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## Setting Goals for Performance Metrics During Market Uncertainty

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*Determining the right performance metrics goals for your firm involves a careful balance that leverages a wide range of data and approaches.*

Performance awards with vesting tied to internal metrics, such as earnings per share (EPS) and return on invested capital (ROIC), are particularly attractive to companies due to the belief that they can be controlled more than stock price. However, the challenge, even in a stable economic environment, is determining appropriate goals. If they are too easy, you likely won't motivate your employees to grow. But when they are too difficult, the awards no longer serve as a valuable retention mechanism.

A variety of data can be used to help find that perfect balance of goals, including:

- Historical company, peer and industry performance during volatile markets
- Current or recent performance of the company, peers and industry
- Analyst estimates of performance
- Probability assessments using financial theory and Monte Carlo simulation, which we describe in more detail below

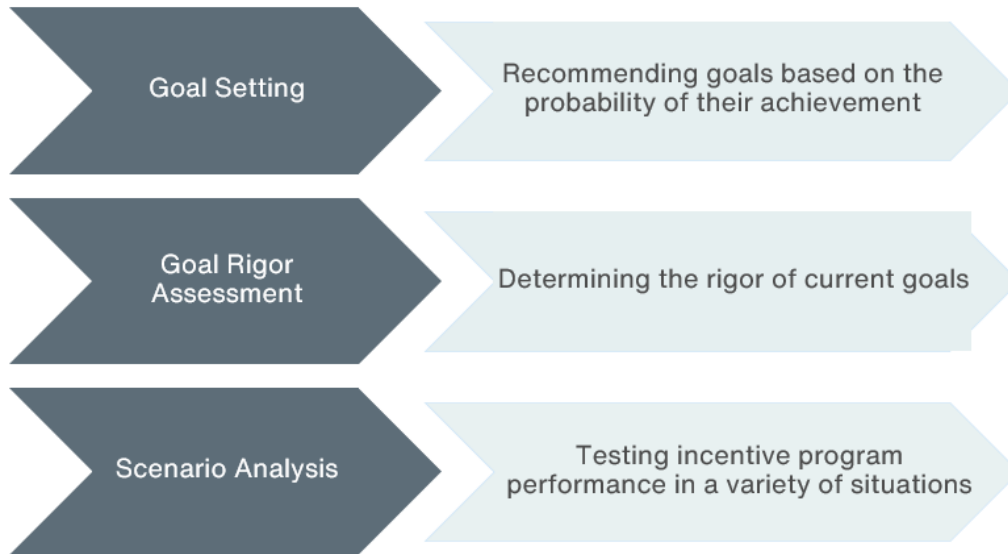
It's important to note, however, that none of these data points should be relied on exclusively — they each help assess future performance from a different angle. The more ways performance is analyzed, the better the outcome.

### **What is Monte Carlo simulation?**

Monte Carlo simulation is a model used globally to predict the probability of future outcomes through random variables and a distribution of results. Put plainly, it is a model that projects information to a future date using basic assumptions and theories about the numbers being projected.

It is most commonly used in the world of employee compensation to determine the fair value of market-based performance awards. Stock prices are projected to future dates based off a set of assumptions (volatility, growth rate, correlations, etc.) and a random variable to arrive at a distribution of results, creating an average "fair value." The model runs many simulations (sometimes over a million) to capture essentially every possible scenario and create a robust distribution of results.

**Figure 1 – How can probability assessment using Monte Carlo simulation help set and analyze goals?**



Source: Aon

Monte Carlo simulation can be used to project any metric, and it only requires two or three assumptions about the underlying metric – a growth rate, an expected volatility and a correlation if multiple metrics are being projected simultaneously. It is key to acknowledge that while they represent a robust distribution of results, specific frequencies (such as distinguishing a value achieved 20 percent of the time) will also be very precise. However, this precision should not be confused with accuracy. The model is heavily dependent upon assumptions and therefore the results are only as good as the assumptions made.

### The assumptions process

The assumptions used should be tailored and representative of the company, making this both an objective and subjective process.

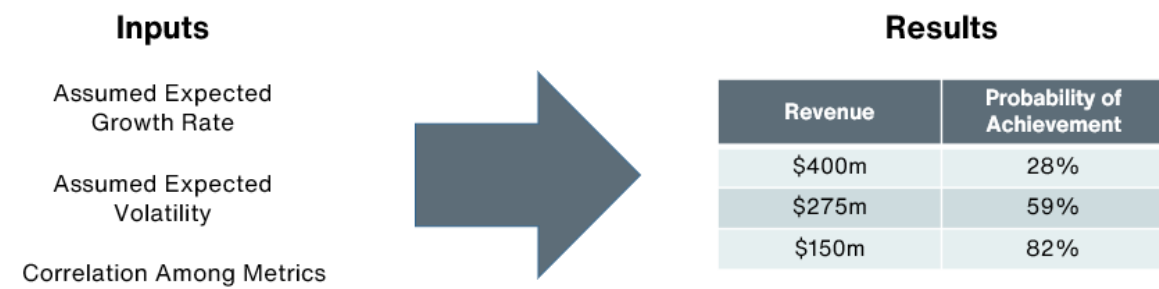
- **Volatility** – this is calculated by looking historically to determine how volatile the metric has been in the past. The more data that is available the better. Annual data will work, but quarterly is preferred. Adjustments can and should be made to align with future volatility expectations, including implied volatility for the company.
- **Growth Rate** – This is what the model will use as the baseline growth for the metric. The average of all simulations will equal this growth rate, so it is critical to discuss expected future growth with management.

With a rapidly changing economic environment around the world, it can be challenging to create valid assumptions. Multiple sets of assumptions should be tested to simulate different economic environments, where various volatilities and growth rates can be leveraged to assess the outcome in different environments. This will also help determine the level of sensitivity results may have to even the smallest changes in assumptions.

**How the simulation works**

Once all the design elements and assumptions are input, the Monte Carlo simulation can test the probability of achieving threshold, target and maximum payout for that particular award design with that particular set of assumptions. A number of different growth rate assumptions can be used and multiple metrics can be tested together. While this provides added analysis and rigor to the goal setting process, it is still only one of the elements that should be considered when determining goals.

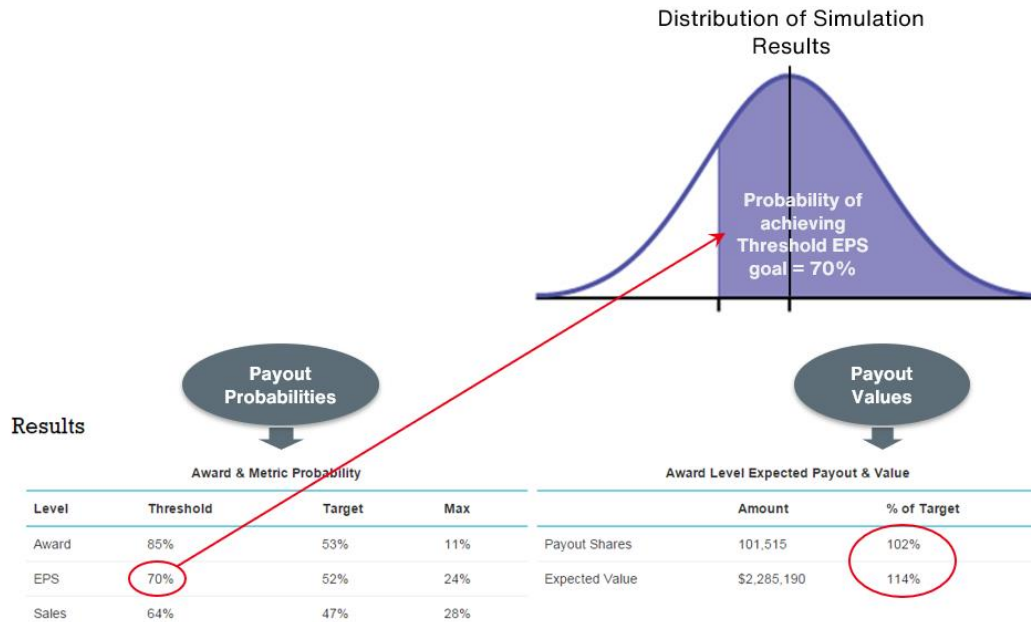
**Figure 2 — Assumptions and results of Monte Carlo simulation**



Source: Aon

The results can be looked at several different ways. For goal setting, you will know what value is met X percent of the time. For example, if you want your threshold to be 70 percent probable, you will have that exact number in the distribution of results. If you want to test a set of potential goals, it will tell you exactly how often they were achieved in the distribution of results.

Figure 3 – Probability of achievement and corresponding payout values



Source: Aon

You can even take the analysis one step further and change the growth rates up or down to model various economic environments. This enables you to blend the results to essentially widen the goalposts and increase the likelihood that the threshold is met in an economic downturn, while setting the maximum based off the normal or even strong economic state.

Figure 4 – Combination of multiple economic states

Separate Situations

Normal Economic State

Revenue	Probability of Achievement
\$500m	25%
\$350m	50%
\$200m	75%

Poor Economic State

Revenue	Probability of Achievement
\$300m	25%
\$200m	50%
\$100m	75%

Combined Situation

Revenue	Probability of Achievement
\$400m	25%
\$275m	50%
\$150m	75%

Source: Aon

## **Practical application and next steps**

Given the subjectivity of the goal setting process, introducing a more scientific approach ensures a thorough and efficient process that is typically used in three core areas:

1. To ensure goals are robust and resilient in a variety of economic states, as companies continue to face economic uncertainty around the world.
2. To aid in the financial reporting process to document if an internal metric is likely to be achieved based on data through the end of the reporting period.
3. When designing special one-time outsized awards where rigor is paramount.

Clearly, there are many factors to consider when setting and analysing performance goals. The results from the Monte Carlo simulation process are certainly useful, but provide only one perspective to consider.

To learn more or for additional support related to valuation and plan design services to help companies design, value and track performance equity awards granted to employees, please contact the Aon equity services team [here](#).

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