

Calculations of uplift data for footwear & apparel surveys

14 April 2004

Purpose

- This paper sets out the reasoning for and the methodology used to calculate uplift data for ASGA's footwear and apparel surveys.

Background

- Footwear surveys have been carried out on a quarterly basis since July 1995 while apparel surveys have been carried out on a half-yearly basis since July 1997.
- The surveys are designed to quantify, as accurately as possible, the size of the internationally branded wholesale footwear and apparel markets by detailed category within Australia.
- In an ideal world, the survey would be completed by totalling data from all relevant wholesalers within Australia. However, some wholesalers choose not to supply data and so a method has been developed to account for this missing data – this is commonly referred to as “uplift”.

Uplift calculations

- Uplift data is calculated with the assistance of two retailer panels. At the current time, the panels consist of the following members:
 - Footwear – Myer, Rebel Sport, Rowe & Jarman, The Athlete's Foot
 - Apparel – Rebel Sport, Rowe & Jarman.
- These retailers are asked to fill out a questionnaire that is in the same format as that filled out by the wholesalers. However, the wholesalers provide information relating to their sales only whereas the retailers provide information on a proportional basis according to guidance they are provided by Deep End Services as to the wholesalers that have chosen not to participate in a given survey. The information is provided for three categories of wholesalers:
 - Category 1 - those that have provided data;
 - Category 2 - those that have not provided data but would be considered part of the survey frame; and
 - Category 3 - those that have not provided data and would not be considered part of the survey frame (eg. skate shoe & apparel wholesalers who may be added to surveys at some stage in the future).
- *For example, Retailer A in the apparel survey may determine that 85% of men's tracksuits were sold by Category 1 wholesalers, 10% by Category 2 wholesalers and 5% by Category 3 wholesalers.*

- The information is then weighted on the basis of the total wholesale purchases of the retailer for the given period.
- *Retailer A may have reported total apparel sales of \$10 million and Retailer B may have total sales of \$5 million. For a two-member panel, this means that Retailer A's overall weighting would be 0.67 (i.e. 10/15)*
- *Retailer A's uplift contribution for men's tracksuits would then be calculated as*

$$= (\% \text{ Category 2 sales}) / (\% \text{ Category 1 sales}) * \text{weighting}$$

$$= 0.1 / 0.85 * .67$$

$$= 0.078$$

$$= 7.8\%$$
- The individual retailers' weighted uplifts are then added together to calculate the uplift factor.
- *Uplift factor*

$$= \text{Retailer A uplift} + \text{Retailer B uplift}$$

$$= 7.8\% \text{ (from above)} + 4.4\% \text{ (say)}$$

$$= 12.2\%$$
- The 'raw' total of sales reported by Category 1 wholesalers is then multiplied by the total uplift factor to arrive at an estimate of the actual category size.
- *Total category size*

$$= \text{Sum of Category 1 wholesalers' sales} * (1 + \text{uplift factor})$$

$$= \$500,000 \text{ (say)} * (1 + .122)$$

$$= \$610,000$$

Implications

- Use of the uplift factor process as described in this paper is an excellent method to produce accurate data when both the Category 1 wholesalers and the retailer panel account for a reasonably large proportion of sales. This is generally the case for the footwear surveys (where an overall uplift factor is generally in the range of 10% to 20%).
- However, the process is less accurate for the apparel survey where the retailer panel only contains two members and fewer returns are received from Category 1 wholesalers. An additional complication is caused within categories where sales are dominated by Category 2 wholesalers, with bathers being the most obvious example and where uplift factors can be as high as 1000%.
- Users of the apparel survey data should therefore exercise caution when using the data and particularly for categories where the uplift factor is higher than 100% - these categories are now highlighted within the survey results spreadsheet and consisted of the following for the July – December 2003 survey:
 - Bathers
 - NRL – jumpers & guernseys
 - NRL – other licensed apparel
 - ARU
 - Other licensed apparel.

- Users of apparel survey data should also be aware of particular problems that arise when one of the following occurs for a category:
 - Total sales for Category 1 wholesalers are zero; or
 - Total % sales for Category 1 wholesalers as reported by the retailers is zero.

In the first case, the calculated uplift factor is irrelevant (as zero multiplied by anything is zero) while in the second case an uplift factor cannot be calculated (divide by zero error). The women's bathers category in the July – December 2003 apparel survey was impacted by an occurrence of the first case and hence uplifted sales are presented as zero (compared to \$9.073 million in July – December 2002). Clearly this is incorrect but there is no manner by which this can be rectified at the current time. Instances such as this are now identified within the results spreadsheet with an entry of "No sales reported".

Improving the process

- The most obvious way by which this process can be improved is to receive data from more suppliers and retailers. ASGA continues to work on this but is mindful that any data limitations be highlighted in the interim.