1. Which stock should Mr. Brown invest in and what is the expected monetary value of that decision?

Mr. Brown should invest in **SUA** as it has the highest Expected Monetary Value of **$57,854**. This indicates that, on average, investing in SUA will yield the highest return based on the provided probabilities and investment outcomes.

1. Which stock has the worst expected monetary value?

The stock with the worst expected monetary value (EMV) among the options provided is **YHA**, with an EMV of **$54,550**. This makes it the least attractive investment option based on the given probabilities and monetary outcomes.

1. How sensitive the optimal decision strategy is to changes in probabilities associated with YSP? Specifically, if the probability for $65,820 could vary anywhere between 35% and 65%, how would that affect an outcome of the tree? (Hint: replace 50% with a parameter function, change the lowest 25% to a formula that ensures all options total to 100%)

The sensitivity analysis for YSP's Expected Monetary Value (EMV) demonstrates that changes in the probability of achieving its highest investment return ($65,820) significantly influence its attractiveness as an investment option. By varying this probability between 35% and 65%, the EMV of YSP increases from $54,264.63 to $59,597.88. This notable rise indicates that YSP's potential as an investment improves substantially as the likelihood of its best outcome increases. Most critically, at the upper end of this range, YSP's EMV surpasses that of SUA ($57,854), the initially identified best investment option, thereby making YSP potentially the more favorable choice under higher probability scenarios for its top return. This analysis underscores the importance of precise probability assessments in formulating robust investment strategies, as shifts in these probabilities can pivotally affect the optimal investment decision.

