



TELLUSANT

Streamlining Corporate Decisions

The Consumer Impact of Pricing

How the rapid price increases in fast-moving consumer goods are impacting consumers

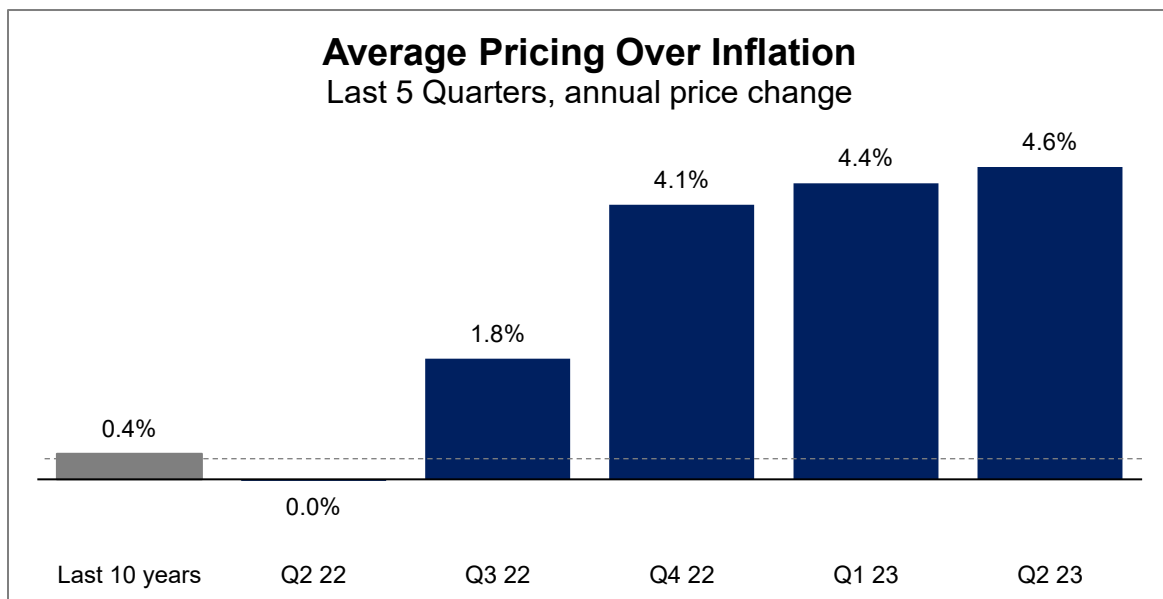
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INTRODUCTION

Consumer goods companies have increasingly been in the news for raising prices in today's high global inflationary environment. With uncertainty about the true size and effect of these price increases, we examine how pricing is impacting both company volumes and consumer ability to pay on a global scale.

We captured the price increases from 10 of the largest global fast-moving consumer goods companies in the world. These companies are market leaders in countries representing the majority of global GDP and explain key price movements across the category.

The last three quarters have seen a dramatic increase in prices these companies are charging per unit. Price changes without inflation¹ adjustments have hovered between 8-12% even as inflation has slowed, resulting in significant price taking since mid-2022.



FMCG companies today are increasing prices at 10x the historical rate versus inflation.

This also represents a sizeable shift from recent pricing trends that have hovered around 0.4% over inflation the last 10 years.² FMCG companies today are increasing prices at 10x the historical rate versus inflation.

We examine the impact of this rapid price growth both in terms of company performance today and broader consumer effects going forward.

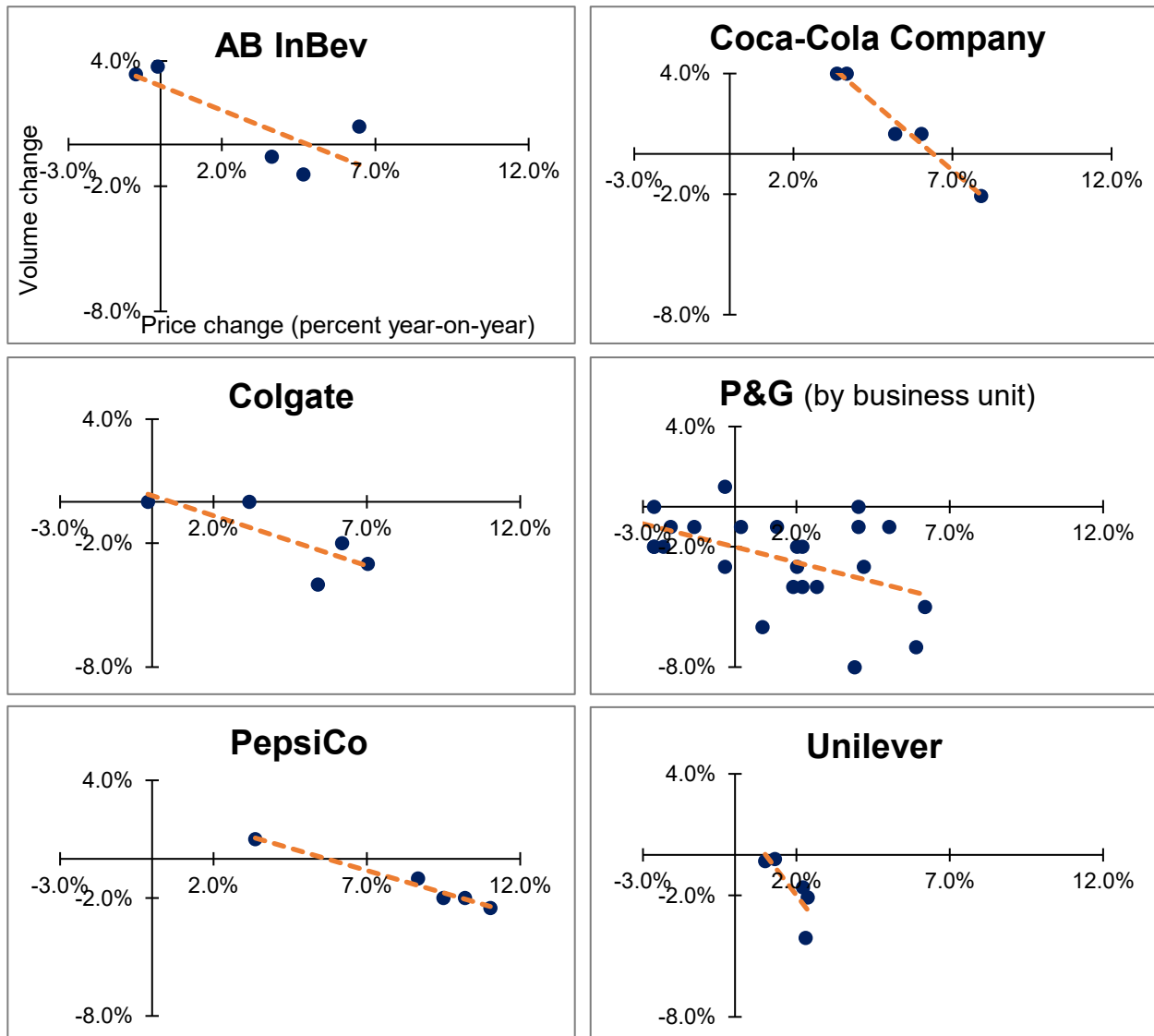
¹ Inflation is reflected as CPI for the country of each company's headquarters

² Based on inflation data of food versus overall CPI across all OECD countries

THE SCALE OF PRICING CHANGES

To better understand the significance of these price increases, we investigated the individual implications for some of the largest consumer goods companies in the world.

Specifically, we gathered pricing and volume data from Q2 '22 to Q2 '23 from quarterly and annual reports for each company. All data reflects year-on-year changes and excludes M&A, FX, and other non-recurring items. The price changes here reflect producer prices, so slight differences in price to consumer may exist.



The effect of pricing recently has been quite clear: volumes go down as prices increase.

Further, pricing - with all other effects considered - explains volume with a high level of precision. Our analysis indicates that price changes directly account for over 95% of volume changes in multiple cases and more than 60% in all but one case.³

In 4 of the 6 companies shown, the calculated elasticity is less than 1, implying that raising prices above inflation will also raise revenue. Thus, at first glance, the logical decision may be to continue increasing prices by 4% above inflation going forward as well.⁴

While in some situations this may be true, the most important insight we see is how highly interconnected pricing and volume remain in inflationary times. To us, the next step must be to see the impact on end consumers to understand what can be learned and applied.

³ Metrics represented in terms of R^2 for the data points available. Additional analysis should be conducted to use this as a forward-looking explanatory variable

⁴ The explained differences in elasticities and growth rates in this assessment do not consider factors including underlying growth trends, price segment changes, competition, and other external drivers.

THE HIDDEN EFFECT OF PRICING CHANGES

The impact on volume is seen both through:

- Participation: individuals choosing to consume at all
- Consumption per participant: often split into frequency of consumption and intensity per occasion

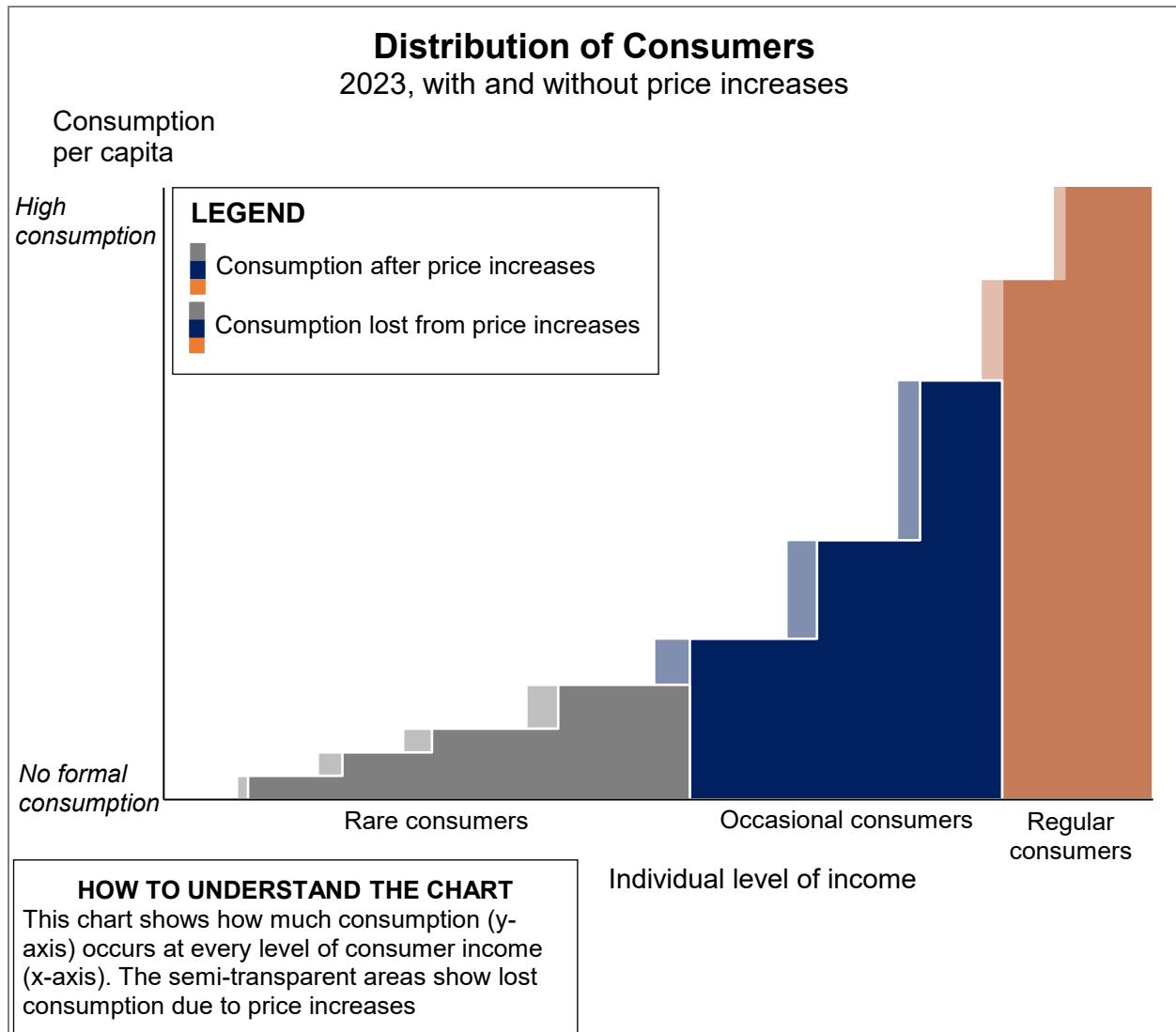
Surveys are an excellent method to get individual-level information about these volume drivers. However, surveys often lack comparability across markets, require consistent surveying to get more than a single point-in-time assessment, and are difficult to capture at a global level.

Tellusant's PACE (Pricing Aligned with Consumer Economics) App gives participation and per capita consumption information on a broader scale around the world and into the future. The tool allows users to see how many consumers qualify for products given individual-level incomes; view impact on pricing; and map out what consumers would fit where in a portfolio.

We use PACE to see how many individuals globally will fall out of key groups across three types of consumers:

| Consumer Type | Number of People (2021) | Disposable Income (daily, USD, 2021) | Description |
|---------------|-------------------------|--------------------------------------|---|
| Rare | 3.1 billion | < \$9 | Consumers who will not interact with formal fast-moving consumer goods daily |
| Occasional | 2.9 billion | USD \$9-\$42 | Consumers who purchase fast-moving consumer goods but cannot afford to be reliant on the products for all their consumption |
| Regular | 1.9 billion | > USD \$42 | Consumers whose budgets include fast-moving consumer goods without significant restrictions |

We assume that the price increase of 4% over inflation from major consumer goods companies is reflective of the entire market. We use the PACE app to show how this change has resulted in the following differences in consumers by type since 2021 versus if the companies had priced at inflation:



Price increases reduced the number of Regular consumers by 60 million and the number of Occasional consumers by 22 million.

In total, the price increases reduced the number of Regular consumers by 60 million and the number of Occasional consumers by 22 million (due to a combination of decreasing Regular consumers and increasing Rare consumers).

To see where these changes have been felt most, we have further leveraged the PACE app's global granularity. We can see that China has the largest impact in addition to many other middle-income countries:

This effect is especially significant in middle-income markets that would be expected to drive significant future demand for FMCG products.

KEY TAKEAWAYS

In conclusion, we now can see several facts:

- Recent price increases from major FMCG companies have been both significant and a shift from typical price inflation
- The high price increases have had an impact on company volume while acting as a positive driver for revenue, in most cases
- The volume declines have reduced the global consumer base by over 80 million people already (in addition to consumption intensity)

Further, these observed changes reflect just a year of higher pricing. If these rates of increase continue, then 440 million fewer people will be an Occasional or Regular consumer than expected by 2026.

Therefore, while price increases appear to be supporting growth today, there are several longer-term questions about the true implications of these actions:

1. The price taking above inflation has reduced the global consumer goods affordability for many individuals already
2. New consumer entry will be delayed for over 3 years (from baseline) for formal consumer goods categories and could shift long-term demand patterns downward
3. The significance of these price shifts creates opportunity for new value players, as many countries now have substantial consumer bases who struggle to afford FMCG. Low-priced and semi-formal offerings in less affluent European and Latin American markets are a growing opportunity

By understanding pricing impacts on individuals, rather than on markets as a whole, we find a new world of insights. Tellusant's mission is to streamline corporate decision making by providing products that can show this type of information in a consistent, accurate, and immediate manner, globally and locally. Our products such as PACE make this happen. This means that companies can spend more time thinking about the implications of their decisions rather than searching for data.

If you are interested to learn more about our products including PACE, please contact Philip Burgin-Young at pbyoung@tellusant.com.

REFERENCES AND NOTES

Our dataset is comprised of public companies in the fast-moving consumer goods space. We collected data shared by companies from quarterly reports and SEC filings. These companies make up a sample of the overall FMCG industry that we believe is representative of the overall industry, but there are several caveats:

- The information is at a manufacturer level, so actual price seen by the consumer may differ
- Competitive companies may have priced differently than our sample of companies. To lower this risk, we tested the trends by sampling a total of 20 of the largest FMCG companies for one quarter to confirm our insights

To access a free trial of the PACE App, you can sign-up here: [PACE](#).

Data was collected from:

1. TelluBase (as of September 1, 2023). TelluBase is Tellusant's database with unique subnational income distributions on a global scale covering 218 countries, 2,600 cities, and 2,400 subdivisions from 2000-2050
2. OECD (2023), Inflation (CPI) (indicator). doi: 10.1787/eee82e6e-en (Accessed on 09 September 2023)
3. Individual company reports publicly listed on corporate investor relations websites

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