



# The New Research is Bringing Transparency Between Marketing and Finance

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ARF Audience Measurement 6.0



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## I. Background

Historically, there has been a gulf separating marketing and finance within major corporations. Whereas finance reduces everything to dollars and cents, marketing has never been able to do so.

Marketing – consisting principally of advertising (persuasion as to the brand's ability to enhance the life of the user) and promotion (saving the user money) – typically has set its advertising goals in terms of awareness levels and percentages of the population holding specific perceptions of the brand.

Stuart Colley in 1961 wrote a treatise defending this practice. Called DAGMAR for short, this stood for Defining Advertising Goals for Measuring Advertising Response. The goals that were to be quantified were communications goals such as awareness and attitudinal/perception percentages of the population at large or of a specific target group.

One might look at this treatise as an outgrowth of two business trends which were changing the world at that time. One trend was the desire to reduce everything to numbers of some sort – the drive to quantification. This was aimed at making business more like science.

The other trend was Management By Objectives (MBO). This idea was to be able to measure how well an employee performed removing subjectivity and leaving a clearcut equation. The two trends were obviously quite inter-related.

At about the same time, direct marketing was in the process of becoming a more prestigious practice. Going back in time before the 1960s, direct marketing was associated with products being sold by smaller companies, mostly through direct mail and print ads with mailback subsections in them – this was a very low prestige sector of the advertising business. In fact, the part of the advertising business that everyone called “Madison Avenue” tended to shun direct marketers as an “inferior” class. Led by Lester Wunderman and a handful of other visionaries, in the 60s direct marketing was showing itself to be just as applicable to major brands as to smaller ones, and as, in fact, a pretty smart business practice.

So at the time of DAGMAR there was a raging debate as to whether (a) all of advertising should be direct response (b) brand advertising should be measured based on sales results or (c) brand advertising should be measured based on quantified communications (awareness/attitude) goals. DAGMAR obviously took

position “c”. Tolley argued convincingly that advertising is only one of many drivers of sales and so advertising can never be held responsible for a brand’s sales. This demolished the argument for “b”. For many years, DAGMAR was widely upheld by those in the advertising business not disposed to join the direct marketing revolution.

The situation began to change with the introduction of singlesource measurement methodologies. With the encouragement of ARF, the Milwaukee Ad Lab was established in 1964. Later in the 60s it was overshadowed by Adtel, causing the Ad Lab to close down in 1971. Adtel itself was then shouldered aside by IRI’s BehaviorScan in the early 80s. In the early 90s came Arbitron’s ScanAmerica, and in the new century came Apollo and similar services in England, France and Germany.

In parallel to these singlesource methodologies came the rise of marketing mix modeling (MMM). The combination of the two sets of techniques ultimately proved that advertising’s contribution to sales could be teased out from other forces using multivariate analytics. Singlesource was able to identify advertising’s contribution to sales with high signal to noise ratio, at the individual household level, and could aggregate this upward. MMM could estimate advertising’s contribution to sales inferentially with greater levels of noise in the signal, and the necessity of subjective choices on the analyst’s part. One way or the other Tolley’s assertion of the impossibility of separating out advertising’s sales effect was demolished.

Today, advertisers are highly vocal about wanting to make advertising accountable on an actual ROI basis, meaning real sales results, not some surrogate such as communications measures. The advertiser who has made the most public its use of singlesource as a tool to increase TV ROI is Mars. In 2009, TRA and Mars co-presented at AMS 4.0 and the single most important aspect of their paper was the fact that Mars brands increased their average TV ROI from 70 cents to \$2.00 in England, France and Germany through the use of the small singlesource panels in those countries to identify and remove under-selling creative executions and to select programs reaching purchaser targets.

In the past year, Mars has been using TRA as its U.S. singlesource. TRA differs from all prior singlesource in that it leverages already-existing databases (frequent shopper cards and set top box data) rather than requiring panelists to do home barcode scanning and peplemeter compliance. This allows two orders of magnitude greater sample sizes, and removes both nonresponse and response biases. This TRA invention received a U.S. patent in June 2010.

## II. Objective

The objective of this paper is to report the gains in TV ROI made by Mars in its first year of TRA use in the U.S., and to round out the picture of how TRA singlesource is being used by advertisers and their agencies to increase TV ROI, by reference to other case studies done by other advertisers and agencies during the same time frame.

## III. Methodology

TRA is a patented method for linking any number of databases at the same-household name/postal address level, without TRA ever seeing those names and addresses. This means that in an ideal world, all marketing research could be combined without any estimation, modeling, inferencing, fusion or ascription. Because TRA makes use of data already collected and compiled (scanner data and other “hard” purchase records, TV set top box data and other “hard” program/advertising household exposure records), without the need to elicit cooperation or self-reported data, there is no bias of either type (nonresponse bias and response bias). Because enormous sample sizes are used (approximately two orders of magnitude larger than all previous singlesource), random error is minimized. These are the three classical types of error (nonresponse bias, response bias, and sampling error) and they are reduced to the minimal level in the TRA methodology.

The remaining types of error – processing error and omission of unavailable data – are rigorously controlled by TRA:

- a. Processing error is held to a minimum by automation and elimination of manual processing, and by multiple levels of state of the art QC (Quality Control). TRA’s Engineering team is led by experts in massive database processing with experience at companies such as Apple and sectors such as Wall Street trading.
- b. Because not all stores sell their household level scanner data, and not all Multichannel Video Platform Distributors (MVPDs) sell their set top box (STB) data, TRA weights and projects the data it does receive to the Total U.S. TV Homes population. The sample is stratified and weighted/projected based on over 100 variables including market, county size, age of head of household, annual household income, family size, race, and Hispanic/Non-Hispanic, resulting in exact representativeness along these dimensions.

Evidence that the resulting data in fact minimize processing error and omission error is found in the  $>.9$  correlation with currency ratings and with IRI brand share data. Studies by Mars indicate that the insights obtained by singlesource in

grocery stores are applicable to all other non-measured packaged goods channels (convenience stores, big box stores, etc. which either lack frequent shopper card programs or do not sell their data).

Privacy protection is a key foundation of the TRA system. TRA only accepts data from sources which fully disclose to the consumer what is being done with their data and which offer the consumer an opt-out. TRA itself never receives PII (Personally Identifiable Information). TRA receives household level demographic information from Experian and does not use information that could be used to reidentify a household, resulting in exclusion of about 100 demographics per household (leaving hundreds of other demographics which are used). TRA wherever feasible uses double-key encryption in the uploading of STB data. TRA (alone in its field) is certified by auditing as compliant with ISO 27001, the highest standard of information security/data protection. It is impossible to run reports within the TRA system that are based on fewer than 30 households, making reidentification of any household impossible.

TRA's system Media TRAnalytics® is a state of the art distributed processing system – a supercomputer composed of hundreds of processors – which is scalable to almost any size sample, while delivering virtually all reports in seconds. To our knowledge there is no comparable system in the world of marketing/media research today. This Web based system allows TRA users to create their own highly customized reports and transfer these to any other system via APIs or Excel.

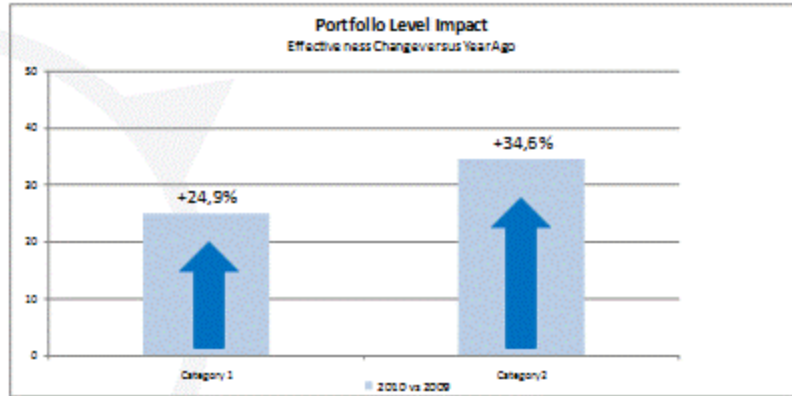
## **IV. Findings**

First we will present the Mars findings, and then parallel findings by other TRA clients. The Mars findings are presented by M. Larginat, and the other TRA results by M. Harvey.

### **A. Mars**

1. Two of Mars' leading brands, in two different product categories, changed creative and media according to TRA indications in 2010. One brand increased TV ROI by +25%, and the other increased TV ROI +35% as a result of using TRA.

# Measuring Progress from Implementing Learning

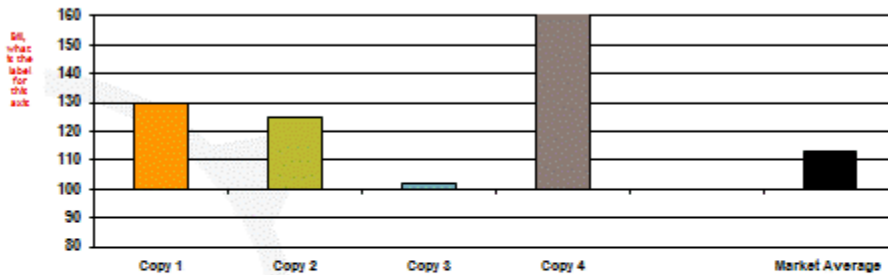


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- One brand had 4 creative executions over a two year period. Although all had passed standard copy testing, 1 of these had very strong sales effect, 2 had above average sales effect and 1 had virtually no sales effect.

# Assessing Performance Performance across Executions



	2008Q1	2008Q2	2008Q3	2008Q4	2009Q1	2009Q2	2009Q3	2009Q4
Copy 1	Orange			Orange				
Copy 2		Green		Green	Green			
Copy 3						Blue		
Copy 4								Brown

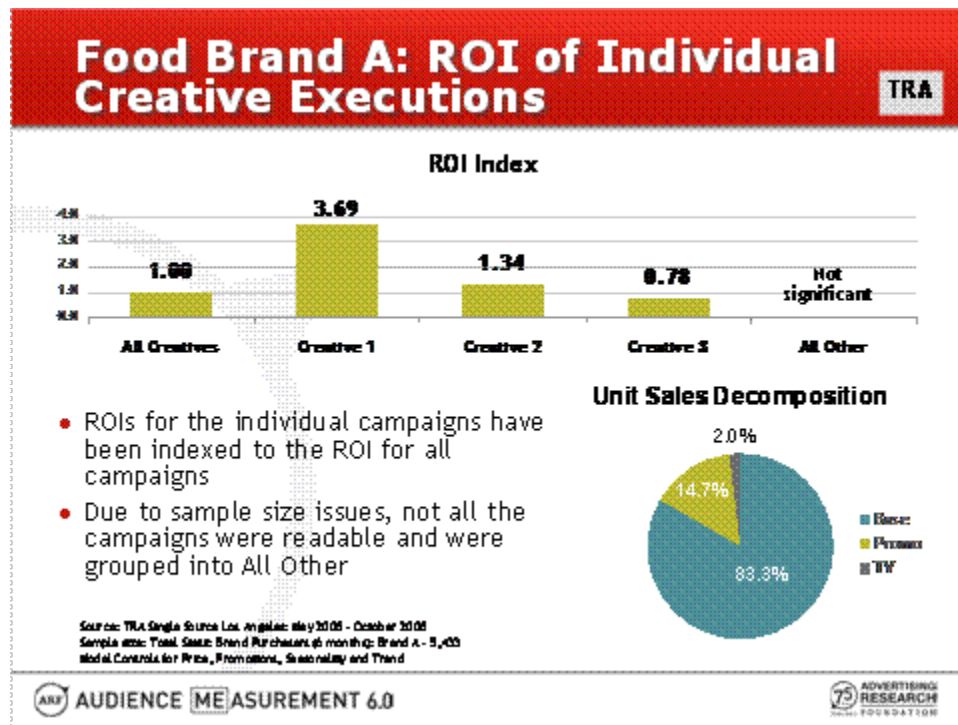
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- Using the TRA information we are now able to more quickly spot which executions to run more frequently and which ones to take off the air. In Europe, this creative tactic represents 65% of the ROI lift we are able to achieve with singlesource, the other 35% stemming from media changes. Through both creative and media we have increased our TV ROI from 70 cents to \$2 in Europe.
- We expect the TV ROI to continue to build for the next two years as creative and media agency implementation continues to gradually adapt to the requirements of ROI optimization in the U.S. Already TRA has brought tens of millions of dollars to the Mars bottom line that would not have been there, through the use of singlesource around the world now including U.S. gains. In terms of sample size and other advances, TRA has set a new high bar for singlesource.

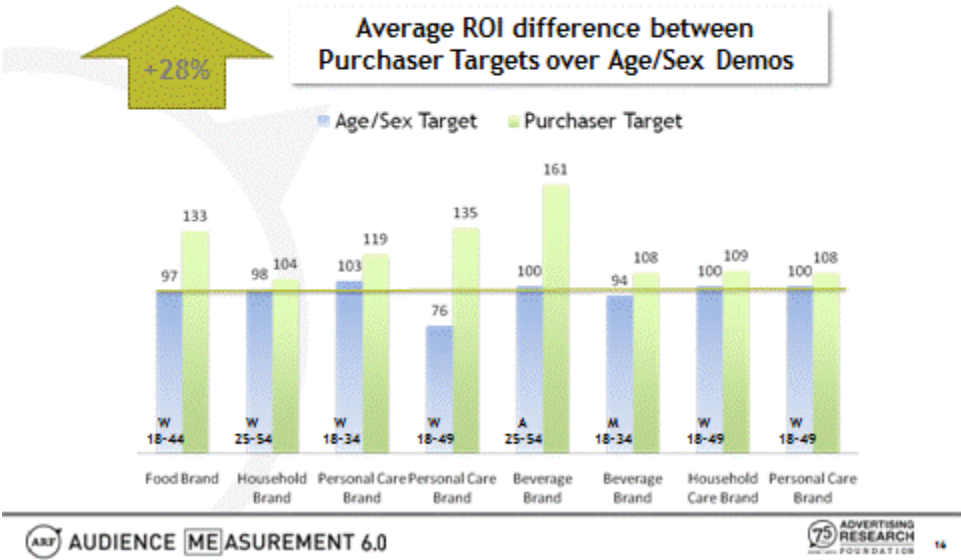
## B. Other TRA Clients

- Other TRA clients have found similar dispersion in the sales effects of creative executions, despite having been pretested in the standard manner.

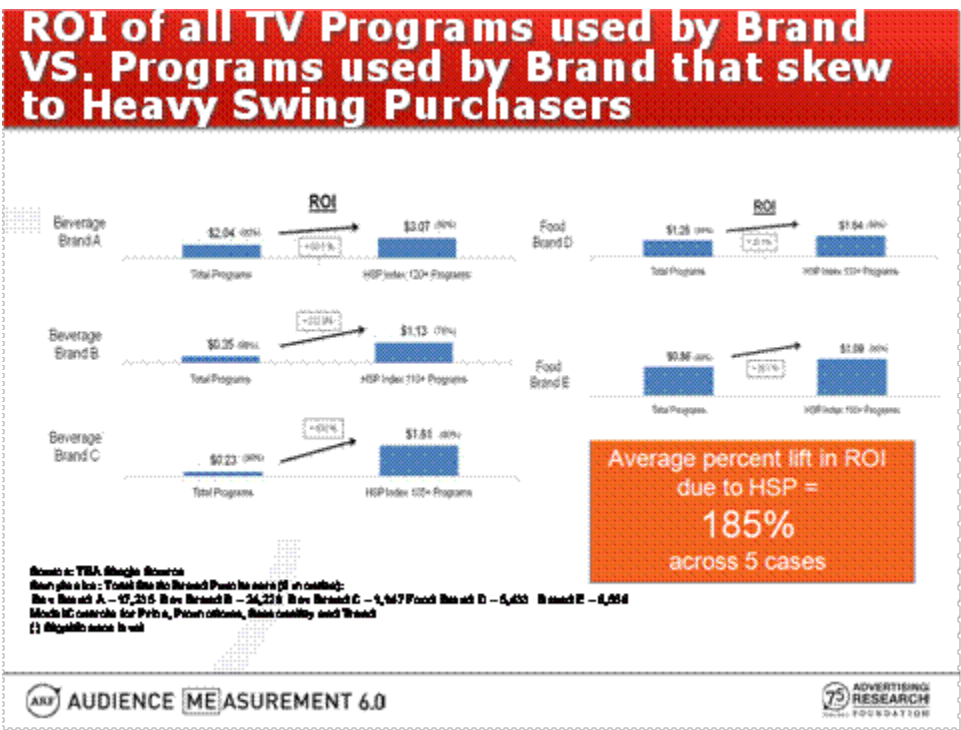


- Other TRA clients have also seen that each brand has a specific ROI Driving segment. This is always some type of purchaser segment and not a sex/age target. Sex/age targets almost always show lower TV ROI than the proper purchaser segment that maximizes TV ROI.

# TRA Purchaser Targets Improve Sales Impact



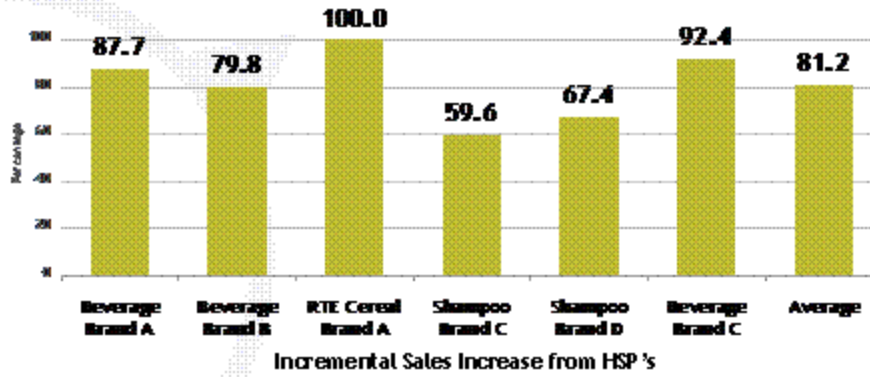
- 3. Many mature packaged goods brands have the same ROI Driving segment – we call them Heavy Swing Purchasers – they are category heavies who have also bought the brand in the past although not loyally.





## Heavy Swing Purchasers™ Account for Over 80% of Incremental Sales Effect of TV Advertising

HSP Percentage of Total Incremental Sales Revenue Based on Brand Purchase Increasers in Post Period as Compared with Pre Period Among Those Exposed to Brand TV Advertising



Source: TRA Single Source Ltd. Analysis May 3-May 12, 2008  
 Sample size: Total=62,363; Heavy Swing Beverage Brand A and B=4,414; Heavy Swing RTE Cereal purchasers=7,308; Heavy Swing Shampoo Brand C purchaser=291; Heavy Swing Shampoo Brand D purchaser=225; Heavy Swing Beverage Brand B=7,026

AUDIENCE MEASUREMENT 6.0

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- Using the TRA optimizer or agency's own optimizer, the amount of increase in weight against the ROI Driving segment that can be produced at the same cost has been found to vary from as low as 10% to as high as more than double.

## TRA Targeting – Olay Purchasers Network "Z" Switch Pitch

TRA

- By targeting purchasers rather than demos, Olay can achieve a 104% lift in targeted impressions from shifting a vast majority of the buy to more target-rich programs

### TRA NATIONAL DATA



	Original Plan (Across Networks)	Rebuy Plan (Across Networks)
Olay Regenerist Heavy Purchasers	TRP	188.19
	Reach 1+	49.9
GRP (Surrogate for Cost)	Broadcast	115.17
	Cable	56.82
	Total	171.99
Units	Broadcast	73
	Cable	234
	Total	307

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5. TRA has thus far produced three case studies for clients involving nontraditional television advertising forms. One of these was a program sponsorship that was quite costly for the brand, and yet the ROI even despite the huge relative cost, was more than double the brand's average. We find this extremely interesting based on earlier work of one of the authors (Harvey) which predicted TV sponsorship having far above average ROI (Harvey et al, 2006). This case qualified as "True Sponsorship" (per the use of terminology in the cited paper) in that the brand was integrated into the program, and in that there was also a gratitude-producing philanthropic/Cause element.

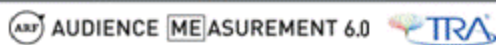
## Case Study - Program Sponsorship

### Results:

The sponsorship produced more than twice the ROI compared to the same brand's traditional TV advertising during same period

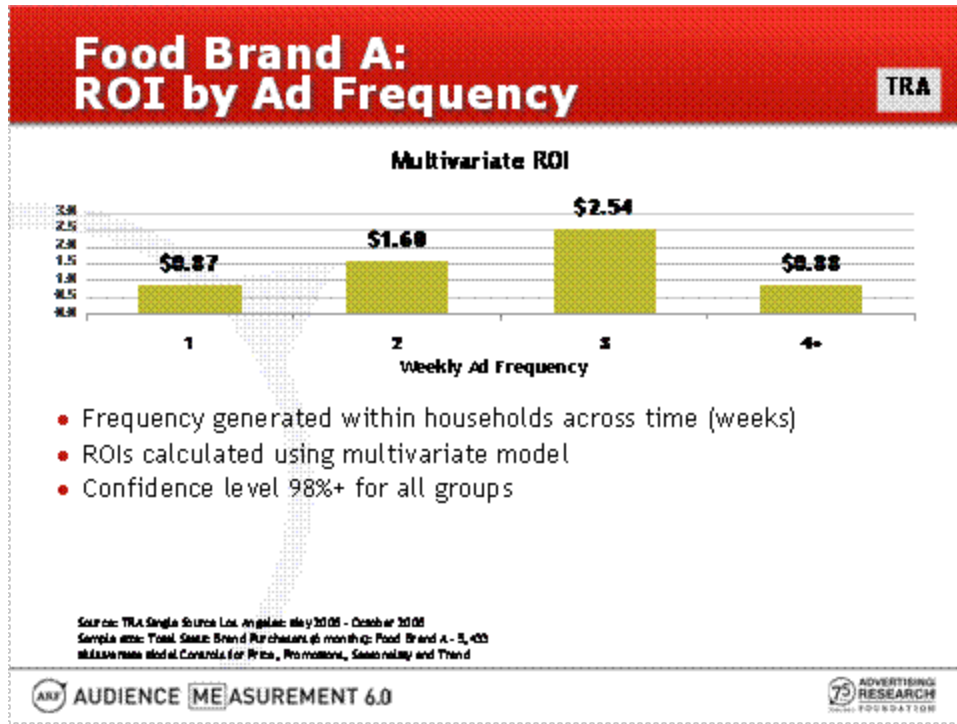


Source: TRA National 1/2009 - 6/2010  
Sample size: Total Static Brand Purchasers (18 months): 6,210

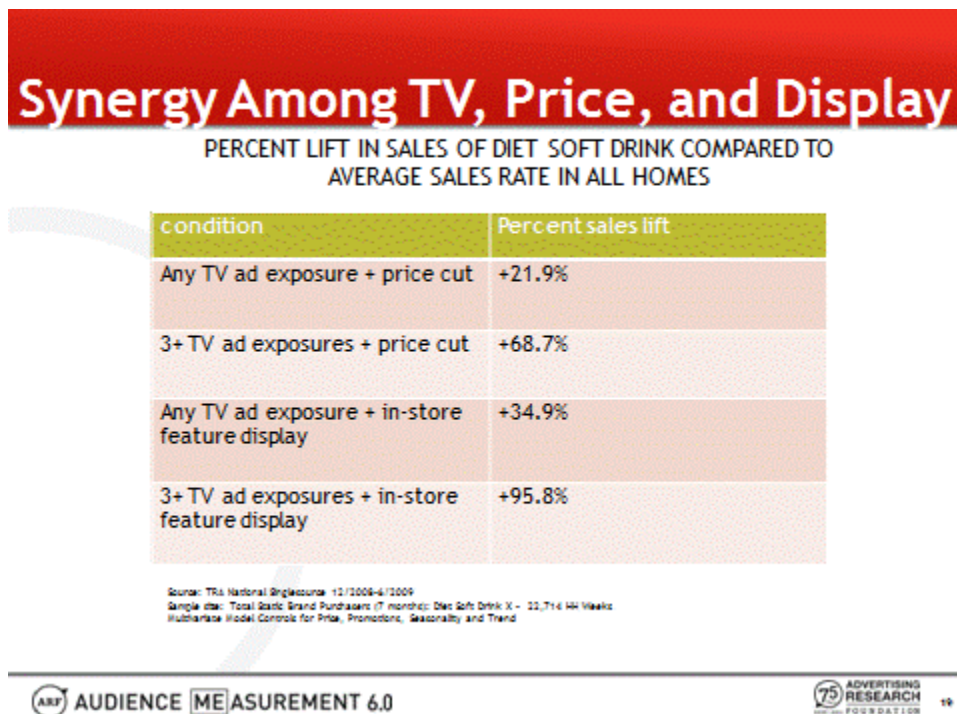


6. Four out of five fast moving packaged goods brands analyzed achieve their maximum TV ROI at a frequency of 3 household exposures per week. We hypothesize that this is because at a frequency of every other day, whenever a shopper goes to the store the brand's commercial could have been seen within the last 48 hours – i.e. what we are seeing may look like frequency but it could actually be a Recency effect.





7. In beginning to cross-analyze the interactions among price, in-store display, and TV, it appears that at least some of the time these elements synergize, as in this diet soft drink case:



## V. Implications

They said it couldn't be done. And now, it has been done: brand advertising on television can be as accountable as direct marketing. TV ROI can be measured by empirical singlesource not just estimated by marketing mix. TV ROI can be calculated down to granular aspects (target groups, frequency, creative executions, media vehicles, nontraditional television advertising such as branded entertainment and True Sponsorship, synergy with in-store display, synergy with price, etc.) where marketing mix was never able to credibly go before. And therefore, TV ROI can be increased by learning what works and doing more of it, taking money away from what doesn't work as well.

This is no longer theory, it is fact.

And this is destined to have tectonic impact. TV ad revenues could conceivably begin a new growth phase, in that top advertisers who have settled for low TV ROIs because they had no choice – getting out of TV had even more harmful effects and marketing mix could not tell you how to lift your TV ROI – can now grow their TV ROI – and this could justify more TV spend. The rollout of TV Everywhere could add to the ability to use TV in new ways – synergies across screens – that could further add to the ability to lift TV ROI.

Agencies can build a stronger business again by new business models to compensate them for ROI performance.

Early TRA results suggest the ROI power of program-brand integrations (deeper than simple product placement), and especially True Sponsorship brand integrations involving a philanthropic/Cause element. We speculate that this can be the doorstep to agencies getting back into TV production in a big way – creating custom content as optimal environments for their brands. We may see a return to TV program cast presenter commercials (called “live reads” in radio). Now that we can measure granular TV ROI there will be a Darwinian feedback loop that fuels the expansion of whatever works to lift client sales.

Whatever the effects now that the patented TRA method of scalable singlesource – linking existing databases at the household level behind a privacy shield – has been proven to increase TV ROI, the world will never be the same again. The world of marketing and the world of finance just became one singular world. Thanks to Mars for taking the dramatic step of lifting the cover off of this world changing finding and sharing it with the industry.

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