How technology helped Constellation Brands shift to a more advanced risk model

When the treasury team at Constellation Brands identified that their approach to risk management had some drawbacks, they recognized at the same time that they were staring at an opportunity.

The treasury team was hedging a policy driven fixed percentage of their cash flow exposures, a practice that is common for many corporate treasuries to do. The approach was based on hedging exposures at predefined percent thresholds documented in policy. In reality, this simplistic and understandable hedging strategy took a niche view of currency exposures, and did not account for more holistic exposures at a consolidated level.

"This one-dimensional approach was historical and logical based on our peers and competitors alike, and yet left us unable to explain the volatility in consolidated earnings," says Alexander Shneydman, Constellation Brands' Treasury Director.

"It also was not as intuitive to the board and senior management to speak in terms of hedge percentage when they think in terms of risk impact to financial statements. You want to be able to explain to senior leadership what the risk to their cash flow and profit and loss (P&L) is, but presenting strategies strictly based on hedge percentage targets doesn't link these two together."

Constellation Brands produces and markets a wide array of wines, beers and spirits in North America, Europe, Australia and New Zealand. The company conducts its business through wholly owned subsidiaries as well as through a variety of joint ventures with other entities. Its business operations can be found in the US, Mexico, New Zealand, Italy and Canada.

The treasury team found that simply hedging a percentage of currency exposures for such a diverse business was not a forward-thinking risk management strategy, but rather a box-ticking exercise that ignored the impact on earnings and currency diversification.

"The policy approach we used left unexplained volatility in our earnings caused by exchange rate movements," says Katie Nagel, Constellation Brands' Market Risk Manager. "As a treasury department, we did not have a complete understanding of this volatility and concluded we needed to change our approach."

Finding a better model

To move away from the policy approach and to a far more useful risk target strategy, the Constellation Brands team knew that they would need a suitable risk model in place. One of the options under consideration early in the process was Value-at-Risk (VaR).

While VaR was suitable for the banks that Constellation Brands worked with, it wasn't quite as suitable for the company itself.

"Ultimately, if you look at the differences in risk objectives between banks and corporates, VaR is not the best model for what Constellation was trying to accomplish," says Shneydman. "VaR was developed in the banking world where the primary focus is on overnight or short term risks. In a corporate world, we are managing the risk on financial statements and transactions, which are longer term."

With this in mind, the team set about looking for a model that could more realistically measure longer-dated risk. Importantly, they were also looking for a model that can understand the interaction between cash flow and P&L on a consolidated holistic level.

"Not every currency exposure is a cash flow risk, and not every exposure is a P&L risk, so we needed to have that clear distinction to more accurately model exposures into financial statement risk," notes Shneydman.

In conversations with a banking partner, the Constellation Brands team was introduced to the concepts of Cash-Flow-at-Risk (CFaR) and Earnings-at-Risk (EaR). CFaR is a model to measure possible shortfalls in forecasted cash flows due to currency fluctuations. EaR is a model that looks at the impact of FX rate movements on Earnings.

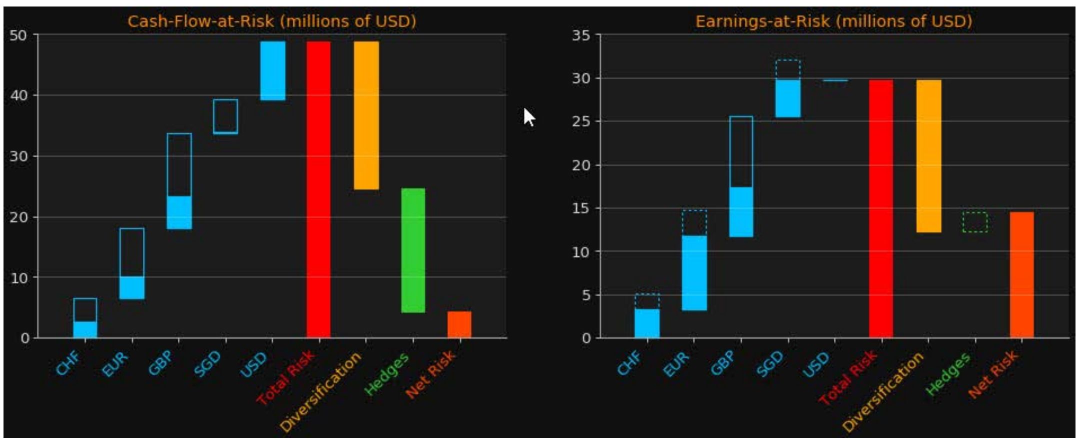
"It took a little while to grasp the interplay between the concepts, but once we did we found it to be extremely valuable and perfectly in line with our vision of where we wanted to take our hedging program," says Paul Sciarratta, FX Derivative Trader for Constellation Brands.

Optimizing CFaR and EaR

Having identified CFaR and EaR as two models that could provide a practical risk management strategy for the organization, the next step for Constellation Brands was to examine how to use both models in harmony with each other.

After speaking with some of their partner banks, Constellation realized that they could optimize their risk management strategy by using both models together. The potential insights of this combination were highlighted by the company's extensive back testing of five years' worth of data. This testing demonstrated that optimizing the two models could provide an accurate measure of the impact that hedging decisions had on earnings.

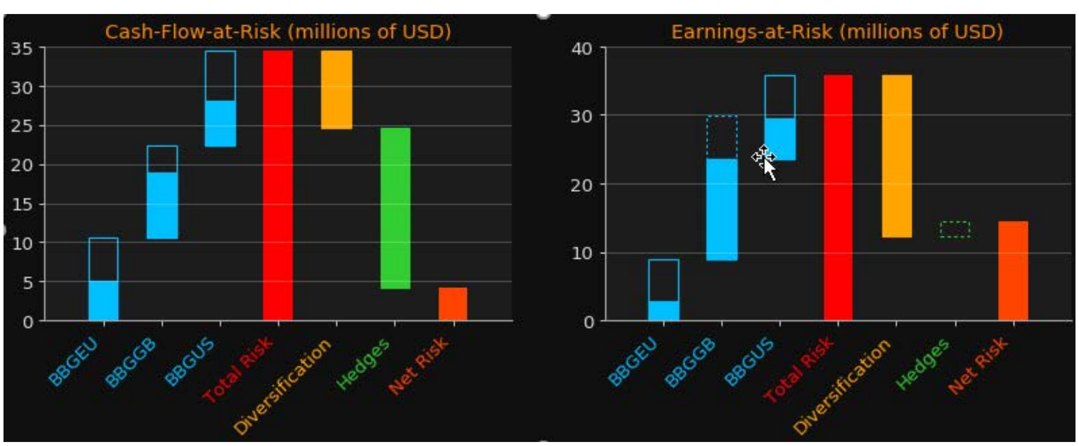
While CFaR and EaR models will measure Constellation's currency risk to financial results, these models on their own do not provide the tools to determine the additional trades needed to move the company from current position to an optimized hedge portfolio. This is where Bloomberg was able to provide an optimization tool to run this for the company.



Risk decomposition by currencies.

"We partnered with Bloomberg as they have the data, skills and tools to do the calculations efficiently," says Shneydman. "We could have used Historical, Parametric or Monte Carlo simulations but realized it would be more efficient with no loss in accuracy to use Gaussian variables to simulate the risk for both EaR and CFaR. We could then calculate an efficient frontier between the two models for hedging, identify an EaR level that treasury and the senior leadership are comfortable with and manage the CFaR to the optimal target."

The optimization tool also takes into account the currency exposure forecasts, which are regularly updated. Every monthly or quarterly forecast updates existing exposure or creates a new exposure position for which treasury manages the risk. Treasury can then layer on more trades or adjust existing trades into their hedging strategy to manage risk. The new approach means that, instead of making decisions on layering on as a percentage of the exposure, the Constellation Brands treasury team are now layering on hedges to achieve the targeted EaR and CFaR.



Risk decomposition by subsidiaries.

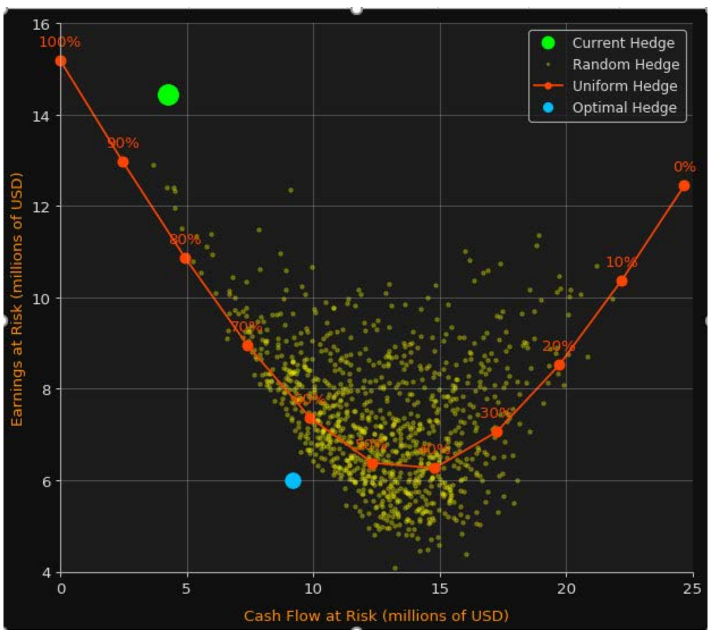
A new standard in corporate risk management

The work that the treasury team put in to achieving an optimized view of CFaR and EaR allowed them to make the case to switch to this holistic way of managing risk. The model and its results were validated by extensive backtesting.

"The concept of managing risk by targeting a risk number to a 95% confidence level was easily understood by our senior leadership and we were able to move very quickly from the targeted hedge percentage approach to a targeted EaR and CFaR strategy approach," notes Shneydman.

By implementing Bloomberg's optimization risk management tool, Constellation Brands treasury has enhanced the way it manages risk in a way that benefits the treasury team, senior management and the business as a whole. Gone are the days of explaining to the senior leadership why hedging 80% of an exposure is a better strategy than 75% or 95%. Now when treasury presents currency risk, they can clearly assign the dollar value of foreign exchange risk to financial results to with 95% confidence.

"This risk management strategy has dramatically changed the way we speak to senior leadership about risk, we now have a holistic view of currencies' impact on earnings and cash flows which we can more easily explain," concludes Shneydman.



Optimized view of CFaR and EaR

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