

Establishing Risk Appetite and Risk Tolerance for AAA Systems

Risk Appetite - *The type, amount and threshold of risk that an organization is prepared to accept in pursuit of its strategic objectives and business plan.*

Risk Tolerance - *The acceptable level of variation relative to the achievement of objectives. In setting-specific risk tolerances, management considers the relative importance of related objectives and aligns risk tolerance with risk appetite.*

Risk Appetite

Risk Appetite is the first step of the two and comes from the highest levels of the organization. Leadership from the top should establish the risk culture and determine the risk appetite for each AAA Systems. Establishing culture should include all of the following:

- 1) Recognition that risk is inherent to achieving organizational goals
- 2) Establish if the organization is Risk Taking or Risk Averse
- 3) Requirement that the design, development and committees (1st and 2nd lines of defense) identify risk throughout the design and development life cycle with comprehensive capture of risk and reward and subsequent measurement of risk and reward

Risk Taking - means that the organization is willing to absorb risk based upon opportunities they uncover

Risk Aversion - means that risk is budgeted or allocated, up front and business is allowed to develop within those parameters

Importance of Culture, including manner of communication

Risk Appetite is expressed through the culture of the organization and thus communication is important. This communication takes many forms:

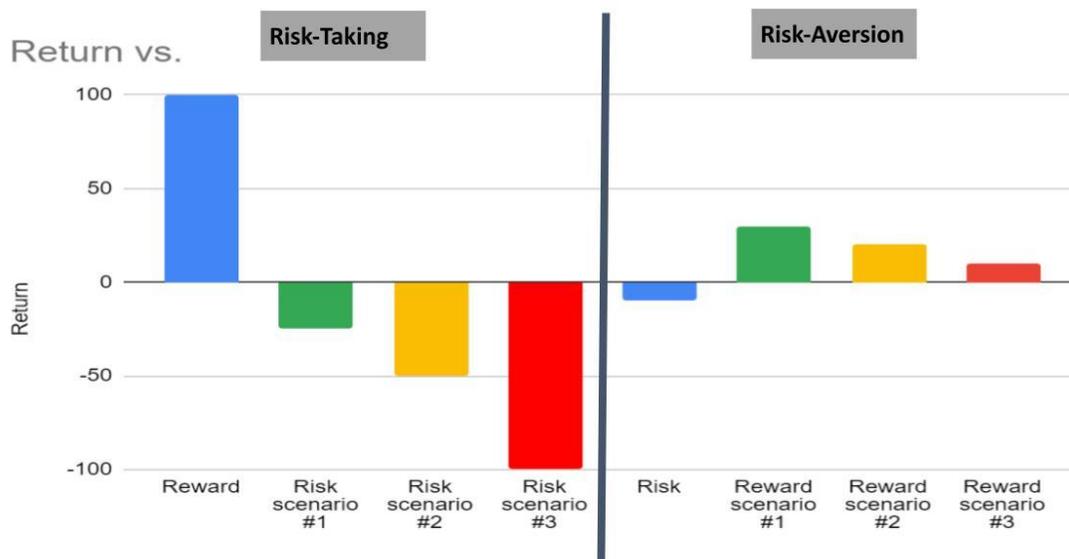
- 1) Guidance and encouragement in team meetings
 - a) Guidance and encouragement for managers to share messages
 - b) Organization-wide communications
 - c) Public expressions from leaders
- 2) Discussion about opportunity, exploration
- 3) Discussions about risk management (forethought or afterthought)
- 4) Compliance and risk management by design
- 5) Guidance on principles and values of the organization
- 6) Feedback loops on success/failure
- 7) Outcomes of success/failure
 - a) Raises, promotions bonuses
 - b) Firings, punishments, demotions
- 8) Resource Allocations

Each of these means of communication should be considered for the message and principles conveyed from top of the organization and will result in a culture of risk taking or risk aversion and establish the overall organization's risk appetite. Leader's should understand that rhetoric about innovations and risk taking will fall on deaf ears if remunerations, feedback loops, evaluations, guidance do not match the rhetoric. The cumulative effect of communications dictates the risk appetite.

Risk appetite then dictates the manner in which participants in design and development begin with a risk budget/costs or according to opportunity/profitability/other success measures. RiskTaking encourages the organization to focus on opportunity and profitability first (REWARD), the concept is that a risk budget (RISK) can rise and fall depending on the size of the opportunity and thus is expressed as a ratio (REWARD/RISK) or an allocation for the achievement of the goal. This can best be illustrated with an example.

Foundational Guiding Documents

Establishing Risk Appetite



The organization establishes its risk appetite for Risk Taking, when it knows what ratio of risk/downside/costs makes an opportunity no longer viable. The blue box illustrates the reward/profit expected. Once calculated, then Risk must be properly measured, accounting for all risk/costs, not just monetary. Once Risk is reasonably valued, then the decision about Risk Appetite can be asked in the context of thresholds - Is the Reward/Risk profile of a two-times reward/Risk sufficient (AMBER)? At what point does the reward/risk ratio

make the opportunity uninteresting, such as the one-to-one (RED). The thresholds determined equals an organization's risk appetite.

Conversely, Risk Aversion starts with a risk budget (RISK) and compares itself against the opportunity, such as the four-to-one Reward/Risk profile under risk-aversion #1. The same threshold questions must be asked, but now from the opposite perspective. How much reward must be expected to use the allocated risk budget? This process is also a pathway towards the establishment of Risk Appetite.

Some important caveats:

- 1) Risk Appetite is assessed continually
 - a) Rewards change (up or down)
 - b) Risks change (up or down)
 - c) Organizational Risk Appetite changes
 - d) Acceptable ratios change and must always be evaluated against Risk Appetite thresholds
- 2) Measurement of Risk and Reward are difficult
 - a) How do you measure the value to customer satisfaction or brand growth?
 - b) How do you measure the risk to clients, customers, social constructs or the environment?
- 3) Because Risk and Reward measurements are difficult- organizations (shareholder value entities) error on the side of overvaluing Reward and undervaluing risk

Below are some sources of Risk Aversion:

- Brand Risk
- Well-established guidelines, principles and procedures
- Stable cash flows and market share
- Customer Trust
- Previous experience
- Choice - Security and Certainty over Growth and Uncertainty

The opposite can hold true for true for each bullet point above in regards to Risk Taking and highlights the last element of the Risk Taking versus Risk Aversion continuum, which is time. As a generalization, often based on shifting preferences or needs, like people, organizations tend to grow more Risk Averse over time.

Where Risks and Rewards can be quantified the organization should endeavor to do so. This practice is especially critical on the risk side, where increasingly the cost of regulatory non-compliance can be calculated. As algorithm disgorgement becomes a risk, organizations should track production costs and attribute the cost as a risk associated with a probability of non-compliance. Finally, meaningful measurement, through the risk management process of tensions and trade-offs can make for a more robust dialogue

regarding the AAA System's reward/risk profile and thus its viability in the context of Risk Appetite.

Risk Tolerance

Once an AAA System is up and running, meaning the reward/risk profile of the system is acceptable in the context of Risk Appetite, then we can consider the organization's Risk Tolerance. Evaluating Risk Tolerance requires ongoing, discernable and meaningful measurements of reward and risk. In the presence of good measurements, the organization can examine the dynamics of reward and risk. Changes in reward and risk measured against the organization's thresholds equates to the Risk Tolerance of the organization. Movement within the thresholds is considered acceptable and movement in reward/risk beyond acceptable threshold exceeds Risk Tolerance. Therefore the organization needs to ask the following questions and develop metrics to measure the changes. How much does reward have to decrease, how much does risk have to increase? How much might reward decrease and risk increase before Risk Appetite shifts from "Go" to "No Go"?

Additionally, Risk Tolerance procedures and thresholds may want to be able to consider the temporal state of change in risk. Are changes in reward or risk transitory? Are they permanent? Are mitigation of risk on the horizon? The time factor of risk tolerance is a critical element of this evaluation. Long term decisions based upon short term upheaval has often proved to be a destructive strategy. Having thresholds for Risk Tolerance than can evaluate the transitory versus permanent change in reward and risk is a useful way to evaluate risk.