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RBC CEO Dave McKay looks to stay ahead of technology

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RBC's CEO, Dave McKay, explains to Joy Macknight how artificial intelligence and advanced data analytics will help see the Canadian bank through the fundamental changes facing the industry.

Dave McKay belongs to the rare breed of bank CEO with a techie background. He joined the Royal Bank of Canada (RBC) in 1988 as a computer programmer, while obtaining a mathematics and computer science degree at the University of Waterloo.

But while many of his non-techie peers are hailing the era of ‘banks as technology companies’, Mr McKay disagrees. “If a bank thinks it is a tech company, then it is wrong. We are still business-to-consumer and business-to-business companies, trying to meet customer needs. Banks are using technology to anticipate those needs and meet them in a creative way, but we don’t derive our income from technology,” he says.

In saying that, Mr McKay believes that all companies, including banks, are in the process of redefining their businesses and value add to customers in light of recent technological developments. “Technology now enables customers to bundle different value equations across industries,” he says. “As a result, the role a bank plays in a customer’s value chain is changing. Customers aren’t going to signal life events to their bank in the way they have done over the past 150 years.”

Previously, banks were always on the customer's path to achieving their financial goals, whether depositing wages, making payments, obtaining a loan or mortgage, or investing money. “Increasingly those services are going to be bundled in wider and longer value chains,” says Mr McKay. “The customer may not stop to tell their bank what they want, so banks will need to predict those events.

“That is why artificial intelligence [AI] and data analytics are mission critical – as a customer inhabits a different digital world, interacts and exchanges information with new counterparties, banks must be able to anticipate their needs,” he adds.

The power of AI

Most large retail banks have been using AI in the form of neural networks for more than 20 years. But the outcome predictability in AI has significantly improved, according to Mr McKay, and this is driven by three fundamental changes.

First, the enormous increase in computing power allows organisations to tackle much larger data sets than ever before. Second, organisations are collecting more data on pretty much everything due to an increasingly digital world. Third, the new algorithms, capabilities, reinforcement learning, etc... enable banks to better extract knowledge and value to serve the customer.

“RBC has ingested more data in the past year than it has in the past

20, but it is not useful data unless we can use our computing power, as well as existing and new mathematical algorithms, to convert data into knowledge and then into value," says Mr McKay.

"Banks have the challenge of making sure that they can meet the customer need in a very different value chain, but it all starts with understanding and seeing the need first. If a bank can't see it then it has no chance [of meeting the need], no matter which channel is used."

Winners and losers

Mr McKay believes that this paradigm will create a new set of winners and losers in the banking industry, which is why RBC has committed significant resources to AI research. In October 2016, the bank launched a machine learning and AI research institute located in the MaRS innovation hub in Toronto. Led by RBC's chief science officer, Dr Foteini Agrafioti, the lab is home to 35 researchers currently, with plans to increase headcount in future.

"We are creating an environment that will attract the best talent in the industry," says Mr McKay. "These scarce resources are essential for RBC – it is a new skill that we have had to bring into the organisation to look at our customers in a different way and anticipate their needs."

One of the pioneers of AI, Edmonton-based Dr Richard Sutton, joined in January as an academic adviser to the RBC Research Institute. At the same time, RBC established a new lab in Edmonton and works with the Alberta Machine Intelligence Institute, based at the University of Alberta.

Importantly, the scientists involved in the labs are not limited to solving banking issues, but are also exploring how to use the data to solve societal problems, such as healthcare. "We have given them enormous flexibility to take on broader challenges and leverage that resource for the good of the country and communities," says Mr McKay.

Fintechs versus platforms

RBC spends a great deal of time engaging with the fintech community, mostly with the aspiration of discovering better ways of doing things that can then be incorporated into the bank's existing business models, or assist in developing new models. The bank has made several investments in fintechs, such as Wave, and has also acquired a few firms, including Wiser Investments.

As demonstrated by RBC's collaborative approach, Mr McKay is not concerned about a fintech taking significant market share within the current market structure. "It is just too hard to build a brand and acquire customers along the existing distribution chain," he says. "If a fintech is trying to build a browser-based better way of doing things, then it is too easy for existing banks to replicate it. It is also difficult for the fintech firm because the investment return is very low when acquiring new customers."

However, technology companies with platform capabilities, or fintechs attaching themselves to platforms, have caught his attention. "The four major platforms that I think about are: social media, e-commerce, entertainment and work. Those platforms are going to increasingly act as a gravitational pull for customers and engage them for a significant amount of time during their day. And with that will come enormous insight into customers' needs and where they are in their life journey," he explains, returning to his earlier point.

"If a fintech attaches itself to a platform and can anticipate and react to customers' needs – that is very disruptive. But if it is competing in a traditional way by advertising on the internet or buying Google adwords, then it won't work for the most part," he adds, pointing out that the top Silicon Valley venture capitalist firms are investing in fintechs aligned with platform strategies.

The 'FANGs' – Facebook, Amazon, Netflix and Google – may not be interested in becoming banks, but they are looking to take margin away from banks. "They are trying to create customer value, but they don't want to be a bank in its existing construct. Instead, they are trying to envision a completely different construct as to what it is to meet customers' needs," says Mr McKay. "Therefore, as an industry we are challenged to define what that means, which is exciting but also a real test [for banks]."

Advanced analytics

While Mr McKay's first job was in RBC's IT division, his true passion lay in serving the bank's customers, so he landed a branch administration role. At 19, he oversaw customer service and functioning of the branch, learning the business from the customer inwards. "I have learned more from our customers than anyone else in banking," he says. He then moved into commercial banking, completed an MBA at the University of Western Ontario, and developed a background in trading.

“I enjoyed the commercial and corporate banking space where I dealt with fascinating entrepreneurs, successful leaders and innovators. That led me back to the retail bank, where I was given risk management responsibility for consumer credit scoring and it was my first foray in driving technology change within the bank,” Mr McKay says, adding that this was a formative job for him.

In 2001, he boldly proposed to retool completely RBC’s credit scoring system. The bank worked on the concept with Experian, based in Nottingham in the UK. “We called the project ‘Marian’ because it was hatched in the forests of Nottingham,” he says.

Deployed in 2002, Project Marian was a career changer for Mr McKay because it transformed how RBC measured client risk. The project leveraged the data across the organisation to have a more powerful predictive capability of client behaviour. “This project gave us a quantum lift in the performance of our business,” he says.

In operation through a full economic cycle, the sophisticated analytics led to significant market gains and better risk management. According to Mr McKay: “Through the last cycle, we significantly outperformed the industry on market share gain – performing on a 25% to 30% premium to the market. We also had the lowest risk volatility of any bank through the cycle because of these models. They form the foundation for how we think about customers and measure customer activity.”

AI and risk analytics remain core to RBC’s business. While the models have been tweaked and updated, the fundamental design of how the bank architects its decision making has not changed.

Growing success in the US

RBC is the largest bank in Canada, according to *The Banker*’s Top 1000 World Banks 2017 ranking, with Tier 1 capital of $41.25bn. It also held onto 40th position in the world by this measure for the fourth year in a row. Like all 12 Canadian banks in this year’s ranking, RBC saw an increase in Tier 1 capital, although its growth rate (6.91%) was on the lower end of the country scale.

The RBC franchise strength, according to Mr McKay, is based on the bank being number one or two in everything it competes in domestically, in addition to its geographic spread across the country. “Wherever growth manifests itself, whether customer segment or geography, we are well positioned to capture it," he says.

But while Canada still makes up 62% of RBC's revenue, according to its 2016 results, the bank's bigger growth story is in the US, based on two franchises.

First is its corporate and institutional franchise, which is serviced by the bank's capital markets arm. RBC has the ninth largest investment banking business in the world, according to the *Financial Times* league table.

"A decade of growing our customer base and meeting their needs with a widening array of services and advice has led to the success of the capital markets business," says Mr McKay, adding that RBC's US capital markets operation is bigger than its domestic operation.

Second is its growing US wealth management franchise. In 2001, the bank acquired Minneapolis-based Dain Rauscher serving high-net-worth (HNW) individuals, which RBC wanted to combine with commercial banking. Mr McKay says: "We see the relationship between creating wealth in entrepreneurship and managing that wealth. Serving HNW customers holistically has been part of our success in Canada and we looked to pursue the same strategy in the US."

RBC searched for a platform that could provide the private banking and commercial infrastructure for the bank to grow and become one of the leading private commercial banks in the US. City National Bank, headquartered in Los Angeles, came out on top and RBC bided its time for two years until the opportunity became available. "The stars aligned and we closed the acquisition, which has been enormous success for us – with more than 15% growth across all aspects, from bottom line to balance sheet," he says.

The deal closed in November 2015 and was Mr McKay's first acquisition after taking over the reins as CEO in August 2014, so its success was vital for his leadership credentials.

Entrepreneurship focus

Mr McKay believes in the bank's wealth management commercial strategy because there is a clear reason for its success, unlike RBC's foray into the south-east US mass retail market, which it exited in 2011. "There was no definable characteristic as to why we would be successful in a market where the large domestic retail banks had all the advantages," he says. "However, by holistically servicing a commercial niche in entrepreneurial HNW customer and organising the bank around the customer, combined with a mix of technology to link into the customer, we have been able to create a successful franchise."

The business is designed around four entrepreneurial customer pillars: entertainment, from film producers to content creators; professional services, including medical, legal and advertising; real estate; and specialty commercial finance businesses such as franchise financing and equipment leasing.

"We target entrepreneurs that have built successful commercial businesses and help them manage both sides of wealth creation. It is a defensible business and has less probability of being disrupted by technology because it is a complex relationship business, similar to capital markets," says Mr McKay.

It also allowed RBC to make use of underutilised resources, such as its large deposit base from its old private wealth franchise. "We had an advisory relationship with more than 400,000 customers but never talked to them about their commercial business. Bringing Dain Rauscher and City National together has led to enormous success in the combined wealth franchise," says Mr McKay.

As of the third quarter of 2017, the US wealth management business generated revenue of C$1.2bn ($967.1m), compared with C$506m in the same period in 2015, prior to the City National venture. "Now we have defined successful customer strategies and feel positive about growing geographically," says Mr McKay. RBC and City National are opening joint offices in New York and Washington, DC, and are looking at other markets in the south such as Houston and Dallas.

Cross-selling strategy

Additionally, RBC has embarked on a multi-pronged organic growth strategy with City National, cross-selling to existing customers. "There is so much opportunity to grow this client franchise," says Mr McKay. "We want to deploy our marginal capital into a customer segment that is a lower credit risk than the mass-market space, has a wide and deep financial wallet on both sides of the commercial/consumer divide, and is growing significantly."

RBC is investing most of its growth money in hiring high-quality staff, versus building out its physical presence, calling the strategy "branch physical light". "While some advertising and branches are needed, the wealth management business is mostly about hiring exceptional people," says Mr McKay.

As such, RBC increased its headcount by about 20% in the first two years since closing the City National deal. "This is not about consolidating, cutting costs and laying people off – it is a growth story. We are excited about both our corporate, institutional, HNW and commercial strategy in US, which is a significant and deep marketplace, and will continue to be a large share of our overall earnings," he says.

The future of branches

In its home market, RBC began its journey to reinvent its retail branch network more than seven years ago, and is in its third incarnation of changing the branch from a pure transaction centre to one that is focused on complex problem solving and financial advice.

The branch has also become a 'discovery centre' and puts employees in front of customers in a different way. "The bank created a 'hotelling' concept, where staff are on the floor and out in the community, enabled by mobile technology," says Mr McKay. "For some time now we have been trying to re-create a sense of value and relevance for customers."

Overall, RBC is reducing its physical footprint across Canada. During the year ending October 31, 2016, the bank closed 18 branches and opened 12. Mr McKay emphasises that the bank is responding to customers choosing to do their banking online, particularly in urban centres. In rural areas, however, closing a branch can be "quite emotional" for the local community, he admits.

"We are shrinking our branch network because customers are indicating to us where they value or don't value that physical distribution, but we are following the customer and what they are saying," he says.

"Branches are still a relevant part of our overall customer value proposition for the foreseeable future," he adds. "The physical manifestation of our brand and capability in the market as a bank is still important to the psychology of the customer and their willingness to do business with us, both on the consumer and commercial side. This is changing but branches won't evaporate overnight."

Mr McKay also believes the branch will continue to transform, saying: “The number of RBC branches has crested and will fall, but what we do in the branch is changing – and will continue to change – quite significantly. We will create value in a different way as we continue on an evolutionary path of change.”

RBC CEO Dave McKay will deliver the opening keynote address at Sibos 2017 in Toronto on Monday October 16.

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