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Accountants as Risk Takers

Avoiding Danger, Or Rising To Challenge

By J.W. Martin

Few economic decisions are made under conditions of complete knowledge. The lack of knowledge creates risk and uncertainty. Irving Fisher, in *The Theory of Interest*, states that risk varies inversely with knowledge. Thus, risk and uncertainty are important factors in the decision-making process. In today's accounting environment, these factors would seem to be important when considered with other external and internal conditions. Externally, accounting activities are subject to review by government regulatory agencies, with the possibility of intervention and penalties if the accountant's actions are deemed improper or inappropriate. In addition, the independent accountant risks lawsuits from a number of third parties. Within the accounting firm itself an individual's performance is constantly being evaluated by superiors. The accountant must meet certain standards, yet work conditions create varying degrees of limitations on such performance. As the number of professional standards increase along with professional liability and government supervision, risks and uncertainties of practice tend to rise. In an environment where decisions are made under such conditions, theories of risk taking deserve careful analysis. An increased understanding of accountants' risk aversion behavior may aid our attempts to explain practitioners' actions or perhaps even anticipate them in given situations.

Research Objectives and Scope

The objectives of this research are twofold: first to set forth the primary personality theories of risk taking which have been developed by psychologists, and second, to discuss possible implications which these theories may have for accountants. Too often research in other fields, such as psychology, is ignored by accountants. This presentation will highlight the results of risk-taking research and expose them to consideration by the accounting sector. The discussion will be limited to personality determinants of risk taking, as opposed to situational determinants.

The Nature of Risk and Uncertainty

To set the background for the discussion it may be useful to contrast economic and psychological definitions of risk and uncertainty. From an economic standpoint, risk denotes a situation characterized by incomplete predictability of alternative events. That is, a situation may be characterized by partial but incomplete knowledge of the parameters of a probability distribution of a set of alternative events. In contrast, the economist views uncertainty as a complete lack of knowledge concerning the parameters of a probability distribution of a set of alternative events (Dictionary, 1969).

While the economist differentiates between risk and uncertainty on the basis of the presence or absence of knowledge, the psychologist differentiates the two terms by applying objectivity/subjectivity criteria. The psychologist views risk as the chance of incurring a loss of some kind. The nature of this loss may be physical, psychological, military, political, economic, or whatever; but something of value may be lost. Risk is objective in that it is external to the individual. It exists regardless of whether the individual is aware of it.

Whereas the psychologist views risk as a characteristic of the environment, he perceives uncertainty as a state of mind. Thus, uncertainty is a subjective phenomenon. Uncertainty may be cognitive or affective. Affective uncertainty involves a state of doubt and indecisiveness. Cognitive uncertainty involves the unpredictability of the outcomes of particular actions, but it is not necessarily stressful nor does it necessarily give rise to affective uncertainty. Here, the psychological view conflicts with the economic assumption that men seek to avoid situations characterized by unpredictability. Psychologists point out that an individual may welcome a cognitively uncertain situation as a challenge.

Personality Theories of Risk Taking

The relationship between risk-taking behavior and personality variables has been the object of considerable research by psychologists in recent years. Various theories as to "who takes risk" have been proposed, but the following four constructs appear to be most highly regarded among psychologists: Atkinson's achievement motivation

Risk-averse seniors may pad the audit budget.

model, Kogan and Wallach's theory of motivation and cognition, Liverant and Scodel's perceived environmental control theory, and Steiner's arousal theory of risk taking. These theories will not be presented in turn.

Atkinson's Achievement Motivation Theory

Atkinson's theory of achievement motivation is not specifically intended to explain risk-taking behavior; however, a risk-taking construct is incorporated within the conceptual framework. The construct asserts that individuals are aware that their performance in given tasks will be evaluated according to certain success criteria. Supposedly, this evaluation creates a desire to perform well, thus the situation becomes achievement-oriented in nature.

Depending on the reactions to these achievement-oriented situations, individuals are placed into one of two possible categories: (1) persons who are high in the need to achieve success and (2) those who are high in the need to avoid failure. The former group seeks out tasks in which there are performance standards to compete against, while the latter group tries to avoid these situations because they are afraid of failing. The theory states that individuals in whom the motive to succeed is greater than the motive to avoid failure prefer tasks with intermediate probabilities of success. In contrast, persons dominated by the motive to avoid failure prefer tasks in which the probabilities for success are either very high or very low (Atkinson, 1964).

Why do success motivated individuals prefer tasks with intermediate probabilities of success? They are not satisfied by taking small risks since accomplishing an easy task does not satisfy the achievement motive. Nor are they satisfied by taking a large risk because chance will usually thwart the achievement motive here. Instead, they prefer intermediate probabilities because this is the area where significant achievements are reasonably possible. In contrast, the individuals who strive to avoid failure prefer greater certainty of knowing that they will either likely succeed or probably fail, depending on their choice of high or low probabilities. But failing to accomplish a low probability task is not really failure, since no one really expected them to achieve such a difficult task (Atkinson, 1964). Thus, Atkinson relates risk taking to the need for achievement and risk aversion to the need to avoid failure.

Several research studies provide empirical support for Atkinson's theory. McClelland found that the tendency to prefer moderate rather than extreme risks in game situations was significantly related to scores on a graphic measure of n Achievement (McClelland, 1958). Atkinson and Litwin found that preference for intermediate level risk was related to high n Achievement scores on the French Test of Insight and preference for extreme risks was related to high scores on a Test Anxiety questionnaire (Atkinson and Litwin, 1960). Other tests confirming Atkinson's theory have been performed by Litwin, Meyer and Walker (1961).

Implications of the Theory for Accountants

Atkinson's theory concerning motivational determinants (success/failure) of risk-taking behavior has important implications for public accounting. Accountants who are motivated to take risks due to a desire to be successful should respond differently than accountants who are motivated to avoid risk by their need to avoid failure. To illustrate, an important task in planning an audit is preparing the time budget. When seniors prepare the budget, they are aware that they will be evaluated on the efficiency in which the audit is conducted, and the budget sets up standards against which performance can be measured. Risk-averse seniors who are intent on avoiding failure may "pad" the budget to such an extent that there is a high probability of meeting the budget. In contrast, seniors who are achievement motivated may establish a moderately "tight" budget in which performance standards are high, yet realistic. They realize that there is perhaps only a fifty-fifty chance of meeting this budget, but they know it will provide a challenge for their audit team and, if successful, should enhance a favorable progress report from their superiors. As a result of their strong achievement motive, they are willing to take the risk of failing to meet the budget and any unfavorable consequences which may result.

Other implications arise from research which relate employee performance to risk attitudes and their underlying determinants. Atkinson and Litwin found that high need achievers (risk takers) showed greater persistence in working at an achievement related task. Moreover, such individuals are likely to show more efficiency, or a higher level of accomplishment, than persons in whom the motive to avoid failure (risk averters) is stronger than the motive to achieve success (Atkinson and Litwin, 1960). Thus, if Atkinson's theory is valid, auditors who are willing to bear risk may be more proficient at applying auditing standards than those who are risk averters.

There is also evidence that risk averters tend to be unrealistic in their vocational choice with respect to both ability and interest. Research shows that they avoid consideration of achievement-related information. Thus, risk averters may lack relevant information concerning the kinds of satisfaction to be found in various occupations. They are prone to choose jobs only remotely related to the kinds of gratifications that they desire and expect to find in their vocations (Mahone, 1960). Thus, it appears that Atkinson's theory has implications, not only for performance but also for job satisfaction, both of which are prerequisites for success in public accounting.

Finally, if accountants are to adequately serve the business needs of tomorrow, innovative individuals who are willing to take calculated risks will be needed. In a rapidly changing environment, successful accountants must be willing to take certain risks. This does not imply that they should take risks which are so great as to bring almost certain disaster; nor does it mean that they should assume risks which are so conservative that their endeavors are limited and the growth of the accounting profession is inhibited. But in certain situations, accountants should be willing to assume responsibilities which involve both moderate risks and moderate rewards.

Kogan and Wallach's Theory of Motivation and Cognition

While Atkinson dwelled solely on motivational determinants of risk, Kogan and Wallach both expanded the motivational determinants being considered and distinguished between motivationally and cognitively determined risk taking. They focused on two motivational determinants: text anxiety (Atkinson's fear of failure motive) and defensiveness (a trait which causes one to project and protect a particular image; for example, males might seek to maintain a bold, risk-taking image). Motivational risk takers are defined as those who are high scorers in test anxiety and defensiveness. Test anxious and defensive subjects are characterized by a "risk conservative syndrone." That is, their behavior is overinfluenced by motivational requirements, such as defending one's self image or avoiding failure, and under-influenced by situational aspects of a task. In contrast, cognitive risk takers score low in test anxiety and defensiveness. Instead of allowing motivational determinants to dictate the decision, they carefully evaluate situational cues which are relevant to successful performance (Kogan and Wallach, 1964).

Neither cognitive nor motivational risk takers are necessarily risk prone or risk averse. The difference between them lies in the consistency with which their risk-taking strategy is employed. Motivationally determined risk takers are either consistently risky or consistently conservative. Their concern with anticipated evaluation causes them to ignore whether or not a task requires skill or merely luck. Their defensiveness causes them to ignore the effects which different risk-taking strategies may have on particular tasks. In contrast, cognitive risk takers do not exhibit a consistent risk-taking orientation across various tasks. They examine the particular situation and choose the decision strategy whose expected success is greatest (Alker, 1969).

When faced with failure, motivational risk takers react by taking a defensive position and insisting on their satisfaction with that strategy. However, cognitive risk takers will express dissatisfaction with the outcome and change the risk-taking strategy to improve their results. Thus, Alker equates motivational risk taking to irrational risk taking and refers to cognitive risk taking as rational risk taking.

Alker contends that risk-taking behavior can be explained by the Kogan-Wallach theory without recourse to Atkinson's theory of achievement motivation. He argues that, while a strong desire to succeed may cause individuals to try hard, this does not guarantee that they will possess the capability of learning from their mistakes, a capability which characterizes cognitive risk takers. Thus, he believes that some subjects may be high on need achievement, and yet follow irrational, rigid risk strategies (either consistently conservative or risky). Rather than appraise one's risk-taking behavior along motivational lines, he would use a rationality criteria: the ability to appraise the properties of particular tasks and to evaluate and correct prior errors.

However, rather than casting the Atkinson theory aside, he cautions the reader with this statement (Alker, 1969, p. 211):

> *No claim is being made that the Kogan-Wallach formulation should supplant the one with which it is being compared. The Atkinson-McClelland perspective has received far more extensive documentation than the former approach. When two theories lead to the same predictions, the confirmation of those predictions merely circumscribe the domain over which either theory can claim that it is the best available explanation. If both theories are confirmed, possibly the most useful contribution that would be made by a comparison is its estimate of whether one explanation accounts independently for more variance in the dependent variable than does the other.*

The CPA should evaluate the audit environment on each engagement to determine the inherent risk.

Implications of the Theory for CPAs

Kogan and Wallach's theory has relevance for all decision-makers since almost every decision of major consequence involves risk. If decision-makers view risk irrationally, then their decision may be irrational. The rational approach to risk problems is to evaluate the merits of the particular situation and then establish a risk strategy. The irrational approach is to allow inner motivations to dictate one's risk preference while ignoring the cost-reward aspects of the situation. Auditors, in particular, should evaluate the risk inherent in each audit situation. For example, the CPA should evaluate the audit environment on each engagement to determine the risk inherent therein. This might include consideration of questions of independence, client disputes with prior auditors, reliance on other auditors, and tight restrictions on completion dates.

Special consideration should also be given to each client's management and business environment. Does management appear to stress the appearance of financial performance or is emphasis placed on real operating performance? Is the client willing to accept unusually high risks, such as with credit policies? Does the client operate in a high-risk industry? Does management face unusual liquidity problems or deteriorating operations? These are some of the factors which will determine the amount of risk inherent in individual engagements.

Evidence that some auditors are giving individual attention to the

Accounting assignments do not challenge all new staff members equally.

risks underlying each engagement exists in the form of audit risk questionnaires. These questionnaries provide a checklist of key risk factors that should be evaluated before the audit program is prepared. Only after considering the peculiarities of each situation can the auditor rationally establish his own risk strategy. This writer suspects that too many auditors allow their inner motivations of conservatism to dictate their audit approach. This could result in overauditing, or what Kogan and Wallach would deem to be irrational risk taking.

Liverant and Scodel's Theory of Internal and External Control

Liverant and Scodel base their theory on Rotter's social learning theory. Rotter (1966) states his general concept of internal and external control as follows:

When a reinforcement is perceived by the subject as following some action of his own but not being entirely contingent upon his action, then, in our culture, it is typically perceived as the result of luck, chance, fate, as under the control of powerful others, or as unpredictable because of the great complexity of the forces surrounding him. When the event is interpreted this way by an individual, we have labeled this a belief in external control. If the person perceives that the event is contingent upon his own behavior, or his own relatively permanent characteristics we have termed this a belief in internal control.

Liverant and Scodel hypothesized that this internal-external control dimension would affect decision making in a risk situation. A decision will be approached differently according to the extent one believes that the outcome depends upon his own behavior. The internally controlled individuals attempt to maintain control in chance-dominated situations by making a cautious and planned selection of probabilities. In contrast, externally controlled individuals will base their decisions on hunches or prior outcomes (Liverant and Scodel, 1970).

In a gambling situation, Liverant and Scodel found that internally controlled subjects chose significantly more intermediate probability bets than externally controlled subjects and that significantly more "internals" than "externals" never selected an extreme high or low probability bet. Finally, their test results indicate that the amount of money wagered on safe as against risky bets was significantly greater for "internals", and the "internals" tended to be less variable in their choice of alternatives.

In essence, the two types seem to differ according to a belief in luck versus a belief in one's own ability to control events. Test results indicate that the "internals", who do not believe in luck, tend to select more intermediate probability bets; whereas, the chance-oriented "externals" select more longshots. These results support the internal-external control theory. Internals desire to have control of their own fate and thus prefer high probability bets which are almost certain to bring success. Externals choose lower probability bets because they believe their fate is not in their own hands.

Implications of the Theory for CPAs

Rotter and Mulry (1965) discuss the behavioral implications of the internal-external control theory as follows:

The perception of a situation as controlled by chance, luck, or fate will lead to predictable differences in behavior, in comparison to situations where a person feels that reinforcement is controlled by his own behavior. The individual who tends to perceive reinforcements as contingent upon his own behavior is more likely to take social action to better his life conditions, is more likely to attend to, and to learn and remember information that will affect his future goals, and is generally more concerned with his ability, particularly his failures. The individual who seems to be more internal also appears to have a greater need for independence and is resistive to subtle attempts at influence.

The implication is that "internals" are more attentive to feedback than "externals". This parallels the writings of DuCette and Wolk (1972) who conclude that externals fail to develop perception of their skills and also fail to develop critical skills themselves. Their views are expressed as follows:

By systematically eliminating feedback from the environment, such a person is, in essence, demonstrating a tendency to avoid situations where he can ever change his behavior. An external subject, by his choice of extreme options, is guaranteeing the fact that he will receive extremely impoverished and biased feedback about himself.

Auditors generally receive progress reports from their superior after each job is completed. In essence, they receive feedback concerning their performance on that particular job. If the progress review is to be successful, the auditor must "attend to and learn" from the superior's suggestions. To ignore assessing one's weaknesses is to invite disaster. Future success is dependent on adequately assessing one's performance on the basis of feedback. Thus, auditors who are "externals" (extreme risk takers as classified by Liverant) may disregard feedback which is essential to their success.

Steiner's Arousal Theory

Steiner's theory is based upon research which suggests that intermediate levels of arousal (a measure of responsiveness) result in better task performance than either very high or very low levels. These studies reflect an inverted U-shaped relationship in which increases in arousal are associated with improved performance up to a point, after which additional increases lead to increasingly inferior performance (Steiner, Jarvis and Parrish, 1970).

Hebb analyzed this relationship and hypothesized that insufficient arousal would result in boredom, and if prolonged, would create a desire for stimulation and a wish to escape from the situation. On the other hand, excessive arousal results in a disruption of normal behavior and a similar desire to

TABLE 1

COMPARISON OF RISK-TAKING THEORIES

Theory	Synopsis	Motivation Factor	Definition of Key Terms	Implications	Tests	Weaknesses
Atkinson	Risk taking is related to the need for achievement and risk aversion to the need to avoid failure. Risk takers will select tasks with intermediate probabilities of success; risk averters select tasks with either extremely low or high probabilities of success.	n achievement	n achievement; a psychological need to be successful in competitive and creative enterprises.	Task selection. Persistence and efficiency. Job satisfaction	McClelland Atkinson and Litwin Atkinson, Bastian, Earl, and Litwin Litwin	May be weak in predicting behavior. Conflicting evidence exists as to what type of task will arouse the achievement motive.
Kogan and Wallach	Risk taking is influenced by motivating and cognitive factors. Motivational factors may lead to rigid, irrational risk decisions. Cognitive factors lead to a flexible and rational approach to risk. The cognitive risk taker learns from his mistakes and revises his risk strategy; whereas the motivational risk taker is consistent in his approach to risk.	Test anxiety and defensiveness. Various cognitive factors	Test anxiety; fear of failure Defensiveness: a desire to protect a particular self-image.	Task selection. Rationality of decision process	Kogan and Wallach	Kogan and Wallach asserted that the defensive subjects may either be consistently conservative or consistently risky.
Liverant and Scodel	Individuals react to risk according to one's belief in his own ability to control events. One who believes he can influence events tries to maintain control in risk situations by choosing tasks with intermediate probabilities of success; whereas he that believes fate controls events may choose tasks with low probabilities of success.	Perceived degree of control	Internal control: belief in ability to control one's fate. External control: a passive acceptance of the environment.	Desire to learn and improve. Desire to work independently	Liverant and Scodel	
Steiner	One reacts to risk according to his state of arousal. Since risk can alter arousal levels, one may seek out or shun risk depending on his present arousal level. If one is already highly aroused, he may avoid risks, but if his arousal state is low, he may adopt risky strategics.	Arousal level	Arousal: a measure of responsiveness which can range from deep sleep or coma to intense excitement or even terror.	Employee training methods	Steiner et al.	Steiner's own experiments show mixed results.

escape. Thus, when the level of arousal is below optimum Hebb suggests that an individual "should approach, and take pleasure in, any circumstances which will increase arousal." In contrast, when arousal exceeds an optimal level, a person "should withdraw in displeasure from the situation" if possible (Steiner et al, 1970).

Steiner relates the arousal hypothesis of Hebb to risk-taking behavior by assuming that risk situations give rise to high arousal levels. They suggest that individuals can influence these levels of arousal and bring them toward an optimum by either avoiding or seeking out risks. They further assert that the extent to which people are willing to bear risk depends upon their current level of arousal. If they are experiencing high arousal levels, subjects will tend to avoid risk and adopt cautious strategies which will bring down their arousal level toward an optimum. Conversely, if they are experiencing low levels of arousal, they will tend to accept risks and thus increase their arousal level toward the optimum.

Implications of the Theory

In essence, Steiner implies that there is some optimal arousal level at which individuals are willing to accept risks. At this level, they attain optimal task performance and avoid boredom. If Steiner is correct, accounting firms should pay particular attention to the degree to which employees are challenged by job assignments.

Consider the manner in which new recruits are typically handled. The audit senior usually gives the new employee relatively easy assignments, such as tasks which are rather mechanical in nature. Moreover, the junior is often assigned to audit accounts of lesser importance and to accounts which have been found to be relatively "clean" in prior audits. This approach supposedly gives the inexperienced employee an opportunity to become acclimated to the audit environment before confronting tasks of a more demanding nature. This approach may be appropriate for the average recruitee; however, juniors that are considered to be in the "cream of the crop" category become bored and dissatisfied when given less challenging assignments.

A better approach could be to differentiate among new employees on the basis of their preemployment records. Burton has suggested that recruits should be divided into one of three groups: audit staff potential, partner potential, and managing partner potential. Those with audit staff potential would go through the normal audit staff training approach. The activities of those with partner potential would be scheduled so that a significant proportion of their time in their recent years is allocated for personal growth. They would not be evaluated on how much auditing work they completed, but instead, a conscious effort would be made to develop them into "question askers," both within the firm and within the client's office. This would be accomplished through outside projects and special educational efforts. Finally, those with managing partner potential would start at the top as administrative assistant to a partner (Burton, 1971). While Burton's proposal may seem radical, a differentiation approach may be necessary in order for each individual to attain an optimal arousal level which, according to Steiner, leads to optimal risk taking and task performance.

For purposes of summary and comparison, the reader should refer to Table 1 which highlights the above theories. It should be emphasized that all of the theories have received mixed test results. This fact must be kept in mind when considering the implications for auditing. One purpose of this research is to bring the theories to the attention of accountants, for if one or more of the theories are valid, then their implications should be noted. Ω

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