WHARTON
MAGAZINE

SURVIVAL SKILLS

A meeting of Wharton's strategic minds on sustaining success in an uncertain global economy.

Steve Krognes, W'92
CFO, Genentech

EDITION FOUR | FALL 2011

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PORSCHE INTELLIGENT PERFORMANCE

PORSCHE

A lunchtime discussion at the Wharton Founders' Retreat 2011. Wharton students, alumni and faculty gathered at General Assembly in New York City to introduce the newly matriculated MBA class to the Wharton entrepreneurial community. Capt. Kirk was a popular part of the eclectic interior design at General Assembly.

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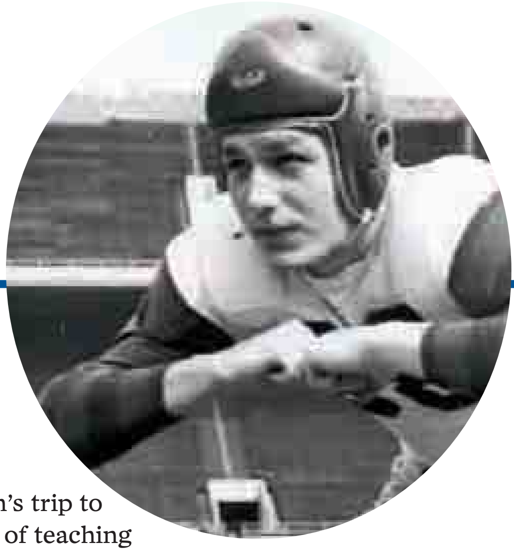

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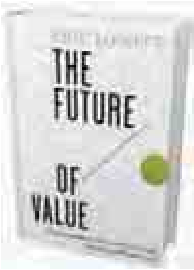

A Message from the Dean

The fall is what I like to call "welcome season" at Wharton. Every day, it seems, I have the chance to meet a new student, faculty member or speaker. You might think I would get tired of saying, "Welcome to Wharton"—but I don't. I never do. It is the best place in the world to study business and it is made better each year with the infusion of new minds, bringing with them new perspectives and ideas.

The additions to our community this year include 22 outstanding faculty from top-flight institutions and more than 1,600 accomplished new students across our MBA, MBA Executive, Undergraduate and Doctoral Programs. All of them the best and brightest, they come to us from across the nation and from 83 countries around the world. What's more, the entering full-time MBA class is 45 percent women—a record for Wharton and across our peers—and women comprise more than 40 percent of the single-degree undergraduate class for the second year in a row.

Our new students join us knowing they have an extraordinary opportunity before them: to build relationships with exceptionally talented and motivated classmates, to explore diverse new avenues for professional and personal fulfillment, and, especially, to learn from the most knowledgeable and highly cited business faculty in the world. They know that this great research university offers them advantages that they could not get anywhere else, and that their time here will be as demanding as it is exhilarating.

I bet you remember the feeling.

For my part, it is a pleasure to watch them begin this next great chapter of their intellectual and professional development—perhaps the most formative chapter of their lives. They are ready, they are eager, and we are confident that they will make the most of all that Wharton has to offer.

Thomas S. Robertson
Dean and Reliance Professor of Management and Private Enterprise

ON THE WEB

The Dean's Blog

To read more from Dean Robertson, visit his blog at http://www.wharton.upenn.edu/about/from-the-dean.cfm.

Editor's Letter

I began my tenure as editor of *Wharton Magazine* in August, and immediately I immersed myself in the campus goings-on. I attended the customary department meetings, shook hands and memorized the names of dozens of Wharton's competent and energetic faculty and staff. I also had the pleasure of sitting in on a guest lecture by private investor and businessman extraordinaire Sam Zell, and witnessing the annual Iron Prof competition.

I began to grasp that the "campus goings-on" at Wharton do not just happen on the campus in University City, the greater Philadelphia area or the U.S. for that matter. The research on quantitative finance that will come out of Wharton's new Jacobs Levy Equity Management Center for Quantitative Financial Research could impact how finance is done everywhere and anywhere, and was made possible through the generosity of Wharton alumni **Bruce I. Jacobs, G'79, G'86, PAR'10,** and **Kenneth N. Levy, WG'76, G'82**.

Wharton's wide impact can also be felt in government. No matter your political persuasion, most of us can agree that governments should keep their books straight and their investments in order. Three Wharton alumni are charged with just that task at the state level, as the treasurers in Alabama, North Carolina and Pennsylvania: **Young Boozer III, WG'73**; **Janet Cowell, C'90, G'95, WG'95**; and **Rob McCord, WG'89**, respectively. The role of treasurer has gained in prominence and importance in recent years. These independently elected officials are tackling the front-and-center issues of our day, from the sovereign debt crisis to the underfunding of pensions to the cost of healthcare. No wonder the position has attracted top-flight banking and financial pros.

Speaking of the critical issues of our day, what's more important than the state of the global economy? Uncertain at best, unhinged at worst, it poses a challenge to business leaders in the near term, if not the medium term. It was not difficult to find Wharton professors and alumni willing to illuminate sustainable business strategies to succeed in such a climate. Our cover story on page 18 reveals their diverse set of insights.

Still only weeks into the job, I also became familiar with the Wharton Alumni Business Showcase, which brought together alumni on both sides of the startup experience—investors and entrepreneurs. I learned about the Faculty International Seminar (FIS) and its recent trip to South Africa and Kenya, which like FIS trips before, will lead to new insights and innovations being taught in classrooms back on Wharton's campus.

And so, I declare myself immersed. One of the joys of overseeing your alumni magazine is that the rich and never-ending stream of activity makes for good fodder for these pages. I just wish we had more pages. I do hope, however, that you enjoy the ones that follow.

Matthew Brodsky
Editor

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Thanks for the Compliment

I just received the Summer 2011 issue, and, I must say, what an improvement in the format! Much more visually appealing, much easier-to-read font sizes and an overall pleasure to hold in your hand.

Rafael L. Nones, W'71

Toleration and Great Leadership Training

As a Vietnam veteran, I enjoyed your article, "Commanding the Field" (Summer 2011, P. 28). It triggered a lot of memories. Something else speaks to the outstanding makeup of the five Wharton MBAs. People above the age of 22, or 23, will have an extremely difficult time. Once we have been out in the world, and have developed a stronger adult sense of self, it takes a lot to tolerate a gunnery sergeant's constant screaming and humiliation. Even at 24-hours, it can be a shock.

Semper Fi to Marine Robert Seo. His comments about having to react when things aren't going well are spot-on. In officer basic training, the constant refrain was "what will you do Lieutenant ... NOW!?" Best leadership training I ever had. Of course, Wharton Grad is a close second.

Thanks for a great article.

Walter T. "Toby" Decker, WG'69

Putting People and Training First

Your story about Wharton MBA students learning leadership skills during their 24-hour Marine Corps boot camp program ("Commanding the Field") missed perhaps the most important point about how the Marines develop leaders. While the article focused on obvious aspects of rigor and the team-based training, what really separates Marine Corps leadership training is their emphasis on placing top performers in training roles.

That's right; the Marines actually pull their top performers—both officers and enlisted—from the front lines and use them as trainers, sometimes for two- and three-year stints. The boot-camp instructors who interacted with the Wharton students all endured a highly selective process to become part of the Officer Candidate School staff. Training and leader*ship development duties are viewed as some of the best and most well rewarded assignments within the Marine Corps. A quick look at the biographies of top Marine generals and enlisted personnel will all have one thing in common: They all served significant time away from the front lines in important training and leadership development roles.

As a former Marine Corps officer, my one piece of advice is that, if you want to truly emulate the Marine Corps way, focus on the people—not the rigor.

Patrick Lefler, WG '88

What Magazine Is This?

When I received my copy of *Wharton Magazine* with the pic of the young lady in military gear, I thought, "What magazine is this?"

Interesting article about the "leadership" training of the Wharton students at Quantico ("Commanding the Field"). I can relate because, as a Wharton MBA—circa 1969!—I attended as an active-duty Army officer, having recently returned from a 20-month Vietnam tour.

My MBA served me well in my 30-year career, and I have thought about writing an article to highlight the similarities in leadership and management between the military and business. Just as my undergraduate university, USMA-West Point has sustained a top three rating for many years. So has Wharton in the MBA field. Proud to be a graduate of both!

Col. James B. Lincoln (Ret.), WG'69

Send your letters via email to letters@whartonmagazine.com or via traditional mail to: Letters, Wharton Magazine, Wharton External Affairs, 344 Vance Hall, 3733 Spruce Street, Philadelphia, PA, 19104-6360. Letters may be edited for clarity or brevity.

Like Eskimos—Really?

I feel the contradiction running throughout the article, "Ethics Beyond Borders" (Spring 2011, P. 34), trying to sell ethics to Wharton business graduates—a little like trying to sell ice to Eskimos. Most of my career, off and on, was in the hotel industry in management, first sales then marketing, finally as general manager in commercial hotels and resorts.

There has never been a time in more than 30 years when I have worked for vice presidents that my instructions were "do whatever it takes, no matter what." My sense of ethics and honesty cost me a job here and there. My personal ethics are these:

I wouldn't do anything that would embarrass my wife, my family, my mother and father if it appeared in the morning papers.

Either you know what's right and you live by it, or you don't. You can't teach morality or legislate it.

C. Roger Fulton Jr., WEV'68

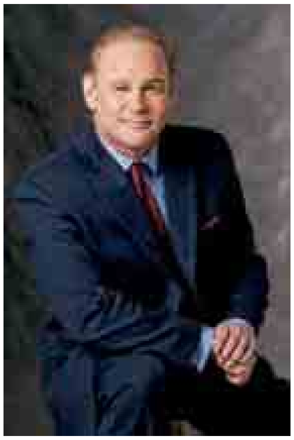
Debrief

One Eye on Policy, the Other on the Books

Three state treasurers are solving society's top crises, all in the name of public service.


Young Boozer III, WG '73


Janet Cowell, C'90, G'95, WG'95


Rob McCord, WG'89

Standing at the intersection of politics and business are three Wharton alumni—independently elected state treasurers who are able to combine their interests in finance and public service and tackle some of our nation's biggest problems**.**

As **Janet Cowell, C'90, G'95, WG'95,** the first female treasurer for North Carolina, says, "Treasurer is an interesting position because it combines the business world with the political world."

She came to the post after four years in the North Carolina Senate and three years on the Raleigh City Council, and with private-sector experience as a financial analyst with HSBC Bank and Lehman Brothers.

One of the biggest attractions for her is the operations component of designing systems and "running your own shop"—in her case an agency with more than 400 employees.

For **Young Boozer III, WG'73,** state treasurer for Alabama, public service is important.

"The state of Alabama has been really good to me and my family, and I wanted to return the favor," he says, mentioning his father (a Crimson Tide football star and state luminary) and his grandfather (a former mayor).

Boozer III's service started after nearly four decades in banking, more than half at Colonial BancGroup, when he accepted a request from a friend that he serve as Alabama's financial advisor. His job consisted of solving a financial problem involving derivatives. He saved the state more than $100 million.

"No good deed goes unpunished," he quips.

That success led to his role as deputy finance director, followed by the sitting treasurer asking him to run as her successor.

In public service and in the banking business, Boozer seems to have been handed problems that needed quick decision-making and successful resolutions, and he seems to enjoy that.

Pennsylvania's treasurer, **Rob McCord, WG'89,** credits Wharton's curriculum with giving him the tools to succeed, as do Boozer and Cowell.

"Credibility and competence and confidence. It substantially added all three," says McCord, who used his MBA to pivot from being a staffer and lobbyist on Capitol Hill into a career in venture capitalism, namely at Safeguard Scientifics and the Eastern Technology Council.

WHARTON AND PUBLIC POLICY

Robert P. Inman, Richard King Mellon Professor of Finance, suggests that many MBA students come to Wharton with their sights already set on public policy, either because of their undergraduate education or a previous job, such as the case of McCord. Professionals in these roles tend to have a strong personal bent toward public service, Inman says. They have to to take on such a tough assignment.

"To take on a job [such as this] is a real commitment," Inman says. "It has important sacrifices to it, not just financial but [in terms of] time."

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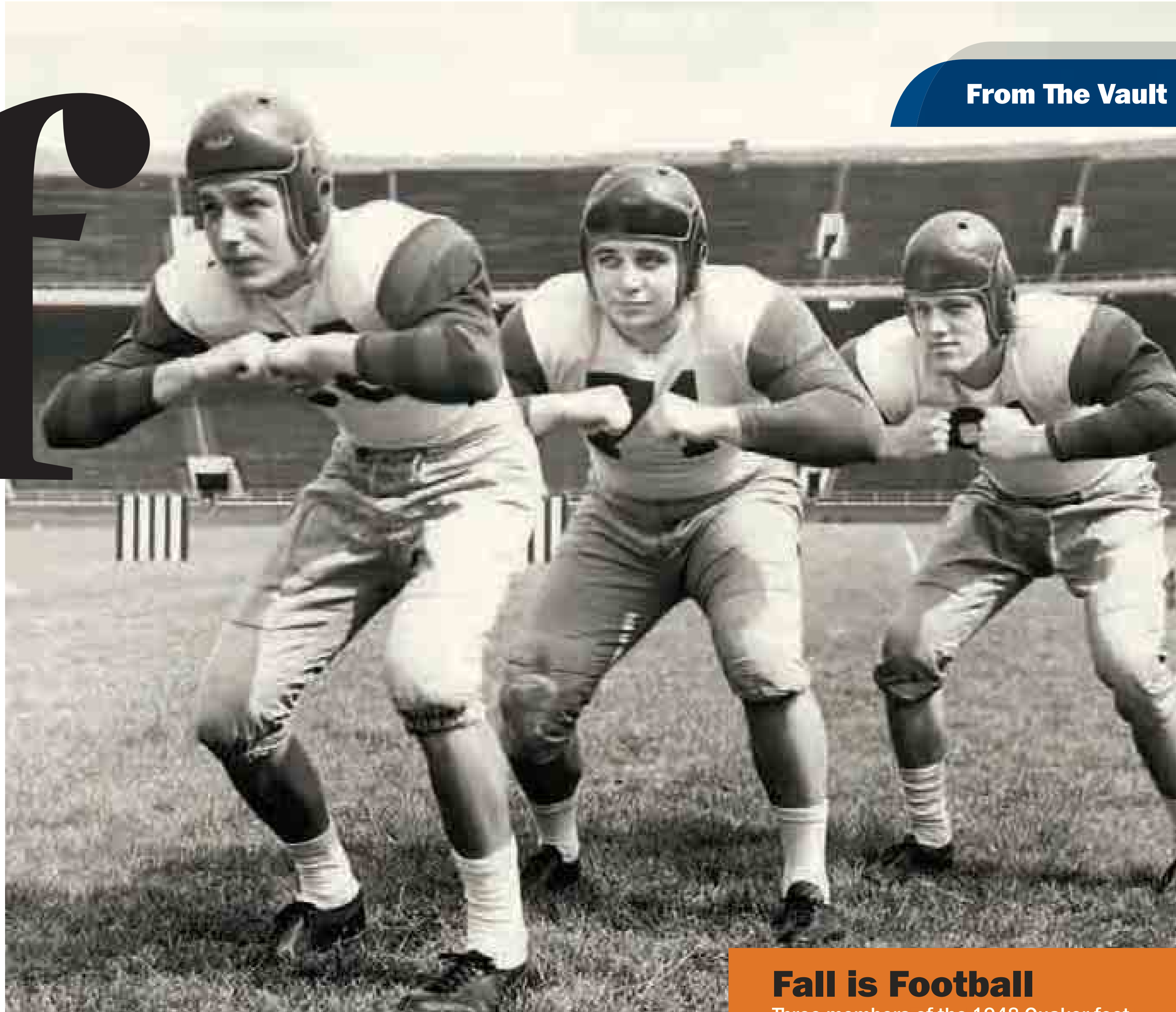


Fall is Football

Three members of the 1948 Quaker football squad (left to right: **Alex Jaffurs, W'52,** quarterback; **Don De Torre, W'50,** tackle and co-captain; **Allan Power, C'51,** end) attempt to stay menacing during a team practice. Jaffurs received a scholarship to attend the Wharton School, play quarterback and participate on the Penn basketball team. After receiving a law degree from Yale University and serving in the U.S. Navy in the 1950s, Jaffurs settled in the Pittsburgh area at his own private practice. Over the course of his career, he was elected mayor of Wilkinsburg and served as Allegheny County solicitor and chief council of the Pennsylvania Liquor Control Board. De Torre retired from American Metal Products Co. in 2005 as vice president. Under Coach George Munger, the '48 team went 5-3. The season before, however, they went 7-0-1, including a Thanksgiving victory over Cornell 21-0, and finished No. 7 in the AP poll.

Cowell believes her public service was ingrained at a very young age by her parents, a Methodist minister and a school teacher.

Inman adds, though, that Wharton helps such already motivated individuals understand how public service can be a valuable part of professional life, of their "lifetime portfolio." The School allows students with these interests to pursue them in a formal way in their classes and other activities. Inman teaches a course at Wharton, for instance, that helps students bring their financial skills directly to bear on government's problems. Of course, Wharton also provides the rigorous business-school training in management, finance and accounting that are as essential for government officials as they are for someone entering the corporate world.

As Boozer explains, he built upon his Stanford University undergraduate degree with the "rigorous and quantitative education" at Wharton.

"We encourage their interests when they arrive, we give them the formal training they'll need," Inman says, echoing many of the same sentiments from Boozer, Cowell and McCord.

Besides the three current state treasurers, Inman says, Wharton has helped to produce other public servants such as former Michigan treasurer **Robert Bowman, WG'79,** and Philadelphia Mayor **Michael Nutter, W'79.**

"[Nutter] is the perfect example of someone who has taken his Wharton experience and turned it into a very successful and productive career in the public sector," Inman says.

THE TURNAROUNDS

Another perfect example, Boozer has applied his education and expansive private-sector experience, along with his passion for public service, to deal with the effects of the crisis in the financial markets upon his state's Prepaid Affordable College Tuition program, which sunk so low in 2009 that parents sued. Boozer has since secured a settlement that preserved significant value for investors.

"The resolution of it is the best possible outcome given the circumstances," he says, adding that a financing plan and operational program has been put in place for years to come.

With this security, the 40,000 plan participants will receive payouts for their children at fall 2010 tuition rates.

Boozer came into office on Jan. 17, 2011, with the college savings program as the highest campaign priority and with two slogans being: "Yes, Young Boozer is my real name," and "funny name, serious leadership."

"Little did I know that my name would become the stickiest name in politics," the Republican says.

In Pennsylvania, McCord has also tackled the impact of the tumultuous investing environment on both the commonwealth's prepaid tuition 529 plan and pension funds. He admits to coming into office in 2009 without fully appreciating "how much of a turnaround operation it was going to prove to be" in the wake of the 2008 market collapse.

The Keystone State's pension funds, two of the largest in the nation, had suffered 30 percent loses. Its guaranteed 529 college savings plan—similar to Alabama's in that families paid for future college credits at yesterday's rates—was 70 percent funded. After McCord's work, it is now 95 percent funded. The pension fund is seeing 11 percent to 18 percent returns.

"That was a huge amount of turnaround," McCord says.

Pennsylvania's Democratic treasurer ensured the current and future success of the college tuition fund by reaching across the proverbial aisle to Republicans in the state legislature. And as sole fiduciary for the fund, he decided not to bet on fixed-income investments.

> "Treasurer is an interesting position because it combines the business world with the political world."

Instead, he bet heavily in 2009 on some market recovery, and he introduced financial instruments that were new to the plan, like mezzanine debt and hedge funds. This provided solid, double-digit returns (well north of the 8 percent actuarial assumption) with less risk and volatility, according to McCord, who adds that the fund also "de-risked" a bit before the summer gyrations in equity markets.

Success with the pension funds came in part, he says, because the treasurer's department marketed them heavily, guaranteeing the largest pool of money upon which to maximize returns.

HEALTH PLAN M&A AND AAAS

Cowell has recently been discussing mergers and acquisitions in North Carolina—for the state health plan. For more than two decades, the plan was run out of the legislative body, which was not the "ideal governance structure," Cowell says. No one else, however, wanted to take over the fund ... until Cowell.

"I just felt like, if you're going to be in public office, why not step up to the plate and take on the big issues," she says.

Come January 1, 2012, Cowell and her office will take charge. She is already working to appoint a new fiduciary board for the health plan—a "really educated professional board" populated with the major stakeholders—to help make decisions to improve medical outcomes for the beneficiaries as well as reduce costs for North Carolina.

Unlike her peers in Pennsylvania and Alabama, though, Cowell didn't inherit a troubled operation.

"We have a very good fiscal legacy in the state of North Carolina," the Democrat says. "It's more about protecting something that's really good."

Namely, the state's AAA credit rating.

In today's uncertain and fearful economic climate, though, it isn't all about what you do—but about events outside of your control. Cowell says that she fears that ratings agency Standard & Poor's will downgrade the rating for the United States again. S&P has already noted that states can only be rated one grade higher than the federal government, so at the moment, North Carolina's AAA rating is safe.

This depends, though, on what action, or lack thereof, the congressional supercommittee takes, as mandated by the debt ceiling agreement forged by President Barack Obama and Republicans in Congress during the summer. Currently, Cowell is lobbying Congress and talking with other AAA-rated states.

That Wharton grads are popping up as treasurers to manage these challenges also says a lot about the post itself.

It's a "market signal," McCord says, that the treasurer "is becoming more powerful, more important."

"I think that it's an interesting niche in the political world. It particularly lends itself to people with business experience," he says.

—*By Matthew Brodsky*

Bottom Line

The Wharton School is known for its intense and superbly regarded undergraduate and MBA programs. Its research centers and initiatives serve as an intellectual hub at Wharton and the broader University of Pennsylvania for faculty, students and members of the business community. Here, stakeholders can come together to study and debate key business challenges. Their work generates courses, academic programs, community outreach, published research and partnerships among academics, government and industry.

40

First-year MBA students who are chosen every February through the Wharton Center for Leadership and Change Management to serve as Leadership Fellows. In their second year, they are charged with providing every first-year student the opportunity to enhance their leadership potential through the development of practical tools and concrete strategies applicable in every area of life.

20,000

Small businesses and entrepreneurs that have benefitted from the support of Wharton's Small Business Development Center.

BY ERIKA KARP, W'85
Managing Director, head of global sector research, UBS Investment Bank

Lady Gaga and Succeeding With Sustainable Investing

Great investors often demonstrate an extraordinary sense for the rhythm of the markets. Great entertainers seem to have precisely the same skill in their business.

In seeking strong financial returns for the long run, though, the short-term strategies that seem so prevalent today might undermine the efforts of an investor. I argue that we can learn a lot about successful investing from Lady Gaga.

Her extraordinary performance isn't predicated upon following the consensus path. In her dancing, for instance, she moves on the one and the three beat, rather than on the usual two and four. It's different, nontraditional and certainly strikes the right chord for her audience. It's fair to say that the success of her performance can't be matched by that of most portfolio managers. So maybe investors can take a lesson from her differentiated approach.

The different approach I'm referring to for capital-market participants is called "sustainable investing." The greatest, single impediment to this investment discipline is that short-term, consensus thinking. This is unfortunately propagated by suboptimal incentive structures across industries. Like Lady Gaga's music, sustainable investing is most suitable for those with the courage of their convictions and the patience to think about the needs of all the diverse stakeholders. These stakeholders are not just those with the loudest voices in the crowd. In times of economic stress in particular, all voices need to be heard, though ultimately their roar could become deafening.

JAMES DEVANEY/GETTY

In other words, the well-being of all the customers, employees, suppliers, communities and minority shareholders from which and for whom companies generate their ultimate success should be cared for in a manner that will lead to truly sustainable business performance. In fact, attention to all these constituencies should be considered a proxy for quality business management, strategy and execution.

Sometimes taking a different approach can lead to amazing results. Companies and financial analysts who don't get such fantastic results might consider altering the nature of their investment analyses and changing their rhythm. They ought to try asking different questions and digging deeper to look for signals about the sustainable drivers of business growth for the long run. An analysis into corporate performance around issues relating to environmental, social and governance (ESG) practices can yield a great deal of predictive insight into the ultimate outcomes for earnings, cash flows and share prices.

We can only hope to find shares that show even a modest portion of the meteoric rise of Lady Gaga's stock. Perhaps we could even find ourselves on the "Edge of Glory."

ON THE WEB

This article first appeared online on the Wharton Blog Network, our open forum of ideas about business, entrepreneurship, leadership and more. Contributors include Wharton faculty, administrators, alumni and students. To read more, visit www.whartonmagazine.com/blog.

25+ Research centers and initiatives, which reflect the diversity and depth of interests and activities at the School, such as the Sol C. Snider Entrepreneurial Research Center, the Carol and Lawrence Zicklin Center for Business Ethics Research, and the Risk Management and Decision Processes Center.

1 New research center launched in 2011, the Jacobs Levy Equity Management Center for Quantitative Financial Research.

100 Workers employed at an animal feed plant in Zambia, headed by the Wharton's Societal Wealth Program, which produces poultry feed for more than 600 new chicken farmers who grow and sell the equivalent of 2.5 million daily protein servings per month in a region generally regarded as poor and nutritionally deficient.

3 Professors who are heads of more than one center or initiative: Ian C. MacMillan, Peter Cappelli and Olivia S. Mitchell.

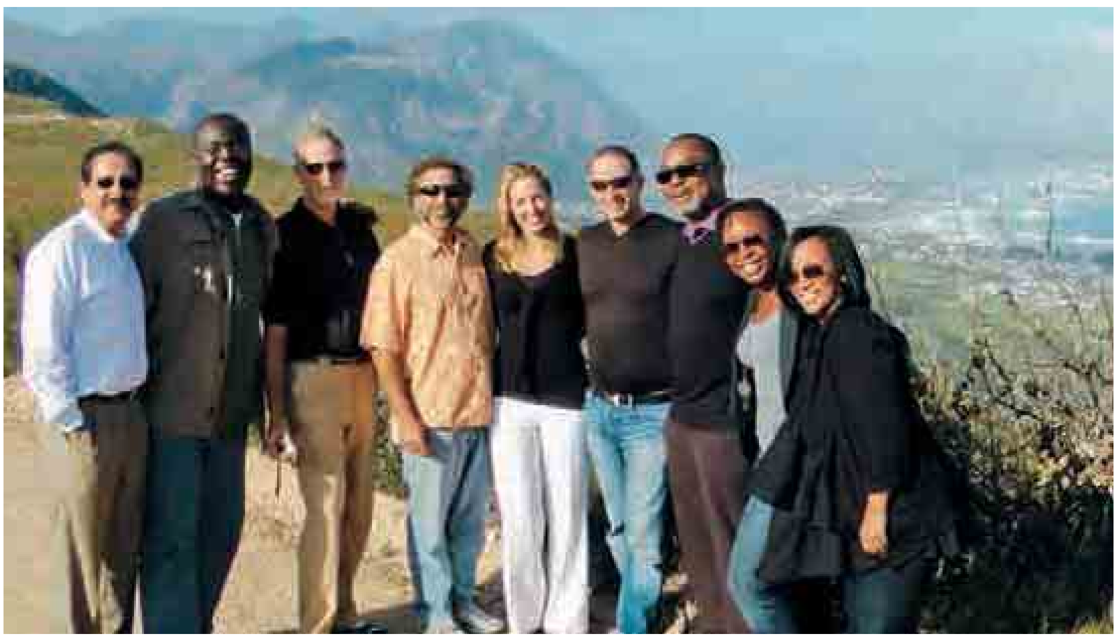
South Africa Bound

Faculty International Seminars gives Wharton faculty exposure to the emerging Kenyan and South African economies. What new insights will find their way into curricula and research?

In July and August 2011, a team of Wharton faculty visited Kenya and South Africa to learn how Africa is evolving within the global economy. They gained precious insight from local entrepreneurs and alumni.

The group was in Africa as part of Wharton's Faculty International Seminar (FIS), which takes groups of faculty to selected countries to experience business issues related to their research and teaching.

The professors spent 12 days meeting with business and political leaders across various sectors in Johannesburg, Cape Town and Nairobi. Leading the eight-member delegation were **Ziv Katalan,** director of Wharton Global Initiatives and adjunct professor of operations and information management, and **Harbir Singh,** the Mack Professor of Management and vice dean for Global Initiatives.



Harbir Singh, Eric Kacou, Steve Hoch, David Reibstein, Martine Haas, Ziv Katalan, Ken Shroppshire, Rose Ndindiri Thiga and Shawndra Hill (left to right) pose for a moment during the busy FIS Africa trip.

"My take on the seminars is that they're Wharton's R&D for intellectual capital, which is what drives any business school," Katalan says. "They're about making sure that our faculty has firsthand exposure to the regions and countries where change is happening."

This visit is expected to lead to new research problems and partnerships and provide the faculty with exposure to the business culture, issues and leaders of Kenya and South Africa.

Wharton students and faculty have increasingly come to look toward Africa in general, with such projects and activities as the Wharton Africa Business Forum. Held Nov. 4–6, 2011, the 19th annual forum increased dialogue on business in Africa by engaging companies, prominent business professionals, investors interested in the region and leaders of academic thought.

In addition to Katalan and Singh, other participating faculty members on the FIS trip included **Jonah Berger,** James G. Campbell Assistant Professor of Marketing; **Martine Haas,** associate professor of management; **Shawndra Hill,** assistant professor of operations and information management; **Stephen Hoch,** Laura and John J. Pomerantz Professor in Marketing; **David Reibstein,** William Stewart Woodside Professor and professor of marketing; and **Kenneth Shropshire,** David W. Hauck Professor and professor of legal studies and business ethics.

"We saw a whole host of companies of different sizes and areas—everything from shampoo factories to call centers to cigarette companies to tourism," explains Berger, who was visiting Africa for the first time. They met with people at all levels—CEOs, CFOs and entrepreneurs who had crafted unique solutions and business models and who had worked to be innovators and leaders in their respective industries.

Hill, who has taught a doctoral class at Addis Adaba University in Ethiopia for three years, says the highlight of the trip was witnessing the wide use in Kenya of m-pesa, a mobile banking solution by Safaricom.

"The success and wide adoption of m-pesa highlights the fact that we can't always fit our Western solutions to the continent," she says. "There may be more innovative solutions that have the potential to enable a larger number of consumers to participate in business."

CONTRASTS AND OPPORTUNITIES

The range of meetings provided contrasting perspectives on all sectors of the economies. On one day, they met Atul Shah, managing director of Nakumatt Holdings, a Nairobi-based retailer tapping the underserved formal retail market in East Africa. Inspired by unmet demand for world-class retail products and services, the company utilizes sophisticated supply chains and information technology in its 33 branches across the region.

Shah believes that, although Wal-Mart has entered the region, the current East African market of 140 million people has an opportunity to sustain at least 10 major retail stores in each town.

In another meeting, faculty learned about a Kenyan company that distributes solar lamps in partnership with women in Kenya's shanty towns. Typically, residents burn kerosene at night, which is neither environmentally friendly nor cost-effective, because these areas don't have much electricity, Berger says.

"The women who distribute [the solar lamps] get a portion of the proceeds as entrepreneurs, and the whole community and environment benefits more broadly," the marketing professor says.

OPPORTUNITY IN AFRICA

The extensive agenda was planned with the help of **Eric Kacou, WG'04,** and **Rose (Ndindiri) Thiga, WG'11.** The previous school year, Thiga, a corporate development professional with Ametek Inc., co-led the first student Career Trek to South Africa.

She used the groundwork for FIS, helping to create a packed schedule that went smoothly, despite infrastructure issues that led to large chunks of time in Kenya's snarled traffic.

"African challenges can sometimes seem daunting and insurmountable. However, therein lies the opportunity," Thiga notes.

Alumni participation extended to regional gatherings, including a Johannesburg event co-sponsored with the MBA Admissions office, attracting 20 alumni. **Adil Popat, WG'84,** CEO of Simba Corp., and **Anthony Hamilton-Russell, WG'90,** proprietor of Hamilton Russell Vineyards, also met with the FIS group.

OUTCOMES IN CURRICULA AND RESEARCH

Lessons learned from the FIS experience make their way directly to Wharton students as faculty introduce global content into discussion and develop new curricula.

"Last year in June, the faculty had good exposure to the energy sector in Brazil," Katalan says. "So we followed up with a Global Modular Course on energy and infrastructure in Brazil using what we had learned."

FIS was founded in the late 1980s with visits to Japan and Korea. After a hiatus, Singh and **Jeff Sheehan,** associate dean for international relations, relaunched the program in September 2008.

"The immediate goal is to foster new research related to these companies and businesses. The second goal is to influence the curriculum—we're looking for opportunities to add globalization at Wharton," FIS Director Katalan says.

Recent FIS teams have visited China, Vietnam, Cambodia, Brazil and India. A trip to Japan will take place next year.

—By Kelly Andrews

Wharton Folly

Up, Up and Away From Economic Ups and Downs

Illustration by Brian Ajhar

Identifying an Icon

A new film about Whitney M. Young highlights the Civil Rights leader's accomplishments, which students and teachers at Wharton have long recognized.

As one of the "big six" of the Civil Rights movement, Whitney M. Young Jr. had the ear of presidents John Kennedy, Lyndon Johnson and Richard Nixon.

Young "knew how to accomplish what other people were merely for," Nixon said after Young's funeral in 1971, which he attended. "It's really easy to be for what is right. What is more difficult is to accomplish what is right, and that's what Whitney Young's genius was."

His genius and gentle persistence opened the doors of Fortune 500 companies to African-Americans—an achievement acknowledged by many, including the current chairman and CEO of the American Express Co., Kenneth Chenault, who says that Young "helped in many ways to pave the road for my success in corporate America."

Both Chenault's and Nixon's comments are part of a soon-to-be released documentary, *The Powerbroker,* a film by Bonnie Boswell Hamilton, an award-winning reporter, producer and talk-show host, and Young's niece.

She also was one of the keynote speakers at last year's Whitney M. Young Jr. Memorial Conference, a student-run event sponsored by the Wharton School.

This year's 38th annual conference—which will be held December 2-3 at the Loews Philadelphia Hotel at 1200 Market Street—is designed to "provide enriching discussion and dialogue and great speakers that touch on global leadership and innovation on an expansive level," says **Nathaniel Johnson, WG'12**, who is student co-chair of the event, along with **Michelle Gittens, C'03, WG'12.**

The previous conference brought together African-American business, cultural and political leaders, along with Wharton faculty and other international experts, to talk about an array of topics and sectors, such as finance, education, entertainment, entrepreneurship, innovation and healthcare.

Gittens notes that the leadership conference also offers students and faculty networking opportunities with each other, as well as with the conference speakers.

Networking with business leaders was one of Young's valuable skills.

"Much of his work was behind the scenes. ... He was the person at the table who was having the conversations with presidents and corporate leaders," Johnson says.

As director of the National Urban League, Young created educational and training programs for African-Americans.

He also "was the main liaison to corporate America," Hamilton says.

"He was able because of his relationships with people to offer logic and vision to people who were the heads of corporations. He was able to open up pathways for nonwhite men to enter the corporate structure," Hamilton explains.

Young convinced the CEOs of Ford, *Time* magazine and PepsiCo to hire blacks for management positions and increased overall minority job placements in corporations from 10,000 to 50,000 per year.

MPI/GETTY

ON THE WEB More information about the 38th Annual Whitney M. Young Jr. Memorial Conference is available at www.wmyconference.com. View a clip of *The Powerbroker* at www.whitneyyoungfilm.com.

"His focus," says Harvard University Professor Henry Louis Gates in *The Powerbroker,* "was … more of an economic-based revolution."

But it's was a quiet and subtle revolution, notes Americus Reed II, associate professor of marketing and the Whitney M. Young Jr. Professor at Wharton.

Young was not a man looking for publicity, Reed says. "It always was about the cause and the ideas rather than anything that might be related to self-promotion."

And he didn't shy away from his ideals, acting as one of the organizers of the March on Washington in August 1963 along with Dr. Martin Luther King Jr., even though many white business leaders opposed the action.

He also couldn't always avoid controversy in those tumultuous days. He faced criticism by militant black Civil Rights leaders for his close relationships with white businessmen and, in 1968, two men were convicted of conspiring to murder him, for being, they said, one of the "betrayers" of black people.

While many today do not remember Young—although that may change with the release of the movie—his legacy "underscores the importance of different perspectives and how different perspectives in corporate America and academia enrich everyone's lives rather than taking away from it," Reed says.

He notes that some look at diversity in hiring as a "bad thing that takes people's jobs," but it should be viewed instead as a way to provide additional perspectives.

"Which means you get diversity in thought, which means more creative ideas happen, which means the entire environment for innovation is stronger," Reed says.

The filmmaker of the "The Powerbroker" is currently looking at several options for a broadcast partner but aims to have the movie on public television soon.

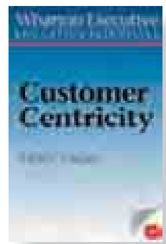
—By Anne Freedman

3 New Books From Wharton Digital Press

Hot off the press from the all-digital publishing initiative from the Wharton School, these new business books are available both in ebook and paperback formats.

Wharton Executive Education Customer Centricity Essentials: What It Is, What It Isn't, and Why It Matters

BY PETER FADER

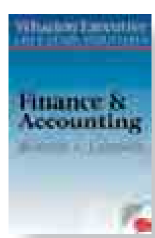


Despite what the tired, old adage says, the customer is not always right. Not all customers deserve your best efforts. In the world of customer centricity, there are good customers—and then there is pretty much everybody else.

Upending some of our most fundamental beliefs, renowned behavioral data expert and Wharton Professor **Peter Fader,** co-director of the Wharton Customer Analytics Initiative and Frances and Pei-Yuan Chia Professor of Marketing, helps businesses radically rethink how they relate to customers. He provides a roadmap for revamping your organization, performance metrics and product development to make sure you meet the needs of your most valuable customers.

Wharton Executive Education Finance & Accounting Essentials

BY RICHARD A. LAMBERT

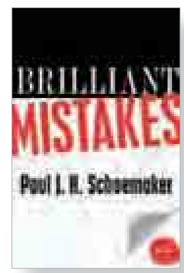


A solid understanding of finance and accounting is critical in every aspect of business. To gauge business performance, make investment decisions or devise effective strategies, managers must be able to access and use the information contained in financial statements and work with the concepts that underlie them. Financial literacy is an absolute requirement for the successful manager.

In direct and simple terms, **Richard A. Lambert,** Miller-Sherrerd Professor of Accounting at the Wharton School, demystifies financial statements and concepts and shows you how you can apply this information to make better business decisions for long-term profit.

Brilliant Mistakes: Finding Success on the Far Side of Failure

BY PAUL J. H. SCHOEMAKER



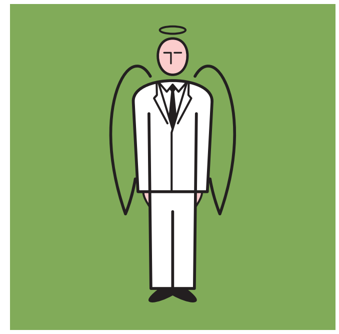
If you have ever flown in an airplane, used electricity from a nuclear power plant or taken an antibiotic, you have benefited from a brilliant mistake. Each of these life-changing innovations was the result of many missteps and an occasional brilliant insight that turned a mistake into a surprising portal of discovery.

There are countless books that tell you how to avoid mistakes. Now, **Paul Schoemaker, WG'74, GR'77,** founder and executive chairman of Decision Strategies International and research director of Wharton's Mack Center for Technological Innovation, shares critical insights on the surprising benefits of making well-chosen mistakes. Based on solid research and insights from more than 100 organizations, he provides a roadmap for using mistakes to accelerate learning for your organization and yourself.

For more information about new releases, please visit http://wdp.wharton.upenn.edu/.

ON THE WEB

Bold Investors, Smart Entrepreneurs Share Spotlight in the Big Apple



The 2011 Wharton Alumni Business Showcase goes with less competition, more funding.

How is an angel investor—someone who provides seed capital for business startups—like a psychic? According to Wharton Angel Network and Alumni Business Showcase Chairman **Steven Shindler, W'76**, angel investors must accurately judge whether early-stage entrepreneurs are correctly predicting the future. He says that angels have to ask, "Are their ideas great, do they resonate?" At the 2011 Wharton Alumni Business Showcase this summer in New York City, the answer was a resounding affirmative.

It started as an alumni competition three years ago, modeled after the well-known Wharton Business Plan Competition for University of Pennsylvania students. On a June evening in the foyer at Christie's, it quickly became clear that the Alumni Business Showcase has become much more than a competition.

"It's really something that grew out of the feedback we received from the people who participated in last year's competition. They said that it's nice to compete and win a competition, but the fundamental objective for their business is to get funded," says **Jeff Mulholland, W'86,** co-chief of the Wharton Investor Resource Exchange.

One finalist, **Sudhir Rani, WG'11,** CFO of TerViva BioEnergy, reports that the firm has leveraged participation in the event to raise funds for a $2.5 million seed round from angel investors, including from one alumnus at the event itself. The firm has developed an environmentally responsible feedstock for the production of biodiesel.

"For a startup to be able to present to a room full of potential investors is almost unheard of," another finalist, **Mary Beth Minton, WG'82,** founder and CEO of Arete LLC, says, adding that since the event the firm's added a number of "incredible advisors." Arete produces children's toys and books, most notably the Zylie the Bear line.

ON THE WEB

Learn more about the Wharton Alumni Business Showcase at www.whartonny.com/article.html?aid=1526, and the Wharton Club of New York at www.whartonny.com.

GREATER VISION

The shift from competition to showcase is part of a greater vision shared by Shindler and the other organizers of the event, namely that Wharton alumni should be committed to helping fellow alumni.

According to **Eric Ewald, WG'03,** co-chair for applicants, they aim to provide entrepreneurs with " a lot of strategic guidance," such as connecting entrepreneurs with coaches, devising strategies, identifying markets, advising on corporate governance, and "hooking them up with accountants and tax professionals."

"More than any other type of investing, angel investing can create enormous wealth," says Steven Shindler. "I submit, however, that our program provides not only that opportunity but, equally important, it provides opportunity to help make a classmate's dream become a reality."

If the participation of more than 63 business applicants, 90 volunteers and 80 accredited investors is any evidence, Shindler's new model appeals to a large number of alumni.

Calling the past event an "out-of-control success," Shindler says, "We didn't even have to go out and recruit investors to show up."

Entrepreneurial hopefuls submitted their applications and business plans to five panels composed of 72 judges, and 12 finalists had the opportunity to present their plans live at Christie's for an audience of judges and angel investors. Business ideas were diverse and ambitious, representing industries across the board—biofuels, high-density fiber tech, cancer diagnostic and targeted treatment probes, point-to-point ground transportation planning and nanoparticle measuring technology—which "really mirror what's happening in the venture community today," says Ewald.

"There's a heavy emphasis on life sciences and biotech. There were a lot of applications in the mobile Internet space, which is very hot right now, and clean tech was another big category," he explains.

The finalists themselves were also demographically diverse. One had just celebrated his 43rd class reunion, some were between six and 10 years out of school, and, remarkably, three of the entrepreneurs just graduated. Four others are still in school and involved with Wharton Entrepreneurial Programs.

"Great companies attract great investors, but you first have to have great companies," is how Shindler puts what the finalists brought to the table.

The two common denominators among the finalist teams were that they all had at least one member who was a Wharton alumnus or alumna, and all their businesses are in the early development stage. The goal of the showcase is to target businesses beyond the idea and seed stage that are ready for the scrutiny of angel investors, but have not yet reached a commercialization stage.

2012 AND BEYOND

Where will the Alumni Business Showcase go from here? Investor Co-Chair **Joon Shin, GEX'06,** inspired by the energy of the June event, says it will dynamically grow because of the incredible opportunities it provides.

The Alumni Business Showcase organizers envision the world's largest network of angel investors and alumni and a series of events across the country.

"It's a big, ambitious plan," Shindler says about possibilities for 2012. It's not a matter of if or when, it's a question of "how big is big," he says.

—By Josh Green and Matthew Brodsky

Sustainability: The Future of Value

In his provocative new book, Wharton MBA Eric Lowitt makes the case for why sustainability is far more important to success than just appearing "green."

"Companies that are ignoring the pursuit of sustainability are increasing the likelihood that they fail," argues **Eric Lowitt, WG'01,** in his new business strategy book *The Future of Value*. In this new phase of sustainability, he finds that the most successful companies are beyond viewing sustainable initiatives only as altruistic ventures and marketing ploys. Lowitt uses interviews, case studies and strategy discussion with leading Fortune 500 companies to make his case that the integration of sustainability is crucial for business' future success. Altruism is actually the "enemy of sustainability," insofar as it will not drive systematic, persistent investments in sustainability, he argues.

The book will be well-received by those disheartened by the current lack of political leadership on environmental issues. *The Future of Value* leads readers to believe that smart, competitive businesses have enough incentives to lead the way toward closed-loop systems, responsible supply chains and cleaner ecosystems. Indeed, many are already doing so.

Readers don't need to be absorbed in sustainability and climate change issues to find value in Lowitt's new book. *The Future of Value* will also be of interest for all those readers who are dedicated to enhancing their companies' value and competitiveness. Lowitt provides a toolbox for companies to build comprehensive strategies, explaining how to prioritize NGO relationships, set up sustainability committees, evaluate supply chains and more.

Part case-study collection, part workbook and part strategy storybook, *The Future of Value* is a must-read discourse on how to succeed in the next phase of business and environmental sustainability.

Interested in continuing the discussion? The Initiative for Global Environmental Leadership (IGEL) is bringing Lowitt to campus March 21, 2012 (noon – 1:30pm) in the Carol Lynch auditorium.

—By Caroline D'Angelo

"Altruism is actually the 'enemy of sustainability.'"

ON THE WEB

Go to http://environment.wharton.upenn.edu to find out more about Lowitt's visit to the Wharton School.

To survive in an uncertain global economy, business leaders must deliver in the short term while investing in what's new and risky in the future. We ask experts to share their thoughts on the ideal tools.

BY MATTHEW BRODSKY

Sustainable Survival in a Volatile Economy

In today's economy, business leaders are being called upon to answer the question: What are the sustainable strategies designed to ensure that their business succeeds?

This question leads to another: What does "sustainability" mean?

While sustainability has become the buzzword for green initiatives, at the highest levels of business the term has regained, or perhaps always retained, its original, fullest meaning: the ability to survive and grow over time.

This is not news. Our conversation builds off a foundation of research from the Wharton community that began with the financial crisis. One example is work done by **Michael Useem,** William and Jacalyn Egan Professor of Management and director of Wharton's Center for Leadership and Change Management. Along with co-authors Michael Patsalos-Fox of McKinsey and Dennis Carey of Korn/Ferry International, Useem published the findings from interviews done with leaders of 14 major companies, ranging from Tyco to Travelers, Pepsi to Macy's.

ERIC MILLETTE

Steve Krognes, W'92

CHIEF FINANCIAL OFFICER AT GENENTECH

"To us, having a sustainable business basically means that you have to innovate."

What they arrived at was agreement on broad strategies that leaders can apply during uncertain times. In particular, they agreed that leaders must confront and accept the present, while keeping faith in and working toward the future, no matter how dark the present is.

Building off this understanding, we offer here a survival toolkit of strategies that will ensure that organizations will thrive in this decade and the decades to come, no matter what changes occur during that time.

We spoke with a cross-section of alumni and faculty experts to determine the short list of items that should be in this survival toolkit, what is needed to harness the emerging trends in innovation, emerging markets, talent management, marketing, and resource and waste management and other green initiatives.

"The operative word is 'long term,' " says Useem.

"It's not just a quarter. It's five, 10 years down the road we stay focused on," says **Alex Gorsky, WG'96,** the vice chairman of the executive committee at Johnson & Johnson who is responsible for the diversified consumer goods and healthcare company's supply chain, government affairs and venture-capital groups, among others.

Or another way to put it, sustaining success through the current historically troubled times is about focusing on your core business and asking if you will be around doing the same thing in 2020 or 2030, according to **Steve Krognes, W'92,** the chief financial officer at Genentech, whose background spans mergers-and-acquisitions work with Roche, venture capitalism, investment banking with Goldman Sachs and management consulting at McKinsey.

INNOVATION LEADS TO STRENGTH

"To us, having a sustainable business basically means that you have to innovate," Krognes says of Genentech. Innovation for this South San Francisco, CA-based drugmaker means finding new treatment options and biotech and chemical-based products that satisfy heretofore unmet medical needs.

"As long as you bring a medicine that meets an unmet medical need, there is always a willingness to pay for that," he says about his market. "You've got to be on the frontier."

Such a core business model is also high risk, and innovation is expensive. It's a "numbers game," as Krognes explains it. When perhaps only one in 10 projects in human testing make it to market, Genentech and other firms like it must have the scale to be able to afford those nine failures.

While this might be a high price to pay, Krognes argues that it is necessary. "The key … for me in leadership in times of extreme pressure on the business model is you need to keep learning as an organization, you need to keep innovating, you need to keep evolving," Krognes says. This innovation leads to success.

Unfortunately, it does not appear that these "times of extreme pressure" will end soon.

"It's going to be a challenging five years," estimates **Vikram Malhotra, WG'86,** director and chairman of the Americas at McKinsey & Co.

During this time, businesses can't just stop what they are doing. They must deliver earnings results, real growth and shareholder value.

"You absolutely must deliver in the near term. The capital markets are too brutal. Boards are restless," Malhotra says. "Otherwise, you as a CEO are not going to survive."

SERIOUS ABOUT ERM

The challenge for CEOs and other leaders is that living only for the short term puts long-term success at risk. They must also find the time and money to study, prepare and invest so that they have the capacity to respond to whatever their risks are—and all while somehow balancing their current business plan and short-term performance expectations.

"Stick to your knitting, absolutely, but markets also have a habit of upending our current ways of doing business with periodic game-changers," Useem says. "To lead a company these days is to require a capacity to deal with great uncertainty, rapid change and catastrophic risk, and to change the business model when necessary."

In part, leaders are turning more than ever to enterprise risk management (ERM) to develop this capacity.

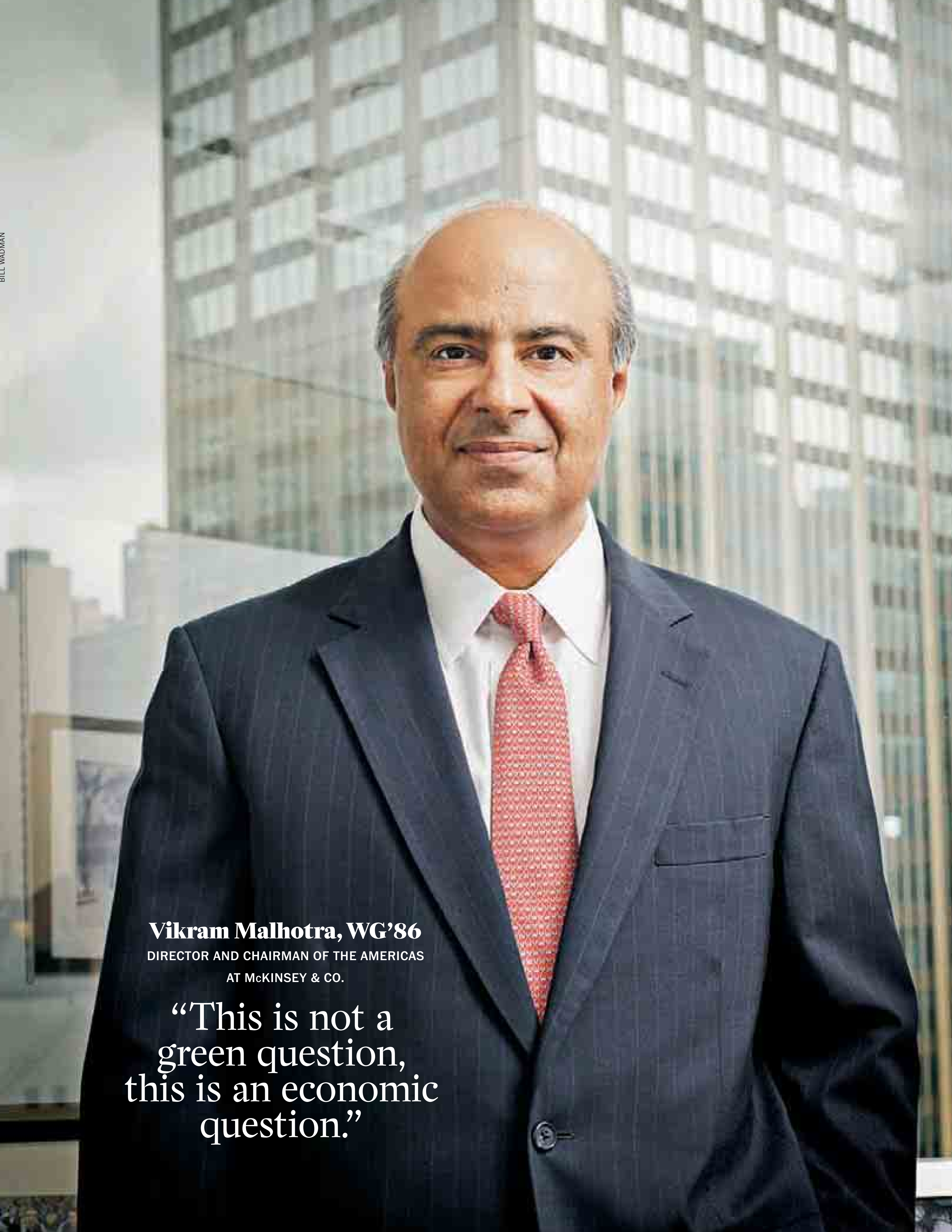
"Catastrophic events, extreme events, are very high on everyone's agenda now," says **Howard Kunreuther,** Wharton's James G. Dinan Professor and co-director of its Risk Management and Decision Processes Center, who is working on a study about risk management in Standard & Poor's 500 companies, along with the Center's managing director, **Erwann Michel-Kerjan,** and Useem. Despite tight budgets and fiscal crises in the developed world, Kunreuther says, U.S. business leaders are devoting the resources to mitigate these events.

The goal is not to overreact to the perceived, large dangers out there. Rather, according to Kunreuther, business leaders are overcoming short-term "myopia" and learning to do a better job of assessing all risks that could interfere with their long-term strategies, understanding the uncertainty surrounding those risks, estimating the consequences of direct and indirect losses if those events come to pass, and finding ways to mitigate the risks and build resiliency.

As importantly, they are coming to grips with the costs of failing to follow these risk management steps, and the benefits when they do and their competitors don't.

There is an opportunity for firms that take the time to prepare for a disaster now to be propelled forward to future success. "They may be the best firms on the block," Kunreuther says.

ERM is not all about catastrophes, and not all risks will be bad for the bottom line. Malhotra at McKinsey foresees several macro-



BILL WADMAN

Vikram Malhotra, WG’86

DIRECTOR AND CHAIRMAN OF THE AMERICAS AT McKINSEY & CO.

“This is not a green question, this is an economic question.”

economic trends manifesting themselves on the horizon, which, if harnessed properly, could help companies enjoy sustained growth over the next decade.

"I think what you've got to do in the next five years is absolutely invest against these trends," Malhotra says. Companies that do the opposite—hunker down and focus exclusively on cutting costs—risk being left behind in the long run.

The first of these trends is a great rebalancing in wealth from the West to the East and the South, to emerging markets hitting their "sweet spot" thanks to growing numbers of younger laborers with fewer children, as well as urban migration. More than 1.5 billion individuals will move to cities in the next 20 years in emerging economies.

"To sustain yourself and to grow in an increasingly competitive world, it is vital to focus on emerging markets in China, India and elsewhere," Useem says.

For the developed world's economies, growth will be more challenging because the demographics are working against these economies, according to Malhotra. Growth for them must come from productivity driven by innovation, not just efficiency. Technology must also be applied to assist with the process of globalization.

HELPING TO GOVERN

For Malhotra, another macrotrend to plan sustainable strategies against is that "big government" is here to stay.

Enterprises in emerging markets are benefiting from pragmatic, business-savvy governments that look for ways to enable private companies to succeed. In a special report on these macrotrends shaping the next decade, McKinsey points to Poland and Singapore as but just two nations "wooing enterprises." In the developed world, on the other hand, governments are increasingly challenged by budget deficits, debt levels and social obligations, he said.

"Which means you've got to deal with regulation," Malhotra says. "The successful ones will learn how to work with all these disparate governments and disparate policies."

Business leaders might also need to take on government's customary leadership roles if and when politicians fail to advance public policy. Leaders in large companies need to collaborate with colleagues and competitors and weigh in on vexing social and political issues that increasingly affect how companies operate, like unemployment, Useem says.

"In the United States, unemployment and other social challenges have historically been a focus of public policy, but increasingly they require intervention by the private sector as well," he notes.

The global stage is another location where business leaders could step in in the absence of intergovernmental progress, particularly if you consider climate change a pressing issue that needs addressing. **Eric W. Orts,** Guardsmark Professor and director of the Initiative for Global Environmental Leadership (IGEL) at Wharton, is pioneering research into "climate contracts," whereby corporations tackle climate change in partnerships with other companies, nonprofits or associations. Joining business networks that recommend long-term, market-based regulatory solutions is one way, according to Orts.

Many companies have already entered into alliances with nonprofit organizations on various projects. Wal-Mart Stores Inc., for instance, has partnered with the Environmental Defense Fund to measure and reduce its environmental impact—by as much as 20 million metric tons of greenhouse-gas pollution by 2015.

LEADERS, TOP TO BOTTOM

To lead society, though, an organization obviously must be well led itself. A sustainable human capital strategy could ensure focus on all talent within the enterprise. Malhotra argues that employers should consider how they access talent, if they are seizing upon talents in diverse countries, and how they identify and train young talent within their organization. The CEO should own the top 5 percent of talent, track that talent and focus on the future of that talent, he says.

This emphasis on talent should begin at the top, Useem says, with executive searches and boards selecting the right candidates. These leaders must then station the right people around themselves.

Useem warns leaders against a talent policy that involves "Draconian" head-count chops. According to Useem, talent should be viewed as a "great asset" and treated as such. Top employees will likely be more productive if happy and cared for, and when times turn good again and the job market is vibrant, they will more likely be loyal.

Johnson & Johnson's Gorsky argues that focusing on "people and values" is a key strategy to sustainable success. Using his employer as an illustration, Gorsky mentions J&J's decades-old "credo," which speaks to the firm's responsibility toward customers, employees, communities and, lastly, shareholders. The credo provides grounding for employees, he says, particularly important "at a time when everything seems to be changing."

"People want to feel like they're working for a higher purpose, for something enduring," he says.

C-suite executives must also be able to serve as the "chief confidence officer," Useem adds. "If business leaders are not confident in their long-term strategy during a short-term difficulty, and if they cannot convey that confidence, then what reason do other stakeholders have to feel confident in their enterprise?"

LISTEN, TOO

But business leaders have even more to contend with. They must not only be heard; they must listen. Marketing and advertising has changed, and executives must adapt to this new world where consumers and clients demand a conversation.

"I think certainly for our industry, one thing that will be fatal to any company is if you don't listen to patients and if you don't do what's in the best interests of patients," Krognes at Genentech says.

This advice easily transfers to any sector. Business leaders refuse or fail to apply this lesson at their own risk, Krognes says. Amid Silicon Valley, he points to Apple and its revolutionary smartphone and tablet computing products as examples, whose success could be interpreted as the result of Apple tapping into an unmet consumer demand for gadgetry. Apple's competitors either have had to change quickly to compete and survive, or, as some big tech players are already finding out, they will face an exit from a market because they haven't adapted fast enough.

For **Josh Kopelman, W'93,** managing partner at First Round Capital, the one common denominator of the 3,000 business plans he sees every year is that they are "all wrong." A business plan is essentially a prediction of the future, he explains, a future in which the company will grow "faster, bigger, stronger."

Reality of course doesn't trend upward in straight lines, and functional crystal balls are hard to come by.

So instead of looking for soothsayers, Kopelman—a seed-stage investor and company launcher himself, having founded firms like Infonautics, Half.com and TurnTide—seeks entrepreneurs who can adapt to the change that can't be predicted. He likens successful entrepreneurs to guided missiles, adjusting on the fly to hit targets based on "signals" from potential customers, the marketplace and competitors.

"Those are the entrepreneurs we like to fund. We like to fund heat-seeking missiles," Kopelman says.

As for larger companies, Kopelman sees Netflix as an example of a company forecasting an oncoming disruptive shift in its marketplace, and acting now upon it. The firm had decided to split in two to best prepare for a future where all visual content is delivered digitally versus by disc in the mail, which still accounts for most of Netflix's current success. Netflix CEO Reed Hastings believed, Kopelman says, that consumers will want to stream their movies and content more and more in the future.

"It's a fascinating experiment: The willingness to disrupt yourself," Kopelman says.

Then again, just as Kunreuther advised about risk management, knee-jerk reactions to perceived customer trends can be unsustainable too. Netflix was vilified for its recent decisions by some consumers. Hastings pivoted again in October based on such signals from the marketplace, announcing that the split would not occur.

That's why some would caution that it's important to not stray too far away from what made you successful in the first place.

"There's always a tendency when things are changing so quickly to overreact and chase the trend," Gorsky says. "Having that right balance between driving change and staying true to your core principles is more true than ever."

SUSTAINABILITY DOES EQUAL GREEN

Now we return to what some people might consider the biggest new trend (or fad) of them all: the green definition of sustainability.

This notion is one of the macrotrends on Malhotra's and many others' horizon. The smart use of resources comes down to supply and demand. No matter what conservation efforts the developed world implements, demand for commodities will continue to increase in emerging economies, perhaps as much as 30 percent in the next 10 years. Meanwhile, it's safe to assume supply will remain the same, if not dwindle

"You've got to be able to figure out how you will operate in that environment," Malhotra says.

Again, as with our other survival tools, it's about investing today for tomorrow. **Craig Isakow, WG'08**, program director of Global Energy & Sustainability for the Building Efficiency unit of Johnson Controls, stresses that the troubled economy of the present is as good a time as any to launch green initiatives that will redirect existing resources to reduce costs.

"If the premise is 'sustainability is going to drive profitability and reduce costs,' if anything, you should be doubling down on your sustainability initiatives," says Isakow, who also is on the alumni advisory panel for IGEL and president of Wharton's energy affinity alumni club.

Examples include being more energy efficient, reusing and recycling of waste, and designing facilities and operations to be environmentally friendly. As Isakow suggests, these efforts can save money in the short term while also providing long-term resource security. He holds up work Johnson Controls did with the Empire State Building as proof. The owner sought to create a more appealing property for tenants and prospects and a more efficient and better-run building for his organization. The result: a $4 million upgrade that led to 38 percent energy savings and only a 2.2 year payback.

Interestingly enough, by being smart about resources and the environment, business leaders can also positively impact the other "tools" in their survival kit. For instance, take communication. According to Isakow, Johnson Controls' leadership has expressed its confidence in its own business model—particularly of its Building Efficiency unit, which consults with clients about green facilities—by building its own corporate headquarters to earn a Platinum LEED rating. For green structures, Platinum is the highest grade possible from the U.S. Green Building Council and requires significant investment and dedication to achieve.

"Bottom line is, that we took our corporate headquarters and put our money where our mouth is," Isakow says.

In terms of optimizing talent management, it's conventional wisdom now that today's MBAs want to work for good corporate citizens.

"There appears to be a generational shift in interest. Although different occupational and educational backgrounds matter, many well-educated students put sustainability issues high on their list of concerns," Orts tells *Wharton Magazine*.

"There are many issues in this [green] area, such as risk management or stakeholder strategy, that are economically rational to pursue regardless of larger social or environmental value," Orts continues.

Some companies would not pursue any green strategy that was economically irrational. Intel, in fact, does not pursue any sustainability efforts that do not provide shareholder value, reports **Neil Blecherman, EE'85, WG'89,** global director of the tech manufacturer's software platform partnerships.

For Blecherman, who drafted new Intel sustainability programs for the company's chief executives, the definition of "sustainability" blurs between "green" and "long term." Sustainability impacts every stage of the chipmaker's product lifecycle, from R&D to supply chain, from manufacturing to product use and end of life. The programs result in operational goals, like recycling 80 percent of all chemical and solid waste from manufacturing, and successes, like becoming the largest U.S. purchaser of renewable power—which all translate into advantages for Intel.

"Sustainability drives long-term shareholder value," says Blecherman, who also serves on IGEL's alumni board. "Sustainability is really key to continued competitiveness."

Or as Malhotra simply states: "This is not a green question, this is an economic question."

Then perhaps we are talking about the same definition of "sustainable" after all. ■

PARTNER WITH WHARTON

The Wharton Partnership

Left to right: Eduardo Garrido (Sovereign | Santander Universities), Mauro Guillen (Dr. Felix Zandman Professor of International Management; Director, Lauder Institute), James Dever (Sovereign | Santander Universities)

Wharton Partners: **Sovereign Bank** and **Santander Universities**

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Learning Lessons for a Lifetime

Wharton Magazine sat down with Karl Ulrich, CIBC Professor of Entrepreneurship and eCommerce and Vice Dean of Innovation, to talk about the impact of innovation at the School and upon Wharton's Lifelong Learning Initiative.

Wharton Magazine: With the establishment of Dean Robertson's "three pillars"—innovation, global presence and social impact—why is innovation such an important component, and what is the role of the Innovation Group?

Karl Ulrich: Globalization and information technology, among other forces, are upending the educational models of elite business schools. I believe that institutions that fail to take advantage of this period of disequilibrium through innovation will be displaced by more aggressive rivals. The Dean formed the Innovation Group at Wharton to create, identify and develop exceptional opportunities to improve the performance of the School with respect to any of its objectives, including education, knowledge creation and outreach.

WM: There has been some buzz in the media about a Lifelong Learning Initiative for alumni. Can you describe what Lifelong Learning means at Wharton?

KU: The Lifelong Learning Initiative aims to provide educational resources beyond graduation that maximize achievement for Wharton alumni, in whatever organizational context they find themselves. The initiative is a response to the reality that professionals will face substantial changes in the environment in which they work over their careers, and they will take on many different roles over their careers as well. Wharton is the first business school to make lifelong learning an institutional priority and to pledge to its students and alumni that it will continue to meet their educational needs over their entire lifetimes.

WM: Why is the Innovation Group taking the lead on the Lifelong Learning Initiative?

KU: The Lifelong Learning Initiative is the result of collaboration across the many units of the School, specifically Alumni Relations, Executive Education, and our undergraduate and graduate divisions. It must also take advantage of our pre-eminent information technology organization. The processes that make Wharton so good at delivering established programs and services do not necessarily excel at creating new programs and services. The Innovation Group has been able to play a catalytic role in nurturing development of new ideas and program delivery across our operating units.

WM: You note that the Innovation Group approaches things differently to produce results. What is your process and how is this different from the way that programs are usually developed?

KU: My entire career has been spent in researching and teaching innovation and product development. I've also created several successful new ventures as an entrepreneur and innovator. I believe the most reliable and successful innovation process, which I both practice and preach, starts with an understanding of the needs of the target audience. Thus, we have driven our innovation effort in Lifelong Learning with an understanding of alumni needs. Our cross-functional project team has conducted interviews and focus groups with about 75 alumni working in many types of organizations and at many different life stages. We are currently following up on this qualitative research with some quantitative surveying to better understand how needs differ by alumni segment.

WM: What have you learned from the alumni so far? What does this mean for the Lifelong Learning Initiative?

KU: We look forward to reporting on our findings, but our early results are already providing valuable insights. For instance, one of the needs we have uncovered is for alumni to learn from each other, in peer-to-peer coaching and in sharing their experience and insight with one another. Wharton alumni are incredibly accomplished individuals who together have expertise spanning the universe of business and management. We believe that the School through the Lifelong Learning Initiative can serve to coordinate a dynamic exchange of knowledge in this community.

A Guide to Lifelong Learning Resources

COURSES, PROGRAMS AND ONLINE LEARNING

- Executive Education
  - Leadership Development
  - Negotiation and Persuasion
  - Management Development
- Alumni Webinars

DIGITAL CONTENT

- *Knowledge@Wharton* Network
- Lippincott Library Services and Research Guides
- Wharton@Work
- Wharton Digital Press
- Executive Education Video Library
- YouTube
- iTunesU

NETWORKING, CONNECTION AND SUPPORT

- Career Services
- Wharton*Connect*
- Reunion Weekend
- Global Alumni Forums

Additional information about these resources and more can be found at the homepage of the Lifelong Learning Initiative at **www.wharton.upenn.edu/lifelonglearning/**.

WM: What will be the significance of innovation and lifelong learning going forward?

KU: The alumni community can look forward to the School both providing unique and valuable information relevant to current career challenges and facilitating learning from other alumni. We believe that a Wharton education can extend over an entire lifetime, and that this promise is one way in which the School will continue to set the standard for business education globally. ■

Wharton Innovation Fund

Thanks to the generous support of **Alberto Vitale, WG'59,** promising entrepreneurs at the University of Pennsylvania can turn to the newly established Wharton Innovation Fund for support. The Fund provides resources for students, faculty and staff at Wharton to take projects for new technologies or services from the classroom to the business community.

Vitale called the Fund "a catalyst to stimulate innovation at the School and to surface the brainpower of its students."

The Fund gives preference to student-led projects that show creativity and demonstrate a large potential impact. Proposals involving faculty, students and staff will also be considered, particularly those that leverage the School's inventions and thought leadership in various fields of business. Administered by the University of Pennsylvania through the Wharton School's Innovation Group, projects that meet the Fund's criteria are considered for support upon submission. The Fund's advisory board, consisting of Wharton faculty, students, senior staff and alumni, set specific criteria for supported projects. Approximately $125,000 in grants is available each year.

"Innovation is one of the pillars of the Wharton School. The Wharton Innovation Fund reflects the School's dedication to nurturing the best ideas and providing them a structure in which to grow" said Wharton Dean Thomas S. Robertson. "We are very grateful to Alberto Vitale for his visionary generosity, which allows us to draw upon the remarkable intellectual resources of our students and the Wharton community."

Calculating the Impact of the New Quant Finance Center

Wharton's Jacobs Levy Equity Management Center for Quantitative Financial Research aims to pioneer innovative research in finance and to produce the next generation of investment leadership.

BY MATTHEW BRODSKY

It took two of quantitative finance's most prominent pioneers to launch a research center that will produce the next generation of the field's leaders at The Wharton School.

And according to those pioneers, **Bruce I. Jacobs, G'79, G'86, PAR'10,** and **Kenneth N. Levy, WG'76, G'82,** the arrival of the Jacobs Levy Equity Management Center for Quantitative Financial Research is well timed. "An increasingly complex world requires the tools that quantitative research can provide," Jacobs told *Wharton Magazine*. "Finance will always be an 'art,' since it reflects human actions, not natural forces. But there is a lot to be gained by the application of scientific methods," Jacobs added. As illustration, he compared quantitative research to the testing of pharmaceutical

Dean Thomas S. Robertson, Bruce Jacobs, Ken Levy and University of Pennsylvania President Dr. Amy Gutmann prepare to cut the ceremonial ribbon at a celebratory dinner for the Jacobs Levy Equity Management Center for Quantitative Financial Research.

drugs, in that it can distinguish the effective solutions from the ineffective or "outright dangerous ones."

In the 21st century, a significant portion of the financial community has adopted quantitative finance, Levy told *Wharton Magazine:* "Most financial research done today is quantitative, either analytical or empirical." Furthermore, "quantitative finance is taught as part and parcel of a general financial degree." Yet room still exists for tremendous growth in the field.

To that end, the Jacobs Levy Center aims to foster new and innovative research by faculty, visiting academics and Ph.D. students, and disseminate that research through its website, Knowledge@Wharton and other media, as well as through an annual conference.

Furthermore, the Wharton-Jacobs Levy Prize for Quantitative Financial Innovation will recognize research that leads to substantial innovations in the practice of quantitative finance, research that, as

Jacobs stressed, has an impact on the financial well-being of us all. Granted every two years, the Wharton-Jacobs Levy Prize will recognize one or more persons who publish peer-reviewed journal articles that demonstrate outstanding quantitative research that contributes to a particular innovation in the practice of finance. Levy expressed the hope that the prize will become the "most coveted" in financial research.

At the day-to-day helm of this idea-mining mission will be Donald B. Keim, John B. Neff Professor of Finance. Keim explained how Jacobs and Levy have been at the forefront of combining academic research and practice for the past quarter-century, through their work at Jacobs Levy Equity Management (see the side story on P. 31). He was, he said, eager to pursue the same goal at the Center: to create the highest quality quantitative financial research.

"We feel as if we're funding the Lewis and Clark Expedition."

The Jacobs Levy Center will be in good hands. Keim is one of Wharton's longest-serving and most-distinguished faculty members, and he has been a leader in the field of quantitative finance for nearly three decades, as both an author and editor for the field's leading journals.

"I can think of no individual other than Don to carry Wharton through this new endeavor," University of Pennsylvania President Dr. Amy Gutmann told guests at the celebratory dinner in September marking the opening of the Jacobs Levy Center.

"It's an honor for me to serve as the first director," Keim said during his speech at the event.

What could such research illuminate?

In his speech during the Center's opening gala, Jacobs, who will serve as chair of the Center's advisory board, suggested that room to roam in research could be found in domestic and international stocks

Ken Levy (left) and Bruce Jacobs (right) enjoy the evening's event with guests and attendees.

"This is ... at the heart of the Penn Compact."

and bonds, corporate finance and portfolio management.

Levy, who will also be on the advisory board, pointed to the promising intersection of quantitative research and behavioral finance, which could benefit from academic research and in turn benefit practitioners. He also suggested that quantitative finance could have a "big impact" on individual investing, offering such investors an alternative to their traditional choice between passive investment funds and "judgment-driven" funds.

"At a time when individuals are increasingly responsible for their own financial futures, securing those futures is becoming more and more difficult and complicated. We believe quantitative finance has a lot to offer," Levy said.

"Given the current environment, there's also renewed interest in understanding and managing risk, on both the economic and individual portfolio levels," Jacobs told us. Experts in quantitative finance, Jacobs noted, "brought us such 'risk-control' mechanisms as options and option replication, and structured securitization such as mortgage-backed securities. These were designed to insulate investors from risk in one way or another." Yet instead, these instruments have at times increased risk, most notably during the credit crisis of 2007-2008.

"We obviously have a long way to go in understanding these instruments and strat-

25 Years of Success and Beyond

Without The Wharton School, Bruce Jacobs and Ken Levy would never have met and their firm Jacobs Levy Equity Management would never have existed, Levy explained during his speech at the dinner that launched the Jacobs Levy Equity Management Center for Quantitative Financial Research (which, by the way, would never have been launched).

Jacobs holds an M.A. in Applied Economics and a Ph.D. in Finance from the Wharton School and had a brief but distinguished career on the faculty at Wharton. Levy holds an M.B.A. and an M.A. in business economics from Wharton.

It was while Jacobs was teaching at the Philadelphia campus in the early 1980s that he and Levy met and realized they had common interests, among them an intense interest in the stock market and a certain skepticism about the efficient market hypothesis, the dogma of the day. They each independently moved next to Prudential, where they formed and managed a quantitative equity management affiliate.

Then in 1986, the two men founded Jacobs Levy Equity Management. For the first three years of the firm's existence, they devoted themselves only to research, in particular to researching the fundamental and behavioral factors underlying security returns and to what would become one of their innovations: the "disentangling" of return-predictor relationships. In 1990, they began accepting assets from clients and applying their proprietary research in practice.

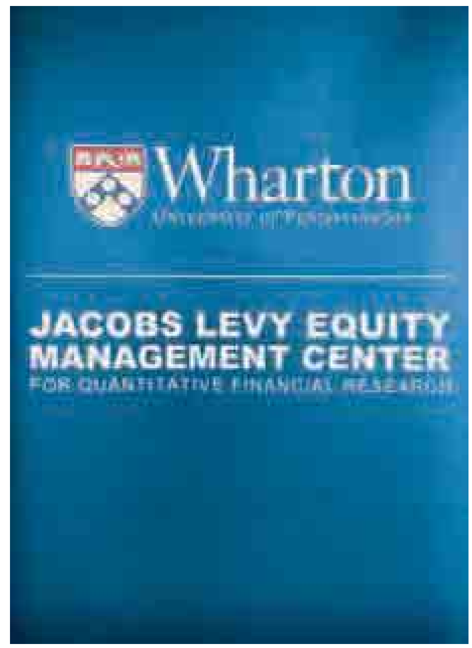
More than two decades later, the firm manages $8 billion in assets for a prestigious global roster of corporate pension plans, public retirement systems, and endowments and foundations, including many of *Pensions & Investments'* "Top 200 Pension Funds/Sponsors."

They have continued to expand their research into market anomalies and opened up new lines of inquiry. In particular, they have pioneered the construction of controlled-risk portfolios that hold both long and short positions, including both market-neutral long-short portfolios and 130-30 long-short portfolios. They have developed defensive equity strategies, which are designed to deliver a return similar to or better than the market's with lower risk. They have also worked with Nobel laureate Harry Markowitz on creating a computer model that can be used to simulate financial markets.

Jacobs and Levy have explained the concepts behind their research in numerous published books and articles that have had a widespread impact on quantitative finance. Their influence on quantitative finance will now be amplified through the Jacobs Levy Equity Management Center for Quantitative Financial Research, a natural progression, albeit a large one, and a highlight of their careers.

"So far, it is second only to our creation of Jacobs Levy Equity Management," Jacobs told *Wharton Magazine*.

—Matthew Brodsky



egies and their effects on markets," Jacobs offered. In particular, according to Jacobs, regulators and credit ratings agencies have proven themselves "not as quantitatively savvy as the practitioners."

"We hope the Jacobs Levy Center can contribute to knowledge in ways that will level the playing field in this regard," he said.

The Jacobs Levy Center could raise overall awareness about risk management and help create new tools for practitioners, Levy said.

No matter the research topic, it is clear: there is still plenty of unexplored territory, a fact that both Jacobs and Levy relish and one that bodes well for the Jacobs Levy Center.

"We are setting off on this exploration with the goal of drawing new and better maps of the world," was how Jacobs painted the endeavor during his speech at the opening dinner. "We feel as if we're funding the Lewis and Clark Expedition."

The Jacobs and Levy expedition, though, will bring along more pioneers than the few dozen who braved the 19th century venture commissioned by President Thomas Jefferson.

The Jacobs Levy Center will bring together not just various departments within the Wharton School—such as Finance, Accounting, Statistics and Operations and Information Management—but will also connect the business school with the schools of Arts and Sciences, Engineering and Applied Science, and beyond—connecting academics and students on campus with practitioners throughout the world of finance.

For Dr. Gutmann that facet helps explain in large part why the Jacobs Levy Center is such an immediate fit for the campus.

"This is ... at the heart of the Penn Compact," she said to the audience at the Jacobs Levy Center dinner party.

Since 2004, the Penn Compact has represented the University's commitment to teaching, research and service. Its four core tenets are increasing access, engaging locally, engaging globally and integrating knowledge.

Dean Thomas S. Robertson, Reliance Professor of Management and Private Enterprise, concurred when he said that night that Wharton's new center will be of value to the worldwide business community, and by extension, that Wharton will become even more valuable to that community. "That is indeed our objective: to be the best business school in the world, and for the world," he said.

Or as Levy summed it up in his dinner speech, "As much as research pushes practice, practice pushes research."

"Ideas are the critical capital," he said, in today's increasingly "virtual" business world.

> "The demands it makes are large, but the rewards can be tremendous—and not just the pecuniary ones."

The Jacobs Levy Equity Management Center for Quantitative Financial Research can bring to light a trove of ideas—through debate and through "dynamic, give-and-take thinking," as Jacobs put it, between students, professors and practitioners.

Students are first in line to reap the benefits of the Jacobs Levy Center. Quantitative finance education is in "good shape" around the country, according to Levy, but room always exists for improvement.

"The Jacobs Levy Center will, we hope, propel the study of quantitative finance at Wharton and raise its standing throughout the financial community," Levy told us.

This greater awareness could lead to more of today's talented students—and tomorrow's—entering the field.

"We hope they will seriously consider it," Jacobs said. "The demands it makes are large, but the rewards can be tremendous—and not just the pecuniary ones." ■

Knowledge@Wharton

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ON THE WEB

Can Anyone Create a Hacker-Proof Cyberspace?

NIGEL BUCHANAN

Over the July 4 holiday in the U.S., the Fox News Twitter account was attacked by hackers who left six tweets saying that President Obama had been shot to death in Iowa. Apple was also attacked over the weekend with a tweet directing readers to a list of user names and encrypted passwords from the Apple Business Intelligence website. Citibank, Sony and even the CIA have also suffered data breaches in recent months, drawing renewed attention to cyber security and accelerating the policy debate on how to protect critical information from hackers.

The opportunity for cyber attacks grows daily as corporations and governments continue to amass information about individuals in complex networks across the Internet. At the same time, new generations of cyber criminals, some motivated purely by money and others by the desire to unnerve corporations and governments, continue to hack into private data, according to Wharton faculty and security analysts.

"As the Internet becomes central to more peoples' lives, security becomes increasingly important," says Wharton professor of legal studies and business ethics **Kevin Werbach.** New wireless and mobile applications add to the volume of information that can be stolen. Moreover, he adds, the rise of cloud-based computing creates more centralization of processing and "bigger points of failure."

In response to growing threats, the Obama administration unveiled a legislative proposal in May to address cyber security after more than 50 separate cyber-related bills were introduced in the last Congress. Meanwhile, the Department of Homeland Security last month published guidelines pointing to 25 common software problems that allow criminals to obtain access to personal data.

Wharton legal studies and business ethics professor **Andrea Matwyshyn** says concerns about cyber security have been growing since the early 2000s, but recent malicious attacks on corporate and government data is driving action in the United States and Europe. She also points to a watershed breach in 2009, when Google and other Silicon Valley companies were attacked in what some security experts believe was a hacking attempt sponsored by the Chinese government. Google stated that the attackers were attempting to access the Gmail accounts of anti-government activists in China. "The blurring of the lines between the private and the public sector in this space is part of what Washington and [Capitol] Hill are reacting to—an increasing recognition of the urgency with which cyber security needs to be addressed," says Matwyshyn.

Since early May, a group of hackers calling themselves LulzSec, a splinter faction of a more established group, Anonymous, has taken credit for attacks on PBS, Fox News, Sony, the U.S. Senate and the CIA. "Together, united, we can stomp down our common oppressors and imbue ourselves with the power and freedom we deserve," the group tweeted after announcing it would disband. LulzSec went underground shortly after British police arrested a 19-year-old from Essex and charged him with some of the attacks. According to *PCMagazine,* Anonymous has been around for many years, coordinating attacks on organizations, companies and governments it believes pose a threat to Internet freedoms.

The Obama administration's proposal emphasizes consumer protection through a standard, federal requirement for reporting data breaches that would replace the current patchwork of state statutes. The proposed legislation would also apply federal Racketeering Influenced and Corrupt Organizations Act (RICO) penalties to cyber crime. In addition, the White House would work with the private sector to improve security of critical infrastructure, such as the electrical grid, and upgrade security of the federal government's own computer systems.

According to Matwyshyn, the initiative would create minimal nationwide standards for companies, vendors and all those involved in the collection, maintenance, transmission and storage of data. "At present, there is no floor, and that is desperately needed," she says. However, some critics have charged that the federal statute might diminish the effect of some states' strong data protection laws. In the meantime, Matwyshyn notes, the Federal Trade Commission is stepping up enforcement of basic privacy protections for consumers who provide data to companies when making online purchases.

From Bombs to Cupcakes

Shawndra Hill, a Wharton professor of operations and information management, says the government initiative is "long overdue." Hill suggests that the best way to combat threats to national security is through a consortium of government, industry and academia. "The technical experts need to be able to inform lawmakers on what is possible with respect to cyber threats and vice versa," she says. However, she warns that policymakers must consider ancillary effects of new legislation. For example, it may create new jobs in cyber security, but be very costly for companies that would have to create new infrastructure and data services to comply with the standards. So far, Hill notes, policy has not kept pace with technology and advances in data dissemination and use. "Companies will not necessarily act to prevent data misuse without incentives to prevent the exploitation of cyberspace," she adds.

Cyber threats are constantly morphing. In a report released this spring, Verizon, in partnership with the U.S. Secret Service and The Netherlands' National High Tech Crime Unit, found a decrease in the volume of data stolen in 760 attacks investigated in 2010. However, the drop appears to reflect a shift away from large-scale attacks to a more targeted focus on theft from independent and small franchise businesses, according to Wade Baker, director of risk intelligence at Verizon.

Several years ago, he notes, high-profile breaches of large organizations resulted in the loss of millions of records. More recently, investigations point to a trend toward more financially oriented attacks on smaller, independent businesses where breaches are less likely to be detected. Point-of-sale equipment, including ATMs and gas pumps, are under attack by criminals who insert devices that "skim" consumer information and pass it on to thieves through Bluetooth devices and smartphones. Developing security for consumer-focused transactions is a challenge, Baker adds. "Any time you have to mix security with high availability and accessibility, that makes your job more difficult."

According to Baker, "hacktivists" such as LulzSec—who break into networks not necessarily to steal money, but for ideological reasons or to prove a point—also appear to be ramping up activity. Since the earliest days of networked computing, hackers have sought to show their expertise by exposing vulnerable data systems. Baker says this form of hacking had subsided a few years ago "because it was not cool anymore." Now, however, it appears to be on the rise with a harsher edge. "The mentality seems less about fun and getting your badge to be a hacker; this seems to have maliciousness to it."

Additionally, he notes, in the past year or two, security officials have detected government-sponsored attacks, presenting new challenges for data protection. Baker says that criminals looking for financial gain will move on to new targets if they are at risk of being caught. But "nation states are different. They have the resources of nations behind them and a lot of time on their hands." Computer analysts have said that an unnamed government was behind a June attack on the International Monetary Fund designed to steal secret economic data that could be used to destabilize currencies or trade. Also in June, British newspapers reported that the U.K. government had hacked into the al-Qaeda site and replaced an article on how to make bombs with a cupcake recipe.

Personal Data Backlash

Those who work with consumer data must continually weigh the risks of a breach against the upside of using rich data to develop more effective marketing and product development. **Eric Bradlow,** a marketing professor and co-director of the Wharton Customer Analytics Initiative, says academics are working on new ways to resolve the tension between data privacy and the benefits of using targeted personal information. "The reality is that big money is made by tracing individual-level customers," he says. "That's the magic of the Web."

However, rising concerns about privacy may erode consumer trust and create a backlash against companies that harness Web-based data without providing effective security. Instead, academics, statisticians and computer scientists are developing new approaches to organizing data that can provide much of the benefit of individual-level data—but without as much risk, Bradlow notes. Some companies collect more personal information than they really need, “The reality is that big money is made by tracing individual-level customers.”

creating greater potential for a damaging breach, he says, adding that firms should think carefully about what data is essential and ignore the rest.

In the meantime, government appears likely to step in to help manage the balance between privacy and a viable, innovative Internet. In a hearing before the U.S. Senate Committee on Commerce, Science and Transportation last week, corporate leaders voiced support for increased government control. Tim Schaaff, president of Sony Network Entertainment International, which suffered an attack on its PlayStation Network in April, called for industry and government to work jointly to protect consumer data. Hewlett-Packard’s chief privacy officer, Scott Taylor, told the committee that legislation is necessary to create national standards that will help restore trust in corporate stewardship of personal data. “Consumer trust is a precious commodity,” Taylor said.

However, Sen. Pat Toomey (R-Pa.) cautioned against government overreach that might stifle innovation and expansion of the Internet. The United States, he noted, has been a leader in web technology, largely because it has maintained a light hand compared to other nations. “We need to examine this issue and make sure we don’t find a solution in search of a problem.”

According to Werbach, cyber security is an issue that transcends lines between the private and public sectors. “No one wants security vulnerabilities. Just ask Sony,” he says. “The question is: How can government and the private sector work together most effectively?” He adds that the White House has “struggled” with balancing security against the benefits of free and open data exchange and is “quite cognizant of that trade-off. Overall, what I’ve seen coming out of the Obama administration is generally a sensitive approach focusing on security rather than fear mongering.”

Kartik Hosanagar, a Wharton professor of operations and information management, thinks government has a role in Internet security, but notes that information technology companies and firms that rely on the IT sector to manage data should take the lead. Government, he argues, is needed to combat instances of state-sponsored cyber attacks, which he predicts are likely to become more common unless countries work together to agree on rules for cyber warfare. Victims of cyber attacks need to rely on government “cyber cops” to detect and punish criminals, he suggests. “That job cannot be left to private companies.”

Hosanagar points to the financial service industry as a sector that has provided strong leadership in managing cyber security, largely because incentives to provide data protection are aligned closely with business goals in financial companies.

A More Effective Approach

According to Werbach, the Department of Homeland Security’s guidelines on common software holes do not break new ground. While a lot of attention has been focused on spectacular, highly-publicized hacker attacks, he notes, these breaches may amount to a larger problem. At the top of the list is a method used by LulzSec to break into web sites and gain access to user names and passwords.

The cloud presents additional challenges, Hosanagar says, because it eliminates one kind of threat but introduces another. He points out that in the cloud, data and applications are managed away from the individual user, typically by information professionals who can keep systems up-to-date with software updates and virus protection. “The flip side,” he notes, “is that a lot of critical data is centralized. As a result, it creates a single point of failure and an attractive target for attack.”

Baker, the Verizon analyst, says the security industry has the tools to combat much of the threat to data, but often fails as a result of faulty management structures. “The bad guys aren’t successful because organizations don’t have the technology,” he argues. “It’s really about using, deploying and configuring the basic things we’ve been doing for years.” He adds that security analysts should devote more time to following up on their efforts in order to get a better sense of what actually works. “We don’t have real science and study and testing to make sure the things we are recommending are really effective.”

According to Matwyshyn, the United States and Europe have approached government oversight of the Internet from different poles, but are now moving more in sync. The European Union started with privacy principles on the Constitutional level for all member states. In the U.S., she says, policy has developed through “bits and pieces” of state law and court rulings. In Europe, governments took an opt-in approach to consumer data, while in the United States, privacy was based in contract law and consumer decisions to opt-out of providing access to data. Now data breach notification has been evolving on a state-by-state basis. “That’s a uniquely U.S. approach, but something the EU has been looking at and considering,” Matwyshyn notes. “Meanwhile, there has been a bit of resurgence of a call for more contract-based and market-driven self-regulatory approach in the EU. What seems to be happening is the two different data regimes are starting to converge toward a middle ground.”

She adds that the U.S. fostered a self-regulatory approach to data privacy between 2002 and 2007. “Now it is clear that there aren’t adequate financial incentives to push companies to do the right thing in security,” Matwyshyn says. “Some companies, not all, are simply taking their chances and hoping they will not get hit by a major attack, or that they can conceal it from the public.”

Legal penalties, she notes, have not been swift or severe, leaving corporate counsels with little ammunition to convince top management to devote more resources to cyber security. She adds that companies, particularly during an economic downturn, find it hard to justify an investment in security because it may not generate easily identifiable, short-term returns. Data security, however, has long-term implications because a loss of consumer faith or trade secrets could have major implications for a company.

“No piece of code will ever be truly secure,” Matwyshyn says. “It’s a language used and written by humans and for humans. ... The question is not whether there are flaws, but how companies and governments respond.” ■


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Final Exam

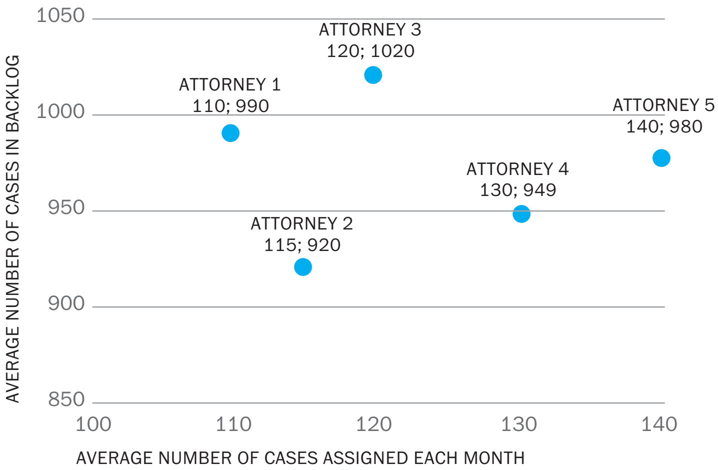
In each issue of *Wharton Magazine,* we'll test your knowledge with a question straight from an actual Wharton exam, crafted by one of the School's esteemed faculty members. Submit the correct answer and you'll be entered into our drawing for a fabulous prize—tuition-free attendance at a Wharton Executive Education program.

This Final Exam challenge comes from **Noah Gans,** the Joel S. Ehrenkranz Family Professor of Operations and Information Management. Good luck!

Winner of the summer issue Final Exam challenge:
Joshua Wool, WG'10

Congratulations, Joshua!

Figure 1: Case-Load Statistics for Five Attorneys



The Basics:

The U.S. Board of Immigration Appeals in Philadelphia has a backlog of almost 5,000 cases waiting to be processed. Each of five attorneys is assigned cases as they arrive. Figure 1 shows the number of cases assigned per month to each attorney (x-axis), as well as the average number of cases in each attorney's backlog (y-axis).

The Question:

Assume that the arrival rate of cases to the board is fairly constant over time and that the success rate of appeals is the same across attorneys. Based on the data shown in Figure 1, if you had an immigration appeal pending before the court and wanted to minimize the expected delay before the case is heard, to which of the five attorneys would you hope it would be assigned? Why?

ON THE WEB

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