

The Scotiabank Digital Banking Lab ("Lab") was established in April 2016, supported by a \$3 million gift over 10 years from Scotiabank. As the first university research centre focused on financial technologies ("Fintech"), the Lab's mandate is to study and understand the implications of digital disruption for banking and financial services, and to prepare students to operate in an environment of changing technology and innovation. The Lab promotes student engagement, publishes targeted research, and engages in outreach to stakeholders in Canada and abroad.

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KEY PRIORITIES

- **Student Engagement & Teaching** Providing students with onsite experiences at Scotiabank through internships, summer rotations, and research projects. Developing new teaching materials and student programming on Fintech.
- **Targeted Research & Publications** Pursuing interdisciplinary research on the impact of digital transformation of the Canadian and international financial sector.
- Outreach & Industry Leadership Co-sponsoring hackathons, conferences, and other events that attract experts from around the world and showcase Scotiabank's and Ivey's leadership in adapting to and embracing digital transformation.

1. Student Engagement & Teaching

- Scotiabank International Case Competition (SICC) (Mar 2-5, 2017) Organized and executed by a team of HBA students, the 28th SICC attracted 10 teams of students from 8 different countries who studied the future potential of blockchain technology for the Scotiabank Digital Factory. Teams had approximately 15 hours to prepare their case before they presented to a panel of 11 judges, comprised mostly of Scotiabankers and Ivey alumni. The University of Hong Kong took home the first place prize, with Maastricht University of Business and Economics and Muenster School of Business and Economics as the other finalists.
- Annual Hackathon & Propel (Nov 17-19, 2017) Students Amy Xu and Joy Pak co-chaired HackWestern4, a 48-hour hackathon attended by more than 500 students from Ontario, Quebec, and the northern United States. Scotiabank executives spoke at the event, while Scotiabank Digital Factory employees ran workshops and staffed a recruiting booth. Scotiabank sponsored the Fintech track, with a \$3,000 prize awarded to Western students Jason Brown and Sean Bradley for Bloxoffice, a blockchain technology for the ticketing industry.
- Western's Propel "Seed your Startup" (April 2017) The Lab partnered with Western's startup
 accelerator, Propel, to provide seed funding for student startups. In April 2017, we provided
 funding to to Beatcamp, an online marketplace to license instrumental music, co-founded by



Ayush Vaidya, HBA '17. Going forward, the winners of the Fintech track from HackWestern will receive funding from the Lab.

- Ivey Field Project / New Venture Project Each year, the Lab supports Ivey students who
 participate in consulting or new venture projects as part of their curriculum. In 2017-2018, two
 HBA projects are currently being supported by Scotiabank's Laura Curtis-Ferrera and the Global
 Marketing team:
 - <u>Project 1</u>: The management of household investments is shifting with women taking on the management of the family portfolio. This project examines this change and the need to change the fee model from all-in to a-la-carte while embracing greater transparency. Female decision makers are less tolerant of opacity in pricing and require a different approach to marketing and engagement as wealth management customers.
 - <u>Project 2</u>: It is clear that digital content, especially video, is highly valued in specialized industries and by knowledgeable audiences. What is the best-in-class model for sharing content as a means of engaging and generating leads? What can we learn from industry leaders such as HSBC and Goldman Sachs?
- Hack the Case In May 2017, Ivey teamed up with Deloitte, SAS, and Scotiabank to create a unique case competition for MSc Business Analytics students called "Hack the Case" a 10-day glimpse into the world of business analytics. Students used real, but masked, customer data from Scotiabank's SCENE loyalty card program.
- **IBM Case Competition** (April 2017) This one-day competition featured 216 students from Western, Ivey, Ryerson, University of Toronto, Waterloo, and Laurier who competed to identify how artificial intelligence, APIs, and data storage could accelerate the business of London startup Loan Connect. It was hosted by the Ivey Fintech Club and Western Founders Network
- Paytm Case Competition (Nov 2017) Four Ivey MBA students won first place at a case competition organized by Paytm and held at the Rotman School of Management. The competition challenged students to develop an in-depth strategy and implementation plan to increase the user base for Paytm Canada, a fintech and digital innovation company.
- **Case Publications** The Lab develops <u>Fintech case studies</u> for use in business programs across the world. Currently Ivey Publishing has published 12 Fintech cases, including:
 - o Bitcoin (JP Vergne, K. Mark) ▶
 - o Bitgold: Turning Digital Currency Into Gold? (JP Vergne, B. Burke) ▶
 - o Lending Loop: Fintech Disruption in Canadian Banking (JP Vergne, P. Cumming) ▶
 - A Pathway for Scotiabank's Innovation: Leveraging Fintech Partnerships (JP Vergne, YY Hsieh, M. Weil) <u>▶</u>
 - o Nest Wealth Asset Management Inc. (C Grace, A Sarta) ▶
 - Mogo: Spearheading Fintech adoption in Canada (C. Maurer, N. Miles, forthcoming)
 - o TokenFunder.com (JP Vergne, A. Li, *under development*)
- Bitcoin Cash Course Prof Vergne, Christina Lomazzo and Ying-Ying Hsieh updated their 60-minute online bitcoin crash course, which has attracted over 15,000 visitors and 75,000 impressions.



- "Mastering Fintech: Strategies for the Future" The Lab offered its first two-day executive
 education program in November 2017 that examined the business models and the key players in
 four FinTech sectors: cryptocurrencies and blockchain, P2P lending and equity crowdfunding,
 robo-advice and digital wealth management, and B2B applications, including cognitive banking.
- Fintech Elective "Fintech and the Disruption of Banking" The Lab is developing a new Fintech elective for September 2018 for HBA2s that will use cases, live materials and speakers to develop student expertise on this topic. This fintech elective will complement existing electives that examine disruption ("The Dark Side of Capitalism") and sustainable finance ("Impact Assessment").
- Support for PhD Students and Post-Docs The Lab provides funding for graduate and postdoctoral students, matches funding for Mitacs projects used to hire and train students on Fintech research. Current projects being supported are:
 - YY Hsieh (PhD, supervised by JP Vergne), The governance of blockchain organizations (2016-2018). Dr. Hsieh is joining Imperial College Business School (London, UK) as an Assistant Professor of Innovation and Entrepreneurship on Sept 1, 2018.
 - o G Swain (PhD, supervised by JP Vergne), The survival and growth of Fintech startups (2016-2017). Withdrew from the PhD program in Oct 2017.
 - A Sarta (PhD, supervised by C. Grace and JP Vergne). The Canadian robo-advice industry (2017-YTD)
 - Y Rahrovani, A Pinsonneault, M Joshi (PhD). Knowledge networks and innovation at the Digital Factory (2017-2018)
 - o N Ahmed (PhD, supervised by JP Vergne). The rise of AI in Fintech (2018-YTD)

2. Targeted Research & Publications

- **Academic Research** The Lab engages in academic research on the implications, successes and challenges of digital transformation in the banking and financial services industry:
 - S Wang & JP Vergne. 2017. "Buzz factor or innovation potential: What explains cryptocurrencies' returns?" PLoS ONE 12(1). Viewed/downloaded 13,000+ times, mentioned/cited in 20+ media articles.
 - JP Vergne & G Swain. 2017. "Categorical anarchy in the U.K.? British media's classification of bitcoin and the limits of categorization", <u>Research in the Sociology of Organizations</u>, p.185-222.
 - Arjaliès DL, Hsieh Y, & Vergne JP. 2017. A reply to Cohen's "The Rise of Alternative Cryptocurrencies in Post-Capitalism.". Online commentary, <u>Journal of Management</u> <u>Studies</u>, January 17, 2017.
 - JP Vergne & G Swain. 2018. "Bitcoin", in Ledeneva A. (ed.), <u>The Global Encyclopaedia of Informality</u>: Understanding Social and Cultural Complexity, pp. 148-151. London: UCL Press



- YY Hsieh, JP Vergne, S Wang. 2018. "The internal and external governance of blockchain-based organizations: Evidence from cryptocurrencies" in <u>Bitcoin and Beyond:</u> <u>Blockchains and Global Governance</u> (<u>Routledge</u>).
- o YY Hsieh & JP Vergne. 2018 (forthcoming). Bitcoin and the rise of decentralized autonomous organizations, <u>Journal of Organization Design</u>.
- The 2017 Toronto Fintech Conference On Oct 20-21, 2017, the Lab organized the inaugural Toronto Fintech Conference, held at the Scotiabank Centre. Leading Fintech scholars from 35 universities located in Europe, Asia, Russia, Australia and North America gathered to discuss their cutting-edge research. More details here.
- Scotiabank iLEAD Digital Learning Series Ivey faculty are presenting their research and insights to Scotiabank leadership and employees. The following seminars have taken place:
 - o Dec 7, 2016: Is FinTech a disruptor or enabler?, by Michael King.
 - Mar 3, 2017: From hype to reality: The promises (and disappointments) of blockchain technology by JP Vergne.
 - Sep 14, 2017: The Future of Advice, Defining the Next Generation of Technology Assisted Financial Advice, by Chuck Grace.
- Academic Conferences The Lab's scholars have presented the Lab-sponsored Fintech research at leading international academic conferences: Strategic Management Society 2016 (Berlin, Germany); European Group for Organization Studies 2017 (Copenhagen, Denmark); Academy of Management 2017 (Atlanta, USA); the 2017 Wharton Entrepreneurship Workshop (Philadelphia, USA); the 2017 Consortium on Competitiveness and Cooperation (University of Pennsylvania, USA); the Israeli Strategy Conference 2017 (Technion); the 2017 College of Organization Science of the INFORMS Conference (Rice University, USA); the 2018 Organization Science Winter Conference (Utah, USA); the 2017 Academy of Management Journal workshop on "New Ways of Seeing" (Ivey Business School, Canada); the 2016 Medici Summer School (HEC Paris, France); the 2017 "Bitcoin and Beyond" workshop (U. of Waterloo, Canada); the 2017 Toronto Fintech Conference (Scotiabank Centre).
- Practitioner Conferences JP Vergne gave a keynote presentation entitled "Can we predict the
 price of cryptocurrencies?" at Bitcoin Wednesdays' 4th Anniversary Conference (Amsterdam,
 Netherlands) and moderated two panels at SIBOS 2017 (Toronto, Canada). Michael King was
 the keynote speaker, a panelist or the moderator for Scotiabank's Investor Day, the Toronto
 Region Board of Trade, the Toronto Financial Services Alliance, the Northwind Institute, and the
 Canadian Lenders Association. He also presented on "Bitcoin, Cryptocurrencies and Blockchain"
 at bcIMC and University of Victoria.
- **Practitioner Research** The Lab published articles and practioner research on:
 - o "SEC & Ethereum Short-term Pain for Long-term Gains" by M Di Bartolomeo
 - "Interview with a Bitcoin Miner" by M King
 - o "Popping the Bitcoin Bubble Releases Ethereum" by M King
 - o "Financial Advice in Canada: A Way Forward" by C Grace, A Young, and A Sarta



- "Preparing Canada for the Fintech Tsunami", Ivey Business Journal (January/February 2018) by M King
- o "Disrupting the IPO", Ivey Business Journal (January/February 2018) by JP Vergne

3. Outreach & Industry Leadership

- Fintech Strategy for Canada The Lab has been meeting stakeholders, holding seminars, and organizing conferences with the goal of promoting a national Fintech strategy for Canada. The following steps were completed: (i) held focus group with 14 early & late-stage startups in Toronto (Jan 2017); (ii) presented to Director Generals of ISED in Ottawa (Feb 2017); (iii) organized a workshop for 50 public sector policymakers from federal, provincial and municipal governments, and regulators in Toronto (Apr 2017); (iv) held calls and meetings with Finance Canada in Ottawa (May & Oct 2017); organized consultations between Finance Canada and fintech entrepreneurs in Toronto on Canada's payments legislation (Sep 2017); and (iv) published two OpEds in *The Globe and Mail* and *Financial Post* (May 2017 & Feb 2018).
- Communications and Public Education The Lab seeks to educate practitioners and the public
 on the impact of digital transformation of banking.
 - On June 23, 2017, we partnered with the Global Risk Institute for Financial (GRI) for a one-day event at Scotiabank Centre on "The Future of Banking and Financial Services".
 - In 2016-17, we partnered with the SWIFT consortium on two high profile public events in the run-up to SIBOS in Toronto: one on <u>digital disruption</u> and a second on a <u>business</u> forum for Canada.
 - The Lab organized three Fintech events for alumni in Toronto (Mar 2017, Sep 2017), and Vancouver (Oct 2017)
- Scotiabank Speaker Series in Digital Transformation in Banking, June 1, 2017 Dino Trevisani, President of IBM Canada, spoke to an audience of 250 alumni and financial professionals about the challenges of artificial intelligence and the coming era of cognitive computing at the Scotiabank Centre
- Rotterdam School of Management Fintech Study Tour, August 28-September 1, 2017 The
 Lab ran a one-week Fintech study tour in Toronto for 38 EMBAs and MBAs from this European
 business school. The tour featured lectures, cases, speakers, and site visits;
- Media The Lab's co-Directors were interviewed, quoted or mentioned in 30+ media publications, including in CBC News, CBC Radio, CTV, The Globe and Mail, the Toronto Star, Huffington Post, BNN, Reuters, Russia Today, CryptoCoin News, and CoinTelegraph.

4. Upcoming Events

- The 18th Scotiabank International Case Competition 21-24 March 2018, Ivey Business School, London ON.
- Hack the Case Event April 9th and 16th: MSc Business Analytics students participate in a hack related event, organized by Ivey, Deloitte and Scotiabank: https://youtu.be/E_uxGMXB7uQ
- Future of Digital Advice Symposium April 16, 2018 Day-long conference on the Future of Digital Advice hosted at the Scotiabank Centre, Toronto.



- **Mastering FinTech** Executive Education course_— April 19-20, 2017, Ivey Tangerine Leadership Centre, Toronto.
- The third annual Scotiabank Speaker Series May 31st, Scotiabank Centre, Toronto. Speaker confirmed: Ryan Zurrer (HBA '06), Co-founder and Principal Venture Partner, Polychain Capital.
- **iLEAD Digital Learning Series** Led by Greg Zaric and Ying-Ying Hsieh for 2018 (Topic: TBD)
- The second Toronto Fintech Conference March 14-15, 2019, Scotiabank Centre, Toronto.
- FinTech events for Ivey Alumni: New York, Toronto and Vancouver (all in Fall 2018).
- **Keynote speaker or panelist** at: 2018 Western Regional Angel Summit (Feb 2018); Northwind's 2nd Annual FinTech/InsurTech Forum (Mar 2018); National Crowdfunding and Fintech Associaton (Mar 2018); BC Public Sector Pension Conference (Apr 2018).

For more information on the Scotiabank Digital Banking Lab's activities, please visit:

https://www.ivey.uwo.ca/scotiabank-digital-banking-lab/