

CONSUMER PACKAGED GOODS MARKET ANALYSIS

OUTLINE

1. Introduction
2. Methodology
3. Result
4. Discussion

1. Introduction

1. The Overview of Consumer Packaged Goods (CPGs) Industry (market size, top companies...)
2. The Impact of Covid – 19 on CPGs Industry.
3. The Affect of Rising Inflation to CPGs Industry. Challenges and Solutions.

2. Methodology

- Data Collection
 - + Crawl data from Amazon, Yahoo Finance and collect data from other websites.
- Data Wrangling
 - + Cleaning data (change data type, remove null values, merge data...)
- Exploratory Data Analysis
 - + Calculate Total Trade, Moving Average, Daily Return and Cumulative Return of Stock.
 - + Visualize data using Matplotlib and Plotly.

3. Result

	Brand	Category	Revenue	%YoY Change
0	Abbot	OTC Pharma	8.294	8.50
1	Johnson & Johnson	OTC Pharma	14.600	4.10
2	Procter & Gamble	Household Goods	76.118	7.28
3	Unilever	Household Goods	62.047	7.08
4	3M Co	Household Goods	35.355	9.85

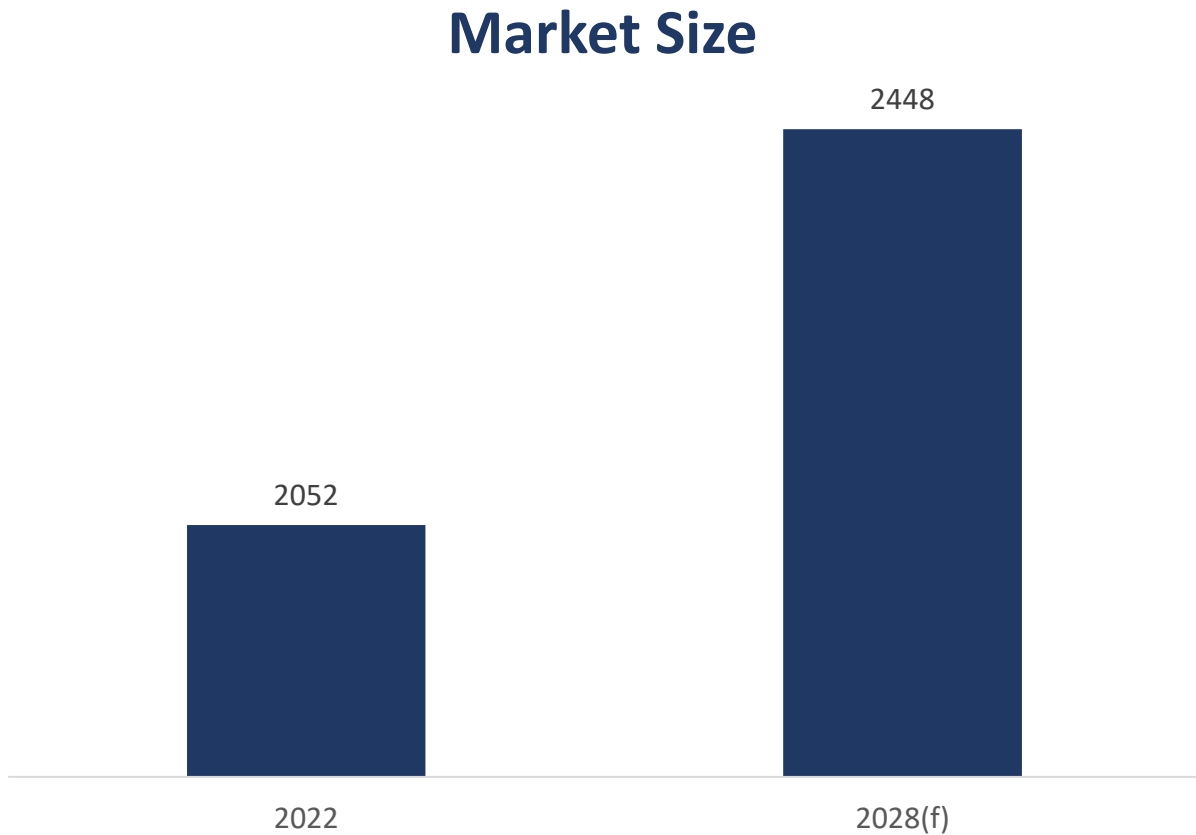
	Brand	Rating		Brand	Price
4	Dove	967.0		1	Dove 15.70
28	Dove	32.0		3	Dove 8.97
29	Dove	6.0		5	Dove 32.37
43	Dove	278.0		7	Dove 14.49
46	Dove	13.0		9	Dove 27.96

	Name	Price	Volume	TotalTrade	MA50	returns	Cumulative Return
Date							
2023-04-21	UL	54.51	2535000	138182850.0	NaN	NaN	NaN
2023-04-20	UL	54.28	1505600	81723968.0	NaN	-0.004219	0.995781
2023-04-19	UL	53.86	1719600	92617656.0	NaN	-0.007738	0.988076
2023-04-18	UL	53.78	2735400	147109812.0	NaN	-0.001485	0.986608
2023-04-17	UL	53.78	1475300	79341634.0	NaN	0.000000	0.986608

	Name	Price	Volume	TotalTrade	MA50	returns	Cumulative Return
Date							
2023-04-21	PG	156.07	14875800	2.321666e+09	NaN	NaN	NaN
2023-04-20	PG	150.85	5370900	8.102003e+08	NaN	-0.033447	0.966553
2023-04-19	PG	151.24	3837600	5.803986e+08	NaN	0.002585	0.969052
2023-04-18	PG	151.21	4158400	6.287917e+08	NaN	-0.000198	0.968860
2023-04-17	PG	151.05	4296400	6.489712e+08	NaN	-0.001058	0.967835

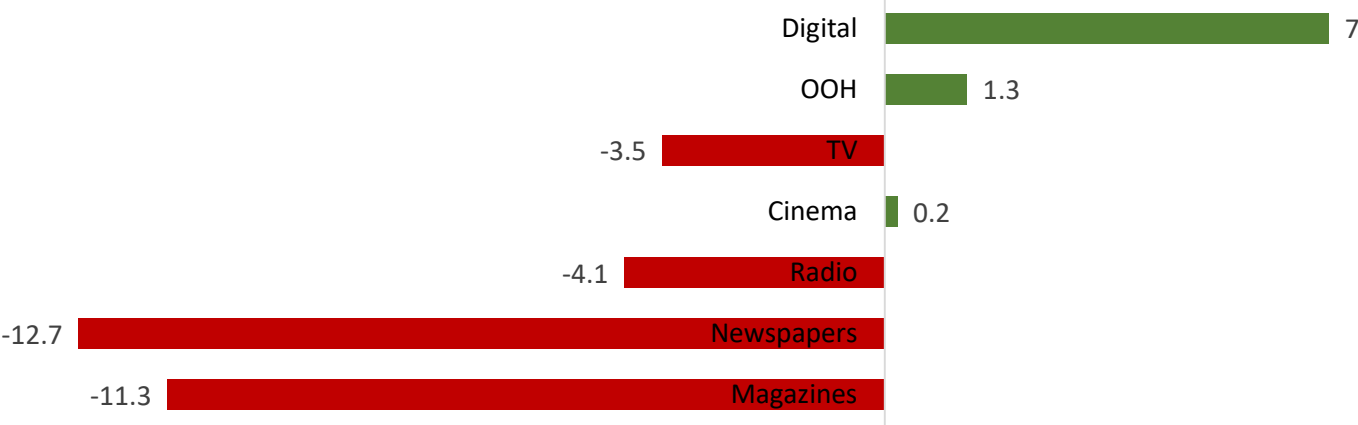
4. Discussion

4.1. Market Overview

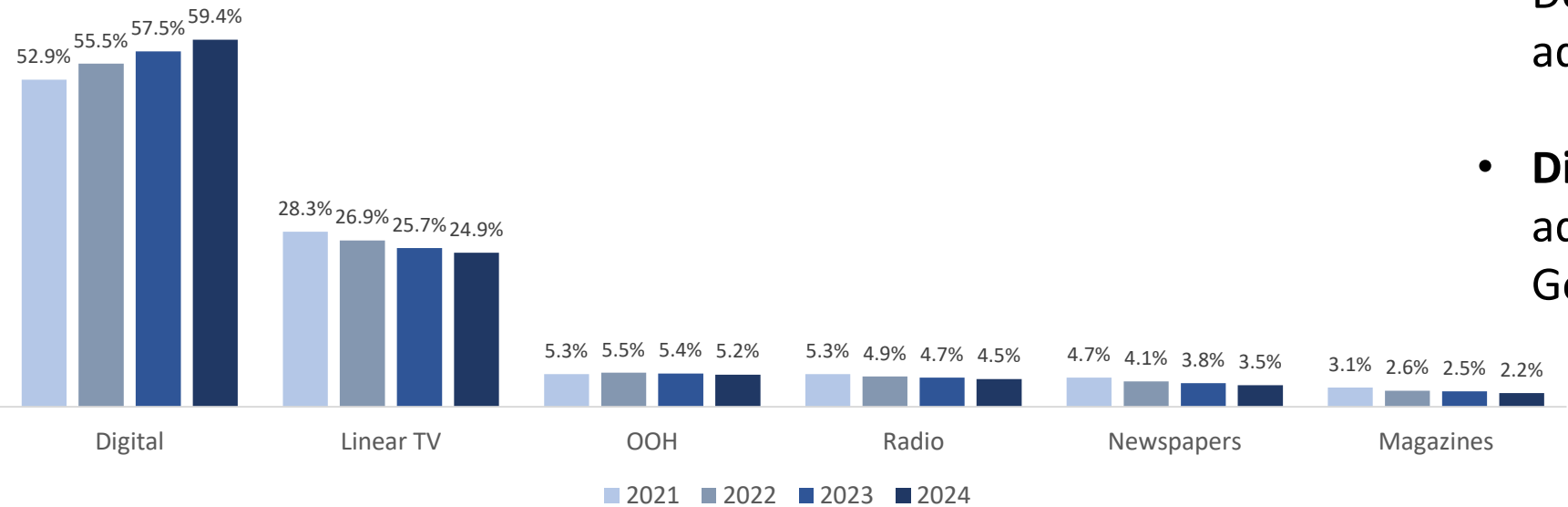


The market size was \$2052B in 2022. It is expected to expand at a CAGR of 2.98% during the forecast period, reaching \$2448B by 2028.

Average Annual Growth in Ad Spend for CPG Industry 2019 - 2023 (%)

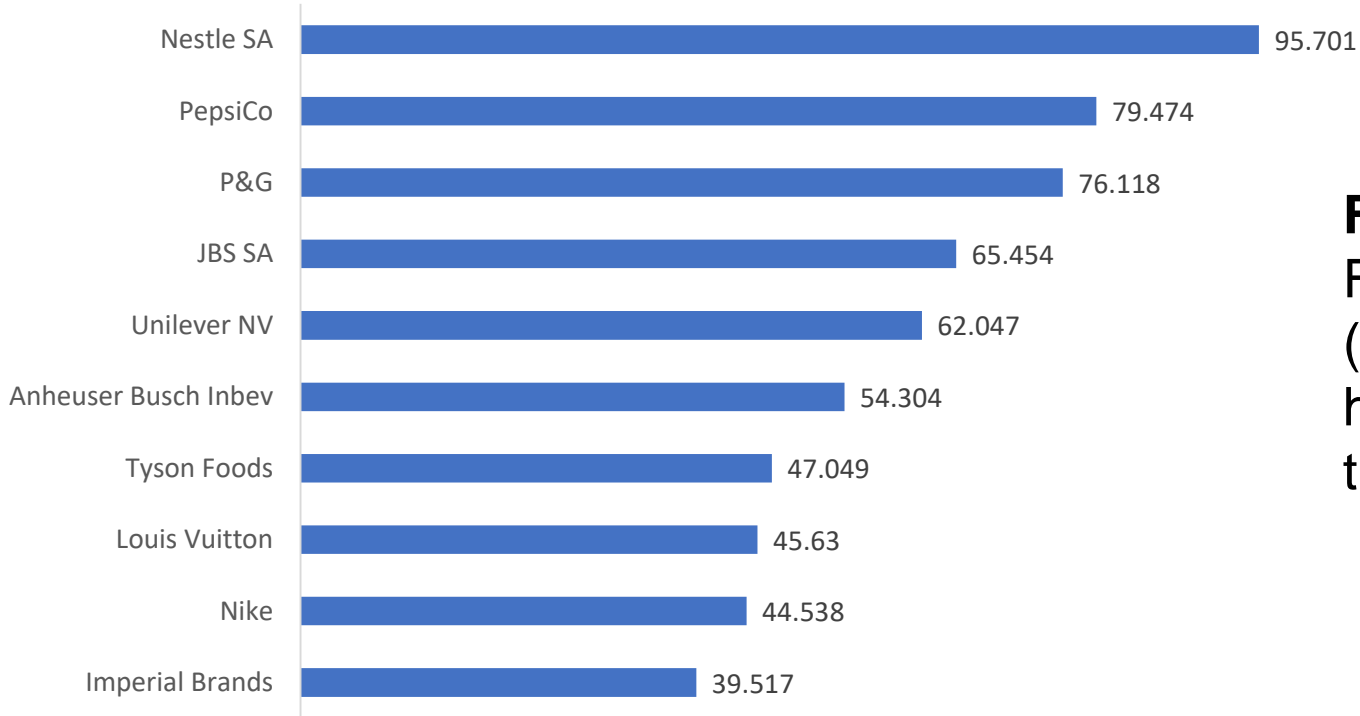


Global Ad Spend Share 2021 - 2024 (f)



- According to Zenith Market Insight, the average annual growth in ad spend for CPG industry using Digital, OOH and Cinema increases.
- Digital advertising is predicted to continue to grow and dominate in Global Ad Spend Share according to Dentsu – global marketing and advertising agency.
- **Digital Advertising** is the main advertising in Consumer Packaged Goods Industry.

Top 10 Companies in CPG in 2022 by Revenue (\$B)



Food & Beverage (Nestle, PepsiCo, Tyson Foods, JBS SA) and **Household Goods** (P&G, Unilever) are two categories that have the most number of top companies in the list.

CONSUMER PACKAGED GOODS - MARKET ANALYSIS



COMPANY

Unilever



BRAND

All



AVERAGE PRICE

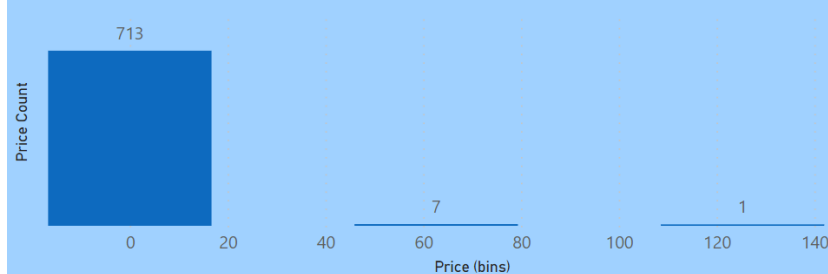
\$19



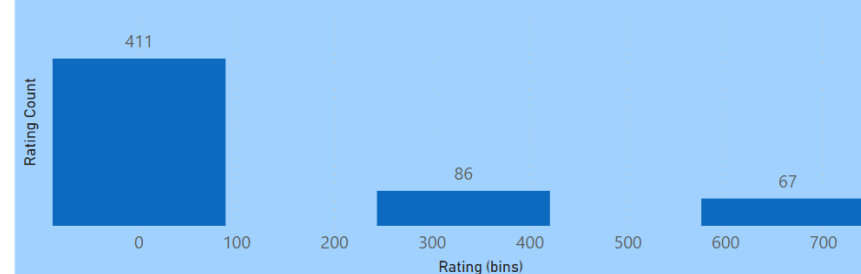
AVERAGE RATING

219.83

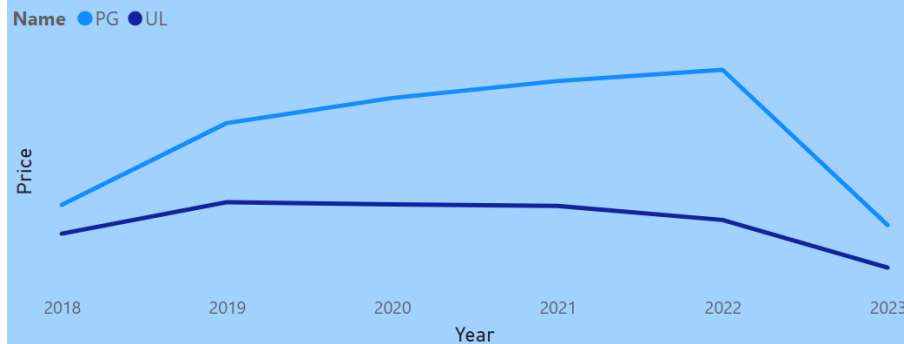
Price Frequency



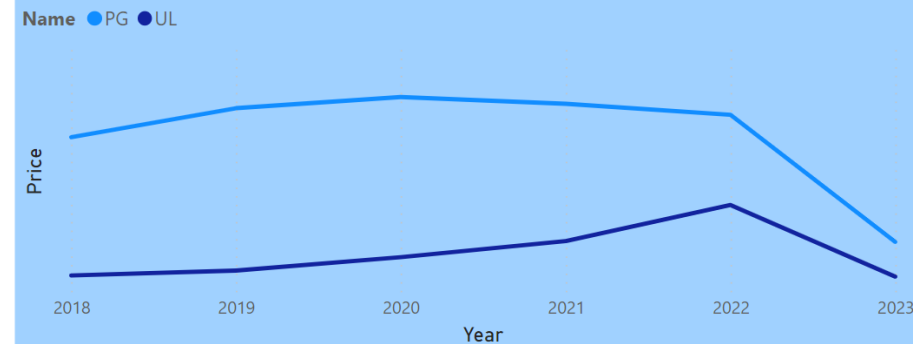
Rating Frequency



Stock Price by Company



Stock Volume by Company



- According to the dashboard, average price of the Unilever's products on Amazon is **\$19** and average rating for each product is **220** approximately.
- Majority of price's products are under **\$60** and the number of ratings are under **300** on Amazon.

CONSUMER PACKAGED GOODS - MARKET ANALYSIS



COMPANY

P&G



BRAND

All



AVERAGE PRICE

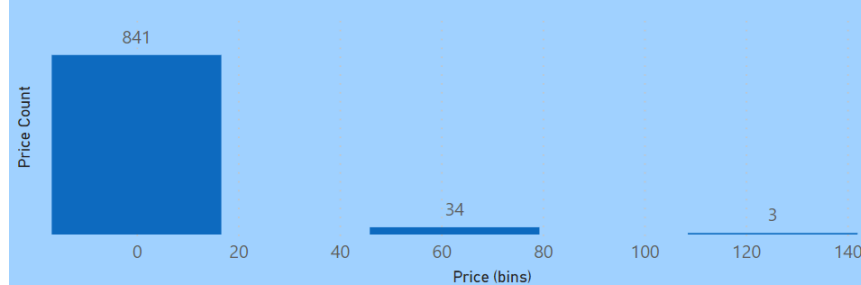
\$24



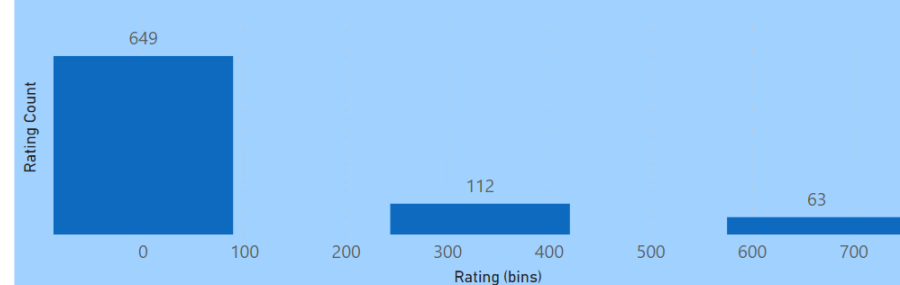
AVERAGE RATING

183.19

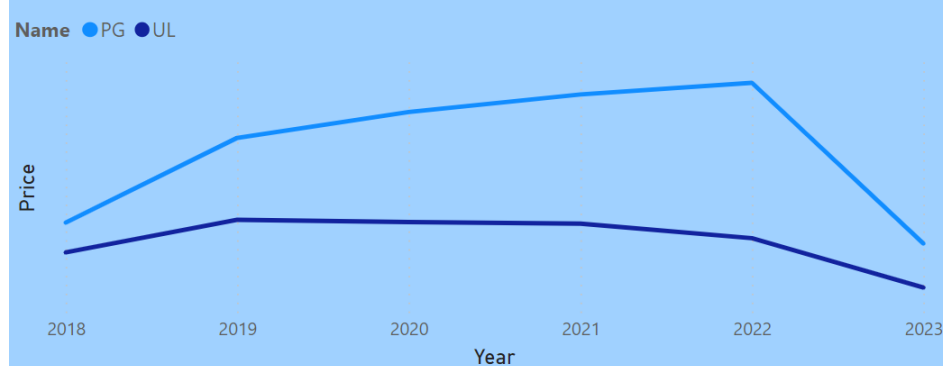
Price Frequency



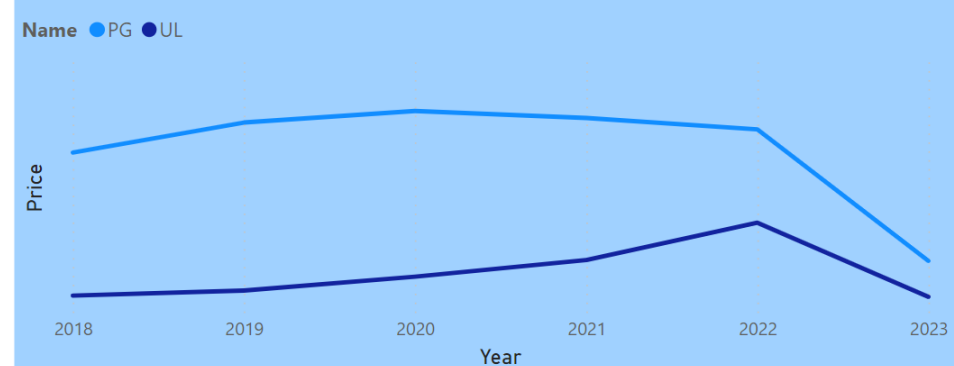
Rating Frequency



Stock Price by Company



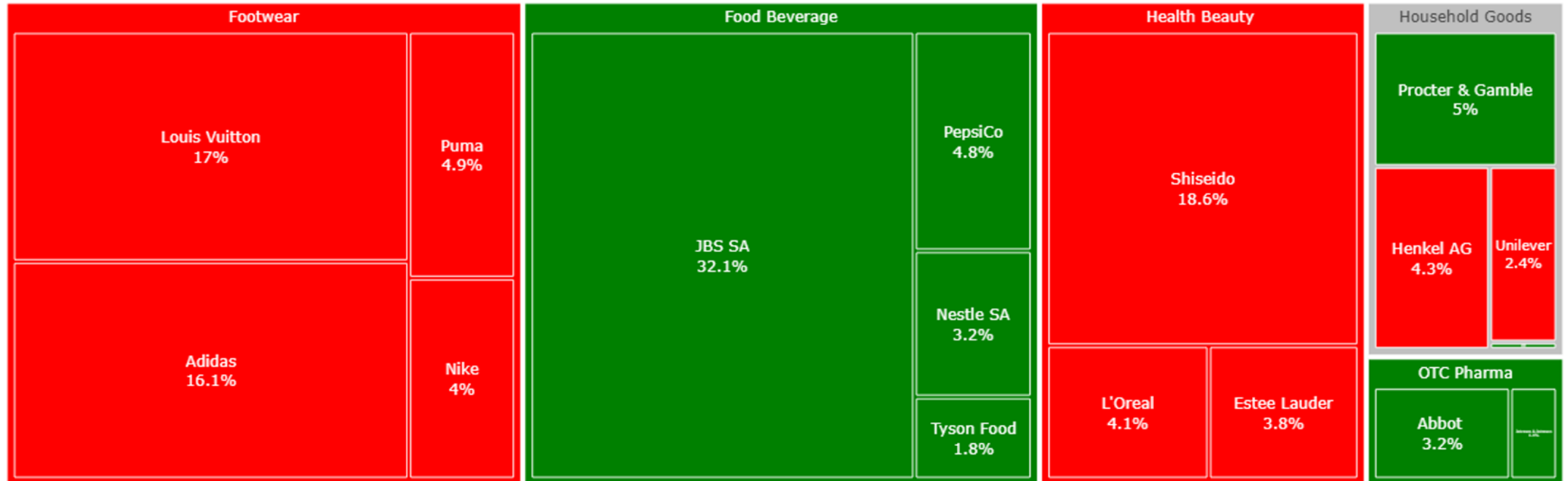
Stock Volume by Company



- Like Unilever, majority of price's P&G products are under **\$60** and the number of ratings are under **300** on Amazon.
- The average price is **\$24**. It's higher than Unilever. But the average rating is **183** - lower than Unilever.

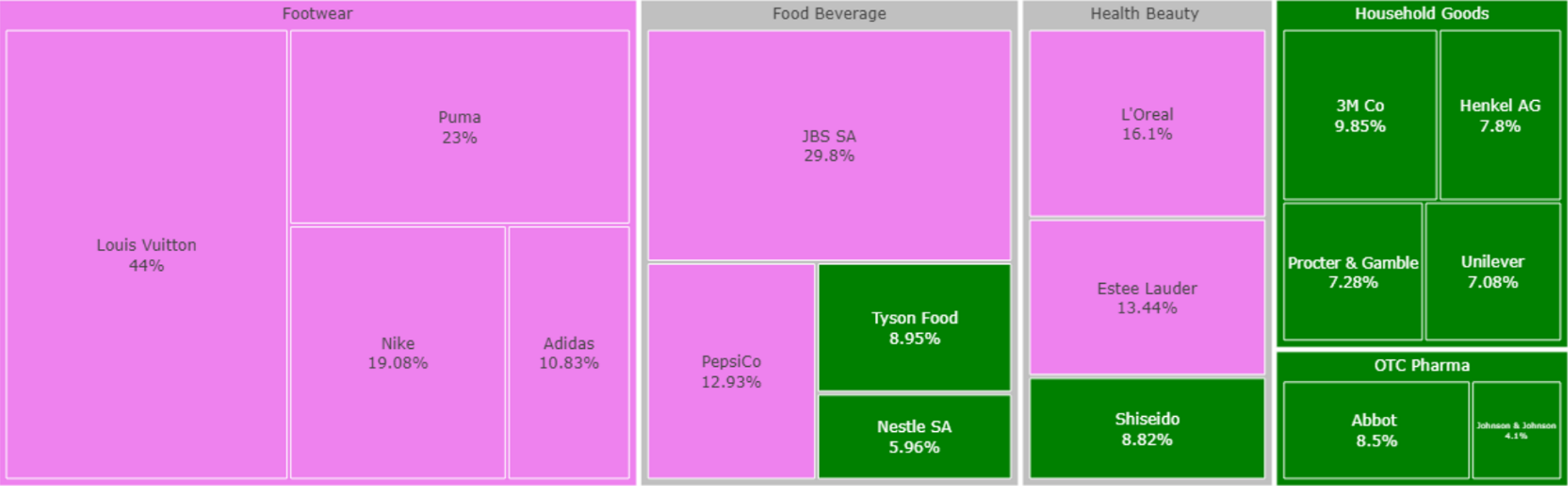
4.2. The Impact of Covid – 19 on CPGs Industry

%YoY Change in Revenue in Consumer Packaged Good Industry in 2021



During Covid – 19, most of the top companies in the nonessential categories such as Louis Vuitton, Adidas (**Footwear**), L'Oreal, Estee Lauder(**Health Beauty**) had a decline in revenue. But **Food Beverage** and **OTC Pharma** still slightly grew in this time.

%YoY Change in Revenue in Consumer Packaged Good Industry in 2022



In 2022, most of categories in CPG industry grew higher than 2021. Especially **Footwear** and **Health Beauty** grew significantly.

Stock Price of Unilever and P&G

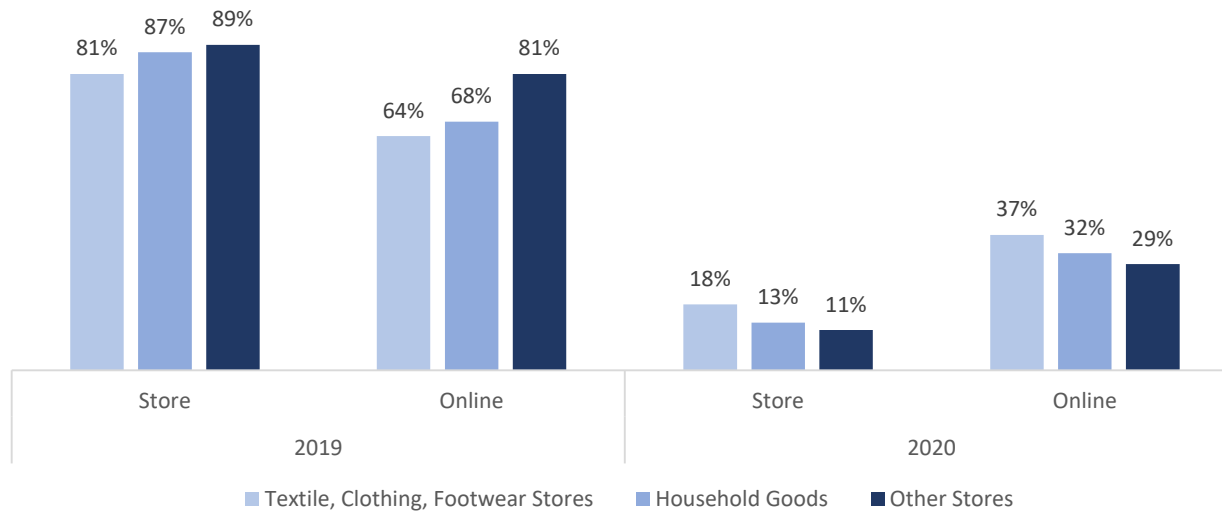


- Unilever and P&G are top companies which are specialized in Household Goods but the growth potential of 2 companies is different.
- From 2018 – 2023 the stock price of Unilever have almost moved sideways. But P&G's stock price has risen significantly in the same time.
- If you invested \$1 into P&G in 2018, you would get double profit (\$2) now. But you will payback and don't get any profit if you invest into Unilever.

Cumulative Return of Unilever and P&G



Average Proportion of Sales from March to August 2020 compared with March to August 2019



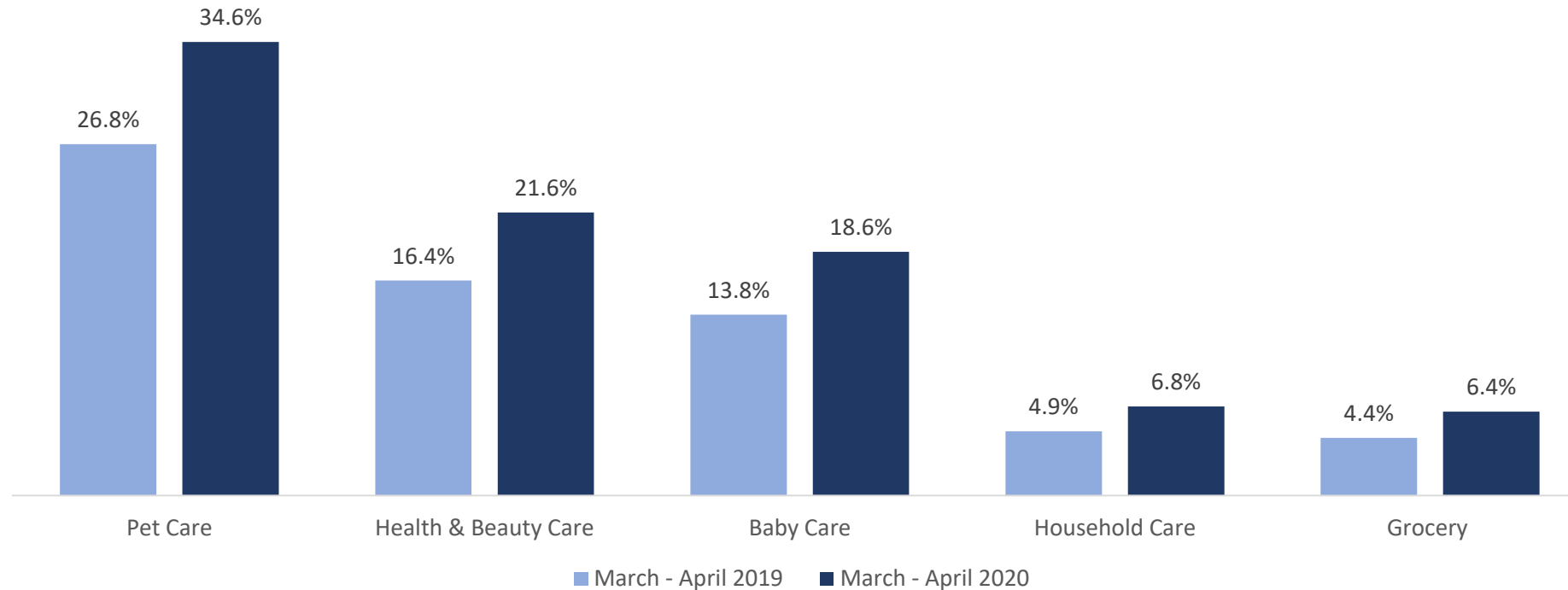
- According to National Statistics, the proportion of total online sales grew when comparing the period of pandemic in 2020 against 2019.

The Percentage Changes in Consumer Behaviour



- Covid – 19 also changed consumer behaviour. The percentage of people visiting physical stores less and ordering groceries online were grown up.

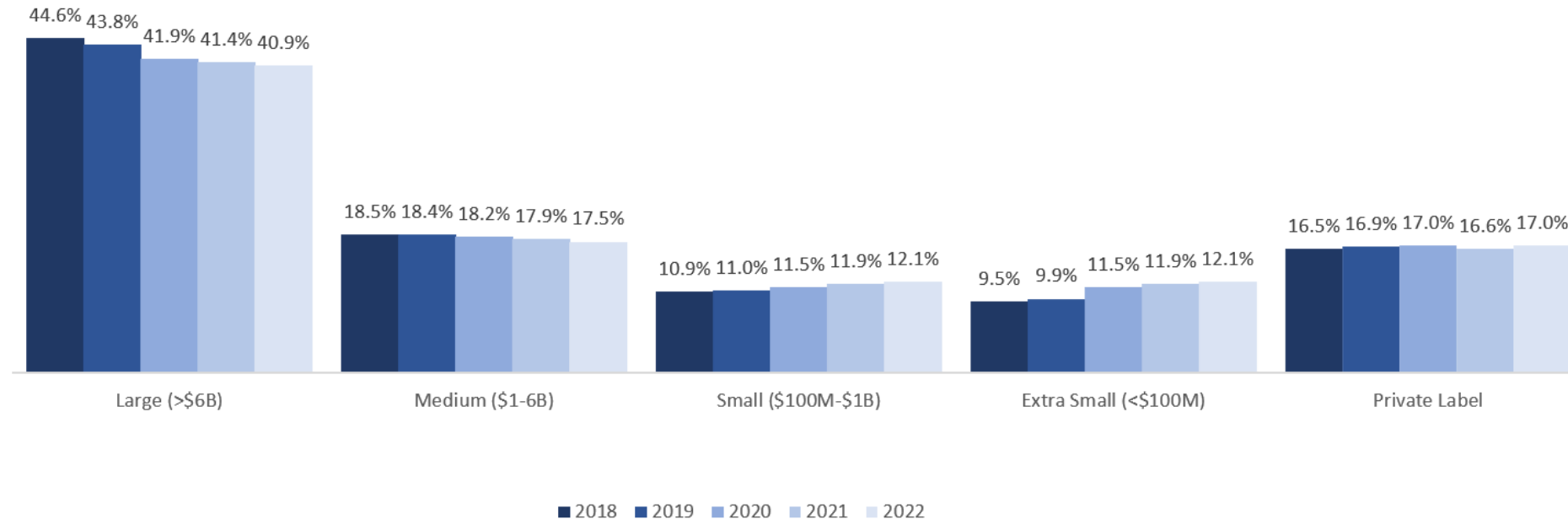
E-Commerce Share of CPGs Category Sales



- During the Covid – 19, certain CPG categories have seen significant growth in E-Commerce Sales.
- Comparing CPG E-Commerce Sales between March and April of 2020 to the same period in 2019, the most significant relative growth could be seen in the Grocery category.
- In 2019, this category accounted for 4.4% of total category sales and this share has grown by **46%** year over year to 6.4% share of total sales in 2020.

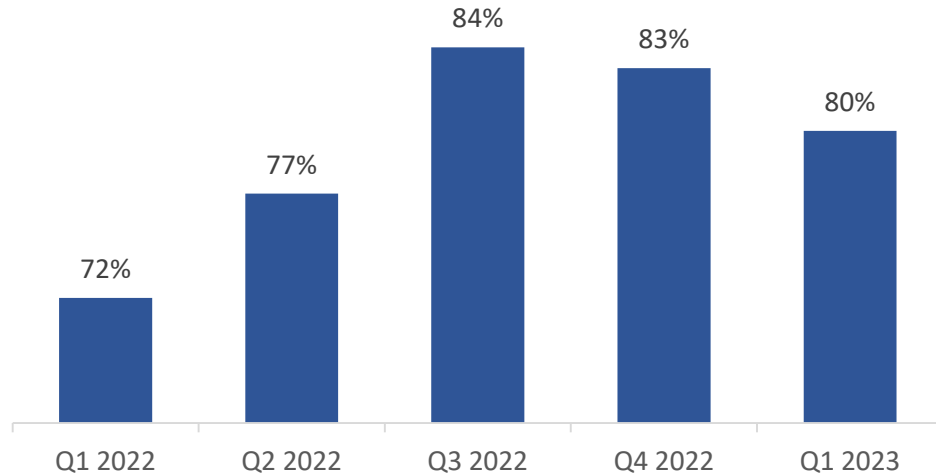
4.3. The Affect of Rising Inflation to CPGs Industry

CPG Market Share Trends (2018 - 2022)

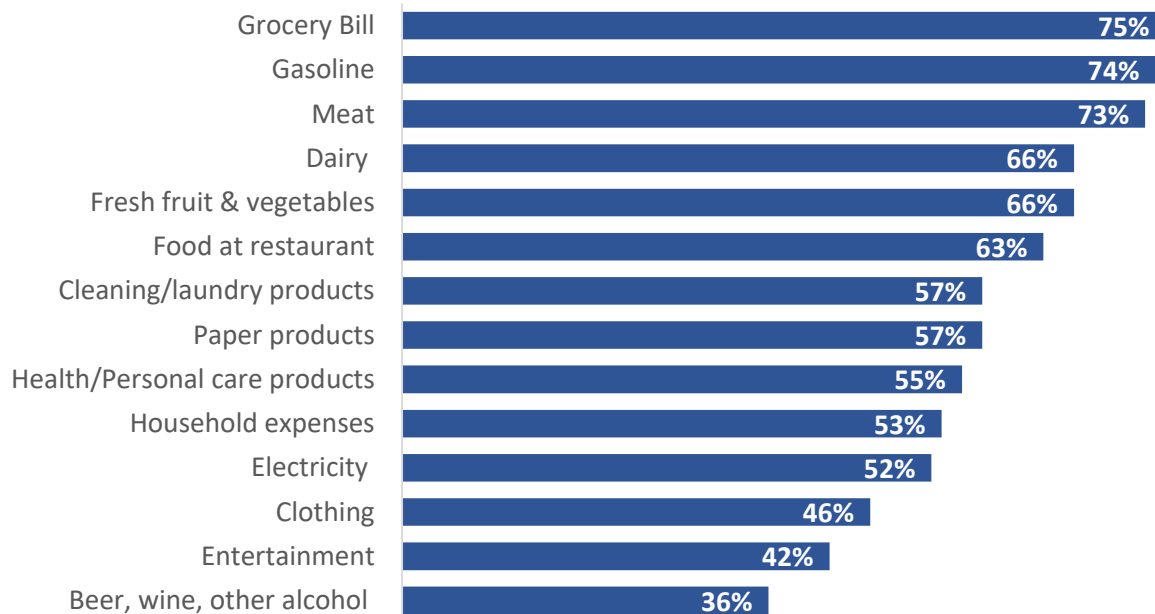


- According to BCG report, large manufactures (defined as those with more than \$6B in annual sales) accounted for 40.9% share of CPG total sales. This figure downed 0.5% from 2021 (41.4%)
- Private label, extra small (<\$100M) and small (\$100M - \$1B) rebounded.
=> In response to inflation people would **buy cheaper brands and more private label brands.**

Inflation's Impact on Consumer Spending

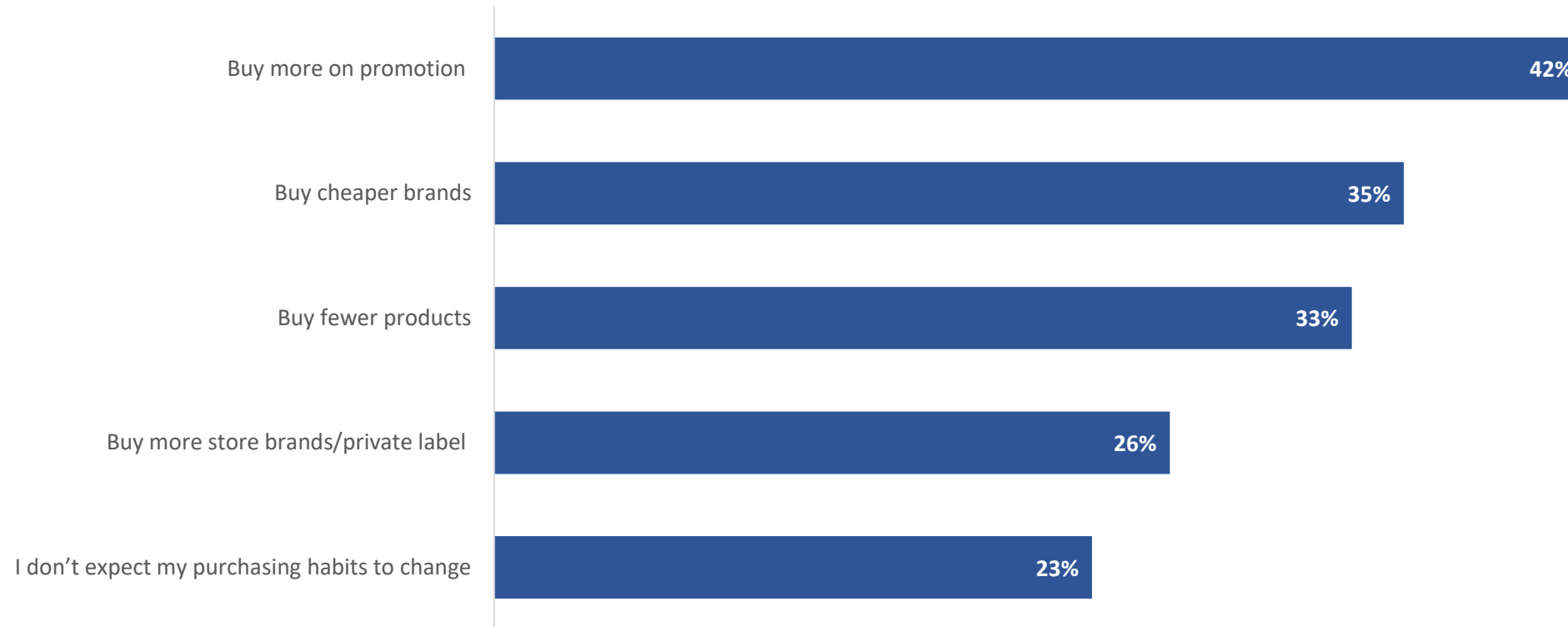


Consumer Feel Impacted by Inflation across Categories



- According to the survey of Jungle Scout, inflation has been causing consumer to change their spending habits (cut back on dinning out at restaurant, subscription services, buy less expensive brands and buy generic or “no name” brands)
- It raised from Q1-2022 and peaked in Q3-2022. This number was still high until now.
- Gasoline and food price have been most strongly impacted. Within food categories, meat prices were mentioned most often (73%) by Ipsos survey.

The Impact of Inflation on Customer Behaviour

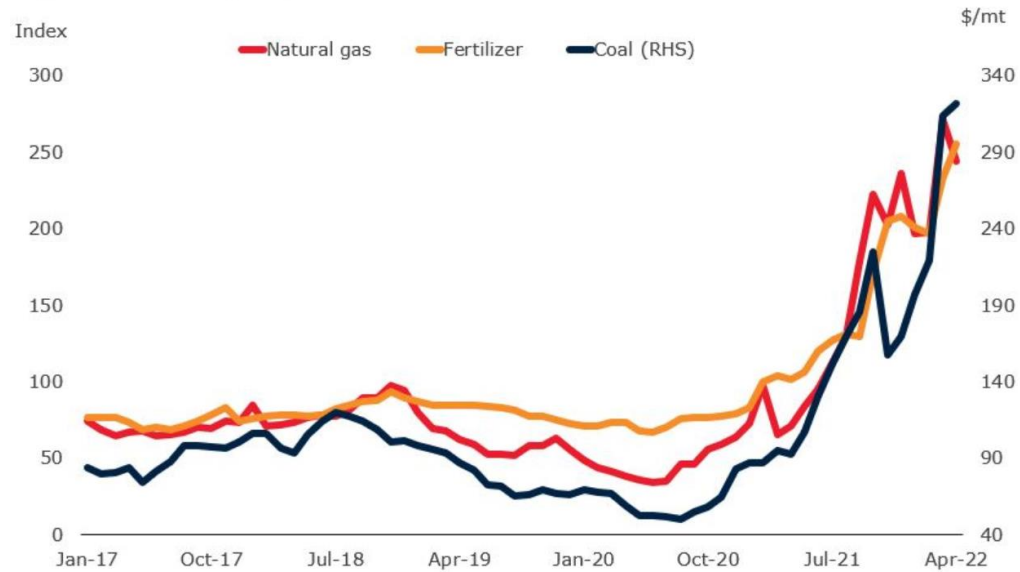


Almost 80% said they would do at least one of these things because of higher prices

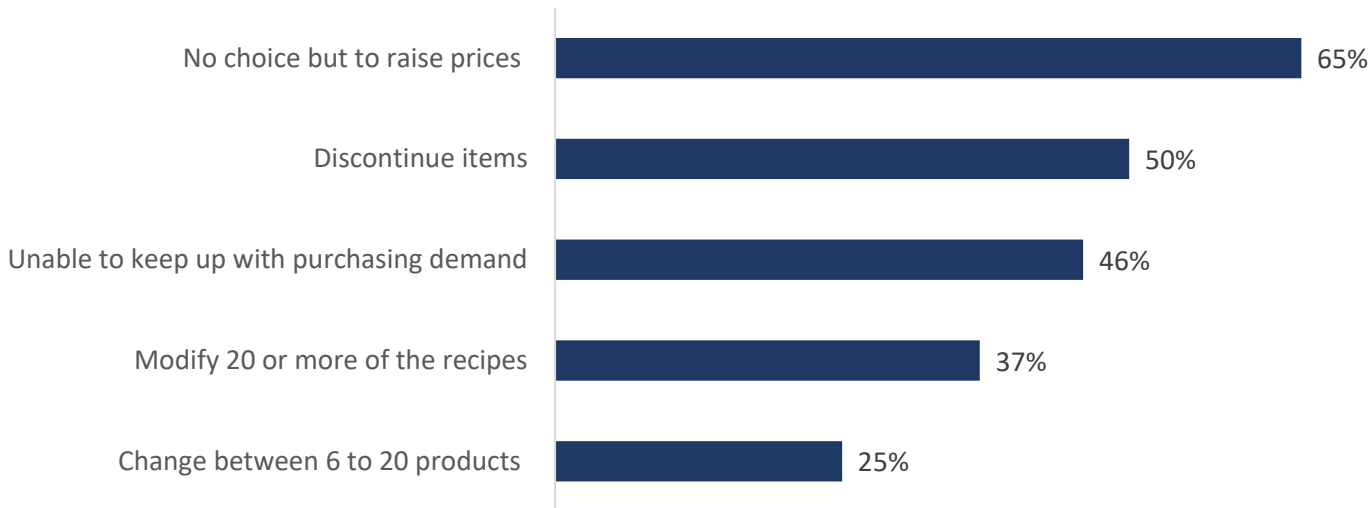
80% of consumers expect to change their shopping habits if inflation persists. Increased prices will see some buy fewer things, but more will look for product on promotion (42%), look to trade down to lower priced items (35%) and turn to store brands or private label (26%).

Challenges and Solutions

Agriculture input prices



How are CPGs responding to the higher cost of ingredients?



- Energy prices, especially coal and natural gas in Europe surged in 2021 and are expected to increase in 2022 and 2023.
- Energy market developments have affected to fertilizer market, agricultural activities and supply chain.
- According to the chart, 65% said they had no choice but to raise prices. Close to 50% had to discontinue items and 46% admitted to unable to keep up with purchasing demand.
- CPG companies need the basic ingredients that make the products. With these ingredients costing more, they have to make changes or accept reductions

Benefits of washing in cold

Washing in cold is not only beneficial for you and your wallet, but for the environment, too.



Save money

Every load adds up on your energy bill, especially for families. With Tide, you can save up to \$150 on your yearly energy bill simply by turning to cold water.*** Tide is designed to work powerfully in cold water temperatures, giving you a great clean in every single load.



Help the environment

By switching to cold, you can save on average 90% of the energy you use with every load of laundry. That means less energy wasted and less impact on the environment with every wash. That's just one way Tide contributes to a cleaner, brighter future.



Get a powerful clean

Get great results, no matter the water temperature. Tide is specially designed to give you the best clean in every wash, even in cold water. Tide even cleans better in cold water than the bargain brand does in warm.****



- By pricing to the value of a products as opposed to just the cost, CPGs can consider this situation as an opportunity to raise margins.
- Focus on how to expand and create new value or use pricing and cost management strategies can yield positive results.
- Improve the quality of data for better accuracy, advances the demand forecasting system using AI to support the supply chain during high inflation.