
MASB **Standards Project**

Return from CPG Target Segments using Customer Lifetime Value (CLV)

Rick Abens
Foresight ROI

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**Marketing Accountability Standards Board
of the Marketing Accountability Foundation**

Project Team

Leads: Rick Abens (Foresight ROI)
Kate Sirkin (SMG)

Heroes: Jamie Richardson (Kimberly Clark)
Chris Ciccarello (ConAgra Foods)
Shubu Mitra (Coke)
Eric Schmidt (Coke)
Debra Parcheta (Blue Marble)
Paul Flugel (Nielsen)
Brock Trautvetter (Nielsen)
Carl Spaulding (Nielsen/Catalina)
Path Sengupta (SMG)
Dominique Hanssens (UCLA)
VK Kumar (GSU & AMA)

Admin: Allan Kuse (MMAF Center)
Meg Blair (MAF/MASB)

Meet: Monthly on 3rd Friday at 10:30 am ET

Agenda

- I. Objectives & Hypotheses
- II. Customer Lifetime Value Metrics
- III. Managing CLV with Marketing
- IV. Forward Direction

Objectives & Hypotheses

Objectives

Phase I: Document what is known about CLV.

Phase II: **Conduct a pilot and test that will demonstrate that the CLV construct and models can be reliably applied to CPG target marketing.**

Phase III. Determine the extent to which this approach satisfies the MMAP Characteristics (e.g. predictive validity and causality) for use in CPG business practice to improve overall financial performance.

Hypotheses

- 1) A metric of Customer Lifetime Value (CLV) can be standardized and used to **quantify the short and long-term effects of marketing activities** on financial performance for CPG target segments.
- 2) The CLV structure will allow marketers to better **target the right marketing efforts** to the right consumers.
- 3) The measurement components of the CLV construct applied to CPG can be improved over time for **more accurate forecasting and process management.**

Confidentiality and Security Considerations

1. Project team full access to project information

- Complete a Non-disclosure agreement

2. MASB Board

- Review all general findings
- Specific findings as per Marketer choice

3. Public

- Reveal only product categories
- Select findings as per Marketer choice

CLV and CE: Definitions

- **Customer Lifetime Value is the net present value of the expected cash flows attributed to the relationship with the customer.**

What's in a Net Present Value?

Individual cash flows take into account

1. Number of expected purchase transactions
2. Purchase quantity per transaction
3. Price
4. Contribution margin

The **Net Present Value** discounts the future cash flows to account for a time value of money and risk (.25)

$$\text{Customer Equity (CE)} = \sum \text{CLV for all customers}$$

CLV and CE: Business Application

CUSTOMER LIFETIME VALUE is useful for:

- Calculating customer equity – Quantifying customer relationships as an asset
- Measuring customer loyalty trends - probability of repurchase
- Monitoring current marketing effects on the value customer relationships
- Determining differences in the impact of sales-based tactics and marketing-based tactics in short and long term
- Judging the appropriateness of the costs of acquiring a customer
- Selecting targets for certain customer-specific marketing strategies

CUSTOMER EQUITY is a useful measure of how much value a customer base represents in future revenues.

CE and Firm Value

**Customer Equity = Net Present Value of all
Expected Future Earnings
from the Brand's Customers**

**Firm's stock price \approx Net Present Value of all
Expected Future Earnings
by the Firm**

Source: Hanssens (2008)

- **Value of customers' discounted future earnings is a good estimate of firm's value**
- **A 1% improvement in retention, margin, or acquisition cost improves firm value by 5%, 1%, and .1%, respectively.**
- **The results show that the linking of marketing concepts to shareholder value is both possible and insightful.**

Source: Gupta, Lehmann, Stuart (2004) 8

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Calculating CLV and CE

1. Household and transaction level data is expanded to calculate additional household level statistics.
2. The panel data is split into two sections:
 - A. An initial hold out set: some number of weeks large enough to have a stable view of purchasing patterns (to use for good prediction) (22 weeks was used for all pilot test sets)
 - B. A calculation set: the rest of the panel weeks (about 2 and ½ years), to calculate CLV
3. To calculate CLV:
 - A. We predict for each household in each week the probability that they will buy the brand again.
 1. predictions take into account the number of purchases, EQs purchased and the time elapsed since their last purchase.
 - B. We also have a threshold for probability of purchase
 1. Equal to or above the threshold, a household is a retention household
 2. Below the threshold, an acquisition household.
 - C. We classify the households as acquisition or retention in every week based on the threshold.
 - D. We use the households in each group in each week to calculate a weighted CLV value (net present value of the cash flow we expect from the relationship with these panel households) at each week's end.
 - E. The dollar value on the Y axis of the graph represents the the sum of the present values (PVs) of the individual cash flows using the time value of money for the acquired households and retained households in each week. (From the value for this panel set, we could use the size of the target set and the proportion to the population to scale up to a Total U.S. Household CLV for the brand.)
4. CE is the sum of the CLV for all customers

Definition of Prospect vs Active Customer

Relationship businesses: based on contractual status

Consumer packaged goods: based on probability of being an active customer

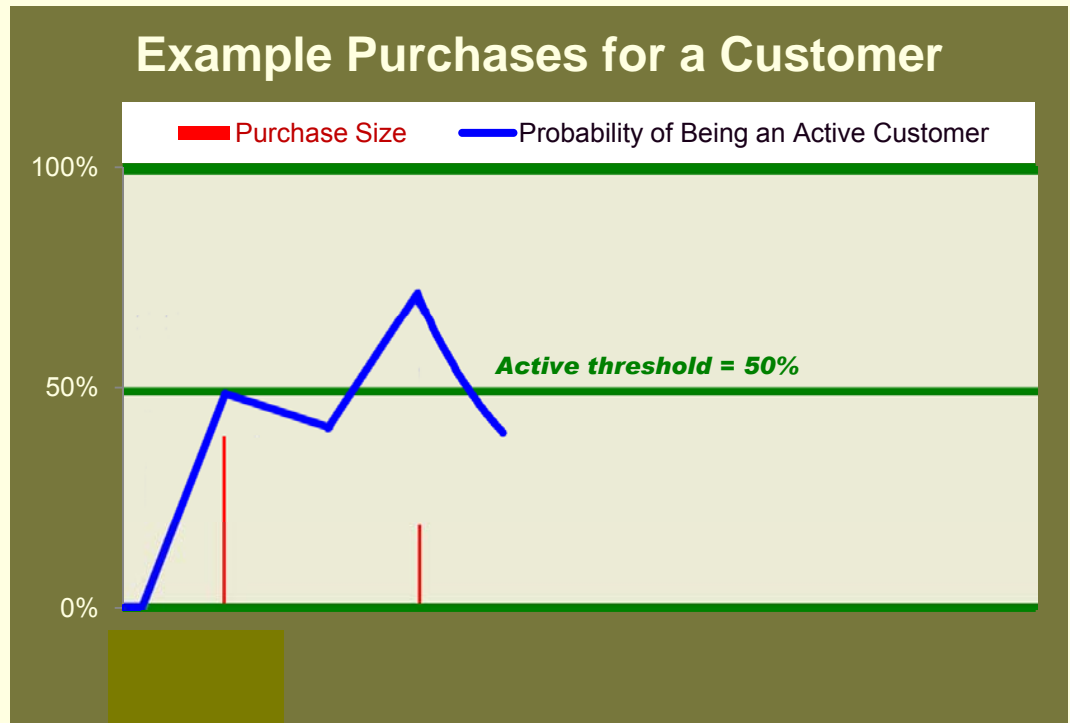
Active Customer Drivers

1. Time since last purchase
2. Purchase frequency
3. Purchase size

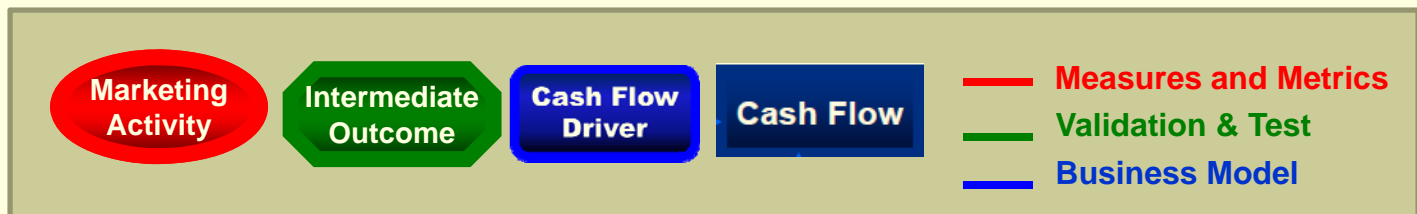
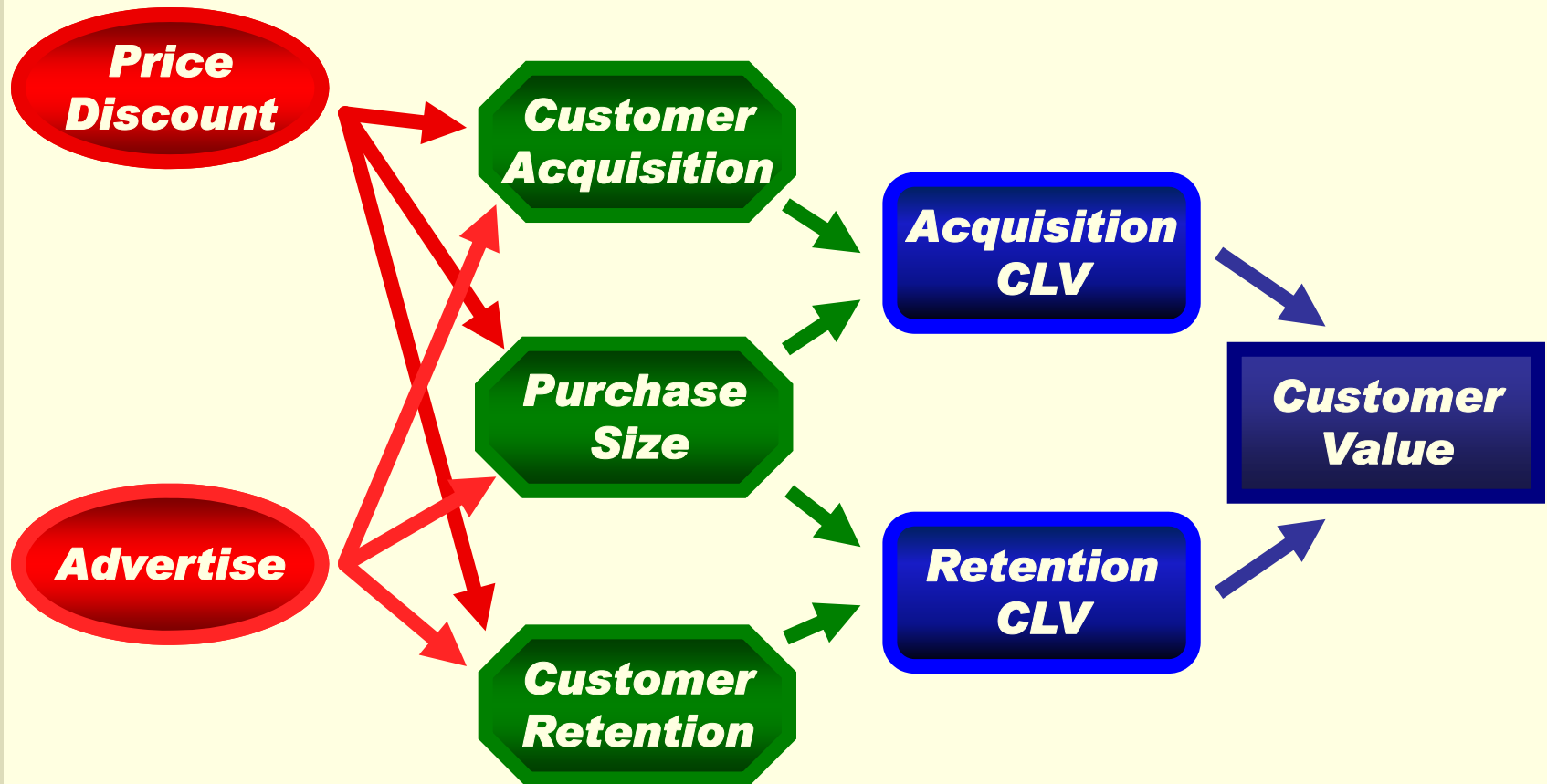
Forecast Accuracy of Method

Number of transactions	91-98%
Purchase size	97%

Yoo & Hanssens (2011)



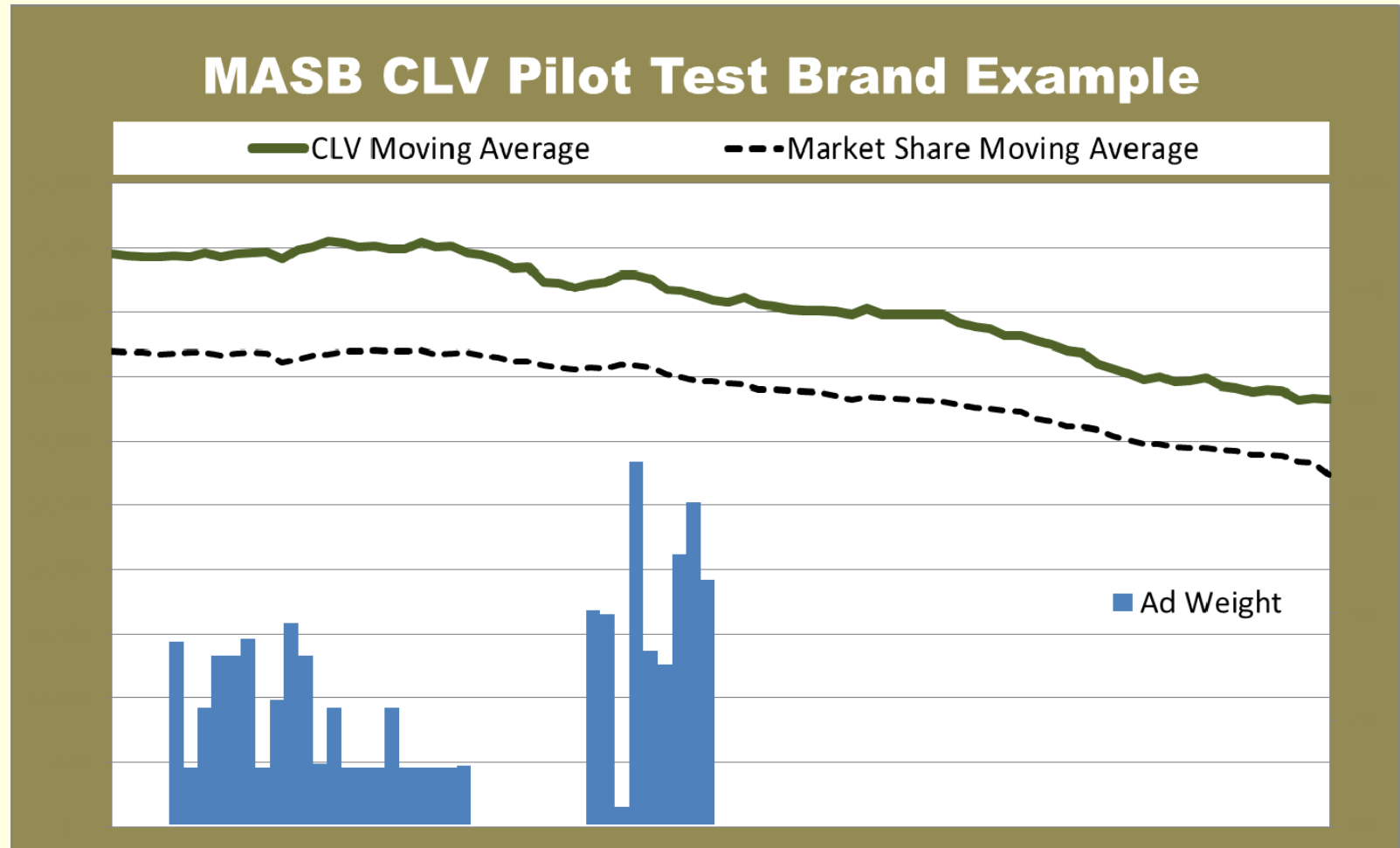
Managing Cash Flow from Marketing (Conceptual)



Observations from Initial Results

- **Marketing effects on acquisition and retention aligned with consumer behavior and firm's marketing strategies**
- **More variation than expected**
 - **Margin compression of price discounts not yet accounted**
 - **Sample sizes of the target consumer groups**
 - **Model parameters**
- **New metrics will take time and testing to understand**

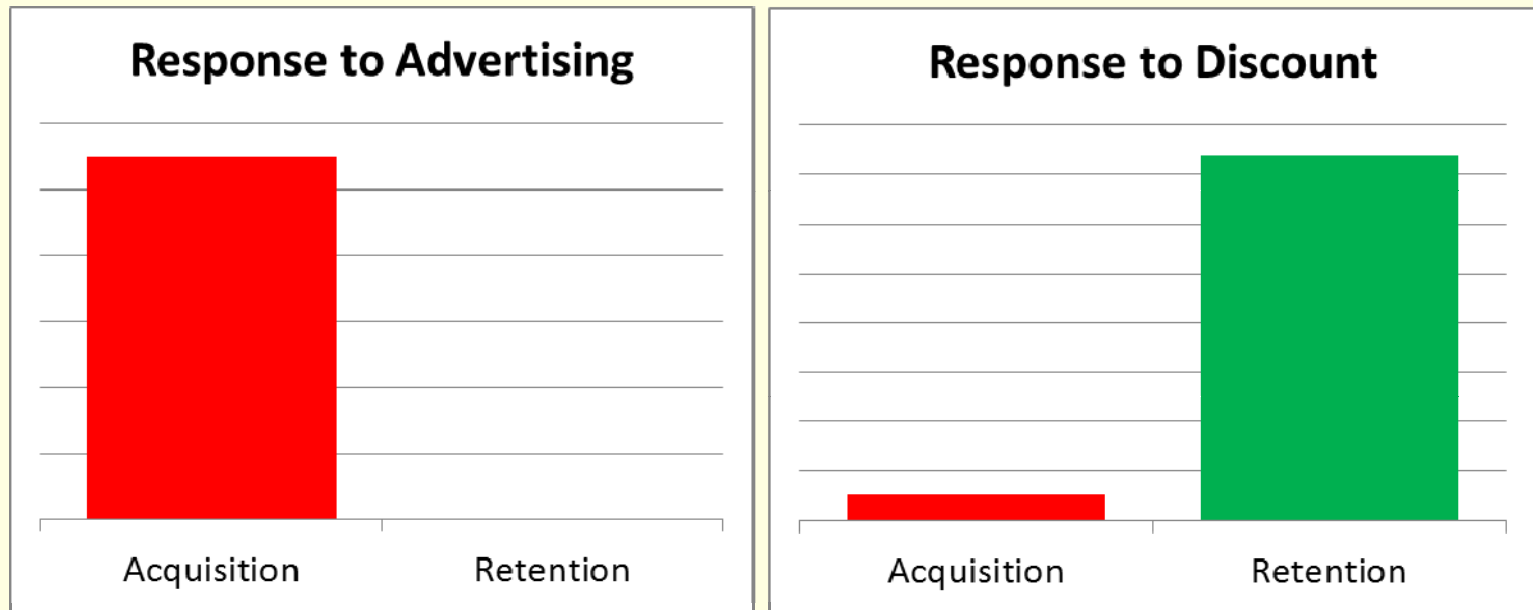
CLV appears to be responsive to advertising



One brand in MASB CLV Pilot, preliminary CLV estimates

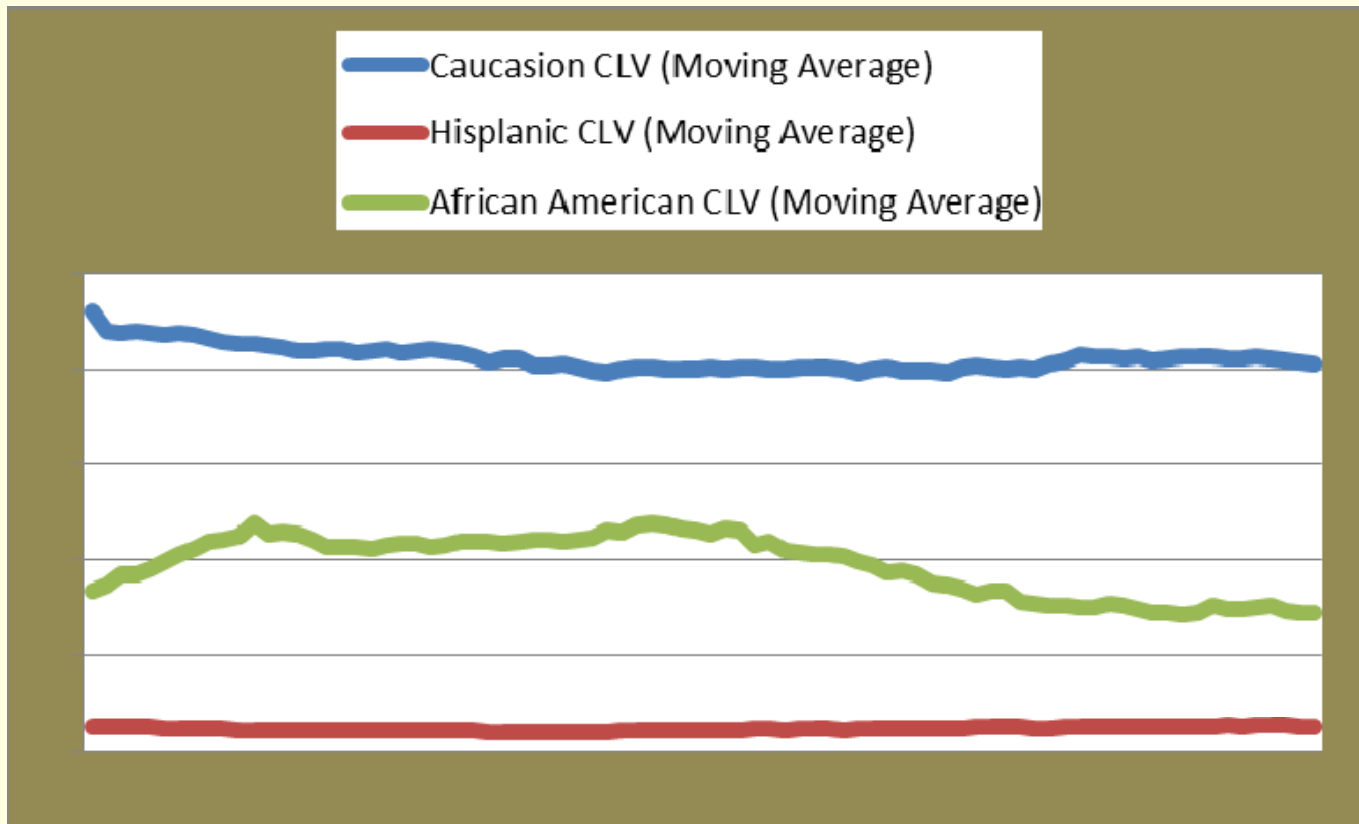
Marketing response can vary w/brand experience

Example



One brand in MASB CLV Pilot, preliminary CLV estimates, early marketing response model tests

Differences in target consumer groups



One brand in MASB CLV Pilot, preliminary CLV estimates

Questions to explore

- **Can we reduce the volatility of the CLV metric?**
- **How reliable are the acquisition, retention and CLV metrics?**
- **What are the most effective marketing tactics to drive acquisition, retention and customer equity for each brand?**
- **How do we differentiate our marketing to our target segments?**

Promise/Utility of using CLV/CE in CPG

- **CLV/CE's promise is in:**
 - **Measuring and predicting a brand's future cash flow based on changes in the relationship with its consumers**
- **CLV/CE's utility lies in:**
 - **Determining trends in a brand's health - past, present and future**
 - **Use marketing to manage your customer retention and build loyal behavior**
 - **Understand your target segment's response to marketing to differentiate messages and offers**

Thank-you!