HOW TO BE AN INFLATION WINNER

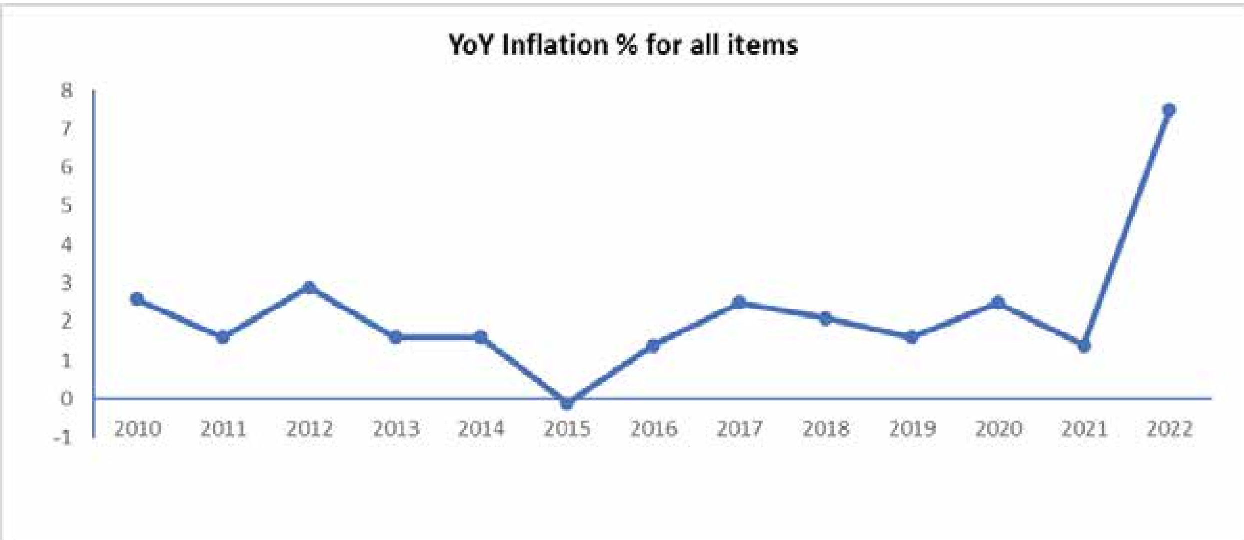
PRICING IMPERATIVES FOR GROCERS IN A POST-COVID WORLD

Inflation isn't going anytime soon

The US is facing an all-time high inflation not seen in the past few decades with prices rising as high as 7.5% as of January 2022 compared to last year. There are a variety of reasons behind this increase - strong demand after the coronavirus outbreak, persistent supply and labor shortages, increasing energy prices, and more. Further, this trend of increasing prices and volatility is now expected to continue due to the Russia-Ukraine war.

The below chart shows the year on year increase in inflation rates from 2010-2022 taken every January. As can be seen, year 2022 inflation is like no other seen in the last decade.

Figure 1: Chart showing YoY inflation% from 2010-2022.



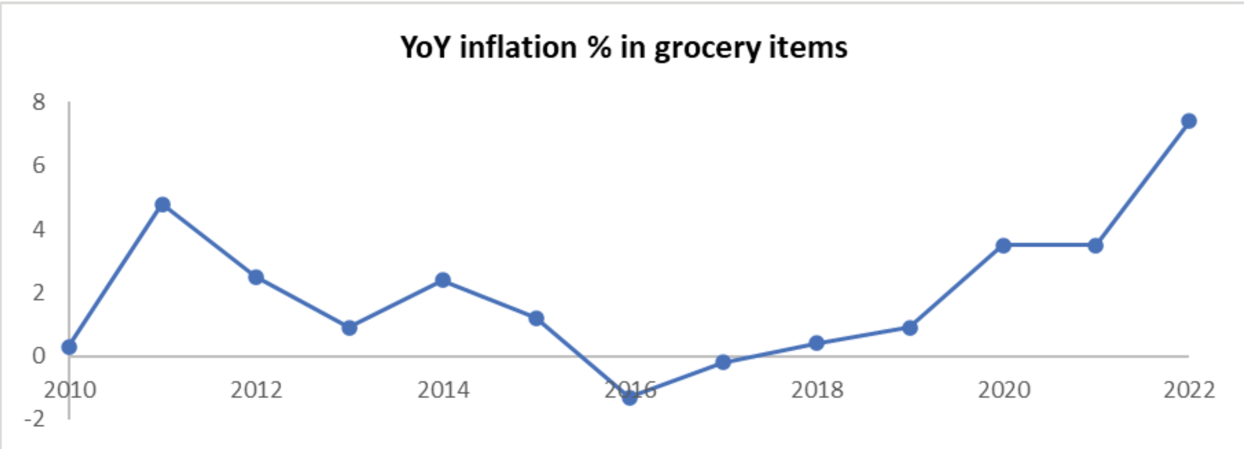
Source: Bureau of Labor Statistics, CPI index reports

There are many dIfferent reports providing forecasts about inflation trends, and when we can expect a return to normal. As per a forecast by Bloomberg, inflation is expected to remain high in the year 2022 with normalization to ~2% expected as late as 2024. However, there is still a lot of uncertainty in the market, which has left grocer's to seek out solutions as they feel pressure building on their margins. In the coming years, grocer's will need more agile and flexible pricing models to help them navigate this unprecedented inflationary environment.

Impact on Grocery

Inflation in the overall food-at-home segment (incl. grocery store and supermarket food purchases) rose by 7.4% over the last 12 months, with the largest increase of 12.2% observed in the meats, poultry, fish and eggs sub-segment. These numbers are expected to continue to rise by 1.5% to 2.5% in 2022.

Figure 2: Chart showing YoY inflation% in grocery from 2010-2022.



Source: Bureau of Labor Statistics, CPI index reports

As inflation in grocery becomes more visible to consumers, there are a range of emerging trends we see happening:

- **Shift in Key Value Categories (KVCs) and Key Value Items (KVIs) –** Consumers are shifting to lower priced brands, pursuing discounts and promotions and trying to cut back on discretionary spend. As per a report by Numerator:
    - **49%** of consumers plan to switch to lower priced brands with slight inflation, and **60%** plan to switch with significant inflation.
    - **45%** will seek out additional discounts and promotions with slight inflation, **50%** with significant inflation.
    - **36%** plan to cut discretionary spend with slight inflation, **49%** with significant inflation.

- **Bulk buying of grocery items -** Consumers are finding innovative ways to save. They prefer to bulk buy groceries and do price comparison online before shopping, to get the best deals.

- **Increase in bulk buying of grocery items -** As consumers plan to cut back on discretionary spending, they are looking for substitutes to derive the maximum gain.

- **Change in behavior depending on price elasticity -** It has been observed that consumers behave differently when it comes to buying highly price sensitive items such as eggs, white bread, fruits and vegetables where they are expected to shift loyalties in brands or substitute items as per their budget. For example, the demand for non-white bread is much less price-elastic than the demand for white bread, and the demand for cookies and cakes is one of the most price-elastic.

Hence, in order to avoid shocks of the evolving consumer behavior, it is very important for grocers to price right and avoid mistakes.

- **Protection of margins -** Consumers are finding innovative ways to save. They prefer to bulk buy groceries and do price comparison online before shopping, to get the best deals.

    - **Blanket price increases do not work -** While most companies plan to increase the prices citing reasons for increase in inputs such as transportation, material costs and higher wages, in groceries a blanket increase in prices across all categories and products is typically not the best solution.

    - **Selective price taking maximizes sales and margin -** Based on careful measures of elasticity and a thorough understanding of consumer behaviors, grocers can take price increases on select products.

    - **Increase market share and sales while preserving margins-** When competitors take blanket price increases because they don't know better, smart grocers will selectively price to preserve margin, and lead with winning prices in the categories that matter for price comparison and to drive traffic.

      The complete portfolio of grocery products can be categorized under three buckets from high to low elasticities.

        - Highly elasticity products - cookies, cakes, cheese, frozen food, white bread.
        - Medium elasticity products - packed snacks, low range biscuits.
        - Low elasticity products - fresh food and vegetables, non white bread, fish, seafood.

IMPACT ANALYTICS

Let us take an example of how two grocers (Grocer_1 and Grocer_2) react to inflation on two of their products - a). a high price elastic product (white bread) b). A low price elastic product (non white bread).

1	2	3	4	5	6	7	8	9	10	11
Grocery Caterogry	Price Elasticity	Cost (USD)	Historic Margins	Old prices (USD)	% Increase in costs (fuel, wages, etc)	Revised costs (USD)	Revised margins	Revised prices (USD)	Revised margins	Revised prices (USD)
							Grocer_1 (maintains margins)		*Grocer_2 (revises margins based on*	
White Bread	Price Elastic	1.53	5%	1.61	5%	1.61	5%	1.69	2%	1.64
Non-white bread	Price Inelastic	2.00	8%	2.16	5%	2.10	8%	2.27	10%	2.31
Total		3.53		3.77		3.71		3.95		3.95
Profits				**0.24**				**0.25**		**0.24**

As can be seen in the above table, let us assume that a uniform price inflation of 5% (C6) has increased the costs of both the products as shown in C7. Grocer_1 increases the prices of the products keeping its margins same as before (C4 and C8) listing a revised price as shown in C9. However, Grocer_2 revises prices keeping in mind the price elasticity of products. Since, white bread is more price elastic, any significant increase in prices may decrease its demand and hence Grocer_2 takes a margin of only 2% on it as compared to 5% previously. Similarly, margin for non-white bread is increased to 10% from 8% since it is a price ineastic product. Grocer_2 will end up gaining the same absolute margin of 0.24 USD as it did previous to inflation however Grocer_1 is at a risk of a weak demand for white bread and might end up with lower absolute margins.

Hence, the winning formula for grocers will be to categorize every SKU in the store, and take pricing action based on elasticity, competitive positioning, and consumer behavior.

How can AI help?

AI driven pricing can help predict the ups and downs in the market in terms of input costs, demand fluctuations, supply bottlenecks and provide a more agile pricing strategy.

- **Accurate estimation of elasticities –** AI models can help determine the price sensitivity for each grocery item and determine consumer price elasticities. This will help in understanding which income group customer is sensitive towards price increase/ decrease of which category of grocery items.

- **Targeted price rises and estimation of impact –** AI driven solutions can help determine price increase/decrease across categories along with optimizing of profit margins. Since a uniform inflation impact cannot be transferred directly to consumers via prices, AI will help optimize target prices across different categories based on their elasticities.

- **Smart roll out of changes through test and learn –** Before grocer's take any pan-chain pricing decisions, they would need AI to test the pricing in a few stores and determine the success of their decisions. AI can help select the right portfolio of test-stores (location, size, assortment) that can accurately represent all the stores. Once the test-store results are optimized, the pricing decisions can be rolled out everywhere.

At Impact Analytics we have built solutions to accurately forecast demand, test pricing strategies and pick the best portfolio factoring in all the external variables including volatile consumer trends and micro & macro-economic behavior. Our tools such as PriceSmart, TestSmart and ForecastSmart, are automated platforms backed by robust analytics, artificial intelligence and machine learning to help organizations run seamless experiments, design pricing strategies to maximize gain and deliver highly accurate forecasts for quick decision making.

Impact Analytics has also pioneered a real time price index which tracks top moving grocery items across the elasticity spectrum. This price index will help firms make a more realistic prediction about average pricing across competitive products and categories so they can make better business decisions related to pricing.

IMPACT ANALYTICS

Ranked as one of Americas' fastest-growing private companies by Inc 500 for four consecutive years: 2018-2021

Ranked as one of Americas' fastest growing companies by Financial Times for two consecutive years: 2020 & 2021

Ranked as one of North Americas' fastest-growing technology companies by Deloitte for two consecutive years: 2019 & 2020

Featured as one of top 25 ML startups to watch by Forbes in 2019

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About Impact Analytics

Impact Analytics is a proven leader in enterprise AI SaaS solutions, that combine the art and science of merchandising and supply chain optimization. Our cloud native integrated platform's planning, pricing & promotion, inventory management, and intelligence suites, are built on the foundation of an innovative AI & ML guided forecasting engine with robust predictive algorithms. Impact Analytics is a trusted partner for top retailers, CPG and manufacturing companies across the globe, and is empowering them to make smart data-based decisions, unlock process efficiencies, transform their businesses, and achieve unparalleled business benefits. Our unique engagement model allows for implementations to be executed in a quick and cost-efficient manner.