

Sustainable Market Share Index™ 2021 Report

Randi Kronthal-Sacco

Tensie Whelan

Updated: April 2022



Sustainable Market Share Index™: Executive Summary

We reviewed consumer purchasing of sustainability-marketed products in 36 consumer packaged goods (CPG) categories comprising ~40% of the total CPG market* (\$). Our findings are:

Sustainability-Marketed Products Share Performance.

- Products marketed as sustainable now hold a **17.0%** market share, **up +3.3 pts** vs 2015, with significant **growth during the pandemic** (Pgs. 5, 6).
- Sustainability-marketed products delivered approximately **one third of all CPG growth**, despite representing 17% share (Pg. 7).
- Products marketed as sustainable **grew 2.7x faster** than products not marketed as sustainable (Pg. 7) and achieved a 6-YR **CAGR of 7.3%** vs. 2.8% for its conventional counterparts (Pg. 8).
- **Carbon Labeled** products now account for \$3.4B in Sales, up from \$1.7B in 2020 (Pg. 9).
- The market share of sustainability-marketed products roughly aligns along a **continuum** based on perceived category **functionality** or efficacy. Even in categories with low shares, shares of sustainability-marketed products increased (Pgs. 12-13).
- Sustainability marketed products enjoy **stronger shares online** vs. in-store (Pgs. 19, 20).
- **Availability** of sustainability-marketed products strongly **correlates with share** performance (Pgs. 27, 28).

*Excluding alcohol and tobacco. **Weighted by \$ Sustainable Sales of categories examined

Sustainable Market Share Index™: Executive Summary (Page 2 of 2)

Price Premiums and Elasticity of Sustainability-Marketed Products

- Sustainability-marketed branded products still enjoy a **price premium of 28%**** vs. their conventionally-marketed branded counterparts, but the **differential has decreased** since 2019 (Pgs. 14-15).
- Since the pandemic, year to year **price increases of conventionally-marketed products** have **outpaced** their sustainable counterparts (Pg.16).
- Sustainability-marketed products are largely **less sensitive to price**. (Pg. 17).

Innovation

- The **percentage of new products** that incorporate sustainability benefits have **increased** every year since 2017 (Pgs. 10,11).

Demographics

- **Upper income, millennials, college-educated and urban** consumers are more likely to buy sustainability-marketed products. In addition, middle income, Baby Boomers and Gen Xers contribute a significant percent of sustainable sales (Pgs. 22-26).

Green Chemistry

- **Green Chemistry** formulations are growing share and **contributing differentially** to category growth (Pgs. 29-34).

*Excluding alcohol and tobacco. **Weighted by \$ Sustainable Sales of categories examined

Sustainable Market Share Index™: Research Questions

Consumer packaged goods (CPG) companies are responding to changing consumer expectations, including for more sustainable product offerings, yet understanding of sustainable purchasing trends had been limited.

NYU Stern Center for Sustainable Business partnered with IRI, to assess the following:

1. Have purchases of sustainable products increased over time?
2. How important has sustainability become in new product development?
3. Are there specific product categories for which the purchases of more sustainable product options out- or under-perform less sustainable alternatives?
4. What is the price premium of sustainable products?
5. How have sustainable products fared in e-commerce?
6. What is the demographic profile of the sustainable purchaser?
7. What is the impact of product availability on share?
8. Are green chemistry products outperforming conventional formulations?

Note: This study represents an updated and significantly expanded review of consumer purchasing first presented in March 2019.

CSB Sustainable Market Share Index: Research Question 1

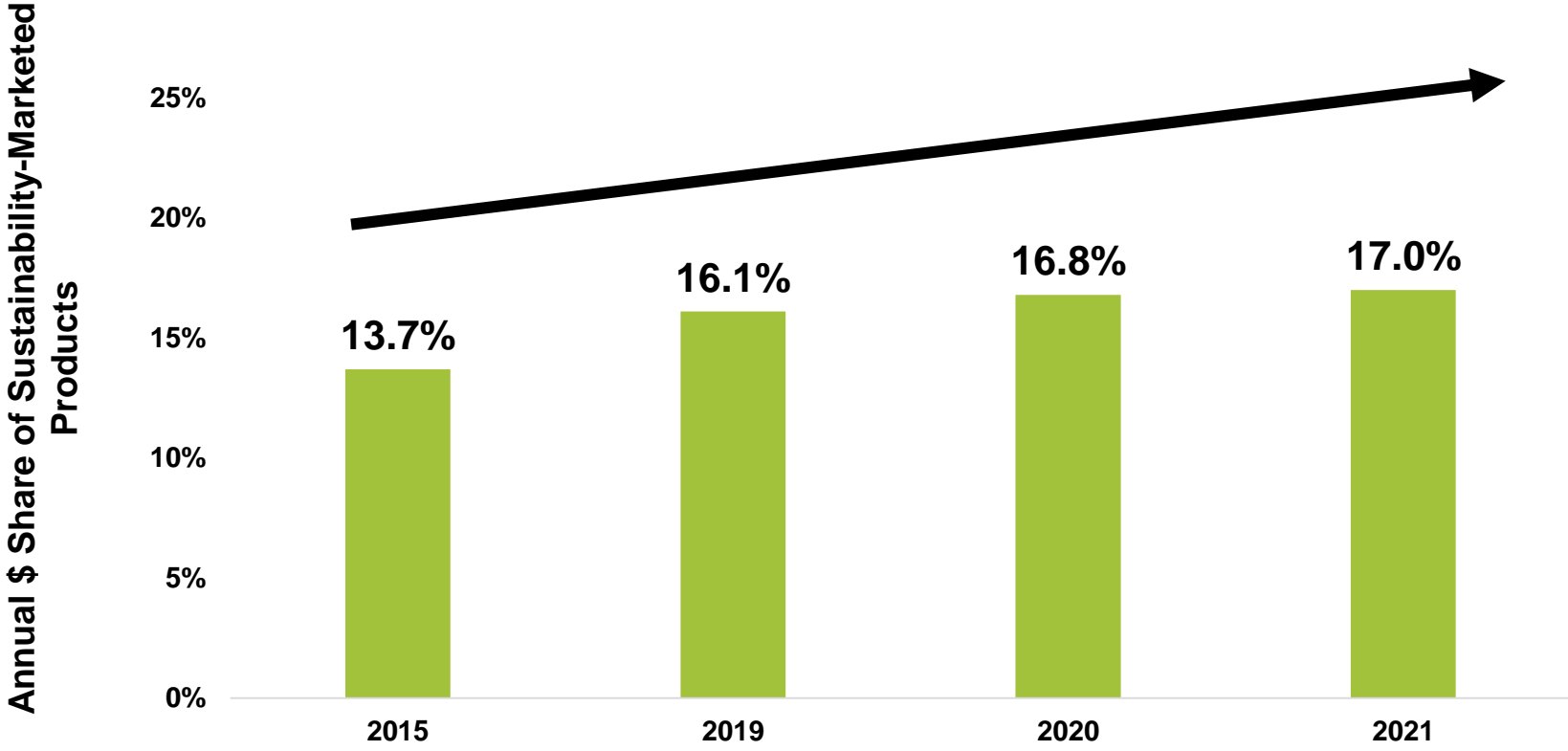
Research Question: Have purchases of sustainable products increased over time?

Research Result: Sustainability marketed products have grown every year since 2015 with a significant share increase during the pandemic. Moreover, they are contributing to a disproportionate share of the CPG category growth.



Sustainable Market Share Index™: Background 2021 Market Share

Sustainability-marketed products continues to grow share every year, with a marked increase during the pandemic.

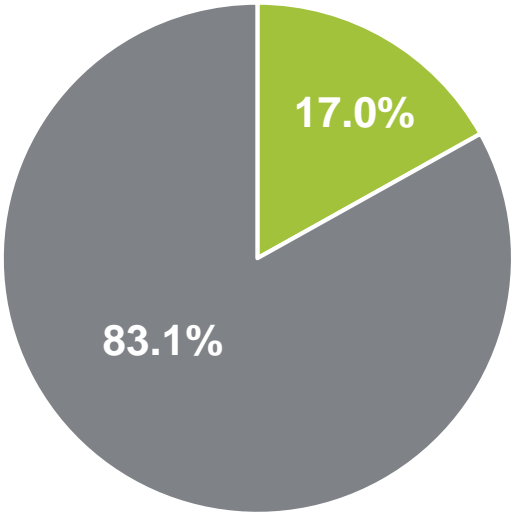


36 categories examined

Sustainable Market Share Index™: Contribution to Growth

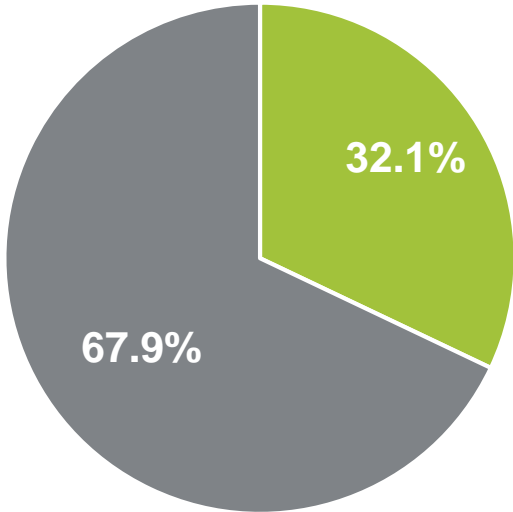
Despite the fact that sustainability-marketed products are less than one-fifth of the market share, they delivered one-third of the growth

\$ Share of Market
(2021)



- Sustainability-marketed products
- Conventionally-marketed products

\$ Share of Market Growth
(2015-2021)



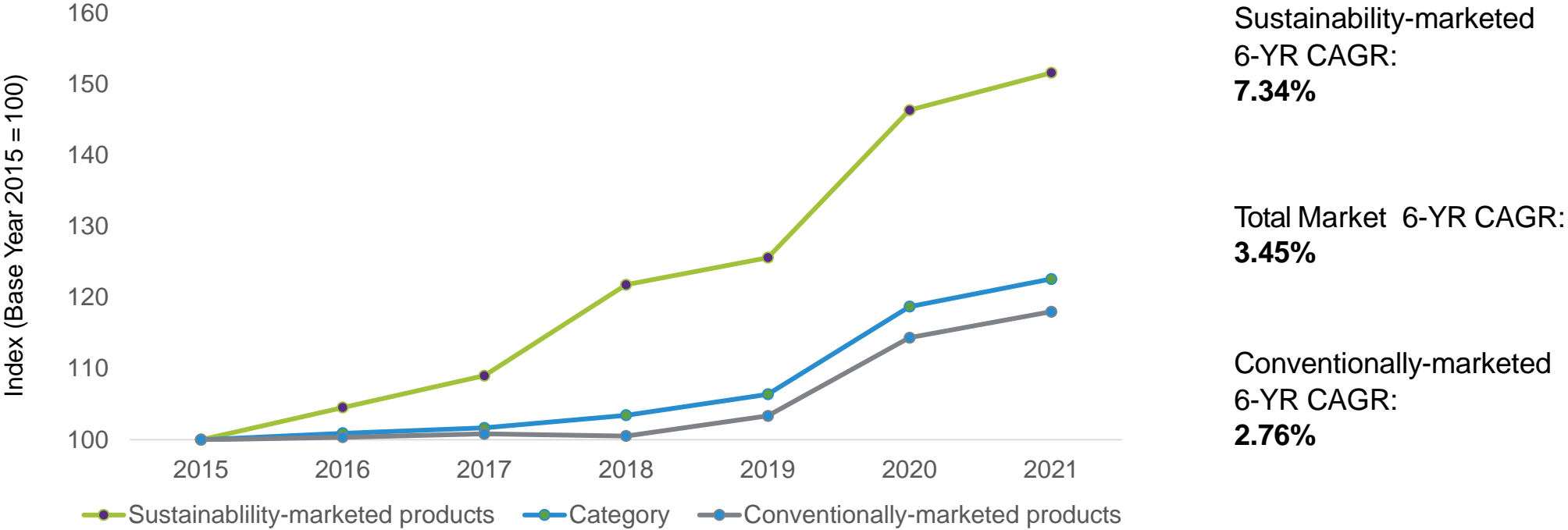
- Sustainability-marketed products
- Conventionally-marketed products

* Note: Based on 36 categories examined



Sustainable Market Share Index™: Growth Rate

Sustainability-marketed products grew 2.7x faster than conventionally-marketed products, and 2.1x faster than the CPG market

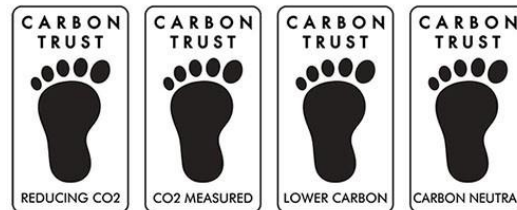


Note: Based on 36 categories examined



Sustainable Market Share Index™ : 2021 Carbon Labeling

Carbon-labeled products delivered Sales of +\$3.4B in Sales in 2021, up from \$1.7B in 2020



+\$3.4B

CSB Sustainable Market Share Index: Research Question 2

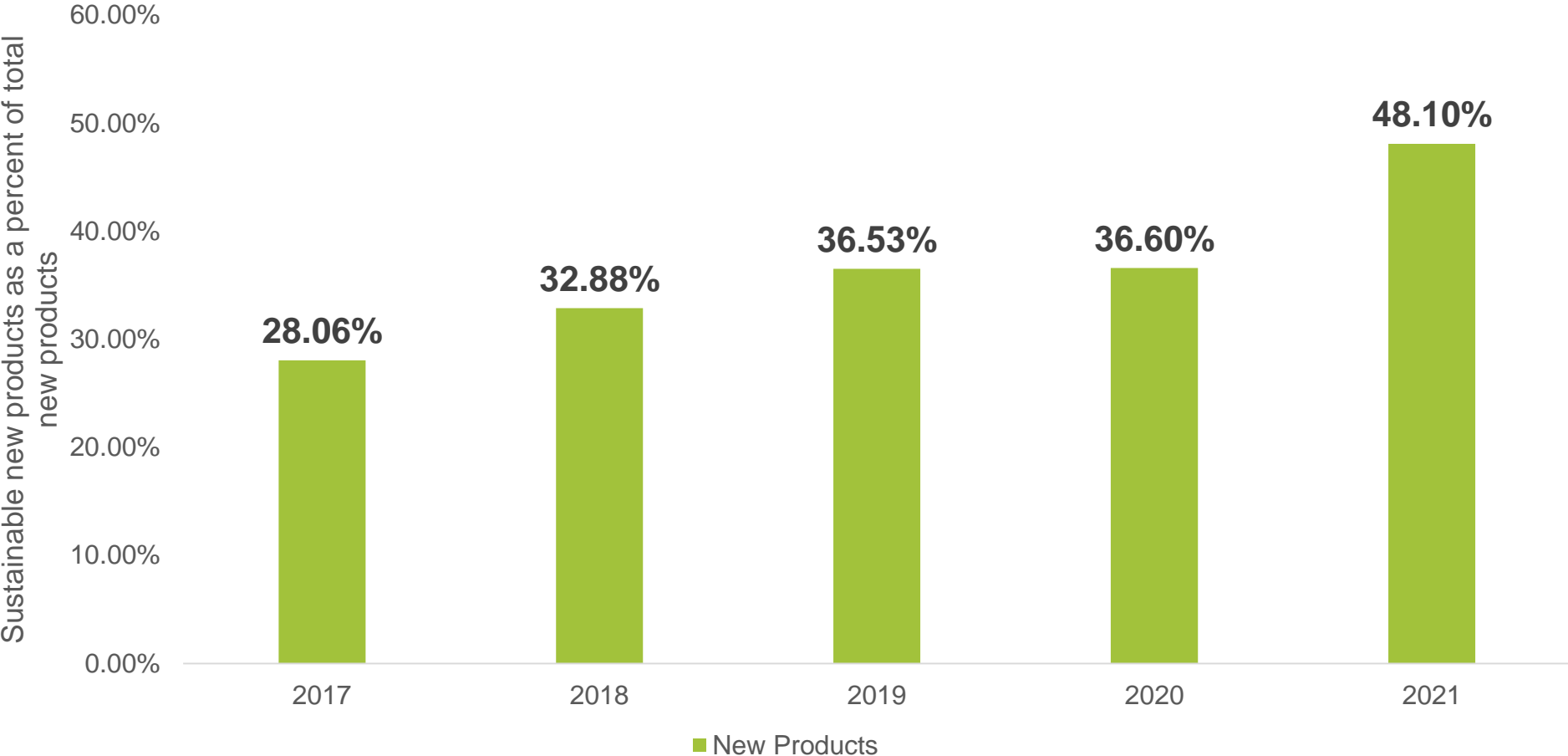
Research Question: How important has sustainability become in new product development?

Research Result: The percentage of new products with sustainable attributes have increased every year since 2017. In 2021, approximately one out of every two new products introduced had a sustainable benefit.



Sustainable Market Share Index: New Products

The percentage of new products that incorporate and communicate sustainability benefits have increased every year since 2017.



Note: Based on 32 categories examined

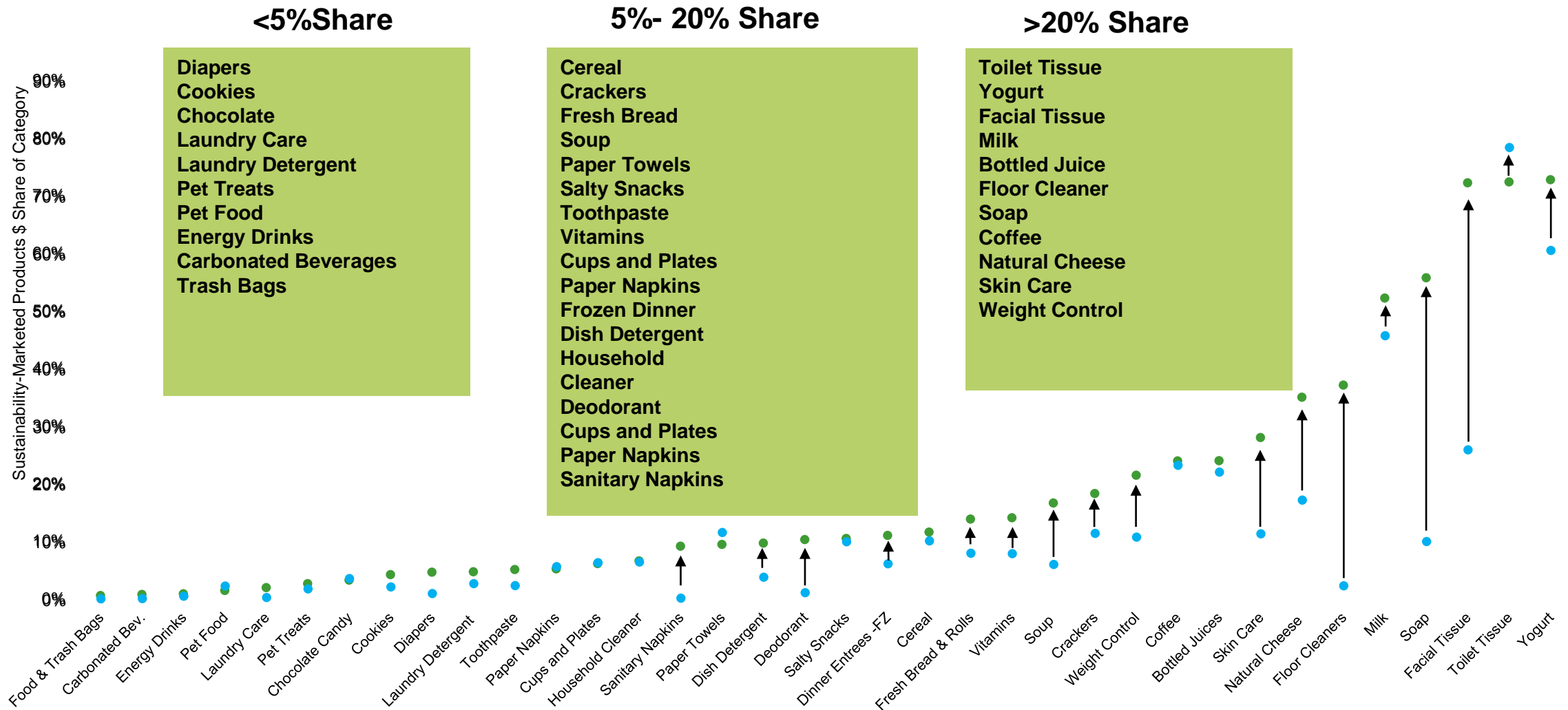
CSB Sustainable Market Share Index: Research Question 3

Research Question: Are there specific product categories where the purchases of more sustainable product options out- or under-perform less sustainable alternatives?

Research Result: Yes. In general, categories that demand high functional performance (e.g., detergent) do not have a large percentage of sustainable purchases, but nevertheless experienced share growth. Conversely, categories with low functionality demands (e.g., dairy) have higher category consumption.

However, exceptions exist as large players in functional categories become more sustainable and sustainable transformation is introduced.

CSB Sustainable Market Share Index™: Category performance



CSB Sustainable Market Share Index: Research Question 4

Research Question: What is the price premium of sustainable products?

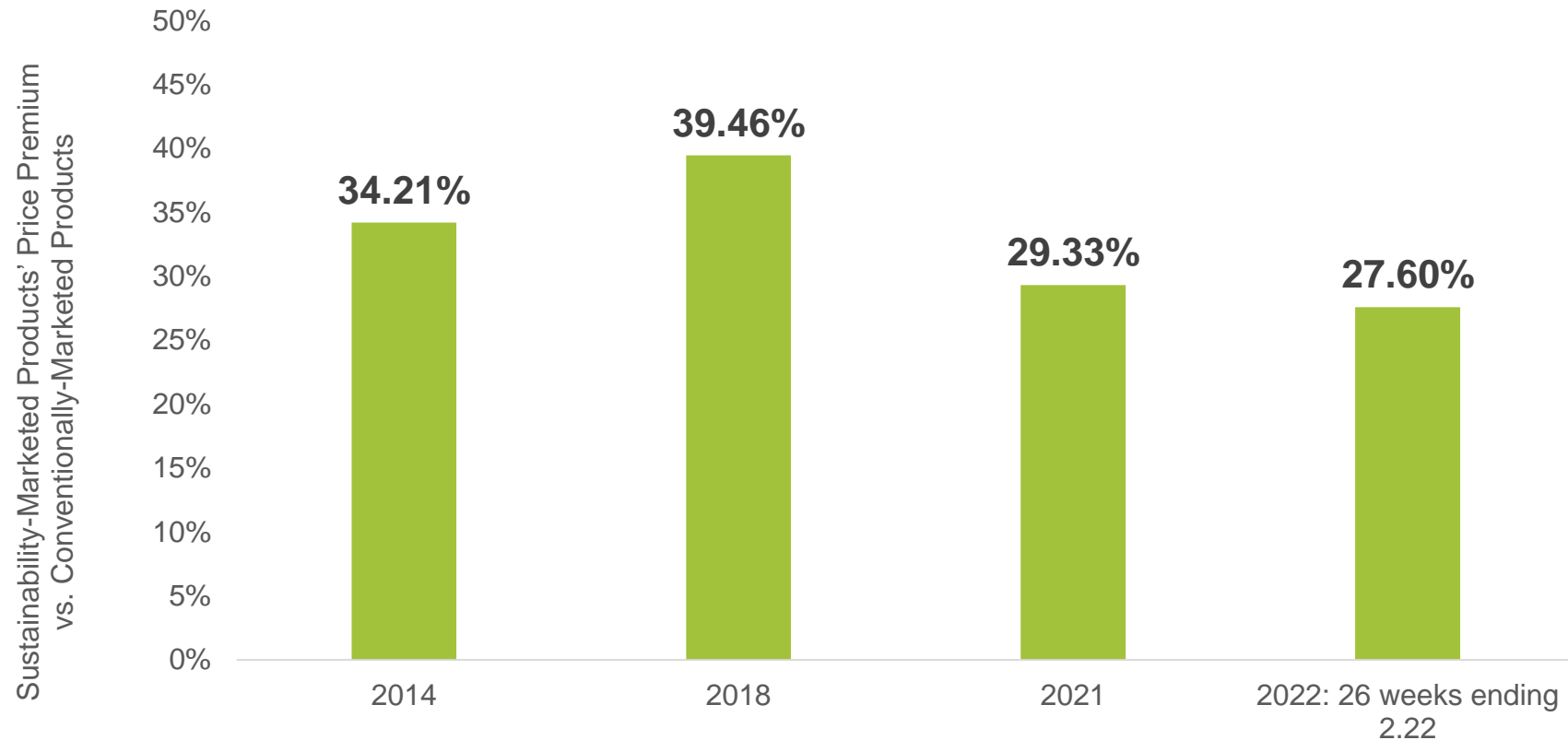
Research Result: Sustainability marketed products still enjoy a sizeable premium vs. their conventional counterparts but that gap has shrunk in recent years. Sustainability marketed products had lower price sensitivity in 2/3rds of the categories examined.



Analysis conducted was among branded players and excluded store brand/private label; based on 36 categories examined

Sustainable Market Share Index™: Price Premium

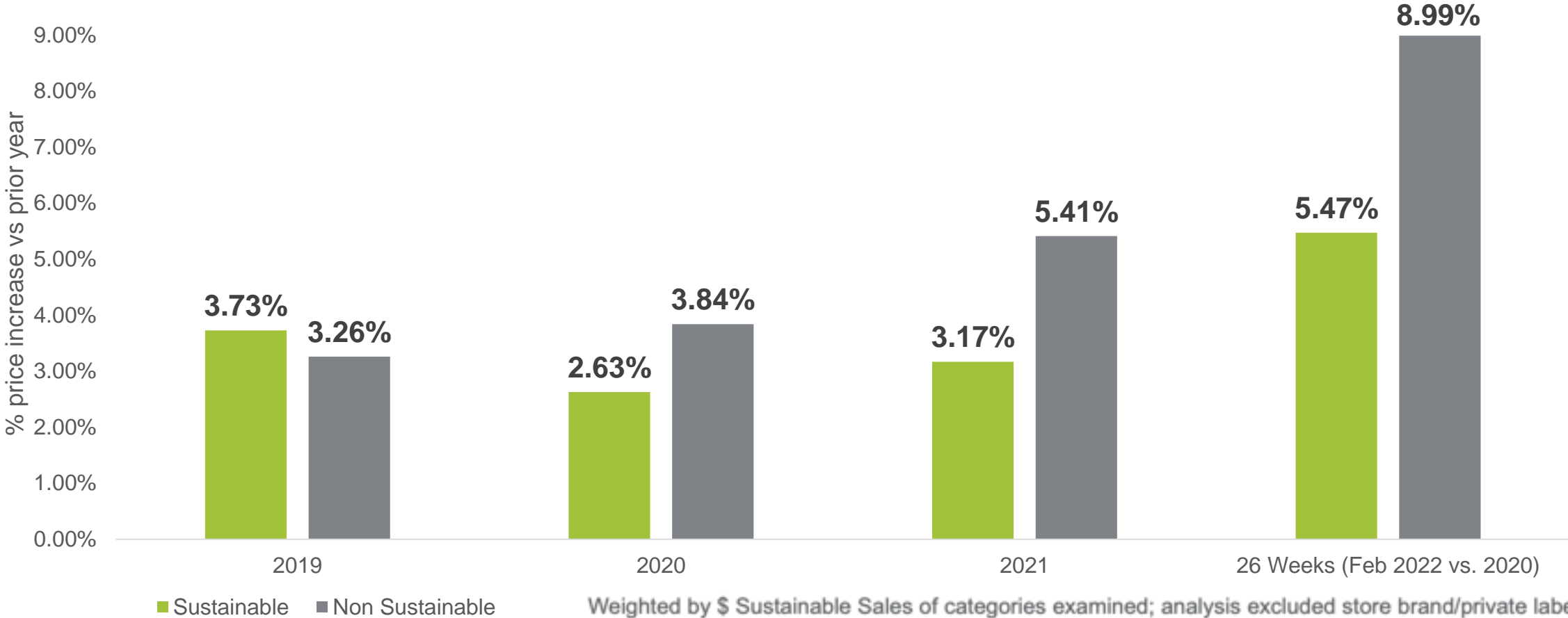
Sustainability marketed products enjoy a sizeable price premium of 28% over conventionally marketed products, but the price differential has decreased since 2018



*Weighted by \$ Sustainable Sales of categories examined; analysis excluded store brand/private label

Sustainable Market Share Index: Year over Year Price Increases

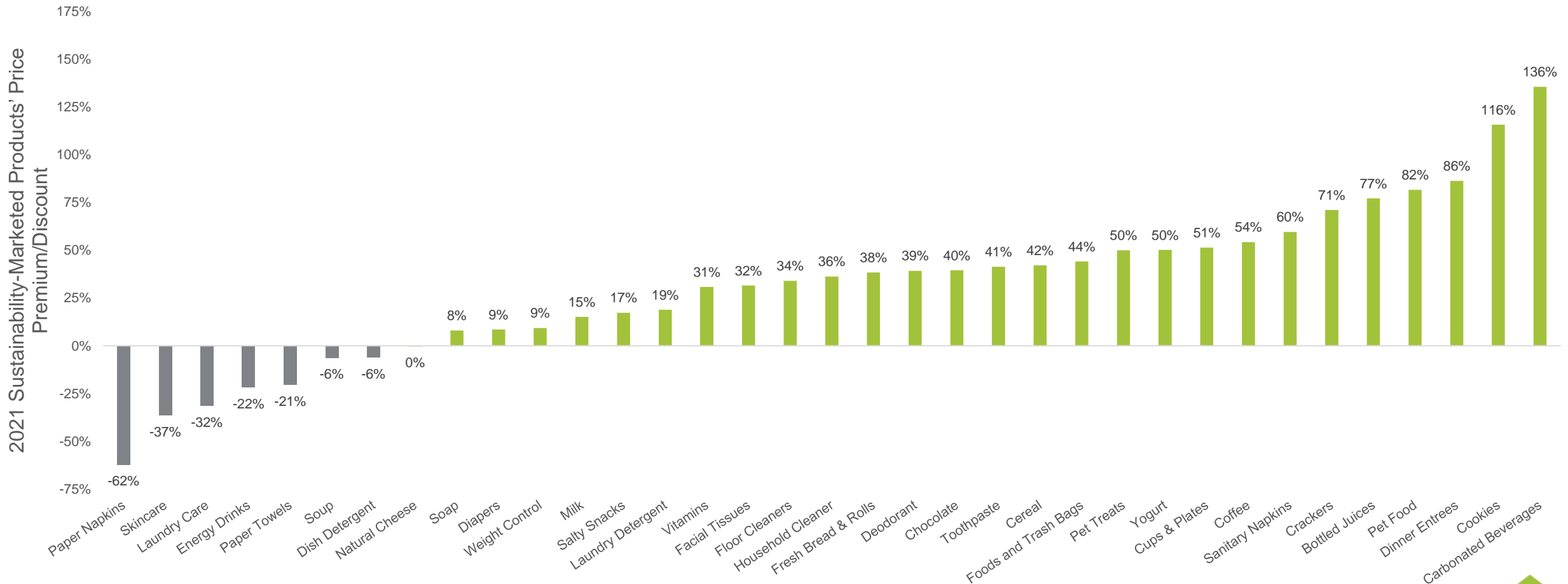
Conventionally marketed products have increased prices at a higher rate than sustainability marketed products reportedly due to inflationary pressures and supply chain disruptions



Sustainable Market Share Index™: 2021 Price Premium by Category

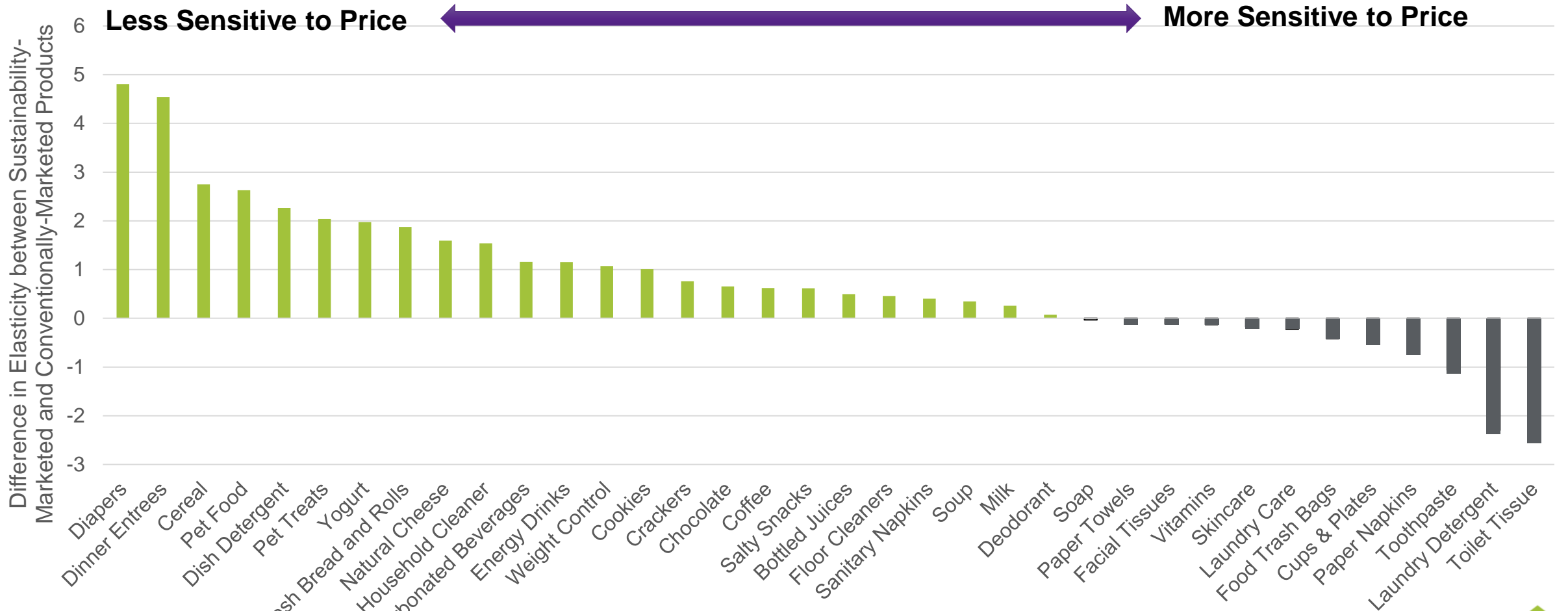
Sustainability marketed products still command price premiums, ranging from 8% to over 130%

Only a few categories had price discounts vs. conventionally-marketed products



Sustainable Market Share Index™: Price Sensitivity (2018)

Sustainability marketed products had lower price sensitivity in most categories studied: Food categories had the greatest price leverage



Price sensitivity is the % change in volume due to a 1% change in price* 2018 analysis.

CSB Sustainable Market Share Index: Research Question 5

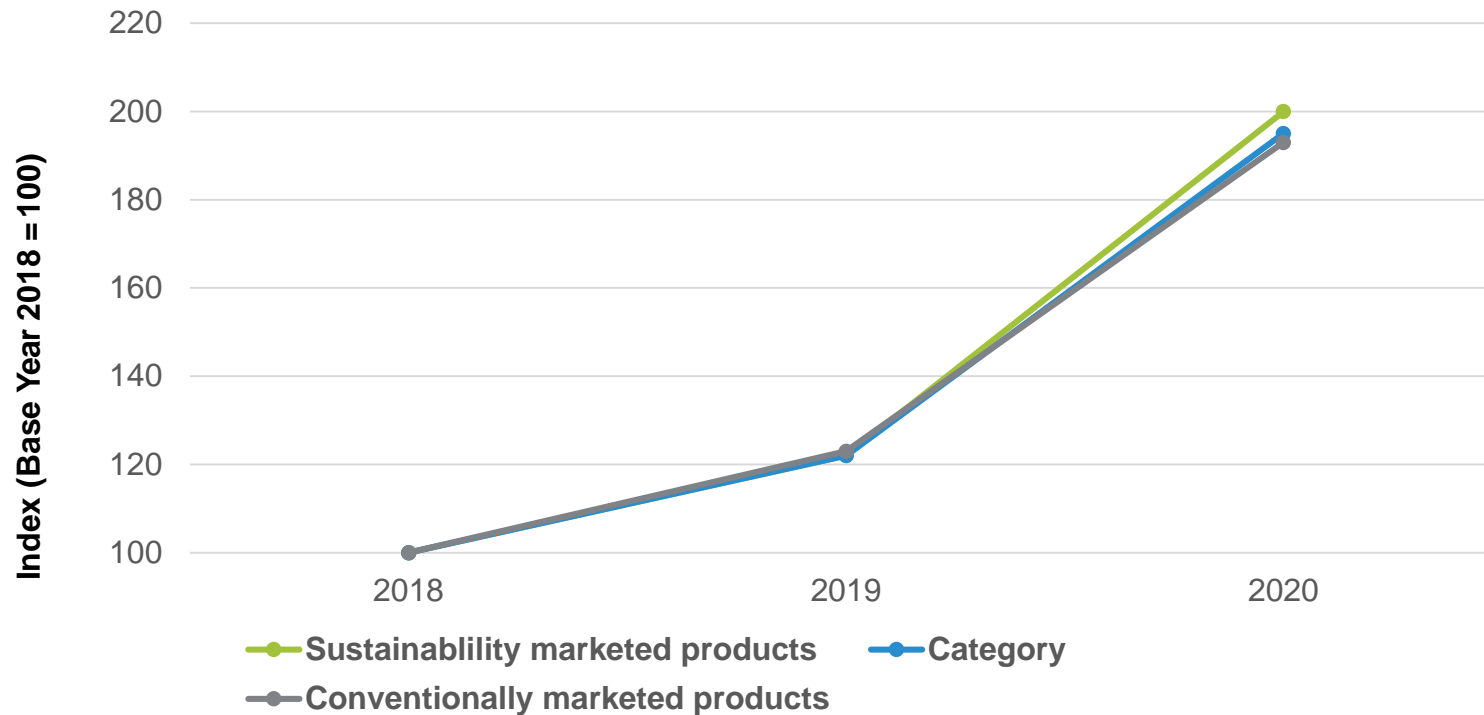
Research Question: How have sustainable products fared in e-commerce?

Research Result: Products marketed as sustainable have outperformed conventionally marketed products in e-commerce. Moreover, sustainability marketed products perform better online vs. in store.



Sustainable Market Share Index™: E-commerce Performance

Sustainability marketed products grew slightly faster than both the category and conventional products



Sustainability-marketed
2-YR CAGR: 42%
2020 vs 2019: +65%

Total Market
2-YR CAGR: 40%
2020 vs 2019: 59%

Conventionally marketed
2-YR CAGR: 39%
2020 vs. 2019: 57%

Sustainable Market Share Index™ : Share Differences Online vs. In store

In 3/4ths of the categories examined, shares of sustainable products are stronger online than in-store



CSB Sustainable Market Share Index: Research Question 6

Research Question: What is the demographic profile of the sustainable purchaser?

Research Result:

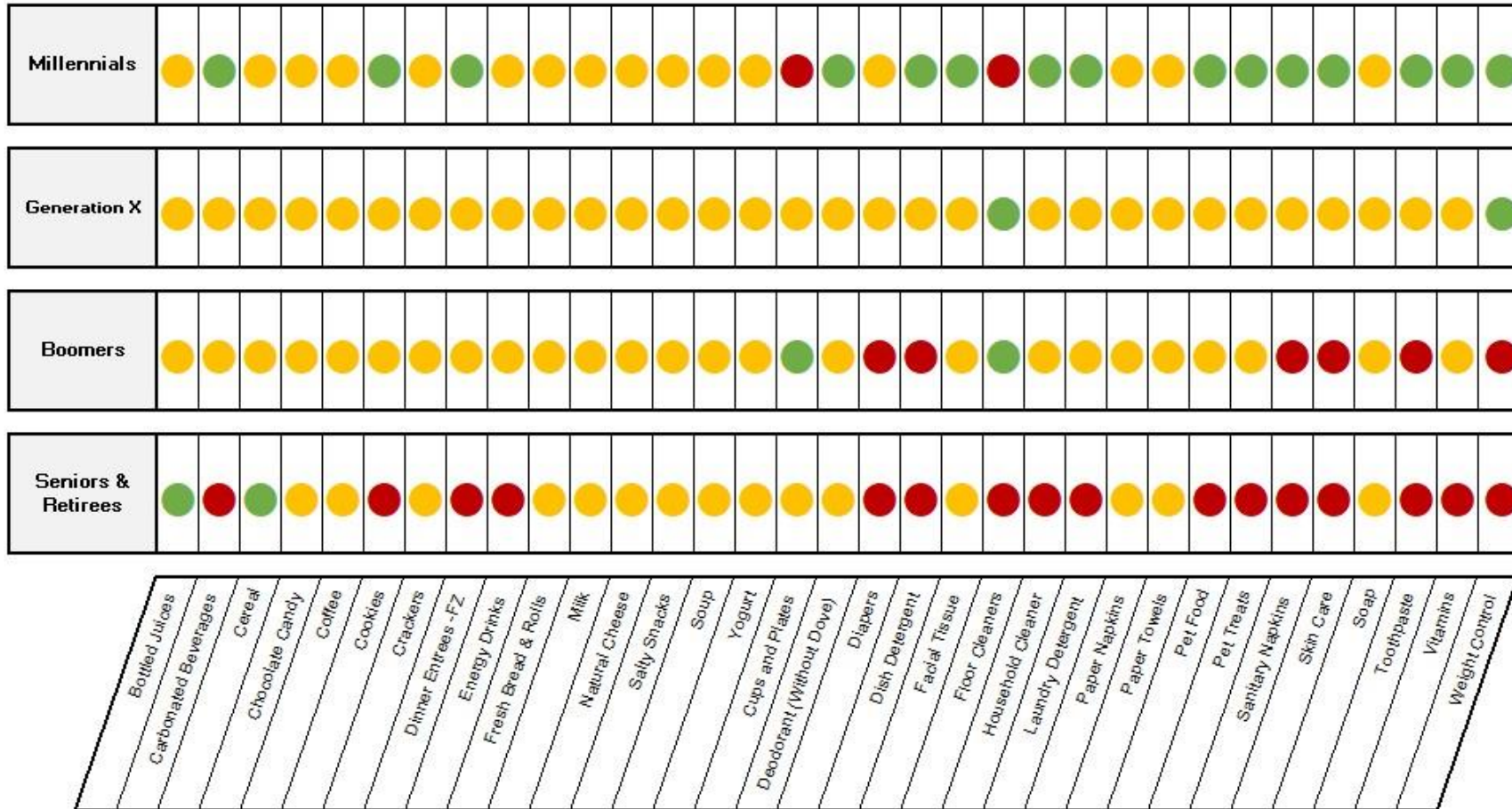
Millennials, upper income, college-educated and more urban cohorts are more likely to buy sustainability-marketed products.

Baby Boomers, Gen Xers, upper and middle income, college educated and urban cohorts account for the bulk of the sustainable dollars spent.

Analysis conducted using IRI HH panel data; based on 35 categories examined

Sustainable Market Share Index™: Generational Cohorts

The younger the household, the more likely they were to buy sustainability-marketed products. However, most sustainability-marketed product purchases came from Gen X and Boomers.



Total CPG Sustainable Sales Composition	
Millennials	25%
Generation X	32%
Boomers	33%
Seniors & Retirees	10%

- Index 120+
- Index 80-120
- Index <80

Chart read as: Millennials purchased a significantly higher percent (>1.2x) of their Carbonated Beverage purchases on sustainability-marketed products, than did Average HHs.

Sustainable Market Share Index™: Household Education

The higher the education, the more likely they were to buy sustainability-marketed products. Most of the sustainability-marketed product sales came from college graduates or those with some college education.

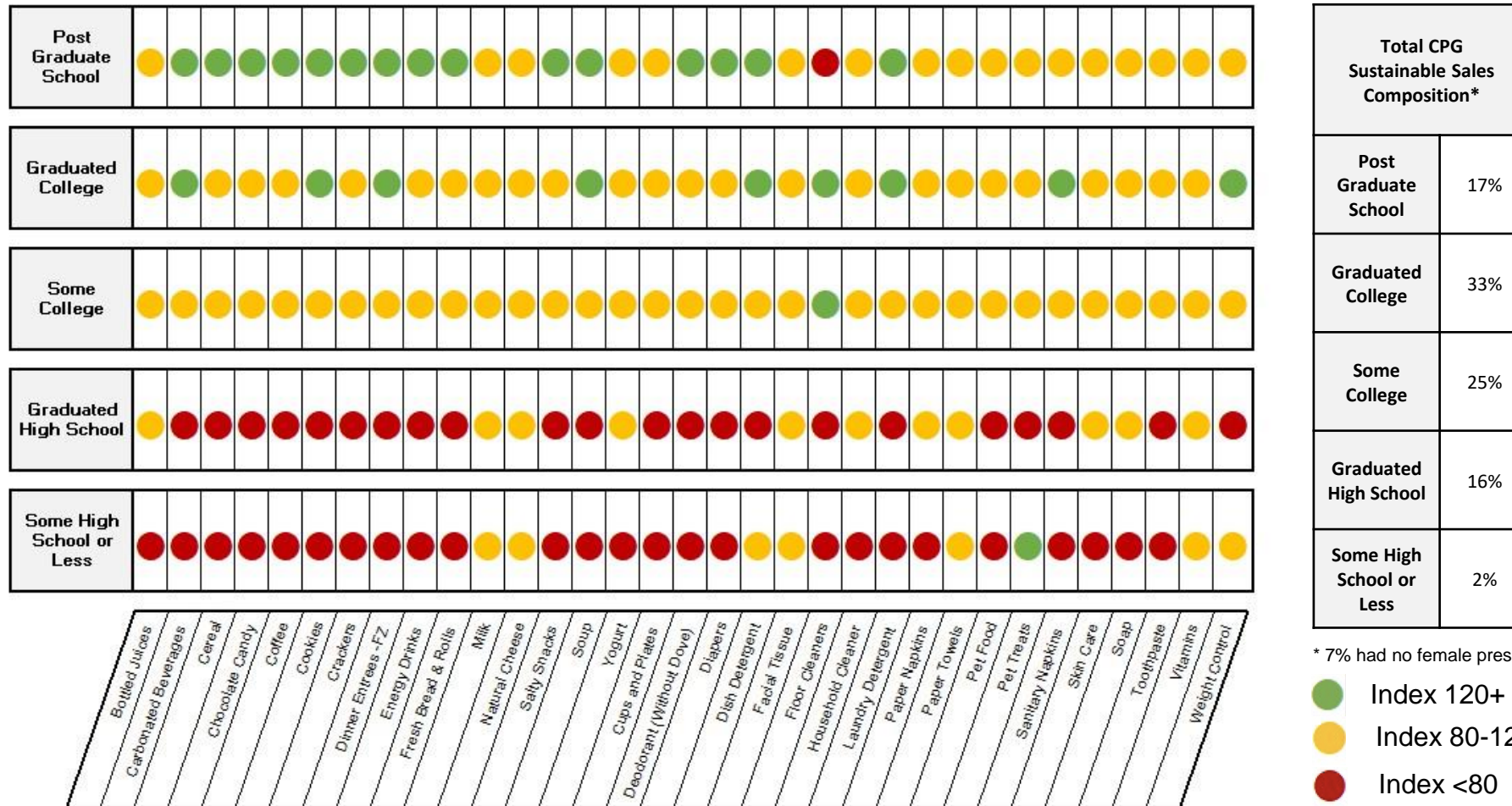


Chart read as: Female HH who attended Post Graduate School purchased a significantly higher percent (>1.2x) of their Carbonated Beverage purchases on sustainability-marketed products, than did Average HHs.

Sustainable Market Share Index™: Income Tiers

The higher the household income, the more likely they were to buy sustainability-marketed products. Upper/middle income made up the highest percent of sustainability-marketed product dollars spent.

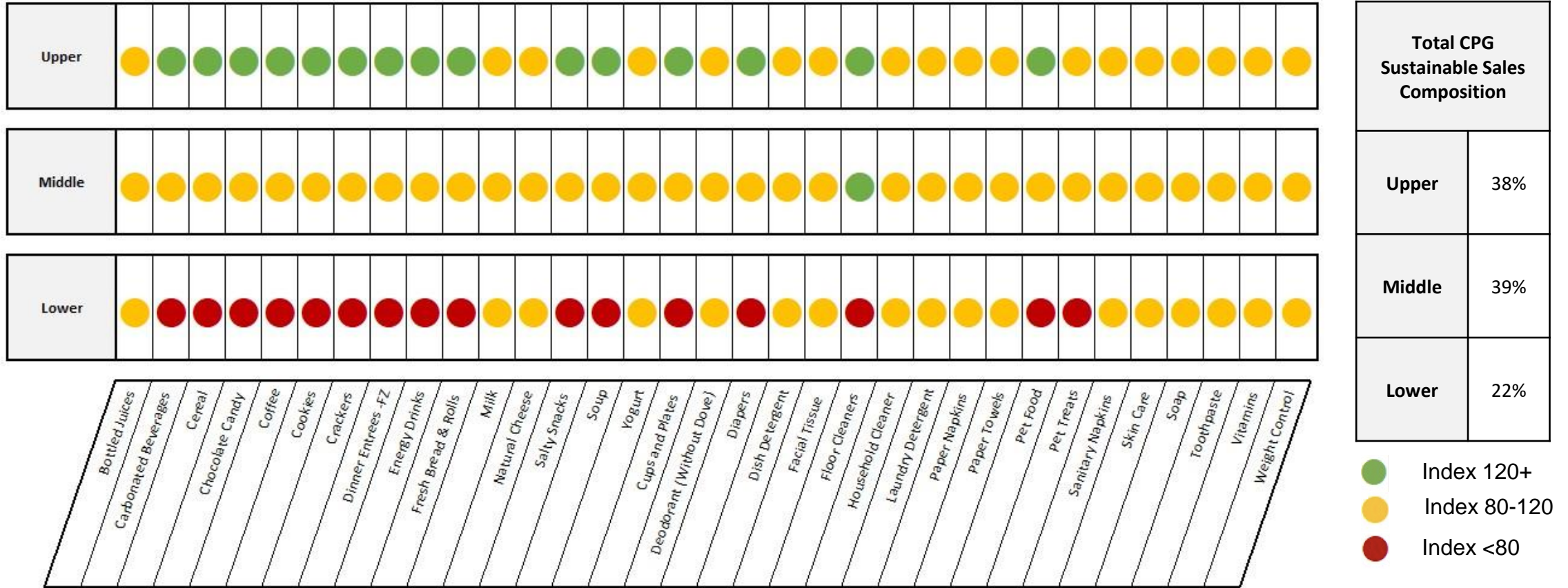


Chart read as: Upper Income Households purchased a significantly higher percent (>1.2x) of their Carbonated Beverage purchases on sustainability-marketed products, than did Average HHs.

Sustainable Market Share Index™: Urbanicity

The more urban the residence, the more likely the purchases of sustainability-marketed products. County A accounted for just under half of the total CPG sustainability-marketed dollars spent.



Chart read as: County A purchased a significantly higher percent (>1.2x) of their Carbonated Beverage purchases on sustainability-marketed products, than did Average HH's.

CSB Sustainable Market Share Index: Research Question 7

Research Question: What is the impact of product availability on share?

Research Result: Sustainability marketed product share highly correlates with product availability.



Sustainable Market Share Index™: Impact of Availability

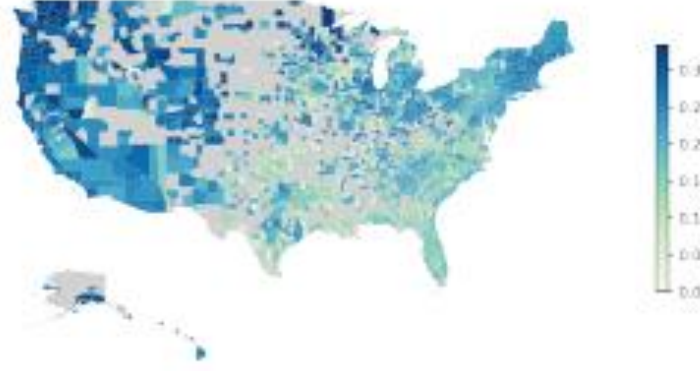
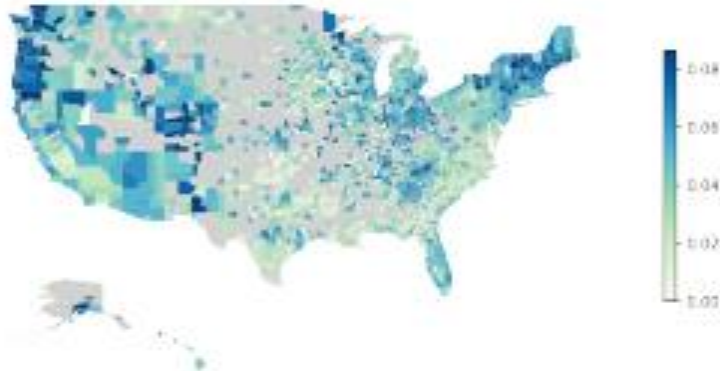
High correlation between availability and share ranging from .79 to 1.0

Detergent: 2%

Coffee: 23%

Yogurt: 60%

2015



Detergent: 4%

Coffee: 26%

Yogurt: 72%

2019



Note: The darker the blue, the greater the availability; Share of sustainability marketed products are the percentages listed

CSB Sustainable Market Share Index: Research Question 8

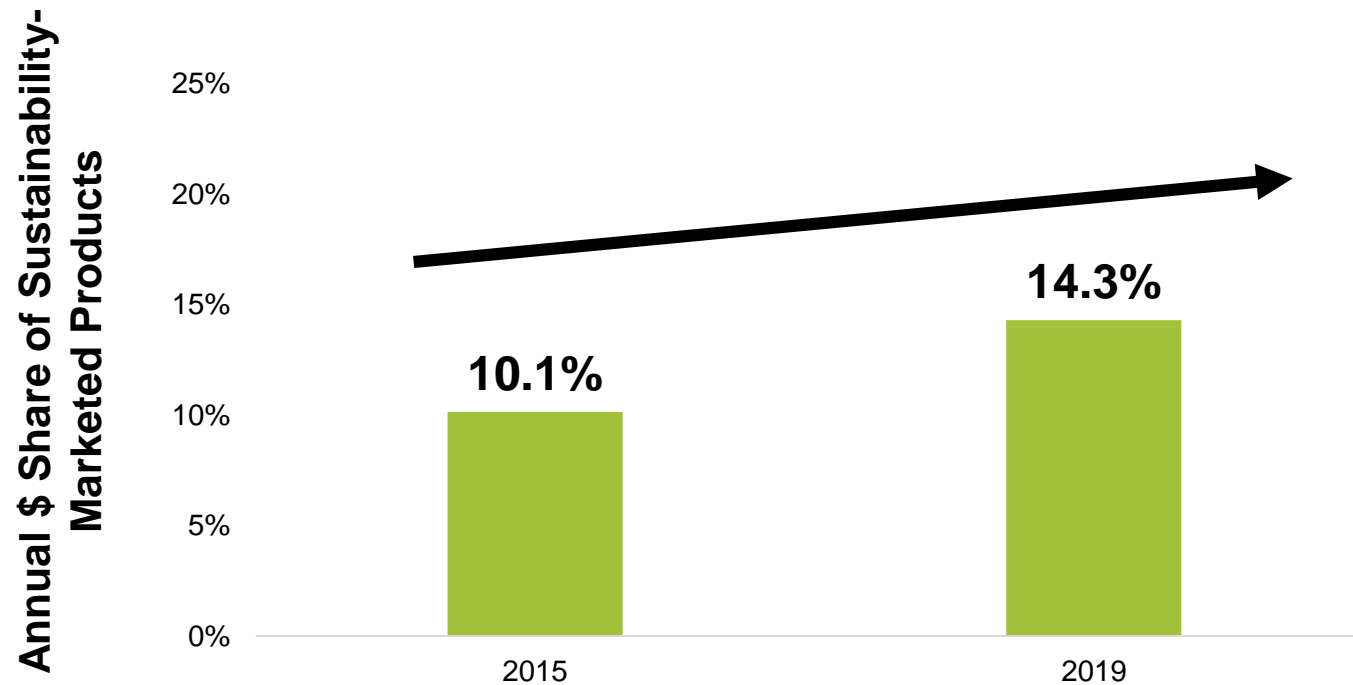
Research Question: Are green chemistry products outperforming conventional formulations?

Research Result: Not only are green chemistry products growing but they also are contributing to a disproportionate share of the category growth



Green Chemistry Council: Pre-Pandemic Market Share

Prior to the pandemic, green chemistry-marketed products accounted for 14.3% share of market (\$) in 2019, up from 10.1% in 2015.

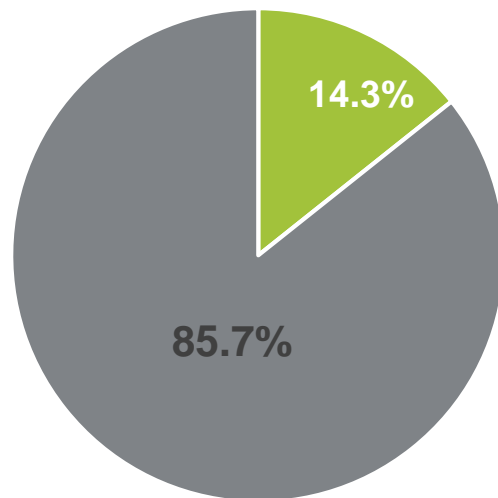


Based on 10 categories that include green chemistry formulated products

Green Chemistry Council: Pre-Pandemic Contribution to Growth

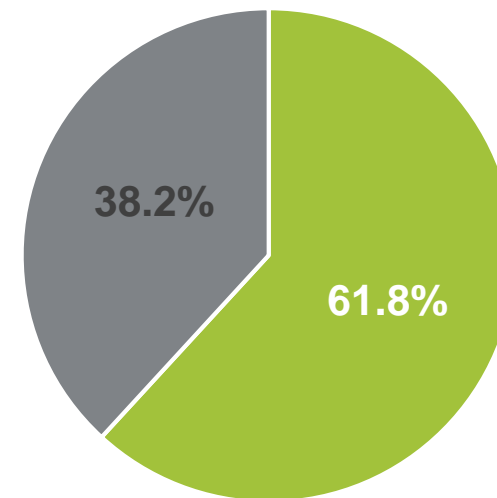
Green Chemistry-marketed products are 14.3% of the market and delivered 62% of the categories market growth

\$ Share of Market
(2019)



- Sustainability marketed products
- Conventionally marketed products

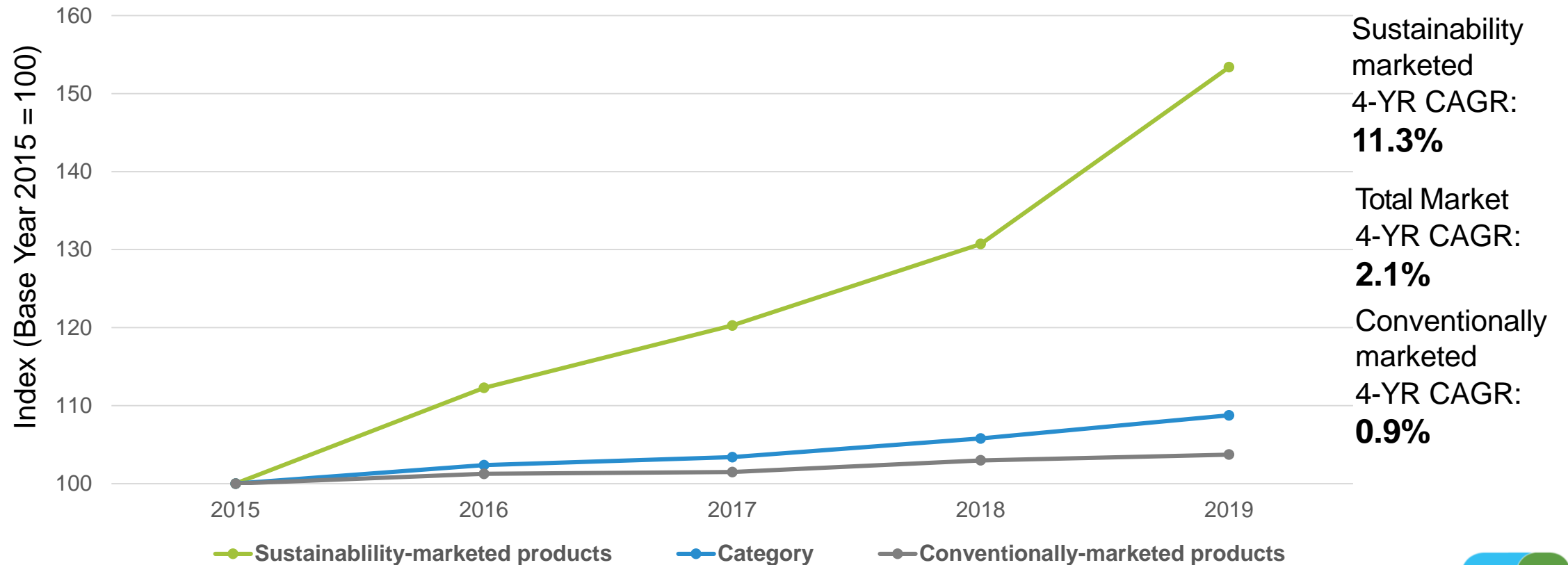
\$ Share of Market Growth
(2015-2019)



- Sustainability marketed products
- Conventionally marketed products

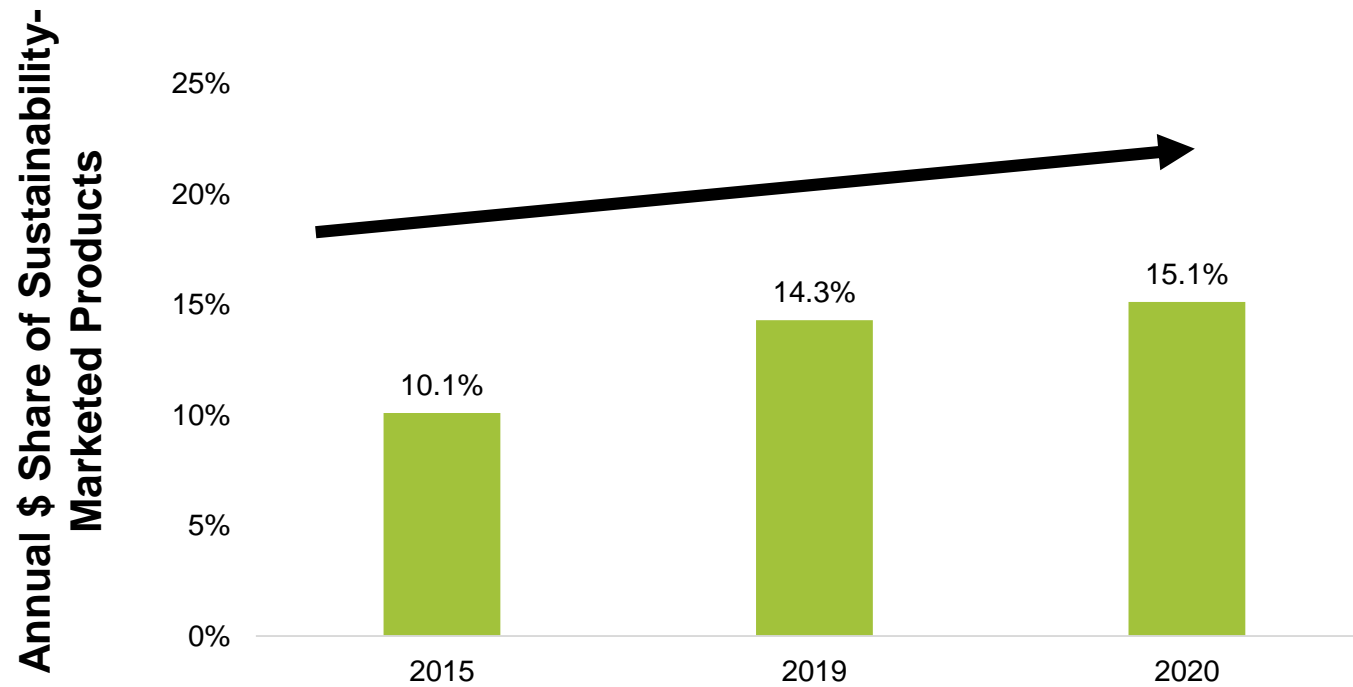
Green Chemistry Council: Pre-Pandemic Growth Rate

From 2015-2019, Green Chemistry-marketed products grew 12.6 times faster than their conventional counterparts, and 5.4 times faster than the market.



Green Chemistry Council: Pandemic Market Share 2020

Green Chemistry-marketed products continue to climb in 2020, despite the pandemic



Green Chemistry Council: Top Sustainable Messages by Category

Claim	Share of Average Annual Dollar Sales of Sustainability-Marketed Products 2015-2019
Pool Chemicals	
Organic	55%
Non-Toxic	55%
Soap	
Phthalate Free	68%
Paraben Free	63%
Skincare	
Paraben Free	61%
Phthalate Free	54%
Household Cleaner	
Plant Based	29%
Biodegradable	23%
Floor Cleaner	
Plant Based	22%
Natural	22%

Claim	Share of Average Annual Dollar Sales of Sustainability-Marketed Products 2015-2019
Dish Detergent	
USDA Bio Based	31%
Biodegradable	25%
Laundry Detergent	
Plant Based	86%
USDA Bio Based	44%
Suntan	
PABA Free	46%
Reef Friendly & Safe	45%
Auto Wax	
Silicone Free	97%
Petroleum Distillates	97%
Pavement Deicing	
Salt	81%
Natural	36%

About the NYU Stern Center for Sustainable Business

The NYU Stern Center for Sustainable Business was founded on the principle that sustainable business is good business; delivering better financial results while protecting the planet and its people. We aim to help current and future business leaders embed social and environmental sustainability into core business strategy, resulting in competitive advantage and resiliency for their companies as well as a positive impact for society.

Randi Kronthal-Sacco is a Senior Scholar for the NYU Stern Center for Sustainable Business. Ms. Kronthal-Sacco was a senior executive at Johnson & Johnson and is a Stern alumna.

Tensie Whelan is a Clinical Professor at NYU Stern and Founding Director of the NYU Stern Center for Sustainable Business.

Please contact sustainablebusiness@stern.nyu.edu or rkrontha@stern.nyu.edu with any comments or questions.

Acknowledgments

The NYU Stern Center for Sustainable Business would like to thank the IRI organization for the generous donation of its data.

A special thank you to IRI's Joan Driggs, Jeanne Livelsberger, Larry Levin, and Sheila Noojibail

We are grateful to Professor Bryan Bollinger for his continued academic support.

We would like to acknowledge the research support of NYU Interns Hurkan Kurtolglu, Prachika Agarwal, Saraub Kumar, Alexandra Walstad, Dorea Noveaz, Samuel Wallace, Ethan Ou, Jessica Tou, Patrick Wu, and Anirudh Dave as well as market research consultants Elena Kanner and Biren Shah.

Appendix

Methodology

Data

- IRI Point of Sale, HH panel, and e-market insights data in all measured channels in U.S.

Selection Criteria

- 36 categories examined held the largest dollar volume; in a few cases, smaller categories were included to ensure fair representation of all major CPG segments
- Over 250,000 products reviewed; products with 0.00 dollar share of category were not considered unless identified as organic.
- Due to lack of visibility into private label product claims, private label was not included as sustainability-marketed, with the exception of organic private label in the food categories.

Sustainability-Marketed Products Determination

- Identified all skus for each category marketed as sustainable with on-package communication, e.g. 3rd party certification (e.g. USDA Organic), containing organic ingredients, no phosphates, no phthalates, etc.
- Sustainability determination focused on the product itself, not the recyclability of the package.
- A very conservative approach was adopted. For example, the following was not considered sustainable:
 - Natural with no other sustainable identification
 - Recyclable packaging

Other Assumptions/Information

- Products that were deemed sustainability-marketed in 2018 were considered sustainability-marketed in 2015. This likely depressed the growth numbers in the earlier years.
- We made no attempt to assess if products marketed as sustainable were, in fact, sustainable. Instead, we focused on whether the marketing of a product as sustainable would drive purchase.

All estimates and analysis in this paper based on Information Resources Inc., data are by the authors and not by Information Resources, Inc.