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MANY ACADEMICS JUMPED HEADFIRST INTO THE ECOMMERCE WORLD. Maybe it was the convenience of having high-speed access lines and the support of our universities for excitingly innovative IT programs, or maybe our commitment was driven by our intellectual curiosity. We embraced ecommerce and assumed roles as researchers, users, and even content providers. But in the real world, ecommerce isn't always accepted with rejoicing. Many players in the corporate world are resistant to change. This month's engaging article by Ernie Jordan poses the question: "Are corporate board members ready for ecommerce?" Board directors traditionally take on the perspective of risk management or risk governance. Based on observations and extensive interviews, he concludes that board members do not feel it is their responsibility to offer an ecommerce strategic plan. Rather, they expect management to set the agenda on ecommerce strategies.

Are Corporate Board Members Ready for e-Commerce?

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is a professor of management at Macquarie Graduate School of Management, Macquarie University. Starting from a cadetship in industrial mathematics with Lucas Aerospace (then Lucas GTE), his path

led quickly to commercial data processing and a period as a lecturer in statistics. Dr. Jordan then gained some 10 years experience in the development of information systems in commerce and industry before entering the academic world. He has specialised in the area of strategic application of information technology, which is currently mostly concerned with electronic commerce. For the last year he has been exclusively teaching electronic commerce for MBA students and students of the new Master of Electronic Commerce Management degree. Over the last three years, Dr. Jordan has carried out research that examines the reluctance of organisations in Australia to develop formal IT disaster recovery plans. His recent study report "Managing for failure" has been widely received by industry and practitioners. This research is now being expanded to include the risks that organisations face in implementing electronic commerce, in particular the challenge of making these technological, strategic and operational risks understandable to board members. Before coming to Macquarie he taught in Hong Kong for eight years and developed an interest in the cultural differences in technology adoption and use.

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Boards of directors are under increasing pressure to be fully responsible for the risks undertaken by their organisations—regulators around the world are increasing their expectations. Electronic commerce applications, especially business-to-business, generate risk across a broad spectrum, but are board members aware? Is it business-as-usual or alien-invasion? We interviewed experienced board members to try to understand their approach to the risk governance of electronic commerce projects.

Corporate regulators demand that boards be informed about the organisations that they control, and exercise due diligence in minimising risk. Today, however, the risks associated with growing electronic commerce are complex and interdependent. Whose job is it to work out the risks? Technologists? Managers? Board members? We need to build a bridge of understanding between the electronic commerce system developers and the boards governing their organisations.

Electronic commerce is having a significant impact on the world economy in terms of investments, retail activity, and business-to-business efficiencies. Banks offer on-line banking, stockbroking, and loan applications. Retailers promote on-line shopping, often linked to loyalty programs, electronic mail, and personalised

shopping. Computer hardware vendors deliver customer sales and support globally through their websites. Electronic communities between business organisations have redefined the relationships between suppliers and purchasers in many industries and product areas. Business-to-business electronic commerce is growing rapidly, with half a million organisations forecast to be involved by 2005 (Gartner, 2000).

Globalisation means that, simultaneously with the increased opportunity for one nation's organisations to sell their goods and services to a world-wide market, its local markets are themselves opened up to competition from around the world. Well-managed electronic commerce systems will be a cornerstone of significant economic development in every developed economy.

Complexity

The appearance of electronic commerce applications within the information technology portfolio of an organisation will typically increase the overall level of complexity. The new system has its dedicated hardware and software, but it must also be integrated into existing back-office or legacy systems, as well as working with industry alliance partners, customers and suppliers. Transaction volumes (such as in

online stockbroking) have the potential to increase significantly as new behaviours (e.g. day trading) emerge in the marketplace. While returning flexibility to users and creating new profit streams for organisations, such growth also represents real shifts in the risk experienced by those charged with overseeing corporations.

Risk in e-commerce is only partially understood. The inherent insecurity of the Internet, through its openness, is one example of such risk. Multi-level architectures and inter-related projects are common, and configuration management is not!

Boards of publicly listed companies and public corporations are expected to exert their duty of care to monitor the risks that the organisation is taking. Yet the risks are increasing—a double-edged sword.

Security is the persistent challenge impeding electronic commerce system proliferation. Our overall aim is to build upon and enhance existing theories of communicating risk to corporate boards faced with this challenge.

Approaches to Risk

There have been many approaches to risk management within organisations, coming from such perspectives as audit and control, financial management, insurance, operational continuity, crisis and emergency management, and from the professional practice of 'risk managers'. An even wider view (Pricewaterhouse Coopers, 1999) included entrepreneurial risk within a framework for developing a risk map for an organisation.

Standards represent another approach. In 1995 Standards Australia (in cooperation with Standards New Zealand) issued a risk management standard, now revised as Australian Standard AS4360: 1999, that describes a generic approach to risk management. This standard is being considered for adoption as a world standard by the International Organization for Standardization.

Computerised systems have been long been the subject of standards, which has been widely accepted in the IT industry. Such standards are not prescriptive; rather, they present good practices that are to be encouraged to enhance information security. They do not include performance measures or summative indicators.

There has been substantial professional practice in the area of risk management, one that has not been accompanied by rigorous theories. This divergent status of practice and theory is also to be found in the board of directors' formal role in monitoring risk within the organisation, although this is a much newer concern.

Investigation

We studied experienced board members of organisations from Australia, examining their perceptions of board and management actions concerning electronic commerce projects. 'Experienced' refers to the duration of service and number of companies, not to electronic commerce or IT in general.

Key questions that we asked were:

- How much do you know about electronic commerce? What do you see as its risks and rewards? Threats and opportunities?
- Have you had any involvement in electronic commerce projects? As a board member / otherwise? What were your experiences?
- How are electronic commerce ventures reviewed in your boards? Do the boards have risk assessment routines for these ventures?

An initial target of eight such directors was extended as the range of issues raised in the early interviews was wider than had been anticipated. Eventually thirteen directors took part in the study with collective representation on more than sixty boards.

Main Observations

Board members gave higher regard to shareholders above other stakeholders and were more concerned about threats than the other SWOT components. In many cases it was pointed out that some e-commerce opportunities were also threats, timing being critical.

Board members also emphasised their role to review and approve management decisions, rather than initiating activities. They saw their role towards e-commerce projects generally was to give management proposals the strongest review and criticism.

Executive board members, such as CEOs or managing directors, perceived themselves as the channel for the flow of information, issues, priorities and under-

standing between the board and other management.

However, the evaluation of risks was frequently mentioned as an item for which board members were responsible. Appropriate corporate governance in Australia requires board members to be aware of all risks that the business is undertaking. This is clearly interpreted to require their assessment of risk. On the other hand, board members uniformly did not expect to participate in the processes of overcoming or minimising risks.

The framework adopted by Pricewaterhouse Coopers (1999) is particularly strong in referring to partner risk, entrepreneurial risk and corporate governance issues of risk. Risk of disintermediation is one risk that was frequently cited.

To gather the rich flavour of the views expressed, here are some of their remarks.

The Nature of the Risk

Some of the respondents understood the general nature of the risk of e-commerce:

The risks included "operational risk...credit, legal, compliance [issues]."

"I think that boards are increasingly looking at how do we grow this business, there are entrepreneurial risks that are taken."

There is a risk of being pre-empted by competitors: "If your whole game is threatened, if you can argue that you will be out of the game...."

Others did not...

"I don't think that any [directors] see [e-commerce] as risk...."

And there were doubts about the long-term issues raised by e-commerce:

"We are being confronted by things we don't understand, this technical issue, what are the hardware and software possibilities and what are the implications of poorly-understood hardware and software developments over the next five to ten years, what are the possibilities that they bring and what [do] the economics of them look like."

The Board Risk Management processes for e-commerce

The remarks on the risk management processes that would be used to exam-

ine e-commerce proposals put to the Board were less than reassuring. There were several opinions:

It's a management task...

"They [directors] leave it [the assessment of the risks] to management."

"There is always a fine line between board responsibilities and management responsibilities, but I think that it [the risk management processes] is primarily a management responsibility. What the board has to ensure is that if there is a process, that it works."

Speaking of e-commerce risk: "It's a management decision, management would report on initiatives like that outlining the advantages and the risks...."

Or a consultant's task...

"Most [directors] are very content to delegate it [risk] to management....[or] to consultants...[there is] a tendency to accept the recommendations of management which tend to echo the recommendations of the consultants."

"You rely tremendously on experts in e-commerce."

Or the task of the audit committee...

"The board would rely on the audit committee for monitoring [of risk]."

Or not!...

"Any director who says "e-commerce, that's the audit committee," that's a load of rubbish. The audit committee's got no more expertise...you've got to trust management."

There are doubts about the degree of risk testing done by the board:

"I feel that around the board table, you have got certain age groups, the older the board the larger the trend is really there not to be any e-commerce understanding and while it's seen as a shift in direction..., the average board... do(es)n't like change."

"Whatever comes back to the board tends to be rubber stamped if it seems sensible, but there is no thorough analytical review in the way you would have in other areas where the directors know what is going on. It's treated as a sort of black box."

There are some directors who can see problems with risk management for e-commerce:

"I don't think that our processes [for evaluation of an e-commerce project] are substantially different to the process we use to evaluate new business opportunities and capex proposals...."

"Directors use the same process for all risks."

"For businesses...[who are] going to embark on an e-commerce strategy, one of the bigger risks for them is to really understand...how do they make those decisions?"

"I don't think that risk management is taken [by boards] to a very high level in Australia today."

"On my boards, the checks and balances have been put in, but more in a global sense than in a specific sense."

There was no single strand of opinion on how the risks of new and strategically important ventures such as e-commerce were to be managed. The opinion generally was that the board would rely on management or the audit committee to evaluate the risks. There seemed to be no feeling that the board owned the risk management process.

The strategy-making process

It is clear from the interviews that it is not generally the view of directors that it is a board responsibility to produce the strategic plan. It was generally their view that the board sets the broad direction of the organisation. Some of the comments, however, suggested that it was management that set the agenda and that the board reviewed their actions.

"Boards should do nothing more than give the big picture...Management should fill in the blanks, go back and do the detail and plans and the board should question them and confirm the plans...." "The board should set the big picture, it should not be a micro-management, strategy setter...that is probably the most important role the management has, the question of making sure the focus of the company is in the right place."

"A board's not there to be a policeman, a board's there to be a coach, to be...an encourager and look at overall policy and strategy...." "I'm tending to see a specific driven road being put in place by the management team."

"The directors are conscious that they are reliant on management [for e-commerce strategy]."

"I really think that management should have enough expertise and capability...to really understand better than anyone else its own market and its customers and that it should...be presenting to the board...significant [new strategies]. I think it's the board's responsibility to... ask appropriate questions of management [to] ensure that management has really thought through the bigger picture...."

"management submit [strategic] plans to the board before implementation."

"[Strategy is] done by management within the delegated authority."

"The [e-commerce] projects we have done are at a level that the management had prerogative to move on anyway...."



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Sciences, Information Resources Management Journal, and Information Systems Journal. He has just edited a book entitled Emerging Information Technologies: Improving Decisions, Cooperation, and Infrastructure for Sage Publications and has coauthored books on Systems Analysis and Design and Needs Assessment and Project Management. Dr. Kendall is a founder of ICIS, has been a vice president of the Decision Sciences Institute, and is past chair of IFIP WG 8.2. His research focuses on studying Web push and pull technologies and developing new tools for systems analysis and design. He has published over 60 articles in journals such as Decision Sciences, MIS Quarterly, Management Science, and Operations Research.

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Only one director, a CEO of a large organisation, said that he had been instrumental in driving a strategy on e-commerce. However, he is the only executive director on the board, and in his strategy development work he was acting as the most senior member of the management team. He noted that the rest of the board was relying on him to "make it happen." He said that he went to his direct reports, the CEOs of the operating divisions and told them that e-commerce was "something that you must consider as part of the overall plan." With these CEOs, he put together a management team to devise the strategy, or in his words "resourced people from the various businesses, (set up a group) of people who were really looking at it." These submissions were made to the main board which "...evaluate(s) the company's overall strategic plan."

Conclusion

The established literature and professional practice is clearly aimed at 'risk management', yet a 'risk governance' perspective is taken by boards of directors. A significant proportion of boards is dealing with electronic commerce risks in new ways, ways that have not been used before. The responsibility of board members, to become informed of the relevant issues in electronic commerce, is an issue raised by many of the subjects.

Thus, the 'monitor and review' component of the Australian standard is one that boards see as important for them, but **whether** they can monitor and review electronic commerce strategies and projects is seriously questioned. ■

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ANNOUNCEMENTS, from page 21

Business Process Management Journal announces a special issue on "Knowledge Management and Organizations: Process, System, and Strategy." Submission deadline is November 30, 2001. Guest Editors for the Special Issue: Young-Gul Kim, KAIST Graduate School of Management, Domino2@unitel.co.kr; Hee-Seok Lee, KAIST Graduate School of Management, Arizona9@unitel.co.kr; and Ingoo Han, KAIST Graduate School of Management, Ighan@kgs.m.kaist.ac.kr. www.emeraldinsight.com/bpmj.htm (for style details)

Greener Management International announces a special issue on "Greening Supply Chain Management." Submission deadline is November 30, 2001. Contact Guest Editor Joseph Sarkis, Clark University, jsarkis@clarku.edu. <http://www.greenleaf-publishing.com> (click on "Notes to Contributors" for style details)

Information Systems Journal announces a special issue on "E-commerce Enabled Manufacturing Operations: Issues and Analysis." Submission deadline is January 31, 2002. Guest Editors: A. Gunasekaran, University of Massachusetts, agunasekaran@umassd.edu; Joseph Sarkis, Clark University, jsarkis@clarku.edu; R. P. Sundarraj, Clark University, rsundarraj@clarku.edu; Janice M. Burn, Edith Cowan University, Australia, j.burn@ecu.edu.au.

Advances in Business Marketing and Purchasing (Volume 12), published by JAI Press, an imprint of Elsevier Science, seeks manuscripts for an upcoming issue on "Marketing, Operations, and Finance: Interdisciplinary Contributions to Theory, Research, and Practice." Submission deadline is May 28, 2002. Contact Co-editors Kenneth N. Thompson, University of North Texas, thompson@cobaf.coba.unt.edu; John E. Hogan, Boston College, john.hogan@bc.edu; Arch G. Woodside, Boston College, woodsiar@bc.edu). www.elsevier.nl/locate/jbusres (for style details)

The International Journal of Business & Economics (IJBE) is intended to be an outlet for original, high-quality theoretical and empirical research on a broad range of topics in business management. IJBE is currently inviting papers in all areas of business. Contact Editor-in-chief Atul Gupta, Lynchburg College, Gupta@Lynchburg.Edu. www.facultyforum.com/ijbe

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