A Message from the Director

The financial sector is undergoing what may end up being its largest transition in recent memory. In addition to the changes in regulation, from the Volker Rule to Dodd-Frank, we are witnessing the emergence of a strong, disruptive FinTech sector that is likely to leave a permanent mark on the way all financial companies function. These changes have profound implications for the MMF, mostly as an opportunity to grasp and bring to our future generation of graduates, but also as a beacon to broadcast data points to our alumni so they can position their professional careers optimally for what is to come. In our 2016 Symposium at Blue Mountain, all these topics were covered, from regulation to innovation, in a mix of rigorous discussions and entertaining presentations, where participants had the chance to discuss current events as well as speculate on what may come in the near future, all in the idyllic surroundings of the Collingwood Hills.

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Luis Seco
Blockchain Technology

Touted either as big hype or as the most important technology since the internet, blockchain technology, which powers bitcoin, has captured the attention of many. Some are excited about the promise of it, however, some say it might be only a craze. What is behind the technology that is polarizing so many, including people in the world of finance?

At a high level, blockchains are distributed databases running on multiple computers that are following a mathematical protocol to secure transactions and ensure data integrity. Before blockchains, electronic transactions could only be secured by a trusted party who is responsible for maintaining a centralized ledger on a system fully under their administrative control. In exchange for this service, that party is able to ask various fees and also police all the traffic that transits on its network. This inherently creates a monopolistic position that can serve the interest of some, but that can also be detrimental to other groups that do not have a vested interest in the control of that network. That network operator may also decide to share information on its network traffic and position only with selected members creating asymmetric access to information and lack of transparency for some participants.

Blockchains are breaking this paradigm by setting up networks with computational rules for transactions that do not require a centrally controlled administrative access. This new model enables peer-to-peer exchanges of digital coins, receipts or contracts on a level that effectively cuts the middlemen. Transactional information on blockchains is also public which means that everyone is on the same level when it comes to analyzing the information and traffic on the network. Once a transaction is included into the blockchain, it becomes a permanent record impossible to delete or reverse. It is not hard to imagine that if blockchains were deployed in the financial system that this could be a major change in the area of settlements and counter-party risk.

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Blockchains are already being deployed with success in different forms for various projects. Bitcoin, being the first and the most notorious of them, has certainly shown the extreme resilience and potential of that technology. You also have more advanced platforms such as Ethereum, that enables not only exchanges of coins, but also the execution of smart contracts, asset-backed tokens and digital titles, and all of this at a speed a dozen times faster than Bitcoin. Ethereum has already become the second most valuable cryptocurrency after Bitcoin despite its short existence and has attracted the attention of many fortune 500 companies such as Microsoft and IBM.

Blockchains are here to stay. Consortiums such as R3CeV are already being formed to harness the potential of that new technology and put it to work among financial institutions and broker dealers. The viability and success of that project remains to be seen. It does however try to improve to the current rule set for settlements and trading. There is also much speculation that trading on blockchains will level the ground between market participants by making market information more transparent.

There is little doubt that tremendous opportunities will arise from the deployment of blockchain based networks in finance. MMF students and graduates certainly have a head start when it comes to understanding this new technology as it is a combination of mathematics (in particular cryptography) and finance. It is now up to them to add blockchain technology to their toolbox and develop the expertise essential to the next generation of financial managers.

Adam Nanjee
Head of Financial Technology Innovation
MaRS Discovery District
MMF Lecturer

The future of financial technology: In Canada, we have never seen such explosive growth as we have in financial technology innovation. Over the past two years, MaRS FinTech has seen several hundred startups emerge nation-wide in sectors around alternative lending, security and authentication, adjudication, global remittance, cryptocurrency, digital wealth management and mobile payments. An innovation vertical thrives when there are the right amount of startups, investments from the venture capital community and participation from financial institutions. The backbone of innovation can be attributed to the growth in technology combined with world-class research, development and academia. At the core, financial technology is built upon the convergence of mathematics, engineering, finance and technology.
The MMF class of 2016 will be completing their Program at the end of July. If you would like to post a position for new grads, and/or recent or senior alumni you may send us your submissions.

If you would like to hire one of our students as an intern in 2017 please contact

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