Information ambiguity is prevalent in organizations and likely influences management decisions. This study examines, given imprecise probabilities and outcomes, how managers make choices when they are provided with single-figure benchmarks. Seventy-nine MBA students completed two experiments. We found that, in a decision framed as a decision under certainty involving an ambiguous outcome, the majority of the subjects were ambiguity prone in the loss condition and switched to ambiguity aversion in the gain condition. However, in the presence of probabilistic ambiguity in a decision under risk, this expected switching pattern was shown only when the difference in wiskiness between the two choice options (in the loss condition) was perceived to be relatively small. In a companion study, we used a written protocol approach to identify factors that affect decision makers' investment choices when faced with ambiguous outcomes. Protocols frequently mentioned that the ambiguous outcome option was risky, even in the case which was framed as a decision under certainty in the problem statement. In a decision under risk with ambiguous outcomes, the combination of probabilistic risk and outcome ambiguity was seen as even more risky.