In this issue

Dealing with big data

02

Bits and bytes in the boardroom
The board’s role in addressing data and analytics
Directors need to understand the opportunities and challenges of big data and be prepared to ask the right questions to help their organizations develop an appropriate and strategic approach to capturing, analyzing and capitalizing on the voluminous and rapidly increasing available data.

07

The bar is raised: Anti-corruption compliance now requires big data analytics
Many companies are now incorporating new data analytics techniques to elevate their anti-bribery and corruption compliance programs.

09

Standard-setting update: convergence projects on revenue, leases and insurance
We review the latest developments from the Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB) and highlight relevant questions for the audit committee to consider.
Bits and bytes in the boardroom

The board’s role in addressing data and analytics

In just the last few years, the term “big data” has emerged from the obscure corners of the IT department to become a hot topic of mainstream discussions in boardrooms and companies around the world. For many organizations, big data is a critical element to keeping the company nimble, competitive and profitable. Board members need to understand the complexities and have a grasp of the issues surrounding big data and, equally important, be prepared to ask the right questions moving forward.

What exactly is big data and how are companies using it?

Big data is the enormous amount of electronic information being produced every minute through a variety of channels including bank transactions, financial and market reports, orders and invoicing, surveys, online activities and even weather or traffic reports. Individuals, manufacturers, service providers and suppliers and the machines they use all contribute to this growing mass of data. This data can be defined by three important attributes:

1. It consists of very large data sets (volume).
2. It is being produced at a tremendous speed by the growing digitization of society (velocity).
3. It contains data from many possible sources, including structured and unstructured (variety).

According to a report from the National Association of Corporate Directors, “the data that now flood the Internet every second is equivalent to the data stored on the entire Internet 20 years ago.”

This means that analytics on the scale we are now experiencing is profoundly new to the world of business.

A game changer for business and boards

The sheer volume and overwhelming variety of the data, coupled with the split-second velocity at which it becomes available, all present technological challenges related to securing, storing and tracking the data. But companies that can effectively capture, store and analyze the information in a timely and efficient manner stand to uncover important and valuable relationships between seemingly unrelated, large and complex data sources. Analyzing data to produce actionable information is a key challenge and opportunity for companies. Properly utilizing this information will be a differentiator for forward-leaning companies.

For example, by analyzing select customer data, a telecommunications company can predict earlier and more accurately than ever before when a customer is considering dropping a service or switching to a competitor. This advanced warning allows the company time to proactively engage with these individuals and retain them as customers and forecast consumer trends before they become mainstream.
Meaningful operational change comes from the top. Board members and C-suite executives need to embrace this change, identify the best talent and empower other senior executives and the rest of the organization to adopt the best systems, technologies and analytics for their businesses.

Board members play an important role in ensuring that the CEO and the management team are taking the right steps to develop the most sensible and strategic approach for their company. Board members do not need to be big data experts or fully understand all of the nuances. They do need to ask the right questions based on some widely recognized best practices for dealing with the challenges big data presents, and have the right people in place to respond. Topics to consider as a board or to discuss in more detail with management might include:

**Decide what you want to achieve with the data.** In the traditional approach to data analytics, too many organizations look at the data first and allow the data to drive the decision-making process. Common questions include: “I have all of this data – what can I do with it? How do I collect and analyze the data to make better decisions about the business?”

Rather than starting with the data, companies should begin by hypothesizing about the decisions they need to reach and work in reverse, using data and analytics to prove or disprove the hypothesis. In this way, a company will collect and analyze only the data that has direct bearing on a particular decision. With all of these discussion points it is important to include representation from IT in the process; collaboration and insights gleaned from multiple vantage points will help determine the focus.

**Determine what is relevant.** There is simply too much data (content and volume) out there to analyze it all. And most of the data is not relevant to business decisions companies need to make.

Companies should focus on smaller pieces of data that shed light on the problem at hand or the ones they anticipate. For example, it is best to determine an appropriate response to a service issue based on a customer’s profile and his or her anticipated reaction rather than a “one-size-fits-all” approach.

**Focus on what will drive value.** In addition to the volume, variety and velocity of big data, many say the “fourth V” of big data is value. Companies must sort through data sets to determine which ones are most likely to drive value. Again, this assessment involves assumptions and hypotheses that sometimes will be proven wrong. But it is better to start collecting and analyzing data that is most likely to drive value rather than a “no-stone-left-unturned” approach in hopes of finding additional value drivers.
Big data, big costs

While companies can gain a competitive advantage if they get the right information to the right people in the right format at the right time, there are potential pitfalls, not the least of which is spending too much time and money analyzing too much data for too little return.

Fortunately, there are tools and technologies that can help make better sense of the data and provide a strong foundation for using analytics to make better business decisions and deliver better value. It is important to understand what is available and appropriate for the organization and its goals, and invest in the appropriate resources to effectively utilize data.

CIOs are being asked to store more data, yet control the costs of storage and help derive greater business value from the information they store. A solution to address this challenge is to increase resources – both human and technical.

Consolidating the analysis and presentation format of big data is crucial. Many companies develop multiple business intelligence dashboards, sometimes to satisfy a handful of executives.

These dashboards often use charts and other graphics to visually illustrate how certain company divisions are performing against key objectives. However, companies will get a greater return on their investment in data analytics if they consolidate the number of these dashboards being used and develop just one.

This single dashboard can still use charts and graphics to track progress, but the objectives that are tracked and analyzed are limited and relate to the entire organization.

Managing the costs associated with big data will continue to be a significant issue for most companies. As companies increasingly look at the world in terms of bits and bytes, it is important to remember that sometimes it is best to stand back and look at the big picture before diving into data analysis. With any new method or process, there is a learning curve and the need to understand the full scope.

The board’s role

Boards cannot be involved in the day-to-day activities of managing big data and big data costs. But in discussions with the CEO and other C-level executives, board members should insist on clarity of vision and collaboration across all disciplines to maximize the return on any investment in big data. First and foremost, board members should gain a better understanding of how the company is using big data and how the data and analytics can drive the business. Boards also need to ask management about the resources being deployed to capitalize on big data and whether
Board members should have an understanding of how the company is using big data and how the data and analytics can drive the business.

the company has the right talent to effectively develop a quality big data management program.

Board members should also focus on the new risks presented by big data. With information moving at the speed of light, it is important to remember that big data is a two-way street and companies should have specific policies about how and by what means they communicate with their stakeholders and the world at large. In today’s environment, one false step can be instantaneously communicated around the globe.

Moving forward in a changing world

Data analytics must be viewed as a vehicle for transforming organizational performance – one that can add value in repeating increments over time as the world constantly changes, often with little warning. Capitalizing on the value the data can deliver can be challenging for organizations calling for a complete shift in organizational thinking and leadership. Board members are ideally suited to be the champions of this perspective.

Questions for the board or audit committee to consider

- Does the company know which data is relevant and can help drive value? What is the plan for collecting and analyzing this data?
- What is the company’s strategy for capturing the appropriate data and what is the methodology for identifying meaningful data?
- What human, technical and other resources are being devoted to the effort? What additional resources might be appropriate?
- How much is the organization spending on big data initiatives and how will the success of those expenditures be measured?
- How is the organization preparing to manage future costs related to big data?
- What are the expected outcomes and how will such outcomes drive value for the organization?

Bits and bytes in the boardroom

Integrating advanced techniques as part of a robust anti-corruption program or investigation enables today’s chief compliance officers, general counsels and chief audit executives to be more proactive in their queries.
In today’s regulatory environment, US companies doing business globally are under greater pressure to improve their anti-bribery and corruption compliance programs to prevent and detect potentially improper payments that expose the company to risk under the Foreign Corrupt Practices Act (FCPA). Anti-corruption compliance continues to be a top priority for audit committees, boards and senior management at many multinational companies.

It is clear from recent regulatory enforcement actions and settlement agreements that the bar has been raised from the regulators’ perspective. Simply having an anti-corruption compliance program is not sufficient. The keys to compliance are effective governance, controls and monitoring activities, among other components.

However, the controls designed to effectively detect bribery and corruption are fundamentally different from the traditional Sarbanes-Oxley financial type controls. Anti-bribery and corruption analytics test of controls incorporate big data concepts that integrate multiple data sources: third-party watch lists; transactional data; text mining; and even social media and email to prioritize and isolate areas of risk or rogue activity.

Integrating these techniques as part of a robust anti-corruption program or investigation enables today’s chief compliance officers, general counsels and chief audit executives to be more proactive in their queries. They can use advanced tools and detection methods to ask more poignant and specific questions of their data in an effort to identify concerns or flush out deeper issues in a more timely way. Beyond traditional rules-based tests that may generate large amounts of false positive results or miss important information, executives can now investigate regions or business units where increased risks are surfacing based on multiple attributes in the data—not just from one source or an isolated test. This focused analysis yields significantly higher-quality results.

At the same time, executives can reduce overall internal audit or compliance field work costs by leveraging these anti-corruption analytics as a component of the company’s risk assessment process to determine which locations to audit, rather than running analytics after the fact.

New questions, new answers

For example, internal audit and compliance teams can now utilize big data to identify possible areas for concern by making inquiries such as:

- Show high-risk vendors, with multiple fraud risk indicators in accounts payable
- Match identified vendors to international sanctions databases and adverse media databases
- Show local office employee travel and entertainment expenses
It will be more common for the audit committee to ask the chief audit executive or chief compliance officer, “What are we doing around FCPA and global corruption?”

• Search email communications where sensitive words are mentioned.

Beyond a simple duplicative payment or currency analysis, overlaying vendor activity across these multiple data sources helps the analyst apply a “risk score” to vast amounts of data in an effort to focus on those that meet multiple risk criteria.

Further, when combined with new innovations in text mining, data visualization and statistical analysis, internal auditors and compliance professionals can better leverage their knowledge of the business and industry to spot irregular patterns or trends – rather than simply looking at rows and columns in a spreadsheet.

As anti-corruption compliance continues to gain focus, it will be more common for the audit committee to ask the chief audit executive or chief compliance officer, “What are we doing around FCPA and global corruption?” Moving forward, it may not be enough to hear that the company has conducted selected training, repeated last year’s tests and reviewed anti-fraud policies – especially when the company is in a highly regulated industry or expanding in emerging markets.

A more adequate answer might be that the organization has begun a more comprehensive anti-corruption program that addresses those tone-at-the-top topics but that it is taking into account tangible analytics and reporting metrics to the board that focus on corruption risk areas and targeted tests of transactions that look for potentially improper payments or other illegal acts.

Questions for the audit committee to consider

• Is the company currently conducting business in emerging markets or high-growth economies, particularly China, India, Africa, South America and Eastern European countries? If so, what tactics are being used to oversee anti-corruption compliance in these markets?

• Beyond compliance policies, training and education, what is the internal audit or compliance department doing to test the effectiveness of the controls in place? Does the board receive periodic updates from internal audit or the compliance department on the results of these tests?

• Has management communicated to the board if the monitoring activities conducted are relying on simple rules-based tests derived from traditional internal audit procedures, or do they incorporate multiple data sources, data visualization, text mining and targeted anti-corruption/FCPA-specific tests?
Revenue recognition standard

The Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB) (collectively, the Boards) addressed several outstanding issues on their joint revenue recognition standard that were identified in the drafting of a final standard. They plan to issue this final standard in the first quarter of 2014.

In October, the Boards reached tentative decisions on the proposed constraint on estimates of variable consideration and how assessments of a customer’s credit risk should be reflected in the accounting for contracts with customers. The Boards also decided to have their staffs draft clarifications for determining when revenue from a license of intellectual property would be recognized at a point in time and when license revenue would be recognized over time.

The new guidance will be effective in 2017 for public companies. For example, a public company with a calendar year-end would be required to apply the standard (including the new disclosure requirements) in the first quarter ended 31 March 2017. The FASB decided that nonpublic entities could apply the new standard one year later.

The Boards tentatively decided to allow either full retrospective application (i.e., all periods presented would be restated to follow the new guidance) or a modified retrospective approach for both public and nonpublic companies. Under the modified approach, entities would:

- Present comparative periods under today’s guidance
- Apply the standard to new and existing contracts as of the effective date
- Recognize a cumulative catch-up adjustment to the opening balance of retained earnings at the effective date for existing contracts that still require performance by the entity
- Disclose all line items in the year of adoption as if they were prepared under today’s revenue guidance

The new standard may significantly increase the volume of required disclosures that companies applying US GAAP will have to include in both their annual and interim financial statements. During the transition period, entities will need to determine that their systems can properly capture the data needed to comply with these requirements. In addition, companies will have to evaluate their revenue arrangements to determine any significant differences in the timing of revenue recognition. Even if there are not significant differences to reported revenue, companies will need to understand the new judgments and estimates that may be required, as well as any related changes in systems or controls.

Leases on the balance sheet

The Boards plan to redeliberate many key aspects of their May 2013 exposure draft in which they proposed a right-of-use model for leases that would require lessees to recognize most leases on their
balance sheets. The plan was developed based on feedback the Boards received in more than 600 comment letters and in roundtable discussions. While constituents generally support the goal of reporting leases on the balance sheet, many of them expressed concerns about the cost and complexity of the proposal and questioned whether such presentation would significantly improve the decision-useful information available to investors.

**Effects of the FASB insurance proposal**

The FASB has proposed a new accounting model that would apply to all contracts that meet the definition of an insurance contract, not just those contracts issued by insurance entities. Entities that issue certain financial guarantees, performance bonds, warranties and indemnities would have to follow the guidance in accounting for those contracts. Many noninsurance companies that issue contracts that would fall into the proposed scope said in comment letters that they don’t believe the guidance should apply to them. In their view, requiring them to follow the guidance would be costly, would make their accounting more complex and would confuse investors.

The proposal is aimed at giving users of the financial statements better information about an entity’s insurance liabilities and promoting comparability by treating arrangements with attributes, risk transfer and cash flows similar to those of insurance contracts as insurance contracts. Entities would have to consider various outcomes to measure the expected cash flows for obligations resulting from contracts in the scope of the proposal on a discounted basis for each reporting period. Revenue would be recognized as coverage is provided. Claims expense would be recognized when incurred.

The FASB and the IASB issued separate insurance proposals after deliberating jointly and disagreeing on certain key issues.

**Questions for the audit committee to consider**

- Have management and the audit committee discussed which transition alternative the company will select with respect to the new revenue recognition standard and why?
- Does the company have all of the lease data necessary to comply with the Boards’ proposal?
- Has the company performed a preliminary assessment of the effects of these proposals on its financial statements, processes and internal controls and presented the assessment to the audit committee?
- Has management determined what planned or ongoing IT system initiatives could be affected by these accounting changes?
Many other constituents also expressed various concerns about cost, complexity and whether the proposal represents an improvement from today’s accounting.
Additional resources

**Effectiveness and accountability in the boardroom**

Kellogg School of Management, Corporate Governance Program
May 18–21, 2014

Even senior executives may not have all of the skills required of a board member. That’s why EY and the Kellogg School of Management invite you to attend an intensive program for current and future board members. Guided by top faculty from the Kellogg School of Management, the program explores the boardroom dynamics, the director’s important role and moving from compliance to long-term strategy.

To learn more, visit [www.kellogg.northwestern.edu/execed/programs/director](http://www.kellogg.northwestern.edu/execed/programs/director).

**AccountingLink: your resource for accounting and financial reporting developments**

EY’s AccountingLink highlights our latest technical guidance and thought leadership on key issues. You can see the latest proposed and final guidance from standard setters, as well as our analysis of how this guidance might affect your company.

Please visit [www.ey.com/us/accountinglink](http://www.ey.com/us/accountinglink) to learn more and sign up for email alerts. First-time users will be prompted to register.

If you have feedback or ideas for future topics, please contact Sara Brandfon at [sara.brandfon@ey.com](mailto:sara.brandfon@ey.com).

This publication and other EY audit committee resources are available online at [www.ey.com/auditcommittee](http://www.ey.com/auditcommittee).