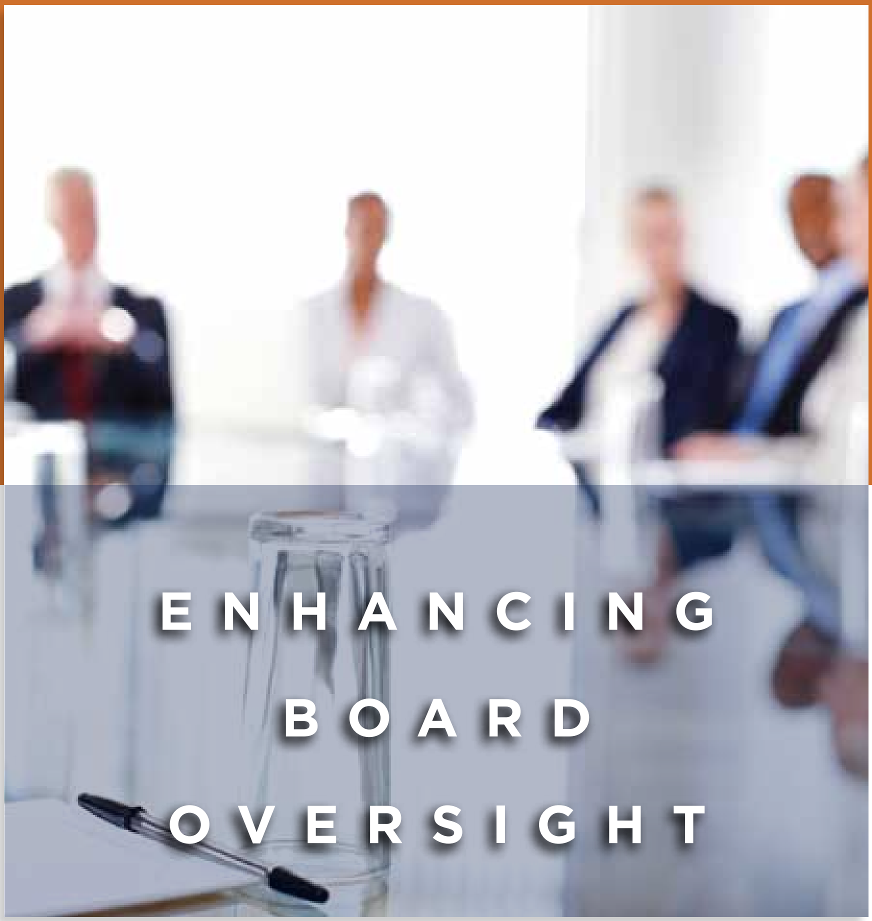
COSO

Committee of Sponsoring Organizations of the Treadway Commission



ENHANCING BOARD OVERSIGHT

Avoiding Judgment Traps and Biases

By

KPMG LLP | Steven M. Glover | Douglas F. Prawitt

Authors

KPMG LLP

Contributing authors from KPMG LLP include:
Sam Ranzilla
National Managing Partner,
Audit Quality and Professional Practice
George Herrmann
National Office Partner
Rob Chevalier
National Office Partner

Steven M. Glover, CPA, Ph.D.
Chaired Professor of Accounting,
Brigham Young University

Douglas F. Prawitt, CPA, Ph.D.
Chaired Professor of Accounting,
Brigham Young University

Consistently making high-quality professional judgments in a constantly changing environment has never been more important or challenging. The growing complexities of the global business environment and demands for effective corporate governance and oversight have placed a premium on sound judgment and decision making by all key players in the marketplace: management, boards of directors, auditors, and others.

Our hope is that this collaboration—incorporating insights from academic research and reflecting KPMG's commitment to consistent and incisive professional judgment in all aspects of its work—will be useful to board members in appropriately evaluating and challenging judgments and in encouraging sound decision making and solid performance.

KPMG LLP | **Steven M. Glover** | **Douglas F. Prawitt**

COSO Board Members

Preface

This project was commissioned by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), which is dedicated to providing thought leadership through the development of comprehensive frameworks and guidance on enterprise risk management, internal control, and fraud deterrence designed to improve organizational performance and governance and to reduce the extent of fraud in organizations. COSO is a private-sector initiative jointly sponsored and funded by the following organizations:

American Accounting Association (AAA)

American Institute of CPAs (AICPA)

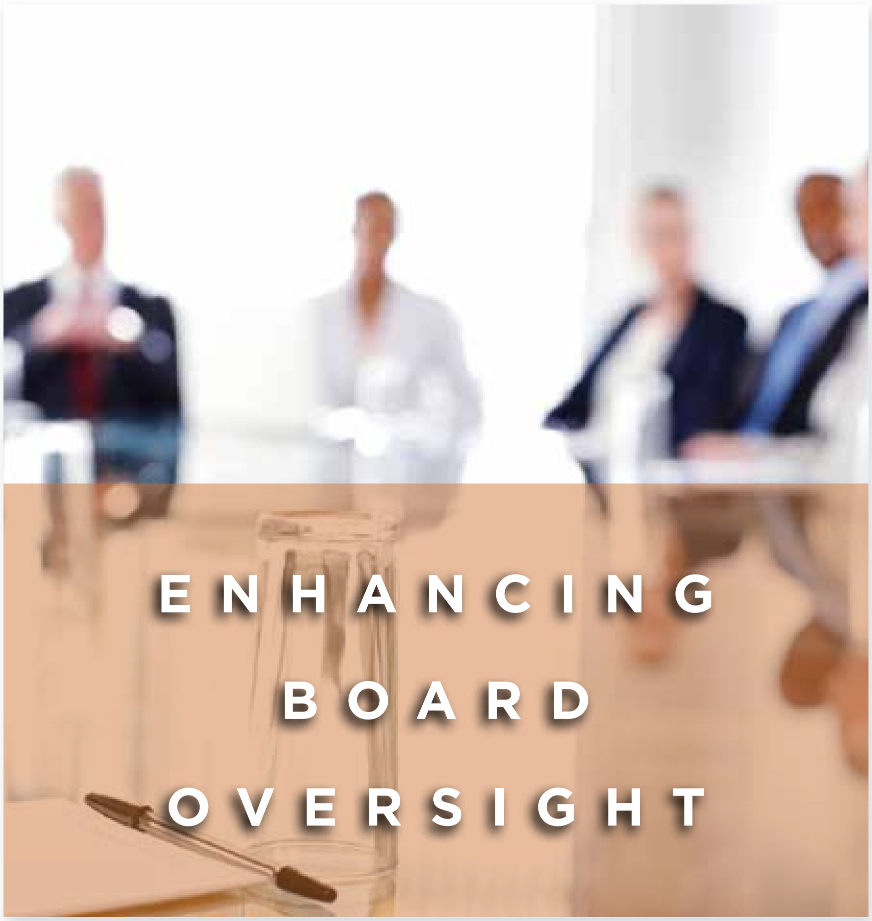
Financial Executives International (FEI)

The Institute of Management Accountants (IMA)

The Institute of Internal Auditors (IIA)

Committee of Sponsoring Organizations of the Treadway Commission

www.coso.org



ENHANCING BOARD OVERSIGHT

Avoiding Judgment Traps and Biases

Research Commissioned by

COSO

Committee of Sponsoring Organizations of the Treadway Commission

March 2012

1234567890 PIP 198765432

COSO

www.coso.org

Content Outline

Introduction

The board of directors plays a major role in setting strategy; formulating high-level objectives; allocating resources; and providing guidance, direction, and accountability for management. The Committee of Sponsoring Organizations of the Treadway Commission's (COSO's) *Internal Control—Integrated Framework* and *Enterprise Risk Management—Integrated Framework* identify effective board oversight as one of the fundamental principles for establishing the entity's tone at the top within the internal environment. In this context, the board has responsibilities for providing governance and oversight, including defining what it expects in terms of integrity and ethics.

COSO's recent thought paper, *Effective Enterprise Risk Oversight: The Role of the Board of Directors*, notes that

> [t]he role of the board of directors in enterprise-wide risk oversight has become increasingly challenging as expectations for board engagement are at all time highs …. The complexity of business transactions, technology advances, globalization, speed of product cycles, and the overall pace of change have increased the volume and complexities of risks facing organizations over the last decade.

Recent research on fraudulent financial reporting issued by COSO in 2010, *Fraudulent Financial Reporting 1998–2007—An Analysis of U.S. Public Companies*, found that even boards and audit committees that possess many of the characteristics deemed to be effective best practices for board governance (a majority of independent directors, 100 percent independent audit committees, the presence of financial expertise on audit committees, frequent meetings, and so on) are sometimes misled by management who have fraudulently distorted the organization's financial statements.

Directors are required to exhibit sound judgment in fulfilling their fiduciary responsibilities of corporate governance and oversight, including overseeing the entity's efforts to prevent fraud and effectively manage enterprise risks. In meeting their obligation, directors often face a variety of difficult questions requiring judgment calls on matters such as the acquisition of other businesses, sales of assets, and business expansion. The need for high-quality judgment and oversight has never been greater. Directors who consistently make high-quality judgments distinguish themselves and the entities they represent in the marketplace.

The business judgment rule, which helps directors meet the increasingly challenging role of strategic decision making without undue fear of liability, grants immunity to directors and officers for losses incurred in corporate transactions within their authority, so long as the transactions are made in good faith with reasonable skill and prudence.[1]

Although case law supports the business judgment rule, directors are exposed to liability if they do not exercise sound professional judgment. For example, in one case, the court held directors liable when evidence was presented that the directors reached a decision to sell a company at a particular price after hearing only a 20-minute oral presentation concerning the sale. The court also noted that the directors had received no documentation indicating that the sale price was adequate and had not requested a study to help them determine whether the price was fair. The court determined that because they failed to adequately inform themselves and had not engaged in a sound judgment process, the directors were liable to the shareholders for negligence.[2]

Boards of directors generally comprise highly capable people who are well aware of the need for careful judgment processes that can be justified and defended and who know the potential impact that poor decisions can have on the success of the business, shareholder value, and director liability. Notwithstanding this fact, opportunities for improvement in the judgment processes of directors are likely available. Corporate governance is enhanced when directors improve their ability to exercise an appropriate level of skepticism and actively engage with management. Entities and their key stakeholders are better served when directors effectively challenge management's judgments, explicitly consider alternative perspectives, and engage management in frank and open discussions.

1 The rule originated in *Otis & Co. v. Pennsylvania R. Co.*, 61 F. Supp. 905 (D.C. Pa. 1945).

2 *Smith v. Van Gorkom*, 488 A.2d 858 (Del. 1985).

Ironically, despite the fact that we constantly make judgments and decisions and that the demand for good judgment is high, most people receive very little formal training in what good judgment looks like or in the human tendencies that threaten good judgment. Although talent and experience are clearly important components of effective professional judgment, researchers have discovered key insights in judgment and decision making over the last few decades that have the potential to enhance the professional judgment skills of even highly experienced directors and officers.

The purpose of this thought paper is to improve board oversight of management's judgments by raising board member awareness of important insights that can improve the judgment of experienced business executives and board members.

For example, research has found that judgments can be flawed when decision makers do not consistently follow a sound judgment process and when they fall prey to systematic, predictable traps and biases that can lower the quality of judgments. Making judgments in groups can exacerbate these traps and biases and can present additional judgment pitfalls if group interactions are not structured and conducted properly.

The challenge for board members is both to effectively challenge the judgments of corporate officers and enhance the quality of their own judgments. These two aspects of professional judgment are essential to organizational performance and the effective oversight of enterprise-wide risk.

For purposes of this thought paper, *judgment* is the process of reaching a decision or drawing a conclusion when there are a number of possible alternative solutions.[3] An effective judgment process will be logical, flexible, unbiased, objective, and consistent. It will utilize an appropriate amount of relevant information, and it will properly balance experience, knowledge, intuition, and emotion. However, we often do not follow a sound process due to common judgment traps and tendencies that can lead to bias. Some of these tendencies are judgment shortcuts that help simplify a complex world and facilitate more efficient judgments. However, these shortcuts sometimes can lead to suboptimal judgments. The judgment traps and tendencies are systematic—in other words, they are common to most people, and they are predictable.

By consistently following a sound judgment process, understanding where directors and management are vulnerable to predictable traps, and appropriately challenging their own judgments and the judgments of those they are charged with overseeing, directors can improve their oversight and monitoring of the organization's strategies and risks, including the risk of fraud. Following a better judgment process translates to improved risk management and better business outcomes. This thought paper highlights some of the common pitfalls and biases in judgments to which decision makers are vulnerable and provides an overview of actions and steps that boards can take to avoid falling prey to them.

[3] Many judgments are typically made in coming to a decision. For simplicity, in this paper we refer to the combined processes of judgment and decision making as judgment.

A Model of Good Judgment

In order to exercise sound judgment, it is helpful to consistently follow a good judgment process. With an understanding of the components of a good judgment process, as well as the common threats to good judgment, the quality, justifiability, and defensibility of judgments can be improved.

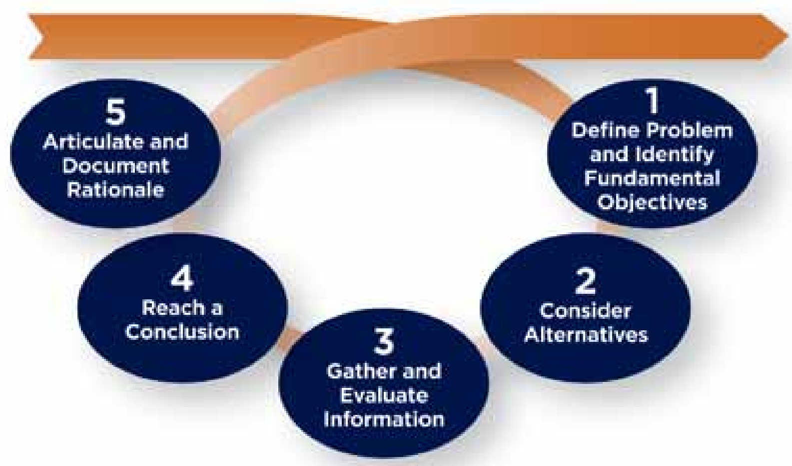
The following **exhibit 1** illustrates a model of a good judgment process. The steps in this process are simple to understand, and they will not surprise you; however, it is important to remember that, although the steps are a representation of the process that we should follow, the exhibit does not depict how people often actually make judgments. Thus, this simple representation of a good judgment process provides a helpful context to illustrate where judgments can go wrong. The reality is that in a world of high-stake decisions, deadlines, and limited capacity, the judgments of even highly educated, capable people are vulnerable to common, systematic traps and predictable biases.

KPMG's Professional Judgment Framework

The five-step process illustrated in **exhibit 1** is adapted from KPMG LLP's *Professional Judgment Framework*.

This five-step process is simple and intuitive, but when properly employed, it can guide judgments and help identify where and when our judgments are threatened by predictable, systematic judgment traps and biases.

Exhibit 1: Professional Judgment Process



Defining the problem and identifying fundamental objectives (step 1) is crucial in setting the stage for high-quality judgments. Skipping this step can result in time wasted solving the wrong problem, and it can severely limit the set of alternatives available for consideration. It is important to consider alternatives (step 2) because our judgment can only be as good as the best alternative considered. As we discuss subsequently, decision makers often skip step 1 and consider an artificially constrained set of alternatives because they are influenced by a judgment trigger, which masquerades as a valid problem definition.

Gathering and evaluating appropriate amounts and types of information, as indicated in step 3, is a critical step in coming to an informed conclusion, which is step 4. Finally, step 5 involves articulating and documenting the rationale for the conclusion, which provides the decision maker(s) an important opportunity to reflect on the rationale for a judgment and on whether a sound professional judgment process was followed. The inability to adequately articulate the rationale for a conclusion often will reveal that a decision may have been based on insufficient information or may not have resulted from a good judgment process.

Our Intuitive Judgment Processes Can Betray Us

Although this five-step judgment process is simple and intuitive, it is important to realize that the judgment tendencies and shortcuts that human beings often rely on can short-circuit such a process, and as a result, our decisions can be biased. It is an interesting paradox that the human mind is capable of solving complex problems and developing new and creative solutions and, yet, can be subject to predictable judgment traps and biases. Consider the act of driving a car through traffic, which people regularly perform with relative ease. In terms of the judgments that are required, this is a very complex task—so complex that even the most powerful computers cannot perform it as well as humans. And yet, history is replete with examples of the devastating results of flawed judgment. To efficiently navigate complexity, we often unknowingly use mental shortcuts and simplifying strategies. On balance, these simplifying shortcuts and tendencies serve us well. However, because they are shortcuts, situations can arise in which they can systematically and predictably lead to suboptimal judgments. Suboptimal judgments on trivial tasks are of little consequence, but on critical high-stakes judgments, they can be devastating.

As a simple illustration of how mental processes that normally serve us very well can sometimes lead to bias, consider how our eyes can fool us when we see an optical illusion. Our eyes and related perceptual skills ordinarily are quite good at perceiving and helping us accurately judge shapes and motion. Just as with optical illusions, there are instances when the intuitive judgment of even the smartest and most experienced people falls prey to systematic cognitive illusions, referred to as judgment traps and biases. Unfortunately, when it comes to judgment traps and biases, experience is not always the best teacher. The good news is that once we are aware of these traps and biases, we can deploy logical steps to reduce their impact and improve our judgment skills.

We will refer to the following example as we describe in the rest of this paper how directors can proactively frame and reframe issues to more effectively evaluate and challenge judgments and how they can identify and mitigate the effects of common, systematic human tendencies that can result in predictably biased judgment:

> *The CEO and CFO of ABC Manufacturing Inc. call an urgent meeting of the full board over a weekend. The issue at hand is a business opportunity to acquire 100 percent of the common equity of a supplier of raw materials used in the company's manufacturing process. The CEO starts off the meeting, "First off, I want to thank you for taking time out of your weekend to meet. We have an incredible opportunity to vertically integrate our operations, ensure uninterrupted supply of critical raw materials, reduce production time, and increase market share through this acquisition. We assembled you on such short notice because I want to be in a position to present our offer early next week." The meeting is then handed off to the CFO who says, "In front of you is a package of schedules and analyses that we used in arriving at the offer price we are suggesting. The analyses are detailed and comprehensive." The CFO then walks the board members through the calculations at a high level and shares a list of factors that management considered in arriving at the offer price. "In conclusion," says the CFO, "I believe you will find that our figures align very well with what we know of the raw material supplier and are fairly conservative in nature given the tremendous opportunity for synergistic cost savings, as well as gain in market share. Based on our analysis, we are confident that our offer price of $800 million is on target. In our view, this acquisition should be a slam dunk." The CEO and CFO have made their decision to move forward and feel a sense of urgency to extend the offer quickly, and they ask the board to step up and demonstrate decisiveness and vision by approving the extension of an offer.*

> "A hasty judgment is a first step to recantation."
>
> – **Publilius Syrus** (Roman writer)

Common Judgment Traps

One of the most common judgment traps that individuals and groups fall into is the tendency to want to immediately solve a problem, to appear decisive by making a quick judgment. In a group setting, this *rush to solve* is often manifested as a tendency to strive toward quick compromise and early consensus. Ineffective compromises are sometimes reached in order to avoid conflict, rather than foster a healthy consideration of opposing views. Groups tend to produce better judgments when diversity of thought is not only tolerated but explicitly and specifically encouraged. Alfred Sloan, former chairman of the board of General Motors, stated the following at the end of a meeting with the company's board of directors,[4]

> *I take it we are all in complete agreement on the decision here…. Then I propose we postpone further discussion of this matter until our next meeting to give ourselves time to develop disagreement and perhaps gain some understanding of what the decision is all about.*

Mr. Sloan saw the lack of conflicting views as a sign that the group did not fully appreciate the underlying problem or fundamental objectives.

> One-third of audit committee members surveyed indicate that they believe unhealthy groupthink tendencies influence their meetings.
>
> – **KPMG Audit Committee Institute** (2011 survey)

Some seriously flawed judgments with calamitous outcomes have been attributed to the set of group decision behaviors known as groupthink, including the ill-fated decision to launch the Challenger space shuttle in cold conditions in 1986. Members of a group who are subject to groupthink behaviors tend to suppress their own views for various reasons (for example, they may assume that consensus in the group signals good judgment). This behavior may be especially true in cases when a board has a prominent member who expresses his or her views early. Such a scenario can enhance the group's tendency toward narrow thinking, suppression of divergent views, and partially considered judgments. Interestingly, overly cohesive groups begin to believe that they have reached a fail-safe conclusion when consensus is achieved; in other words, quick agreement among like-thinking members of a group can lead to extreme overconfidence among the group members. Fostering healthy debate and avoiding early consensus is key to avoiding unhealthy tendencies toward suppression of views or early, potentially premature consensus. A key take-away is that groups need to beware of early consensus for important judgments; it is often a sign of a surprisingly common judgment trap. Instead, group interactions should be designed and conducted to stimulate and encourage the expression of different perspectives. The board of directors is a key component of the control environment, including setting the tone at the top (see COSO's *Internal Control—Integrated Framework, 1992*). As such, it is important for the board to function effectively and avoid groupthink and other group tendencies that can present obstacles to sound judgment processes.

> "An audit committee where everybody is happy and likes each other is an audit committee that makes me nervous."
>
> – **Michael Schrage** (MIT Sloan School of Management)

Most of the time, decision makers do not even realize when they have fallen into the "rush to solve" trap. This tendency is a trap because people fall into it unaware and, as a result, unknowingly develop a limited view of the problem that they are addressing, the objectives that they are trying to achieve, and the available alternatives. In other words, if we rush to get to a solution, we are likely to underinvest in the vital early steps of a good judgment process. People falling into this trap often go with one of the first workable alternatives offered or that come to mind. By underinvesting in the first step of defining the problem and identifying fundamental objectives, people sometimes solve the wrong problem or settle for a suboptimal outcome. It is important to remember that a judgment can only be as good as the best alternative considered. You will notice in the ABC Manufacturing Inc. acquisition example that the tendency to rush to solve can be exacerbated by external or self-imposed deadlines.

We often fall into the trap of inheriting or accepting an incomplete problem definition and can then fall into the common trap of doing an absolutely excellent job of solving the wrong problem. An example of initially working on an incomplete problem definition would be a snack company trying to take market share from the market leader. The market leader sells snacks in interesting, retro-shaped packages. The company seeking to gain market share considers the shape to be the key competitive advantage; thus, its early attempts to take market share are focused almost exclusively on developing a more eye-catching

[4] See Drucker, 1967.

package. When increases in market share do not follow, the company adopts another perspective: simple and convenient package shapes keep costs down and make it more convenient for consumers to purchase and store more product. Just as in this simple example, companies that effectively consider multiple perspectives when faced with important judgments are able to develop a more complete problem definition and devise more effective strategies. We discuss the role of multiple perspectives, or judgment frames, later in this paper.

What Is a Judgment Trigger?

In the snack company example, the retro-shaped package functioned as a form of *judgment trigger*, an assumed or inherited problem definition that can lead the decision maker to skip the crucial early steps in a good judgment process.[5] A judgment trigger is another common judgment trap and can often be recognized when a problem definition is stated in the form of an alternative. In the ABC Manufacturing Inc. acquisition example, the potential judgment trigger was the acquisition alternative presented. Although ABC Manufacturing Inc.'s management may be right that the acquisition is a slam dunk opportunity, without a clear definition of the underlying problem and objective and a fuller consideration of the possible alternatives that ABC Manufacturing Inc. might pursue, management and the board may be solving the wrong problem or settling for a suboptimal use of the company's resources.

Asking What and Why Questions

Once we become aware of the potential dangers of judgment triggers, we can identify logical steps to better navigate through the judgment, such as asking what and why questions. For example, after learning about judgment triggers, an executive recognized a judgment trigger when he was charged with overseeing the in-house development of customized software to track important projects at the company. He noticed that the suggested problem definition, the need for custom-developed software, was actually just one potential alternative that was being substituted in place of a well-defined fundamental problem and specific objectives. Through the appropriate use of what and why questions, he gained a better understanding of the actual problem and related objectives and was able to identify additional alternatives. In the end, he found that an off-the-shelf, third-party product with some ability to customize the software interface was a far more cost-effective alternative. The third-party product was implemented much faster than would have been possible with a product developed from scratch, and it was far more cost effective in both the short and long run.

As illustrated, judgment triggers often come in the form of an alternative that is improperly used as a problem definition. Given the tendency to rush to solutions, it is easy to see how one might readily react to a trigger and move forward without a complete list of fundamental objectives or a clear definition of the problem. Obviously, adopting a triggered alternative can work well if the alternative happens to be a workable or good alternative; if not, such an approach can lead to costly mistakes.

As another example of asking what and why questions to drive to the fundamental problem and objectives, consider a common definition used for a retirement goal: "I need to have a certain amount of money saved in a retirement fund by the time I reach retirement age." This certainly is a worthy goal, but as with many initial goals and objectives, it is really only a means to an end. Following up by asking why you want a certain amount of money for retirement, as obvious as it might sound at first, can help uncover a more fundamental objective, which might be something like, "To maintain a high quality of life in retirement." Note that pausing to search for fundamental objectives in this example readily yields a number of additional alternative approaches to achieving the objective of a high quality of life, such as maintaining good health, identifying a desirable retirement location, being free of debt, and so on. Carefully defining the problem and identifying fundamental objectives by asking what and why questions is a key step in improving the quality of important judgments.

"A prudent question is one-half of wisdom."

– **Francis Bacon** (English scientist and statesman)

5 See *Smart Choices: A Practical Guide to Making Better Decisions*, where the authors suggest that every judgment problem has a trigger or initiating force.

Boosting the Board's Ability to Appropriately Challenge Judgments Through Proactive Framing

At the core of a director's ability to raise effective questions, appropriately challenge and evaluate judgments, and help both the board and management avoid judgment traps and biases is a concept called judgment framing. *Frames* are mental structures or perspectives that we use to determine the relevance or importance of information. The underlying analogy behind framing is that different perspectives are visible through different window frames. For example, consider the different vistas that are available from different windows of the same office building. Different vistas or frames also are possible with judgment problems; often, there are many possible perspectives on the same situation. Different frames can lead to significantly different understandings or interpretations of a situation, and these different understandings and interpretations will affect behavior and decisions.

For example, research shows that people's willingness to take on risk depends on how a situation is framed.[6] Doctors and patients tend to select riskier treatment options when a medical condition is framed in terms of the odds of dying as compared with when the identical situation is framed in terms of the likelihood of surviving—same situation, different frames. Similarly, tax professionals may be more accepting of management's high-risk tax position when the underlying transaction is a done deal as compared with when the same transaction and position are not yet completed. Same transaction; however, the professionals either agreed or didn't agree with management's position depending on the frame with which they viewed the transaction. The point here is not to suggest that one frame is better than another; there often is no single best frame. However, judgments can be improved by considering the problem from the vantage point of multiple frames.

The Power of Framing

Frames are necessary and helpful, but individuals are often unaware of the perspective or frame that they or others are using. As a quick illustration of the power of framing, you may have heard of the phrase "the war on drugs." In an effort to change the nation's approach to the drug problem, when General Barry McCaffrey became the nation's "Drug Czar" a number of years ago, one of the first things he did was change the metaphor, or frame, that was being used by policy makers from "the war on drugs" to "drugs are a cancer on our nation." There are important implications of thinking about the drug problem through one frame versus the other. If the drug problem is a war, we will send soldiers to the border; we will use force to attack and arrest. If it is a sickness, we will tend to educate the public, treat addicts, and look for preventative measures. Again, the point is not that one frame is necessarily better than the other but, rather, that the two metaphors point to very different perspectives and actions.

Identifying Frames

Management and boards facing an important judgment will initially adopt a frame, and board members should work to identify and understand the frame that is being used by management, other board members, and the board overall. One way to recognize a frame is by identifying the analogies or metaphors being used. People often use sports metaphors, such as "this investment is a slam dunk." This basketball analogy was used in the previous ABC Manufacturing Inc. acquisition example, and it suggests a near guaranteed basketball scoring opportunity, suggesting that the acquisition is obviously going to be highly successful and beneficial to the company and its shareholders, with very little risk of things going wrong. Analogies can shape important discussions; we can often challenge the frame by looking at the situation using a different analogy or metaphor.

> "If everyone is thinking alike, someone isn't thinking."
>
> – **General George S. Patton**

6 For a review of judgment framing and references to the underlying research, see *Judgment in Managerial Decision Making*.

A distinguishing characteristic of those who consistently make high-quality judgments is that they are frame-aware. They understand the judgment frame that they or others are using, and they are able to consider the situation through different frames, or what KPMG LLP professionals refer to as a fresh lens. Referring back to the simple medical treatment example, the best way to approach such a decision would be to think about the odds from both the survival and mortality perspectives and explicitly consider how our judgment is affected by the different frames. On a financial reporting issue, alternative frames that board members might consider are perspectives of regulators, analysts, investors, or a hindsight perspective, such as how will management's judgment look if it is reported in the press in six months?

In the ABC Manufacturing Inc. acquisition example, there are a number of different frames to consider, such as what would change if we considered this acquisition as a 3-point shot instead of a slam dunk, what is the problem that the acquisition is attempting to solve, and what are the fundamental objectives. Additional frames might be identified by asking whether alternative acquisition opportunities may be better, whether it would be better to acquire less than 100 percent of the supplier, and whether long-term raw material rights contracts might accomplish similar benefits. One might also ask what could go wrong or what the best arguments are for not going ahead with the acquisition.

Seeking Alternative Views

Boards need to understand management's frame, but they also need to proactively consider issues through alternative frames, which sometimes means that they need to ask more questions or purposefully think through a view that might go contrary to management's perspective. For example, although it is generally true that without taking risk there is no reward, sometimes, executives adopt the frame that risk equates directly to positive opportunity. It may be prudent for the board to remind management that not all risks are worth taking from other stakeholders' perspectives and that with risk can come significant or even catastrophic loss. Boards would also often be well advised to take time to explicitly identify and carefully consider the implications of alternative or opposing views. Management and boards might be able to identify such views from down-the-line employees or outside sources.

Although not intended as a comprehensive list, other areas where a heightened ability by the board to appropriately challenge judgments may prove particularly beneficial include the following:

- Evaluating management's business strategies and whether management is taking necessary steps to achieve strategic goals
- Evaluating risks, including the risks of fraud, and assessing management's internal control and other responses to those risks
- Reviewing and approving financial budgets and forecasts
- Evaluating the transparency of reported financial information
- Reviewing the adoption of new technology
- Evaluating management's plans to address the risks of various potential disasters

Common Judgment Tendencies and Related Biases

Boards of directors are regularly charged with making challenging judgments in an environment characterized by significant complexities, uncertainties, and pressures. In such an environment, where both efficiency and effectiveness are at a premium, it is important to understand where people are most likely to become vulnerable to systematic, predictable judgment traps and biases. So far, we have discussed some common traps that can derail a judgment process, especially in group settings, and the importance of proactively identifying and considering alternate frames.

A formal judgment process like that depicted in **exhibit 1** provides steps to good judgment when making important judgments. When making these kinds of judgments in a complex world, however, individuals often unconsciously fall prey to motivational biases and sometimes use shortcuts that are efficient and generally effective, but because they are shortcuts, they can lead to biased judgments. These shortcuts are techniques that we all use, often unknowingly, to help cope with the complex environments in which we operate. As a quick example of a simplifying judgment shortcut, when crossing a city street, say in New York City, some people don't wait until they get a walk sign; instead, they move through intersections by quickly looking to the left for oncoming traffic. If the coast is clear, they will take a step out into the street and then look to the right for traffic coming the other way. This is a very efficient and, often, effective shortcut strategy. Over time, it becomes an unconscious, automatic part of how some people cross the street in a busy U.S. city. However, if they were to use this shortcut strategy in London or other cities where cars are driven on the other side of the street, the consequences could be fatal.

Tendencies That Can Lead to Bias

Understanding where we tend to take judgment shortcuts and where our motives can subconsciously affect us can help us identify when the quality of our judgments can be affected by systematic bias. Fortunately, once we understand the implications of our judgment tendencies, we can devise ways to mitigate potential resulting bias. When it comes to crossing streets in London, transportation officials have placed signs on the sidewalk, on signposts, and even on streets to remind visiting pedestrians of the direction of traffic flow. The signs are an attempt to get visitors out of the subconscious shortcut mode and apply more formal thinking.

Once we are aware of the judgment tendencies to which we are often unknowingly prone, we can identify intuitive, common sense methods to mitigate bias and improve our judgment. Although research has identified many judgment tendencies and associated biases, we focus our discussion in this paper on four common, bias-inducing tendencies that can predictably lead even the brightest people to make suboptimal judgments: overconfidence, confirmation, anchoring, and availability.[7]

Overconfidence Tendency

Overconfidence is the tendency for decision makers to overestimate their own abilities to perform tasks or to make accurate assessments of risks or other judgments and decisions. This prevalent subconscious tendency results from personal motivation or self-interest. The tendency to be more confident than is justified is likely to affect individuals even when they are doing their best to be objective. Research indicates that many people, including very experienced professionals, are consistently overconfident when estimating outcomes or likelihoods. For example, in one study, when doctors were asked to assess the likelihood of pneumonia, they were highly confident that their diagnoses would be wrong only 20 percent of the time. Instead, they were wrong more than 80 percent of the time.[8] Particularly relevant to board members is that confidence grows more rapidly with experience than does competence. In other words, the most overconfident people are typically the most experienced.

> "It ain't what you don't know that gets you into trouble. It's what you know for sure that just ain't so."
>
> – **Mark Twain**

So, what's wrong with overconfidence? Some may argue that being extremely confident is a blessing, even a necessary attribute of successful business professionals. Although it is true that confidence is an important attribute, overconfidence can lead to suboptimal judgments because it can result in taking on too many projects, missed deadlines, budget overruns, shutting down potentially useful discussions, reaching ill-considered snap judgments, considering too few alternatives, truncating or skipping an information search, or solving the wrong problem. In the context of enterprise risk management (ERM), it can result in underestimating the likelihood or potential magnitude of risks, ignoring certain stakeholder perspectives, or neglecting to plan for the possibility of events with potentially adverse outcomes. In terms of assessing the possibility of fraud in the organization, overconfidence can lead to an insufficient level of skepticism and questioning. In sum, overconfidence can result in avoiding, or poorly executing, a sound judgment process in any context. A recent study titled "Executive Overconfidence and the Slippery Slope to Financial Misreporting" concluded that overconfidence on the part of business executives can lead to an optimistic bias in financial reporting and, in turn, "leads them down a slippery slope of … intentional misstatements."[9]

In the ABC Manufacturing Inc. acquisition example, the CEO and CFO express strong confidence in their analyses and decision, and it very well may be the case that they are overconfident. Once board members are aware that overconfidence is a trait commonly found in business executives that can influence their ability to make accurate estimates and probability assessments, board members can take logical steps to mitigate the negative effects of this tendency.

7 For a detailed review of the tendencies discussed in this paper and references to the underlying research, see *Judgment in Managerial Decision Making*.

8 See *Winning Decisions*.

9 See "Executive Overconfidence and the Slippery Slope to Financial Misreporting" in the *Journal of Accounting and Economics*.

Confirmation Tendency

You may have heard the old saying, "My mind is made up; don't confuse me with the facts!" In other words, once people have adopted an initial preference or opinion, they tend to favor information that supports and agrees with their initial preference or opinion. This describes the *confirmation tendency*, which is the tendency for decision makers to seek—and put more weight on—information that is consistent with their initial beliefs or preferences.

Decision makers, including business executives, tend to seek confirmatory evidence, rather than conducting an objective search that includes looking for information that might be inconsistent with their initial views or preferences. After obtaining some confirmatory evidence, decision makers often are confident that they have adequate evidence to support their belief. The more confirmatory evidence that they are able to accumulate, the more confident they become. Seeking and considering only confirmatory evidence is a judgment shortcut that can result in biased judgment because, in many situations, we cannot know something to be true unless we explicitly consider how and why it may be false.

The confirmation tendency may bias board judgments made in reviewing key performance indicators (KPIs). Board members may be prone to overrely on management's explanation for a significant difference between budgeted and actual KPIs. Given the power of the confirmation tendency, board members' questions may unknowingly tend toward information that is likely to confirm management's explanations, which can lead to a failure to consider information that might suggest alternate explanations. For example, statements made by some of Enron's board members suggest that they may have been too accepting of information presented by management, which may have been at least partially attributable to the confirmation bias. Thus, the confirmation tendency, which includes the failure to seek out and consider disconfirming information, may explain why highly intelligent, conscientious boards of directors might not always effectively oversee risk management processes and even why they might fail to recognize indicators that management is perpetuating fraud.

Let's consider another example. Suppose there has been an explosion at a manufacturing facility. The CFO has presented to the board an estimate of the resulting contingent liability. The CFO explains that she has arrived at a fairly narrow range for the estimated liability of $110–$120 million using 2 different estimation techniques. The board carefully considers the analyses, and it appears that the CFO has done a thorough job. The board's confidence is bolstered by the fact that the CFO was able to arrive at essentially the same number using 2 different estimation approaches, and both appear to be carefully performed. The board reviews the analysis before the meeting and even double checks some of the CFO's calculations and assumptions and concludes that the amount looks reasonable to compensate for human suffering and property damage at neighboring companies.

Suppose that 1 year later, the company's legal team comes back to management and the board proposing a $200 million settlement. General counsel explains that $130 million was needed to compensate families, workers, and others who were killed or injured and to pay for property damage to the facilities of neighboring companies whose manufacturing facilities were damaged by the explosion. But another $70 million was needed to compensate the owners of the neighboring facilities to recover damages from lost business because the damage to their facilities resulted in loss of business and breach of contract because they were not able to manufacture and deliver goods on schedule. The CFO did not consider these losses in her original analyses, and because the board focused on confirmatory information supporting the CFO's analysis, rather than specifically seeking potentially disconfirming information, they likewise did not consider the possibility of other costs. Consideration of such factors may seem obvious with the benefit of hindsight, but the confirmation tendency can powerfully limit one's thinking about factors and information outside of what has been previously considered.

> "The greatest obstacle to discovery is not ignorance, it is the illusion of knowledge."
>
> – **Daniel Boorstin** (U.S. historian)

In general, as a result of the pervasive nature of the confirmation tendency, boards may have a tendency to rely on management's assertions and unknowingly or unintentionally be biased toward considering and seeking only confirmatory evidence. A sign that the board might be falling prey to the confirmation tendency is if meetings with the board and management tend to be overly comfortable or agreeable. As critically important overseers of strategy, execution, and risk management, boards must appropriately and rigorously question management's assertions and conscientiously consider potentially opposing views and information.

> "In all affairs, it's a healthy thing now and then to hang a question mark on things you have long taken for granted."
>
> – **Bertrand Russell** (Welsh philosopher and logician)

In the ABC Manufacturing Inc. acquisition example, the confirmation tendency could lead the board to rely solely or primarily on management's analysis. It would also likely combine with the judgment traps of rush to solve and judgment trigger. Also, the more confirming evidence presented by management, the more confident the board might become that the acquisition is a good move. However, in ABC Manufacturing Inc.'s case, more confirming evidence does not necessarily validate the decision because there may be important disconfirming evidence that should be considered. Applying an appropriate level of skepticism through the appropriate use of different judgment frames would allow the board and management to more properly and fully apply a good judgment process.

Although not a comprehensive list, other common areas where the confirmation tendency may affect board judgment include the following:

- Evaluating key assumptions in strategic plans and financial forecasts
- Assessing capital structure in light of strategic initiatives
- Assessing the potential impact of legislation or internal investigations
- Evaluating fair value estimates

Anchoring Tendency

Anchoring is the tendency to make assessments by starting from an initial numerical value and then adjusting insufficiently away from that initial value in forming a final judgment. As an example of the anchoring tendency, managers tend to make salary decisions by adjusting from the starting point of a job applicant's previous salary. A prospective employer might quickly realize the unreasonableness of the anchor (for example, the job applicant's salary at her previous employer was $58,000, which was prior to her earning an MBA) but propose a starting salary irrationally close to the starting point, or anchor. In this example, the job applicant is likely to receive a lower salary offer if the prospective employer knows her salary before she earned her MBA. There are two components of anchoring and adjustment: the tendency to anchor on an initial value and the tendency to make adjustments away from that initial value that are smaller than what is actually justified by the situation.

Potential anchors are abundant in business settings. Initial values or starting points may be suggested from historical precedent; past experience; industry data; or, surprisingly, seemingly irrelevant information.

Think back to the earlier example of a contingent liability estimate. Estimates of potential risk likelihoods and magnitudes are prone to the anchoring tendency. Suppose one of the board members believes that management's estimate for the contingent liability is too low. Even if the board member is successful in convincing the rest of the board that the amount should be increased, the board will tend to anchor on the initial estimate and adjust it by an insufficient amount. Preliminary numbers serve as anchors, and they can powerfully, yet unknowingly, affect a decision maker's judgments.

You can imagine how pervasive anchoring effects are in negotiations of various kinds when a low or high starting figure is thrown out. This tendency is powerful and pervasive. You can bet that expert negotiators regularly use this tendency to their own advantage. Those who are unaware of it are not only very likely subject to bias but also vulnerable to possible manipulation by others.

In the ABC Manufacturing Inc. acquisition example, the suggested purchase price of $800 million serves as an anchor. This is not to say that all initial values are incorrect, only that the initial values that are determined to be incorrect will have undue influence on revised estimates. Other common areas where anchors could influence board judgment include reviewing and approving financial budgets and forecasts, reviewing and approving executive compensation, and evaluating cost reduction or revenue-enhancing proposals.

Availability Tendency

The *availability tendency* is the tendency for decision makers to consider information that is easily retrievable from memory as being more likely, more relevant, and more important for a judgment. In other words, the information that is most available to our memory may unduly influence estimates, probability assessments, and other professional judgments. Like other mental shortcuts, the availability tendency often serves us well, but it has been shown to introduce bias into judgments in business settings.

The availability tendency often affects performance evaluations in business settings. For example, if highly salient negative feedback about a subordinate's performance is received by the evaluator close to when the evaluation is made, the evaluator's assessment of the subordinate's performance may very well be unknowingly and inappropriately skewed by that feedback, even if the colleague's performance during the period was overall very positive. Of course, in a similar fashion, positive feedback or a success close to when the evaluation is being made can lead to an overly positive assessment.

A particular situation in which the availability tendency might impact boards is when directors serve on multiple boards. In these cases, the conclusions reached or outcomes obtained recently from business judgments for another company would be very available and may suboptimally influence a director's recommendation or judgment pertaining to the current company. For instance, if a board member has recently observed a positive (negative) acquisition outcome at another company, it may cause the director to unknowingly increase (decrease) the estimated likelihood of the success of the proposed ABC Manufacturing Inc. acquisition.

Common board responsibilities that could be affected by the availability tendency include the following:

- Evaluating business strategy and the likelihood of threats to achieving goals
- Assessing the quality of the entity's executive team and determining whether the company can achieve its objectives
- Assessing synergies in business acquisitions
- Evaluating the impact of a proposed or new regulation

Exhibit 2 summarizes the traps and tendencies that we've discussed.

Exhibit 2: Brief Description of the Common Threats to Good Judgment in the Context of the KPMG Professional Judgment Framework

Rush to Solve

The tendency to want to immediately solve a problem by making a quick judgment results in underinvestment in steps 1 and 2 in the judgment process (see **exhibit 1**). Often, the solution is to select the first seemingly workable alternative without sufficient consideration of the problem to be solved and the objectives to be achieved. As a result of the rush-to-solve trap, decision makers sometimes end up solving the wrong problem, or they might settle for a suboptimal outcome.

Judgment Triggers

Every judgment or decision has an initiating force that triggers a decision and that trigger can lead the decision maker to skip the early steps in the judgment process. Triggers often come in the form of an alternative masquerading as a problem definition, and we thus move forward without a complete understanding of the problem or objectives and without a complete consideration of other alternatives.

Overconfidence

The pervasive tendency to be overconfident can lead to suboptimal behavior in every step of a good judgment process. Overconfidence can lead to underinvesting in defining the problem and identifying fundamental objectives, the consideration of too few alternatives, or truncating or skipping an information search, all of which can lead to a suboptimal conclusion.

Confirmation

The confirmation tendency and related potential judgment bias primarily affects steps 3 and 4 of the judgment process. Our tendency is to seek and overweight confirming information in the information gathering and evaluation steps and to favor conclusions that are consistent with our initial beliefs or preferences.

Anchoring

The anchoring tendency and related potential judgment bias primarily affects step 3 of the judgment process. In gathering and evaluating information, it is human nature to anchor on an initial value and adjust insufficiently away from that value in making our final assessments.

Availability

The availability tendency limits alternatives considered or information gathered to those alternatives or information that readily come to mind. The availability tendency can have particular influence on steps 2 and 3 of the judgment process.

Mitigating the Effects of Judgment Traps and Biases

Once we are aware of the traps and biases, we can take steps to mitigate their effects. Although it is likely that traps, tendencies, and related biases will never disappear from people's judgment processes, understanding their nature can help us recognize situations in which our judgments can be biased. This recognition, in turn, enables us to take logical, intuitive steps to avoid judgment traps and mitigate the effects of judgment biases.

The first step in mitigating traps and biases is to be aware of possible sources and to recognize situations where we might be vulnerable. Awareness, coupled with the consistent application of terminology to identify and label the potential traps and biases, is key to improving judgment. Earlier, we mentioned how optical illusions cause our visual processes to mislead us. Once we are made aware of the misperception, we can introduce logical tools to help process the visual information correctly or at least take steps to mitigate the misperception, given an awareness and understanding of how our perceptions are likely affected.

Some of the most dangerous judgment traps—rush to solve and judgment triggers—have to do with the failure to follow the steps in a sound judgment process. In other words, one might pass too quickly through the initial steps in the judgment process in order to arrive quickly at a solution or conclusion. Recognizing that human beings have this tendency, as previously discussed, a helpful mitigation strategy is to pause and ask what and why questions. Taking time to ask questions and consider the steps of a good judgment process can help us avoid these traps.

> "It is better to debate a question without settling it than to settle a question without debating it."
>
> – **Joseph Joubert** (French essayist)

Seek Opposing and Disconfirming Evidence

If we believe that the confirmation tendency may be influencing a judgment process, helpful mitigation techniques include making the opposing case and seeking disconfirming or conflicting evidence. For example, suppose management of a distressed company presents plans to the board for addressing a liquidity concern. In addition to evaluating the underlying confirming evidence provided by management, board members would want to consider the factors beyond management's control that could intensify the liquidity crisis and threaten the viability of the company. In evaluating management's estimates and assumptions, board members should explicitly question whether disconfirming evidence might be available or even consult with outside experts to understand different perspectives. Making the opposing case and seeking disconfirming evidence are techniques that are effective in mitigating the adverse effects of all the judgment tendencies that we've discussed, as are the consideration of different frames and the application of a sound judgment process.

With respect to mitigating the bias associated with anchoring, board members can purposefully introduce alternative anchors. Or, armed with the knowledge that management will provide an estimate that might act as an anchor, the board could seek an evaluation from an independent source who is not aware of management's estimate and will not be influenced by an anchor. When we believe that recent or available information may be biasing judgment, in addition to the common mitigation techniques, we might obtain objective data over a longer period of time.

Question Expert Opinions

To mitigate the effects of the overconfidence tendency, board members can take the time to think through and explicitly question experts' or advisers' estimates and underlying assumptions, even if, at first, they are inclined to agree with them. In addition, stress testing key assumptions can be a useful approach in understanding how susceptible estimates are to changes in individual or a combination of expectations. For example, in the ABC Manufacturing Inc. acquisition example, in addition to the questions previously noted under judgment framing, the board could specifically ask management to identify factors that could materially affect realization of the benefits expected from the acquisition, such as an unexpected downturn in the industry or general economy, or the introduction of technological innovation affecting the cost or quality of upstream inputs. In addition to understanding management's analysis, the board could specifically ask management to identify factors that have caused delays in the integration plans of other companies in similar situations and consider how delays would affect the estimated cost. Often, when potential causes of delays and related likelihoods are explicitly considered, decision makers' confidence in their initial assessment is tempered.

Exhibit 3 summarizes actions that boards can take to mitigate bias caused by the four common judgment tendencies described earlier in this thought paper.

Exhibit 3: Mitigating Biases Associated With Common Judgment Tendencies

Overconfidence Tendency

- Be aware
- Challenge expert's or adviser's estimates
  —Potential causes of unexpected outcomes
  —Estimates of unexpected outcomes
- Challenge extremely high or low estimates
- Challenge underlying assumptions

Confirmation Tendency

- Be aware
- Make the opposing case and consider alternative explanations
- Seek and consider disconfirming or conflicting information

Anchoring Tendency

- Be aware
- Make an independent judgment or estimate
- Consider relevant alternative anchors
- Solicit input from others

Availability Tendency

- Be aware
- Consider why something comes to mind (for example, vividness and/or recent events)
- Make the opposing case
- Consult with others
- Obtain and consider objective data

Encourage Opposing Points of View

Making judgments in groups has the potential to greatly improve judgment quality, but poorly structured group interaction can actually exacerbate the traps and biases previously discussed. Thus, group members should not only consider the mitigation strategies previously discussed but also take additional steps to protect and enhance the quality of group judgments. Groups facing difficult judgments can typically boost the quality of their judgments by having individual members carefully and conscientiously prepare before the meeting and then, in the meeting, by having each individual share his or her initial views openly without critique or qualification from others. After all ideas, issues, and concerns are on the table, the group can then openly, objectively, and respectfully discuss and consider the required judgment. Such an approach can increase the effort and participation of fellow board members, encourage a broader and more complete set of perspectives and alternatives, and enhance the quality of final decisions. In addition, leaders should not only tolerate but explicitly and genuinely encourage diversity of thoughts and opinions and open sharing and full consideration of ideas and perspectives, especially those that go against the flow of the group's predominant views.

Summary Observations

COSO recognizes the vital role of consistent, high-quality professional judgment as management and boards of directors execute and oversee an entity's ERM, internal control, and fraud deterrence efforts. Professional judgment is increasingly important as board members fulfill their responsibilities related to effective oversight of management's strategic planning, execution, fraud prevention, and risk management processes. Even seasoned board members can improve the consistency and soundness of their judgment by being aware of common judgment traps and by following a good judgment process. Such a process can help avoid threats to good judgment, including the biases related to common judgment tendencies or shortcuts. **Exhibit 4** outlines actions that boards can consider at each of the five steps of the judgment process presented in **exhibit 1**.

Many board-level judgments are made in group settings, and although group judgments are often better than individual judgment, group judgments can fall victim to narrow thinking; suppression of divergent views; and, consequently, shallow judgment processes. Some common tendencies that exhibit themselves in individual judgment and that can lead to bias in board-level decisions are the overconfidence tendency, the confirmation tendency, the anchoring tendency, and the availability tendency. These tendencies can affect boards as they oversee management's planning, fraud prevention, ERM, control, and execution activities.

Awareness of the common threats to good judgment is the key initial step in improving judgment. Board members can use the insights summarized in this thought paper to test and improve the consistency and quality of management's judgment processes and outcomes by rigorously challenging perspectives and assumptions via open and frank discussions. Such discussions can include consideration of judgment traps, simplifying tendencies, and alternative viewpoints. Board members who are aware of traps and tendencies that limit the quality of judgment can use these insights to challenge management's judgments and more effectively fulfill their oversight role.

Exhibit 4: Summary of Key Considerations in Applying the Steps of Good Judgment

Step 1. Define the Problem and Identify Fundamental Objectives

- Obtain a thorough understanding of fundamental aspects of the judgment or decision.
- Develop specific objectives and relevant measurable criteria.
- Consider different perspectives or frames; challenge the current frame and seek input from those who see the matter differently.
- Ask what and why questions to get to the root of the issue and the fundamental objectives.
- Be aware of common threats to judgment that may affect this step, including accepting management's frame, as well as biases and traps, such as the overconfidence tendency, the rush to solve, and judgment triggers.

Step 2. Consider Alternatives

- Invest appropriate time and effort to consider different alternatives; ask how questions.
- Remember that a judgment can be no better than the best alternative considered.
- Seek input from others with different perspectives and apply alternative frames.
- Weight the alternatives in terms of how well they meet the objectives.
- Be aware of common threats to judgment that may affect this step, including judgment biases and traps, such as the availability tendency and judgment triggers.

Step 3. Gather and Evaluate Information

- Gather the appropriate amount of relevant information.
- Consider the reliability, validity, certainty, and accuracy of the information.
- Identify and consider relevant technical literature and industry information.
- Assess the consequences associated with alternative approaches or options considered.
- Identify the alternative that best meets relevant objectives.
- Be aware of common threats to good judgment that may affect this step, including deadline pressure or a biased information search introduced by the overconfidence, confirmation, anchoring, or availability tendencies.

Step 4. Reach a Conclusion

- Before reaching a conclusion, ask whether a supportable process has been followed (that is, consider steps 1–3), and if not, return to the appropriate previous step(s).
- Be aware of common threats to judgment that may affect this step, including conflict avoidance tendencies.

Step 5. Articulate and Document Rationale

- Consider the judgment with the end in mind of articulating the rationale, reflect on the steps of good judgment, and consider whether a sound process was followed and whether judgment traps and biases influenced the conclusion.
- Assess whether the conclusion makes sense and is supported by the underlying information.

References and Additional Resources for Interested Readers

Bazerman, Max H., and Don A. Moore. *Judgment in Managerial Decision Making*. 7th ed. Hoboken, NJ: John Wiley & Sons, 2009.

Drucker, Peter F. *The Effective Executive.* Burlington, MA: Elsevier, 1967.

Hammond, John S., Ralph L. Keeney, and Howard Raiffa. *Smart Choices: A Practical Guide to Making Better Decisions*. Boston: Harvard Business School Press, 1999.

Russo, J. Edward, and Paul J. H. Schoemaker. *Winning Decisions: Getting it Right the First Time*. New York: Doubleday, 2002.

Schrand, Catherine M., and Sarah L. C. Zechman. "Executive Overconfidence and the Slippery Slope to Financial Misreporting." *Journal of Accounting and Economics*, forthcoming, 2012.

About COSO

Originally formed in 1985, COSO is a joint initiative of five private sector organizations and is dedicated to providing thought leadership through the development of frameworks and guidance on enterprise risk management (ERM), internal control, and fraud deterrence. COSO's supporting organizations are the Institute of Internal Auditors (IIA), the American Accounting Association (AAA), the American Institute of Certified Public Accountants (AICPA), Financial Executives International (FEI), and the Institute of Management Accountants (IMA).

American Accounting Association | AICPA | fei | ima The Association of Accountants and Financial Professionals in Business | IIA

About the Authors

KPMG LLP, the audit, tax, and advisory firm (www.kpmg.com/us), is the U.S. member firm of KPMG International Cooperative (KPMG International). KPMG International's member firms have 145,000 people, including more than 8,000 partners, in 152 countries.

Contributing authors from KPMG LLP include Sam Ranzilla, National Managing Partner, Audit Quality and Professional Practice; George Herrmann, National Office Partner; and Rob Chevalier, National Office Partner.

Steven M. Glover, CPA, Ph.D., and Douglas F. Prawitt, CPA, Ph.D., are both chaired professors of accounting at Brigham Young University. They are internationally respected scholars in the area of financial statement auditing. Much of their research centers on business professionals' judgment and decision making. Their research has been published in the premier journals in their field, and they have taught a popular executive MBA course on effective management judgment and decision making for many years. They have consulted extensively with a variety of accounting firms and other large and small enterprises.

COSO

Committee of Sponsoring Organizations
of the Treadway Commission

www.coso.org

ENHANCING BOARD OVERSIGHT

Avoiding Judgment Traps and Biases

COSO

Committee of Sponsoring Organizations of the Treadway Commission

www.coso.org