82.3 64.2	1.543 78.9 69.1	1.543 78.9 69.1	1.543 78.9 69.1
(PRE / FINIDL) ** 2	2.055 100.0	1.742 84.8 61.7	1.742 84.8 61.7	1.742 84.8 61.7	1.742 84.8 61.7
(ADV / FINIDL) ** 2	3.034 100.0	3.009 99.2 40.7	3.009 99.2 40.7	3.009 99.2 40.7	2.873 94.7 64.2
(PRE / FIN) ** 2	0.847 100.0	0.797 94.0 42.0	0.802 94.6 60.5	0.802 94.6 60.5	0.802 94.6 60.5
(ADV / PRE) ** 2	2.869 100.0	2.571 89.6 66.7	2.571 89.6 66.7	2.571 89.6 66.7	2.415 84.2 71.6
MONTH-TO-MONTH ANALYSIS					
((PRE/FIN) - (FINIDL/FINIDL(-1))) ** 2	2.297 100.0	1.782 77.6 76.5	1.638 71.3 81.5	1.638 71.3 81.5	1.638 71.3 81.5
((ADV/PRE) - (FINIDL/FINIDL(-1))) ** 2	2.850 100.0	2.775 97.4 60.5	2.775 97.4 60.5	2.775 97.4 60.5	2.556 89.7 65.4
((ADV/PRE) - (PRE/FIN)) ** 2	2.900 100.0	2.585 89.1 65.4	2.475 85.3 60.5	2.475 85.3 60.5	2.254 77.7 74.1

RETAIL SALES

CATEGORY 3

ROOT MEAN SQUARE ERROR

YEAR-TO-YEAR ANALYSIS

MEASURE	GM OF METHA GMMA/GMMA	GM OF METHB1 GMMB1/GMMA AV %MB1<MA	GM OF METHB2 GMMB2/GMMA AV %MB2<MA	GM OF METHB3 GMMB3/GMMA AV %MB3<MA	GM OF METHB4 GMMB4/GMMA AV %MB4<MA
((CYPRE/PYFIN) - (FINIDL/FINIDL(-12)) ** 2	1.680	1.564	1.564	1.426	1.426
	100.0	93.1	93.1	84.9	84.9
		56.8	56.8	66.7	66.7
((CYADV/PYFIN) - (FINIDL/FINIDL(-12)) ** 2	3.489	3.393	3.369	3.299	3.221
	100.0	97.3	96.6	94.6	92.3
		58.0	56.8	58.0	65.4
((CYADV/PYFIN) - (CYPRE/PYFIN)) ** 2	3.240	2.893	2.869	2.960	2.880
	100.0	89.3	88.5	91.4	88.9
		63.0	64.2	55.6	59.3

RETAIL INVENTORY

ABSOLUTE PERCENT CHANGE

MEASURE	GM OF METHA GMMA/GMMA	GM OF METHB1 GMMB1/GMMA AV %MB1<MA	GM OF METHB2 GMMB2/GMMA AV %MB2<MA	GM OF METHB3 GMMB3/GMMA AV %MB3<MA
LEVEL ANALYSIS				
ABS(FIN / FINIDL)	0.577 100.0	0.560 97.0 43.7	0.560 97.0 43.7	0.560 97.0 43.7
MONTH-TO-MONTH ANALYSIS				
ABS((FIN/FIN(-1)) - (FINIDL/FINIDL(-1)))	0.525 100.0	0.520 99.0 47.4	0.473 90.0 54.1	0.473 90.0 54.1
YEAR-TO-YEAR ANALYSIS				
ABS((CYFIN/PYFIN) - (FINIDL/FINIDL(-12))	0.251 100.0	0.376 150.0 25.2	0.376 150.0 25.2	0.200 79.8 46.7

RETAIL INVENTORY

ROOT MEAN SQUARE ERROR

MEASURE	GM OF METHA GMMA/GMMA	GM OF METHB1 GMMB1/GMMA AV %MB1<MA	GM OF METHB2 GMMB2/GMMA AV %MB2<MA	GM OF METHB3 GMMB3/GMMA AV %MB3<MA
LEVEL ANALYSIS				
(FIN / FINIDL) ** 2	0.688 100.0	0.688 100.0 43.7	0.688 100.0 43.7	0.688 100.0 43.7
MONTH-TO-MONTH ANALYSIS				
((FIN/FIN(-1)) - (FINIDL/FINIDL(-1))) ** 2	0.668 100.0	0.664 99.4 47.4	0.626 93.7 54.1	0.626 93.7 54.1
YEAR-TO-YEAR ANALYSIS				
((CYFIN/PYFIN) - (FINIDL/FINIDL(-12)) ** 2	0.343 100.0	0.502 146.4 25.2	0.502 146.4 25.2	0.250 72.7 46.7

WHOLESALE SALES

ABSOLUTE PERCENT CHANGE

MEASURE	GM OF METHA GMMA/GMMA	GM OF METHB1 GMMB1/GMMA AV %MB1<MA	GM OF METHB2 GMMB2/GMMA AV %MB2<MA	GM OF METHB3 GMMB3/GMMA AV %MB3<MA
LEVEL ANALYSIS				
ABS(FIN / FINIDL)	1.289 100.0	1.196 92.8 55.6	1.077 83.6 63.0	1.077 83.6 63.0
ABS(PRE / FINIDL)	1.763 100.0	1.621 91.9 57.8	1.621 91.9 57.8	1.621 91.9 57.8
ABS(PRE / FIN)	1.182 100.0	1.192 100.8 48.1	1.145 96.8 61.5	1.145 96.8 61.5
MONTH-TO-MONTH ANALYSIS				
ABS((PRE/FIN) - (FINIDL/FINIDL(-1)))	1.994 100.0	1.749 87.7 62.2	1.677 84.1 63.7	1.677 84.1 63.7
YEAR-TO-YEAR ANALYSIS				
ABS((CYPRE/PYFIN) - (FINIDL/FINIDL(-12))	1.637 100.0	1.819 111.1 38.5	1.819 111.1 38.5	1.629 99.5 51.1

WHOLESALE SALES

ROOT MEAN SQUARE ERROR

MEASURE	GM OF METHA GMMA/GMMA	GM OF METHB1 GMMB1/GMMA AV %MB1<MA	GM OF METHB2 GMMB2/GMMA AV %MB2<MA	GM OF METHB3 GMMB3/GMMA AV %MB3<MA
LEVEL ANALYSIS				
(FIN / FINIDL) ** 2	1.649 100.0	1.509 91.5 55.6	1.371 83.2 63.0	1.371 83.2 63.0
(PRE / FINIDL) ** 2	2.329 100.0	2.256 96.9 57.8	2.256 96.9 57.8	2.256 96.9 57.8
(PRE / FIN) ** 2	1.634 100.0	1.660 101.6 48.1	1.584 96.9 61.5	1.584 96.9 61.5
MONTH-TO-MONTH ANALYSIS				
((PRE/FIN) - (FINIDL/FINIDL(-1))) ** 2	2.618 100.0	2.359 90.1 62.2	2.238 85.5 63.7	2.238 85.5 63.7
YEAR-TO-YEAR ANALYSIS				
((CYPRE/PYFIN) - (FINIDL/FINIDL(-12)) ** 2	2.252 100.0	2.465 109.5 38.5	2.465 109.5 38.5	2.250 99.9 51.1

WHOLESALE INVENTORY

ABSOLUTE PERCENT CHANGE

MEASURE	GM OF METHA GMMA/GMMA	GM OF METHB1 GMMB1/GMMA AV %MB1<MA	GM OF METHB2 GMMB2/GMMA AV %MB2<MA	GM OF METHB3 GMMB3/GMMA AV %MB3<MA
LEVEL ANALYSIS				
ABS(FIN / FINIDL)	0.660	0.593	0.502	0.502
	100.0	89.9	76.1	76.1
		49.6	60.7	60.7
ABS(PRE / FINIDL)	1.176	1.166	1.166	1.166
	100.0	99.2	99.2	99.2
		50.4	50.4	50.4
ABS(PRE / FIN)	1.148	1.155	1.096	1.096
	100.0	100.6	95.5	95.5
		44.4	60.7	60.7
MONTH-TO-MONTH ANALYSIS				
ABS((PRE/FIN) - (FINIDL/FINIDL(-1)))	1.160	1.188	1.110	1.110
	100.0	102.4	95.7	95.7
		52.6	55.6	55.6
YEAR-TO-YEAR ANALYSIS				
ABS((CYPRE/PYFIN) - (FINIDL/FINIDL(-12))	1.271	1.365	1.365	1.271
	100.0	107.4	107.4	100.0
		48.1	48.1	57.8

WHOLESALE INVENTORY

ROOT MEAN SQUARE ERROR

MEASURE	GM OF METHA GMMA/GMMA	GM OF METHB1 GMMB1/GMMA AV %MB1<MA	GM OF METHB2 GMMB2/GMMA AV %MB2<MA	GM OF METHB3 GMMB3/GMMA AV %MB3<MA
LEVEL ANALYSIS				
(FIN / FINIDL) ** 2	0.834 100.0	0.774 92.7 49.6	0.648 77.6 60.7	0.648 77.6 60.7
(PRE / FINIDL) ** 2	1.439 100.0	1.432 99.5 50.4	1.432 99.5 50.4	1.432 99.5 50.4
(PRE / FIN) ** 2	1.430 100.0	1.432 100.1 44.4	1.346 94.1 60.7	1.346 94.1 60.7
MONTH-TO-MONTH ANALYSIS				
((PRE/FIN) - (FINIDL/FINIDL(-1))) ** 2	1.445 100.0	1.471 101.8 52.6	1.392 96.3 55.6	1.392 96.3 55.6
YEAR-TO-YEAR ANALYSIS				
((CYPRE/PYFIN) - (FINIDL/FINIDL(-12)) ** 2	1.586 100.0	1.703 107.4 48.1	1.703 107.4 48.1	1.600 100.9 57.8