INTELLIGENT FORECASTING:

Tapping into Economic Indicators to Seize Market Opportunity and Momentum

By: Russ Banham

prevedere

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Modern executives have faced their fair share of challenges throughout the last decade. Today's leaders have faced unique challenges, from marketplace chaos to the constant change in consumer behavior dynamics. However, one of the heaviest demands to date seems to be how to transform a business into a truly data-driven organization.

According to NewVantage Partners' 2019 Big Data and AI Executive Survey, a majority (69%) of executives from major global corporations readily admit that they have yet to create a data-driven organization. Further, executives that identify their firms as being data-driven has dropped from 37% in 2017 to 31% in 2019. So, why is the evolving role of data and analytics posing problems for executive teams? A recent Prevedere survey set out to examine this trend.

The recent "Why Creating a Data-Driven Organization is Challenging the C-Suite" report analyzes findings from a March 2019 survey* commissioned by Prevedere and conducted amongst C-Level and senior executives, primarily from the retail and consumer goods industries. The main objective was to gauge opinions on the challenges faced regarding data and analytics specifically. Compiled findings are compelling and provide an inside view on popular reservations leadership hold when deliberating on data and emerging technology. What's clear is that executive leadership believe their organizations are lacking in having the right combination of data and software to accurately and efficiently convert data into insights.

THE QUEST TO DIGITIZE THE WORLD

Until recently, finding the right data to forecast a company's future business prospects was like finding a needle in a haystack. One reason is all that data. As of right now, in 2020, there are about 40 trillion gigabytes of data. Tomorrow, another 2.5 quintillion bytes of data will be produced, the equivalent of covering the earth with pennies side-by-side five times over. By 2025, this figure will increase five-fold.

CFO CHALLENGES

Within this planet-sized array of data are individual units of information that are viable business indicators for some companies but not all, making them competitively differentiating and invaluable, insofar as where to deploy growth capital. The problem is filtering the gazillion data elements to find these kernels of insight. Unable to process all that information manually, the unique business indicators are unattainable and unfathomable.

This challenge confronts every CFO in making strategic plans and capital decisions, and Financial Planning and Analysis (FP&A) teams generating forecasts based on historical financial performance and current macroeconomic trends. Traditional business intelligence technology tools grind up the same external data, producing homogenous predictions on an industry sectors basis. This is no way to achieve competitive traction; even worse, it increases the risk of wastefully distributing an organization's finite financial resources.

INTUITION AND INSTINCT

Demand forecasting—projecting which products or services will be purchased where, when and in which quantities—is a fundamental process in every company. It is common for businesses to draw upon the insights of salespeople closest to customers in making the forecast. In some companies, gut instincts are a replacement for fact-based inputs.

For example, a salesperson at a maker of windows firmly believes his arthritic knees can uncannily foretell market demand. If his knees hurt, it means rainy weather is coming, an indicator of increased demand since homeowners would not want to replace a window when it's pouring outside.

Regrettably, his knees told the wrong story. Historical weather data indicated the company's window sales actually increased when it rained, contrary to the salesperson's deductive flawed reasoning.

Facts are what every FP&A team and all CFOs want in hand to make unequivocal and informed forecasts and capital allocation decisions. The problem is that traditional business indicators, while factual, are too general to be of much use. Sometimes, they also may be misleading,

> *Like most CFOs, I'd look at the economic cycle in my industry to get a sense of where business was growing or receding, said Karim Sadik-Khan, North America CFO of Beam Suntory Inc., one of the world's largest producers of distilled beverages. But, at the end of 2016, the economy was doing just fine, employment was rising, GDP and stock markets were growing, wages were up a bit, and inflation was holding steady. Yet, our spirits category (whiskeys and tequila) was slowing down, pretty dramatically. I was struggling to determine how this could possibly be the case.*

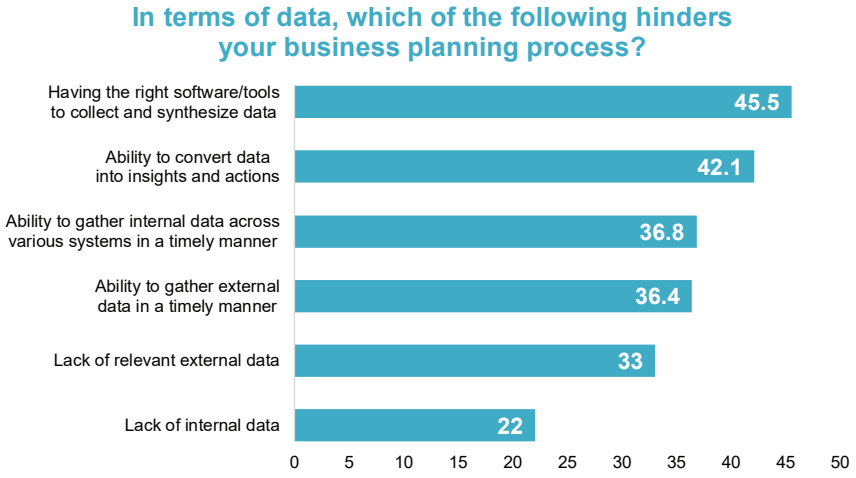
CFOs in other industries are equally caught off guard when business slows unexpectedly during an economic upswing, yet somehow rises when economic prospects turn south. Something is obviously off-center, but what exactly is it? FP&A teams, on the other hand, lose confidence in their projections when the field force posits strong sales ahead that fail to materialize.

> *Our sales team talks with their customers regularly, yet at the end of the day our revenues were stagnant, said Phil Barton, Senior Manager of Corporate Financial Planning and Analysis at GoPro, a maker of action cameras used in sports like skydiving and skiing to capture life's thrilling moments. We rely on traditional bottoms-up forecasting, whereby sales teams provide input on our business at customers like Best Buy. However, our sell-through figures (the percentage of a product sold by a retailer after being shipped by the supplier) were not a dependable indicator of future performance.*

DIGGING DEEPLY FOR THE TRUTH

These experiences are far from uncommon. According to a survey conducted by Quest Mindshare and sponsored by Prevedere, more than one hundred top executives at companies with over $250 million in revenue conceded their forecasts, based on external factors and historical data, are largely a guessing game.

Their guesstimates were attributed to lacking the right software to collect and synthesize external data (cited by 45 percent of respondents), ongoing difficulties accessing internal data (37 percent), and the inability to turn data into actionable insights (42 percent).



A separate study sponsored by Prevedere suggests that 70 percent of CFOs have no systematic way to collect, analyze, and incorporate external data into their strategic planning processes. For the most part, data from traditional metrics like GDP and housing starts are cut and pasted into spreadsheets to assist their capital allocation decisions. With external factors driving 85 percent of a company's business performance, this unpolished process is a less than satisfactory way to determine which external factors align with actual performance.

A forecast based purely on historical performance data, current macroeconomic trends, and gut feelings is akin to a baseball manager selecting the lineup for an upcoming game based on last summer's hitting percentages, the opposing team's win-loss record, and which way the wind is blowing.

Conversely, former Oakland Athletics' manager Billy Beane, whose book "Moneyball" introduced how a middling baseball team transformed into a winner, tossed away "common wisdom" and outsmarted the competition by digging up granular data other teams ignored. CFOs and FP&A teams can do the same, by capturing a set of specific external data that aligns, or correlates, with the company's prior business performance.

ECONOMETRIC MODELING

The value of analyzing external data to forecast future performance was suggested decades ago in a 1971 Harvard Business Review article. This econometric modeling methodology showed great promise, demonstrating that trends in general economic conditions altered a product's future sales rate. These "leading economic forces," the article stated, influence "subsequent changes in specific industries."

Importantly, the article affirmed that historical patterns in external data can be expected to persist for a period of time. "Statistical techniques are based on the assumption that existing patterns will continue into the future. This assumption is more likely to be correct over the short term than it is over the long term, and for this reason these techniques provide us with reasonably accurate forecasts for the immediate future."

The continuation of historical patterns in external data made econometric modeling a desirable forecasting method. The challenge (at the time) was the human input needed to develop the models. The article concluded on an upbeat note, stating that more powerful mainframe computers would eventually take on this task.

Up until quite recently, econometric modeling still entailed the physical gathering and manipulation of external data by people, typically in spreadsheets. Now, thanks to new technologies like machine learning, advanced analytics, and cloud computing, data-rich econometric calculations are possible. It is impossible to overstate the importance of these predictive capabilities.

As a 2019 study by McKinsey & Co. states, "Analytics create value when big data and advanced algorithms are applied to business problems to yield a solution that is measurably better than before."

Today, econometric modeling is considered the best method to predict near-term, mid-term and even long-term business turning points, selected in 2018 as the most accurate predictor of identifying economic headwinds and tailwinds by the Institute for Business Forecasting and Planning.

Ignoring the predictive power of these models comes with a cost. Missed forecasts are the major reason why shareholder value decreases in public companies, often resulting in the replacement of the CFO for the person's inability to see and analyze what lies ahead.

"The stakes are high," the McKinsey study states. "Analytics has the potential to upend the prevailing business models in many industries. Those who advance furthest, fastest will have a significant competitive advantage. Those who fall behind risk becoming irrelevant."

To avoid this fate, companies need to pull out the handful of insights from the trillions of gigabytes of external data that correctly predict their future performance.

DATA IS HERE, THERE, AND EVERYWHERE

This information is there for the taking. Thanks to the Internet of Things, automobiles provide reams of data on car performance, driver abilities, miles driven, traffic endured, maintenance issues, road conditions, and so on. And that's just cars.

Smart devices and appliances are proliferating—from smart thermostats, smart factory equipment, and smart security systems to smart payment systems, cameras and virtual personal assistants like Amazon Echo and Google Home. Data from these devices can signal some companies' future performance possibilities, making this information a competitive differentiator.

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The aforementioned data on the frequency of garage doors opening and closing, for example, can be used by retail stores to determine when people are most likely to be driving, guiding decisions on a store's open hours and labor needs. Coupled with data elements like the retailer's target demographic and the proximate location of drivers who have smart garage door devices, retailers have additional information is available for analysis and action.

"By identifying, sizing, prioritizing, and phasing all applicable use cases, businesses can create an analytics strategy that generates value," the study by McKinsey & Co. states.

A VIEW OF THE FUTURE

Prevedere has developed this analytics solution. The company's revolutionary advance in predictive intelligence informs the most accurate demand forecasts, strategic plans, and capital disbursements. The economic intelligence drawn from its growing database of 3.5 million-plus external data elements ensures no stone is left unturned. Clients are provided an extraordinary opportunity to see what lies ahead for their business.

> *As Doug Garis, Division CFO at Masonite International, a manufacturer of interior and exterior doors and related components, said about Prevedere's predictive model, It was exponentially better than our track record of forecasting and re-forecasting. It builds confidence in the business.*

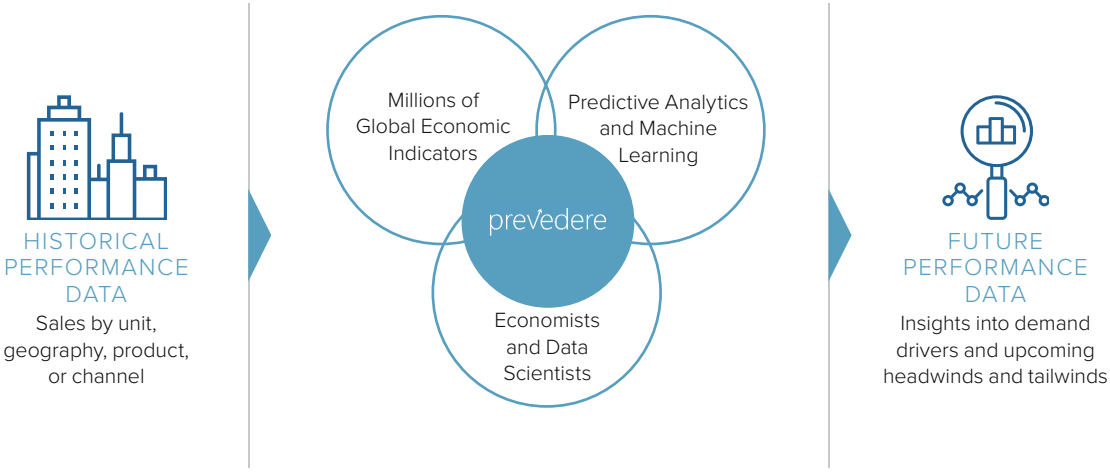
Prevedere is an Italian verb meaning "to see in advance." Other providers of business intelligence make predictions based on historical financial information and traditional external market data. Prevedere's cloud-based analytics tool accesses a database of more than 3.5 million external economic data points to bring to light the specific ones correlating with the company's business outcomes across the previous five years.

These economic drivers become leading indicators of future performance, giving FP&A more surety in their strategic plans and forecasts and CFOs the financial confidence to seize market opportunities when tailwinds are expected or retreat before the headwinds approach. The metric may be as unconventional as the number of times Internet-enabled garage doors opened and closed in a specific region over a period of time. But, if the external data corresponds to a company's past business cycle, it deserves consideration as it may indicate future performance.

HOW IT WORKS

The process begins with a conference with the prospective customer, who provides an economic analyst at Prevedere with graphs and charts illustrating the company's performance on a monthly and/or quarterly basis over the past five years.

This data (traditional metrics like sales revenue, market demand, and shipment volume) are graphed in the customary sine wave formation, accelerating and decelerating to represent the company's business cycle. Armed with this information, Prevedere analysts will search the firm's massive database for external data that closely matches the peaks and valleys of the customer's business cycle. Traditional metrics like new housing starts and consumer savings rates, for instance, may have very similar sine waves over the five-year period. Nothing surprising there. What is truly eye-opening are the thousands and thousands of other microeconomic indicators that share the same cyclical characteristics.



This is just the first phase of the model's analytical work. Certainly, not all apparent correlations have business relevancy. For instance, the price of bananas in Zimbabwe may line up with a U.S. retailer's business cycle but would have no import as a leading indicator. In effect, the tool funnels out these coincidental indicators, tagging only the ones that have specific relevancy to the customer's business profile.

Relevant business indicators for action camera manufacturer GoPro, for example, may include external data on adventure, sports, tourism, travel and consumer disposable income, assuming the metrics aligned with its business cycle over the five-year period. If a strong pattern match is achieved, this data is a relevant leading indicator.

The funneling process continues until a set of other relevant indicators are determined. Thereafter, customers are provided real-time economic intelligence on the leading indicators on a quarterly basis or some other contacted period of time. Prevedere simultaneously monitors the health of the model to ensure continuous accuracy, refreshing where needed.

CHANGING FORECASTS

Economic intelligence is changing how companies forecast future performance. Masonite Architectural historically relied largely on traditional business indicators like GDP, unemployment rates, and consumer sentiment in putting together the quarterly forecasts. By running its five-year business cycle in the Prevedere model and filtering out coincidental correlations, a set of microeconomic indicators surfaced. The metrics included real estate investment figures, construction and remodeling activities, available dollars for construction loans, and sales at home improvement stores like Lowe's and Home Depot.

This "composite of market indicators" provides CFO Garis with "a much better directional sense of where the business is going," he said.

Although the company's finance organization was the initial user of the model, other parts of the organization like sales and marketing requested the data for their own purposes.

"They wanted to see the data and what was behind it," Garis said.

Learning a forecast in a particular region or territory was optimistic or pessimistic, the sales reps tailored their spend strategies accordingly.

A similar progression from finance to sales has occurred at GoPro, which uses the forecasting model in seven countries representing more than three-quarters of its annual revenues. "It has given the sales and marketing team a grasp of underlying economic drivers they didn't have before," said Barton. "They now have additional guidance on where they can get the best bang for the buck in terms of sales promotions."

A study by Deloitte affirms that predictive models often root first in finance before gaining acceptance across the business. "Functions from marketing to supply chain to human resources all have needs for predicting the future to drive important decisions," the study states. "While CFOs may not lead function-specific forecasting, they should help shape these forecasting initiatives since Finance will inevitably use the outputs they generate."

PREDICTIONS THAT REALLY DO COME TRUE

At Beam Suntory, the Prevedere model has earned enterprise-wide credibility, CFO Sadik-Khan commented. The model predicted that 2017 would be a soft market in the U.S. for the company's line of spirits, and 2018 would mark a turnaround, "predictions that held, as they have since," he said.

The model most recently suggested the company would experience a significant two-point drop in a particular category's sales between second quarter 2019 and second quarter 2020.

"In anticipation, we have reset expectations at the holding company and with leadership, including our global CEO and CFO," Sadik-Khan said. "We are presently optimizing production and supply chain to not needlessly tie up cash, while sales rethinks pricing."

Beam Suntory uses the model to parse data at very granular levels—comparing business indicators for whiskey against those for vodka, sales in convenience stores versus supermarkets sales, and preferences of younger drinkers versus older drinkers (younger generations drink less scotch overall, for instance, but favor premium brands).

> *As North American CFO, I am able to maximize opportunities where the forecast is upbeat and minimize the impact where it isn't, shifting the marketing spend to make better financial decisions, Sadik-Khan said.*

It's a succinct summation of the value of the forecasting model for all CFOs swimming upstream in a swirling river of data. At last there is something to hold onto in strategically planning the future.

Russ Banham

A Pulitzer Prize-nominated financial journalist and best-selling author

Russ Banham is a Pulitzer Prize-nominated journalist and author of 23 books. Other books include The Ford Century, the award-winning, international best-selling history of Ford Motor, translated into 13 languages; Rocky Mountain Legend, the national best-selling chronicle of the Coors brewing dynasty; Wanderlust, profiling the historic design and cultural impact of the iconic Airstream "silver bullet" travel trailer; and The Fight for Fairfax, detailing the turbulent economic growth of northern Virginia in the aftermath of World War II. His various books have led to several television appearances, including The Today Show and A&E Biography.

Banham has written more than 4,000 articles for dozens of publications, including the Wall Street Journal, the Economist, the Financial Times, the Atlantic, Forbes, IChief executive, U.S. News and World Report and many others.

Recognized for his broad grasp of business issues and an ability to transform dense information into comprehensible, compelling and insightful stories, Banham is available for contract writing assignments. Corporate services include white papers, brochures, advertising copy, Website copy, speechwriting and ghostwriting of bylined articles and reports.

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ABOUT PREVEDERE

Prevedere is a predictive analytics software company that delivers insights into future business outcomes based on economic trends. Our predictive economic intelligence offering helps executives see what lies ahead for their business and solve for upcoming risks and opportunities. Our SaaS solutions apply the power of machine learning and predictive modeling to millions of indicators of global economic and consumer activity. Prevedere customers include Fortune 500 industry leaders in retail, manufacturing, and consumer packaged goods. To learn how Prevedere can help provide executive-level strategic insights, please contact 888.686.7746 or inquires@prevedere.com.

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