
DECISION-MAKING PROCESSES WITH UNCERTAINTY

On page two is a basic *Project Decisions with Uncertainty* table that is used with countless variations in all professions, and are commonly implemented into the economic and financial segments. As you know, some decisions still (and will always) need to rely primarily on traditional subjective biases - many which can be improved.

For several generations behavioral research suggested that, in general, good subjective decisions could be obtained by intuition as based on rule-of-thumb, recent experiences, etc. However, in the late 1960s that started to change as behavioral economic studies evolved and statistical software and computer hardware exponentially improved at a significantly lower cost. Viable research now increasingly suggests that investors all-too-often make poor decisions based on subjective factors such as greed, fear, euphoria, hubris, personal relationships, questionable advertising, etc. Additionally, many models were poorly designed, and possibly even more were designed to have a pre-determined outcome.

This paper was written for investors to help make better passive and active allocations, and increase their confidence in the Midwest quantitative processes. For example, there is little objective evidence that “market timing” or “sector timing” strategies are consistently successful over the long-term. Conversely, they may simply create additional uncertainty and transaction costs.

In summary, investors are better served by making important decisions only when they have an acceptable degree of confidence that their expectations will be met. Without that confidence level, the risk when making important (but necessary) decisions without a baseline can still be reduced by relying on experience, common sense, trust, competent peer review, etc.

References

- Daniel Kahneman, *Thinking Fast and Slow*, 1st ed. (NY, New York: Farrar, Straus and Giroux, 2011).
Amos Tversky, and Daniel Kahneman, “Judgment under Uncertainty: Heuristics and Biases,” *Science* 185 (Sep 1974): 1124-1131.
Michael Lewis, *Moneyball, The Art of Winning an Unfair Game*, 1st ed. (NY, New York: W.W. Norton & Company, Inc., 2003).
Michael Lewis, *The Undoing Project*, 1st ed. (NY, New York: W.W. Norton & Company, Inc., 2017).

PROJECT DECISIONS WITH UNCERTAINTY

Good Factor Examples

Good data
Good statistical interpretations

Experience, Common sense, Trust, Patience

Good data
Good statistical interpretations

Experience, Common sense, Trust, Patience

Good data
Good statistical interpretations

Experience, Common sense, Trust, Patience

FAVORABLE OUTCOME?

Sub-decision 1 or
Sub-decision 2 Little statistical data
Sub-decision 3 or
Sub-decision 4 Little statistical data
Sub-decision 5 or
Sub-decision 6 Little statistical data

FINAL DECISION

Bad Factor Examples

Bad data
Bad statistical interpretations

Rule of thumb, Recent event(s), Ego, Haste

Bad data
Bad statistical interpretations

Rule of thumb, Recent event(s), Ego, Haste

Bad data
Bad statistical interpretations

Rule of thumb, Recent event(s), Ego, Haste

UNFAVORABLE OUTCOME?

Old Theory: Internal intuitive decisions often led to good or random judgements.

New Theory: Internal intuitive decisions often lead to bad or random judgements.

Please let us know if we can help.

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