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Range-Based Forecasts: A Worthy Alternative in Light of COVID-19

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Initiatives: Planning, Budgeting and Forecasting **and 1 more**

Traditional point forecasts lack the agility required during a crisis such as the COVID-19 pandemic. In such times, range-based forecasts provide greater guidance and actionability. FP&A leaders should use this research to understand and avoid four mistakes when developing range-based forecasts.

A Better Alternative to Predict and Prepare in Times of Uncertainty

The debate about whether to use point forecasts or range forecasts has been going on for several years, although FP&A teams almost exclusively rely on point forecasts to predict future performance outcomes because it provides a precise estimate. However, the COVID-19 crisis is making it extremely difficult for FP&A teams to develop accurate point forecasts given the level of uncertainty and the lack of historical data. In the current environment, traditional inputs will not have the expected outcomes. Many teams are under pressure to forecast more frequently — either weekly or multiple times a month — given how quickly things are changing. However, progressive FP&A teams are questioning the fundamental value of point forecasts in times of high uncertainty, let alone the value of doing them more frequently.

Table 1: Reliable Forecasting During Times of Uncertainty

Why a point forecast underserves ↓	*Why a range forecast is better* ↓
Provides a narrow view of the future — Focuses on only one scenario which limits management's ability to react quickly.	**Provides a broad view of the future —** Focuses on several outcomes which encourages proactive planning on how to best prepare for different scenarios.
Hides important assumptions — Inadvertently hides underlying assumptions that may be necessary to understand the likelihood of outcomes.	**Helps uncover critical assumptions —** Identifies likely scenarios, providing central teams with a platform to uncover likely drivers of volatility.

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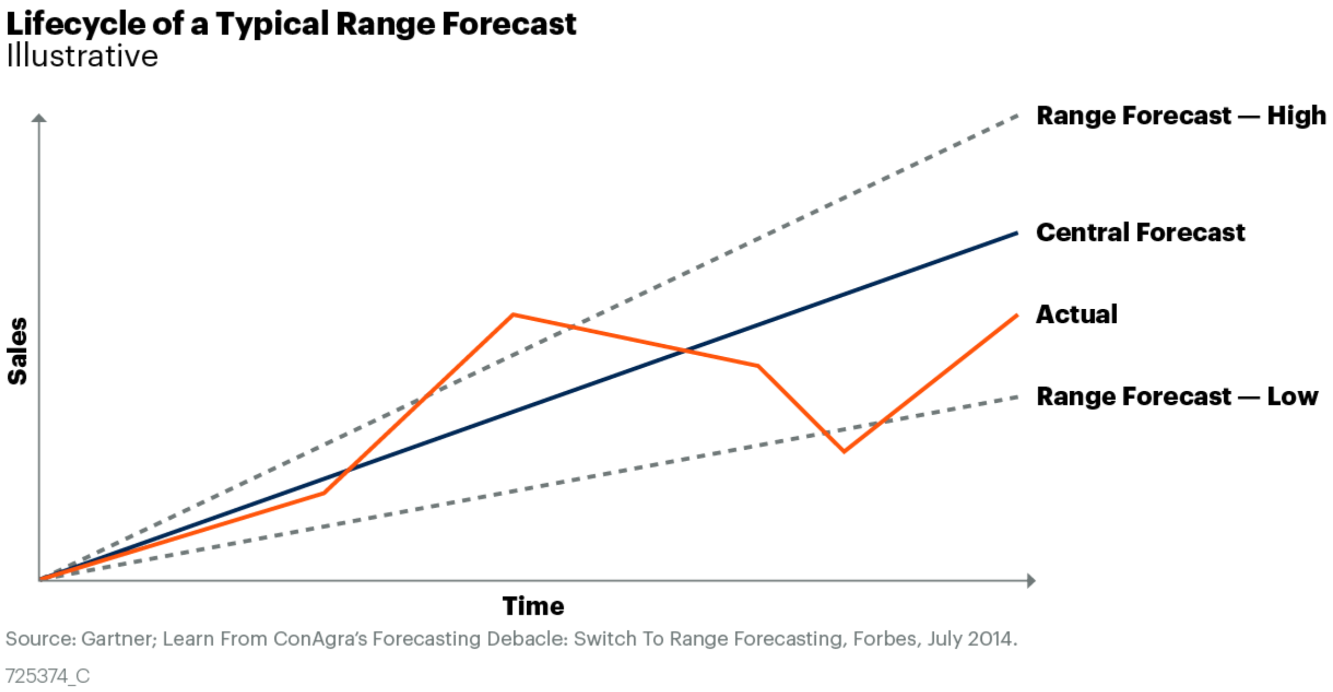
Now is the time to reconsider using range-based forecasts given accuracy is less important and what matters more is helping the organization plan and prepare for several scenarios, which point forecasts fail to do. When critical uncertainties in a forecast are unknown, or in the case of a pandemic crisis unknowable, a traditional forecast will only be accurate by luck. Forecasts will inevitably be proven incorrect because their assumptive basis cannot be correct. Focusing on scenarios exposes the uncertainties and facilitates a better understanding of possible scenarios. [1]

Figure 1: Life cycle of a Typical Range Forecast (Illustrative)



Four Mistakes to Avoid When Using Ranges

One of the biggest challenges of range-based forecasting is figuring out how to determine the low and high ends of the range that would make it useful. A range that is too broad would likely contain the true estimate but not help decision makers understand what is likely or not likely to happen, which can hurt decision making. Similarly, a range that is too narrow may miss the true estimate altogether, which isn't useful either. Below are four mistakes FP&A teams should avoid making including guidance on how to avoid those mistakes:

1. **Don't treat the low and high ends of the range as two independent point forecasts.** Many FP&A teams are actively performing sensitivity analysis which involves running multiple point forecasts to predict the outcome by changing one or more of the input variables. However, this is different from developing a range forecast which involves coming up with a variety of probable outcomes that fall between the best- and worst-case scenario. A good way to think about the high and low ends of the range are to ask two questions: what value is so high that the true estimate will most likely fall below it, and what value is so low that the true estimate will most likely fall above it? Then ask what is the probability of the estimate falling within that range? Several studies have found that forecasters are consistently overconfident when asked to estimate a range at a particular level of confidence than when they are asked to estimate their confidence in the reasonableness of a particular range. [2,3]

2. **Don't make the range too narrow at the start.** While a narrower range may be more informative, it is also more likely to be wrong. In times of high uncertainty, it may be better to start with a wider range that is more likely to contain the true estimate than a narrower range that is highly likely to miss it. [2,3] After a few iterations, if you find your actuals falling consistently closer to the top of the range, increase the low end to make the range tighter. Similarly, if you find your actuals fall consistently closer to the lower end of the range, decrease the high end to get to a more precise range over time. In order to ensure a reasonable starting point for the range, ask the business to explain specific risks and opportunities that align with their high and low estimates.

Figure 2: Risk and Opportunity Assessment Sheet (Illustrative)

Risk and Opportunity Assessment Sheet
Illustrative

Line Item 3
(Operating Cash): Receivables — EMEA Branch

Risk

Low Projection: $4 M			
New Risk (Week 44)	**Cash**	**Probability**	**Forecast Impact**
Crane Customer ABC Receivables will be late for this billing cycle.	$3 M	80%	($2.4 M)
Crane Customer XYZ Will pay 20 days late for current equipment.	$4 M	70%	($2.8 M)
Static Risks (All Weeks)			
Crane shipments to Africa are experiencing delayed deliveries.	$2 M	50%	($1 M)
Supplier HHH in Germany is experiencing delays in raw materials.	$1.5 M	20%	($300 K)
Total			**($6.5 M)**

Opportunities

High Projection: $15.2 M			
New Risk (Week 44)	**Cash**	**Probability**	**Forecast Impact**
Crane Customer HHH Expressed interest in pulling forward quarterly payments	$3 M	50%	$1.5 M
Crane Customer LKG Placed additional order and may pay cash on hand	$3 M	80%	$2.4 M
Static Opportunities (All Weeks)			
New customer sales in Africa with real-time cash payments	$3 M	20%	$600 K
Streamlined crane shipping arrangement to Croatia — 20% working capital improvement	$1 M	20%	$200 K
Total			**$4.7 M**

Source: Adapted From Manitowoc

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3. **Don't apply a one-size fits all approach when applying ranges to different forecasts.** FP&A teams can use ranges for all types of forecasts — revenue, cash, cash flow, expense, demand or earnings — but must recognize the nuances of each type of forecast to make them effective. These nuances are based on the factors considered when establishing the range, the width of the range, the depth of the forecast, and the frequency at which ranges should be updated. Below are some examples that illustrate these nuances.

Table 2: Example Forecast Types and Their Nuances

Forecast Type ↓	*Nuance* ↓
Revenue Forecast	External factors (e.g., market share, competition, demand, etc.) should play an explicit role in setting the range.
Expense Forecast	Provide tighter ranges for headcount driven functions (e.g., Finance, Legal, Marketing, etc.).
Demand Forecast	Because demand is mostly “soft” in nature, save time by limiting the depth of your forecast and providing top-level ranges.
Earnings Forecast	Ranges can be easily set at the corporate level, aiding in external guidance.
Cash Forecast	Requires more regular updates, since it monitors the company’s cash position day-to-day.

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4. **Don’t use a blanket approach when implementing ranges.** Given the high pace of change and the frequency with which teams need to develop forecasts, a wholesale change to the forecasting process may have unintended consequences, especially since both the business and FP&A teams are already under pressure to deliver timely and useful forecast information. In order to keep the burden minimal, consider the following:

    1. Determine if there are some business units (BU) that are more suitable for range-based forecasting than others based on factors such as revenue size, volume of transitions, or even the degree of uncertainty each BU is facing.

    2. Determine which line items are most susceptible to change or ones that can have a high impact on the P&L and cash flows.

Recommended for Gartner Clients

“Range-Based Cash Forecasting Process (Manitowoc)”

Learn how Manitowoc’s range-based cash forecasting process provides transparency into business units’ cash assumptions in order to eliminate overly conservative point estimates.

“Range-Based Cash Forecasting Tool”

Use this tool to forecast your company’s cash position across the next 13 weeks.

Endnotes

[1] "Learn From ConAgra's Forecasting Debacle: Switch To Range Forecasting," Forbes.

[2] "A Better Way to Forecast," Adaptive Insights.

[3] "A Simple Tool for Making Better Forecasts," HBR.

This complimentary research is part of Gartner's ongoing coverage of the business impact of the coronavirus (COVID-19).

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