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Providing senior management, boards of directors, and audit committees with concise information on governance-related topics.

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Boards Look to Harness Blockchain Disruption

By Matt Kelly

Though blockchain technology holds enormous promise to transform how businesses operate, it also has the potential to cause significant issues for boards and senior executives alike.

After all, nobody really knows what a transformational technology will do until that transformation is already well underway. Recall the internet in 1994, or social media in 2005. Everyone knew that each technology would have a huge effect somehow – just not precisely how.

Blockchain is in a similar place today. At its fullest potential, it could (emphasis on could) bring perfect, immutable transparency to all sorts of transactions. Walmart is experimenting with blockchain so it can cut the time to trace the source of produce on its shelves from seven days to 2.2 seconds. Maersk wants blockchain to transform the shipping industry, so importers, exporters, customs agencies, and others can automate the process of moving goods from one port to another. HSBC said in January that the bank had settled \$250 billion in forex trades in 2018 via blockchain.

Those are just three examples already underway. Ultimately, blockchain could transform health care (better tracking of opioid medications), real estate (no need for title insurance), and even auditing itself: Who needs sampling when all transactions are available all the time?



In other words, blockchain has the potential to be a disruptive technology – one that changes how whole industries work.

The truth, however, is that disruptive technologies leave corporate boards uneasy. In Protiviti's 2019 survey of enterprise risks, the top concern among board directors and executives was the inability to embrace innovation and new technology. Yet that is exactly what blockchain could – again, emphasis on could – bring about, for all sorts of industries in all sorts of ways.

“Technology is massively disrupting corporate America,” says Christa Steele, a former bank CEO and now board director very much in the pro-blockchain camp. “So we have to come up with new ways to mitigate that risk, and educate ourselves in the boardroom to ask the right questions.”

So what questions might those be? Boards have a legal and fiduciary responsibility to manage risks. For blockchain, that means evaluating how it improves transparency and reliability in operations, and whether the potential added benefit exceeds the benefit of what the company is already doing.



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Questions to Ask Management

The first question boards should ask management is **how much of their attention they should devote to blockchain, and why**. That puts the onus on management to decide what sort of threat or opportunity blockchain might pose.

For example, any business that is a supplier to giant firms embracing blockchain (see Walmart and Maersk, above) will need to understand when and how it might be forced along for the ride. What new technology will the business need? How will blockchain integrate with the company's legacy technologies? Where will the company find the right talent to conduct that integration?

Blockchain could be an opportunity in that circumstance; any supplier prepared to work with a customer's blockchain ecosystem will have an advantage over rivals that aren't. Then again, it could upend carefully estimated budgets for manpower and technology strategy.

Boards should also ask **where blockchain fits relative to other emerging technologies catching the corporate world's fancy right now**. Yes, blockchain might be the bigger transformation over the long haul – but other new technologies can't be ignored either. Some might lead to better competitive advantage more quickly. For example, if an organization wants to revolutionize its supply chain management over the next five years, sure, blockchain might do the trick. On the other hand, an investment in machine learning might accelerate its business analytics and improve supply chain management within six months. Revolutionize later, or improve efficiency now – which path makes the most sense?

Management should be able to articulate that technology strategy: "Which investments should be made in various technologies (blockchain or otherwise)?" and "How should those investments enhance the organization's ability to create value for its stakeholders?"



Some of that enhancement might manifest as the business improving what it already does, such as lowering transaction costs or accelerating product development. Or technology might allow the business to create value in new ways, as through the development of new products, new services, new customers, or new business models with better profit margins.

Fundamentally, boards want to know: **How will the company harness blockchain to disrupt other competitors, and how will it avoid being disrupted?**

Implicit in all this, however, is an awkward assumption – that boards know enough about blockchain already so that they can evaluate management’s answers competently. This may be a big ask for some board directors.

“Most board members still don’t even understand blockchain,” Steele says. So they need to learn, quickly, the difference between cryptocurrency and blockchain; between public and private blockchains; between permissioned and permissionless blockchain. Boards may even need to consider creating some sort of technology risk committee, or bringing aboard new directors with a strong understanding of blockchain and related emerging tech. (Let’s remember here that chief audit executives already know this concept, and that they should be aware of emerging risks and prepared to educate the board on those issues. Blockchain is one of them.)

Or else what? Or else the board “will be heavily reliant on management to provide them with information, rather than asking probing questions,” Steele warns.

Questions to Ask Audit

If the audit function serves as the eyes and ears of the audit committee, helping the board to understand risk and how well risk management controls are (or are not) working, then one question rises to the top: **Does internal audit have the resources it needs to assess and monitor blockchain risk?**

Those resources might take the form of additional staff, outside specialists on a consulting contract, closer cooperation with the IT or cybersecurity team, or even just more budget to send audit staff to a blockchain seminar. Regardless, the board should understand whether

internal audit already has the skill to assess blockchain thoughtfully – or, if not, a plan to get it.

“It gets down to internal auditors really understanding the different parts of blockchain they should focus on, to mitigate excessive risk or improve the overall process,” says Dave Uhryniak, blockchain competency leader at Crowe LLP. “From there, the auditor can begin to review it, and really understand if it’s working as intended.”

Resources on Blockchain

IBM is devoting considerable resources to develop blockchain technology, and has created a resources page for curious executives and technologists.

Porter’s Five Forces is a risk analysis tool that can help executives ponder where, and how, competitive threats might emerge. For a change as transformational as blockchain, Porter’s Five Forces is a great vehicle to help boards and CAEs frame the issue.

Blockchain decision trees can help a boardroom sharpen its focus. The decision tree offered by BlockExplorer.com includes a flowchart to walk people through the process.

Board directors and audit executives can also consult with **any number of audit or advisory firms** (all of the Big 4 have blockchain specialists, for example).

Boards should also ask the audit team **at least to catalog, and ideally to assess, what the company’s blockchain activity already is.**

For example, is anyone in the R&D function already tinkering with blockchain just to see how it works? Are any technically minded employees in operating units building blockchain projects, or working with industry consortiums on possible standards? Such activities might not normally reach the board’s attention; audit teams could find them and present them as part of a blockchain risk analysis.

Speaking of risk analysis, boards should also ask: **Is the organization moving with proper speed on blockchain?**

This harkens back to the earlier point that management should discuss how blockchain fits into the company’s broader technology strategy. An audit function that

understands blockchain, and what the company is already doing with blockchain, can help the board understand the strategic implications of what management wants to do. Is the company moving too quickly? Too slowly? Is management too focused on seizing opportunity, rather than preventing threats?

For the record, the famed Gartner Hype Cycle for Emerging Technologies places blockchain past the “peak of inflated expectations” (which was 2016), moving into the “trough of disillusionment.” Will it ever glide back upward to the plateau of productivity? That’s hard to say. McKinsey, for example, just published an article questioning whether blockchain might ever grow beyond a niche technology in the payments industry. SWIFT is working on one rival technology, and at least \$7 billion in fintech investments last year went to payments. That makes for a lot of rival tech.

Uhryniak welcomes the receding hype, so more serious applications can emerge. “Early adopters are positioning themselves to reap the benefits of superior competitive position – whatever that might be – that results from adopting blockchain,” he says.

Every business will need to decide for itself what that competitive advantage might be, or whether one exists at all. Steele, however, does voice one indisputable point: “You’ll be left in the dust if you don’t start thinking about this now.”



Quick Poll Question

How involved is your organization in the use of blockchain technology?

- Currently using blockchain
- Running a test program to determine benefits
- Discussing potential business applications and skills needed
- Not involved

Visit www.theiia.org/toner to answer the question and learn how others are responding.



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