marquette

THE MAGAZINE FOR MARQUETTE UNIVERSITY

COLLEGE OF BUSINESS ADMINISTRATION | 2018

Changed Landscape

Graduates of the ACRE program are making Milwaukee's commercial real estate market — and leadership landscape — more dynamic and diverse.

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HEALING A STORM-WRACKED ISLAND
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DREAM TEAMS: PROFESSORS AND EXECUTIVES
JOIN FORCES FOR BETTER TEACHING

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dean's note

Dr. Brian D. Till James H. Keyes Dean College of Business Administration

As a
Catholic,
Jesuit
business
school, the
College of
Business
Administration
has a unique
duty to
the world
around us."

As a Catholic, Jesuit business school, the College of Business Administration has a unique duty to the world around us. We are charged, first and foremost, with educating future business leaders who — through our three foundational pillars of ethics and values, experiential learning, and personal attention — will go on to Be The Difference.

That duty includes bettering the community in which we operate: our home, Milwaukee.

In his cover story "Changed Landscape," writer Dan Simmons explores the history of the Associates in Commercial Real Estate program, a minority outreach program that provides commercial real estate training, networking and mentoring opportunities in a diversity-starved industry. He tells the ACRE story through the eyes of its graduates — an impressive list of successful developers, prominent Milwaukeeans and city council members who each day are transforming whole swaths of Milwaukee's central city.

In this, the second issue of *Marquette BIZ*, you will also read about alumna and Marquette University Trustee Joanna Bauza, who, with grit and determination, is bringing the skills she learned in the classroom and on the court as a tennis standout to secure brighter futures for her employees in her native Puerto Rico.

We also delve into the importance of teamwork, another tenet of a Marquette Business education. First, take a behind-the-scenes look at our students' wildly successful track record in various case competitions, in which teams vie for trophies, scholarships and bragging rights against other universities in disciplines such as supply chain management, applied investment management, real estate, project management and applied economics.

Then, read about how Marquette Business professors are joining forces with industry veterans for a series of co-taught courses that are not only a powerful teaching tool for our students, but also an invaluable experience for our faculty.

Thank you for reading these and the other stories we share with you in the coming pages. They are a mere glimpse of all the great things happening in the college, but I am proud that they so accurately and broadly capture the spirit of Marquette Business — our students, faculty and alumni, alike.

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We appreciate your feedback on MARQUETTE BIZ magazine. Please send all comments to the editorial director at stephen.filmanowicz@ marquette.edu.

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Students' grade levels in this issue are current as of the 2018–2019 academic year.





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DREAM TEAMS

Professors and professionals team up to deliver students classroom knowledge and worldly experience.







Joanna Bauza, Bus Ad '97, was at home in Chicago when Hurricane Maria struck Puerto Rico last September, but her heart was 2,000 miles away on the beloved Caribbean island where she grew up and still has much invested, personally and professionally.

Though all made it safely through Maria's initial onslaught, colleagues and family alike soon faced life-threatening hazards, including illness outbreaks and perilous searches for fresh water and gasoline. "The first team meetings were all about helping everyone meet their basic needs. One employee told me, 'Joanna, I spent 12 hours waiting in line for gasoline with my baby.' It was awful. She had no other choice," recalls Bauza, who ran the meetings by conference call as flight service on the island remained nonexistent or sporadic. "For the first two weeks, we were like a counseling department. We couldn't really get much more done than that."

When she could finally book a roundtrip ticket and see the storm's aftermath BY JENNIFER ANDERSON

The devastation she saw left her with a sense of resolve deepened by her love of the island ... and certainly the grit she developed rising the ranks of competitive tennis



As Puerto Rico plunged into an electricity blackout and frightening images began to circulate, she anxiously accounted for the well-being of her parents, other family members and friends. And that wasn't all. As president of The Cervantes Group, an international information services company headquartered in San Juan, Bauza and her husband, Timothy Mullen, Comm '96, Cervantes' managing partner, also had the firm's Puerto Rican employees and customers to focus on and help.

firsthand, she trailed Mullen who'd headed down a week earlier with four huge suitcases stuffed with supplies such as batteries, fans, flashlights and granola bars. As her flight descended into San Juan, Bauza was stunned. "It looked like a massive fire had burned down the whole island, like it had been hit by a nuclear bomb."

The devastation she saw, however, just left her with a sense of resolve deepened by her love of the island, her business philosophy and certainly the grit she developed rising Even with hurricane-related challenges, Cervantes occupies a market sweet spot. "Most of our consultants are bilingual," says Bauza. "Our clients really appreciate the value we place on multiculturalism."



Joanna Bauza and husband, Timothy Mullen

the ranks of competitive tennis in Puerto Rico and at Marquette. Though Cervantes had come to have offices stretched from Chicago to Madrid, Spain, Bauza and Mullen had established the firm in San Juan. They knew it now had a role to play rebuilding the city's shattered economy, providing employees with support and long-term career prospects. The crisis was a humbling reminder of the business philosophy the couple has nurtured with Marquette's influence. "The university really instilled in us the value of giving back," says Bauza. "It helped form our values and friendships. And it gave us an understanding of how you can use business to change people's lives for the better."

Drive and resilience were traits Bauza already had in abundance when she arrived at Marquette in the mid-1990s.

As a girl in Guaynabo, Puerto Rico, she would play her mother in tennis, only to be beat soundly in repeated 6–0 sets. Those losses ignited a competitive spirit in Bauza that drove her to become the No. 1 ranked women's tennis player in the Commonwealth of Puerto Rico.

That hustle continued at Marquette. As a freshman, she shared head coach Jody Bronson's dream of taking the women's tennis team to an NCAA Championship, but they lacked enough players to qualify. So Bauza worked the phones, encouraging former competitors from all over the world to check out Marquette. Several top Spanish players eventually enrolled. In 1997 the team reached the NCAA Championship for the first time, capping off Bauza's third season as team MVP. Looking back, she credits many of the elements of her success — discipline, mental toughness, vision, collaboration, leadership — to her athletics experiences.

After graduating with a degree in management information systems and marketing, earning an MBA from Depaul University in Chicago and spending several years working for startups, Bauza was ready for a new kind of challenge, and so was Mullen. The couple moved to San Juan and established The Cervantes Group in 2004. Her grandparents had established a number of retail stores in Puerto Rico, and her parents brought the True Value hardware store brand to the island, so the idea of starting and growing a business was familiar to her, perhaps even imbedded in her DNA.

Leveraging Mullen's sales and marketing skills with Bauza's technology talents, the partners established a specialty in information technology consulting and talent acquisition. "Puerto Rico proved to be a great place for entrepreneurship," she says. "The market was so underserved with the services we provide."

Today, Cervantes is a multimilliondollar company with offices in San Juan, Querétaro, Mexico, Madrid, Spain, Boston and Chicago, where the couple and their children live (while retaining an apartment in San Juan). Even as it works through hurricane-related challenges, the firm occupies a sweet spot in the IT marketplace. "We are a very diverse company," she explains. "Most of our consultants are bilingual. We move quickly and adapt to our clients' needs. Our clients really appreciate the value we place on multiculturalism and, of course, results. Our commitment to excellence is the cornerstone of our fast growth." These strengths put the company on firm footing to deliver on its promise to help people in Puerto Rico get back on their feet.

Although her love for the island is unrivaled, her loyalty to Marquette comes close, says Bauza, a Marquette University Trustee since 2016 and recipient of the 2015 Spirit of Marquette national alumni award with Mullen. "I find that when people come to Marquette, it becomes their second home, and they become very committed to our university. I knew I wanted to make a difference for Marquette as well."

BIZ BRIEFING

Trading Up

It's amazing what students can acquire when they start with a pencil and start trading — including the lesson that value is in the eye of the beholder.

During a semester abroad this spring in Vietnam, Vincent Weber, a junior majoring in information systems and marketing, ventured out daily into the streets of Ho Chi Minh City, even during rainstorms. That means he

found the umbrella he brought along with him from the United States one of the most valuable items in his suitcase.

Best of all, he didn't pay a cent for it. A semester earlier, as a student in Dr. Kristie Rogers' Negotiations and New Ventures course, he and fellow students tackled an unusual assignment — negotiating no fewer than five trades to parlay a pencil into something else of greater value.

Weber and his partner made eight trades, moving from pencil to pen to snacks and electronics, culminating with an exchange of a coffee-mug thermos for the aforementioned umbrella. "The assignment didn't specify that the item had to be expensive. I focused on obtaining an item I'd actually use," Weber says. "I brought it to Vietnam, and I've used it three times."

Indeed, in helping students hone skills for real-world transactions, the assignment isn't focused strictly on monetary value, says Rogers, assistant professor of management. The goal is to "think about value in a way that is not purely objective. In any given situation, something is of greater value to one party than another,

and when you identify that asymmetry, it opens new possibilities."

That lesson resonated with Thomas Madaras, Bus Ad '18, a business administration major who appreciated its marriage of classic economic self-interest with the concern for others stressed in Marquette's

Catholic and Jesuit values.

"No one likes to get the short end of the stick,"
Madaras says. "You have to have value on both sides."

For one trade, Madaras connected with a friend who had just received 40 packages of Peeps candies from his aunt. With so many Peeps on hand, even just half a pack of gum was of greater comparative value, while Madaras realized a full package of Peeps would give him greater leverage for his next trade.

The assignment teaches students "to think on our feet and be able to adapt to any situation," says Molly Long, a senior majoring in marketing. "You can't really prepare for that with a test. You have to work with a person ... and adapt to what they are seeing to get what you want and make sure the other person leaves satisfied."

The assignment lavished extra credit on the trade voted best by the class. A light-up Bluetooth fidget spinner earned accolades, as did a five-show pass to the 2017 Milwaukee Film Festival, valued at \$55. But the deal that earned top billing, garnered from 13 trades? A black betta fish.

Lesson learned: Value is in the eye of the beholder.



Dr. Kristie RogersAssistant professor of of management

BY LAURA MERISALO





Dr. Kristie Rogers

BIZ BRIEFING

Blockchain Explained

Marquette looks to harness a blockchain boom that extends far beyond cryptocurrency.

In 2008, a year after the iPhone debuted, a new kind of record keeping was invented. Called blockchain, this ultra-clever technology is suddenly poised, 10 years later, to transform practices in currency systems, accounting, supply chain management, medical records or even higher education — with a new leadership cluster headquartered in the College of Business Administration bringing the discussion to campus.



So what exactly is blockchain? It's a technology that does something previously impossible. Since time immemorial, the veracity or security of information has depended on its maintainer. Banks are generally

trusted, for example, to keep accurate records of customer accounts. Blockchain does something different. Using encryption and a network shared across a large number of computers, it creates hack-proof records, known as blocks, that everyone (with the right keys) can add to and access as needed. The information exists like a fortress unto itself.

Verifying transactions through a process called "mining," blockchains have already been used to create currencies such as Bitcoin.

Users churn through the encryption needed to make Bitcoin work using special, high-powered computing rigs and earn a portion of the currency for their trouble. (The minting process of the cryptocurrency is highly predictable, producing new coin blocks roughly every 10 minutes; it's just the subsequent speculative trading of bitcoins that's proved risky.) Forward-thinking businesses could someday use blockchain to track inventory or financial records, and in those cases, the technology would stand in for trusted clerks and accountants and remove the need for auditing.

"Blockchain is how the internet was in 1995," says Dr. David Krause, director of the Applied Investment Management program in the College of Business Administration. "It's ready to burst on the scene."

The college is on track to be there when it does. Administrators and faculty in the college convened a half-day blockchain conference in November that drew 300 people to the Alumni Memorial Union. At an event in February coorganized by Startup Milwaukee and Marquette, three local startups using blockchain technology pitched themselves to potential investors. A workshop followed in March on using blockchain for supply chain management. Alec Shaw, Bus Ad '18, and Davis Marklin, Eng '18, both graduating in December, are leading the Marquette Blockchain Lab, which helps organize these events as part of a broader agenda of connecting the campus and local business community through outreach and partnership.

"We've been waiting for 40 years for a method of digital currency to emerge," says Krause. And now it's clear the technology's impact will go far beyond virtual money, with Marquette aiming to go step-for-step in keeping pace.



Dr. David Krause

Director of Applied Investment Management program and assistant professor of practice, finance

BY MATT HRODEY



RINCKCHAIN

WAS IN 1995.

IT'S READY TO

BURST ON THE SCENE

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Dr. David Krause

Photo (left): As professors and students anticipate what's next for blockchain, the technology has gone mainstream to the point that consumers can purchase Bitcoin currency at ATMs like this one on Brady Street in Milwaukee.

Supply and Demand

Leveraging recognized expertise, a master's program tackles the transition to digital supply chains.

The field of supply chain management — encompassing customer service, logistics, manufacturing, sourcing and purchasing — is changing rapidly as the world becomes more technology-enabled and the economy more robust, says Dr. Doug Fisher, director of Marquette's Center for Supply Chain Management and assistant professor of practice of management.

Fortunately, with an undergraduate program in supply chain management ranked 14th nationally by *U.S. News & World Report* and a master's program debuting this fall, Marquette is a natural place for educational programs and research that keep pace with this change. The content of the new graduate program, in particular, is industry-driven and focused on the field's newest challenges.

Supply chain managers traditionally were tasked with ensuring businesses purchased or moved raw materials, parts or other products efficiently as cost-saving measures, says Fisher. Now they're also being asked to be more effective and drive revenue by utilizing massive amounts of information to make data-driven purchasing choices to meet customer needs. "It's the fourth industrial revolution," he says.

This transition from physical to digital supply chains, and the utilization of data to more effectively meet consumer needs, has been coined "Industry 4.0," explains Dr. Mark Barratt, associate professor of supply chain management. It's creating a need for companies to hire people who understand digital supply chains and are ready to capitalize on them, Barratt adds. Leaders of the Center for Supply Chain Management had those needs in mind in developing the new master's degree program. Barratt has worked closely with Fisher and an advisory council of business leaders and other experts to develop the 31-credit

program. The graduate courses, which are online with the exception of three in-person workshops, are geared toward individuals with two to three years in the field, Barratt says, and will tackle subjects such as Industry 4.0, blockchain, additive manufacturing and business analytics.

After helping to shape the program, partners from industry now enthusiastically endorse its approach and focus on the transition to digital supply chains. "Many companies here can benefit from hiring students with the applied focus and skills that Marquette graduates traditionally have. The graduate program will help forge a better connection between the program and the business community," says Dr. Mark Cotteleer, Bus Ad '88, research director of the Center for Integrated Research at Deloitte Services and an advisory board member.

Fisher and Barratt see an alignment of conditions favoring the program's launch — a strong overall economy, an emergence of supply chain management as a competitive weapon driving business success. and Wisconsin's presence as a major manufacturing center energized by the arrival in the region of the world's largest electronics manufacturer. With a new graduate program leveraging these factors, they believe, supply chain management at Marquette is poised to move from regional to national prominence.

Adds Barratt, "Adding a master's program with the focus on equipping students to help employers prepare their own digital supply chain systems will move our program from a regional to a national scale."



Dr. Mark BarrattAssociate professor of supply chain management

BY EDGAR MENDEZ, GRAD '14

Illustration by James Steinberg



BIZ BRIEFING

All Marquette, All Online

The GSM's newest MBA is all about flexibility and high standards.

The trending need among today's graduate students is flexibility. Whether working full time, traveling globally for jobs or seeking to carve out time with family, students increasingly ask for flexible MBA study options.

Responding to these evolving student needs, the Graduate School of Management is offering a fully online MBA program beginning this fall. Online MBA students will take two classes per term in fall, spring and summer, for a total of 33–39 credit hours.

To maintain Marquette's high MBA standards, the online program features the same admission requirements, curriculum, faculty, learning outcomes and international experiences as the other MBA offerings.

Students will spend less time navigating administrative aspects of each class and more time on learning, thanks to a template developed by an instructional design committee that helps to ensure consistency across online courses.

Another program highlight is virtual team participation for each student. "A cohort model is important for creating community in an online environment," says Dr. Jeanne Simmons, Bus Ad '88, Grad '90, '97, GSM associate dean. Cohort teams will use tools such as Skype for Business, Outlook Lync and WikiLinks, with each group determining the best methods to get and stay connected. In using these applications, students also develop soft skills beneficial to their careers, as time zone differences and travel limitations increasingly call for use of these types of collaboration tools.



To learn more, visit marquette. edu/business/graduate/infosessions.php.

BY LAUREN SCHUDSON, GRAD '97



Insiders helped students understand how a major brand and its agency handled the pressures of a viral sensation — the return of McDonald's Szechuan dipping sauce.

BY KALEY ROHLINGER

Inside the "Incident"

An immersion trip gives students a valuable view into advertising and marketing in Chicago — and the managing of a viral sensation.

Dana Warren, Bus Ad '18, spent the past four years as an undergraduate studying marketing — and a fan of Cartoon Network's grown-up comedy *Rick and Morty*. So when she and 29 other Marquette marketing and advertising students found themselves in the Chicago headquarters of We Are Unlimited, the ad agency solely focused on McDonald's global marketing needs, she didn't hesitate to ask about "the Szechuan sauce incident."

Beginning innocently enough in mid-2017 with an impassioned speech by one of the show's characters lauding the short-lived 1990s-era McDonald's sauce, the incident grew into a cause célèbre with tens of thousands of fans petitioning the chain to bring back the condiment. What followed qualifies as a case study for handling (or not) the viral engagement brands pine for but struggle to manage.

Fortunately, the Chicago Experience — a new two-day immersion in agencies and brands piloted by the College of Business Administration and the Diederich College of Communication — delivered students to the right place to learn lessons. An account specialist guided them through the case step-by-step, including the misfiring of a well-intentioned "limited" return of the sauce that left fans lining up angrily for a product that had already run out (requiring police intervention, in some cases).

McDonald's took a well-publicized do-over in February, flooding its U.S. restaurants with 20 million Szechuan sauce packets. The firsthand report and other revealing agency visits amounted to "one of the most interesting college experiences I have ever had," says Warren.

Adventures in Applied Economics

Inside the program where students hone their analytical skills answering intriguing questions — such as how your weight may influence your salary.

Graduates of the Master's in Applied Economics program are everywhere, conducting market research for Fortune 500 companies, doing statistical analyses for the State Department and aiming for exceptional gains in investment banking.

Before assuming these enterprising roles on the world stage, students prepare for them with professional projects: theses-like papers that culminate their study and use economic analysis to answer pressing questions.

Take Kevin Kane, Arts '10, Grad '18. He studied Medicaid expansion and found that increased utilization of the program that provides health coverage to the poor and others in need actually led to reduced private insurance premiums. To reach this conclusion, Kane analyzed data from over 100,000 privately insured consumers that he obtained from claims databases to compare the experiences of states that did and did not expand Medicaid.

Kane now applies this research directly to his work as a public policy expert for the nonprofit Citizen Action of Wisconsin, which was also his employer while he pursued his degree. "After the program, the research reports I do for work are a lot more rigorous and, I believe, more respected by people in the field," Kane says.

Kane's classmate Nicole Vanderlin, Grad '18, devoted her final project to another timely and relevant topic: the interplay between weight and salary. Using a national data set that surveys and tracks a representative set of over 5,000 families in the United States, Vanderlin looked at the effect of a person's

weight on their wages and found that heavy white women are paid less than their thin counterparts. Surprisingly, she also found that overweight African American men and overweight white men are paid more than their normal-weight counterparts. Vanderlin, now an analyst at Geico, had used an innovative model — the Blinder-Oaxaca decomposition, a statistical method primarily used to identify discrimination — to reach these conclusions, leading her faculty adviser, Dr. Nicholas Jolly, associate professor of economics and labor economics expert, to work with her to publish the research in an academic journal.



Nicole Vanderlin, Grad '18

BY ANNA MILLER, ARTS '17

Illustration by James Steinberg



AND ... MORE RESPECTED ...



Kevin Kane, Arts '10, Grad '18



Such innovative research methods and noteworthy results gladden but do not surprise Dr. Farrokh Nourzad, professor of economics and director of the Master's in Applied Economics program, who says the research, analytical and communication skills of Kane and Vanderlin are the kind that take program graduates places in their careers. "Not only do they learn quantitative research tools, they learn how to communicate," he says. "Because of this, they're not going to be in the back room, just crunching numbers. They can be in the front, leading."

BIZ BRIEFING

Knowing Warren Buffett

Alumnus David Martin shares what it's like to be riend an investing legend.

Few people can earnestly count one of the world's richest people among their friends. David Martin, Bus Ad '09, doesn't have that problem: He's friends with Warren Buffett. A graduate of the college's heralded Applied Investment Management and real estate programs, Martin has enjoyed his own professional success growing his family's business, developing commercial real estate and sharing commentary as a guest on CNBC. But some of the greatest lessons he has learned have come from the "Oracle of Omaha" himself. *Marquette BIZ* asked Martin about business, being on camera and — of

— luckily Walmart responded, and we went to Bentonville, Ark., to pitch the idea. We received our first chance with Walmart on Feb. 22, 2010, which I will never forget. As we like to say, one good job leads to the next.

ON MEETING THE ORACLE OF OMAHA: I have always admired Warren and Berkshire Hathaway. At Marquette, there were many references in class to his track record, management ability, integrity and success. I tried to read as much as I could from shareholder letters, news articles and books about him, his partner Charlie Munger and Berkshire as a company.



David Martin is president of Building Installation Group I, Inc., a retail merchandising service company he founded after developing and growing that sector of his family's business, Green Bay, Wisconsin-based H.J. Martin & Son Inc., a national construction specialty contractor.

BY CHRISTOPHER STOLARSKI



Students in the AIM program have benefited from the connection of Martin (far right) and Buffett (front, center), twice joining the young alumnus in Omaha for meetings with the Berkshire Hathaway CEO and students from other universities. Dr. David Krause, director of the

AIM program, appears rear, right.

course — Buffett. What follows are excerpts of that interview:

ON EARLY SUCCESS: Throughout our company's history, we have always tried to add new revenue sources, and one way we thought to do this was to begin offering merchandising services to national retailers. A co-worker and I wrote to existing and potential customers

I attended my first Berkshire shareholder meeting in May 2013. Later that year, I was lucky to meet Warren with a family friend Green Bay Packers legend Paul Hornung. We flew to Omaha to see Berkshire's office and have lunch with Warren. In 2014 he and seven people from Berkshire came to a Green Bay Packers game at Lambeau Field, which was a

real highlight for me. As we watched the Packers win the game, we talked about how university students would visit Warren, tour Berkshire's businesses and — most importantly — ask him questions. Thankfully, the Berkshire team let Marquette travel to Omaha.

ON MARQUETTE VISITING BUFFETT: I've had the opportunity to accompany two AIM classes and AIM Director David Krause to Omaha, where we were among seven other university groups of about 20 students each who visited with Warren. I was always impressed with the Marquette students and how they carried themselves with the likes of many Ivy League schools — it is a real credit to Dr. Krause and his leadership. Each time I went with the students to Omaha, I was proud to be a Marquette alumnus.

ON CNBC STARDOM: Being on camera is not easy for me, and I give a lot of credit to the people who do that every day. I've gotten to know Brian Sullivan from CNBC over the years, and hopefully I can incorporate the AIM program into a feature story or in-person visit in the future.

FINAL THOUGHTS — ON BUFFETT'S WISDOM:

One thing Warren has always said is he wants to be known as a teacher. The luncheons with students are a way for him to "conduct class." And the generosity he has shown (in mentoring) me, and several others, is something that is very special and speaks to his character.

Warren always says you go in the direction of the people you surround yourself with, and I was lucky to meet a great group of friends at Marquette in the real estate and AIM programs who are very motivated and intelligent. Being around them helped me tremendously.



BIZ BRIEFING



Dr. Sarah Peck Associate professor of finance

BY JEFF BENTOFF

Illustration by James Steinberg



NOBODY HAS LOOKED AT

PUBLIC PENSION GOVERNANCE

IN THIS WAY BEFORE.
WE'RE REALLY GIVING BOARDS
A TOOL, SO THEY CAN DO THEIR

JOBS BETTER



Dr. Sarah Peck

To learn more about the new company that grew out of this published Marquette research, visit fundgovernanceanalytics.com.

Above Board

New Marquette research links effective boards of directors with better municipal pension plan performance.

Your local municipal pension plan certainly doesn't have Warren Buffett managing its investments. But does it need to?

New research by two College of Business Administration faculty members has found that the performance of a plan's board of directors is a key overlooked factor in fund performance: The more effectively a board governs a municipal pension plan, the more likely it is that good financial returns will follow.

The researchers — Dr. Sarah Peck, associate professor of finance, and Dr. Christopher Merker, Grad '17, adjunct professor and director in wealth management at Robert W. Baird & Co. — have developed an innovative index to measure that effectiveness. And with many public pension plans underfunded and trillions of dollars at risk, says Peck, "We feel this index has real social value, both for the taxpayers and for the beneficiaries of these plans."

To create the index, Peck and Merker relied on an army of graduate students that looked at minutes from nearly 1,300 board meetings on websites of 150 large public pension plans. They focused on 17 variables, including length of board meetings, percentage of board members on a board's audit committee and frequency of investment discussions. Applying statistical processes to the data, they created an index they've named the "fiduciary effectiveness quotient." Peck says that how a plan ranks on the index "is strongly related to the returns the funds earned." In fact, a 10 percent improvement on the team's FEQ index equates to a 3.6 percent annual increase in market returns compared to benchmarks

that take into account funds' different asset allocations, which in turn would reduce the required contributions of taxpayers and bondholders by about \$37.1 million.

Given results like that, it makes sense that the authors are working with Marquette to patent the index and have made it commercially available to public pension plans as the FEQ™ through a new company, Fund Governance Analytics, created in partnership with Marquette University. "Nobody has looked at public pension governance in this way before," says Peck. "We're really giving boards a tool, so they can do their jobs better."





MOVING PICTURES

Which films with business themes have stuck with prominent figures from the college?







Cynthia Lopez, Bus Ad '18
Recent graduate,
accounting and international business

Shari Noonan, Bus Ad '96 CEO and co-founder, Rialto Trading

Dr. Kevin RichChair and associate professor, accounting



FOUNDER



Movie: Legally Blonde (2001)

Movie:The Founder (2016)

Movie:The Pursuit of Happyness (2006)

Why:

There's more to Chihuahua-carrying law student Elle Woods than meets the eye. Just ask Cynthia Lopez: "As stereotypical as it seems, as a young girl I loved her pink outfits and little puppy." But it was Elle's persistence — and the early glimpse of college life — that stuck with Lopez, the daughter of Mexican immigrants. "When I asked friends' parents what Harvard was, I learned what college was and how there were many options," she says. While not interested in studying law, Lopez did become president of her sorority. "And like Elle, I always try to have faith in others and in myself," she says.

Why:

As co-founder of a firm whose technology provides access to anonymous fixed-income trading, Shari Noonan knows entrepreneurship firsthand and can relate to Michael Keaton's performance as Ray Kroc, the businessman who built McDonald's into a nationwide chain. "Especially the perseverance required when embarking on a new venture," Noonan explains. "People you think will be there for you may well not show up. However, new and surprising advocates arrive." She also admires Kroc's unconventional recruitment philosophy, "focusing on those who were innovative and hungry, rather than people who had the requisite capital or were groomed to run the franchises."

Why:

Dr. Kevin Rich gives the biographical drama starring Will Smith as entrepreneur Chris Gardner two thumbs up for its inspirational message and valuable lessons on managing work-life balance. Gardner's transformation from a homeless father and unpaid stockbroker trainee to a top-performing employee and, eventually, owner of his own investment firm illustrates qualities that are beneficial in and outside the workplace. "Chris Gardner's nevergive-up attitude is extremely inspiring," Rich says. "He strived to work smarter — to be creative and find a different way to do things — because he didn't have time to work more hours because of family commitments."



Changed Landscape

The ACRE
program and
its talented
graduates have
transformed a
diversity-starved
local real estate
development
industry and
fostered a new
generation of
Milwaukee
leaders.

BY DAN SIMMONS

Photography by John Sibilski

Kevin Newell (left)



When he applied to become part of the second cohort of Marquette's already popular Associates in Commercial Real Estate program in 2006, Kevin Newell had strong credentials but was quite a bit younger than the typical applicant.

Noting that the 26-week course was designed primarily for working adults and that Newell hoped to enroll while still an undergraduate — Dr. Mark Eppli remembers, "I actually pushed back against admitting him because he was a full-time student at UW-Whitewater." Back then, just one of five applicants got accepted, and even small things could disqualify an applicant for the program, which meets weekly and includes courses in property management, construction management and real estate development techniques. But others championed the applicant, and Eppli, then professor of finance and Bell Chair in Real Estate in the

College of Business Administration, agreed to take a chance.

"We made an exception, and the dude has hit it out of the park," Eppli says. Newell finished ACRE at the top of his class then worked four years in increasingly bigger roles for the Wisconsin Housing and Economic Development Authority. Now, 13 years after his ACRE training, the still-young Newell (pictured left) is helping to reshape Milwaukee's urban real estate landscape through his own company, Royal Capital Group. Most visibly among the firm's \$100 million in developments so far, Royal was handpicked to develop the 112-unit luxury apartment and mixed-use development as part of the Milwaukee Bucks Arena District, outcompeting developers local and national. Notable about the announcement was a lack of headlines or surprise about a major downtown development going to an African American man born and raised in Milwaukee. Even a decade ago, that piece of the news surely would have garnered more attention simply because, even that recently, it almost never happened.

"Without the ACRE program, Royal Capital does not exist," Newell says. "I was really attracted to the opportunity to do a deep dive into the teachings of the commercial real estate world from experienced peers, industry professionals and seasoned leaders in academia."

The theme that landed Newell in the program — taking a chance — aptly sums up ACRE's overall approach. Started in 2004 with funding from the Helen Bader Foundation, the program's founders, including Eppli, decided the university should take a chance on identifying and fostering promising men and women of color in Milwaukee to become players in the local development scene. They did so because both personal experience and industry research told them that the region had microscopically small numbers of minority representation in commercial real estate, a field whose practitioners build

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A strong **ACRF** program is a strong Milwaukee, and a real win not just for the lifechanging experiences that these graduates receive, but also for our broader community.

Andy Hunt

generational wealth for themselves and their families but also shape the look, feel and possibilities of their communities.

That investment in human capital has encouraged other gatekeepers in the industry and related civic circles to take a chance on the program's graduates, who have taken thousands of chances on developments. Those efforts, in turn, have remade big swaths of the central city and helped fuel many graduates into positions of leadership. ACRE graduates include prominent Milwaukeeans and form a burgeoning network in town. The pipeline works the other way, too. When Newell hired Terrell Walter at Royal, he urged him to enroll in ACRE, which he did, graduating in 2015. He's now development manager with the company, in charge of a multimillion-dollar portfolio.

"We now see more developers of color coming before us with development projects that will help shape and mold Milwaukee's future," says a recent letter from three current Milwaukee Common Council members: Milele Coggs, Khalif Rainey and José Pérez. Another thing they have in common: Each is an ACRE program graduate. "Our experiences within the ACRE program have equipped us well as policy makers, influencing the real estate developments we now see changing the Milwaukee skyline," they wrote in the joint statement.

ACRE is now coordinated by LISC Milwaukee, which partners with Marquette, the Milwaukee School of Engineering and UW–Milwaukee.

Eppli, who accepted a faculty position at UW–Madison and is departing Marquette this summer, leaves not just the legacy of starting ACRE but also an enduring role. In March, LISC launched a new real estate fund called the Dr. Mark Eppli Catalytic Venture Fund, which it hopes to grow to \$200,000 and will be available exclusively to ACRE grads for startup grants to get

projects going, with an expectation they'll pay the funds back once projects reach maturity. Eppli says ACRE students have always brought a discipline and dedication that he admires.

"They're there to learn," he says. "The level of engagement is extraordinary. That's what makes it fun to teach."

Andy Hunt, Bus Ad '08, Grad '13, director of Marquette's Center for Real Estate, says that the department remains committed to the ACRE program after Eppli departs, and that Eppli's replacement will oversee Marquette's involvement in the program just as he did.

"A strong ACRE program is a strong Milwaukee, and a real win not just for the life-changing experiences that these graduates receive, but also for our broader community," Hunt says.

ACRE ACHIEVERS: 5 MORE GRADUATES MAKING THEIR MARK IN MILWAUKEE

Melissa Goins, Comm '03, Grad '12 (pictured right), took an unusual route to her current job as founder and resident of Maures Development Group LLC. She was a sergeant in the Wisconsin Department of Corrections before joining the ACRE program, which propelled her into development and spurred her rapid rise into the ranks of Milwaukee's up-and-comers. Maures has done \$70 million in apartment developments, including three major projects not far from Goins' childhood home at 24th and Center: Teutonia Gardens, Franklin Square and Century City. "The biggest gift beyond curriculum is that real estate is based on who you know, and ACRE creates a bridge and a platform for people without opportunities to be exposed to the real estate world," Goins told the Marquette Tribune in 2014. "ACRE is not a magic bullet. ... The responsibility is in the hands of the participants to nurture those connections created by the program."





As executive director of LISC Milwaukee, a community development nonprofit

that's part of the 32-city-strong Local Initiatives Support Corp., **Donsia Strong Hill** guides partners in nationally tested development strategies to Milwaukee's central-

city neighborhoods. "Across the national LISC network, ACRE is seen as a promising model for advancing equitable economic development and building wealth," she says. But her connection to the program doesn't stop there. She graduated from the inaugural ACRE class of 2005. LISC now coordinates the ACRE program in partnership with Marquette and others. "ACRE graduates build their own wealth and influence, and become mentors and investors to the next generation of minority developers in Milwaukee," she says.

Keith Stanley parlayed his ACRE training into roles in city government and neighborhood development, ultimately landing him in his role as executive director of the Near West Side Partners/
Business Improvement

District 10, a high-profile partnership of neighborhood constituents and five anchor institutions: Aurora Health Care, Harley-Davidson, Marquette University, MillerCoors and Potawatomi Business Development Corp. "Many of our political and economic systems in this country still seek to avoid competition, specifically diverse competition, resorting to the 'good ole boy' system," he says. "ACRE was and continues to be a voice against this mindset."

In addition to the rigorous training ACRE provides to develop the skills and tools needed to succeed in high-stakes development work, he appreciates how the program connects students to influential industry insiders. Says Stanley,

Milwaukee BizTimes' 2017 Nonprofit Executive of the Year, "I think I'm probably most proud of the relationships I have."

Deshea Agee, Bus Ad '99 (pictured left), spent nine years as an economic development specialist for the city of Milwaukee before assuming his current role as executive director of Historic King Drive Business Improvement District 8 in 2016. Where did ACRE fit into his rise? "I can point to ACRE as the single most important set of events that propelled my career," he says. "Professionally, ACRE put me in a position to help more than 300 property and business owners access over \$3 million to improve properties in Milwaukee. Ultimately, ACRE guided me to a career where I wake up every day enjoying what I do." And he avidly connects with up-and-comers from the program. "I am positioned well to help ACRE graduates put deals together. This is important because a goal of ACRE is to change the narrative in Milwaukee."

Vincent Lyles' path to his current job as president and CEO of Boys & Girls Clubs of Greater Milwaukee led through ACRE, which he completed in its inaugural year of 2005 and calls "a game-changer for me and

many others." He was working in the public finance group at Robert W. Baird at the time, a job he eventually left to be president of M&I Community Development Corp. before accepting his current job in 2012. He also serves on Marguette's Board of Trustees. "I think more diverse and talented individuals have gained the confidence and skills to network within the real estate industry, and both groups have put their combined resources to good use," he says about ACRE. "Good housing is fundamental to our existence, so the more people we have working on solutions, the better off we're going to be as a community."

ACRE graduates build their own wealth and influence, and become mentors and investors to the next generation of minority developers in Milwaukee.

Donsia Strong Hill



Ready, Set, Compete!

Coached by professors and drilled on abilities they'll need in their fields, business students enter the case competition fray — and frequently end up on top.

BY GUY FIORITA

Illustration by Robert Neubecker



Buy AptarGroup. That stock tip, recommending that investors purchase shares of the Illinois-based company, catapulted Marquette to victory over five other teams in the regional final of the CFA Institute Research Challenge in February. "Actually it was not that simple. We probably put in 150 hours each to arrive at that answer," says team member Stephen Arcuri, Bus Ad '18, a finance and accounting major. They also had to produce a 10-page, in-depth, full equity research report and present their findings in front of a panel of judges.

The CFA Challenge, which began 11 years ago, is an annual global competition that provides students with mentoring and intensive training in financial analysis as they work to analyze a publicly traded company, often meeting face-to-face with the company's management before making their final buy, sell or hold recommendation. Marquette has competed in the past 10 challenges and has advanced from the local level to the regional level in eight of those years. As a member of Marquette's winning Blue team that moved on to the national finals in Boston, Arcuri says a direct factor in the squad's success is the experiential learning he and teammates receive in the Applied Investment Management (AIM) program. Twice each semester, the students are tasked with researching a company, writing up a report and presenting their findings in class. "Then we are aggressively grilled by our classmates. It all gives our team a competitive advantage. We are more comfortable with the delivery, we understand the analysis that's required, and we are used to being judged," he says.

A forum for showcasing these skills and more, the challenge is also a fine networking opportunity, judged by professionals from firms such as Baird, Northwestern Mutual or Wells Capital Investors. In order to accommodate all of the students who wanted to compete this year, Dr. David Krause, director of the Applied Investment Management program and team adviser, was obliged to create two teams. "It made for some interesting situations as each team tried to keep their analysis secret. They hardly talked to each other and were careful not to discuss it in front of anyone. For me, it was

a lot of fun watching them avoid each other. They really are very competitive."

Today, much like student-athletes on the basketball or soccer teams, business students are competing in the school's name and holding the Marquette banner high. From the CFA Challenge to competitions in supply chain or real estate and more, they go head-to-head in a variety of arenas. And their success is demonstrating the college's excellence in preparing students to apply their knowledge and conceptual understanding to real-world problems using reflection, analysis and synthesis.

"These competitions add another avenue for experiential learning, which is one of the strategic pillars of the college. It's a great opportunity for the students to apply what they have been learning in class and gives them poise that will help them throughout their own careers. Their success is really an indicator of the great hands-on education they are receiving at Marquette," says Dr. Brian Till, James H. Keyes Dean of Business.

Matt Melinyshyn, Bus Ad '18, agrees and points to his experience in several supply chain competitions as further proof. He and his classmates competed in the Arizona State University's National Case Competition and placed first out of 11 teams from across the country. "We were given the task to evaluate Oracle and its current situation regarding the growing trend away from in-house data storage systems," says Melinyshyn. "The fact that we were all adept in the processes we were proposing in our solution helped our team deliver a strong presentation in front of the judges."

He also attributes part of the success to the diversity of expertise found on his team. "In addition to supply chain, many of the students have double majors, so unlike some of the other schools, we were able to bring IT, finance and marketing perspectives to the table," says Melinyshyn, a supply chain and marketing major.

"These competitions really give the students a chance to put their knowledge and skills to the test against their peers from other universities. And because the judges are all from the industry, it really validates the students' ability to communicate effectively with senior managers," says Dr. Mark Barratt, associate professor of supply chain management.

Not far from the University of Minnesota Twin Cities' campus stands the WaHu Tower, a \$90 million student housing project comprising 327 units and 24,000 square feet of retail space. Coincidentally, that happens to be just what Marquette's team at the regional NAIOP Real Estate Competition recommended for what was then a former used car lot. "There's also a senior housing facility in the suburbs of St. Paul and a hotel near the Mall of America that our teams recommended in other years," says Andy Hunt, Bus Ad '08, Grad '13, director of Marquette's Center for Real Estate.

"The real value of these competitions is the experience and exposure the students get to industry conditions and professionals," says Hunt.

When Hunt says "exposure," he means a lot of it. Students are given their case sometime near the end of January and present in mid-April. In the time between, they put in up to 20 hours per week on preparations. As part of the development and final judging process, students routinely touch base with at least 50 professionals, whether that's through one-on-one calls to gather data from brokers, meetings with other developers



Stephen Arcuri: Team took first in regionals of CFA Institute Research Challenge.



Sabrina Thomas.
Placed second
individually
in Project
Management
Competition.



Stephen J. Gillespie: Team took first in Minnesota's University Challenge in Real Estate.



Matt Melinyshyn: Team placed first in ASU's National Case Competition in supply chain and operations.



in the area, visits to banks to discuss financing, or feedback from real estate specialists at practice events. "This kind of exposure is unparalleled and gives the students a real-life view of their development project," says Hunt. "What's more, this contact absolutely impresses the professionals they interact with, and often leads to shadow opportunities, internships or jobs."

Competing in two real estate case competitions every year — one in Chicago and one in St.Paul — Marquette teams have won six in the last 10 years, including three straight wins in Minnesota from 2015-2017, and taken second place in another four. Stephen J. Gillespie, Bus Ad '18, a real estate major and the Commercial Real Estate Club's director of finance, competed in St.Paul. "I was a little nervous to present in front of 200 judges, but I was also confident because it really just meant putting into practice everything I had learned in class. It's a chance to show yourself in front of some very successful and highly regarded real estate professionals and that helps lead to conversations about future jobs," he says.

No matter the competition or format, each offers an opportunity for experiential learning that simply cannot be replicated in the classroom. "I've had to present in front of industry professionals in the past," says Melinyshyn, "but never on this scale. How else could I learn how to address a whole ballroom and to be both poised and confident? And on a more personal note, I had never been to Arizona and looked forward to the opportunity to see how supply chain-focused businesses operated outside the Midwest — which could affect my post-grad career search."

Managing to Compete

OK, hit the buzzer if you know this one. When planning team development activities, what input would you use to identify when the team members can participate?

Last December, 10 business students traveled to Chatham University in Pittsburgh to compete in the Project Management Competition, which put teams from nine universities head-to-head in demonstrating the knowledge needed to manage large information technology projects. When all the points were tallied, Marquette's two teams had beaten their competitors to the correct answer enough times to take second and third place in the team competition. Sabrina Thomas, Bus Ad '18, and senior Kevin Lipuma also placed second and third respectively in individual competitions. "The Jeopardy-style format is fun, but it's also a real test of their overall knowledge. And it's great preparation because the questions mirror the ones they will have to face on their Project Management Professional certification exam," says Kurt Gering, adjunct instructor of project management and coach/ chaperone for the event.

Lipuma says his Pittsburgh success helped convince him to take the Certified Associate in Project Management exam. And Thomas calls the event "an awesome way to prepare for the Project Management final that semester. And it made it a lot easier to find the integrations project management has into every area of business."



Selling the Role

In today's presentation, the president of the Federal Reserve Bank of Boston will be played by Michael Dennison; the president of the Federal Reserve Bank of New York will be played by Philip Suess; and Governor Lael Brainard will be played by Cathy Gong. No, these aren't playbill listings from a *The Fed Goes* Broadway theatre performance, but part of Marquette's lineup from last November's Fed Challenge, a competition that combines economics acumen with acting ability.

In the weeks before the event, the students not only developed their analysis of current economic conditions and monetary policy recommendations, but also tried on the roles of important monetary policymakers in dry runs of their 15-minute presentations and similar-length Q&A sessions to follow. In the rehearsals, questions from faculty members such as Dr. Stephen Cole, assistant professor of economics, would occasionally produce signs of discomfort - a gulp or wide-eyed pause. But by the time the contest rolled around, the practice paid off; Dennison and Gong, both Bus Ad '18, Suess, a senior, and other team members performed convincingly, placing fourth out of 17 schools in the region.







On a Wednesday afternoon in March, the theatre-style seats in room 106 of David A. Straz, Jr., Hall are full of inquisitive faces and the sounds of fingers tapping on laptop keyboards. The juniors and seniors in this Introduction to Operations and Supply Chain Management course are taking in a lecture by Dr. Doug Fisher, associate professor of practice of management, and his co-teacher Eric Korman, a semiretired consultant with decades of tech industry experience.

"I'm trying to get you folks to deal with ambiguity," Fisher tells the students. After all, the subject of this lecture and of the whole semester — setting up a supply chain for the new \$10 billion Wisconsin plant of Taiwanese electronicsgiant Foxconn — is uncharted terrain. For navigational assistance, Fisher encourages students to make an appointment with Korman, who has agreed to co-teach several class sessions over the semester, meet one-on-one with students and be available for questions by email.

Adding momentum to a burgeoning trend, Fisher was one of five business professors sharing the classroom this past year with executives with high-level expertise in their fields. And all indicators suggest more such partnerships are on tap for future semesters.

The students' case study topic is the largest development deal in Wisconsin history, creating a campus-to-be in Pleasant Prairie, Wis., employing as many as 13,000. "The complexities of establishing a supply chain for an industry that basically does not exist in the USA are unfathomable," says Korman, who talks the students through potential construction and communication issues, legal complexities, environmental questions and strategic demands. He urges them to embrace these challenges as a collective opportunity not available to students anywhere else, even Harvard. "Supply chain is the next hot spot for executive talent," he says. These students get that message from Fisher, but it's equally tangible coming from a high-level executive with experience establishing tech production facilities.

Co-teaching pairs such as Fisher and Korman are following a path plowed by Dr. Cheryl Maranto, associate professor and chair of management and a trailblazer of the current trend, who took the leap into executive co-teaching, by necessity, in 2013. When a retiring faculty member caused a gap in coverage for the graduatelevel Strategic Human Resources Management course, Maranto turned to Lindsey Linder, Bus Ad '05, Grad '07, who had excelled in an adjunct capacity before having to pull back from teaching because of growing career demands at Rexnord Corporation. This time, Linder enthusiastically embraced the opportunity to get back into the classroom without having full responsibility for the class. Maranto's contribution of academic chops and Linder's network of contacts and strategic experience created "that perfect mix," says Maranto. And it led to a co-teaching partnership with a Rexnord colleague Lisa Rambol, the company's director of human resources, that continues today.

Now numerous partnerships are flourishing. One this spring combined the academic expertise in leadership studies of Dr. Jay Caulfield, Grad '93, '01,

BY ANN CHRISTENSON, CJPA '90

assistant professor of management, and the strategic daily newspaper leadership of Betsy Brenner, who led the Milwaukee Journal Sentinel to three Pulitzer Prizes over the nearly 12 years she served as president and publisher. In their strategic communication class, students are divided into four groups that use the techniques they've learned in class to contribute to the foundational work of United Way's Teen Pregnancy Prevention Oversight Committee. Combining their strengths in leadership and communication, the co-teachers coached the students on using persuasion, multicultural messaging, reliable information and leadership initiatives to make their contributions to the committee's goals.

Other business school academics are tailoring the executive co-teaching program specifically to their courses. For instance, Dr. David Krause, assistant professor of practice of finance, used two executive coteachers this spring. Entrepreneur Michael Adam, the founder of Milwaukee loan startup Bankmybiz.com, was on board for the first half of the semester in a capacity Krause compares to a broadcast sports commentator. While Krause handled the "play-by-play," his co-teacher did the "color analysis" without having to deal with class management, he says. Dr. Kelly O'Reilly, Grad '04, research director of Northwest Passage Capital Advisors, closed out the semester helping students improve nontraditional financial analysis skills using tools such as Matlab statistical software and Python programming language.

For his Understanding Entrepreneurship course, John Peterson, Coleman Professor of Practice, supplemented his own business experience by partnering with an executive from the front lines of entrepreneurship. His co-teacher, Jacquin Davidson, spent decades running a successful entertainment industry startup in California. She is CEO of Davidson Associates, managing director of WERCBench Labs, a Milwaukee accelerator, and is on the leadership

group of the M7 Marshalling Our Resources initiative for entrepreneurship in the region.

Over two semesters together, the pair have developed an almost stageworthy classroom rhythm. In covering what makes a good pitch, says Peterson, "I provided a lot of information, including best practices and research findings, while Jacquin gave students reviews on their presentation skills and the impression they made. It was very valuable to them."

"We are good cop-bad cop," offers Davidson.
"I'm usually the bad one."
Peterson appreciates

another role Davidson plays in a field often considered male dominated. "Student entrepreneurs need role models they can relate to," he says. "Jacquin is an excellent role model, showing all students that entrepreneurship is one of the most inclusive careers one can pursue."

Dean Brian Till trumpets a "best of both worlds" dynamic with in-class executives benefiting students and faculty alike and coteaching proving to be a powerful teaching tool as the college aims to give students "the very best step into the business world that we can."



Pooling know-how for a novel challenge

For students, troubleshooting the creation of the first-ever U.S. supply chain for electronics-giant Foxconn gets less intimidating with the guidance of the college's Dr. Doug Fisher (right) and coteacher Eric Korman (left), an industry expert.



From the boardroom to the classroom

As president and publisher of the Milwaukee Journal Sentinel, Betsy Brenner (center) led the organization to three Pulitzer Prizes. More recently, she brought this proven leadership to a business communication course cotaught with Dr. Jay Caulfield, assistant professor of management.



Dollars & Sentience

As computerdriven trading and artificial intelligence bit the investing world like a tidal wave, investment education at Marquette adapts to a world of "quants" and coders.

BY CHRIS JENKINS

Illustration by Sam Ward



If Max Mattappillil needed any further proof of the invasion of the world of high finance by "quants" — investment strategists who develop computer code to conduct complex quantitative analysis and support automated trading — he got it when he worked on Wall Street last summer.

During his internship at Societe Generale in Manhattan, Mattappillil noticed something that would have been shocking a decade earlier: Most of the traders he met had computer programming experience and used it in managing their trades. "It's

almost like it's becoming a requirement," says Mattappillil, Arts '18, who majored in applied mathematical economics, a joint program of the College of Business Administration and the Klingler College of Arts and Sciences. "At least on my desk, every trader could program."

Not that Mattappillil was caught by surprise by this phenomenon. Months earlier, in the spring of 2017, he co-founded Marquette's Algorithmic Trading Club to bring together students from various majors to experiment with financial applications for computer modeling and artificial intelligence, making him something of a quant himself.

Club members now meet regularly during the school year to compare notes, write code and better understand the nexus of artificial intelligence and algorithmic trading - where traditional fundamental analysis of businesses takes a backseat and humans are mostly removed from buying and selling decisions as computer models developed by quants determine when to execute transactions. At their meetings, students in the club speak almost reverently about Renaissance Technologies, a hedge fund that has set records relying on quantitative analysis developed largely by mathematicians, physicists and other scientists with nonfinancial backgrounds.

As students take the initiative to learn new technologies through the club, faculty leaders in the College of Business Administration have moved past the wondering stage in determining how these rapid changes in the financial industry will affect the college's curriculum. "Universities need to get on this quickly because the rate of change is faster than I've ever seen it before," says Dr. David Krause, director of the college's elite Applied Investment Management or AIM program, where undergraduates get hands-on financial analysis experience, in part by managing their own portfolios from a trading floor inside David A. Straz, Jr., Hall.

Toward that end, faculty members from accounting, finance and the AIM program are collaborating to develop a series of stackable modules focused on artificial intelligence, machine learning and blockchain. (For more on blockchain, see p. 6.) Drs. Joseph Wall, Grad '06, assistant professor of accounting, and Terence Ow, associate professor of management, are completing the first modules this summer and seeking funding from an industry partner to support development of secondary modules and expansion to additional topics.

"Each module will develop a specific skill set for students, and each will have a deliverable associated with mastery of the material presented," Wall says. "The first stackable module in each of the current series is designed to be taken with very little baseline knowledge, such that most members of the Marquette community — even those outside of business — could participate."

While Krause doesn't see every area of the financial industry surrendering to quants — a human financial analyst is still needed to analyze a company's future growth strategy,

for example — he says any job that deals with past events or is rules-based and can be executed more accurately through an algorithm is up for grabs. "Trading desks are going to go nearly all-quant because they operate 24/7 and can execute trades in nanoseconds when new information becomes available," Krause says. "Quants will not take over areas of finance where decisions are based on more than just data that can be run through a model. However, quants will continue to grow at the expense of those who have been involved in the industry pushing paper."

For its part, much of the time, the Algorithmic Trading Club at Marquette seems a better example of harmonious interdisciplinary collaboration than a onesided rise of the quants. After all, it brings together students from the College of Business Administration, the Opus College of Engineering, the Klingler College of Arts and Sciences and possibly others. "These days you need expertise in a lot of very complicated fields — finance, math and computer science," says Ryan Schumm, Arts '18, a data analytics and physics major who served as lead modeler for the club. "The finance part, a lot of that went right over my head, but we have a lot of smart people here who could help me out with that. I could help them out with math and computing, machine learning stuff. It's been a great learning environment."

Look deeper, though, and you'll see some student members of the Algorithmic Trading Club parting ways over how extensively their field is being transformed. "The classic discretionary strategies ... if it feels like you're doing too much manual work, you are. Write a little algorithm to do it for you.

Max Mattappillil



really are dying. We know Renaissance Technologies, the top-performing hedge fund in history; they're just a team of Ph.Ds, mathematicians and physicists. The industry is dominated by machines and math," says Schumm, representing the bullish-on-algorithms perspective.

Harboring a more balanced view is Mattappillil, who gained hands-on experience not only through internships but also as one of a very few nonfinance majors enrolled in the highly selective AIM program. Returning to New York City this summer for a full-time position at Societe Generale, Mattappillil believes his familiarity with quantitative and fundamental analysis will help him in his career.

"I think fundamental analysis will always have a role," Mattappillil says. "That being said, everything is going to end up being more quantitative. I can imagine that a trader in a few years will primarily be a computer scientist. ... The number one thing my boss told me last summer is that if it feels like you're doing too much manual work, you are. Write a little algorithm to do it for you."

And despite the advance of coders and computers at big-time hedge funds, Mattappillil doesn't expect to see rank-and-file financial advisers pushed out the door anytime soon. "Maybe generations in the future it can change, but people still want to see a human managing their money," he says. "It can be uncomfortable if you throw \$200,000 into a computer to manage it for you. Even if that's more accurate, just knowing that someone is handling it can be comforting."



Max Mattappillil: Co-founded Marquette's Algorithmic Trading Club.



Dr. Joseph Wall: Codeveloping curriculum covering machine learning, Al and blockchain.



Dr. Terence Ow: Completing first course modules with Wall this summer



Dr. David Krause: Sees "quants" proliferating but not replacing fundamental human analysis.

High-tech Translators

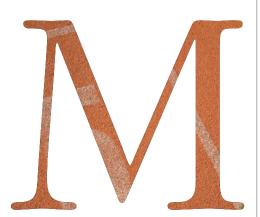
There is no shortage of data scientists sitting at computers in backrooms of businesses analyzing masses of data, says Dr. Mark Barratt, associate professor of management at Marquette. "What industry doesn't have enough of are people who can translate the insights generated by the data scientists into knowledge for decision-makers in management to help companies become more effective and grow," he says.

That's the need awaiting Marquette's future Business Analytics program, an undergraduate major the college is preparing to launch in fall 2018. Business analytics students will make use of statistical analysis, predictive modeling, data visualization and other high-tech tools to help suppliers understand what the customer wants and how they want it, says Barratt. With Dr. David Clark, professor of economics and executive associate dean of the college, Barratt drafted a proposal for the program approved by the Undergraduate Board of Studies in April.

"It's for students interested in both the quantitative and qualitative aspects of industry," says Barratt, explaining that students will be expected to combine their study of business analytics with an additional major in finance, supply chain management, information technology or another related business field.

The new major is the latest example of Marquette's leadership and responsiveness in fast-growing data-intensive fields. "We're driven by industry, and they're telling us they need business analytics specialists and will hire them," Barratt says. "It's a great opportunity for our students."





After pushing herself to remarkable success in athletics and academics, Monique Felix adjusts her sights and aims high in a new arena.

BY MARTINA IBÁÑEZ-BALDOR, COMM '15

Monique Felix (left)

The hip injury that forced her out of the 2018 track season will help her "better relate to student-athletes who are going through adversity," an asset as she aspires to become an athletics administrator. Monique Felix, a senior, has always had big dreams. As a confident third-grader in Sheboygan, Wis., she vowed to follow in her father's footsteps as a collegiate athlete and set her sights on Marquette, which she'd see looming appealingly out of the car window every time her family headed to Illinois to visit relatives. Felix was ambitious, but it was her father guiding her vision. "Sometimes you can't see your potential until someone else points it out," she reflects. "I think my dad believing in me and being there to support me was really essential to where I am now."

Monique's father, Frantz Felix, who emigrated from Haiti at a young age, had to strive to get where he is today and taught the same to his daughter. "He talks about hard work, and he has the experience to back it up," she says. Frantz ran track and played football as a student at Lakeland University near Sheboygan and coaches a local girls high school team. He started coaching her in middle school and by high school, Monique caught the attention of Marquette's track head coach Bert Rogers and assistant coach Rick Bellford. "After she left with her parents on her very first visit, I knew we had a pretty special athlete on our hands," recalls Bellford.

Making good on those expectations and her childhood dreams, Felix charged out of the blocks, setting Marquette freshman records in events including the triple jump, pentathlon, heptathlon, 60-meter hurdles and 100-meter hurdles. She's led her team to two consecutive Big East Conference championships and has been named the Big East's Most Outstanding Female Field Athlete three times.

Her success in sports translates into confidence in the classroom. Entering her senior year in the College of Business Administration, Felix is triple majoring in finance, international business and Spanish. Multiple semesters with a 4.0 grade point average have earned her a spot on the Beta Gamma Sigma business honor society, lunches with President Michael R. Lovell and a highly competitive internship in the Harley-Davidson's treasury department. "I'm really impressed by her commitment to living her university experience here at Marquette to the fullest," says Dean Brian Till.

In November, Felix was selected from among all female athletes in the conference to represent the Big East at the NCAA Student-athlete Leadership Forum in Washington, D.C., where she was inspired by students and professionals committed to improving conditions and outcomes for student-athletes. "It was eye-opening," she recalls, "to see that there are jobs in sports where you can help change student-athletes' lives." So much so that she is considering a future career in college athletics.

Felix encountered her first major setback as a junior last fall — the diagnosis of a balland-socket lesion and cartilage tear in her hip that could result in permanent cartilage damage if left untreated. "It started to affect walking around campus and sitting in class," she remembers. "Being an athlete, I didn't know when to call it quits." Ultimately, though, she made the difficult decision to bow out of the 2018 season to have surgery and focus on recovery. Yet with her interest deepening in a future career in college athletics administration, the injury has a silver lining, "It will help me better relate to student-athletes who are going through adversity," Felix predicts. "It puts everything into perspective."

With her family there to support her, Felix is as motivated as ever. She vows, "Even though you achieve your goals, there's always the next step to becoming better."

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