2011

A Green Board as a Climate-Change Imperative: Appointing a Climate-Change Expert to the Audit Committee

Porcher L. Taylor III
University of Richmond, ptaylor@richmond.edu

Harris L. Kay

Recommended Citation
Taylor, Porcher L., III, and Harris L. Kay. "A Green Board as a Climate-Change Imperative: Appointing a Climate-Change Expert to the Audit Committee." *University of Baltimore Journal of Environmental Law* 18, no. 2 (2011): 215-61.

A GREEN BOARD AS A CLIMATE-CHANGE IMPERATIVE: APPOINTING A CLIMATE-CHANGE EXPERT TO THE AUDIT COMMITTEE

Porcher L. Taylor, III
Harris L. Kay*

I. Introduction

In a nation still struggling to arrive at a post-recession relief destination, the American corporate board faces a formidable array of strategic decision-making and risk-management challenges.[1] These challenges run the gamut from executive pay reduction, to accounting reform. Paradoxically, with respect to climate change, acceleration,[2] scandal and scientific vindication,[3] growing public skepticism,[4]

* Porcher L. Taylor, III, J.D., University of Florida College of Law; B.S. United States Military Academy, West Point. Mr. Taylor is professor of paralegal studies in the School of Continuing Studies at the University of Richmond. He holds a joint appointment (2010-2014) as an associate professor of management in the Robins School of Business at the university. He developed and taught the national security law course in the university's School of Law as an adjunct assistant professor of law. Harris L. Kay, Esq., J.D., University of Richmond; B.A., College of William & Mary. Mr. Kay is a partner with the Chicago-based law firm of Henderson & Lyman, a boutique law firm that represents financial institutions and other institutional clients in a variety of matters. He also serves on the board of directors of a privately-held company. We are indebted to Doug Boyle, Esq., for his invaluable assistance in the research and drafting of the business judgment rule section of this article. Also, we appreciate Dr. David E. Kitchen's assistance in shedding more light on the science of climate change.

1. The board is "at the apex" of the decision-making process in public corporations, as "every major operational or strategic decision, including a company's policy toward the natural environment, must flow through the board." *See* George Kassinis & Nikos Vafeas, *Corporate Boards and Outside Stakeholders as Determinants of Environmental Litigation*, 23 STRATEGIC MGMT. J. 399, 400 (2002).
2. With respect to global warming's acceleration forecast, climate change researchers from the United Nations Environment Program recently predicted that the earth "will warm by 6.3 degrees Fahrenheit by the end of the century even if the world's leaders fulfill their most ambitious climate pledges." Juliet Eilperin, *New Analysis Brings Dire Forecast of 6.3-Degree Temperature Increase*, WASH. POST, Sept. 25, 2009, at A4, *available at* http://www.washingtonpost.com/wp-dyn/content/article/2009/09/24/AR2009092402602.html?hpid=topnews.
3. Nobel Prize co-laureate Al Gore best acknowledges and summarizes most of the errors that have plagued the climate-change academy this past year: "It is true that the climate panel [UN's Intergovernmental Panel on Climate Change] published a flawed overestimate of the melting rate of debris-cov-

corporate defections and resignations,[5] a new, controversial Environmental Protection Agency ("EPA") finding and rule,[6] a surprise interpretive disclosure guidance from the Security Exchange Commission ("SEC");[7] legislative "gridlock" in the U.S. Senate,[8] a U.S. president

---

ered glaciers in the Himalayas, and used information about the Netherlands provided to it by the government, which was later found to be partly inaccurate. In addition, e-mail messages stolen from the University of East Anglia in Britain showed that scientists besieged by an onslaught of hostile, make-work demands from climate skeptics may not have adequately followed the requirements of the British freedom of information law." Al Gore, Op.-Ed., *We Can't Wish Away Climate Change*, N.Y. TIMES, Feb. 28, 2010, at 11, *available at* http://www.nytimes.com/2010/02/28/opinion/28gore.html. "According to some critics, the UN climate change chief resigned partially from the pressures surrounding this series of errors." *See* Neil MacFarquhar & John M. Broder, *U.N. Climate Chief Quits, Deepening Sense of Disarray*, N.Y. TIMES, Feb. 19, 2010, at A8. Vindication for the Nobel Prize-winning Intergovernmental Panel on Climate Change ("IPCC") included new reports from the National Academy of Sciences that offered cogent evidence that it would be "folly to put off dealing with" the climate change problem any longer. *See* Editorial, *Are They Paying Attention?*, N.Y. TIMES, May, 24, 2010, at A22, *available at* http://www.nytimes.com/2010/05/24/opinion/24mon3.html. On the corporate scandal front, NASA's chief scientist reportedly made a "serious" recommendation to Congress: send corporate executives to jail for sowing doubt about global warming. *See*, Charles H. Moellenberg, Jr. & Leon F. Dejulius, Jr., *Remove the Tort Liability Muzzle*, NAT'L. L.J., May 10, 2010, at 34.

4. As a consequence of recent scandals, the climate-change academy is now facing a "crisis of public confidence," with "serious damage" already inflicted, as manifested in the results of a poll conducted by Yale University and George Mason University. John M. Broder, *Scientists Take Steps to Defend Climate Work*, N.Y. TIMES, Mar. 3, 2010, at A11, *available at* http://www.nytimes.com/2010/03/03/science/earth/03climate.html. "The number of Americans who believed that climate change was a hoax or scientific conspiracy had more than doubled since 2008 . . . ." *Id.* In Britain there has been a major increase in climate-change doubters. *See* Elisabeth Rosenthal, *Climate Fears Turn to Doubt Among Britons*, N.Y. TIMES, May 25, 2010, at A8, *available at* http://www.nytimes.com/2010/05/25/science/earth/25climate.html. One business and public policy scholar, Robert Hahn, notes that climate change "deserves to be debated thoughtfully in the academy and by decision makers." Robert W. Hahn, *Climate Policy: Separating Fact from Fantasy*, 33 HARV. ENVTL. L. REV. 557, 591 (2009).
5. Prominent member corporations of the U.S. Chamber of Commerce have resigned their membership in response to the Chamber's bellicose stance on new climate-change legislation. *See infra* note 27 and accompanying text. Three large companies—British Petroleum ("BP"), ConocoPhillips, and Caterpillar—all quit the U.S. Climate Action Partnership, a powerful lobbying group that had focused on shaping climate-change legislation. *See* Stephen Power & Ben Casselman, *Defections Shake Up Climate Coalition*, WALL ST. J., Feb. 17, 2010, at A1, *available at* http://online.wsj.com/article/SB10001424052748704804204575069440096420212.html.
6. *See infra* Part V.D.
7. *See infra* Part V.E.
8. Since the U.S. House of Representatives passed a promising climate bill in the summer of 2009, there has been a legislation roadblock in the Senate. *See* Juliet Eilperan & David A. Fahrenhold, *Lawmakers Move to Restrain EPA on Climate Change*, WASH. POST, Mar. 5, 2010, at A2, *available at* http://www.

straddling the climate-change fence,[9] and a failed Copenhagen Summit.[10] Boards must sort through this disarray for a clear-eyed carbon strategy.

The current global financial crisis could precipitate some dramatic changes in corporate governance. Cogently, it is during the apex of a crisis "when the pain is felt most that there is an opportunity to break established malpractices and governance structures, to implement new laws and regulations, and to find support for economic and financial reforms."[11] The prevailing view of many experts is that companies and boards must realize that courts might apply higher standards of responsibility to them for risk management during these trying financial times.[12]

To successfully confront some of these demands, it may require a fundamental change in board composition, including, but not limited to, more expert directors. Consider as Exhibit A the Federal Reserve's "unprecedented federal intervention in pay decisions traditionally left to boards and shareholders," as the Federal Reserve assertively implements compensation regulations for lenders."[13] This will make life "more difficult for boards and their compensation committees, already under fire for controversial pay practices."[14] As a result of this

---

washingtonpost.com/wp-dyn/content/article/2010/03/04/AR2010030404 715.html.

9. Environmental advocates have grumbled that President Obama has "all but abandoned his quest for sweeping climate change legislation and begun to reach out to Republicans to enact less ambitious clean energy measures." *See* John M. Broder, *Environmentalists Cooling on Obama*, N.Y. TIMES, Feb. 18, 2010, at A16, *available at* http://www.nytimes.com/2010/02/18/science/earth/18enviros.html.

10. Lamentably, the Copenhagen Summit failed to achieve its coveted goal: a legally binding treaty requiring nations to reduce their greenhouse gases. *See Copenhagen Climate Conference*, YOUNG PEOPLE'S TRUST FOR THE ENVIRONMENT, http://www.ypte.org.uk/environmental/copenhagen-climate-conference/87 (last visited Feb. 27, 2010); *see also* Kelley Inman, *Recent Development: The Symbolic Copenhagen Accord Falls Short of Goals*, 17 U. BALT. J. ENVTL. L. 219 (2010).

11. Anna Gelpern, *Financial Crisis Containment*, 41 CONN. L. REV. 1051, 1069 (2009) (citation omitted).

12. Perry E. Wallace, *Symposium: Climate Change, Corporate Strategy, and Corporate Law Duties*, 44 WAKE FOREST L. REV. 757, 762 (2009).

13. Aaron Lucchetti, et al., *Fed Hits Banks with Sweeping Pay Limits*, WALL ST. J., Oct. 23, 2009, at A1, *available at* http://online.wsj.com/article/SB12562302 6446601619.html. In June, 2010, the Federal Reserve adopted "sweeping new rules that will give banking regulators more clout over how the nation's thousands of banks compensate employees ranging from senior executives to traders." Deborah Solomon, *Tighter Scrutiny for Bank Salaries*, WALL ST. J., June 22, 2010, at A4, *available at* http://online.wsj.com/article/SB10 001424052748704895204575320802814329546.html. "Top government officials . . . have identified flawed compensation practices as a contributor to the financial crisis." *Id.*

14. Joann S. Lublin, *Boards Face Expanded Responsibilities*, WALL ST. J., Sept. 21, 2009, at A2, *available at* http://online.wsj.com/article/SB12533148152922 4335.html#mod=todays_us_page_one.

government interloping in the business judgment of bank compensation committees, banks might need to makeover their compensation committees by recruiting and seeking directors who are compensation experts.[15]

The recession-generated need for the federal government to periodically place itself in the corporate board room could presage an overhaul in corporate governance at all publicly-traded U.S. companies,[16] not just in terms of pay. Indeed, once shareholders and government policy makers have a voice in executive salary, what could be next on the intervention horizon?[17]

On this slippery slope, could the next government inquiry be "how big a carbon footprint does the company leave?" Strikingly, years before the financial crisis, prudent climate-change or greenhouse-gas ("GHG") emission management[18] should have been at least a blip on the radar screens in the boardrooms of practically every corporation. Climate-change "certainty" combined with the "emerging market and regulatory cultures" surrounding climate change augur that "'virtually every company's activities, business models and strategies will need to be completely rethought,'"[19] given the cross-industry ubiquity of climate change's touch. Since corporations have "past and continuing roles in creating the problem" of global warming,[20] and even compa-

---

15. *Id.* One executive-pay expert asserts that some bank board's lack directors who are executive-pay experts. *Id.* Even the SEC recently entered the interloping fray by promulgating new rules that, *inter alia*, require public companies to disclose more information about how their boards are structured, the expertise of directors, and how they pay employees, all in the aftermath of the Bernie Madoff mega-fraud and the recognition that "ineffective oversight by corporate boards fueled the financial crisis." Zachary A. Goldfarb, *SEC Tightens Rules on Investment Advisers, Corporate Transparency*, WASH. POST, Dec. 17, 2009, at A30, *available at* http://www.washingtonpost.com/wp-dyn/content/article/2009/12/16/AR2009121604148.html.
16. Federal government intervention in corporate pay scale decision-making might ultimately extend well beyond bailed out Wall Street banks, bailed out auto-makers like General Motors, and Federal Reserve regulated banks, to all publicly held companies. Devin Leonard, *Executive Pay: A Special Report: Bargains in the Boardroom?*, N.Y. TIMES, Apr. 4, 2010, at BU1, *available at* http://www.nytimes.com/2010/04/04/business/04comp.html. Indeed, pay czar Kenneth Feinberg, an Obama appointee, has noted that his "blueprint" for compensation limitations could be applied "in myriad other boardrooms." *Id.*
17. *See* Karen Dillon, *The Coming Battle Over Executive Pay*, HARV. BUS. REV., Sept. 2009, at 94, 97.
18. A top scholar in climate-change law and corporate law, Professor Perry Wallace, warns that "[GHG] management now ranks among the world's great challenges." Wallace *supra* note 12, at 757. He persuasively makes the case that there is a "rapidly growing movement toward corporate strategic planning for GHG management," and that this momentum is likely to strengthen in the future. *Id.* at 758, 776.
19. *Id.* at 757-58, 758 n.3 (quoting Rory Sullivan, CORPORATE RESPONSES TO CLIMATE CHANGE 2, 3 (RORY SULLIVAN ED., 2008).
20. *Id.* at 757.

nies that have not contributed to climate change can have their bottom lines impacted, undisclosed and unmanaged climate-change risk might detrimentally impact companies and shareholders, placing both companies and boards at potential liability risk.

This Article makes the innovative and timely case for a climate-change imperative: a green board. Urgency is evident, with the arrival of "a fast-emerging new burden on board members to oversee their company's posture on climate change and to begin monitoring an area that, until now, has drawn scant attention in the boardroom."[21] One major impetus for the proposal advocated in this Article is that there is apparently a dearth of green boards in corporate America.[22] In contrast, European and Canadian companies appear to be at the vanguard of utilizing green boards.[23]

The foregoing translates as follows: "boards must begin now to develop the governance expertise to provide the companies with an understanding of the issues and priorities" associated with climate change.[24] As a result, practically every corporation needs to adopt

---

21. Jeffrey M. Cunningham & Aaron Bernstein, *Governance Required: New Regulations and Rising Temperatures Have Put Corporate Boardrooms on Notice*, 33 DIRECTORSHIP 44, 44 (2007).

22. A recent benchmarking study by three corporate governance researchers of how twenty-five Fortune 500 companies in five different industries addressed corporate citizenship through their governance, structures, and systems found "few boards have a sub-committee dedicated to sustainability or corporate social responsibility *per se*." Guy Morgan, et al., *Leading Corporate Citizenship: Governance, Structure, Systems*, 9 CORP. CITIZENSHIP 39, 43-44 (2009).

23. In a 2007 benchmarking study of how 125 large European companies managed their GHG emissions, 76% of those firms had a high-level environmental or climate change strategy group involving board and senior management personnel and 70% had a named board member with responsibility for this area. *See* Rory Sullivan, CORPORATE RESPONSES TO CLIMATE CHANGE: ACHIEVING EMISSIONS REDUCTIONS THROUGH REGULATION, SELF-REGULATION AND ECONOMIC INCENTIVES (Rory Sullivan ed., 2008), at 11-12. On the Canadian side of the Atlantic, a 2006 Carbon Disclosure Project ("CDP") survey of 280 Canadian companies published by the Conference Board of Canada revealed that 65% of companies surveyed had elevated climate change to the board level by granting directors responsibility for "climate-change strategic risks." Stephen Bernhut, *Corporate Climate Change*, CAMAGAZINE, Jan./Feb. 2009, at 23, 26, *available at* http://www.camagazine.com/archives/print-edition/2009/january-february/features/camagazine5372.aspx.

24. *See* Cunningham & Bernstein, *supra* note 21, at 44. Jeff Smith, head of the environmental practice group at Cravath, Swaine & Moore and co-author of the path-breaking American Bar Association book on U.S. climate-change law, wisely warns that, in the context of potential director personal liability, "[w]e are at a point of inflection where board behavior needs to change and adapt." *Id.* To be sure, director expert advice is vital on matters of environmental responsibility and the risks of litigation. *See* Kassinis & Vafeas, *supra* note 1, at 401.

board expertise as a new best corporate governance practice,[25] to include the recruitment and appointment of a climate change or GHG management expert as an independent director to serve at the board's center of gravity: the audit committee.[26] Compellingly, the value of director expertise in general[27] is supported by a large corpus of empirical research, and this Article catches the decade-long renaissance that advocates and favors that trend in the boardroom.

To fully appreciate the critical need for board expertise in environmental matters, one need not look any further than the Gulf Coast, where putative gross negligence by petroleum giant BP unleashed the biggest oil spill disaster in American history.[28] Sadly, BP's board chairman has no experience in the oil industry[29] and none of BP's other fourteen board fiduciaries has deep-water drilling operations expertise.[30] In fact, recently fired BP CEO and board member Tony Hay-

---

25. The Delaware Supreme Court has made a very relevant statement about best practices in *Brehm v. Eisner*; "Aspirational ideals of good governance practices for boards of directors that go beyond the minimal legal requirements of the corporation law are highly desirable, often tend to benefit stockholders, sometimes reduce litigation and can usually help directors avoid liability. But they are not required by the corporation law and do not define standards of liability." 746 A.2d 244, 256 (Del. 2000), *quoted in In re* Walt Disney Co. Derivative Litig., 907 A.2d 693, 745 n. 399 (Del. Ch. 2005).
26. Some researchers, noting the unique role of the audit committee, make this exhortation to all boards: "It's time for [the audit] committee to assert its unique role as messenger to the rest of the board of directors on all matters of risk management and financial-reporting judgments and to bolster trust among corporate constituencies—especially shareholders." H. David Sherman, Dennis Carey, & Robert Brust, *The Audit Committee's New Agenda*, HARV. BUS. REV., June 2009, at 99, *available at* http://www.kornferry institute.com/files/pdfl/HBR_The_Audit_Cmtte_New_Agenda.pdf. Corporate board audit committees' most likely face more regulation-imposed practices and liability perils than the entire board combined. RALPH D. WARD, THE NEW BOARDROOM LEADERS: HOW TODAY'S CORPORATE BOARDS ARE TAKING CHARGE 162 (Praeger, 2008).
27. In the 1990s, when globalization was rapidly making international expertise a business necessity, there was a big hunt for global outside directors, especially from the Asian Pacific area. *See* Theodore Jadick, *Recruiting Global Directors*, CORPORATE BOARD, Jan./Feb. 1996, at 11.
28. Bradley Blackburn & Matt Gutman, *BP Oil Spill Called Worst in U.S. History, as MMS Official Steps Down*, ABCNEWS, May 27, 2010, http://absnews.go.com/WN/Media/bp-oil-leak-now-worst-history-surpassing-exxon/story?id=10759905 (last visited Feb. 23, 2010).
29. Julia Werdigier, *BP Chairman's Low Profile Likely to Grow*, N.Y. TIMES, Jun. 16, 2010, at A20.
30. *See The Board*, BP.COM, http://www.bp.com/managedlistingsection.do?categoryId=9021801&contentId=7040608 (last visited Feb. 23, 2010) (a review of the biographies of BP's directors on its corporate website reveals their expertise is void). A primary task of BP's board's Safety, Ethics and Environmental Assurance Committee is to "[m]onitor and obtain assurance that the management or mitigation of significant BP risks of a non-financial nature is appropriately addressed. . ." *See* BP P.L.C., BOARD GOVERNANCE PRINCIPLES 12 (n.d.), *available at* http://www.bp.com/liveassets/bp_in-

ward defiantly testified to Congress that he was not an expert at all.[31] Consequently, this Article predicts that Congress might ultimately pass legislation that requires the entire deep-water drilling industry to have at least one board member who is an environmental expert.

This Article foresees five potential concomitant advantages that might emerge from having a climate-change expert in the boardroom nerve center: fostering climate-change literacy among board members, providing more prudent GHG risk-detection and management, helping shield directors from personal liability in shareholder derivative lawsuits under the higher-standard business judgment rule that courts are expected to adopt on GHG decision-making, reducing Director and Officer ("D&O") liability insurance premiums,[32] and triggering higher corporate governance ratings for firms that adopt this practice.[33]

Part II starts with an overview of optimal board composition and how it is particularly a *sine qua non* for company survival in these arduous times. Then, this Article introduces the value that director expertise generally adds to decision-making for boards, and then segues to intriguing research that shows that accounting expertise is valuable in enhancing board audit committee effectiveness. The Sarbanes-Oxley

---

ternet/globalbp/STAGING/global_assets/downloads/B/bp_board_governance_principles.pdf.

31. David J. Lynch, *Leaders Take Shots at BP but Leave Empty-Handed: Chief Executive Apologizes but Offers Nothing New at Hearing*, USA TODAY, June 18, 2010, at 2B, *available at* http://www.usatoday.com/printedition/money/20100618/bpceo18_cv.art.htm?loc=Interstitialskip.

32. This Article proposes that D&O insurers require boards to appoint a climate-change director to the audit committee and reward that practice with a reduced insurance premium. Cognizant that "climate change presents a gigantic challenge to them in terms of anticipating (and pricing for) risks associated with global warming, rising oceans, and changing climatological patterns," insurance companies are positioning themselves to make dramatic changes in the way they conduct business. Jayne W. Barnard, *Corporate Boards and the New Environmentalism*, 31 WM. & MARY ENVTL. L. POL'Y REV. 291, 309-10 (2007). Indeed, witness the fact that "[s]ome insurance companies have implied that they may even withdraw [D&O] liability coverage from those companies that do not have adequate risk management policies developed for climate change." Christina Ross, et al., *Limiting Liability in the Greenhouse: Insurance Risk-Management Strategies in the Context of Global Climate Change*, 26 STAN. ENVTL. L.J. 251, 270 (2007).

33. One criterion of corporate governance rating agencies is board structure, "such as independence of the board and key committees." Thuy-Nga T. Vo, *Rating Management Behavior and Ethics: A Proposal to Upgrade the Corporate Governance Rating Criteria*, 34 IOWA J. CORP. L. 1, 7 (2008). By illustration, these influential agencies "assign strong ratings to companies that separate their board chair and chief executive positions." *Id.* at 13. Since these rating agencies "exert strong influence over the governance practices of public companies," corporations "pay close attention" to their individual governance ratings. *Id.* at 1, 7 (2008).

Act's ("SOX")[34] encouragement of director expertise on audit committees in 2002 and the subsequent surge over the years in accountants serving on such committees will be the center of gravity of this subsection. Using SOX as an expertise analogue, we also explore the need for and value of climate-change expertise on the board, especially to offset any potential board groupthink on climate change.

Part III examines best practices of leading companies in carbon reduction, top green boards, and how to best recruit a climate-change director. Part IV briefly evaluates the continuing evolution of the venerable but confusing business judgment rule, which is designed to shield boards from personal liability for good faith, conflict-free decisions. Part V probes how the Supreme Court, Congress, EPA, and SEC have all recently converged to impact how corporate boards should respond to climate change.

Lastly, Part VI delivers a sobering caveat to boards by creatively raising what could ultimately be a new business judgment challenge: the declaration by the U.S. intelligence community that climate change poses a 'threat multiplier' effect to national and global security,[35] and the possibility that courts could take judicial notice of this declaration. Director expertise on climate change would prove vital in this new arena.

II. Director Expertise: Adding Value to Decision-making

A. *A Stark Lesson from the Global Economic Crisis: Board Composition Failure*

In his new book, Ram Charan, a leading corporate governance scholar and advisor, astutely captures the urgency of the board composition revolution that the global economic crisis has abruptly wrought upon corporate America:

> The role of the board has unmistakably transitioned from passive governance to active leadership with a delicate balance of avoiding micromanaging. It's leadership as a group, not leadership by an appointed person. This group needs *the right composition* to succeed, and that composition will have to change, sometimes abruptly, as conditions do. With *the right composition*, a board can create value; with the wrong or inappropriate composition, it can easily destroy value.[36]

---

34. Sarbanes-Oxley Act of 2002, Pub. L. 107-204, 116 Stat. 745 (2002) (codified in scattered sections of U.S.C.).

35. Jody Freeman & Andrew Guzman, *Climate Change and U.S. Interests*, 109 COLUM. L. REV. 1531, 1576 (2009). Professors Freeman and Guzman cite a host of authorities for this sobering security assessment including, Congressional testimony by the intelligence community, several reports by think-tanks, and law review articles. *Id.* at 1576 n.199.

36. RAM CHARAN, OWNING UP: THE 14 QUESTIONS EVERY BOARD MEMBER NEEDS TO ASK 1 (John Wiley & Sons, Inc., ed., 2009) (emphasis added).

Further advancing this board composition reform theme, Charan cites a telltale job posting at Citigroup:

> In April 2008, Citigroup added an extraordinary job posting to its website, seeking individuals with "a particular emphasis on expertise in finance and investments." What made the post so unusual were the positions Citigroup was trying to fill: directors. It took $18 billion in write-downs in the fourth quarter of 2007 and capital infusions of over $20 billion for the largest bank in the world to realize its board lacked finance and investment know-how.[37]

To be sure, the posting serves as a wakeup call for corporate America that Citigroup was not an isolated case of one board having a deficit in "crucial expertise," because a legion of boards in the financial services industry fell short on this requisite.[38] This urgent expectation that boards can help their companies "find a safe place to land"[39] in the economic crisis is not limited to just ailing financial services firms. Even "good companies" with AAA debt ratings have been caught in the crisis tidal wave.[40] There is a universal lesson here for all boards: directors must have the "specific skills and perspectives" necessary to carry out their duties.[41]

Boards should not be lulled into myopically thinking that Wall Street financial greed is the sole key catalyst that can plunge the world into economic downturns. Ominously, "[c]limate change could trigger similar global slowdowns in the future."[42] This revelation should make the following coverage of strategic problem-solving, risk management, and the remaining parts of this Article even more germane for those companies that recognize the true value of striving toward a green board.

B. *Expertise and Strategic Problem-Solving*

Lamentably, "the financial crisis of 2008 laid bare a long buried truth: that many boards do not really own the strategy of their company."[43] It has become clear that boards are failing to maintain a "clear, credible strategy with appropriate risk levels."[44] However, problems in the macroeconomic milieu exposed intrinsic risks in

---

37. *Id.*
38. *Id.*
39. JACK KROL, *Foreword* to CHARAN, *supra* note 36, at vii. Krol is the former chairman and CEO of DuPont. *Id.* at viii.
40. *Id.* at vii.
41. CHARAN, *supra* note 36, at 2. Even "hardworking, conscientious boards can fail when their directors lack critical expertise." *Id.* at 16.
42. Freeman & Guzman, *supra* note 35, at 1575.
43. CHARAN, *supra* note 36, at 57.
44. *Id.* Charan cites Motorola, Yahoo!, Sears, and the Detroit automakers as illustrations of this picture. *Id.*

many company strategies that blindsided the boards.[45] A brand new look at strategy is mandated in the midst of the ongoing transfiguration of the business environment.[46] The age of keeping "strategy at arm's length" is over.[47] A brief but helpful look at some of the strategic problem-solving literature in the context of director expertise is in order.

One dimension of corporate strategy-making is certainly axiomatic and cautionary, irrespective of the level of "vigilance." Boards with directors lacking relevant experience are most likely not capable of "fully contributing" to corporate strategy.[48] Fortunately, even in the face of incomplete information about a particular board issue, most outside directors, by virtue of their principal occupation, have acquired strategic problem-solving skills which enable them to participate in strategy making.[49] In order to assist in strategy-making, such directors "process available information more efficiently and by reason of analogy."[50] Indeed, these expert directors provide insightful input into the cognitive tasks through which strategic decision-making is carried out: scanning, interpretation, and choice.[51]

This Article first turns to risk management and the board's pivotal role in serving as the company's devil's advocate.

1. Expertise and Risk Management

The most important role for the board in the context of risk management[52] "is to act as a devil's advocate . . . by questioning assump-

---

45. *Id.*

46. *Id.* Charan observes that a strategy-engaged board is the most helpful tool a CEO can have because directors "can open management's eyes to blind spots, raise the imagination to make bold moves, or advise management to pull in its horns when the risks are too high." *Id.* at 58.

47. CHARAN, *supra* note 36, at 58.

48. Mark Kroll, et al., *Board Vigilance, Director Expertise, and Corporate Outcomes*, 29 STRATEGIC MGMT. J., 363, 364.

49. Violina P. Rindova, *What Corporate Boards Have to Do with Strategy: A Cognitive Perspective*, 36 J. MGMT. STUD. 953, 961–62 (1992). Compelling statistics about board composition support this proposition, indicating that outside directors have significant strategic expertise in the problem-solving arena. *Id.* at 962.

50. *Id.* at 961.

51. *Id.* at 954.

52. For purposes of this Article, we use Fanto's general definition of risk management: "the practice of assessing and identifying the different kinds of risks facing a person, an institution, or society because of its activities and environment, determining the likelihood of losses and other consequences from those risks, and taking appropriate actions, which include monitoring the risks and reducing the losses and other consequences from them." James Fanto, *Symposium: Anticipating the Unthinkable: The Adequacy of Risk Management in Finance and Environmental Studies*, 44 WAKE FOREST L. REV. 731, 731 (2009).

tions of the risk managers[53] and imagining adverse scenarios."[54] Expert directors would enhance this inquisitorial, worst-case brainstorming role, because they "intuitively know how to ask the right questions."[55] A board must realize and implement the firm's risk model basics, have a risk committee, develop risk-crisis procedures, and assure that the organization's risk taking is linked to executive compensation.[56]

Risks are subject to under and over estimation. Where does climate change fall on this risk spectrum? Ironically, the current financial crisis and climate change have much in common on the risk front. First, both share some common antecedents: while corporations and executives bear much of the blame, ordinary "Americans' over-consumption, heedlessness, and greed contributed to the financial meltdown, and play an enormous part in the climate-change problem as well."[57] Second, both share risks underestimations, especially climate change.[58] As a result, the president of a prominent climate-change-focused coalition recommends that "all sectors of the economy increase assessment of the risks presented by climate change."[59]

The risk-management failure in financial institutions should give us pause about how prepared corporate America is to manage environmental crises.[60] Professor Fanto cogently captures the management

53. "Chief risk officers should report to the board and not the chief executive." Kevin Brown, *Too Big to Fail*, WALL ST. J., Dec. 14, 2009, at R5. Significantly, this was a leading recommendation by a "gather[ing] of 80 top financiers [in] London for [the Wall Street Journal's] second annual Future of Finance Initiative, created to deliberate on the key steps to move out of the recession." Alan Murray, *Fixing the Global Financial System*, WALL ST. J., Dec. 13, 2009, *available at* http://online.wsj.com/article/SB10001424052748704193004574587964095162166.html.

54. *See* Fanto, *supra* note 52, at 748. The purpose of Professor Fanto's article is to assess the role of risk management in the current financial crisis. *Id.* at 731.

55. Patrick Walsh & Thomas J. Neff, *Why Boards Need to Keep an Eye on Value Creation*, BUS. WK., Apr. 14, 2009, at 22, *available at* http://www.businessweek.com/managing/content/apr2009/ca20090414_989435.htm.

56. Fanto, *supra* note 52, at 748.

57. Thomas Joo, *Global Warming and the Management-Centered Corporation*, 44 WAKE FOREST L. REV. 671, 702 (2009).

58. *See* Elizabeth Burleson, *Symposium: Energy Policy, Intellectual Property, and Technology Transfer to Address Climate Change*, 18 TRANSNAT'L L. & CONTEMP. PROBS. 69, 70 (2009) (referencing the Coalition for Environmentally Responsible Economies' ("CERES") president's parallel risk comparison of the subprime mortgage lending catastrophe with climate change). The proximate cause of the subprime lending debacle was the underestimation of risk. *Id.*

59. *Id.* at 70 (citing Rachelle Younglai, *Lifting The Lid: Banks Urged to Address Climate Change*, REUTERS, Jan. 14, 2008, at 1, *available at* http://www.planetark.com/dailynewsstory.cfm/newsid/46393/story.htm).

60. *See* Fanto, *supra* note 52, at 755. Risk management will no longer be just a "'mainstay' in financial companies, but . . . will be present in every Fortune 500 company." Diana Middleton, *Landing a Job of the Future Takes a Two-*

and regulatory failures leading up to the global financial and economic crises, and how these same types of failures in the future could be an even bigger catastrophe with respect to climate change:

> In the financial crisis, there was an excessive dependence upon imperfect quantitative risk models, a reluctance to imagine adverse scenarios in stress testing, a failure of senior decision makers to pay attention to risk management, often because of a focus on short-term results, and regulatory passivity when dealing with risk management problems at a time when the financial industry was profitable and looked safe. All of these failings contributed to a worldwide financial crisis and economic hardship. Similar failure in environmental risk management, however, may well have a more catastrophic outcome.[61]

This Article now segues to how a psychological syndrome can potentially skew board decision-making and whether director expertise can help stymie that effect.

2. Expertise and Groupthink

Unfortunately for boards of directors, several corporate governance scholars have taken note that groupthink is pervasive in boardrooms.[62] "Groupthink occurs when a person's thought process and decision-making capabilities become marred by peer pressure,"[63] leading the board to the "relentless striving for unanimity," which ignores mutual "trust [of] and respect [for] judgment and expertise."[64]

Track Mind, WALL ST. J., Dec. 29, 2009, at D4 (quoting Jeff Joerres, chairman and CEO of Manpower, a staffing firm).

61. *Fanto, supra* note 52, at 755. According to Bernhut, corporations are faced with a hierarchy of six risks with respect to climate change: regulatory compliance, physical risk, litigation risk, reputation risk, competitive risk, and financing risk. Bernhut, *supra* note 23, at 22. Regulatory compliance covers both current and pending laws, which can be especially costly for a company if it has a global supply chain. *Id.* Bernhut explains the other types of risk: "Physical risk [covers] the potential exposure of a company's assets and properties to damage from climate-change-induced weather effects; litigation risk [covers] personal injury or property damage caused by a company's alleged failure to adapt its properties or assets to climate-change-related effects; [and both] reputational and competitive risk . . . result [from] the perception of customers or clients to a company's action [or inaction] on climate change; and financing risk [occurs] as investors and lenders weigh their decisions in light of their assessment of a company's climate risk." *Id.*

62. *See* Marleen A. O'Connor, *The Enron Board: The Perils of Groupthink*, 71 U. CIN. L. REV. 1233, n.30 (2003) (citing three scholars supporting this conclusion about groupthink in the boardroom).

63. Rookmin Maharaj, *Corporate Governance, Groupthink and Bullies in the Boardroom*, 5 INT'L J. OF DISCLOSURE & GOVERNANCE 68, 75 (2008).

64. L.A.A. Van den Berghe & Tom Baelden, *The Complex Relation Between Director Independence and Board Effectiveness*, 5 CORPORATE GOVERNANCE 58, 62 (2005) (citation omitted).

Faulty judgments are the result.[65] Directors should be discerning thinkers with independent minds, creating a board culture of "open dissent."[66] Irving Janis, the creator of the groupthink theory, suggested that one of the most important ways to prevent groupthink is to "formalize the role of the devil's advocate and rotate this position among group members at each meeting."[67] This board dynamics tactic empowers outside directors to collegially challenge inside management.[68]

Another dimension of group psychology that impacts board decision-making is the phenomenon of "'bounded rationality' which asserts that all humans have inherently limited memories, computational skills, and other mental tools."[69] Under intricate and vague conditions, rational decision-makers are limited in their abilities to devise solutions and evaluate the outcomes of those solutions.[70] "[T]he board of directors thus may have emerged as an institutional governance mechanism to constrain the deleterious effect of bounded rationality" within the corporate decision-making context.[71]

In the complex case of climate change, the peer pressure of groupthink and the cognitive myopia of bounded rationality could collide when boards assess the risks of climate change for the company and shareholders. While some senior managers "may not personally agree with the scientific trend supporting human contributions to climate change,"[72] boards must seek to make peer pressure-immune and unbounded rational decisions on global warming.

Perhaps this proposition might bolster the need for a climate-change scientist or scholar to serve as a board director on an audit committee. In order to effectively sort through the complicated and technical data on climate change, a "layer of expertise" between the shareholder and the company is ideal.[73] Indeed, this risk disclosure will probably be drafted with the assistance of scientists and will likely include scientific jargon and other unique features associated with the technical writing typically utilized by the scientific community.[74] Imagine a climate-change scientist on an audit committee, subjected to the devil's advocate rotation. When it is the scientist's turn to play

65. *See* O'Connor, *supra* note 62, at 1239.
66. *See* Van den Berghe & Baelden, *supra* note 64, at 69.
67. O'Connor, *supra* note 62, at 1304.
68. *Id.* at 1241.
69. *See* Stephen M. Bainbridge, *Why a Board? Group Decisionmaking in Corporate Governance*, 55 VAND. L. REV. 1, 20 (2002).
70. *Id.* at 21.
71. *Id.*
72. *See* Jeffrey M. McFarland, *Warming Up to Climate Change Risk Disclosure*, 14 FORDHAM J. CORP. & FIN. L. 281, 298 (2009).
73. *Id.* at 322.
74. *Id.* at 321.

devil's advocate to help the board stymie a possible attack of groupthink and collective bounded rationality, the board may be able to make more prudent climate-change decision alternatives.

3. Expertise on the Audit Committee

A revolution in board composition is afoot that recognizes the high value of expertise on corporate boards of directors. Drawing a cogent climate-change analogue requires beginning with the audit committee reform that was primarily precipitated by the Enron catastrophe.[75] For over a decade, the empirical literature on board governance has been powerfully testifying to the long-overdue and welcome renaissance in the need for director expertise.[76] In the first five years following the aftermath of Enron, section 406 of SOX required public companies to disclose whether their boards had a financial expert on the board audit committee, and, if not, why.[77] "The percentage of accountants on board audit committees has doubled and [this promising] trend appears likely to continue."[78] Since it is axiomatic that the

75. Lawrence A. Cunningham, *Symposium: The Dysfunctional Board: Causes and Cures: Rediscovering Board Expertise: Legal Implications of the Empirical Literature*, 77 U. CIN. L. REV. 465, 471 (2008).

76. *Id.* at 466–67. Professor Cunningham notes that this renaissance is "inchoate." *Id.* at 466. While it is clearly beyond the scope of this Article to examine the decades' long subordination of expertise to independence of board members, Cunningham gives substantial treatment to this issue in his article. *Id.* He observes that "empirical evidence shows that the combination of independence and expertise is uniquely valuable and should be encouraged." *Id.* at 467. Accordingly, this is one of the anchor concepts that inspired and supports this Article.

77. *Id.* at 476.

78. *Id.* at 473–74. SOX mandates that the financial expert-director must qualify as an expert through education and experience. Sarbanes-Oxley Act of 2002, Pub. L. 107-204, § 407, 116 Stat. 745 (2002) (codified in scattered sections of U.S.C.). An easy way for boards to comply with this statutory requirement is by appointing an active or retired accountant to the board. Marc Goldstein, *Mitigating Dysfunctional Deference Through Improvements in Board Composition and Board Effectiveness*, 103 NW. U. L. REV. 490, 492 (2009). Augmenting this Article's proposal that the SOX financial expert-director mandate might be a tenable analogue for a climate-change specialist director is the fact that the SEC carved out a "safe harbor" under SOX that expressly provides that the designation or identification of a person as a financial expert cannot be used as a basis for imposing private civil liability on audit committee members. Jill E. Fisch & Caroline M. Gentile, *The Qualified Legal Compliance Committee: Using the Attorney Conduct Rules to Restructure the Board of Directors*, 53 DUKE L. J. 517, 571 (2003) (citations to the relevant SEC releases omitted). Equally cogent is a prediction by a legal commentator that the financial expert on the audit committee would receive protection from increased liability under the Business Judgment Rule, as long as that expert performs his or her duties with good faith. *See* JAGAN KRISHNAN & JONG EUNLEE, AUDIT COMMITTEE FINANCIAL EXPERTISE, LITIGATION RISK, AND CORPORATE GOVERNANCE, 244, n.7 (2009) (citation omitted).

audit committee is "the most important board committee,"[79] this continuing emergence of expertise is quite significant in itself.

Propitiously, researchers have found that the presence of a director with accounting expertise on the audit committee improves corporate governance and can lead to more faithful financial reporting.[80] Perhaps this "faithful" reporting dynamic might translate into the same for carbon footprint reporting if a climate-change specialist-director served on the audit committee. Encouragingly, Professor Cunningham predicted that in the future, SOX's success with financial expertise would draw attention to other kinds of untapped director expertise that were not yet fully exploited.[81] In the context of board recruitment, federal law provides that "expert directors face no different or higher legal duty or liability than other directors."[82] Conversely, in Delaware, the courts hold expert directors to a "higher

79. *See* Cunningham, *supra* note 75, at 474 (citation omitted). Researchers have found that companies with stronger boards are more likely to appoint high-quality audit committees. KRISHNAN & EUNLEE, *supra* note 78, at 4. One business advisor makes an astute recommendation to boards about auditing all board committees: "The board should audit committees to insure compliance with corporate governance requirements. Healthy corporations tend to have more audit committees than financially troubled firms." Phillip S. Scherrer, *Directors' Responsibilities and Participation in the Strategic Decision Making Process*, 3 CORP. GOVERNANCE 86, 90 (2003).

80. *See* Cunningham, *supra* note 75, at 499. Nevertheless, accountants will contribute to accounting expertise on the audit committee only when those professionals seek to and are "empowered to do so" by the corporation's other governance structures. *Id.* at 482. Cunningham cites research holding that expertise-savvy corporations will more highly compensate expert directors. *Id.* at 496. Perhaps boards should pay the climate-change director specialist more compensation for that expertise, as well.

81. *See* Cunningham, *supra* note 75, at 484. For a proposal for expertise under the rubric of the SEC's recommendation that companies establish disclosure committees to better capture SOX internal control integrity, see Marshall A. Geiger & Porcher L. Taylor, III, *CEO and CFO Certifications of Financial Information*, 17 ACCT. HORIZONS 357, 362 (2003) ("We suggest that a credit expert also be considered for such a committee, particularly in light of the new policy by the largest credit-rating agencies to include evaluations of accounting practices and policies in their creditworthiness reports. Credit agencies might have more confidence in a company that has a credit expert participate in monitoring disclosures.") This credit expert proposal helped inspire this Article. Stakeholders may have more confidence in a company that recruited and appointed a climate-change expert to serve on the audit committee.

82. *See* Cunningham, *supra* note 75, at 498 (citations omitted to the SEC's release adopting final rules on audit committee financial experts). Fortunately, the SEC further provides that the mere designation of the audit committee financial expert does not increase the liabilities of directors in general or audit committee members in particular. *See* Paula J. Dalley, *Public Company Corporate Governance under the Sarbanes-Oxley Act of 2002*, 28 OKLA. CITY U. L. REV. 185, 199 (2003) (citation omitted to the SEC's relevant release statement on SOX).

standard of performance."[83] Thus, Delaware might be a less hospitable venue for the type of green-board reform we propose.

III. Toward a Green Board: A Climate-Change Director as a Best Practice

A. *Carbon Footprint Reduction: Exemplary Companies*

In the context of climate change, the highway toward a green board is paved with two lanes of realization. First, "being green is no longer simply a regulatory or public-relations concern for corporations," but is considered a fundamental business strategy "essential to product development, marketing, and corporate survival."[84] Second, in this new ecological age, companies must change how they are governed both internally and externally in a world that is "Hot, Crowded, and Not-So-Flat."[85]

Several companies should be lauded for their advancement down this progressive highway of carbon mitigation. Google utilizes discussion forums and e-mailings to facilitate employee carpooling.[86] FedEx, which deploys a flotilla of 700 aircraft and 44,000 motorized vehicles, is replacing old aircraft with newer Boeing models, generating an expected reduction in fuel consumption of 36%, while increasing capacity by 20%.[87] Footwear retailer Timberland gives its

83. *See* Cunningham, *supra* note 75, at 497. As a result of Delaware's rigidly high standards for expert-directors, Delaware faces a "more acute talent pool contraction" for such directors. *Id.*
84. Herman F. Greene, *Symposium: Hot, Crowded, and Not-So-Flat: The Changing Climate for Corporations,* 44 WAKE FOREST L. REV. 799, 821 (2009). For those corporations that respond with only "half measures" to GHG mitigation efforts, Greene emphasizes that climate change is so ubiquitous that it has "entered corporate board rooms, the curricula of business schools, associations of business leaders – even law schools!" *Id.* at 804. Sadly, the climate-change arena is already hotly litigious, in what has become "an ambitious legal war on oil, electric power, auto, and other companies whose emissions are linked to global warming," with at least sixteen cases, drawing on a spectrum of legal strategies, pending in federal and state court as of October 2006. *See* John Carey & Lorraine Woellert, *Global Warming: Here Come the Lawyers,* BUS. WK., Oct. 30, 2006, at 34, *available at* http://www.businessweek.com/magazine/content/06_44/b4007044.htm. Some boards may be walking on climate-change egg shells when it comes to business strategies that might trigger adverse, knee-jerk reactions from the plaintiff's bar. Consider that plans for a new coal plant in Australia were "scuttled" by a lawsuit focusing on GHG emissions and the facility's contribution to global warming. *See* DANIEL C. ESTY & ANDREW S. WINSTON, GREEN TO GOLD: HOW SMART COMPANIES USE ENVIRONMENTAL STRATEGY TO INNOVATE, CREATE VALUE, AND BUILD COMPETITIVE ADVANTAGE (Yale University Press, 2006).
85. Greene, *supra* note 84, at 810-11.
86. BUS. FOR SOC. RESPONSIBILITY, BEYOND NEUTRALITY: MOVING YOUR COMPANY TOWARD CLIMATE LEADERSHIP 17 (Oct. 2007), *available at* http://www.bsr.org/reports/BSR_Beyond-Neutrality.pdf.
87. *See* Ram Nidumolu, et al., *Why Sustainability is Now the Key Driver of Innovation,* HARV. BUS. REV., Sept. 2009 at 6.

employees $3,000 towards the purchase of hybrid cars.[88] Johnson & Johnson uses an "Environmental Dashboard" to assess employees' performance that entails determining whether GHG emissions are one metric.[89] Pharmaceutical and drug delivery specialist Alza Corporation pays its employees $1 per day when they bike, walk, or carpool to work.[90] Swiss Re, an insurer of insurers, has an incentive program to persuade employees to do such things as install solar panels.[91] Procter & Gamble created Tide Coldwater, a reformulated product that helps customers wash their clothes in cool water, resulting in less energy usage and cost savings.[92] Since 1990, DuPont has reduced 70% of its GHG emissions, resulting in a savings of $3 billion.[93] By reducing the venting of associated methane gas from its exploration and production facilities, Shell was able to manage a significant portion of its pre-2002 GHG emissions.[94] Lastly, Honda and Toyota, with their highly fuel-efficient fleets, have taken the lead in commercializing hybrid vehicles.[95]

On the GHG emissions reduction pledge front, several companies stand out. Wal-Mart, whose over 2,400 supercenters consume enough energy annually to power "a small African nation,"[96] has pledged to eventually use 100% renewable energy and produce zero waste.[97] By 2010, Staples plans to draw most of its paper-based products from sustainable-yield forests.[98] General Electric has created a coal technology to store carbon emissions underground and will designate $1.5 billion per year to clean technologies.[99]

Several companies are in the vanguard on the clean, renewable energy front. Virgin Airlines CEO Richard Branson has committed the next ten years' profits (an estimated $3 billion) to create "the clean

---

88. BUS. FOR SOC. RESPONSIBILITY, *supra* note 86, at 18.
89. *Id.* at 16.
90. *Id.* at 18.
91. Mark Way & Britta Rendlen, *Walking the Talk at Swiss Re*, HARV. BUS. REV. ONPOINT, Spring 2010, at 42.
92. Andrew S. Winston, *Five Ways to Use (Green) Data to Make Money*, HARV. BUS. REV. ONPOINT BLOG (Nov. 19, 2009, 12:31 PM), http://blogs.hbr.org/winston/2009/11/five-ways-to-use-green-data-to.html.
93. Jayne W. Barnard, *Corporate Boards and the New Environmentalism*, 31 WM. & MARY ENVTL. L. POL'Y REV. 291, 304 (2007) (citations omitted).
94. ANDREW J. HOFFMAN, PEW CENTER OF GLOBAL CLIMATE CHANGE, GETTING AHEAD OF THE CURVE: CORPORATE STRATEGIES THAT ADDRESS CLIMATE CHANGE 113 (2007).
95. Jonathan Lash & Fred Wellington, *Competitive Advantage on a Warming Planet*, HARV. BUS. REV. ONPOINT, Spring 2010, at 1.
96. BRIAN DUMAINE, THE PLOT TO SAVE THE PLANET: HOW VISIONARY ENTREPRENEURS AND CORPORATE TITANS ARE CREATING REAL SOLUTIONS TO GLOBAL WARMING 36 (Three Rivers Press, 2008).
97. ANDREW J. HOFFMAN, CARBON STRATEGIES: HOW LEADING COMPANIES ARE REDUCING THEIR CLIMATE CHANGE FOOTPRINT 30 (Univ. of Michigan Press, 2007).
98. Nidumolu, et al., *supra* note 87, at 81.
99. *See* Dumaine, *supra* note 96, at 5.

fuel of the future."[100] American Electric Power and FPL Energy are among the electric utilities that are increasing their wind energy investments.[101] Investing heavily in wind, solar, and nuclear power, PG&E in California and FPL in Florida may be on the verge of capturing a competitive advantage.[102] Cogently, nuclear power "exudes no greenhouse gas."[103]

Two companies are major innovators in the field of re-engineering of the manufacturing process. Nike has removed one of the most harmful GHGs—sulfur hexafluoride—from the process it uses to fill air pockets in its shoes.[104] Similarly, Unilever has switched its freezer technologies from hydro fluorocarbons to natural gas.[105]

This Article now turns its attention to boards that are leading the charge toward climate-change literacy and initiative with board-level committees and the like.

B. *Green Board Exemplars*

In 1989, the visionary CEO of DuPont, Ed Woolard, created and implemented a Board-level Environmental Policy Committee.[106] He also established an Environmental Leadership Council comprised of senior executives who met monthly.[107] This was particularly innovative because "green issues were still off the radar screen for most of corporate America" at that time.[108] This strategic move apparently spawned the green-board movement.

Paradoxically, Brazilian energy giant Petrobras is a global leader in sustainability and a "champion of renewable energy."[109] Petrobas is a role-model board because it is intimately involved in the auditing of Health, Safety, and Environment ("HSE") compliance of the company's business and service units and new projects.[110] With HSE policy as an explicit part of the company's strategic plan, the CEO and the executive board review and approve the guidelines.[111] Senior, executive, and general managers have participated in more than 1,000 of these HSE audits, going on field trips to refineries, offshore plat-

---

100. *Id.* at 4.
101. *Id.* at 6.
102. *Id.* at 35.
103. *Id.* at 8.
104. Sullivan, *supra* note 23, at 309.
105. *Id.*
106. ESTY & WINSTON, *supra* note 84, at 206.
107. *Id.*
108. *Id.*
109. *See* Jose Sergio Gabrielli de Azevedo, *The Greening of Petrobras*, HARV. BUS. REV., Spring 2010, at 44.
110. *Id.*
111. *Id.*

forms, and pipelines.[112] In twenty-eight of these audit site inspections, either the CEO or one of the Petrobras directors joined in the visit.[113]

American Electric Power ("AEP"), the U.S.'s largest burner of coal,[114] also stands out as a carbon-savvy board. In the Institutional Shareholder Services' ("ISS")[115] 2006 assessment of 100 global companies, ISS assigned 12 of 100 points to board activity, such as the assignment of environmental issues to a specific board committee.[116] Of this group, not many companies scored well, including General Electric, which enjoys top industry rankings for overall climate-change policy.[117] AEP, with its engaged board, shined as a leader.[118]

How did AEP obtain this high board rating? In 2004, AEP's policy board committee conducted a study examining the effects of climate change on AEP.[119] With regard to its new power plants, AEP evaluated how legislation might impact its long-term investments.[120] As of 2007, the board committee still oversaw climate-change and the firm's first sustainability report issued in 2007.[121]

Dow Chemical has formed a unique task force focused on integration of board oversight and executive actions to regulate GHG emissions.[122] General Motors and Ford have similarly implemented a mandatory disclosure policy for emissions and climate risks integration.[123] General Electric has also sought to reap reputational fruits from its innovative "ecomagination" campaign.[124] Nike has a board-level Corporate Social Responsibility Committee, which includes the

---

112. *Id.* at 45.
113. *Id.*
114. *See Climate Change and the Environment,* AEP: AMERICAN ELECTRIC POWER, www.aep.com/environmental/climatechange/ (last visited Feb. 28, 2011).
115. Because ISS is the largest and "most influential" corporate governance-rating agency, rating more than 8,000 companies in 31 countries, the authors of this Article submit that this is a significant assessment. *See* Thuy-Nga T. Vo, *Rating Management Behavior and Ethics: A Proposal to Upgrade the Corporate Governance Rating Criteria,* 34 IOWA J. CORP. L. 1, 4, 5 (2008).
116. *See* Cunningham & Bernstein, *supra* note 21, at 46.
117. *Id.*
118. *Id.*
119. *Id.* Flawed corporate structure can even hurt companies that have the best of strategic intentions in mind on climate change. Consider as Exhibit A the global energy giant, Shell. As far as Shell's climate change-strategy formulations, it had languished somewhat on its carbon-reduction commitment, in part because of organizational structure barriers, including having more than one board. *See* Ingvild Andreassen Saeverud & Jon Birger Skjaerseth, *Oil Companies and Climate Change: Inconsistencies Between Strategy Formulation and Implementation,* 7 GLOBAL ENVTL. POL. 42, 56-57 (2007).
120. *Id.*
121. *See* Cunningham & Bernstein, *supra* note 21, at 46.
122. *Id.* at 45.
123. *Id.*
124. *Id; see also* ANDREW J. HOFFMAN & JOHN G. WOODY, CLIMATE CHANGE: WHAT'S YOUR BUSINESS STRATEGY? 71 (Harv. Bus. Press, 2008). Unsurprisingly, researchers have found that companies in the energy and power industry are more likely to have board subcommittees organized around

monitoring of green issues material to the company,[125] while "Alcoa relies on three dedicated teams to further its climate change and energy efficiency goals: Corporate Climate Change Strategy Team, Greenhouse Gas Network, and Energy Efficiency Network."[126]

Four other companies are worthy of mention in this green board context. Employing a cross-functional, high-level team approach, Whirlpool keeps a strategic eye on climate change through its Environmental Council, consisting of representatives from its six geographically dispersed business units.[127] Swiss Re, a pioneer in carbon mitigation, obtained support from its executive board to create and staff Greenhouse Gas Risk Solutions, which sought ways to profit from carbon reduction.[128] Bayer has a renewable raw materials working group and an executive climate-change Corporate Sustainability Board.[129] In similar governance structure, International Paper's Public Policy & Environmental Board Committee reviews all of its climate-change and related policies.[130]

Two legal commentators advocate that boards should establish an environmental affairs committee, consisting of directors, including independent directors, with direct oversight of that arena, with at least one director from the audit committee.[131] This Article goes further and advocates the appointment of a climate-change *expert* director to the nerve center of the board: the audit committee. That director would be the most logical choice to simultaneously serve on the environmental affairs committee, should a company have such a board-level committee. Conversely, the presence of a climate-change direc-

---

public policy or environmental safety and health. *See* Morgan, et al., *supra* note 22, at 46.

125. CORO STRANDBERG, THE CONFERENCE BD. OF CAN., THE ROLE OF THE BOARD OF DIRECTORS IN CORPORATE SOCIAL RESPONSIBILITY 17 (June 2008).

126. *See* Hoffman, *supra* note 94, at 104.

127. *Id.* at 125.

128. HOFFMAN, *supra* note 94, at 78-79.

129. BUS. FOR SOC. RESPONSIBILITY, *supra* note 86, at 15.

130. *Id.* at 16.

131. *See* David Monsma & Timothy Olson, *Muddling Through Counterfactual Materiality and Divergent Disclosure: The Necessary Search for a Duty to Disclose Material Non-Financial Information*, 26 STAN. ENVTL. L.J. 137, 198 (2007). At the management level, companies should create the position of chief environmental officer who would report directly to the CEO and board-level environmental affairs committee. *Id.* Establishing climate-change non-board-level advisory boards might serve as a stepping stone toward actually placing a director expert on the board, or as an adjunct to a board that has such an expert. For example, companies like Dow, Unilever, and Coca-Cola, have established environmental or sustainability advisory boards that regularly meet with company officials, with the explicit goal of obtaining peer review feedback from independent experts. ESTY & WINSTON, *supra* note 84, at 187. This advisory board strategy gives companies the chance to speak with top NGO leaders, academics, and environmental management experts about emerging issues, providing possible prescience on horizon events. *Id.*

tor on the audit committee might, governance-wise, complement the environmental affairs committee.

C. *Recruiting the Climate-Change Director*

In a utopian world, there are three questions that boards should ask to find and recruit a top-talent, climate change-savvy director. First, what is the ideal professional or career background of such a candidate? Second, what are the quintessential attributes of that director? Lastly, where are the most promising venues to find and recruit this board candidate?

Two researchers have developed seven criteria to best judge whether a director is "financially trained" enough to fulfill SOX's mandate that such a finance expert serve on the audit committee in the catastrophic wake of Enron's demise.[132] This Article creatively analogizes those criteria to discover a qualified climate-change director as follows: (1) a sustainability scientist or scholar from industry, or a sustainability professor or professor of environmental law from a college or university; (2) a certified climate-change expert; (3) a director or CEO of a firm in a carbon-intensive industry; (4) a GHG management or chief environmental or sustainability officer from another company; (5) a partner from a climate-change consulting firm; (6) a partner from an investment firm that focuses primary on high-tech green initiatives; or (7) a former administrator of the EPA or the UN's Environment Program.

Clif Bar, a natural food company that aggressively seeks to reduce its ecological footprint in its entire product process chain,[133] has already brought environmental science expertise in house, a possible step toward our proposal of appointing such an expert to the audit committee.[134] Clif Bar hired a Yale-trained ecologist to work full-time on the firm's sustainability initiatives.[135]

---

132. See Kam C. Chan & Joanre Li, *Audit Committee and Firm Value: Evidence on Outside Top Directors as Expert-Independent Directors*, 16 CORP. GOVERNANCE 16, 19 (2008).

133. *Our Planet*, CLIF BAR, http://www.clifbar.com/soul/our_planet (last visited Mar. 10, 2011).

134. *Id.* (click on "CB&C hires a full time ecologist").

135. ESTY & WINSTON, *supra* note 84, at 187. In 2007, *Directorship* magazine, a widely read publication in the corporate governance field, asked two of the leading experts on board practice to make recommendations for 'dream' eco-savvy board candidates, which *Directorship* combined with its own list. *See* Cunningham & Bernstein, *supra* note 21, at 45-46. Those twenty-two candidates nicely fit one or more of our above criteria. As a sampling, here are the names and titles of six of those candidates: Riley P. Bechtel, Chairman/CEO of Bechtel Corp.; Paul R. Epstein, MD, MPH, Associate Director of the Center for Health and the Global Environment at Harvard Medical School; Lee Higdon, President of Connecticut College; Steven J. McCormick, President/CEO of The Nature Conservancy; Jim Rogers, the Chairman/CEO of Duke Energy; and Mark Tercek, Managing Director of the Goldman Sachs Center for Environmental Markets. *Id.*

At this juncture, the authors of this Article concur with Professor McFarland's transparency proposal that every publicly-held company should be required to include a statement in its annual report regarding the board's and management's involvement in addressing "climate change risk."[136] This simple statement should address board frequency on receiving updates on company climate-change policies and actions, and the titles of executives in charge of addressing climate-change risk.[137] We go one step further and submit that the actual name and very short biography of the climate-change director on the audit committee be revealed in the annual report, along with the fact that the director serves on the audit committee.

Beyond the ostensible collegial personality, team player,[138] innovator, and good judgment traits that any board director must possess, this Article highlights eight knowledge-based qualities that a board should aspire to find and probe to find in a climate-change expert worthy of serving on the audit committee. The first quality is whether a candidate fully recognizes the strong business case for sustainability. Consider the provocative research assertion derived from examining about 200 sustainability case studies on risks and opportunities: "by integrating sustainability strategies into the fabric of their business, large companies can increase profit by a minimum of 38% over five years, and small and medium-sized companies can increase their profit by a minimum of 66% in the same time frame."[139]

The second quality is whether the board candidate understands that sustainability "is now the key driver of innovation."[140] Since research shows that sustainability is a virtual bonanza of organizational and technological innovations that yield both bottom-line and top-line

---

136. *See* McFarland, *supra* note 72.

137. *Id.* at 292-93.

138. Since "many companies don't have the necessary IT systems that will allow them to capture and report their emissions completely and accurately," the CFO must become the ultimate leader responsible for emissions reporting and all other climate-change reporting requirements, and since offsetting accounting could become a "make-or-break" point in an accountant's career certainly the climate-change director must be a team player in particular vis a vis the corporate CIO, CFO and accountants. *See* Bernhut, *supra* note 23.

139. *Id.* As far as tangible savings for becoming carbon-neutral, Dell has stepped up to the plate by purchasing energy credits, increasing efficiency, and reducing emissions. *See* Katherine Harmon, *Top 25 Green Energy Leaders*, SCI.AMER. EARTH 3.0: SOLUTIONS FOR SUSTAINABLE PROGRESS (Summer 2009), at 39. As a direct impact on the bottom line, Dell saved $3 million, thereby "disproving skeptical claims that running [a business] on green technology is bad for staying in the black." *Id.*

140. *See* Ram Nidumolu, C.K. Prahalad & M. R. Rangaswami, *Why Sustainability is Now the Key Driver of Innovation*, HARV. BUS. REV., Sept. 2009, at 57-58, *available at* http://hbr.org./2009/09/why-sustainability-is-now-the-key-driver-of-innovation/es.

returns, only companies that make sustainability a goal will gain competitive advantage.[141]

With the paucity in the necessary IT systems that many companies face in voluntarily capturing and reporting their emissions completely and accurately, the board candidate needs to be asked about the acuity of his or her information systems skills.[142] Given this technological deficit, the authors of this Article wonder how complete and accurate company carbon footprint reporting has been in recent years. Approximately 75% of the corporate respondents to a 2006 survey by the Conference Board stated they were measuring their footprints, or the direct/indirect emissions of their operations.[143] At that time, it was questionable whether all of those companies were maintaining the necessary data management controls. Since this predates any federal law or EPA regulations requiring carbon footprint disclosure, like SOX does on the financial reporting side of internal controls compliance, there may be no external assurance of the data integrity of some of these good-faith efforts by corporate America. The board candidate and the audit committee will need to better review and oversee this disclosure process.

On an encouraging note, Shell should be commended for its voluntary elevation of sustainability practices to a quasi-SOX standard. All Shell executive officers must draft and execute an 'assurance letter' promising their adherence to Shell's sustainability priorities, just as CEOs and CFOs must pledge the veracity of the amounts in their financial statements under SOX.[144] This might mean that Shell business leaders are also swearing by the veracity of their carbon footprints. In any case, this may be a practice worthy of adoption by the near ubiquity of companies that fall under climate change's broad shadow. A perspective board candidate should be attuned to this kind of strategic thinking.

Further, the board candidate should be politically savvy enough to know that companies might need to ask government for "stricter" GHG emission regulations, in stark contrast to virtually all lobbying efforts that are aimed at stopping new regulations.[145] While this may sound counter-intuitive to the profit-focused mind, it can actually generate a competitive advantage when employed under the right circumstances, as evidenced by DuPont gaining market share and profits when it did not fight the Montreal Protocol's phase out of production of ozone-depleting chlorofluorocarbons.[146]

---

141. *Id.*
142. *See* Bernhut, *supra* note 23.
143. CFO Staff, *Feeling the Heat,* CFO MAGAZINE (Dec. 1, 2006), http://www.cfo.com/article.cfm/8191534?f=singlepage.
144. ESTY & WINSTON, *supra* note 84, at 217.
145. *Id.* at 121 (describing the concept of the value of "stricter" regulations).
146. *Id.* at 141-42.

With "salient stakeholders" like government, non-governmental organizations ("NGOs"), investors, suppliers, customers, and competitors having placed climate change on corporate agendas,[147] the ideal board candidate should have some professional experience with at least one or more of these influential players. The potential benefits to corporations of effective stakeholder management are well established in the corporate citizenship literature as such activities can enhance the firm's reputation, improve desirability for potential employees, improve efficiency, boost a corporation's image, reduce capital costs, and, perhaps most importantly, limit risks.[148] Most significantly, even the Chancellors of the highly influential Delaware Chancery Court have pointed out that the "fair treatment of [corporate] stakeholders may be instrumentally useful in creating shareholder wealth."[149]

In fact, stakeholder concepts are codified in state corporation codes to encourage corporate directors to consider the interests not only of shareholders, but of others, such as employees, consumers, suppliers, creditors, and communities, in making certain corporate management decisions.[150] The climate-change board specialist could help strategize new ways to engage these stakeholders.[151]

Given that shareholder proposals are essential to inducing climate-change-related disclosure, analysis, and action, prompting even some action where the company prefers to take none,[152] the board should seek a candidate who is well-versed in proxy resolution strategy.[153]

147. *See* Ans Kolk & Jonatan Pinske, *Towards Strategic Stakeholder Management? Integrating Perspectives on Sustainability Challenges Such as Corporate Responses to Climate Change*, 7 CORP. GOVERNANCE 370, 371 (2007).

148. *See* Barnali Choudhury, *Serving Two Masters: Incorporating Social Responsibility into the Corporate Paradigm*, 11 U. PA. J. BUS. L. 631, 652 (2009) (citations omitted). As a result, many corporations now pursue paths that garner measurable return in terms of both finances and the social good. *Id.*

149. *Id.* at 651 (citation omitted).

150. *See* Perry E. Wallace, *Global Climate Change and the Challenge to Modern Corporate Governance*, 55 SMU L. REV. 493, 513 n.103 (2002) (citation omitted).

151. A crucial part of stakeholder management, especially in the environmental arena, is creating partnerships with and disarming NGOs through co-optation, particularly sometimes hostile ones like Greenpeace. Partnering is a strong defense against NGO attacks, as it is difficult for NGOs effectively "attack their own partnerships." ESTY & WINSTON, *supra* note 84, at 186. For example, witness FedEx's partnership with Environmental Defense to develop a new generation of hybrid delivery vehicles. *See* HOFFMAN & WOODY, *supra* note 124, at 69. Since some researchers foresee potential radical changes in corporate governance on the horizon, including practices that would encourage "formal" stakeholder representation on the board and regular interaction between board sub-committees and various stakeholders, a corporate board might do well to appoint a director expert from the stakeholder world. *See* Morgan, et al., *supra* note 22, at 48.

152. Elise N. Rindfleisch, *Shareholder Proposals: A Catalyst for Climate Change-Related Disclosure, Analysis and Action?*, 5 BERKELEY BUS. L.J. 45, 78 (2008).

153. *See id.* at 60-61.

Boards are certainly attuned to these proxies, and corporations will often address them in such a way that the shareholders withdraw the resolution.[154] In 2005, there was a decade record of over 111 proposals withdrawn, thirty-four of which were related to climate change.[155] Out of that batch, sixteen were withdrawn due to each affected corporation's agreement to adopt a resolution.[156] In recent years, large oil and gas companies such as Anadarko Petroleum Corporation,[157] ConocoPhillips,[158] and ExxonMobil[159] stand out as examples of boards that enticed shareholders to withdraw their proposals.[160]

Deliberately exaggerating a company's commitment to green issues through disingenuous marketing, euphemistically called "greenwashing," can potentially tarnish a company's brand or image and could lead to lost sales.[161] Recruitment-wise, a board might want its climate-change expert candidate to have some basic familiarity with marketing to help avoid this trap. Royal Dutch Shell has been censured twice by Britain's Advertising Standards Authority for greenwashing and drawn the ire of NGOs like Greenpeace and Friends of the Earth for past efforts to extol its green duty.[162]

While Shell last year rolled out a new ad campaign stressing the potential global warming-reduction role of technology and innovation, the effort has backfired with the revival of greenwashing claims.[163] Especially in the energy industry, it may become imperative for board audit committees to review climate-change focused marketing literature that comes out of the corporate communications office.

In partnership with the company's Human Resources ("HR") Director, the climate-change director could help spearhead an employee retention and morale initiative that may position the company for a faster post-recession recovery. Intriguing new research on workforce engagement supports the proposition that "the ultimate goal, especially during a recession, is to improve your company's performance and competitive position through green strategy."[164] This will stimulate extreme loyalty and energy among the work force, accelerating

154. *Id.* at 61.
155. *Id.*
156. *Id.*
157. *Id.* at 62-65.
158. Rindfleisch, *supra* note 152, at 65-67.
159. *Id.* at 67-70.
160. *Id.* at 78.
161. *See, e.g.*, Guy Chazan, *Shell's Green Ads Take New Track*, WALL ST. J., Feb. 2, 2009, at B4, *available at* http://royaldutchshellplc.com/2009/02/03/shalls-green-ads-take-new-tack/.
162. *Id.*
163. *Id.*
164. *See* Andrew Winston, *Energize Employees with Green Strategy*, HARV. BUS. REV., Sept. 2009, at 24, *available at* http://hbr.org/2009/09/energize-employees-with-green-strategy/ar/1.

recession recovery and, most likely, profitability.[165] One pioneering sustainability leader, with five decades of business experience, has found that sustainability uniquely galvanizes employees to turn a company around.[166] On the front end of workforce engagement, companies that pursue sustainability may find it easier to hire and retain talent, as recent research suggests that 75% of workforce entrants in the U.S. consider social responsibility and green commitment as significant factors in selecting employers.[167] In light of the potent role of green strategy in workforce engagement, the board might question a climate-change candidate about any past HR interaction.

Now armed with a new climate-change director, the audit committee is ready to tackle the "five significant bodies of information."[168] These include: (1) the emerging climate change science; (2) the relevance of that science to their business; (3) the position of stakeholders on climate change; (4) the management responses to climate-change-related opportunities, risks, and shareholder initiatives; and (5) the consequences of all of the preceding in the company's capital markets.[169]

These five climate-change knowledge areas are relatively analogous to and overlap with the nine board due diligence duties that Ceres, a stakeholder group, advocates for a prudent board.[170] Cogently, the first Ceres duty is a prima facie call for expertise in order to make informed and responsible decisions regarding climate change,[171] which resonates with the cardinal theme of this Article.

Adhering to these practices above may insulate directors from personal liability and valuable time spent in litigation. Professor of law, Nadelle Grossman, posits that "compliance with best practices may be a director's insurance policy against the risks that he will be held lia-

---

165. *Id.*
166. *Id.*
167. *See* Nidumolu, *supra* note 87, at 64.
168. Jeffrey A. Smith & Matthew Morreale, The Fiduciary Duties of Officers and Directors, in GLOBAL CLIMATE CHANGE AND U.S. LAW 497, 528 (Michael B. Gerrard ed., 2007).
169. *Id.*
170. *See* Jeffrey A. Smith, *The Implications of the Kyoto Protocol and the Global Warming Debate for Business Transactions,* 1 N.Y.U. J. L. & BUS. 511, 525 n. 34 (2005). The nine points are: (1) ensuring adequate company expertise regarding climate-change; (2) ensuring that the company's potential consequences of climate-change are thoroughly managed; (3) ensuring that the company's potential expansion and growth because of climate-change is assessed; (4) monitoring competitors' best practices for addressing climate-change; (5) developing a climate-change strategy that correlates to the business strategy; (6) basing executive pay on the company's fulfillment of climate-change objectives; (7) considering new potential alliances and arrangements; (8) ensuring proper disclosure of climate-change risk to shareholders; and (9) upholding accountability to monitor the company's progress in achieving these goals. *Id.*
171. *Id.*

ble for having breached his fiduciary duties, or that he will be rebuked for failing to employ best practices," even for actions taken in bad faith.[172] For partial support of her argument, Grossman cites former Delaware Chief Justice Veasey: "'Good corporate practices, when genuinely used, in my view, would perforce and simultaneously lead directors to act in good faith.'"[173] Notwithstanding this insurance policy view of best practices, this Article now examines this argument and others at the intersection of climate change and the business judgment rule.

IV. Protecting Board Decisions: The Business Judgment Rule

Directors on a corporation's board have a duty to the corporation's shareholders to exercise due care and loyalty to the corporation in making decisions for the corporation. The business judgment rule, which has existed in some form in United States law for the past 180 years,[174] guides courts in determining when a corporation's board of directors is liable for business decisions[175] that shareholders allege harmed the corporation. Historically, courts have shown great deference to directors' decisions—the rule refers to the presumption that directorial decisions are a product of business judgments and beyond the reach of judicial intervention. Indeed, the Delaware Supreme Court has stated "[t]he business judgment rule exists to protect and promote the full and free exercise of the managerial power granted to Delaware directors."[176] Until recently, the business judgment rule only required that "(1) the directors are disinterested and independent [or] (2) the challenged transaction was otherwise the product of a valid exercise of business judgment."[177]

In recent years, though, three major developments have arguably eroded boards' wide latitude in making business decisions without fear of liability. Recent Delaware cases apparently increase the bur-

172. Nadelle Grossman, *Director Compliance with Elusive Fiduciary Duties in a Climate of Corporate Governance Reform*, 12 FORDHAM J. CORP. & FIN. L. 393, 463 (2007). Grossman further contends that this may help avoid time-consuming litigation, as the director's conduct will, at minimum, be on par with shareholders' expectations. *Id.*

173. *Id.*

174. *See* Percy v. Millaudon, 8 Mart. (n.s.) 68 (La. 1829).

175. *See* Norwood P. Beveridge, Jr., *The Corporate Director's Duty of Care: Riddles Wisely Expounded*, 24 SUFFOLK U.L. REV. 923, 947-49, 947 n. 129 (1990) (provides a list of cases finding director liability for breaching the duty of care through inaction or inattention). Note, the business judgment rule applies only to affirmative director action; it generally does not apply to director inattention or inaction. *See id.* In the case of inattention, courts will usually apply a simple negligence standard, depending upon that state's standards. *See id.* In Delaware, the *Rales* test is used in the case of director inattention. *See* discussion *infra* Part IV.A.ii.

176. Smith v. Van Gorkom, 488 A.2d 858, 872 (Del. 1985), *overruled in part on other grounds by* Gantler v. Stephens, 965 A.2d 695, 713 n. 54 (Del. 2009).

177. Aronson v. Lewis, 473 A.2d 805, 814 (Del. 1984).

den of care directors must exercise in making business decisions.[178] Similarly, SOX mandates that boards and board members take greater legal responsibility for their decisions.[179] Finally, recent corporate scandals, and the litigation stemming from them, have possibly further weakened the protections afforded to boards by the business judgment rule.[180] The effect of each of these developments is considered in turn below.

A. *Highly Informed Business Decision-Making: A Legal Mandate*

1. The New Business Judgment Rule Standard

In the past, courts were highly deferential to board decisions; however, recent Delaware cases have placed a greater burden on directors' decision-making, and even gone so far as to permit judicial inquiry into the merits of the decision, rather than deferring to director judgment where directors followed appropriate procedures in arriving at their decisions.

In *Aronson v. Lewis*,[181] the Delaware court laid out the main boundaries of the modern business judgment rule: "[t]he business judgment rule . . . is a presumption that in making a business decision the directors of a corporation acted on an informed basis, in good faith and in the honest belief that the decision was in the best interests of the company."[182] In so pronouncing its rule, the *Aronson* court added a third requirement to the business judgment rule: directors must be informed.[183] In prior formulations to *Aronson*, this requirement "was conspicuously missing."[184] In a subsequent decision,[185] the court used this formulation "as a tool to allow it to probe directors' decisions about policy and business management, even though the court acknowledged that there were 'no allegations of fraud, bad faith, or, self-dealing.'"[186]

---

178. *See* discussion *infra* Part IV.A.
179. *See* discussion *infra* Part IV.B.
180. *See* discussion *infra* Part IV.C.
181. 473 A.2d 805 (Del. 1984). David A. Skeel, Jr. states that "*Aronson* may well be the single most frequently cited corporate law case of the past three decades." David A. Skeel Jr., *The Accidental Elegance of* Aronson v. Lewis (U. Penn. Inst. for L. & Econ, Research Paper No. 07-28, 2007), *available at* SSRN: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1027010.
182. Aronson, 473 A.2d at 812.
183. *Id.* at 812-13.
184. Lyman Johnson, *The Modest Business Judgment Rule*, 55 BUS. L. 625, 640 (2000).
185. Smith v. Van Gorkom, 488 A.2d 858 (Del. 1985).
186. John Jenkins, *The Decline and Fall of the Business Judgment Rule*, CORP. GOVERNANCE ADVISOR, May/June 2009, at 3 (quoting Van Gorkom, 488 A.2d at 873).

In *Brehm v. Eisner*,[187] the Delaware court seemingly retreated from its previous broad reach. Even though the Court inquired into and found that the board had made a bad business decision regarding the employment and severance package of an executive,[188] it held that the business judgment rule protected the board because the board had followed the procedures outlined in *Aronson* and *Van Gorkom*.[189] The fact that the Court chose to address the "goodness" of the board's decisions was troubling—ordinarily, following the business judgment procedural safeguards had been enough to cut off litigation at the outset.[190]

In re Caremark Derivative Litigation has been, so far, the high-water mark of the Delaware court's willingness to judicially review business judgments of boards. In that case, the court expanded the board's duty of care with respect to its oversight of operations:

> [A] director's obligation includes a duty to attempt in good faith to assure that a corporate information and reporting system, which the board concludes is adequate, exists, and that failure to do so under some circumstances may, in theory at least, render a director liable for losses caused by non-compliance with applicable legal standards.[191]

This language, while seemingly benign, imposes affirmative duties even greater than those of prior cases for directors to inform themselves about the corporation's information and reporting systems, and to conclude favorably on it[192]—altogether, much more than had been required in the past. Taken together, these cases modify the business judgment rule to a remarkable degree such that the deference once afforded to board decisions has been eroded and director duties of oversight have never been higher.[193]

187. 746 A.2d 244 (Del. 2000). This suit was an appeal from the dismissal of a derivative action against Eisner's (then-CEO and member of the board) company, Walt Disney Co. *In re* Walt Disney Co. Derivative Litig., 731 A.2d 342 (Del. Ch. 1998).

188. Brehm, 746 A.2d at 266.

189. *Id.* at 264.

190. As the court in *In re Caremark Derivative Litig.* observes: "[W]hether a judge or jury considering the matter after the fact, believes a decision substantively wrong, or degrees of wrong extending through 'stupid' to 'egregious' or 'irrational', provides no ground for director liability, so long as the court determines that the process employed was either rational or employed in a good faith effort to advance corporate interests." 698 A.2d 959, 967 (Del. Ch. 1996)

191. *Id.* at 970.

192. *Id.*

193. One scholar even claims "the business judgment rule is for all intents and purposes dead." Jenkins, *supra* note 186, at 2. While this is an overstatement, it does stand to reason that the nearly impervious shield of the business judgment rule is no longer so protective.

2. Board Oversight and the Rales Test

Even where there is no cognizable decision to which the business judgment rule would ordinarily apply,[194] boards may still be held liable for their very decision to do nothing in their capacity as overseers of the corporation.[195] As recently as June 2009, in *In re Intel Corp. Derivative Litigation*,[196] a federal district court in Delaware reaffirmed that allegations of harm to the corporation stemming from board *inaction* must be evaluated under Delaware law using the *Rales* test, *not* the business judgment rule.[197] In *Rales v. Blasbund*,[198] the court held that *Aronson* did not apply to board inaction regarding a potential business decision:

> Consistent with the context and rationale of the *Aronson* decision, a court should not apply the *Aronson* test for demand futility where the board that would be considering the demand did not make a business decision which is being challenged in the derivative suit. This situation would arise . . . where the subject of the derivative suit is not a business decision of the board.[199]

Though it remains to be seen if or how this test would be applied in a climate-change inaction context by a board, it is at least clear that courts are willing to entertain claims and uphold liability for board inaction in general. That the board made no "decision," as conceived and required in the application of the typical business judgment rule, is not absolution of possible liability.[200] Indeed, absent law or regulation otherwise compelling private action, doing nothing about climate change is probably the default for private entities like boards. In such cases, the *Rales* doctrine may be another legal hook upon which boards indifferent to issues such as climate change are caught.

---

194. "The business judgment rule does not apply to monitoring or oversight duties in which no decision is being made." Perry E. Wallace, *Climate Change, Fiduciary Duty, and Corporate Disclosure: Are Things Heating Up in the Boardroom?* 26 VA. ENVTL. L.J. 293, 327 (2008). Of course, this statement is true without regard to the environmental context of the decision. *See* Ann M. Scarlett, *Confusion and Unpredictability in Shareholder Derivative Litigation: The Delaware Courts' Response to Recent Corporate Scandals*, 60 FLA. L. REV. 589, 622 (2008) ("It is axiomatic that the business judgment rule *applies* only to scenarios involving a 'business judgment.' Thus, the board must actually make a decision to invoke the business judgment rule.")
195. *See In re:* Intel Corp. Derivative Litig., 621 F. Supp. 2d 165,173 (D. Del. 2009).
196. 621 F.Supp.2d 165 (D. Del. 2009).
197. *Id.* at 170 (D. Del. 2009) ("'where the subject of a derivative suit is not a business decision of the Board but rather a violation of the Board's oversight duties,' the trial court must apply the *Rales* test." (quoting Wood v. Baum, 953 A.2d 136, 140 (Del. 2008))).
198. 634 A.2d 927 (Del. 1993).
199. *Id.* at 933–34.
200. *See id.*

B. SOX: Supra-Prudent Business Decisions?

SOX touches on many areas of corporate disclosure,[201] accounting,[202] and corporate responsibility.[203] In the area of corporate governance, SOX created new, *individual* liability for the CEOs and CFOs of most SEC registrant corporations with regard to the accuracy and completeness of the corporation's financial statements.[204] Before SOX, the CEO and CFO were arguably shielded from personal liability for financial statement misstatements so long as the processes followed were reasonable under general business judgment rule considerations. Now, the CEO and CFO must sign and certify the financial statements, and are, therefore, individually liable for known misstatements they contain.[205] Note, company officer signatories to the Management Representation Letter, which is required under Generally Accepted Auditing Principles, have previously made representations as to the accuracy of the financial statements, but did not necessarily take on personal liability for those decisions.[206] Liabilities stemming from misstatements could be paid by the corporation prior to SOX.[207] Now, signatories to the certification of company financial statements take on *personal* liability for misstatements contained therein.[208]

While this additional layer of liability has already had a general impact on life in the boardroom, it arguably modifies, in small but important ways, the outlines of the business judgment doctrine. In passing SOX, "Congress has federalized and diluted the business judgment rule, paving the way for courts to second-guess boards with non-business hindsight."[209] Underlying the business judgment rule is the principle that risk-taking and profit-maximization are to be encouraged in the corporate context. Those corporations that successfully leverage risk into profit reward investors, and investors may

201. Sarbanes-Oxley Act of 2002, Pub. L. 107-204, §§ 401-403, 407-409, 116 Stat. 745 (2002) (codified in scattered sections of U.S.C.).
202. *Id.* at §§ 101-109.
203. *Id.* at §§ 301-308.
204. The Corporate Responsibility provisions of Title III of the Act apply to "each company filing periodic reports under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m, 78o(d)). . .." *Id.* at § 302(a). Suffice it to say, most companies considered "public" in the general sense fall under this regulation.
205. *Id.*
206. *See* Ronaled E. Marden et al., *The CEO/CFO Certification Requirement*, CPA JOURNAL, July 2003, *available at* http://www.nysscpa.org/cpajournal/2003/0703/features/f073603.htm (discussing auditor's duties under "SAS 85, *Management Representations*").
207. *Id.* The terms of employment for any signatory plausibly could have required that the signatory accept personal liability in connection with misstatements in the financial statements—but this was not the default rule. *Id.*
208. *Id.*
209. Porcher L. Taylor, III, *Danger for Directors*, NAT'L L.J., Mar. 17, 2003, at A13.

reduce the effects of exposure to poor business decisions by diversifying their investments.[210]

C. The Legacy of the Corporate Scandals from the Recession of 2008–2009

Starting in late 2007 the U.S. economy, which had been growing at an unprecedented rate, fueled by easy credit and skyrocketing real estate prices, first showed signs of major weakness.[211] Congress authorized $152 billion in stimulus spending, sent to individuals in an attempt to kick start the economy in February 2008.[212] A seemingly impervious Wall Street bank, Bear Stearns, verged on collapse[213] until it was rescued by the U.S. government in March of that year.[214] Although Lehman Brothers, another bank, was allowed to fail six months later,[215] American Insurance Group ("AIG"), the largest U.S. insurer, was rescued by the government shortly thereafter.[216]

Most recently, in *In re Citigroup Derivative Litigation*,[217] the Delaware Chancery Court modified (and softened) the potentially far-reaching business judgment rule implications of the Court's earlier denial of summary judgment in a similar case regarding the insurance giant AIG.[218] The Court distinguished *Citigroup* from *AIG*, and in so doing, clarified the import of the *AIG* court's decision to allow the suit to proceed against directors who failed to act against an environment of fraud.[219] The court stated:

> There are significant differences between failing to oversee employee fraudulent or criminal conduct and failing to recognize the extent of a Company's business risk. Directors should, indeed must under Delaware law, ensure that reasonable information and reporting systems exist that would put

---

210. This rationale for the business judgment rule is espoused in *Gagliardi v. Trifoods Int'l, Inc.*, 683 A.2d 1049, 1051 (Del. Ch. 1996).
211. For a thorough narrative of the credit crisis' timeline, *see* Zachary A. Goldfarb & Alec Klein, *The Bubble: Anatomy of a Meltdown: Credit Crisis Part 2*, WASH. POST, June 16, 2008, *available at* http://washingtonpost.com/wp-dyn/content/article/2008/06/15/AR2008061501949.html?sid=ST0080611600096&s_pos.-.
212. The Economic Stimulus Act of 2008, Pub. L. 110-185, 122 Stat. 613 (2008).
213. Stephen Bernard & Joe Bel Bruno, *Fed and Rival Bail Out Bear Stearns*, HUFFINGTON POST, Mar. 14, 2008, http://www.huffingtonpost.com/2008/03/14/fed-and-rival-bail-out-be_1_n_91557.html.
214. Joseph Giannone & Dane Hamilton, *Fed Comes to Bear Stearns' Rescue*, REUTERS, Mar. 15, 2008, *available at* http://www.reuters.com/article/idUSN1438968020080315.
215. *See Timeline: Crisis on Wall Street*, WASH. POST, http://www.washingtonpost.com/wp-srv/business/economy-watch/timeline/index.html (last visited Mar. 29, 2011).
216. Tami Luhby, *Fed in AIG Rescue—$85B Loan*, CNNMONEY.COM, Sept. 17, 2008, http://money.cnn.com/2008/09/16/news/companies/AIG/index.htm.
217. 964 A.2d 106 (Del. Ch. 2009).
218. *See* AIG v. Greenberg, 965 A.2d 763 (Del. Ch. 2009).
219. *In re* Citigroup, 964 A.2d at 130-31.

> them on notice of fraudulent or criminal conduct within the company. Such oversight programs allow directors to intervene and prevent frauds or other wrongdoing that could expose the company to risk of loss as a result of such conduct. While it may be tempting to say that directors have the same duties to monitor and oversee business risk, imposing *Caremark*-type duties on directors to monitor business risk is fundamentally different.[220]

Although the business judgment rule has been forever changed by the decision in *Caremark* and its predecessors, it seems that, for now, the Delaware courts are unwilling to further erode the protections of the business judgment rule.

V. Legal and Regulatory Challenges of Climate-Change

This Article now examines how the Supreme Court, Congress, EPA, and SEC all converge to impact how corporate boards should respond to the impact of climate change.

A. *Massachusetts v. EPA*

In April 2007, the United States Supreme Court issued a remarkable ruling in *Massachusetts v. EPA*.[221] In it, the Court professed an unwillingness to keep climate change issues on the back burner.[222] The saga began in 2006, when a concerned coalition of state and local governments, together with environmental organizations, deeming global warming "the most pressing environmental challenge of our time,"[223] petitioned EPA to designate vehicle emissions as greenhouse gases and a threat to the health and welfare of the country, and thereby regulate them under Section 202 of the Clean Air Act.[224] EPA sought and received a large amount of public comment on the subject and eventually decided, for a number of reasons, not to take the requested action.[225] The coalition appealed to, and ultimately lost in, the United States Circuit Court for the District of Columbia.[226]

The coalition then brought their appeal to the U.S. Supreme Court.[227] The Court granted the coalition's writ of certiorari[228] and took the somewhat unusual step of articulating a telling reason for the grant of the writ: the "unusual importance of the underlying issue."[229]

---

220. *Id.* at 131.
221. 549 U.S. 497 (2007).
222. *Id.* at 527.
223. *Id.* at 505.
224. *Id.* at 510.
225. *Id.* at 511.
226. Massachusetts v. E.P.A., 415 F.3d 50, 58-59 (D.C. Cir. 2005).
227. Massachusetts v. E.P.A., 548 U.S. 903 (2007).
228. *Id.*
229. Massachusetts v. E.P.A., 549 U.S. at 506.

In a detailed ruling, the Court reversed the decision of the Circuit Court[230] and, in so doing, broke new ground on a number of issues, but the decision is not without significant criticism.

The opinion opened with a significant statement regarding the overarching issues surrounding the controversy—issues that, to date, remain a question in many individuals' minds. Justice Stevens directly stated that "[a] well-documented rise in global temperatures has coincided with a significant increase in the concentration of carbon dioxide in the atmosphere. Respected scientists believe the two trends are related."[231]

First, the Court considered the issue of standing, that is, whether the petitioners had the right to seek the relief they requested.[232] Because only one petitioner needed to show standing, of the numerous states, cities, and organizations that composed the coalition, the Court focused on the state of Massachusetts.[233] The Court found that Massachusetts had standing based on its affidavits that it was suffering by way of losing coastal land due to rising sea levels, believed to be attributable to climate change caused by GHG emissions.[234] Justice Stevens, for the Court, roundly rejected EPA's somewhat circular argument that no particular individual had standing on climate change matters, insofar as climate change, if it exists, would affect everyone.[235]

The Court did not buy EPA's argument that its refusal to regulate GHG emissions "contributes so insignificantly to petitioners' injuries that the agency cannot be haled into court to answer for them."[236] It rejected what it saw as an erroneous assumption by EPA that "a small incremental step, because it is incremental, can never be attacked in a

230. *Id.* at 535.

231. *Id.* at 505.

232. *Id.* Standing in an environmental protection case, under Supreme Court's *Lujan* test, requires a showing of "concrete and particularized, actual or imminent invasion of a legally protected interest"; a showing that the injury is fairly traceable to the defendant; and a showing that the relief sought will redress that injury. Lujan v. Defenders of Wildlife, 504 U.S. 555, 556 (1992). The standing concept, among other things, discourages individuals with no real stake in the outcome of a case from using the courts to redress perceived societal wrongs. One can easily imagine the hurdles in showing standing in the environmental realm where, in very few cases, does pollution or similar arguable wrongs affect any one individual in a particularized, concrete way. The very nature of environmental issues that affect a wide range of citizens over a vast geographic area would seem to be self-defeating with respect to standing. Indeed, in a number of situations, claims by environmental groups alleging injuries resulting from environmental issues have been rejected on standing grounds. *See, e.g.*, Steel Co. v. Citizens for a Better Env't, 523 U.S. 83 (1998).

233. Massachusetts v. E.P.A., 549 U.S. at 518.

234. *Id.* at 521-22.

235. *Id.* at 517-18.

236. *Id.* at 523.

federal judicial forum," finding that "accepting that premise would doom most challenges to regulatory action."[237]

Thereafter, the Court needed to consider what to do about the climate change issues. Obviously, the Court, like EPA, was faced with evidence from all sides about the impact of GHGs on the environment, and the credibility of climate change. The Supreme Court is not in the business of, and had no desire to engage in, analyzing the data and determining whether EPA should regulate GHGs. Rather, it rightfully recognized that EPA was best suited to consider matters within its delegated area of expertise.[238] What it did do, however, was require EPA to perform its job in the manner the petitioners sought.[239]

Thus, the Supreme Court required the EPA to either decide to regulate GHGs or decline to do so and, if so, articulate the reasons for such refusal that do not constitute an abuse of discretion.[240] One might very well argue that the decision of the Supreme Court in this case, fundamentally based on such mundane concepts as standing and statutory construction, was a thinly veiled attempt at environmental activism.[241] Indeed, the 5-4 split of the decision shook out along arguably philosophical lines.[242] While one might be quick to condemn such an outcome, a fair analysis must also take into consideration the initial determination by the EPA *not* to regulate GHGs, which may seem equally political, so far as to constitute (as the Supreme Court found) an abuse of the trust instilled within EPA to consider properly environmental matters.

Whatever the cause, the effect is clear. The Supreme Court will not permit EPA or any other agencies to ignore the evidence of climate change. If they choose to pay it no mind, their actions will be counter-

---

237. *Id.*
238. *Id.* at 535-36.
239. Massachusetts v. E.P.A., 549 U.S. at 536.
240. *Id.*
241. For a critical essay that "pulls no punches" in criticizing the perceived political goal of this decision, *see* Ronald A. Cass, *Massachusetts v. EPA: The Inconvenient Truth About Precedent*, 93 VA. L. REV. 75 (2007). In any event, the Court's holding here is important for both its far-reaching consequences and historical context. Juliet Eilperin commented that: "Massachusetts v. EPA may be seen as akin to the Roe v. Wade ruling on abortion, in which the Supreme Court answered a question that U.S. politicians were unable to resolve. In this case, the justices stepped in to referee a scientific debate that had become so highly polarized that individual states decided to sue the federal government for what they saw as its failure to protect them from a possible future catastrophe." Juliet Eilperin, *The Court's Green Light for Green Tech*, WASH. POST., April 8, 2007, at B3, *available at* http://www.washingtonpost.com/wp-dyn/content/article/2007/04/06/AR2007040601790.html.
242. Stevens' opinion was joined by Justices Kennedy, Ginsburg, Souter, and Breyer. The remaining justices dissented at least in part. Massachusetts v. E.P.A., 549 U.S. at 503.

manded. While the Supreme Court is not yet in the business of second-guessing the EPA on environmental issues, it will not stand idly by while EPA exercises such unquestionably poor judgment that completely ignores the reality of the climate-change situation.

In many ways, the timing of the Supreme Court's decision could not have been better. As discussed below, EPA did revisit the "greenhouse-gas-as-pollutant under the Clean Air Act" issue, within a different administration and in the context of a very different environment. The results, and the ensuing regulatory and legislative environment, were markedly different.

B. *The EPA's Finding on GHG*

Shortly after President Barak Obama's inauguration, which included a climate change leadership pledge,[243] federal regulators were quick to respond. The EPA made sweeping, previously-unaddressed observations in an April 2009 report.[244] Specifically, the EPA issued findings that emissions of greenhouse gases pose a danger to health and welfare.[245] In the report, EPA Administrator Lisa Jackson found that "greenhouse gases [in the atmosphere] endanger the public health and welfare of current and future generations."[246] The Administrator was straightforward on the cause of this tragedy, stating that the "high atmospheric levels" of greenhouse gas concentrations "are the unambiguous result of human emissions, and are very likely the cause of the observed increase in average temperatures and other climactic changes."[247] Nor did she soft-pedal the potential ramifications of inaction including: more frequent and intense heat waves; wildfires; degraded air quality; increased drought; and harm to wildlife, agriculture, water resources, and ecosystems.[248] Finally, she proposed to find that emissions from new motor vehicles contributed to the greenhouse gases that caused climate change.[249] These are not the sensitive or self-serving observations of an environmental group, but the findings of the nation's top environmental administrator[250] and her observations carry great force. Specifically, if her findings were adopted, then EPA would be empowered, under Section 202 of the Clean Air

243. *Obama Climate Change Pledge*, PRI, Nov. 24, 2008, http://www.pri.org/science/environment/obama-climate-change-pledge.html.
244. Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 78, 18886 (proposed Apr. 24, 2009) (to be codified at 40 C.F.R. § 1).
245. *Id.*
246. *Id.* at 18898.
247. *Id.* at 18886.
248. *Id.*
249. *Id.*
250. *Administrator Lisa Jackson*, EPA.GOV, http://www.epa.gov/aboutepa/administrator.html (last visited Apr. 6, 2011).

Act, to prescribe regulations regarding these emissions from new motor vehicles.[251]

At the time, it would have been shortsighted to believe that the concerns over climate change would stop with motor vehicles. Climate change had become one of the top issues on many voters' agendas,[252] and citizens would likely not stand idly by while the status quo was maintained. Voters expected sweeping changes from their new President and his Democratic majority in Congress.

C. *American Clean Energy & Security Act of 2009*

Voters did not have to wait long; just a few months after President Obama's inauguration, on May 15, 2009, Representative Henry Waxman of California introduced his own climate change measure, House Resolution 2454, the American Clean Energy and Security Act of 2009 ("ACE"), the stated purpose of which was: "[t]o create clean energy jobs, achieve energy independence, reduce global warming pollution, and transition to a clean energy economy."[253] ACE passed in the House of Representatives on June 26, 2009.[254] It is currently pending in the U. S. Senate.[255]

ACE has already won support in the boardroom. Prominent member corporations of the Chamber of Commerce resigned their membership in response to the Chamber's hostile stance on climate legislation:

> . . . Apple, Mohawk Paper and the utilities Pacific Gas and Electric, Exelon and PNM Resources — cited the chamber's climate policy as counterproductive. All said that some form of greenhouse gas regulation or legislation was coming and

---

251. For a discussion of the likely high costs of compliance with these regulations, *see* Jonathan Weisman & Siobhan Hughes, *U.S. in Historic Shift on CO2: Businesses Brace for Costly New Rules as EPA Declares Warming Gases a Threat*, WALL ST. J., Apr. 19, 2009, at A1, *available at* http://online.wsj.com/article/SB123997738881429275.html.

252. Scott Horsley, *2008 Election Issues: Climate Change*, NPR.ORG, http://www.npr.org/news/specials/election2008/issues/climate.html (last visited Apr. 6, 2011).

253. The American Clean Energy and Security Act of 2009, H.R. 2454, 111th Cong., § 1 (2009).

254. *H.R. 2454: American Clean Energy and Security Act of 2009*, GOVTRACK.US, http://www.govtrack.us/congress/bill.xpd?bill=h111-2454 (last visited Feb. 11, 2011).

255. Sadly, ACE and all other pending climate change legislation have been "shelved" as of July 2010, by Senate Democratic leaders for political reasons, resulting in a major setback to President Obama's ambitious energy plan. *See* Stephen Power, *Senate Halts Effort to Cap CO2 Emissions*, WALL ST. J., July 23, 2010, at A3, *available at* http://online.wsj.com/article/SB10001424052748703467304575383373600358634.html.

that they did not want to pay dues to an organization that appeared to be standing in its way.[256]

Should ACE be enacted into law, the effect it will have on U.S. businesses will be profound. Its provisions are wide-ranging and well beyond the scope of this article, but a review of key points is in order. ACE requires major utilities to derive increasing percentages of their electricity supply from renewable sources;[257] requires federal agencies to obtain their power from renewable sources;[258] changes energy efficiency standards on a wide range of matters, from lamps and other consumer appliances, to buildings;[259] and requires new emission standards for automobiles.[260]

Moreover, most applicable to the business community is Title III.[261] The very title could not be clearer: "Reducing Global Warming Pollution."[262] A review of the critical provisions within this Title leaves no doubt that the concept of man's impact on the environment in causing global warming has been settled, at least in the mind of Congressmen Waxman and, as of this date, a majority of the House of Representatives.[263]

This Title imposes significant requirements on EPA regarding the reduction of global warming pollution, the effects of which will be widely felt in the business community. First, the issue of GHGs as a major cause of climate change has been foreclosed: ACE proposes to amend the Clean Air Act to require EPA to "promulgate regulations to cap and reduce [GHG] emissions" over the next forty years, culminating in a 17% reduction.[264] Strikingly, ACE discusses the impact of deforestation on GHGs, requires EPA to report regularly to Congress on developments in climate change science, and reclassifies certain gases as GHGs.[265] From a business reporting standpoint, ACE requires certain reporting entities that exceed threshold GHG emission levels to report on their business.[266]

---

256. John M. Broder, *Storm Over the Chamber*, N.Y. TIMES, Nov. 19, 2009, at F1, F7, *available at* http://www.nytimes.com/2009/11/19/business/energy-environment/19CHAMBER.html.
257. The American Clean Energy and Security Act of 2009 § 101(d)(2).
258. *Id.* at § 103(a).
259. *Id.* at §§ 206, 211, 212 (2009).
260. *Id.* at § 221.
261. *Id.* at § 301.
262. *Id.*
263. The American Clean Energy and Security Act of 2009 § 311.
264. *Id.*
265. *Id.*
266. John M. Broder, *U.S. Issues Limits on Greenhouse Gas Emissions from Cars*, N.Y. TIMES, Apr. 1, 2010, at B1, *available at* http://www.nytimes.com/2010/04/02/science/earth/02emit.html.

D. *EPA's GHG Rule and Reporting Requirement*

In April 2010, the EPA stepped into the legislative void and political fray left by the Senate's hijacking of ACE.[267] The agency, taking its first official step down the road to regulate GHGs, issued final rules for GHG emissions for automobiles and light trucks, ending a thirty-year fight between regulators and automakers.[268] However, this GHG reporting program also sets the stage for potentially a bigger battle over GHG emissions from stationary sources like steel mills, power plants, and refineries.[269] The rules are anticipated to reduce GHG emissions by about 30% from 2012 to 2016, and save the average owner of a 2016 automobile about $3,000 in fuel over the life-expectancy of the vehicle.[270]

Now that the EPA has likewise finalized and effectuated its GHG endangerment findings,[271] its effects in the corporate boardroom are unclear. Notably, these new EPA rules have already generated a record number of lawsuits against the EPA on behalf of nearly one hundred parties, including fifteen states and fifteen members of Congress.[272] While none of these suits have been successful, the authors of this Article anticipate that the Supreme Court would uphold these and future GHG rules, consistent with its landmark GHG ruling in 2007. As a result, the GHG emission mitigation tide appears to have made a defining turn, and a return to the days of un-regulation is unlikely. Through Congressional default, the EPA is now poised to set federal limits on GHG gases using its powers under the Clean Air Act. Boards will have to formulate strategy and risk reduction in this regard.

E. *The SEC's Surprise Disclosure Guidance*

The SEC, because of its power to enforce securities laws and SOX, and to mandate disclosure of relevant information, is the entity most suited to regulate corporate responsibility in the area of climate-change disclosure.

In a surprise controversial and historic move, in February 2010, the SEC entered the climate-change fray.[273] The SEC published its inter-

---

267. *Id.*
268. *Id.*
269. *Id.*
270. *Id.*
271. Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, *supra* note 244. This action was a prerequisite to finalizing the EPA's GHG emission standards for light-duty vehicles. *Id.*
272. Jenna Greene, *Air Assault: 38 Lawsuits Filed Over New Greenhouse Gas Rules*, NAT'L. L. J., June 14, 2010, at 1, 10.
273. Press Release, SEC Issues Interpretive Guidance on Disclosure Related to Business or Legal Developments Regarding Climate Change (Jan. 27, 2010), *available at* http://www.sec.gov/news/press/2010/2010-15.htm.

pretive release to provide guidance to public companies regarding the agency's existing disclosure requirements as they apply to climate change matters.[274] This guidance came on the heels of the SEC receiving petitions from investors who "had close to $1.4 trillion under management."[275] While being careful to avoid giving an explicit opinion on the issue of climate change itself, the SEC did indicate that companies could be helped or hurt by GHG-related litigation, business opportunities, or legislation, and should promptly disclose such potential impacts to investors.[276] For example, banks or insurance companies that invest in littoral property that could be affected by storms or rising seas should disclose such business risks. As discussed below, this SEC guidance should be helpful to companies in determining how to disclose material climate-change risk and reward to investors.

F. Securities & Corporate Law and Climate Change

The corporate citizen may not sit back and relax unless and until ACE or another environmental bill is enacted into law or the EPA or SEC promulgates a new rule. Companies may find that existing laws provide novel ways of ensuring their compliance with sound environmental policy.

First, we may see the impact by the new application of old requirements. Corporate responsibility in the form of mandatory reporting of key material issues is nothing new. In the shadow of the Great Depression, the federal government took steps to ensure that corporations disclosed to potential investors all "material information" necessary to make an informed choice about an investment. Notably, these laws—the Securities Act of 1933[277] and the Securities Exchange Act of 1934[278]—do not specify precisely what actual, substantive categories of information might be "material."[279] Rather, it appears up to

274. Commission Guidance Regarding Disclosure Related to Climate Change, 75 Fed. Reg. 25 (Feb. 8, 2010) (to be codified as 17 C.F.R. 211, 231, 241).

275. Kara Scannell, *SEC Discord Could Stymie Schapiro's Efforts*, WALL ST. J., Feb. 6, 2010, at B1, *available at* http://compliancesearch.com/compliancex/news-and-current-events/sec-discord-could-stymie-schapiros-efforts/.

276. John Broder, *S.E.C. Adds Risk Related to Climate to Disclosure List*, N.Y. TIMES, Jan. 28, 2010, at B1, B7, *available at* http://www.nytimes.com/2010/01/28/business/28sec/html?scp=1&sq=s.e.c.+adds+climate+risk&st=nyt.

277. Securities Act of 1933, 15 U.S.C. § 77a (Westlaw 2010).

278. Securities Exchange Act of 1934, 15 U.S.C. § 78a (Westlaw 2010).

279. A full discussion of the concept of "materiality" in securities regulation is beyond the scope of this Article, but suffice it to say that certain environmental liabilities can and do rise to the level of materiality requiring disclosure. *See* Christina Ross et al., *Insurance Risk-Management Strategies in the Context of Global Climate Change*, 26 STAN. ENVTL. L.J. 251, 267 (2007) ("Over ninety percent of the largest publicly traded utilities have addressed climate change in recent filings."). This is compounded by SOX's more stringent disclosure requirements that arguably will cause companies to err on the side of more disclosure. *See* David Monsma & Timothy Olson, *Muddling*

the companies to determine, for themselves, what a reasonable investor might deem important in determining whether to invest in a given company.

1. Regulation S-K

Regulation S-K prescribes instructions for companies' SEC filings and mandates certain disclosures.[280] Certain Items in Regulation S-K have a profound impact on companies' disclosure duties with respect to climate change.

a. Item 101

Under Regulation S-K, Item 101, companies must disclose the "effect of existing or probable governmental regulations" upon their operations, working capital, earnings, and competitive position.[281] Of course, a discussion of the effect of compliance with existing laws—likely a framework within which the given company has operated for years and years—is routine for most organizations. But, more and more, those responsible for compliance with this once-rote requirement may find their jobs more difficult, especially in light of the new federal regulations analyzed above and the new ones that are likely to be placed into the regulatory pipeline. Boards will need to be vigilant.

b. Item 103

Item 103 of Regulation S-K requires issuers to disclose pending legal matters that are "material."[282] Interestingly, this would include proceedings known to be contemplated by governmental authorities.[283]

Given the current regulatory and litigative environment, the wise corporate guardian would be remiss in not considering that any flouting of environmental law might be short-lived and result in costly litigation. Moreover, given the expansive reading of the standing concept as set forth in *Massachusetts v. EPA,* discussed above,[284] organizations must be sensitive to the fact that the federal courts of the U.S. might now provide a previously unavailable forum for the redress of large-scale environmental wrongs perpetrated by an entity (or an in-

---

Through Counterfactual Materiality and Divergent Disclosure: The Necessary Search for a Duty to Disclose Material Non-Financial Information, 26 STAN ENVTL. L.J. 137, 144 (2007) ("an expansive view of [SOX] suggests that a heightened level of diligence is now required when determining whether there is a duty to disclose information that is *conceivably* material, financial or otherwise.") (emphasis added).

280. 17 C.F.R. § 229.10–229.802 (Westlaw 2010).
281. 17 C.F.R. § 229.101(h)(4)(ix) (Westlaw 2010).
282. 17 C.F.R. § 229.103 (Westlaw 2010)
283. *Id.*
284. *See* discussion *supra* Part VII.A.

dustry) over a wide geographic range, by an affected citizen (or even potentially more damaging, a large group of affected citizens).[285]

The enactment of ACE would certainly not serve to assuage concerns over environmental litigation, and the impact thereof must be considered by the prudent corporate steward. In an early draft of ACE, Section 336 allowed "any person who has suffered, or reasonably expects to suffer, a harm attributable, in whole or in part," to climate change, to bring a lawsuit for damages against the offending entity.[286] Such citizens can recover money damages per violation,[287] and the concept of a violation is even more noteworthy. A violation is "any effect" that is "currently occurring or at risk of occurring," and would even include any "incremental exacerbation" of a citizen's injury associated with a "small incremental emission."[288]

Thus, the traditional hurdle of causation—wherein an individual, plagued by similar harms emanating from a variety of sources, cannot identify the precise source that caused him the precise harm—has been turned on its head, and allows recovery against any organization arguably participating in the wrongful conduct.

Hence, an organization may not take comfort in the fact that it is a small fish in a large pond, operating only in the shadows of another, larger, or more culpable organization. The smaller organization may very well be the more suitable target of suit, and therefore, might bear an inordinate amount of responsibility for a harm to which it has only minimally contributed. Because such an organization can no longer stand idly by, it would seem that the best-reasoned view is to take any action necessary to ensure that one contribute not even a "small incremental emission" that might exacerbate climate change issues. To do so requires smart, focused, and expert leadership at the level of top management and board of directors.

---

285. *See* John Schwartz, *Courts Emerging as Battlefield for Fights Over Climate Change*, N.Y. TIMES, Jan. 27, 2010, at A1, *available at* http://www.nytimes.com/2010/01/27/business/energy-environment/27lawsuits.html. Major climate-change litigation is currently in play in three federal circuit courts of appeal. *Id.* These lawsuits have been filed by environmental groups, private lawyers, and state officials against large producers of GHG. *Id.* With respect to these cases, a professor at the University of Houston Law Center predicts that "the game pieces are being set for eventual Supreme Court review." *Id.*

286. Staff of H. Comm. on Energy & Commerce, 111th Cong., Discussion Draft American Clean Energy & Security Act of 2009 § 336(a), at 527-28 (Mar. 31, 2009). This particular section was abandoned in later versions of the bill. *See* American Clean Energy and Security Act of 2009 § 336 (as introduced in House, May 15, 2009) (omitting language quoted above).

287. Staff of H. Comm. on Energy & Commerce, 111th Cong., Discussion Draft American Clean Energy & Security Act of 2009 § 336(a), at 527-28 (Mar. 31, 2009).

288. *Id.*

c. Item 303

Item 303 of Regulation S-K[289] requires an even more subjective analysis of facts and circumstances. Specifically, Item 303 requires issuers to disclose information regarding the organization's "financial condition, changes in financial condition and results of operation" in the section entitled Management's Discussion and Analysis ("MD&A").[290] Included therewith is the requirement that the issuer disclose "known trends, events or uncertainties that are reasonably likely to have material effects" on the company's financial condition.[291]

It is not at all clear whether climate change issues need to be disclosed under Item 303. First, a corporation must disclose only information that is available "without undue effort or expense," and need not (but, indeed, may) attempt to anticipate future trends or events and the impact thereof on the business—so-called "forward-looking information."[292] A company need disclose only circumstances that are reasonably likely to occur, and only if those circumstances are reasonably likely to have an impact on future business—that is, the SEC adopts a predictability and materiality standard in determining whether a matter must be disclosed.[293]

The SEC considers information to be material if there is a "substantial likelihood that a reasonable investor would consider it important" in deciding whether to invest.[294]

Information about a company's climate-change policy might be of crucial importance to a particular class of investors. Thus, the failure to disclose as "immaterial" a company's irresponsible environmental policy, even if currently legal, may not be as "unimportant" or "immaterial" as the company might have thought.

2. Potential Liability

Section 10(b) of the 1934 Act, and regulations embodied in Rule 10b-5[295] therein, make it unlawful to make untrue statements or to fail

289. 17 C.F.R. § 229.303 (Westlaw 2010).
290. *Id.*
291. *Id.* at (a)(1).
292. *Id.*
293. *Id.* at (a)(3)(ii).
294. TSC Industries, Inc. v. Northway, Inc., 426 U.S. 438, 449 (1976).
295. 17 C.F.R. § 240.10b-5. This rule broadly describes those actions to which liability may attach: "It shall be unlawful for any person, directly or indirectly, by use of any means or instrumentality of interstate commerce, or of the mails, or of any facility of any national securities exchange, (a) To employ any device, scheme or artifice to defraud, (b) To make any untrue statement of a material fact or to omit to state a material fact necessary in order to make the statements made, in light of the circumstances which they were made, not misleading, or (c) To engage in any act, practice or course of business which operates or would operate as a fraud or deceit

to include necessary information.[296] Given the foregoing, if it is deemed that climate change matters are material, and if the organization has failed to disclose them, there could be devastating criminal or civil penalties for the company and its officers and directors.

Rule 10b-5 could also embody a private right of action, whereby an injured plaintiff may bring a lawsuit, including a class action lawsuit, for violations thereof.[297] Potential plaintiffs need not be confined to those wishing to make a political statement by bringing suit on climate change issues. If a company's stock price drops precipitously because of the logical consequence of a climate change matter which was ignored and not disclosed, then any investor in the company's stock is a potential plaintiff.[298]

G. *Science and Fiduciary Duty*

The Delaware General Corporation Law envisions that directors will justifiably rely not only on officers and employees of their companies, but also on others whose "professional or expert competence" lies within the referenced area, and which the corporation has selected "with reasonable care."[299]

This raises interesting implications in the context of climate-change science. Climate-change science and climatology in general, present issues likely beyond the ordinary director's knowledge. Even so, it similarly seems unlikely that a reasonable director could plausibly assert that, in connection with the exercise of his directorial duties for a company in the cross-hairs of the climate-change movement, he or she was unaware of climate change issues. Accordingly, some inquiry with the experts must be initiated.

As discussed in this Article, there is no dearth of scientific information regarding climate change. One may find competent, seemingly

---

upon any person in connection with the purchase or sale of any security." *Id.*

296. *Id.*

297. Edward X. Clinton, Jr., *The Private Right of Action Under Section 10(b) and Rule 10(b)-5*, CLINTON L. FIRM: COMMERCIAL & SEC. LITIG. BLOG, Jan. 17, 2011, http://clintonlawfirm.blogspot.com/2011/01/section-10b-and-rule10b5.html.

298. *See, e.g.*, Basic v. Levinson, 485 U.S. 224 (1988). That is, a plaintiff need not be only an environmentally conscious one to prevail in such a climate-change related proceeding. Indeed, the climate-change matter need not have been at all relevant to the particular plaintiff, and that plaintiff need not prove that he or she based an investment upon a decision regarding the disclosure (or lack thereof) of a climate-change matter. *See id.* at 243. The "fraud on the market" theory, premised upon the Efficient Market Hypothesis, states that, insofar as the market place will reflect the true value of all relevant disclosed information, investors are permitted to sue even without a showing that they personally relied on information disclosed. *See id.* All investors need show is that they purchased the underlying investment. *See id.*

299. DEL. CODE ANN. tit. 8, § 141 (Westlaw 2010).

well-reasoned scientific opinion, falling on both sides of the GHG climate-change link. What, then, must a board member do? Is it sufficient to seek opinions from only those experts who support that director's individual beliefs regarding GHGs and climate change? Or must he or she consider and weigh both sides of the argument?[300]

Once again, echoes of *Massachusetts v. EPA* resonate, where, the Supreme Court second-guessed findings of an administrative agency that it did not consider plausible or relevant.[301] The decisions of federal administrative agencies are given great deference by the courts,[302] much like the discretion and protections afforded directors by the business judgment rule.[303] Does the willingness of the Supreme Court to second guess an agency's decision, and the plausibility of the foundations for that decision, portend closer scrutiny of the basis for a director's decision? It seems this is increasingly likely. Can a massive polluter surround itself only with scientific opinions that climate change is a "hoax" in defense of its inaction or non-disclosure? The safe answer is "no."

VI. Climate-Change as a National and Global Security Threat

As we soberly lifted the specter earlier in this Article, climate change's collision with national and global security could someday catch the eye of state or federal court judges. This Article addresses that proposition. National security agencies commonly accept the proposition that global warming could exacerbate national threats such as disease, drought, famine, and mass migration.[304] This could ultimately result in regional conflicts and the need for America's armed forces to engage in peacekeeping, defense, and humanitarian efforts both at home and abroad.[305]

---

300. One scholar argues that "[t]he board of directors not only has the fiduciary duty to seek out information to guide their decision-making, both financially and socially, but they are also responsible for bringing 'a visionary assessment of how such activities, when properly integrated, can deliver future value for the firm.'" Janet E. Kerr, *Sustainability Meets Profitability: The Convenient Truth of How the Business Judgment Rule Protects a Board's Decision to Engage in Social Entrepreneurship*, 29 CARDOZO L. REV. 623, 634 (2007) (quoting HERMAN B. LEONARD & V. KASTURI RANGAN, CORPORATE SOCIAL RESPONSIBILITY STRATEGY AND BOARDS OF DIRECTORS, BOARDROOM BRIEFING 14 (Winter 2006), *available at* http://www.exed.hbs.edu/assets/Documents/board-responsibility.pdf).
301. Massachusetts v. EPA, 549 U.S. 497 (2007).
302. Chevron, U.S.A., Inc. v. Natural Resources Defense Council, Inc., 467 U.S. 837 (1984).
303. *See supra Part IV.*
304. *See* Op-Ed., *The Climate and National Security*, N.Y. TIMES, Aug. 18, 2009, at A16, *available at* http://www.nytimes.com/2009/08/18/opinion/18tue1.html. For the most authoritative law review article on the national and global security collision with climate change, *see* Freeman & Guzman, *supra* note 35.
305. *Id.*

For the first time, the Pentagon and the intelligence community are taking a serious look at the national security implications of climate change.[306] There is growing concern that these types of climate-induced crises could topple governments and feed terrorist movements.[307] So concerned is the CIA about the national security impact of climate change, it now runs a program that employs spy satellites that assess the hidden complexities of environmental change for the research benefit of about sixty scientists.[308] Truly, global warming is making for some very strange bedfellows. These spy satellites are even tracking "particular ice floes as they drift through the Arctic basin rather than just monitoring static sites."[309]

One legal commentator cogently submits that both the U.S. and other developing nations have a legal and moral obligation to change their consumption behavior in order to alleviate the security and welfare threat to other nations from these "unsustainable patterns of consumption."[310] Does that legal duty fall to not only the U.S. government, but also to corporate America? While it is beyond the scope of this Article to delve deeply into this important query, the authors encourage further research in this arena because, in the foreseeable future, a court may take judicial notice that climate change is an observable fact supported by science and the laws of nature,[311] making it ripe for such a judicial declaration. That would be the first step down the slippery slope of judicial notice of the security havoc that climate change can induce globally, opening the door wider to some

---

306. John M. Broder, *Climate Change Seen as Threat to U.S. Security*, N.Y. TIMES, Aug. 9, 2009, at A1, *available at* http://www.nytimes.com/2009/08/09/science/earth/09climate.html. Domestically within the U.S., there's an equally stark security threat. *See* David A. Fahrenthold, *Report on Warming Offers New Details: Estimates Specify Effects on Different Regions of U.S.*, WASH. POST, June 17, 2009, at A3.
307. *Id.*
308. William J. Broad, *C.I.A. Revives Data Sharing on Environment*, N.Y. TIMES, Jan. 5, 2010, at A1, A13, *available at* http://www.nytimes.com/2010/01/05/science/earth/05satellite.html.
309. *Id.* at 13.
310. Sanford E. Gaines, *Sustainable Development and National Security*, 30 WM. & MARY ENVTL. L. & POL'Y REV. 321, 368 (2006). With Professor Gaines underscoring the fact that the U.S., with just 5% of the world's population, is responsible for emitting 24% of the total carbon dioxide, it is not surprising that he would make these provocative advocacies. *Id.* at 366.
311. For two excellent law review articles that address climate change and judicial notice, *See* Stephanie Tai, *Uncertainty About Uncertainty: The Impact of Judicial Decisions on Assessing Scientific Uncertainty*, 11 U. PA. J. CONST. L. 671, 696 (2009) ("The dangers of the [U.S. Supreme] Court making its own determinations on scientific and medical issues is that such determinations will fix into place 'science' that could be ultimately undermined by additional studies."); Emily Hammond Meazell, *Scientific Avoidance: Toward More Principled Judicial Review of Legislative Science*, 84 IND. L.J. 239, 243 (2009) ("The doctrine of judicial notice, for example, relies on science at its most certain to preclude the need for proof of 'things which must happen according to the laws of nature . . .'").

frivolous and perhaps some meritorious lawsuits against corporations and boards.

In a general context, we do note that, using the "rubric of sustainable development, the [Supreme] Court [of India] took judicial notice of the precautionary principle and the polluter-pays principle as principles of customary international law" in litigation brought by an NGO "against the government of India to protect public health from the leather and tannery industries."[312] Most notably, an NGO initiated this litigation.[313] In the future, the litigation equation will likely target an American publicly-held company. The gravamen of that suit will have some echoes of how excessive GHG emissions from that company spawned a new terrorist movement or brought drought in a developing nation. The risk management lesson here is that the climate-change director and the audit committee need to team up and raise their collective consciousness about how climate change's impact on national and global security could make their companies more vulnerable in unforeseeable ways.

VII. Conclusion

This Article has sought to illuminate the need for a climate-change related restructuring in the corporate America's boardrooms in the midst of a continuing financial crisis; aggressive government intervention in the affairs of corporations; confusion and skepticism in rapidly changing GHG policy, regulation, and law; and rising global temperatures that have triggered urgent concerns from the national security and intelligence communities. A climate-change director who can give strategic clarity to this picture and collegially change the climate in the boardroom is an affirmative manifestation to all stakeholders, including shareholders and the government, that the board is committed to prudent climate-change risk management and disclosure in this new carbon-constrained world. By adding a climate-change expert to the board of directors, corporations and individual directors may be able to insulate themselves from potential liabilities, guide the company in a responsible direction, and even deliver extra value to shareholders.

312. *See* Carl Bruch, *Is International Environmental Law Really "Law": An Analysis of Application in Domestic Courts*, 23 PACE ENVTL. L. REV. 423, 439 (2006) (citation omitted).
313. *Id.*