Is Inflation Deflating Your Brand's Revenue Planning and Velocity?

Forecasting demand for consumer goods has always been time-consuming, contentious and frustrating. Many brands report that historical data is their **ONLY** source of insight for forward-facing projections… which makes sense because as any Dan Carlin or Yuval Noah Harari fan knows, the past is the key to understanding the future.

But over-weighting the historicals makes forecasting significantly more difficult during times of intense inflation. As prices fluctuate rapidly and consumer behavior shifts, it can be a struggle to draw projections into the future based on past events and data. This is a scary prospect for revenue teams in CPG (marketing, sales and finance). Understanding the roots of the challenge can teach you how you can start to overcome them and ultimately allow you to make more informed decisions about the future of your brands.

Why Is Inflation Such A Problem?

Chaos of Volatility

One of the primary reasons why forecasting demand during times of inflation is difficult is that price is a massive variable to every revenue story. **Inflation = increased volatility of prices**. Volatility is the enemy of forecasts. Forecasts prefer stability and even trends. As prices rise or fall more rapidly, it can be difficult to anticipate how consumers will react. Consumers may be more likely to delay purchases or switch to cheaper brands, leading to unexpected changes in demand.

Depleted Purchasing Power

Another challenge is the impact of rising prices on purchasing power. As prices for goods and services increase, consumers may find that their budgets have less purchasing power. This can lead to reduced demand for certain categories of goods, as consumers prioritize their spending on essential or high-value items.

Patterns Become Irrelevant

Inflation can also complicate forecasting by making historical data less relevant. Patterns and trends that held true in the past may no longer apply in times of inflation, making it more difficult to anticipate future demand.

First steps to dealing with the problem

More data sources

To overcome these challenges, businesses can take several steps to improve their forecasting accuracy. First, they can gather more real-time data on consumer behavior, such as using point-of-sale data or social media analytics. This can provide valuable insights into emerging trends and changes in consumer sentiment.

More adaptive and durable models

Another approach is to use AI models that can more easily take inflation into account. Multivariate linear regression, which is often the backbone of most forecasting models, is difficult to inflation-adjust. But businesses can use more sophisticated machine learning models – particularly an ensemble of models-with inflation-adjusted settings to better understand how consumer behavior is likely to change as prices rise. This can help them anticipate changes in demand and adjust production and inventory accordingly.

WorldQuant Predictive's Inflation-Resilient Approach

WorldQuant Predictive's Consumer Goods solutions generate durable and accurate unit and dollar sales predictions based on a unique, derived data based on a mix of syndicated sources (that have past historical sales, pricing, promotions, ACVs, etc.) and a mountain of macroeconomic datasets we join it with. We also use AI-powered models that are superior to traditional demand forecasting. We use an ensemble model (fancy data science speak for many models optimizing predictions collectively) approach that is based on two key model types:

- **Prophet models** that uses historical sales to capture and optimize for seasonality in demand at scale
- **Gradient boosted** decision trees are layered on top of the base predictions to simulate thousands of scenarios and factor in inflation, unemployment and even epidemiological factors

The result is a set of predictions that are consistently above **85%** accuracy and they are more durable to large-scale changes in the real-world like recessions, pandemics and **INFLATION**.

Conclusion

Ultimately, turbulent economic times require a new approach. We're clearly in the midst of the AI revolution and these forecasting challenges present yet another opportunity for AI to enhance human activities. Using a combination of robust data gathering and analysis, an understanding of changing consumer behavior and trends, and careful consideration of the broader economic landscape, businesses can improve the accuracy of their forecasts and make more informed decisions about production, pricing, and marketing strategies.

Go beyond demand forecasting with our powerful, predictive solution. See how Quanto™ can forecast outcomes, simulate scenarios and optimize promotions.

Request a demo of Quanto for CPG today to see what demand forecasting 2.0 can do for your business.

Who We Are

WorldQuant Predictive answers high-value business questions with ready-made, AI-powered predictive solutions. Our intuitive cloud platform Quanto, hosts an array of industry-specific solutions that predict outcomes, simulate scenarios and optimize for results with ready-made, reliable data science. We find signals others miss.

WorldQuant Predictive, founded by Igor Tulchinsky, is a separate entity from WorldQuant, LLC, a global quantitative asset management firm.