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RY.TO - Royal Bank of Canada Investor Day

EVENT DATE/TIME: JUNE 13, 2018 / 12:00PM GMT

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PRESENTATION

Dave Mun - *Royal Bank of Canada - SVP & Head*

All right. Let's get started. Good morning, everyone, and welcome to RBC's 2018 Investor Day. I'm Dave Mun, and it's great to see all of you here. And welcome to those of you watching on the webcast. I just want to take a moment on the agenda and some housekeeping items. First of all, the presentations and the Q&A will end around 11:45, and then we'll open the booth showcases and lunch will be available until about 1:15. We have a great agenda that's split into 2 parts. The first part, Dave McKay, our CEO, will open it up, followed by our Heads of Canadian Retail Banking and Wealth Management divisions as well as our Head of Technology and Operations. After the break, we're going to regroup and hear from our Head of Strategy and Corporate Development as well as our CFO. Afterwards, Dave will come back, close of the day, and then we'll take questions and answers. And we've allocated close to an hour for it. Food and snacks, as you saw, it will be available in the lobby throughout the morning and then the washrooms as shown on maps that you received, are at the far end past all the food. So before I ask Dave McKay to kick it off, I do have to warn you of our safe harbor caution about forward-looking statements as actual results may materially differ from those statements. And the caution is found, both at the front of your books and online at the front of the deck.

So with that said, I really hope you enjoy the day, and we're going to show you a short video first before I ask Dave McKay to come on stage. Thanks very much.

(presentation)

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

Well, good morning, everyone, and thanks for joining us today. I think as I welcome many people into the room today, and while they did notice all the great booths that we're going to bring to light for you in a few minutes, they first noticed that I wasn't wearing a tie. That's the first time, ever seen you without a tie. And I go, "Yes, it might be the first time in public without a tie." But it talks a little bit about the story of change that we're going to tell today. And really our story is how does a market leader grow? But not only grow, our story today and the strategy that we'll outline for you is, how RBC thrives in this world of change, and how from a leadership position, we see an incredible opportunity in the future. We're in a world, as you've heard me say a number of times, we're digitizing commerce, we're digitizing entertainment, we're building platforms, the world of work's changing, the world of education is changing. And in the future world that we're all building towards and living in, maintaining customer relevancy and connectivity has never been more challenging, but there's never been a greater opportunity to connect with more Canadians.

We're living, and we're going to live increasingly in a world where scale becomes more and more important. Scale and data to maintain that relevancy and insight. Scale in cyber security and ability to invest in cyber. Scale in network. Scale to invest in the future. You'll hear that theme throughout our presentation today.

Now today, we're defining retail -- Canadian retail -- sorry, Canadian Banking business and our Wealth Management franchise. And you'll hear a lot of detail about those 2 core franchises to RBC. Two other franchises that you know very well about, but we're not going to talk about today, and that's our global Capital Markets business and our U.S. wealth franchise; both as you saw in Q1 and Q2 and last year in '17, significant strengths, significant momentum, opportunity to invest in those platforms, particularly in the U.S. wealth franchise. I'll talk a little bit about that in the city national Investor Day a number of years ago, but we're not going to have a chance to spend time on those today. But we're really going to focus on those 2 core franchises and technology and how we're transforming our business.

So today's session has 4 main pillars to it. First, we are going to talk about the Canadian Banking business and Neil is going to get up and really talk about this tremendous platform that we have, this tremendous business that's given us significant growth over decades that drives our premium ROE and really is half our earnings, one that has built up a series of core assets that has been a big part of our historic success. But we'll spend some time on them, why we think a number of these assets are very hard to replace under a big part of the story in the future.

You're going to hear stories about us investing in existing channels and growing those, adding new digital capabilities to build new connectivity, building on our platform of reciprocity. Canadians love loyalty. And there's, again, a unique sector opportunity, as you know, in the loyalty space in Canada, to continue to award, reward Canadians for their business. So that's a big part, pillar one. Pillar two, Doug is going to talk about our Wealth Management franchise. Market leader in Asset Management, market leader in Wealth, distributions through Dominion Securities. A business that has scale. The scaling capability, capability that we think continues to attract new advisers, continues to attract new clients, scale to reinvest in that digital future in that business, a very exciting story. So you're going to hear Doug really talk about accelerating client growth, accelerating assets under management in his business.

Third platform or third pillar to our discussion today, Bruce will get up and talk about technology and data. It underpins everything we do today, but increasingly in the future. You're going to hear about how we are using data to leverage. Data is in itself is not valuable until you convert it to knowledge and then into value. So you're going to hear Bruce talk about data scale, knowledge and value. You're going to hear about how we leverage that into customer insight, how we leverage data into risk management from credit risk management to cyber security risk management. And how Bruce has built a team and attracted talent to this organization that allows us to build complex things more quickly, more efficiently and more effectively; therefore, even further leveraging the scale that we have.

And the fourth platform that we're very excited and you'll see in a number of the booths that we have around today is the one where we build new connectivity and new value propositions to Canadians. And the strategy is to really elongate and stretch the opportunities and the needs of Canadians that we think we can meet across all our businesses by bringing new ventures, new capabilities, new channels, new connectivity. You'll see them in our booths. This is a very exciting story, and this is something you haven't seen before. How we accelerate client growth through our new ventures and partnerships is the fourth pillar to our story.

And then, Rod will come up and summarize how this impacts our growth trajectory. How does it increase our new client flow to the organization, how do we deepen our relationships with existing family service clients; single-service clients, which we have a number of that we want to grow and deepen; how we improve the efficiency of organization, both in the short term to reinvest, but also, over the long term. And we'll set efficiency targets for you that we think we can do with or without interest rate changes in the marketplace.

So before I bring Neil up, I'd really like to start at the top, and how we think as an organization, how we cascade our strategy. And it starts with purpose. And for RBC, we fundamentally believe that organizations who articulate a core purpose and live that purpose in and out every day with our employees outperform over the long term. Our core purpose at RBC is to help clients thrive and communities prosper. We're only strong as the health of our communities, and we're only strong as the health of our clients.

Our organization embraces the responsibility to make our community stronger. We're actively involved in that. Our employees rally around that and then it leads to much stronger engagement of your employee base when you have a strong Norstar as RBC does.

And it takes an engaged workforce to deliver on what you're going to hear today. We couldn't do it without the exceptional employees, some of whom are going to be in the room today to talk to you and to man our booths. The talent is so important to what we do. And we just got back our employee survey scores. We do it every year. We survey all 80,000 employees. We had a record response rate of over 72,000 employees wrote back and filled out the survey. And our employee scores had never been higher, never been higher across the world, across our businesses, across our functions. And what our employees are telling us is, we're engaged in your purpose and our purpose as a company. We're engaged in the strategy and the transformation that we're undergoing despite the disruption, despite some of the uncertainty. We're engaged in the mission we're on, and we're excited. And that's the first and most important part of transforming for this new world, that's having employee base that wants to go in this direction. Because we know whenever we've tried this and gone in direction, our employees have taken us there.

Our goal is to build long-term sustainable growth that leads to dividend growth. So similarly, we've focused our corporate citizenship on showing a better future for our youth and a healthier environment.

Now our hope is to build long-term relationships with the next generation, marrying our social responsibility to help you get prepared for a new world of work, for a new world altogether. We think we have a fundamental role to play in doing that. That's why you've heard that we made a $500 million commitment to RBC Future Launch to really help you build the skills, the confidence, the networks and the internships and opportunities to connect with the new Canadian economy and a new world.

So that's the foundation to our purpose, our corporate social responsibility, some of our thoughts on talent. So let's start talk about strategy. So there's 2 core fundamental pillars that we've competed on in the past that will change somewhat going forward, but the architecture of the strategic premise doesn't really change. And one that is sales power. We've competed historically on sales power, which we define to be the capacity of your sales organization, the number of people and branches, the number of branches you have, the number of mobile specialists you have, the number of investment advisers you have, multiplied by their capability. It's an exponential function, more people times better capable, more training, more resources leads to exponential sales power. Two, in itself, if you're out in front of Canadians more frequently and more professionally than your peer -- your competitors, you don't have value to offer, it's still not going to work. So the second part of that, you have to create differentiated value for our customers.

We've done that through, as you know, products that are very hard to replicate, like Avion, like Homeline. We've introduced reciprocity formulas to our customers through RBC Rewards, as Neil will tell you, is now the largest issuer of points in the country.

The performance of our mutual funds in the topcoat on the Morningstar rating, so when we're in front of clients more often, more frequently, we're in front of them with best-in-class value, best-in-class products. Through that, although world is changing and that formula is going to start to change with the digital connectivity changes that we're seeing.

So I want to go through a few core assets that we're bringing forward into this new world that we think are mission-critical. One, over the last 2 decades, we've created a core payments capability, the largest Canadian payments capability and business in the country of cross-debit, credit and business, cash management. Why that's important? It gives us enormous insight into Canadians. It's rich in data for our risk management in helping understand our customers and being more relevant to our customers. And two, when you have a core checking account as you know, cross-selling and building a relationship or broader relationship is much easier. So that's a very important asset that we're carrying forward.

Two, as I mentioned, we created the largest proprietary reward program in the country. Canadians love reciprocity. They love loyalty programs. Very difficult to build as you've seen 2 decades. Not only does it provide us with ability to expand and leverage our platform, as Neil will talk about, but certainly, it gives us insight into the needs of Canadians.

We're the largest bank for business in Canada. From small business straight through to corporate, obviously, positioned to grow across all markets, across all provinces, to capture that growth in the country. But importantly, partners to wealth management, partners to the retail bank, great synergies, we think as one generation matures and hands off their businesses and their wealth to the next generation. We created the largest wealth adviser and asset manager in the country. Again, very important in meeting the changing needs and the changing demographics that we're going to talk about as we move as a society, the boomers age and they invest more than they borrow. Very important to capture that secular move and money flow and asset flow from lending to investing.

The next asset is mission-critical. We've built the most valuable and the most trusted brand in the country. And trust, you'll hear as a theme throughout the day, as we talk about trust and protecting data, trust in protecting your assets, trust in dealing with, I mean, the digital future. That trusted brand is a theme that will play throughout. So most valuable and trusted brand is an enormous asset as you compete with traditional competitors, but also nontraditional competitors. And we sit today, as you saw on the video, #1 in J.D. Power in customer satisfaction, #1 in J.D. Power in advice channels and #1 in J.D. Power in Mobile. So our platform is future-ready and as customers are saying, "You're building the things I really value."

The world's changing. The world's changing in so many ways. Customers from consumers to commercial clients are transacting in new places in new ways. And historically, a customer came to us in a branch. They picked up the phone and called us. We were always top of mind when the financial need came up, and increasingly customers are working, entertaining, they're communicating, they're shopping in new channels. And therefore, their financial needs are more dispersed with new connected tissue into new platforms, new types of opportunities. So how do you connect your bank to these new places where a customer, you're going to hear that story today. How we connect into social media, how we connect into new platforms, how we build our own platforms to maintain relevancy with our customers.

This is mission-critical. As increasingly we're seeing our customers live their lives, even now voice activated as you see in an aero platform companies. Clients are connecting with us in social media platforms and dedicated interfamily, we have to reach in there, but we also have to have a deep understanding of these clients in our own existing platforms. And I think that's a big part of the strategy that we're not going to be reliant solely on seeing our clients in other people's platforms, but we're going to articulate a platform, a series of platforms today that allow us to maintain that relevancy. And that's hard to do, but all the assets I talked about position us to do that.

We're in an era where business value chains are decomposing. And if you continue to define yourself as what we always did, we'll continue to be relevant, the last inch in the payments business, the last part of the cash management, we are at risk of having another business model. We bundle our services into their value chain.

We're seeing across every industry is breaking down barriers, not just banking, but every industry is breaking down value chains and rebundling them. Just look at Uber as an example of what it's doing to the payments business. You used to take your credit card out every time you traveled in the taxi, now you take your credit card once to sign up for the service. It's rebundled into the value proposition.

So the key is, in the future that model of sales power is a model of connectivity. How do you maintain connectivity into all these new nodes and all these new platforms? How do you make connectivity with that customer and that insight? We're going to show you how we do that. Enormous opportunity to launch new channels internally, opportunities to create connectivity to Canadians lives. You have to create new and broader value chains and value propositions for your clients.

Being the last inch in payments, is that going to be enough? Moving up into the value chain, the life value chain, starting a business, buying a home, owning a home, all these moments have longer value chains, where Mike's going to talk to you about how we're moving up early into that value chain to capture the client and build and discover the client.

So this is why we've built. We're going to articulate how we've created a digitally enabled relationship bank. And here's some of the 5 pillars I think to the successful business model going forward. One, you have to create value through a deep understanding of clients. As I told you have to maintain that connectivity, you have to have that data skill, you have to have that trust that the client wants to deal with you and let them see your data. And that means letting them see the value that their data brings to them. That is the first -- this is not about creating data with their value for yourself, but creating value for them and deriving a relationship from that. Trust is the pillar of that. How we're going to do that? Our payments franchise, our loyalty programs and the partners we're going to talk about today and ventures create data scale that we think leads the market and creates our own platform of connectivity.

We're going to create value by providing advisory service to the best people and more channels leveraging AI. We live in a complex world, but many of our customer relationships will still be -- will still have a person at the core center. But to increase productivity, to increase capability, we have this new era of data and AI coming together in real time to make our people better and therefore, make our clients better and happier. So this is a great opportunity through having great people, enhancing them with AI. You'll hear that in the number of the booths that we have.

The third pillar is you have to create value by offering best-in-class services and products. Again, it's coming back to having Avion but enhancing Avion, having RBC awards. And how we're going to grow and enhance RBC Rewards? Homeline continue to perform in RBC investments. And the new services that you're going to hear today is also a big part of it.

The fourth is creating value by providing convenience through an omni-channel experience. So the customers bombarded with all these channels of choice, and it has to feel that it's one channel. A lot of people talk about omni-experience, building it and creating it seamlessly for a client is critical. Making it simple for a client to action in a multiple channels is the key. You can have connectivity, multiple points. You can create value, but it doesn't come together in omni-channel experience. You're not going to convert that customer into your franchise.

And the fifth pillar is, you really have to, as I said, elongate this value chain. You have to move up in the overall value creation of a client and build the relationship before you try to convince them to buy a credit card or take a mortgage with you, help me solve my pain points, show me you're a trusted partner, make my life easier and then I'll give you your business. And that is the fundamental change in the thesis of what we're going to tell you today. We build this incredible franchise over time. With all this sales power, yet we're frustrated that we're #1, the customer tells us we're #1; experts, like retail bankers say, we're the best in the world, yet, we don't think enough Canadians are using our services.

We had this inert customer for so long, that's so sticky and so difficult to switch because they don't take the time or have the insight to perceive that there are significant differences in capability. This new world of connectivity moving up in the value chains gives us a unique secular opportunity to tell our story, to showcase these assets and new channels, to showcase them and modify channels to let Canadians know, let them try this wonderful platform that's taken decades to build that can't be replicated. This is a secular opportunity.

We've been bottled up. We used to bombard mailboxes with 24 million pieces of mail to try to get you buy an Avion card. There's a lot better ways of getting Canadians to see the value of our products and try them. And that is what's changed. To unlock and leverage the potential of our channel. So our thesis that you'll hear today, we're going to create more value for customers through more channels, leveraging our partners, new value chains and venture. We're going to -- in a world of digital platforms, we're going to create new connectivity, and we're going to bring us all together in the secular opportunity to showcase new and existing platforms, and a new world of connectivity to grow our client franchise through new clients to cross-sell and deepen relationships that we've struggled to do before and to improve our efficiency ratio.

So with that, that's the architecture of the themes today, our investment thesis. And I'm going to ask Neil to come up and talk about Canadian Banking. Thank you.

Neil McLaughlin - *Royal Bank of Canada - Group Head of Personal & Commercial Banking*

So as Dave mentioned, we build the market-leading retail bank in the country, and we've done this sort of 2 ways he mentioned. So the first is, this combination of leading distribution, something we refer to as sales power, I'll talk a little bit more about that, but also a full shelf of best-in-class value propositions. We've mentioned Avion. We're also among the first to launch a HELOC product, which is now the market-leading HELOC product.

We also have Canada's best performing mutual fund line up. From a sales power perspective, we have almost 1,200 branches across the country and over 20,000 advisers out there connecting with our clients. So as we look at in terms of our industry, as Dave mentioned, it's evolving. And over the next 30 minutes, I'm going to give you a sense of why we believe this is an opportunity for actually, for us to extend that lead we've already got. So as you move into the next horizon, we do so armed with a set of privileged assets that can't be easily replicated, and I'll talk about 4 of them.

The first is our scale and our leading client base. The second is this deposit franchise that took so long to build and the payments business that's attached to it. The third is our client data, but almost more importantly, is the insights we get from that data. And the last one is our proprietary royal -- rewards program, RBC Rewards. So we'll start with our scale.

And simply put scale matters. And scale matters more now than it ever has. And we're the #1 or #2 position in every single business win in Canadian banking. And that means we have relationships with 44% of Canadian adults, and we service over 925,000 Canadian businesses. And as Dave mentioned, this is all underpinned by Canada's most valuable brand. But why does that matter? As clients' needs and expectations are changing, this scale allows us to invest and navigate the change in our industry more quickly than our competitors. We can invest in our core technology and create market-leading client value propositions and beautifully simple digital experiences, and we can do it across every single segment we compete in. And we can leverage these investments across more clients than our competitors can. We'll turn to our deposits and payments business. And nowhere is scale more important than in deposits and payments. And our payments business is important because it provides day-to-day relevance for our clients. It also provides almost a 1/4 of our earnings in Canadian Banking. But it's also important because it's the core of the relationship. It defines the primary bank for our clients, and it drives the client preference.

And this results in increased wallet share and also provides us with lower attrition for those clients. And so why is that so important? Well, clients with a core banking account are 4 to 5x more likely to consolidate their business with RBC. And they make over 2 billion transactions a year, which brings us to the next privileged asset, our data.

And the data that comes from this payments franchise will continue to benefit our business, and it will fuel our business in a number of different ways. Our client insights is one way, and that will make our advisers more productive and ensure they provide the best advice possible. It'll power our CRM algorithms to make sure we optimize every client contact strategy. And we'll talk about that a bit more. And it will also power our fraud and risk management models to make sure that we protect our franchise, but in the most client-friendly way, we possibly can.

We've invested to curate this data into what we believe is the industry's richest and most robust financial client data asset in the country, but we've also invested in the tools and the talent to make sure we get more client insight. So all this has allowed us to build what we think about as a next-generation CRM platform and because more data allows us to be more predictive, it means that we're most relevant to our clients. And so already our AI teams have applied machine learning to our models and that means we've been able to optimize who we contact, when we contact them, what we contact them about, and we make sure we contact them in the channel they prefer to be communicated to. We take all of that together, and what we've seen over the last 12 months is a 13% lift in client responses to our contact strategies. At our scale that's a meaningful lift. This data is also key source of advantage in our digital marketing. We're the first FI to bring digital marketing in-house, and we've only built on that capabilities. Right now, we'd say our capabilities are second to none and some of the industry experts tell me that every quarter. We increased our client response to digital marketing by over 240% over the past 2 years, while clients are increasingly out there shopping digitally. We've done this while reducing our costs per click by 25% or 26%.

Well, we're not just using the power of our data to build -- and our deep analytics to fuel our own businesses, we're actually taking those same inputs data and analytics, and we're using it to drive value for our clients. The power of AI, combined with Big Data which we've mentioned we have an enormous resource, drives client value like it never has before. In October of last year, we launched NOMI, our digital insights tool. And NOMI is embedded right in our mobile banking app, which means clients don't have to go and download another tool and toggle between 2 separate applications. And in the first 9 months, clients have already interacted with 136 million financial insights. And the fact is, NOMI users are just more engaged. They're actually spending 25% more time in our mobile app than non-NOMI users. And with NOMI Find & Save, we've created a new product for clients. We use AI-predictive cash flow insights to enable clients to save automatically. And that's something we think is great advice for a lot of our clients. And NOMI Find & Save customers, they actually save twice as much as non-NOMI Find & Save customers.

We're also using data to power value for our business clients. And for them, we'll soon launch a new service for our merchants to provide the kind of insights that previously only big corporates were able to generate. It just wasn't affordable. So this service is going to allow retail entrepreneurs to answer important questions about their own business. Where their clients coming from? Where do they outperform or do they underperform their competitors? What are their clients really interested in? We call it right now Project Raven and hopefully, get a chance to check it out in one of the booths later today. We're actually really excited about it.

It brings me to the last privileged asset, and its RBC Rewards. And this is something, Dave mentioned, but we're really excited about the power we've got in this asset. Almost 20 years ago, we decided that rewards was a core competency and it just wasn't something that we thought we should be outsourcing. But I believe that decision has served us extraordinarily well. We only need to look at the marketplace in the last couple of years to underscore that. So today, we won the largest proprietary rewards program in the country. We have 5 million RBC Rewards customers. They're highly engaged, especially in digital.

And by 2019, we'll issue more value into the marketplace in either Air Miles or Aeroplan, but why is RBC Rewards so different? Why is it a privileged asset? Well, our peers rely on the third party for their loyalty programs, we own RBC Rewards. We control the strategy, we control the value proposition, and we get to manage the economics.

Secondly, since we don't rely on the third party, there's no renewal risk for our program. Our customers aren't going to be whipsawed based on the strategy of a third party. And then we don't pay a middleman, which means, we don't rely on a breakage model the way some of these other programs do.

We measure success really delivering on this brand value promise that we create value for these clients with the program. We've often said in the company, we're the ones that will get clients on the plane and I can tell you for the last 10 years, I hear that from more and more clients every year. We've been investing RBC Rewards for decades, and we'll issue $1 billion -- and that we issued $1 billion of value last year through our combined rewards programs.

And again, that's a scale that's just not going to be replicated overnight. So at this point, I'm going to invite Sean Amato-Gauci up on the stage. Sean manages our everyday banking business, our credit card business and RBC Rewards actually rolls up into that portfolio. So we thought Sean could give us a little bit more perspective on the program. So thanks for coming out. So Sean, we've given a bit of a sense of sort of where we are today, but from your lens, why do clients, what's the appeal for RBC Rewards for our clients?

Sean Amato-Gauci

Yes, I think Neil, like you mentioned, we've been investing in RBC Rewards for over 20 years consistently. And we've built it from the ground up, but we've never wavered on our original commitments to deliver superior client value. So whether it's in the travel space, where we continue to differentiate and win because we get our clients onto any airline, when they want to travel with no blackout periods, no seat restrictions and our points never expire.

In addition, we've continued to create simple and rewarding redemption experiences whether it's redeeming for travel or onto gift cards and merchandise, we have over 150 leading retailers and by expanding into new categories, like financial rewards or charitable redemptions. And we're thrilled with our most recent innovation, which unbundles the reward redemption experience and rebundles it with the payment experience. So customers can use their points at the point of sale for virtually anything simply by tapping their phone.

We call it payback with points. And so while it's early days, just in the few weeks, we're seeing really, really strong engagement with over 8.5 million points redeemed since -- on just a soft launch. So the bottom line, Neil, is that RBC Rewards provides an unmatched level of value, choice, flexibility and innovative solutions, which are -- which is why our clients find it so appealing.

Neil McLaughlin - *Royal Bank of Canada - Group Head of Personal & Commercial Banking*

Right. There's a clear distance between us and so many other programs you compete with.

Sean Amato-Gauci

Absolutely.

Neil McLaughlin - *Royal Bank of Canada - Group Head of Personal & Commercial Banking*

So that's where we've taken it today. Can you give us a sense where do we go next?

Sean Amato-Gauci

Yes. And I think Dave and you referenced that, we think this is an absolute privilege -- privileged asset that to date has fueled our credit card business. So moving forward, we're taking a three-pronged approach to evolving RBC Rewards beyond credit cards and beyond points. So first, we will continue to evolve the breadth of redemption options.

Neil McLaughlin - *Royal Bank of Canada - Group Head of Personal & Commercial Banking*

Right.

Sean Amato-Gauci

Such as providing access to once-in-a-lifetime experiences or special access to events, concerts, et cetera. And by continuing to drive our innovation agenda by using technology, such as blockchain, which we'll showcase at our booth after the session today.

Secondly, and most significantly, we will extend RBC Rewards across retail and commercial banking and into wealth management to drive client acquisition, to deepen client relationships, to incentivize further adoption of our digital capabilities and to reward key renewal events or client milestones.

And lastly, we will expand our reach by providing third-party access to RBC Rewards to connect with more Canadians. And we'll accomplish this in 3 ways: By continuing to partner with leading loyalty programs, like our recently launched and highly successful linked loyalty partnership with Petro-Canada, by partnering with leading retailers who leverage RBC Rewards offers to create incremental value for our customers that drive share shift and volume to their stores, and we have many recent examples, including Indigo and Roots and Apple and Saks and many, many more.

And finally, we're assessing the opportunity to white label our rewards platform and assets to support retail or loyalty objectives, which in turn, would open distribution channels for us and new revenue streams. So I'll end by inviting you to join us behind the back doors. We've got an innovation and payments booth, where we'll showcase some of these solutions and answer any of your questions.

Neil McLaughlin - *Royal Bank of Canada - Group Head of Personal & Commercial Banking*

Yes, clearly focused on value in our clients.

Sean Amato-Gauci

Absolutely.

Neil McLaughlin - *Royal Bank of Canada - Group Head of Personal & Commercial Banking*

Thanks for sharing that. So we've walked you through these privileged assets, but how we're going to create more value, especially in this changing environment? So obviously, the world is changing and I want to share -- we're actually viewing this that we're capitalizing on this change. We're doing in 2 different ways: The first is, we're actually widening the funnel, and you can see it on the top of the slide, to new clients. We're accessing non-RBC clients through our partners, and I'll share in a minute, how we're doing that with WestJet, how we're doing with Petro-Canada. And then, secondly, we're starting to connect with non-RBC customers without the first step needing to be a commitment to our financial services product. And Mike Dobbins is going to come up and discuss the work we're doing with RBC ventures a little bit later.

And the second way we're taking advantage of these changes is through the mobility and digitization that have transformed client reach and intimacy. This is the secular change that we heard this morning. When we combine the digital engagement we're seeing every day and our data and the AI-powered analytics, it provides affordable reach that we just didn't have before. Dave referenced there's 24 million pieces of mail that had a limit to the extent of reach we can have with clients and data and analytics and digital actually break that model and give us new capabilities.

And digital has also enabled new value propositions that provide more personalized value and advice to our clients at a scale we just couldn't achieve through our people alone.

So together, all of this is going to enable us to attract new clients, deepen existing client relationships and driving efficiencies. And I'll dig into each one of these one at a time. So let me start with how we're going to attract new clients. Our strategy is allowing us to reach more clients in branches, in digital and through our partner relationships.

I'll start with our branch channel. So our digitally enabled relationship bank strategies while bringing the best of client insights and data and combining it with our people. And I do truly believe that our people remain one of our greatest strengths. And our branches remain an important channel of acquisition. And it's not something we talk about maybe often enough. Our customers are choosing more and more interactive digital, but branches are still where they come when they've got these once-in-a-lifetime moments of truth that they want to get expert advice on, whether that's when can I retire, I'm buying my first home, when do they rely on us? And that -- they're doing that and they're coming to a branch. And over 200,000 Canadians are visiting our branches every single day.

And more and more they're coming for that advice. They're not coming for that simple service they can do on their phones. Our advice appointments are actually up 11% year-over-year. And in dollar terms, 90% of our new business origination comes from our advisers. And our advisers more and more -- our advisers always have been working through our branch network. So it's importantly continued to evolve, how we think about our branch network. It's not static and one of the parts of that evolution is we have to start thinking about how we change our formats. And there's 2 formats we've recently introduced that we wanted to share. These formats are putting us back on the clients path allowing us to engage in a very different way. The first one, you see it on the screen there, is our new student format. We've launched this at McMaster as well as UBC. And we have many more of these student formats planned. We have specifically trained advisers who are connecting with clients and in this engaging format, and it's in a very different way. And they're talking to them about problems that really students are focused on.

How do I manage my cash flow? How do I finance my education? And secondly, a couple of months ago, we launched a new format specifically targeted for newcomers. It follows a very similar formula, very, very small, really focused on the key capabilities of these advisers specialized for this segment. Both of these formats are already showing that we can generate 2x the flow of new clients through these formats than we used to do through our traditional de novo branch format.

And secondly, we'll talk to you about is [the] digital. Digital acquisition is playing an increasingly important role and I can confidently say, we do that better than anybody in banking. Almost half our clients are digitally active. And our digital clients, they're more engaged, they have better overall satisfaction, and we actually measure deeper share of wallet with digital clients. And today, they interact with us once every 2 days, and that compares to about once a month for clients coming into a branch.

So what does that mean for our business? Well, this trended digital mobility gives us more opportunities. We heard that earlier. And these opportunities to be in the client's path allows us to engage them and to have this deeper client intimacy.

We lead the industry in digital sales and this capability is an important addition to our sales power formula. Digital sales represent almost 40% of personal deposit accounts, really driving our HISA growth, our high-interest savings account growth and over 1/3 of credit card originations. And in the future, we believe there's an opportunity to take that mix up to 50% for these 2 product categories.

We've been investing in data as well as digital marketing tools because it's the know-how that takes this data and actually creates the results and creates the value. This slide actually just shows one example of how digital marketing has enabled outside growth in our credit card business. In 2017, we made this decision to really have a new approach to how we go out and originate new credit card accounts. We shifted to a, what we call a 365 always-on digitally led approach. And you can see the results that it generated. We used machine learning, we constantly test it, we refined our algorithms and the net result was a 3x increase in selling credit cards through digital.

And while we're on credit cards that category has been a very good source of new clients for us. We mentioned Avion is the industry leader in the travel reward space and RBC Rewards powers a number of products in our portfolio. But unlike many of our competitors, we decided to grow our portfolio organically. built on those same drivers of distribution and value. And today, Avion has over 1.4 million customers and 35% of that growth is coming from new-to-RBC clients. The same is true for our business credit card segment. Business Avion saw 8% client growth over the last 2 years, but we've seen 20% spending growth over that same period. Business customers are deciding that their business Avion card is the best place to make their payments, and obviously, that's good for our franchise.

And all of that rolled together means we're gaining market share. We're growing purchase volume by 10%. We're growing our balances in the credit card portfolio by 6%. As many of you've probably seen, this is 2 to 3x the industry growth rates of our competitors. And just to reiterate, we've done all of this with a very stable credit-risk appetite. We're not taking on more credit risk to deliver this.

The other way we're going to generate new client relationships is through our partners. We choose our partners very carefully. We believe in this idea of a win-win-win relationship where both partners work together, we provide more value to clients. In return, each of us get to grow our respective franchises.

To date, we've been really pleased with the results. Our partnership with WestJet, for example, they get access to our 5 million highly engaged RBC Rewards members. And in return, they provide access -- us access to their broad and growing client base through their channels, whether it's online, during customers actually purchasing a flight or actually on the airplane. And they had a record 24 million customers fly with WestJet last year, and they've got aggressive growth plans as well.

Last year, just over 115,000 new WestJet cards in 1 year. With Petro-Canada, we have access to 4.7 million Petro points members. And together, Petro and ourselves are providing more value to all RBC cardholders, over 12 million debit and credit card holders. We've already had over 500,000 cards been linked together in this linked loyalty concept that Sean mentioned. And that's allowed our clients to save millions of dollars on fuel. It's also been one of the things that's contributed to the lift we've seen in our -- both our credit and our deposit account originations.

And I think, when I look back, 500,000 cards being linked, the market's telling us that this value proposition is new way to deliver loyalty is resonating. So these partnerships, again, another key part of how we're going to provide value to clients and increase this prospect flow.

In terms of business customers. I said earlier, we're both #1 in business deposits and lending, but we continue to expand on our lead. On the left-hand side, you see what we're doing for small business customers. We know business customers have a lot of things in their mind. It's not only banking. And we've been able to create solutions to help them right from the journey of starting that business, really focus on where they're trying to move, which is to grow that business. So we're providing our small business customers with cloud-based accounting. We've linked that to their online banking for business. Not just -- puts all that money management capability in one convenient spot for them.

We've also created, what we call, MyBusiness Dashboard, and it's a single digital experience that's combined 40 curated apps into a custom portal. And again, this allows clients to manage all his aspects of their business.

On the right-hand side, we're also -- you can see we're also investing to grow our expert advisers and specifically, our commercial account managers. We've grown that sales force by 12% over the last couple of years. We're calling in more customers. We're providing better service to our existing customers. And in return, we're growing our business because they're rewarding us with more of their business.

Again, we look at that, the combination of those activities are generating growth. Business lending, for an example, we've had a 9% CAGR over the last couple of years, and we believe there's more opportunity in that space in front of us. So finally, on acquisition, I'm going to touch on everyday banking. We've heard about just how important it is. And it's key given it's the foundation for, again, depending those customer relationships. We have strategies focused on a couple of key growth segments. We'll talk about 2 of them, youth and newcomers. And they're important because 57% of new-to-banking accounts come from these 2 segments.

And for youth, we've introduced new value propositions, the new formats I just mentioned and targeted sponsorships for their marketing team, like RBCxMusic and Future Launch that Dave mentioned earlier. And we've -- as we've combined this, we've grown our market share from 25% to 28% in this segment in just 2 years.

With newcomers, we've extended our focus all the way back into prearrival, the start of that journey. And we're also testing the new formats I'd mentioned just earlier. And it's about solving all the problems they have when they get to this country. Our advisers tell us, they come to talk to us because they trust us, it's not just about getting a bank account. And that's a differentiator and it's driving more and more clients to us.

We actually had a story of a client who drove all the way from Windsor to Brampton because they heard about our new format and the experiences that some of the clients had there.

So within this new -- this newcomer market, again, we're seeing market share growth. That segment is only growing at 1%, we're seeing our customers growing at 4%. We combine all those things we just talked about and back to this everyday banking account category. Just this year alone, year-over-year we're up 13%. And a lot of these initiatives we're going to talk about still provide opportunity in front of us.

So I'm going to transition to talk about how we're going to deepen existing client relationships. We lead the market in the depth of client relationships. We've talked about this time and time again. And this graph depicts the percentage of clients that have a deep relationship, and we define this in our industry as having a transaction account and investment account and either a card or a borrowing relationship.

And I've talked about a lot of the things that contribute to this deep client relationship. But there's one thing we haven't really touched on and its reciprocity.

Most of our customers reward clients with discounted fees when they leave large unproductive balances in their account. We don't believe that's great advice for our clients, and we haven't done that. We actually have a very different philosophy. We reward our clients for bringing more of the products to us. We call this, and we always have multiproduct rebate.

And last year, these rebates equated to 90 -- over $90 million rebated fees to our clients. It's a key part of how we're driving that deeper client relationship. But the overall formula is our scale, its great products and this reciprocity. But we're continuing to innovate.

Next year, we're going to launch some exciting new value propositions to our everyday banking clients. And part of this is going to be a refresh to that reciprocity program. Sean mentioned it's going to be fueled by RBC Rewards. And the other opportunity in front of us is, we're going to extend this reciprocity formula for our small business customers and our wealth management customers, 2 franchises where we have the #1 market position, and we also have over 30% market share. So again, a strategy our competitors are not going to be able to follow.

Move to investments. We already have Canada's leading mutual fund distribution business. We have about 33% market share in that space. And we've done this again by offering a leading fund line and Canada's leading financial planning business, value and distribution.

And we believe deeply in the power of planning, and we can deliver an in-depth face-to-face plan to our clients. We mostly do this with our advisers in a branch setting, but we wanted to democratize access. So we had a vision that we wanted to bring a financial plan to all of our clients regardless of their wealth level. And digital and data have now allowed us to do that.

We developed a solution that brings the best of digital together with the connection to our human adviser. MyAdvisor, it's what we call it, allows a retail investor connect with -- to connect with an adviser remotely and go through a simplified financial plan in a shared screen and video experience. This year, we've started to deploy MyAdvisor, and I would say the results, whether we talk to clients or do we talk to advisers, are absolutely incredible.

Year-to-date, we're seeing a 37% higher AUM per client who've used MyAdvisors and essentially, that's from great in-depth conversations with more customers, finding out they may have had part of their investment portfolio at another institution and proving we're the better value and that we can consolidate those assets.

I'll move to mortgages. And I think we all know there's been an unbelievable amount of change in the housing market over the last couple of years. And we remain committed to making sure that our clients get into homes they can afford. And it's this approach that gives us confidence in the quality of our mortgage book. But we also know that a home, for most of our clients, is one of the most important life decisions they'll make or for almost all, and it's the largest purchase they'll make in their lives. And this is where they turn to us for that expert advice.

About 3/4 of our mortgage clients have their primary banking relationship with us. But we actively -- we even have more opportunity to earn that mortgage business. So couple of years ago, we took a step back and said, "Clients don't wake up in the morning dreaming of having a new mortgage. They wake up dreaming of a new home." And so we needed to be there engaged at every step of the journey, not just at that financing point. So we created a series of innovative tools across the home journey. You can see them here, and I'll just talk to 3 of them.

Our neighborhood explorer connects us with clients at that very start of the journey when they're just thinking about where they want to live, where they want to raise their family. Our true home affordability tool, this one allows us to interact with clients as they start that buying part of the process, determining how much they can afford and what it's going to cost them each month.

But together, these 2 digital properties generate a 35% increase in digital leads, and we're taking those leads and pushing them back to advisers and that's helping us generate the volume you see.

The final one that I want to talk about is the renewal hub. And this enables our clients to renew simply and digitally online. We're already seeing about 1/3 of our clients take advantage of renewing this way. And this is one of the reasons, in addition to regulation, we're seeing a nice lift in our mortgage renewal rates.

But collectively, these tools are another example of digital-enabling this client connectivity, we've already talked about this morning. These home buyers are engaging with us earlier in the process, and they're giving us more information about their intentions: when they intend to move, the type of house, what type of mortgage and the amount they're looking for. That gives us more opportunities to win their business.

So I'm going to transition now to how we're driving efficiency. We believe our mobile app is the best in Canada. And there's a couple of organizations that told us the same thing, frankly, J.D. Power and Forrester. But I've been asked, what are you getting for all this investment in digital? And I guess, beyond the obvious fact that we're delivering on a client's expectation of modern convenience, we don't talk enough about, but it's helping drive self-service and the ability to reduce cost in our branch network in our contact centers.

We're seeing more and more clients choose to interact through digital. We're seeing mobile actually become our #1 channel as more clients interact with mobile for financial transactions this year, the first time we've ever seen it.

From a cost perspective, this is a really positive trend for us, we're quite excited about it because mobile clients just behave inherently differently. The example you see on the screen is just a snapshot of 110,000 clients who recently adopted mobile. And what you see is there's this dramatic lift in clients selecting self-service for their everyday transactions. So this gives us confidence that this migration to digital and especially mobile adoption, which we've been pushing quite well, is going to continue to drive a lower-cost servicing model for us.

The other side of that client migration equation is our branch distribution. And as clients' behavior is changing, we're going to have to respond. And we're transforming our roles in the composition of our staff in our network. We've reduced our service FTE by almost 2,000 over the past 5 years. We know how to manage our branch network. We've done all that through attrition. And that trajectory is about in line with service transaction trajectories. And with the continued migration of mobile, we do believe there's another 400 to 500 roles that we can reduce mostly from service and a small portion from management over the next few years. And again, we believe we can do all that through attrition.

But at the same time, we've also reinvested in our sales and expert advice: financial planners, mortgage specialists, investment retirement planners, small business and commercial account managers. And while our service staff has reduced by about 25% to 27%, our expert advisers have actually grown by 13%. So that represents a material increase in that sales power formula.

Based on the power of the pace of the migration, we've modestly reduced our branch network. We haven't really taken it down quickly. We have a commitment we're not going to get ahead of our clients.

We've consolidated about 40 branches from our peak in 2015, but we've done it very carefully. When we look ahead, we see the opportunity is more about having smaller footprints and having these footprints dedicated to advice and to really have a place for our advisers to connect with clients. But these smaller footprints will allow us to reduce our square footage by about 20% over the next 5 to 6 years.

If client behavior does change more rapidly than we've seen over the last couple of years, we do have the flexibility to move more quickly. About 70% of our leases come up for renewal over the next 5 years. So we have that strategic option.

Last place we're going to touch on efficiency is in operations. We're always focused on capturing cost opportunities. It's not really a program per se. It's in our DNA. It's just really how we manage the business. And I believe, in operations, we've done a phenomenal job. Despite business growth of about 22% over the last 4 years, we've been able to reduce our operations cost by 2.7%. And right now, that absorption, we're running basically flat. We've used a combination of process reengineering, robotic process automation, and then maybe most importantly, we've taken the time to multi-scale our employees so that, that capacity is put to the highest and best use where we need them. These are just a few examples listed here on the slide.

We've also seen that digital capabilities are something that's helping us. And eStatements is something that has given us significant cost savings. And again, we believe there's more value as more and more clients adopt eStatements.

Where does that bring us? What our clients are telling us is we're on the right track. There's only 3 J.D. Power awards in the market for banking: overall client satisfaction, satisfaction with mobile banking and then new this year, an award for satisfaction with advice. And right now, we hold all 3 of them. I believe this is a great validation of our strategy that -- to hold the #1 J.D. Power award in mobile and, at the same time, for overall client satisfaction. That's a demonstration of our digitally enabled relationship bank strategy at work.

So I'll finish with our goals, and in Canadian banking, we have 2 of them. The first one is that we believe everything we just talked about, all these new capabilities, the new client connectivity, the new intimacy that we can generate through data and digital, that will help us drive a 3x lift in our new client acquisition, and that we'll be able to add 2.5 million new clients over the next 5 years. And our second goal is that we're aiming to have a sub-40% efficiency ratio by the year 2021.

I'll finish there, and I'll invite Doug Guzman to come up on the stage.

Douglas A. Guzman - *RBC Capital Markets LLC - Deputy Chairman*

Okay. Thanks, Neil. Everyone still with us? You got me and then you got Bruce and then you got a break.

So I've got a really simple objective for my 15 minutes or so, and that's to communicate 3 things: one is the extent to which we lead in wealth and asset management because I have a hunch that many of you know we lead, but I have a hunch that many of you don't know by how much we lead; secondly, to explain why we have that lead; and third, to persuade you to share my belief that, that lead will continue to widen given what's going on in the outside world, both in wealth management and asset management. And I'll do that by talking about distribution, so wealth management first and then asset management second.

In the crux of it, the point I'd like to communicate is our lead is sustainable and as a result of an advantage of scale, talent and infrastructure and a system that reinforces itself, and there's 1 slide in particular that I'll draw your attention to as we go through, and a system that is very, very difficult for our competitors to emulate or to replicate. I'll also show you that, that system has a current track record of premium growth in the industry, evidence that the system has advantage and is sustainable. And then I'll make the argument that external disruption, as I just said, augments that advantage.

So let's start with distribution. This is the full scale of distribution. Neil talked to some of these channels. There are a lot of them. That breadth of investment in and of itself is significant and hard to replicate. On your left, the self-directed channel, all of them powered by digital, by the way, all of them a combination of human and digital. But on the left, our direct online trading business, direct investing, $80 billion, largely digital, low fee. As you move to the right, you're going to find more service and more fee, more full advice.

The second channel on the chart is investees. Our robo-advisor, it's currently in pilot in Alberta, Ontario and Saskatchewan, launched in November of 2017. We're ready to roll that out as we choose. And it's experienced -- in terms of clients, it's 50% new to investing clients of RBC. So we're gaining clients with it. In the center of the branch channel that Neil talked to, either serve -- clients either serve on teams or with individual advisers, either in the branch or digitally with MyAdvisor that Neil addressed.

I'll spend my time on the right-hand side of the page, Dominion Securities, the country's leading brokerage model, although it's not fair to call that really a brokerage model anymore, and I'll talk to that, leads by a margin. And then our investment counseling business, PH&N Investment Counsel, also a leader at $30 billion. And then I'll end with a few words on the Asset Manager -- Global Asset Management at $420 billion.

So the investment and distribution, I'll be quick on this side, we lead in the investments arena. We've got 17% of the investment advisers in the country. Those 17% of the advisers drive 25% of revenues -- or, sorry, 28% of revenues and 25% of assets under administration. Our private bank, one of Neil's businesses leads as well, 33% deposit share, 31% credit portfolio and market share. And we lead in a number of other places. Interestingly, on the bottom right of this slide, our sales through brokerage of insurance products last year represented 43% of the industry's insurance sales. So a significant platform.

That lead, I suspect, is bigger than you might otherwise think. We're 80% larger in Dominion Securities than the next largest competitor. In fact, if you add 2 and 3 together, you approximate the size of our business. That's driven above industry growth rates, 10% compound annual growth rate in revenues. The white diamonds show our revenue market share. That's expanded as well over time.

As has our AUA. Here's 2 measures of AUA, either the bank share or the whole industry consistently rising year-to-year, left to right. And a compound annual growth rate in assets under administration over a 10-year period, that's been a 200 basis point premium to our bank competitors. Proven track record that this system is sustainable and provides advantage.

So here's the important slide. I've talked to some of the investments in our -- in industry-leading capabilities, and I'll spend a little more time on the next slide. That drives better client outcome and experience. The client experience and outcome makes us a more attractive place for the country's best investment advisers, and I'll prove that in a second. And as you put the best advisers on the most powerful platform, you get higher productivity -- industry-leading productivity, which drives cash flow, which drives market share cash flow, scale and an ability to invest back in the business that exceeds our competitors. That flywheel or reinforcing circle is differentiated.

And a piece of that differentiation is our wealth management services team. 200 subject matter experts, deep expertise on the spokes you see on the left-hand side. Gone are the days where we are investment advisers in Dominion Securities. We are full wealth planners, family advisers, business advisers. We can talk to philanthropy, we can talk to a cross-border planning, everything you see on the page. That investment in people, the annual spend run rate of that investment in people for us approximates the net -- the before profit -- before tax profit of some of our bank competitors. It's not easy to replicate.

So I said our advisers are the best in the industry or at least I said that we are the most attractive destination for advisers in the industry. This is the industry survey that's done annually by an investment executive. And it has IAs across a number of categories to rate their own firm. And I've picked some of the categories here, but I haven't [biased] the result. The result, if you looked at the survey, will be consistent with what I'm going to show you. But what I chose was those categories of support for IAs that matter, where they're measuring the attractiveness and the power of our platform, so how's our technology, how's our mobility, how's our planning support, how's our will and estate expertise, how are the spokes on that wheel I showed you before. This is the bank-owned averages -- a bank-owned IA average feedback on a 7 to 8. The independents tend to be -- did I lose a slide there? The independents -- I'm going to blow the answer here. So what I'll show you in a second, it would have been really better with the cartoon, but it'll show -- what it'll show you is there'll be a yellow set of dashes, which I'm going to try again, that will show the independent broker's feedback and then -- there's the punch line, the blue bars are our IA's feedback across all of those criteria.

So our overall rating from our advisers is 9.4 relative to -- compared to 7.4 for the rest of the bank. We lead in 30 or 31 categories. Our investment advisers tell us they are better prepared on our platform to do business with their clients. And so that leads to us being able to hire, gather investment advisers. Our share of advisers is going up across the industry. Those advisers are able to carry larger books per adviser because they have more to work with, they have more ammunition and that drives higher revenue per adviser, which also makes it an attractive destination. And that's hard to replicate. And those books drive revenue that's 30% higher than our competitors and 70% higher asset balances in the middle part of the chart than our competitors. They're also doing business with more and more of the country's highest value clients. So the yellow bars at the bottom are the highest net worth clients in the country, and we're up to about 50% in those yellow bars.

So what happens over time as the world changes? You're familiar with all of these external forces. The clients' expectations are changing, more fee-aware, more digital, expect more customization. Technology in the center has set expectations in terms of the level of service they receive that the platform companies have delivered to them, have allowed more automation, more personalization and changing regulation; on the right, more fee transparency, investment at scale and things like CRM2. All of those, I'd argue, are tailwinds to an industry leader who's made a significant investment in capabilities. Whether it's the breadth of advice models I showed at the start, the number of solutions, a DNA in our adviser force of planning and discovery that started 15 years ago, well ahead of the rest of the industry. Again, as I said, long gone are the days where we're just investment advisers. And an ability to invest at scale and digital, not just in our wealth business but in partnership with Canadian Banking, which Neil talked to, and the ability to deploy technologies across both of those businesses, the chassis of digital across that whole series of digital channel -- or channels I showed in the first slide, some of which are exhibited here in the corner, is a -- can be a shared chassis. And so we benefit from those investments.

Here's a variety of them. You can visit them in the booth in the corner. I'll highlight one in particular, which is AVA. This is differentiated. This allows our advisers to be effective outside the office. They bump into a client at a grocery store, they go visit a client at their place of work, it allows them to call up portfolio information to work with the client on planning. We've just rolled out electronic Know Your Client, e-KYC, which is a huge friction point for clients and for advisers. An example of where we lead, where our ability to invest in digital and future-proof, future-ready the business is quite differentiated. And there's other ones around that page. You can talk to our team in the booth in the corner.

And so that's the story on distribution. A sustainable lead, I'd argue, that shows evidence of widening, and outside forces will likely act as a tailwind to continue to have that widening.

So manufacturing. The architecture of my comments is going to be pretty similar because I can make this similar and will make this similar given -- around global asset management. We're bigger than our competitors, 20% larger than the next bank asset manager. We're about 50-50 in terms of retail and institutional, and I'll talk to why that's important in a second.

But my argument about sustainable advantage will feel a little bit similar. We've made investments in capabilities, in people, the best portfolio managers supported by digital, supported by systems. Those lead to better client outcomes, which I'll talk to in a second. There's a symbiosis between retail and institutional asset management, and I'll use our global asset management teams in London, our global equities team, our emerging market team as an example.

Because we had a retail distribution channel of size, we were able to hire very capable portfolio managers, put them on the platform and give them an asset balance to work with before they develop a track record that the consultant would blast. And that's a long -- as people in this room know better than I do, that's a long process. And so we were able to get them to work. And there's obviously governance in the system where we do the right thing for our retail investors, first and foremost. And there's a tension in the system to test that. And those people had a chance then to build a track record. And they built a very attractive track record. And now that the consulting ratings have rolled in and they got formal track records, they're successfully marketing to the institutional community. So that allows us to build asset management organically in a way that some don't have that advantage.

The institutional side sharpens our skills. Some of the best portfolios in the world would prefer to -- or at least have it included in their portfolio, institutional asset management. So we get better people. It's a tougher environment. It's a place where you've really got to perform exclusively on performance and price as opposed to -- more exclusively on performance and price than perhaps in the retail arena where there's a broader set of advice around it. And I'll show you the better client outcomes that leads to market share and cash flow when combined with the distribution channels that both I talked about and Neil talked about and back to a similar pattern of scale to invest back in the business.

In this area, though, we've also got a lever in terms of price. We're passing our size -- economies of scale and size benefits back to our clients. Our mutual funds in the retail arena, you've probably heard from us a number of times before, are 15% to 20% cheaper than average. And so we approached our client base, in particular, in retail with an attractive price and market-leading performance.

So I talked about our investment. Here's a quick slide on some of those pieces. We've covered most of it, but distribution on the left, a full range of solutions, exceptional client service and passing those economies of scale back to the investor on price.

So performance. You can look at it a bunch of ways. Here's a couple, the percentage of our funds that beat the benchmark and the percentage of our assets that beat the benchmark. In this case, it's 3-year gross of fees. You can look 1, 3, 5. You can look at net of fees and compare it to an ETF net of fees, in which case, the number would be 81%. But simple to say, we've performed in a way that's attractive for our clients.

We've also got third-party validation of our process. A number of places where we lead the industry, as you can see on the chart, the one on the bottom right is a bit dated, but it's the last year that Morningstar awarded the award. We're very proud of it because it speaks to doing the right thing for our investors. And I think it's fair to say that some have wondered whether bank -- universal banking models with matched distribution can do the right thing for their investors. And here is a third-party observer of the industry saying, not only does RBC do it well, but we do it better than anyone in the industry in terms of acting for our investors.

And that leads to premium growth. So I said I'll show you the evidence of premium growth. 4.5 times net asset accumulation over the last 10 years relative to the average and almost twice -- 1.5 twice the closest competitor. A big part of that is having lower redemptions. There's 1.5 trillion of mutual funds in the industry. So even a small difference in your redemption rate can have a big effect on the left. So we gather assets that are premium to the market, and we redeem lower than the market, and therefore, we build assets faster than the market.

And so share goes from left to right on the chart, from 7.5 to 14.5. That share is very slow to move because the base is big. It's 1.5 trillion. And think of net long-term mutual fund sales in the year being 40 to 50. So the base moves very slowly. But we're 50% larger than the next competitor in retail. This is the whole industry in retail. Neil showed you a percent that was higher because it was the bank channel.

So what we pay attention to because that base moves very slowly is, what is our monthly, quarterly, annual sales relative to that 15%? Because as long as our net sales are above the 15%, we know we're dragging that 15% up, even if it moves a little bit more slowly because of the relative size of the numerator and denominator. And here, over a 5-year period, we've consistently outsold our underlying base. And we've got -- so we've got a tailwind to the building side of the business.

We continue to invest in GAM as well. Just the same story as I told you in distribution. New active in the top left, building illiquids, (inaudible) unconstrained, quants. We've got $18.5 billion in pure quant. Importantly, we're weaving that quant into fundamental, support for human advisers. We're building quant in 2 ETFs. At the bottom right, we've grown that family of delivery vehicles for our investment asset management expertise. We've got 53 tickers in the ETF business focused on active ETFs. We lead on the top right in ESG, incorporating social and governance and environmental concerns. Again, woven through the investment process of all of the teams, not on specific funds alone. And bottom left, we're able to, again, in partnership with the retail bank, have the scale to invest and experiment on next-gen concepts, whether it's blockchain or artificial intelligence. And we're doing that as well in global asset management.

Similarly on digital to the distribution side, lots going on. Again, I'll pick one to highlight. So our portfolio review service allows us to use optical character recognition to scan in statements. So we've just met you for the first time. You hand us your competitors' -- our competitors' statements, we scan them in -- or maybe you're a client of ours and you want a full picture of all of your assets. You give us the statements, we scan them in, we can analyze your portfolio, we can make recommendation on asset mix, we can make recommendation on lowering the cost of your advisory, your manufacturing fees, a differentiated capability that serves our clients and makes us better advisers and asset managers.

And so I make the same argument in both places. Capabilities, innovation, a mindset to continue to advance the business against an environment where that advancement is going to serve as a bigger and bigger differentiator. So the same words I'd make for asset management as I said for distribution.

So last slide for me. To wind up, the Neil and Doug part of the program where we talked about retail banking and retail wealth management, there's still lots to do fishing off the company pier, if I can use that colloquialism, because there's a lots of potential with existing clients at RBC. Only 35% of high net worth banking clients have a relationship with Canadian wealth management, 16% of our Canadian banking clients invested all with GAM, with Global Asset Management. And we can give you, and I'm happy, a break or as we go through the booths to talk about places where we're crossing the silo like we haven't before and the opportunity that, that presents.

So we're optimistic. We feel like there's a tailwind that's helping us gain share. And maybe appropriate that I ended on technology because I'm to be followed by Bruce, who will give you a deeper cut at what we're doing in technology at RBC.

Bruce Ross - *Royal Bank of Canada - Group Head of Technology & Operations*

Thanks, Doug, and good morning, everyone. First of all, you've heard a lot about the digitally enabled relationship bank this morning. And the group that I represent in technology in RBC, we think of ourselves as the engine room underneath that. And I thought over the -- we've been -- it's a journey we've been eyeing over the last 4.5 years, and I'm really excited to be able to bring that to life to you today.

When we look at -- they gave me a new clicker, and it works. This has not been a technology issue, okay? The -- anyways, when we look at the differentiation that we bring to the table from a technology front, I think I really believe it comes in 4 key areas that you see on the screen here.

So the first is operational scale. We support 5 businesses in 37 countries around the world with the investments that we make, and we leverage those technology investments across all of the businesses. So you get that scale advantage and the technology that we've been investing in for years to be able to drive down the unit cost rate for everything that we do.

The second is that we spend a lot of time looking at the manufacturing platform. So think of this as the assembly line as you would in the auto industry and reengineering that, what we call the next-generation delivery platform, to get speed and scale for all the things that you've seen here and we'll see here this morning.

Third is, and Dave started talking about this, is the data advantage and the insights that we're able to create as a result of that data advantage, leveraging artificial intelligence to these new technologies, really creates an opportunity for us to create a great day for our clients that others cannot.

And then the fourth area is innovation and talent. And we work in a space today where technology is changing at a very rapid pace, and it's not good enough in the business that we're in as the #1 bank to not lead in innovation because you can get left behind very quickly. So we look at innovation and we look at talent as obviously core to who we are, and I'll hope to bring that to life for you this morning.

Now all these investments that we're making, we spend $3.2 billion on technology, and it -- we'll talk about that, but it's delivered in the form of 3 areas. First, scale. And we talked about that. We have 11,000 people in technology that are working together, that are building on the capability that we already have. They support changing business volumes. 4 years ago, we delivered 400 million transactions per day. Today, it's 500 million transactions per day. The velocity and speed that we produce has got to be flawless, it has to be secure and it has to enable our business to deliver the results to our clients. But that's not good enough. It comes down to creating value for clients. And the outcomes that you're going to see, whether it's what you saw with MyAdvisor or any of the other capabilities that we've been showing you this morning, are really how we measure the success of our team, and we'll talk about that.

And as I said, we do spend $3.2 billion a year in technology. That's been growing at a compounded annual growth rate of 7.5%. But it's not just the raw number, it's the ability to actually move from run to change. And we've moved $520 million from the run budget to the change budget over the last 4 years. We needed to do that in order to deliver some of the things that you've seen. But we haven't -- we've asymmetrically invested in new areas, and that is the 25% annual growth rate in our digital investment. So we spent $1.1 billion in terms of creating new capabilities. We've been able to leave the underlying infrastructure piece relatively flat while we've had increasing business volumes that I'll show you. And we've doubled the investment that we've made in cybersecurity, as we all know.

Now operational efficiency has been core to us. And so it hasn't been just growing the budget, it's been actually delivering the operational efficiency. We've delivered $430 million in operational efficiency over the last 4 years, and we've done it, really, in a few different ways. One is we've consolidated. We have global footprint. We've been consolidating as much as we can from data centers to applications and just really working on that core capability of the bank. Two, we've been applying automation, whether it's robotic process automation or just, as I'd like to say, getting hands off keyboards in everything that we do, to streamline what we do. And then creating reuse. Because of those 5 businesses, we're able to create digital capability in any one of those 5 businesses and reuse that in other areas of the business, and we'll talk about that.

Now we've created these operational efficiencies while investing $400 million in what we call our transformation budget. And that transformation budget is all about changing who we are for today. So the transformation budget has been focused on creating this next-generation delivery platform. It's invested in cloud and artificial intelligence capabilities and creating this data platform we have.

And then finally, it's been about creating modular systems that you can -- where you can reuse those components. And you may have seen in March, we announced what we call an API store. And that API store to the marketplace was we looked at extending the development population of RBC beyond the 4 walls of who we are today to allow other clients or development firms to be able to interface with us well and to be able to create capability for us. So one of the APIs we put out was a mortgage calculator and other was a branch locator. And we are the first Canadian bank to do so.

And so while we've continued to grow in terms of our investment, in terms of digital, et cetera, we've also had to keep that infrastructure relatively flat, which we've done all the while as the Canadian environment has grown to the knee of the curve on digital transaction adoption, with a 33% annual growth rate. As well, the growing business and the success the business has had is at growing the underlying core by 8%.

So we do all of these things together, invest in the new technologies, move money asymmetrically to the areas that we need to and keep the underlying capability as flat as possible in the investments that we make.

So let's talk a little bit about this manufacturing line. When we got together a few years ago, I'm not going to talk about all the technical details, although I could, if you wish, but we sat back and we said, "If we need to be able to get capability to the market faster with higher quality, we need to reengineer this assembly line." And that's what we did. We got together with the business, we started working in agile ways together and we started deploying into the cloud. And then what we did is we decided to automate everything in between from testing and all the other capabilities that we had to create a streamlined process that frankly got people out of the way and let the technology do its job. The results have been fantastic. We are now able to release technology into the marketplace at the speed that clients can consume it and the business wants to deploy it versus the limitations on technology.

So that AVA platform that Doug talked about, we've released 12 versions of that in a single year. We could do more. The mobile app, 8 releases in a single year. To get the capability in front of the clients moving as fast as it needs to be. And we've done it at scale. We have 350 agile programs going on in RBC right now in an ongoing basis. And we've been able to generate $250 million worth of productivity benefits. And with that productivity benefit, we either reinvest that in additional capability that the business needs or we can return that to the business in terms of efficiencies. So this has been a great capability.

The third area I talked about was data. Oops. Sorry. I'll talk to you a little bit about some of the things that come out of the manufacturing line. So Neil talked about our NOMI capability, $136 million insights. It's doing things like telling you how much did you spend last month versus how much did you receive. It's telling you whether your Netflix bill went up by $10, which I would have never known and my wife informed me the other day. It's been a great capability, but you have to be able to absorb the knee in the curve.

Secondary, MyAdvisor. We took natural language processing and we took video technology and we applied that so that we can support our customers in whatever environment they're in, on whatever form factor they want to see capability. And it allows the adviser to scale their relationship with clients.

And the third area is our ACE program. This is for our Investor & Treasury Services business. We do work in pre-trade, trade and post-trade with these clients. Huge amounts of data. And we have changed the paradigm from where we used to send reporting to the clients to allow the clients to come in and look at and interrogate their data as they wish, much as the way you would with a Google interface into systems or data yourself.

And fourthly is Project [AIDEN], and AIDEN is at the back of the room. We'll show that to you as we go. But it is a -- we've taken a look at the trading environment inside RBC, and we've used machine learning and artificial intelligence to look at how markets behave over years and then how do we create an AI-based trader. And it's performing extremely well. It's traded over a $1 billion already, and it's really competing well with our traders down in the second floor here at -- in Toronto.

So a lot of capability and, obviously, AIDEN is a great example where data-driven capability and how we use data differently. So let's talk a little bit about that.

There are really 4 capabilities you need in order to actually be really good in terms of using data and artificial intelligence. First, it starts with the core data capability that you have. And that RBC, given the size that we are, the fact that we work with 40% of the Canadian economy, that we work in 37 different countries and that huge client base we have, we have a richer data set than anyone else. When you augment that data set with data that you acquire from the marketplace, the listening that you do to your clients and really use that data, that data acquisition engine is the second big thing. The third capability that you absolutely need is you need great talent that can build these AI-driven models and machine-learning models that people talk about and apply those to your existing models inside your business. That absolutely is key, but without the other 2, it won't work. And then, fourthly, you need a culture of business and technology working together. We built our capability organically versus purchasing it. And so today, when you look at us, we have 32 data labs that execute around RBC, business and technology working together on really important business challenges and opportunities. And you'll start to see them as we go. The investment that we've made has been $225 million over the last 4 years in this data environment, and it's been an environment that's created a set of capability that allows us to grow exponentially in terms of data acquisition. As you can see, we really believe that while every 6 months right now we're generating as much data as we had in the previous 20 years, and that's only going to accelerate over time as we believe it will be 10x in 2 years.

Now let's show a couple of examples of the types of things that we've been doing on data and AI. First, credit risk indicators. So obviously, our -- we have credit risk models. We've had them for years, and they're fantastic. But we applied machine-learning capability to those credit risk models, and we were able to improve them. We had a 12% improvement, which generates a $50 million benefit to us on an annual basis.

Over on my -- on your right-hand side, you're going to see a booth later on that talks about no model left behind because we're taking all the models that we have in the bank and we're actually starting to apply machine learning to those models to improve the outcome that we can get from them.

On the right-hand side of this chart, you'll see what we're doing in location-based intelligence. And this is an example of a retailer. And if you look at the red circle, the -- in a restaurant, the restauranteur would normally have thought that their clients would have been within a 20-kilometer radius of their restaurant, the radius of that circle. They also felt that the postal code that represented that -- was represented in that radius would also be a good indicator of where the clients were.

Now using machine learning techniques and really -- and location-based intelligence, we're able to show this restauranteur that their clients were actually where those little orange dots are. So more than 50% of the clients were outside of the normal parameters that they were using to either target offers or to work with their clients on. And we're able to give that value back to clients because we're looking at dozens and dozens of different indicators to actually come up with better intelligence on where they might sit.

Now when we talk about artificial intelligence and data, you've seen a couple of hopefully great examples of what we're doing. But we don't believe that, that's enough. We believe that when we look at Artificial Intelligence, it's going to start to influence every decision that we make as a bank in the years going forward. It won't necessarily make all those decisions, but it certainly will influence them.

And if it's going to be that important to us, we didn't believe that it was going to be something that we would buy from others or that we would not lead in. We believed that we fundamentally had to have a lead in, and especially in a geography like Canada, where the Artificial Intelligence capability is, yes, very high, but also at a premium and hard to get. And when you have companies like Google DeepMind, Facebook, Microsoft and others investing in the country and taking that talent, we need to capture it.

So we built Borealis AI. Borealis is a research center up at the MaRS center that really is fundamentally focused on theoretical research and advancing science and patents so that we can lead; and number two, applied research, and how the 2 do work together so we can work on those great problems.

Now better than me talking about it, is really our leader, Dr. Foteini Agrafioti. And Foteini is the founder of Borealis AI, and I'd like to invite Foteini up to the stage to chat about this for a second.

Welcome, Foteini.

Foteini Agrafioti

Hello. Hi.

Bruce Ross - *Royal Bank of Canada - Group Head of Technology & Operations*

Welcome, Foteini. So just in your own words, maybe a little bit about the mission of Borealis and what you're doing.

Foteini Agrafioti

Yes. So Borealis AI, as Bruce just said, is an RBC Institute that's dedicated to fundamental and applied machine learning and artificial intelligence research. This is an institute that we have 2 parts of it. The first, the fundamental research center, is focused on developing intellectual property, where we are looking to not only be users of science, but also develop state-of-the-art machine learning algorithms. And then the applied research side that receives that innovation and uses that to solve problems for the financial services industry.

Now if you've been following the AI space, you probably know already that Canada has done extremely well scientifically. Things that we probably heard in the media, like reinforcement learning, deep learning, machine learning all together, is actually born here in Canada. So Borealis AI was our bet to capture that talent and build that capability internally. They said we were crazy 3 years ago. They said, "You cannot build a team like that and world-class research center inside a bank." But here we are today, we're a very unusual team to find in a financial services company. We're a team of academics and entrepreneurs.

And if you follow what we do, you probably already saw, we publish a lot of our research in top-tier academic venues. We proposed and beat benchmarks for machine learning algorithms. And we deploy all of that across our businesses as we go as well.

Bruce Ross - *Royal Bank of Canada - Group Head of Technology & Operations*

And you talked about talent in the marketplace. So how do we attract talent to Borealis?

Foteini Agrafioti

So there's 3 reasons why people come to Borealis AI and prefer us over other choices. And the first one is access to data sets. We have a vast amount of data in RBC, and scientists are very, very interested in getting access to that and testing their algorithms. As you know, data, for AI, is the lifeline, so it's very important.

People are also very attracted to our infrastructure and our compute capability. It's something that you absolutely need as a researcher in order to iterate quickly.

But they also come to us for our academic freedom, and that's something that's extremely unique to Borealis AI. To the best of my knowledge, you cannot find a group like that across the Canadian industry. What it means is that we enable curiosity-driven research. The type of work we do, you'll find other centers in the industry and technology companies or across major universities in North America actually do. We try to decode how the human brain works. We try to understand how humans make decisions, so we can replicate that and support that with compute power.

But make no mistake, this is not an easy talent to recruit. It's an extremely competitive market, and companies like Google, Microsoft, Uber, they've all set up their AI research centers in Canada. So we go head-on with them every day.

With that competition, we've actually managed to build a team of 60 people. Most of us are PhDs in computer science. We have 5 research centers across the country right now, each of which is led by a top professor from a Canadian or U.S. school. They left their faculty roles to join a bank and lead that effort for us here.

Bruce Ross - *Royal Bank of Canada - Group Head of Technology & Operations*

Now you've got a booth over here, but just a couple of the outcomes that you've been able to deliver are pretty exciting.

Foteini Agrafioti

Yes, because it's important to mention that although we believe that research is the only way to developing a competitive intellectual property, that's not our destination. We're in constant delivery mode.

We brought a lot of that stuff with us here today, but one project that is quite notable that I wanted to share with you is called Apollo. And it uses natural language processing to understand news.

Because when I first joined the bank and I met financial analysts, I asked them what they do day-to-day, and they said, "Oh, my job is to know everything about a market, everything about an industry." And I was shocked. What does that really mean to know everything about something? There's so much information out there, and we humans are truly limited by our capacity, our biases, fatigue, the languages we speak. But all that information is critically important in making decisions for our clients.

And so imagine if you had an AI agent, watching the world for you, picking up on those tiny world events that may be taking place at any given time and then estimating the likelihood of them escalating and potentially impacting North American markets.

It's a very, very exciting technology. We've actually just launched it, Apollo beta is being used by RBC GAM, and we have it here with us live today. So if you want to see what it's predicting right now for North American markets, please come see us.

There is lot of other applications of AI that we've looked at. There is -- a lot of the things that you've heard already from our -- my colleagues here are actually either fully or partially supported by Borealis AI algorithms, like [Aiden], next best offering marketing.

We do work in cyber security as well, which is a very interesting intersection between AI and security because there's a lot of data there as well. And what's notable is that, that's where true AI comes to life. We've been enabling cyber security to beat human-level accuracy in catching malicious activity in our servers. That's quite substantial for one technology budget, right?

Bruce Ross - *Royal Bank of Canada - Group Head of Technology & Operations*

Okay, well thank you very much, Foteini.

Now I don't normally think of cyber security as interesting, but it is a fundamental operational risk for the bank, and it's one that we're extraordinarily focused on. As I said earlier, we've doubled our investment in this area, and some of the statistics that you see on this page are because of the work that we've done in artificial intelligence.

42% improvement in efficacy, which basically is our ability to actually, when we look at an event, to actually understand whether it's a problem or whether it's not a problem. And also detection, we're 3x faster than we were before when we look at global threats. So underneath the -- this huge landscape of events that we look at, and the number is huge. We look at 200 billion data points on a monthly basis, just to ensure that we're safe. You can't do that with people alone, you have to use a level of automation and AI that goes into it.

And the cyber landscape that we're in is actually getting more and more complex. And it's also getting -- the volume is growing. And the reason for that is because of some of the technologies that we use within the bank. You can go in to the dark web, you can actually get a piece of malware or technology without actually really knowing what you're doing. And you can use cloud technology and cloud services to aim that at a financial institution.

So our investments here and our capability to understand threats, but be able to go through this entire wheel that is internationally known, NIST Framework, from a way from [protect] to recovery is critical to us. And we don't do it alone. We partner with every secret agency you can think of. We look at ourselves as if we're a police force, and we have to actually have as good connectivity within the rest of the industry and the rest of the world as we do within our own shop.

So when we talk about innovation, the innovation is a differentiator for us at RBC. And when you look at innovation, it's not that -- again, it's about being at the pace of where technology can take you as opposed to being necessarily a follower. And so our job and my job is to look at the world in 3 spaces: Run that 500 million transactions every day flawlessly; transform who we are to enable the digital capability; and then innovate, what is the world going to look like 3 years from now and how do we bring it into today?

And what you've done is we created 9 labs. Foteini represents some of that operation. And those 9 labs are federated. And we did that because we wanted to be closer to the business and be embedded within the business and the other functions as opposed to being a centralized only location. So we get value based on that.

Two, we want to be able to run at speed, so we have -- part of our innovation group sits with Mike Dobbins in the ventures group so that we can act like a start-up and execute that way.

Three, we partner with others in the marketplace, and you see those. And you'll hear from others that you might talk to about their own partnerships. For us, our partnerships are different. We don't just invest money, but we invest people. We put our people on site in those locations, whether it's the University of Waterloo or University of Toronto, because we absolutely believe that the challenges that we're going to face, we have to face together as opposed to just putting our brand on the wall.

Some of the things that we're working on. We're not interested in PowerPoints, we're interested in real outcomes. So you'll see us, things like blockchain, we're working on cross-border payments, we're working on reconciliations. And when I say we're working on it, we have people coding into that capability today. In cyber security, we're working at, looking at what are the impacts that quantum computing could have on current encryption algorithms so that we can get ahead of that and lead the industry.

But I thought rather than me talk more about this, what I thought I'd do is show you a short video so that you can see the types of things that our great technologists are dreaming about and working on.

(presentation)

Bruce Ross - *Royal Bank of Canada - Group Head of Technology & Operations*

That ability to leverage the scale of the bank and the opportunities that we have in the Canadian marketplace and the global landscape, and the view that we have to helping communities strive and clients prosper, that purpose behind RBC, that draws talent to the organization. And what we always say is great talent brings in great talent. And we've been very focused on this over the last number of years. We've been focused on retraining our staff as we move into this transformational and new area. So we can say that we've changed the skills of over 3,000 of our people with a really focused program.

We have also invested in external hires, many of them not from financial institutions, but getting the best technologists that we can in the space. And you'll meet a number of them around here. And that 700 that you see on there, those are people that are focused on things like cloud, machine learning, artificial intelligence, et cetera, and blockchain that are really helping drive who we are.

At the core of it or -- is how do we grow our talent base, from the students on up? And we bring a 1,000 students a year into RBC. We have over 450 of them in here right now. We put them on very meaningful projects. But we take 80 of them and we put them into a unique program we call RBC Amplify. That program is for students, computer science, engineering, business, data science. We have a business and an IT sponsor. We give them a problem on their first day. And we say, "You can talk to anyone you want to in RBC. You can have access to anyone you want. And we'll work with you. We're going to see you in 12 weeks, and we're going to have a competition." So they're on a stage just like this with people just like you that are actually evaluating the solution that they create, and we give scholarships to the winners.

We tell them that if they create -- they want to create a business, as they've done gone through this work, that we've got lawyers, we've got engineers, we've got bank staff, obviously, and we can help them on their way. Last summer, 10 patents came out that were generated by these students. So they work at a high pace. We can't wait to see what they do this year.

And we took that same program, it was so successful, and we put it inside the bank and we use that today. It's called RBCX. And we do that on a 10-week program with our own staff. We don't give scholarships though, but we do everything else.

So talent is core to who we are and who we're going to continue to be in the future.

So in closing, I thought I would just talk about those 4 key areas again, of where -- what makes us who we are. It truly is operational scale, that we can leverage the capability we have across the bank, to be able to create lower unit cost than any other one of our competitors.

Two, it's the asymmetric investment of -- into digital. We've taken at 25% compounded annual growth rate in digital, and keeping the underlying core execution of the engine flat, has been a key differentiator, and you've seen some of those capabilities.

It's Data and AI coming together through unique investments that we haven't purchased, but we built organically. And when we build them organically, they're ingrained in the fabric and culture of who we are, which is essential.

And then the next-generation delivery platform, which is that engine room that allows us to build with scale and to build with quality and get things out the door. In the end, it comes down to our people and what they can do. And if you can't, sure, it says, "If it doesn't exist, I'm working on it." And that's the way we look at things.

So with that, I'm going to hand it over to Dave Mun. And appreciate your attention because I know I'm between you and a break. So Dave, over to you.

Dave Mun - *Royal Bank of Canada - SVP & Head*

Thanks a lot, Bruce. We are running a little bit behind schedule, so we're just going to regroup in about 7 or 8 minutes. We'll call you back in. So grab a coffee, and we'll see you shortly. Thanks.

(Break)

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

So as everyone gets to their seats, I just want to welcome you back. You saw and heard a lot as we connected our digital world to our business. We've got 3 more sections that we're very excited to talk about next.

And just to put some context to the next 2 sections. Well, 3 years ago, I put a team of senior leaders together to talk about, how do we see the world changing? And we brought experts in from various disciplines to talk to us about how consumers' are changing, how business are changing, what trends, how do we capitalize on this?

From that came the concept that we can fundamentally reimagine our role in customers' lives. And I talked about this fourth pillar of building out value propositions, reimagining customers, creating value and creating new connectivity that we think can significantly accelerate our growth as a company, and change how banks play a role in customers' lives.

Mike Dobbins is going to come up in 2 seconds. Joined us from Capital One about 8 years ago. Started in our retail business and ran our mortgage business. And then now is Head of Corporate Development and Ventures. So Mike, why don't you come up?

Mike's going to talk about our ventures program and how we're completely reimagining our role in customers' lives to create future growth. So Mike, over to you.

Michael Dobbins - *Royal Bank of Canada - Chief Strategy & Corporate Development Officer*

Good morning, everyone. So I get the pleasure of talking about our newest growth strategy. So a lot of the cool and exciting stuff. And in particular excited today because you are the first public audience that we will ever have talked about with RBC Ventures.

And so I wanted to start today's presentation with a bit of a thought provoker. These are the 3 companies you may be familiar with: Houzz, Shopify and Credit Karma. They've all built digital, frictionless, useful solutions. And they've achieved significant scale, 120 million clients among them. Now what I find interesting about these companies is 2 things.

The first is they play quite closely to the high-value client segments banks compete for every day. So think about Houzz. Houzz is a site devoted to homeowners looking to improve their home. We are the largest lender to homes in Canada. The same can be said for Shopify, a site devoted to businesses. We're the largest bank for business in Canada.

And so the other thing that interests me when I look at names like these, is why were they not created by a bank? Why wouldn't a bank create a compelling solution that's frictionless and useful that could get to large scale as either a companion for its core banking product to make it differentiated, or more importantly, to drive more people to their banking product? This is a question we asked ourselves at the beginning when we created RBC Ventures. And our answer to the question is we can. And I will show you some examples of ventures that we have developed.

Now banks historically have stored, moved, lent and invested money. And Neil and Dave and Doug just talked to you about our digitally enabled relationship bank strategy. A strategy that leverages privileged assets, the largest and most diversified network in Canada, a multi-year investment and journey in data, data curation, artificial intelligence. And a number of proprietary products, including Canada's leading reward proposition.

But even with that -- Dave mentioned we all got together and talked a few years ago. But even with that, we looked at the forces of change, the speed of change. We believed we needed to put another strategy on the track and run it at scale simultaneously with our digital-enabled relationship bank strategy. And that was to move beyond banking. We call it RBC Ventures.

It's our ability to move from being a part of many experiences to being the orchestrator of entire experiences. And what I'd like to do is show you a short video that my team created, and then I'm actually going to walk you through our ventures and get into some more detail.

(presentation)

Michael Dobbins - *Royal Bank of Canada - Chief Strategy & Corporate Development Officer*

We use the word reimagine a lot. Dave used it. It started a few years ago. We asked ourselves, "Why can't a bank reimagine the role it plays in a customer's life?" You heard it in that video. I'm going to talk to you about 3 different types of reimagining. I'm going to show you a venture that fits each type.

The first one is reimagining when can a bank engage a customer on their path and their journey? How early can you engage? The next is reimagining the nature of the services a bank can provide a customer and the frequency in which those services are used. And then lastly is just reimagining the customer. Is a customer only someone that comes to the bank and sits down and opens an account? Or can a relationship start in a different way? Less friction, thinner and have a relationship built over time.

And so we're going to talk about 3 examples today. And the first one is a venture we call Ownr. Ownr is a newly deployed service of the bank, and Ownr is a site devoted to businesses and entrepreneurs, and it is everything they need to create their business. So inside of Ownr, we have built a really cool and frictionless digital registration service.

So a new business can come, complete all the processes online, have the legal name search, and actually receiving digitally their business identification number. If it's a bigger business, they can incorporate themselves through the service, including getting a rendering of their articles of incorporation. It's got a host of tips and tools. And most recently, we added a feature where we could help the business build its brand and identity. And so using an artificial intelligence tool, a business owner can come into this service and select icons, images, color palettes, and we will use artificial intelligence to actually render the brand and the identity within minutes of that business on their screen.

Now why is Ownr important? Ownr is important because all those things I just said happened before a business would go to a bank to open a business account. And if we wait until the customer comes to open up a business account, we are competing in a crowded space. Where with Ownr, we play at the very top of the journey, as one of a kind, bringing the customer all of those services seamlessly and digitally, including bringing them into the banking relationship with Canada's largest business bank.

So our hope for Ownr is both differentiation in terms of a bank that can provide everything a business needs, but also to play higher into this growth segment on their journey.

Now the next venture I want to show you is an example of an always-on venture. And this one is called DRIVE. And DRIVE is venture that plays into the 20 million vehicles on the road in Canada today and the people that drive those vehicles. Now DRIVE is both insight and service. It's as easy as the customer providing a license plate number, DRIVE will go, we build capability to extract all the other information that's relevant to the vehicle, the make, model, year, then all of that good stuff. And unlike a manufacturer solution, DRIVE isn't about a particular type of car. You can have your '86 Honda, and your 2000 Cadillac all managed within DRIVE in one interface.

From an insights perspective, DRIVE starts by just telling you the value of your vehicle, what's it worth, what will it be worth over time. But in addition to that, DRIVE will also provide you recall notices. And if you're not the first owner of a car, it will provide you a history of all the recalls on the car.

But more importantly, DRIVE is a platform to manage vehicles and vehicle service. We are connected with 800 Canadian dealers, and customers can go into DRIVE and book their service experience, be it basic service, major maintenance, directly through the app, with the entire experience is done through the app, the scheduling, the communication with the dealer. Even at the end, when you get the piece of paper back at the end that tells you what they did in the receipt, those come digitally. And they're stored neatly in your DRIVE document folder.

Now why is DRIVE important? DRIVE is important because today, automotive finance is probably one of the most competitive business we're in. We play at the very end of the customer's journey, when you're in the finance office and somebody else is deciding where the financing is going to go. And so with DRIVE, our goal is to get many of those 20 million to use DRIVE for the value it provides and build a community of auto dealers, where we will add the capability of being able to search for a new vehicle, finance a new vehicle and build a total auto platform.

And we think that this will be a win, win, win. We think it'll be a win for dealers because we will be able to bring customers to them in a more complete way, a more informed way. And hopefully, in a way where they will put more value on the table for the consumer because they will not have to advertise with inefficient plays like maybe an auto trader or things like that. And it's a win for the bank because we hope to get more volume. And ideally, a win for the customer because they now have this solution to manage the entirety of their car.

The last solution I want to show you is a solution called Finfit. And as the name suggests, it's about financial fitness. Like at Credit Karma, Finfit provides free credit scores. It also has a very cool credit simulator. And so for a customer looking to improve their credit or just know what would happen if they did something, they can go ahead and take actions in the simulator and it will tell them what their score would become.

But different than Credit Karma, we wanted to provide a full financial fitness tool, so we built the ability for the customer to aggregate all of their financial accounts wherever they hold them in Canada, we bring them all together in the application and we run an artificial intelligence agent underneath that to provide spending insights to consumers, to tell them how they've spent over time; to tell them, based on their cash flow, what's safe to spend, what's safe to save. And from this, we will build bridges to RBC products in time. If we have money that we see is safe to save, we'll conveniently let them save it or invest it with RBC.

Now why is this important? It's important because today, banks do not provide advice unless you have gone through the act of opening an account, a checking account. With Finfit, we can frictionlessly put advice out to everybody and build relationships with them over time. So this is a way of trying RBC without that friction that Dave talked about, that inertia.

Now we took a play out of the technology playbook, and we're always learning because we're still really new at RBC Ventures. But you see the 50,000 noted at the bottom there, we tried putting a wait list out to just test demand for this type of service in the marketplace, and we were able to get over 50,000 people who joined the wait list for this product, which only went live last week. So we're constantly learning techniques on how to -- not just build ventures, but how to put the emotiveness that founders of businesses would put into them.

And so ventures have been a bit -- I was employee 1 of RBC Ventures when we started it. So all of these, I'm, like, the proud dad of all these ventures. I can talk about them all day.

I thought what would be interesting though is to maybe actually do one more venture and bring the team on stage that built this venture. So this venture is called Arrive, and it is another one of those top of the journey ventures. It's there specifically for newcomers to Canada, which is the largest growth segment that we go after. And it is a highly differentiated solution.

And so I'm going to ask Shikha and Tricia to come on the stage. Shikha and Tricia are with the [Imagineers], it's the title we give to all of our employees. So they were the Imagineers that designed Arrive. And as soon as we said we love it, they became a cofounders of Arrive. So Tricia, thank you. Shikha, hello.

Shikha Bhuchar

Hi.

Michael Dobbins - *Royal Bank of Canada - Chief Strategy & Corporate Development Officer*

So let's start with this. Why don't you tell the group about yourselves and your background so that the group can get familiar with the kind of people we hire to build these ventures.

Shikha Bhuchar

Sure. So my name is Shikha. I'm one of the cofounders of Arrive. My background is in business, I've done my M.B.A. at the Rotman School of Management. And my prior experience is in banking. So I've held roles in strategy, product management and marketing. But most so related to this, I come from a newcomer family, so I'm extremely passionate about solving for this space.

Tricia Jose

And hello, my name is Tricia Jose. I'm the other Co-Founder of Arrive. My background is in technology. So I did my undergrad in computer science. My master's in biomedical engineering. And prior to this, I actually started a FinTech company myself. But like Shikha, I came to Canada when I was 2 years old, so this mission is really near and dear to my heart as well.

Michael Dobbins - *Royal Bank of Canada - Chief Strategy & Corporate Development Officer*

That's great. Now a lot of banks, when I look at their advertising for newcomers, this is just banks, so it'll be something like get a credit card with no credit history required. Why don't you tell us about Arrive and why Arrive is different?

Tricia Jose

Sure, I'll kick this one off. So Arrive is a digital helping hand for newcomers to Canada. And we really want to be there for them from the moment that they are approved to come to Canada and to when they arrive and settle in and beyond.

I'm super excited because we're actually live today. And if you'd like to see a demo, we're more than happy to show it to you at our booth there later this morning. And we want to be there for our newcomers for all their needs, then be a hub for them.

But where we're starting is this problem of information and action overload. Now what I mean by that is that throughout that journey that I described, there's a number of actions and activities a newcomer has to perform and a lot of information they have to digest. And you can imagine with the Internet, it's so overwhelming, not knowing which information is authentic, which information is made for me and which information I even need to pay attention to at any given time.

At least it used to be that way. Through Arrive, we serve up to our users content that is relevant and correct, tailored to them in their unique journey. And so it's the right information at the right time for the right people.

And beyond that, we understand that people really need to speak to an individual. So we offer users on Arrive, the ability to speak to a settlement and employment expert through our leading not-for-profit partner, the Centre for Education & Training.

Shikha Bhuchar

And I'll just add that we're different because we go beyond banking. So what that means is, very early on, Tricia and I, we actually took off our bank hats and put on our newcomer hats to truly understand and emphasize with what newcomers are facing at every point of their journey.

And by bringing newcomers to the table, we learned that there are a number of challenges that go beyond banking. For example, employment, getting back into your desired field of work; or settlement, finding the right place to live.

And so what we found is that these challenges are actually top of mind. And they existed well before that newcomer comes to Canada and well before they're even thinking about banking. And so Arrive is uniquely positioned to provide support in a holistic way to newcomers, starting at pre-arrival.

Michael Dobbins - *Royal Bank of Canada - Chief Strategy & Corporate Development Officer*

That's great. So Shikha and Tricia, can you just tell us, working in venture style, we've built a little bit of a culture of our own. So maybe you could just tell the group what's it's like working in RBC Ventures.

Shikha Bhuchar

Sure. I'll just start off that it's really fun. I'll start with that. We essentially operate as a start-up. So we have our own mini units, particularly, for Tricia and I, we have a team, a very small, lean team. We're very mighty. We play multiple roles, play -- wear different hats every day. And it's very quite different than work -- traditional work environment.

Tricia Jose

And what we really love about our jobs, and trust us, we really do love what we do, it's because when you're building from the ground up, you're forced to have a laser-focus on your end user. Our users dictate every aspect of our business, and it's what pushes us to build something that we believe is really meaningful, impactful and differentiated.

Michael Dobbins - *Royal Bank of Canada - Chief Strategy & Corporate Development Officer*

That's great. And last question, either of you can answer, but what is your ambition for Arrive?

Shikha Bhuchar

Sure. So we hope to be the #1 platform for all newcomers coming to Canada. And so we'd like to be a part of that newcomer's life before they get here and thinking about where they're going to live, once they land, helping them find that job and eventually as they become Canadian citizen. And in doing that, we're confident we're going to earn their banking business.

Tricia Jose

And I think we're uniquely positioned to be able to really solve these problems. We are operating like a start-up, but unlike others start-ups in this space, we have the scale, the reach, the resources of RBC behind us. But building Arrive outside of the traditional retail banking, we're actually able to solve those beyond banking problems. And we're confident that we'll be able to reach a 100% of all newcomers to Canada because our goal really is for all people who choose to make this beautiful country home, like our families did many years ago, and I'm sure many of yours. We want them to just feel like they truly are home through Arrive.

Michael Dobbins - *Royal Bank of Canada - Chief Strategy & Corporate Development Officer*

Nice job guys. Thank you.

Tricia Jose

Thank you.

Michael Dobbins - *Royal Bank of Canada - Chief Strategy & Corporate Development Officer*

So little bit of a scorecard. We've been quite busy. We have 7 ventures that are live in the market. During the break, you'll be able to see them at the RBC Ventures booth. They are all early days, but we are seeing very, very good customer feedback and very good early signs of growth. We have 12 ventures that are under development, so we have a lot of Imagineers like Tricia and Shikha.

We've also made a number of strategic investments and have built a number of strategic partnerships. And I want to pause on this because this is actually quite important. We view early on and building ventures, that if you're going to build lots of things, you needed a tool kit with lots of tools. And that includes capabilities from other tech companies that you may need to integrate, it includes corporate partnerships that you may want to work with. And so we have amassed a number of them. It is a privileged asset, but it is quite important. And as you can imagine, it's not infinite, right? You have to have the right people that you can work and collaborate with to build these.

We also made one acquisition, it's probably important to note that all of the ventures that we've built to date, with the exception of the one acquisition, are all organic. A lot of people wonder if these are investments. These are just us hiring smart and creative people and putting them on teams and allowing them to do what they do: to come up with great areas, to build great ideas and run great areas.

Now in the spirit of just kind of this partnerships, I wanted to show you -- I know this is a busy slide, but I'd say partners are going to fall into 3 categories. The first category is capability.

This is an image of DRIVE at the bottom left to your screen, two capabilities are called out. One is called Your Mechanic, it's an investment that we made. It will be live shortly. It's through DRIVE we'll allow you to have a mechanic come to your home or office for up to 200 basic services, a pretty cool feature. The other one is a company called Tire Butler. For all of you that are Canadian, you know it gets cold here, you do have to change your tires. And to have a nice company like Tire Butler come to your house and do it is a nice add. Those are 2 exclusive partnerships of RBC. And they are there to support DRIVE. So that's using partners as capabilities. As far as distribution, Neil talked about the relationship we have with WestJet and Petro-Canada, which are great examples. This is an example of a fast growth tech company with about 1 million users called Carrot Rewards. We do a little bit of business with Carrot. They -- 1 million users, they've gotten there pretty quickly, and they're about physical fitness. So we found a nice symmetry with financial fitness that may help promote our product, Finfit, for us. And so they're a large part of the 50,000 people that are on our list for Finfit. So there's a lot of ways you can collaborate. And then lastly, is just the expression of value, which again, Neil talked about as it relates to Petro which is, if 2 organizations can come together, we are not seeking each other's clients in the open market, but rather you can come together and create customized propositions, then there is more value to put on the table for the customer increasing the overall value of the venture or the idea.

Now I know this is an Investor Day. So you're probably looking for some numbers. So I'm going to give you 2. The first is my ambition. And my ambition, not just mine, my team's ambition, is to be able to build a relationship with everybody in Canada. That's a long-term ambition. But we've built 7 ventures that we feel quite good about. We've 12 others that are very exciting, which you'll see coming soon. And we'll keep hiring imagineers and building things that we think will make a difference in clients lives. From a math perspective, we've committed to Neil and Doug to deliver 5 million venture users over the next several years and then to actively convert 500,000 or 10% to either new bank customers or deeper bank relationships. And Rod will kind of help sum all this up at the end. And the last slide that I want to touch on is really what I think is most important slide of the day, which is, it is all one strategy. And Dave talked about this in the beginning. And this slide is intended to depict the choreography that goes on to do this, to run a very large bank, a large wealth business, to have this ventures business running on the side. They are all there for the same purpose, which is to grow more clients, to provide more value for them.

In some cases, ventures will feed the top of the funnel for things like our business bank. In other cases, the bank may feed a venture because in the automotive space, we probably already have customers that have 4 million of those cars. And it is that choreography and that collaboration that allows us as a leadership team to execute confidently and move forward on all of these things simultaneously. Now one last responsibility while I'm on stage, which is to ask our CEO, Dave McKay, to come back on stage to speak to this next segment, which is appropriately titled, the power of partnerships. And so with that, I invite Dave back to the stage.

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

So thanks, Mike. You heard this exciting new opportunity to increase the funnel, to move up and reimagine the role we can play and connect with up to 5 million new Canadians that, as we talked about before, who have been inert in the past, have been very difficult to reach through traditional or even digital channels, but to connect with them and to build relationships and to create value and then to offer them our financial services, I think, is a completely new way of acquiring a customer and a very exciting and you got a flavor for some of the ventures.

So the last part of our growth story, as Mike talked about, is partnerships. So there are other like-minded institutions, retailers, airlines who're thinking very similar to we are that we have to lever our client base, we have to partner with other organizations to connect with clients to offer what they think is their differentiated value proposition. We are all in the same boat together, we're trying to connect with Canadians and trying to reimagine our businesses. So partnerships is a very important part of our growth story. So in addition to the 5 million net new Canadians that we're going to connect with through ventures, we think there is a multimillion opportunity to connect with new Canadians through partners. So I'm going to queue a video, then I'm going to invite some very special guests on stage.

(presentation)

Dave Mun - *Royal Bank of Canada - SVP & Head*

Let's get the chairs up here. So it gives me great pleasure. And I think this might be a first in the Canadian Investor Days, but to welcome 3 distinguished CEOs, Kris Smith, EVP of Downstream at Suncor; Heather Reisman, CEO of Indigo Books; and Ed Sims, CEO of WestJet, on stage to have a dialogue about the power of partnership in the future. Let's welcome.

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

So we also firmly believe in the power of partnership. But Kris, we're going to start with you and talk a little bit about our existing partnership before we get to kind of the future. Our linked-loyalty card is already attracting 500,000 net new link cards. Talk a little bit about what it means to Petro-Canada, and why you're excited about it?

Kris Smith - *Suncor Energy Inc. - EVP of Downstream*

Yes. Sure, thanks. And Dave, thanks a lot for inviting us today. It's great to have this opportunity. It's a bit rare, it is a rare opportunity. And we're excited about the partnership and to get the opportunity to talk about it, even just briefly. If I go back just for a moment, Suncor, we're Canada's largest integrated energy company from crude oil all the way to the customer at the pump. And our partnership is at the customer level with RBC. And our network, our Petro-Canada business, we're the largest branded retail network across the country by share of market, by sites. And we also have the largest royalty program in the company in our space. We've over -- almost 5 million Canadians are part of the Petro-Points partnership brand. And the traditional way of partnering with financial institutions...

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

(inaudible) 5 million?

Kris Smith - *Suncor Energy Inc. - EVP of Downstream*

5 million. Well, wait before I get to your number. And when you think about the traditional way that financial institutions partner with retail gasoline stations, it's actually been quite linear. It's been co-branded card. It's been very one-dimensional in how loyalty and partnership has worked. And we wanted to do something different. Because as a company, we like to think in an integrated way all the way to the customer. We want to drive innovation. And there's a big technology story here. And we found a partnership with you and your team that really unlocked a different way of thinking about loyalty and how to connect with the customer. And instead of partnering on a co-branded card, which has a very narrow way of approaching the market, it's a few thousand customers usually, instead we unlocked the power of your 12 million customers. There's the number I was going to bring together with our 5 million loyalty members, and we do a 1 million transactions a day at the pump across the country. This is a novel partnership. It has not been done before in the Canadian retail space. As a matter of fact, globally, this type of partnership is quite unique and bringing value to customers, not only in cents per liter off, making it technology -- the technology work, so it's easier to actually make the transaction at the pump and also leverage both loyalty platforms. And so the value for our customers is quite apparent for them. We've been really excited about -- we've been about 8 months now into the partnership. We've been really excited about the results we've been seeing. We have over 0.5 million customers who've linked Petro-Points with the RBC rewards program. And that doesn't include the other 11.5 million who even though we're trying to get them out to link those programs, still enjoy benefits that come to our site. And so anyway, we're really clear about the partnership. And it's a different way of thinking about loyalty and about how 2 companies -- and the other thing that I'm really excited about is we've got great Canadian companies sitting up here. And I think when you get great Canadian companies working together who have scale across the country and the amount of Canadians that we touch each and every day, we can think about value a lot differently. So it's been very exciting.

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

And we're just -- that's beginning. And creating that always on, you heard Mike say, trying to be always on with the customers a little bit like back to the future. We're always on with the customer because they used to walk into our branches and cash checks and make deposits. Being always on in other ways is so important to both our brands. So really excited about where we are on the -- just -- I'd say just scratching the surface of the opportunity. So Heather, I have always -- I say around North America, you're one of the great retail innovators in the world, much less in Canada. When you walk into your new concept stores, I tell people from Hollywood to New York, you got to see Heather's stores. She is reinventing what it means to be a retailer. We've had some great experiences as early partners. Why don't you give the group an idea of what we've worked on so far?

Heather M. Reisman - *Indigo Books & Music Inc. - Founder, Chairman & CEO*

Sure. And I have to echo Kris' comments, Dave. And in front of this whole group, have this opportunity to say, personally, it's just been incredible for our organization to work with yours. In Indigo, relatively speaking a little tiny company. Right? We'll do $1.2 billion this year. Very tiny compared to the bank, although we have 8 million loyalty members. So let's set the bar.

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

She's setting the bar, and I like it.

Heather M. Reisman - *Indigo Books & Music Inc. - Founder, Chairman & CEO*

But it is just been fantastic to work together. And it doesn't feel like we're working with this big behemoth. And I think it's because of the value -- the personal -- the value connections of the people. And our team is thrilled at the opportunity to work with Royal Bank through Mike and his team. And I think the connection is because we are both very, and I suspect this is for all of us, really focused today on how do you legitimately create value for end consumers that we serve, so that's number one. And we share this. Indigo's tag line that motivates everything we do is, enrich your life. We are in business to enrich the lives of our customers just a little bit every time they interact with us, which is very specifically what the Royal Bank is trying to do. I think it's funny that the tagline is enrich because no doubt people think of that at the bank.

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

Reading the enrichment.

Heather M. Reisman - *Indigo Books & Music Inc. - Founder, Chairman & CEO*

So what exactly -- but what's really come together is that we interact very specifically at critical moments in customers' lives. I would say when they're getting married, when they're having a baby, when they're trying to inspire their kids, whether it's around reading or stammer, right, whether it's around a gifting occasion, at life moments. And so does the bank, interact around life moments. And what we see happening is that by working together, we can make these life moments actually meaningful for people sharing back and forth what our customers want and then advantages both ways. Now we'll say the part of the partnership that is most exciting to me, and I get to announce it this morning, some of you may know that since I started Indigo, I do something called Heather's Picks, which I take very seriously, and I do read those. We're going to launch...

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

Maybe read all those books?

Heather M. Reisman - *Indigo Books & Music Inc. - Founder, Chairman & CEO*

And we are going to launch -- I'm really excited about this, we're going to launch as part of this combined program, Dave's Picks.

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

I guess, I'm reading the book.

Heather M. Reisman - *Indigo Books & Music Inc. - Founder, Chairman & CEO*

And they're all real subjects. I mean, we have a whole segment of people who really want to know was, what does one of the great CEOs in this country, what do you read, what do you think about, how do you get inspired, how do you unplug. Those are big topics for people today.

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

Does the Bank of Canada quarterly monitor report count?

Heather M. Reisman - *Indigo Books & Music Inc. - Founder, Chairman & CEO*

So we're working together. The idea is how do we enhance it and get some value.

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

I'm looking forward to. I love to read. I have a wide range of interest. So you're going to keep me on my toes.

Heather M. Reisman - *Indigo Books & Music Inc. - Founder, Chairman & CEO*

Exactly. It will be fun.

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

Look forward to that partnership. And thank you. That's -- it's a real honor. So I read your Heather's Picks all the time. I'm reading Shoe Dog now.

Heather M. Reisman - *Indigo Books & Music Inc. - Founder, Chairman & CEO*

Fantastic, right?

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

Heather's Pick, yes. Really great book, that's the Nike story. Phil Knight.

Heather M. Reisman - *Indigo Books & Music Inc. - Founder, Chairman & CEO*

Phil Knight.

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

Yes. So Ed, we've had a wonderful co-brand relationship dating back many years now. I remember making the first pitch in 2003, and I was unsuccessful to WestJet in the previous leadership team. But this card has done exceptionally well. I think from a value proposition has been #1. Can you give the group a little bit of idea of what we worked on and why we're so proud of our co-brand relationship?

Edward Sims - *WestJet Airlines Ltd. - President, CEO & Non-Independent Director*

Yes. Sure, Dave. And I'll just pick up on something Kris said. I love the idea of 3 dynamic Canadian organizations working with the largest Canadian bank. I'm from a little island just of the west of British Columbia called New Zealand, but I'm still very passionate about representing the most Canadian, Canadian airline. And I think the crux of our partnership with RBC is having it work at multilevels. So work to the brand level, so the Brand Financial 2018 study stated RBC -- or evaluated RBC as the most valuable brand in Canada. And WestJet is the strongest brand. So you have to have that brand synergy that there are mutual strengths and complementarity. But there also have to be the transactional strengths at every level of the organization. My in-flight staff will announce on every flight that the -- our joint property, our World Elite card is a powerful property and a growing property. So the growth of the RBC Mastercard is growing at a stellar rate. It's growing around 22% a month. It's around a 30% CAGR rate over the last 5 years. So it's working at a transactional level as well as working at the brand level. And it's something that -- I have 13,000 staff. Every single one of those staff will carry the card and buy into the proposition. It has to work at the grassroots level up as well as at the top level down. And I think, we've been selected for best travel card in Canada for the last 3 years, which is an astonishing track record. But we also have to project doubt. And it's wonderful looking around the room, looking the degree of future protection that you are seeing in the room. Ours is a very capital-intensive business. I'm looking at the life of capital assets now over the next 30 years. So we have to be thinking of partnerships with that kind of longevity as well, whether that's our airline partners. We are a global international operation. We're taking delivery of 10 787 Dreamliners from next year, which means that we can't just think about taking Canadians to the world. We have to think about bringing the world to Canada. And we can do that in conjunction with yourself, in conjunction with our airline partners, but on a 20- to 30- year basis, not a short-term pure transactional basis.

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

So it fits with your long term -- and I love those planes, I love flying on 787s. So congratulations. I'm look forward to that addition to your fleet. But the partnership, as you said, building that #1 card has been part of the growth story that you heard Sean and Neil talk about on the card side. And it gives them the disruption that you all know that's happening in the overall loyalty travel space. Travel is still a huge -- the single largest component of (inaudible) and loyalty programs in Canada. So great opportunity for all of us.

Edward Sims - *WestJet Airlines Ltd. - President, CEO & Non-Independent Director*

Thanks for that.

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

Kind of foreshadow my next question, perhaps to Kris. You talked a little bit about where partnerships are going? And how important they are to building platform or franchise capabilities? I'll ask both you and Heather the same questions. You'll go first, Kris?

Kris Smith - *Suncor Energy Inc. - EVP of Downstream*

So -- and you talked earlier, Dave, about just scratching of the surface. And I think that's exactly the way to think about this. And as matter of fact, as Heather and Ed and I were spending some time talking before we came upon the stage and just seeing where technology is going, how we interact with customers, what customer value propositions look like and how value chains are collapsing and how we can bring more value to customers and use technology in a way that's very different. And Suncor is a company where -- I know you've spent a lot of time thinking about digital and thinking about technology and how you can leverage that for the customer experience. And that's happening in every industry. And we're talking earlier my industry is doing that, whether it's autonomous haul trucks in our minds, whether it's integrated operation centers, whether it's data analytics for maintenance. We're also in our end-user customer space, mobile payment, one-to-one marketing, thinking about how we leverage technology to make it easier, faster and bring value to customers. Blockchain is a big topic that you know lot more than I do about. And so thinking...

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

You probably know that.

Kris Smith - *Suncor Energy Inc. - EVP of Downstream*

And so these -- as we think about the future, the exciting part about this partnership and I understand you're going to have some things that people can interact with here later today. The exciting thing about the partnership and the thing that we really value with RBC is the technology forward innovation focus and the investment in the future and how we leverage technology in a different way, and reimagining what the future of business and retail in our sense looks like. And I think that's the power of this. And just to pick up on one thing Ed said was longevity. Thinking in terms of longevity of partnerships as well and not making partnerships transactional, but how you work together in a way that's actually going to build value and build on brand. I think brand is the other piece that's very important. And so that's the way we're excited about the partnership with RBC because we're -- I think we're very like-minded in those spaces and looking forward to working together for many years and kind of working through each of the basis. Things are going to look very different 5 to 10 years from now than they look today.

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

Yes, Heather?

Heather M. Reisman - *Indigo Books & Music Inc. - Founder, Chairman & CEO*

Yes. I totally echo those comments. Look, basically, business is intensely competitive. I think it doesn't matter what industry you're in, business is intensely competitive for customers and for employees for the best talent, technological talent, marketing talent, operational talent, supply chain talent, any talent, highly competitive, which means there's huge pressure. There's pressure on the margins in business, and there is pressure on the cost of business. And so there's no choice, I think, and why we're so respectful of this, there's no choice but to find partnerships and create leverage where 1 and 1 can add up to 4 at a lower cost to the organizations and at a higher value to customers. That's the fundamental issue. And why -- it's just so exciting that the Royal Bank would take this initiative and spur this kind of dialogue. I know it's going to be hugely valuable. Even this morning, just bringing us together, Dave, we were...

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

That's quite a bit of an agreement of the figure...

Heather M. Reisman - *Indigo Books & Music Inc. - Founder, Chairman & CEO*

Exactly. But I think that's the fundamental issue, right? That there's huge competition for resources and for customers. It places pressure on economics. You've got to find ways to change the value chain. You just have to. So...

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

And I think your -- and it is so great to hear you say that because as we look inside our borders, the platforms are almost all foreign-owned.

Heather M. Reisman - *Indigo Books & Music Inc. - Founder, Chairman & CEO*

Exactly.

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

And they're collecting more information and more insight on Canadians than Canadian firms are. So it's an imperative that we kind of band together as Canadian firms with insight into Canadians to take control of our future. And I think that's for all of us, I think, creating value, creating connectivity, connecting with Canadians as a team with shared philosophy around what we're trying to do, I think, is so important. So I think that's -- it's hard to find partners that share that spirit. You think it's easy, it's all about economics, but cultural fit and ambition play a huge role in sustaining a partnership. So I think it's so exciting what we've heard. And last point, we have a bit of an announcement to make.

Edward Sims - *WestJet Airlines Ltd. - President, CEO & Non-Independent Director*

We do, Dave. First of all, I want to announce something that not even Heather is aware of, that I'm going to take Dave's Picks and put it as digital content onboard WestJet aircraft.

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

Well, there you go.

Heather M. Reisman - *Indigo Books & Music Inc. - Founder, Chairman & CEO*

Could we discuss that possibility of physical -- can we just talk about being such a (inaudible) physical

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Edward Sims - *WestJet Airlines Ltd. - President, CEO & Non-Independent Director*

I'm just thinking in terms of an announcement of a joint product. When we think about competition, it's extraordinary now. We look at the world of oil and gas, we look at the world of book retail that Heather is seeing, we look at my world, we've actually got the same competitive set. We're actually competing with Amazon and Google.

Heather M. Reisman - *Indigo Books & Music Inc. - Founder, Chairman & CEO*

Exactly.

Edward Sims - *WestJet Airlines Ltd. - President, CEO & Non-Independent Director*

I don't worry about what's happening in Montreal, I worry about Google from a competitive mindset. So that's what we're looking to build. So this morning, I want to announce -- I'm the newest in my position of any of the 4 of us out in this panel. I'm actually on my 99th day. Now by the 100th day, typically you're supposed to have delivered something. So I actually delivered this morning.

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

We had to move the event up.

Edward Sims - *WestJet Airlines Ltd. - President, CEO & Non-Independent Director*

It's true. If it had been Friday, it would have been a disaster. But I really want to announce that RBC and WestJet have been working for many, many months on the next generation of our RBC World Elite card. And we're announcing a scheme this morning called Ampli, which is going to be a frictionless mobile digital platform for seamless transaction between the 2 organizations. People can earn through RBC. They can redeem on WestJet and vice versa. And we're going to create this digital platform that will allow for multiple retail interactions through that platform. It will allow for Kris to operate through -- a scheme through that. It will allow Heather to operate. It will allow for other retailer or other manufacturing service providers to operate through a single seamless platform. One of the key features, I think, of the WestJet rewards scheme has always been total transparency. It's a frictionless scheme. It's based on spend. It's completely transparent in terms of spend of dollar for point. It has no blackouts, no overbookings. And that's the sort of transparency that we want to now create a platform that isn't owned by an intermediary, it's owned effectively by the founder partners and gives opportunity for great Canadian icons as we have up on stage here to interact on one completely frictionless mobile scheme. So we anticipate this will go live towards the end of the year. And frankly, I think in a highly volatile space in the world of travel-based redemption, this is going to revolutionize the whole world.

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

Yes, I agree. I mean, when you think about bringing Canadians together and creating value for Canadians trust between partners is really critical. And no one wants to create another internal kind of foreign-based platform that controls all the data. So having the ability to work as a consortium and as a group towards the benefit of all and having a physical platform to do that as we thought was very important. So hence, the kind of the creation of Ampli and our partnership to launch this. And again, as we're going to welcome the team here and our announcement of a number of new partners to that platform, so -- as we work out data security and trust. So I think that is really exciting component of what we're doing. So hopefully, you got a feel for how partnerships work, how they must be a cultural fit, the ambitions of each organization, there has to be real value creation and there has to be scale. How do you say you're small, about 8 million connections to Canadians is huge. There's not many programs in Canada that have 8 million connections. So I think as we bring, even the power on this stage, the connections that Canadians in itself can drive a differentiated outcome for all our firms. And that's why we're so excited. And that's why we thought we wanted to kind of finish this with an exciting announcement and 3 great leaders and great partners. So thank you. Thank you for taking the time out today.

Kris Smith - *Suncor Energy Inc. - EVP of Downstream*

Thank you very much.

Edward Sims - *WestJet Airlines Ltd. - President, CEO & Non-Independent Director*

Thank you very much.

Dave Mun - *Royal Bank of Canada - SVP & Head*

So one last piece that you probably all ready for is, what's the financial impact of all of this. So I'm going to welcome our CFO, Rod Bolger, on stage to kind of put together the financial plan and the financial outcomes and talk about our balance sheet a little bit. Rod, over to you.

Rod Bolger - *Royal Bank of Canada - CFO*

Thank you, Dave, and good morning, everyone. And you've heard a lot about our strategies and our enhanced and advanced business models. And it's my job today to pull all together and hopefully give you a number of proof points. One word that comes to mind to me sitting through all this today, as you have, is bold. Now Dave is a bold leader. You've seen a lot of bold leaders, both newer leaders to RBC and established leaders at RBC. And if I was truly a bold CFO, I would throw out my slide presentation, throw out my prepared remarks and just say close your eyes, look around here, you get all this technology, this brand, this customer growth, you get these high returns, this great history, the disciplined risk for 11 or 12x earnings, are you kidding me? But I'm not that bold, so I'm not going to do that. And I'm going to make you suffer through my PowerPoint presentation.

As we look out over our recent history, we've delivered consistent growth over the 6.5 years shown. And in fact, we've delivered 9% EPS growth when our medium-term objective is 7.5% growth. And this period included the oil and gas downturn. And I like to look at things over a shorter period of time, a medium period of time and a longer period of time because I think consistency is one of the hallmarks of RBC. So let's look back more recently. We bought City National 2.5 years ago. So we've about 6 quarters with City National in both comparables. And over those 6 quarters, we've delivered 5 quarters of over 10% EPS growth, 1 quarter at 8% EPS growth, I'm adjusting out onetime gains, for almost 13% EPS growth over that time frame. That compares with the 9% shown here for the 6.5 years. That's all well and good. We've had a good run recently. The economy has been quite good. What about if we go over a longer time frame? Not only oil and gas downturn, but also the global financial crisis. What if we go back 15 years? Then our returns are 9% from an EPS growth and 11% from a dividend per share growth.

Now we've enjoyed this sustained earnings growth with consistent shareholder returns both on an absolute basis, as you can see on the left side, and a relative basis, as you can see on the right side. And this consistently strong performance has been driven by solid client growth in the past, and it's going to accelerate market share growth, expense control, which has been disciplined and prudent risk and capital management.

And we've also consistently delivered strong double-digit book value per share growth, both on a tangible and absolute basis. And we believe that driving sustained tangible book value growth and book value per share growth is essential for long-term return to our shareholders. And also recall that during the financial crisis, we did not cut our dividend. In fact, we've paid out $35 billion of dividends over the last 10 years.

Now we've been able to achieve this strong track record of earnings growth, while maintaining a very disciplined risk position. And you've heard a lot about our investment in technology and a lot of that is for client growth. But what we've also done is invested in technology for risk and credit. And this will benefit us with lower PCL in the coming periods, as we make better credit adjudication decisions. And should we have a downturn, we'd expect that benefit to only increase.

Now the bottom half of this page also demonstrates our declining earnings volatility. And that is lower than the market average, and this is by design. We have intentionally shifted our risk on our capital away from trading book into relationship client businesses. And you can see that in the lower right with lower value of risk as well as lower market risk, risk-weighted assets.

Now I'd like to spend a minute on our strong diversification. We're spending most of today covering about 70% of our businesses, and I want to touch just briefly on the other 30%. But first, let's start with Canada. Now 5 years ago, everyone was expecting Canada has slower growth than many of the global economies. And yes, we have faced lowering interest rates, which has put headwinds on our revenue growth. Yet, the Canadian economy has remained strong, and we've delivered 8% earnings growth over that time frame. And now we have the benefit of higher interest rates. And we also had the benefit of continued strong immigration into Canada, those newcomers we've been talking about, which will help the economy going forward.

Let's turn to international. 17% earnings growth. There's 2 primary drivers here. One, we simplified our business model, taking out risk and complexity, but we've also invested for growth. Two proof points come to mind. One is our Capital Markets business which, as Dave mentioned earlier, has industry-leading returns in many markets. Europe comes to mind where we have double-digit ROE. Also our Investor & Treasury Services business where we are investing and gaining market share in Europe and Australia.

And now we move to the U.S., where we've had 16% earnings growth, a mid-teens revenue growth. You're all are well aware of the City National story, but we've also grown our U.S. Wealth Management and our U.S. Capital Markets business, double-digit earnings growth over the last 5 years.

And so as we get ready to celebrate our 150th anniversary next year, our businesses continue to evolve. And I would expect a higher proportion of our earnings to shift towards Wealth Management as a segment and the U.S. as a geography.

Now we do remain laser focused on costs, especially in operations and middle and back office. There's a number of proof points on this slide. You can see we've kept our Canadian Banking operations flat, while growing revenue in double digits. And we've also made important decisions to streamline businesses that weren't generating the returns that we are expecting. We've actually reduced our footprint and simplified the business for Wealth Management International. We sold off our home and auto manufacturing business for insurance. And as you can see in the lower right, we've significantly improved the efficiency ratios in Investor & Treasury Services since buying out the joint venture partner in 2012 as well as our Caribbean banking business.

And so while we've been cutting costs throughout the organization, we have also determined that we needed to invest for the future. And we had been doing so. So you've heard from Mike on our investments in RBC Ventures. And this is going to help us, again, bringing Canadians with elements that they need, bring them into our business and help us achieve premium market share growth and premium volume growth and add new clients.

And we continued to invest in areas with 3 primary focuses: One, better serve our clients; two, drive operational efficiency; and three, reduce risk. And you can see the proof point that Bruce mentioned, 25% CAGR on digital app dev. That is going -- that is helping us today better serve our clients and grow market share. We talked a lot about the investments we've made in driving through efficiency. And this is a virtuous cycle for us. So we've been making this investment, this is not new. We've been doing this for the last 3 or 4 years. So we're now getting dividends today. And that's helping us invest today for the future. So it's not a onetime headwind. It's not an excuse for why our earnings haven't shown that consistent growth. And cyber risk, as you heard, is, arguably, the top risk that any company, let alone a bank or RBC faces. And keeping our clients' data safe is paramount to our purpose statement of helping clients thrive. And it's also essential to preserving our strong brand value.

So despite all this increased technology spend and new innovations on client acquisitions, and don't forget about the regulatory headwinds that we faced and had to deal with coming out of the financial crisis, we do continue to drive efficiency across the board. Now many of you have heard me say that we do not manage our efficiency ratio at the top of the house. And this slide shows the math on why that makes sense. Over the last

5 years, we've driven down our efficiency ratio in all 5 of our businesses, driving positive operating leverage. And yet at the top of the house, that went up. And we're okay with that. Another key proof point on here is that operating leverage scales the revenue growth. Yes, costs are essential and we manage those, but there also - it also scales the revenue growth. And you can see the huge correlation between the segments, efficiency ratio improvement to the 5-year CAGR on the revenue growth.

And I mentioned earlier, we're expecting Wealth Management to increasingly become a higher portion of our earnings, and given the higher efficiency ratio there with the compensation structure in those businesses, we would expect there to be upward pressure on the overall top of the house efficiency ratio, all while we're committed to continuing to drive down the efficiency ratio in all 5 segments.

So I mentioned a well-diversified business mix. And Dave mentioned earlier that one of our core strategies is driving premium returns for our shareholders. And so you can see that both our return on equity and our return on tangible common equity are industry leading. There's multiple reasons why this is the case. First of all, we have a strong market position across and market-leading position across most of our businesses, especially here in Canada, as you've heard today. Second, we have a fierce focus on strong capital management. And additionally, most of our growth has come organically one client at a time. And our use of acquisitions has been quite limited. Now you can see by adding the yellow dot for Wealth Management that we will make acquisitions if they make sense strategically, operationally and financially. And of course, there has to be a strong cultural fit as there was with City National. And don't forget that a recent buyback activity has added over a 100 basis points to return on equity recently.

So in Q2, our top decile return on equity of 18.1% likely would have been in the high 16s had it not been for our buyback activity. And of course, returning capital to our shareholders is a core element of our capital deployment strategy. And over the last 3 years, we've returned $20 billion to shareholders, with a 60% payout ratio in terms of both dividends and buybacks. And this strong ROE and prudent capital management puts RBC in a position of strength. And we're holding the dividend payout ratio of 45% because when you combine that again with our prudent risk management as well as our fortress balance sheet, when the next recession comes, our strategy is to retain the dividend and not paying that.

I'll spend a moment on our strong core deposit franchise both in the U.S. and in Canada. And this helps us keep funding costs at an industry low level. And after 10 years of headwinds, we're finally starting to see the benefits of the higher interest rate environment. And what we've modeled here is simply taking in the interest rate increases that have happened to date in Canada and the U.S. and modeling in 2 of the 3 that the market is forecasting by the middle of next year. And you can see, 2 key points. One is almost $2 billion of additional revenue. And two, most of that has already taken place with the interest rate increases that have happened.

And please bear in mind that should mortgage volume slow in Canada, this well more than offsets any impact from that. So since our last Canadian Banking Investor Day 8 years ago, we've improved our efficiency ratio 400 basis points. And I won't mention the interest rates again. And yet, we've also, through the execution that Neil mentioned and the team have delivered, we've doubled earnings over that time frame, which is an earnings CAGR of double digits, 10%, in that environment.

And you may recall that our commitment at that Investor Day in 2010 was to take our then efficiency ratio in the high 40s and bring it to the low 40s. And we also said we would grow at a premium to market in terms of volumes. And we achieved both of those. And while we're certainly happy with our past performance, we do want to raise the bar and set additional stretch goals for us, so that we can deliver that continued shareholder return.

And that's why Neil outlined the 2 million new customers from organic measures, Mike mentioned the 500,000 new customers from ventures, the new banking customers. He mentioned that's conservative, I think it's conservative. So we're going to get that figure higher. You also heard about the additional cross-sell opportunities that we had between Neil and Doug and bringing more of the bankers One RBC to our clients.

And so we've driven the efficiency down, again with higher -- with lower interest rates. And now we expect it to improve even further. We also recognize we might be in the late innings of this economic recovery. And so given that, recall that we will scale operating leverage to our revenue growth and we're also in a much stronger position than our competitors in terms of scaling investment as well as our cost base, if that downturn happens. And so with client growth, the economic headwinds that we have today and the efficiencies that we're going to drive, we expect to drive our efficiency ratio below 40% in the next couple of years.

Now 2 years ago, we had an Investor Day for City National and we outlined our aggressive growth targets there in terms of earnings. And I'm happy to say that we're on track to meet those. In fact, we're ahead of schedule, but we also then anticipate U.S. tax reform. So even without the tax reform, we'd be ahead of schedule. And when you shift to our non-U. S. Wealth Management businesses that Doug outlined, we have been able to drive down our efficiency ratio. We haven't disclosed this previously, but it was about 73.5% a few years ago, then 69%. And we expect to continue to drive it down with those industry-leading positions that Doug outlined as well as the technology enablement that we have and the new solutions we're delivering to our clients and to our advisers. And as I mentioned, we expect to extend that leadership position across Canada and drive the efficiency ratio down into the low 60s from the 73.5% level that it was just a few years ago. And we will be providing additional disclosure, I'm sure you'd like to hear that, so you can get a bigger report each quarter. We'll drive additional disclosure, so you can track our progress against these objectives going forward.

So in closing, we've had a great history of exceeding our financial objectives, and we're prepared to not only meet but exceed them going forward in any economic environment. And as you've heard from all of our speakers today, we have differentiated model, strengths and scale. So I hope you take away a few key things. One, in the last 3 years, we have invested heavily in technology for our clients and in new talent. And that puts us in a good space for continued growth. And now we have a lot of momentum to both improve revenue as we grow premium client growth as well as efficiency. And finally, we believe we have the right focus on what matters to Canadians most to continue to drive shareholder value and client value.

And with that, I'll turn it back to Dave.

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

Thanks, Rod. So we've thrown a lot at you. We started about 3 hours ago saying how does a market leader -- the market leader grow, how does the market leader thrive in this new world. I think you've seen from the privileged assets that we talked about, the investment in those privileged assets, the loyalty programs, the scale that we have to continue to build the client scale, the data scale, the technology capability, AI capability. But on top of that, our ventures in moving ahead and reimagine the role that we can play in clients' lives, attracting and connecting with 5 million new Canadians through those platforms alone that we struggled to connect with. We struggled to reach them through traditional and nontraditional advertising channels. We struggled to get them to try our product, even though we're #1 in J.D. Power and mobile, #1 in branch, the best people, we've the best platform, we've the best value. Clients have told us that. Experts tell us that. But we couldn't create the trail. I hope you see through today's discussion, today's presentations that we can create that trail through partnerships, through ventures, through new channels, MyAdvisor and others, through new value propositions and reconnecting. This is a new world. This is a secular change.

And finally, the platform, the RBC platform that we've invested so heavily in, we think we can unlock and lever in the future. And we've seen the growth trajectories. Now it's great to have a tough CEO that keeps everyone honest, and we've already raised the bar in this meeting.

So that's the proposition that this is a unique secular opportunity to grow through our existing channels, to lever those platforms, to create a new funnel of client attraction. And when we get them in and we get them inside this incredible franchise, we keep them, we nurture them, we grow them. And that is what we think is so different and why you can feel the excitement, and why it's everything from AI to technology to partnerships is intertwined across all our businesses. Every leader who I've spoken with, they talked about the integration. It's deeply embedded in our DNA. You heard a partner saying partnerships are deeply embedded in RBC's DNA. I can feel it. That's a differentiating factor. And allowing to -- us to get to know clients, to discover clients helps us manage risk at the end of the day. And that -- we're not getting adverse selection, that we're building relationships, and we're partnering with clients that fit our risk profile. We can get ahead of that curve. So this is a new business model. This is a model that's designed to capture the secular change in our society, and we are incredibly excited about this.

So I'll stop there. We're going to bring up Group Executive that just presented in addition to Helena Gottschling, our Head of HR, because talent is so important to everything we do, and you're going to see the talent in this room as you -- we open up the booths in a minute. But we're going to take your questions for, I think, Dave, roughly 0.5 hours or so. We're running a bit over time. So let's bring the chairs on stage. Let's invite our Group Executive up, and we will take any questions that you have.

QUESTIONS AND ANSWERS

Dave Mun - *Royal Bank of Canada - SVP & Head*

Okay. So I'll open it up for Q&A, and I think we got Rod right here. We have a microphone that's going around.

Unidentified Participant

A lot of talk about rewards today. I'm just wondering if that the planning scenario at this time is for a static interchange ecosystem throughout the next 5 or 10 years. And maybe more importantly, considering the themes of the day, do you think you would benefit if it really dramatically changed because other competitors will have to respond more aggressively where your scale might allow you to offer a better -- a still better competitive rewards program relative to those competitors?

Neil McLaughlin - *Royal Bank of Canada - Group Head of Personal & Commercial Banking*

Yes. Really good question, and I tried to address some of that when I talked about how RBC Rewards is different. So at this point, interchange is something that we have thought about. And when we look at our propriety program, this idea that we manage the economics that there's no renewal risk, that we're not really tied to a third party for a vast portion of our portfolio, it does give us this strategic flexibility that if we need to do to make some changes. And I would agree in terms of this idea. We don't pay a middleman. There's no margin that we're paying somebody else to run this program. So our cost of point, we don't go out and measure this in the minutiae. But conceptually, you have to take our cost of point is less. We're not -- there's not another private entity that's generating returns. So I think whether it's interchange or it's just competitive dynamics, this idea that we can steer this and we manage it, and frankly, picking up on Dave's point, our clients know how valuable it is. And the idea is to start to get prospects to really understand the value of our clients who're seeing it.

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

I think what I would add to that is that the value of the partnerships you heard on Stage 2 is we use each other's margin to help -- creates a greater efficiency. And there's a limited number of partnerships in the market where you're going to participate with the Petro-Canada to offer cents off for the pump and lever each other's margin, which, again, adds to your scale capability to create value propositions for your clients. So both [deal] -- margin to play within our own program, margin with partnerships, I think, lead to creating more value at the same price point, so it's a strong competitive proposition.

Dave Mun - *Royal Bank of Canada - SVP & Head*

Next question. We have one right here.

Unidentified Participant

You talked a lot about partnerships and just wondering whether you feel like you have the right amount of partnerships. Are you looking for more? And if you think about it, the changing world and changing customer preference, is the real price partnerships with some of these larger players, global players that you referenced, Amazon, Facebook, Google, is that something that's on the radar screen? You had pure Canadian players on stage, but in terms of your outlook for global partners with significant operations in Canada, how do you think about where the partnership story is going and how to win in that?

THOMSON REUTERS

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

Yes, I'll talk high level. And maybe, Mike, you can jump in on ventures and on Ampli a little bit. But certainly, the premise is to create value for Canadian consumers. And if there is a non-Canadian partner that can create value for our customers, whether it is in the venture sector or in Ampli or our own RBC Rewards program, absolutely, we're going to consider. We have partnerships with British Airways. We have partnerships with Cathay Pacific. They have created value for our customers. So as we think about the partnerships of the future, if they can do both create value, but they also have the connectivity. Each of the partners on stage brought a connectivity angle to Canadians. So it's much more powerful if you can create value and add connectivity. I think it's a turbocharger. But I think we'd be open as you'll hear more announcements of partners that will join the Ampli program as we get closer to launch. We want to focus on these 3 partners today. So I think it's both, absolutely, in the context. But one of the goals is to build a counterweight to up some of the non-Canadian platforms, right? So that's the strategy here, is to take control of our own destiny to understand Canadians' needs and to meet them in an efficient manner in a Canadian solution, and I think and not be beholden. Certainly, it doesn't stop you from partnering with another platform, but not be beholden to that platform and to seeing your customer and accessing your customer only through their platform in the future. The whole strategy here is to build your own control mechanism and understand your customer be able to contact directly in a digital world.

Over here.

Dave Mun - *Royal Bank of Canada - SVP & Head*

We have one over here.

Unidentified Participant

Who? Me? Okay.

Dave Mun - *Royal Bank of Canada - SVP & Head*

Yes.

Unidentified Participant

How should we think about the cost of acquiring a new customer in this new digital way through the ventures and partnerships versus the traditional means? And is there an element of that scaling up over time?

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

Yes, great question. Mike, do you want to talk about bringing them in early in the funnel and much lower cost of spend in our customer?

Michael Dobbins - *Royal Bank of Canada - Chief Strategy & Corporate Development Officer*

So I think you will find generally with ventures, the cost of acquiring is going to be significantly lower than a bank customer, and then we'll have the job internally as they become users to convert them over time. From a -- just an economic perspective in ventures in total, those numbers are fully embedded in the numbers that Rod put out and the goals that Neil put out. So we are managing it as an integrated strategy. And so we'll be -- when customers in ventures, let's say, they're basic users of ventures, we'll use rewards and other things to migrate the customer. Each of them will have slightly different connection points back into the bank, and we'll optimize them as we have them out and as they scale and mature, but obviously, all with a goal of introducing them to high value RBC products that makes sense for them.

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

You heard Heather Ireland talked about that on Stage 2. I mean, this is a much higher ROE, a marking investment to be targeted by understanding a customer deeply, what will resonate them, what type of card or what type of mortgage, what price points were on the stage and not wasting effort messaging Canadians who are not ready to receive that message. I mean, those are lot of the learnings. I gave the example, Neil and I worked together on this. I mean, actually, you were in charge of direct mail. The timing of 24 million pieces of mail is a scatter plot strategy, very expensive cost of acquisition, longer payback periods. When you're targeted, you have a deep understanding. It's a much more efficient play to -- for all partners, including ourselves, as we look at our own channels. This is a new world of efficiency. And part of that, we'll -- you'll see in the lower efficiency ratio.

Neil McLaughlin - *Royal Bank of Canada - Group Head of Personal & Commercial Banking*

Yes. I'll just add to that in terms of sort of the new world of connecting with clients. We talked a lot about data and digital. The reality is digital marketing, we gave an example during the presentation. It's things like that where we understand the value proposition that we have to offer and whether it's an acquisition bonus or what it is. But rather than just going out and dropping direct mail and having long periods to test, we can put these out and test what's resonating with clients, what are they seeing as relevant and valuable. And so that testing goes on every single day with our tech stack and our marketing scientist. In that way, we optimize our return, and we actually set very specific targets so we know exactly what our cost per acquisition is and what the value proposition would support. So it's a much more exact science now. And I think on the other side, the client's getting a lot more relevance. They're not having a mailbox full of mail that they weren't interested in.

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

We have the #3 over here.

Sohrab Movahedi - *BMO Capital Markets Equity Research - Analyst*

Is that me? Okay.

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

Yes, Sohrab.

Sohrab Movahedi - *BMO Capital Markets Equity Research - Analyst*

I just wanted to build on that for a second. So you've talked about $2 million, $2.5 million of new customers to be acquired over the...

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

2.5 million people, yes.

Sohrab Movahedi - *BMO Capital Markets Equity Research - Analyst*

2.5 million, yes, people. How do you -- what's the size of the pie there? How -- what's the population growth that you're assuming over there? And how much of that incremental population growth do you see capturing? In other words, I'm trying to get a feel for the market share gain implicit in that, number one. And then, number two, just to build on [Alex] point, how many iPad equivalents do you see and having to hand out to get those incremental customers?

Neil McLaughlin - *Royal Bank of Canada - Group Head of Personal & Commercial Banking*

I'm glad you noticed our campaign. So I mean, we've taken a look at these targets. We haven't put them out there without really taking a step back and looking what's achievable. Part of it, we're starting to see this trajectory as some of these assets we're talking about are taking hold. Yes, we will still do the type of product promotion you're referencing. But it's this idea that there's more -- these inputs into the top of the funnel are -- we can now reach out and access clients we never could before. So right now, we talked about a 2 to 3x lift in the client acquisition. That's where we're sort of ramping up from. We're seeing some of that early. We said we've got a 13% lift in everyday banking accounts already this year. And things like Ampli and the ventures, these actually haven't even started to hit our flow yet. So those are all opportunities still in front of us. We're building up those numbers off of things like the traction we've seen with WestJet, the traction we've seen with Petro-Canada and then how we're using data and digital to connect more. So haven't actually worked backwards from what's the population growth number, more so in terms of what are the assets, what's trajectory and what do we think is possible in terms of the efficiency of a new world where the value props that we have and how strong retail bank is can be more transparent to clients.

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

But here is the new value proposition that we didn't really talk about on stage today, and here is the concept that we can take to in kind of version 2.0. So you invite everyone into Ampli and to your partnerships at a bronze level for free. No requirement. You build the connectivity through ventures there. You get to know them. But then why couldn't there be a silver and gold and platinum level, where each partner puts more value on the table but they must have one financial product to get into silver, they must have a financial product to get into gold, they must have this to get in? It's not different than your concept of multiproduct rebate. So you could build cascading levels of value with your partners that helps bring the customer and you share the burden of incenting the customer through your joint initiatives, a completely different way of helping. Once you connect to that customer, moving them through a value proposition, graduating them based on how much they use within the system and rewarding them. So I think there are other ways and other tools that we're going to have at our disposal now as we think about reinventing through ventures and partnerships how to incent a customer at the right time with the right proposition to buy a financial product. But the difference here is that we're no longer trying to just convince you to buy a financial product to start your relationship with us. That's the game changer. That's where a big chunk of the economics start. That we already have connectivity. We've already created value for. We're building a relationship. We're getting to know you, and we can target you exactly. I mean, that efficiency alone versus trying to find you in the worldwide web, trying to find you on search and outbid our competitors in search, who you choose search Google for that, you have to change the game. And that's how partnerships and this model completely changes game and become a growth story.

Sohrab Movahedi - *BMO Capital Markets Equity Research - Analyst*

But Dave, if I could just have a follow-up to that. I mean, the 10 million or 12 million customers were your customers. They started off as your customers uniquely mapped to Royal Bank. You're now sharing those customers. You're co-branding. The next 5 million, whose customers are those?

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

Well, you heard Ed has 5 million customers. Many of them are unique, not RBC customers. You heard Heather has 8 million loyalty program. 20% of those are RBC. So they -- Mike's 5 million are new relationships to RBC. Through these ventures, through owner, through Finfit, through Butter, through all of these ventures, those are new connections, right? Those are people we can't convince to walk into our branch today who turn us off. Because as soon they see an RBC advertisement, they say, "That's not for me because I'm a customer in another bank. I'm not ready to buy." But by creating that relationship, you bring them into your relationship-fold, and it makes it much easier to understand their needs and find them at the right time with a value proposition. So that's where the new customer growth is coming from, right? Venture is 5 million. Partnerships, a couple of million, leveraging each other's databases with client permission. And that's where value creation is so important. It's a sharing of resources that creates a completely different value proposition and trying to constantly pull the same levers of incentives, price and risk. You have to change the game. It's the game changer.

We have one over here.

Unidentified Participant

These are probably for Neil. Firstly, a couple of references to Netflix, Uber, companies that have obviously been very successful in getting their customers to move away from traditional sources of the product they provide. In talking to your counterparts in Canada, we've heard the opposite, that attrition rates for banks within the Canadian segment have been extremely low. Do you think as it becomes easier for customers to access products via digital means, those attrition rates move higher? Because it doesn't sound like it from your customer retention comments in the previous questions -- or customer acquisition comments that higher attrition rates is part of the thought process.

Neil McLaughlin - *Royal Bank of Canada - Group Head of Personal & Commercial Banking*

Yes. I think it's a great question. And I think Dave mentioned a bit of this frustration, right? I mean, my belief is that actually is this perceived high switching costs, and we don't have competitors who are formidable. And -- but the switching costs are perceived -- switching costs have been too high. In a higher sort of churn environment, I believe we come out the winner. And so we've been asked the question about what do you think about open banking or some of these things that can lead to higher churn rate. I think there is acquisition costs that come with that, but I believe the better bank comes out the winner at the end of it. So some of the new things we're talking about is really about us disproportionately trying to get higher [attrition] rates than our competitors. But I believe that's the opportunity, especially with digital engagement and to try to get this message across, that it is worth switching, that there is something better that client isn't benefiting from it now.

Unidentified Participant

And one that's maybe more looking for a real world example. I think as Rod mentioned and a few of the other banks said as well that as we go through the increased spend on technology, the increased data you have in your customers, we should see lower loan losses through the cycle. If I have a credit card or a unsecured line of credit with RBC, what steps can the banks take or can the bank take to nip any potential credit loss in the bud based on my -- what you see from my financial situation?

Neil McLaughlin - *Royal Bank of Canada - Group Head of Personal & Commercial Banking*

Yes.

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

(inaudible)

Neil McLaughlin - *Royal Bank of Canada - Group Head of Personal & Commercial Banking*

Yes. I mean, we'll go back. I mean, I would say, 15 years ago, we looked at this. We're a traditional -- very traditional sort of credit scoring models. But more than a decade ago, we started to bring in the cash flow data as a predictor in terms of when do we think clients are in trouble. So there is a number of levers, and we have playbooks that we put together well in advance of any downturn. A more recent example would be when we saw the oil situation, we had a playbook we could take up the shelf and look at these levers. But it's this ongoing scoring to understand the predictability or the probability of default. And so we kind of think about credit risk management is actually quite a predictable risk now versus something like -- we had other conversations with [cyber] and OpreX (inaudible) and those sorts of thing. So we actually feel very confident in our ability to manage credit risk, and the tools we have now is unlike -- is an unbelievably powerful set of tools even if we just compare it to what we had 10 years ago. But we can do things like if we start to observe early on, we have an early prediction capability. And if the customer hasn't even gone into default one cycle, we just see things, we can reach out with the relationship call and just check in. More about sort of relationship and invites and see if we can help them if there's something going on. For example, a declining behavior score, their proprietary models or reduced cash flow. Beyond that, then we get into more sort of later stage or more severe levers for unsecured credit lines. We can look at taking back line decreases and those sorts of things. Those are steps that we start to get further severity, and we would take them with a lot more caution based on client relationships. But I would say sort of net-net, we feel very confident in our credit risk management. And part of it is analytics, and part of it is the data.

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

And so just to bring Neil's point to life, so just imagine the 2 worlds. We're trying to acquire a customer through bidding on Google search or YouTube search. Don't really know about the credit risk of that customer. We know they're interested in credit cards versus acquiring that customer through Finfit, where they aggregate their financial information with us. You see their credit bureaus because we're pulling it. We know their credit risk, and therefore, who are we going to make the offer to? We have a lot more knowledge about the Finfit customer, who is using their Finfit app and who -- which customers you want to make an offer to versus bidding on them, some are blindly in Google search. The second thing I'll say, as you heard Foteini say it, these great models that we built over the last 10 years that have outperformed, which are being enhanced with AI and bringing in information from the net and from other sources to enhance with better predictability. So that's why ventures and partnerships are so important in seeing the risk versus bidding on a customer and a digital channel that you don't necessarily see. It changes the risk equation completely.

Unidentified Participant

So my -- Sohrab sort of touched on my question already. But -- so you obviously have a lot of access to data, and I know there's a lot of sensitivity now on that data, especially in Europe. And you have a lot of partnerships that you're also developing, so you're gaining more and more access to that data. I'm just curious to know. And I -- sorry, like, Sohrab did already ask this. Like, in your partnership, who determines who actually owns that data aside from the customer obviously or the consumer? And do you think you'll actually get to the point where you have so many partnerships that you have data almost on every Canadian citizen and that the regulator may step in, how you manage that data and how you use it to, I guess, maybe influence that consumer or customer?

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

Yes. That is the question to ask. So a great -- thank you for asking the question. So it starts -- and I'll open it up to anyone who wants -- on the -- my team who wants to jump in on this. And it starts with the fundamental belief that the customer owns our data, and there must be complete transparency and customer control over who gets to see that data and how it's used. I mean, I envision the dashboard for the customer. Two, the customer has to see value for that data and they have to determine that there's enough value creation for them to continue to provide their data or off data. I think that is the founding premise to whether we're collecting data internally or collecting data with third parties through an Ampli or other platforms who we're sharing with customer consent. It's got to be transparent. They have to see value, and they have to have the optionality to turn it on and off, and I think that is the founding premise that the customer is at the center of all of this. And if you can't create value, I would expect that they're going to turn it off, and they won't share. But we're in a new era of customer value creation. Now we're -- the important message here is, we're not building all these things to collect data. We're building these things to create value for Canadians and to connect with Canadians. Data happens to be a byproduct, and we take our responsibility to protect that data from a cyber perspective and to create trust around how that data is used. It's mission-critical, but the whole strategy here is about connectivity and value. And for the first time in the banking industry's history, we're able to build our bank from the customer in versus the bank out. So that is the strategy here. This is not about, "Hey, we need tons of data." We have data to create value, to create customer relationships. But that's -- the goal here is just the former. So we have to protect it. We have to use it with customer consent. We have to demonstrate value. And if we do all of those things, the customer shown historically and I expect them to continue to do this that they're willing to provide their data. And anyone else want who want to jump in on that? Bruce or Rod?

Bruce Ross - *Royal Bank of Canada - Group Head of Technology & Operations*

I felt that, today, I think the other thing is the -- I wouldn't underestimate the richness of RBC's data that we have today, as Neil is alluding to. We have relationships with clients over years. This time, serious data on how clients have behaved, how they will behave and the ability to predict when they could get into trouble and the bank actually connect with them quicker and more proactively with the right strategy is key to us. So I think any institution that has the richness of the dataset that they already have is in a position to provide a better day for their customer than anyone else. So it's not just -- you hear about Amazon, Google and everybody else trying to capture all this data. Well, what they don't have is the trusted relationship we have and the information that these clients have already shared with us. So we're protecting that. We enrich it to some extent because we know patterns that they live in their lives so that we can actually provide a better day. But without that core capability, I don't think you can provide as good an outcome for our customers as we are able to.

Dave Mun - *Royal Bank of Canada - SVP & Head*

So now we -- [Bryce] has one in the back here.

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

We have...

Dave Mun - *Royal Bank of Canada - SVP & Head*

We have 2 upfront.

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

We have a question actually from the webcast. So why don't we go to the webcast first?

Unidentified Company Representative

So we have a question from Mario Mendonca. He asked, the bank's many advantages in domestic retail banking has led to superior revenue growth over the long term. However, the earnings growth gap has not been as wide as expected largely because operating leverage has lagged slightly. The question is, why have the many advantages not translated to superior operating leverage?

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

That's a great question. I think you're certainly seeing volume growth customer response through awards, and market share have responded. But our -- I certainly agree, our NIE trajectory is elevated, and that's planned. We believe, as we just described in the last 3 hours, that we are in a period of enormous secular change, that we see in front of us a unique opportunity to transform our model to invest in these capabilities, to compete not only with traditional competitors but potentially new competitors and to reposition ourself for strength and take control of our destiny at an important moment of time. We also see that we are at the late stages of a economic cycle. And therefore, as an organization, we are investing and acting with an enormous sense of urgency to change, to compete while we have this economic tailwinds to reinvest in our platform. And you've heard, all the things that we're working on are going to be a lot more difficult to do when we hit the next credit cycle and the revenue growth is not there. And you'll ask the same questions, why are you running such massive negative operating leverage if you haven't invested in the things we're doing? So we've accelerated our NIE spend, and it's elevated because we want to capture the secular change for the long term with the ability to manage it down through the next cycle. And if others aren't making those investments now, then when will you make those investments? Two, as Foteini and others said, there is a limited amount of talent to accomplish some of these really important things. And if you don't grab them and nurture them and build now, you're going to miss the cycle. This is -- there's -- if you don't grab these partners now, there's not enough to go around. So that sense of urgency. Yes, our spend is elevated. It won't be elevated forever, in fact. I think we guided to better operating leverage in the latter half of the year. And you guided -- we're getting a lot of big things done quickly now while times are good, giving us enormous flexibility to grow our franchise at lowering interest [running] rates in the future. So that's why they're elevated because we sense the secular opportunity, and we're going for it.

Dave Mun - *Royal Bank of Canada - SVP & Head*

Great. [Mario]?

Unidentified Participant

Question from me, questions for Doug. I believe Rod mentioned that he thinks wealth management will be a larger part of business going forward alluding to, potentially, acquisitions. So Doug, my question for you is, what do you think RBC at this point is missing from a capabilities perspective on the wealth management side? And then secondly, you talked about your AUM split pretty much down the middle between retail and institutional. How do you think about the business economics between those 2 categories? And which one do you sort of favor if you had to sort of choose 1 of the 2?

Douglas A. Guzman - *RBC Capital Markets LLC - Deputy Chairman*

Yes, I don't think -- I don't like their gaping holes and current capabilities, and the customers are telling us both institutional and retail that they appreciate what we're doing. We're delivering returns. You can certainly add -- I pointed to -- in one of the slides to investments in alternatives unconstrained-type approaches overlying macro-type approaches. So we'll continue to build those. We'll continue to build out ETFs. There's product innovation kind of every day on the product side. In terms of growth and acquisitions, we've got a strong preference for organic growth. The -- we've gone from -- obviously, we've seen [ashfall] acquisition stand in exception to that, but that's a very important platform and capability we've got in the U.S. Would we sit up here and say never to another acquisition? No, but you should expect that the standard for anything like that is really, really high. You can -- if you can deploy capital in an organic way, the returns are much higher than having to pay [20] something times earnings, which we get to see an ashfall , and that probably marks 60%, 70%, 80% higher mark-to-market today than it did then. So strong preference for organic over acquisition. I still feel like we've got domestically a market share opportunity, notwithstanding where we sit. But the patterns tell us that the increased requirements for investment looking forward encourage me that, that will continue to be the case. Retail and institutional, we like them both. The -- there is no question that there's historically been more margin pressure on the institutional side than on the retail side. If you push together the story, that story around the retail consumer in general is delivering more to that. Do I think that all of those individual prices for individual things we do will decline? Probably, over time. And let's take my adviser as an example. Don't quote me on this, but we sort of ballparked that the ability of an adviser in that channel, which is actually Neil's channel, to handle clients might be 2 or 3x the volume of clients that an individual client can call -- can handle today. So we've tripled -- to make the same example. We've tripled an adviser's capacity, but we've dropped the unit cost to production by 2/3. And if I dropped the unit cost to production by 2/3 and I've gone somewhere that is very hard for our competition to do, I may prefer a world where actually price comes down. Because I can -- the combination of my price says(inaudible) my volume persists. So we like them both, the build-out of our U.K. global asset management, investment capability in GAM that I spoke about has resonated for both channels. We've been able to bring to our Canadian retail clients very well performing in the case of globally equities weaving in strong ESG influence. It's resonated with retails. Got that consulting track record. Got a rating now working institutionally. So I'd see them both kind of growing together over time, but strong preference for organic growth.

Bruce Ross - *Royal Bank of Canada - Group Head of Technology & Operations*

And I'll just clarify that combined with the elements that Doug talked about in terms of growth trajectory for the Canadian in the global asset management business, the trajectories that we laid out for City National, when you combine those, we just organically expect that growth rate to be higher than the growth rates, which are also good for the other businesses.

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

I'll go here and then to Gabriel. Right here. No. Oh, here. You and Gabriel, then yourselves.

Unidentified Participant

A question probably best for Neil. You showed the J.D. Power ranking, which shows RBC on top among the larger banks, but you're significantly behind Tangerine, you're behind Simplii Financial. And the value proposition for those 2 online platforms is the fact that Canadians would be paying 0 in some cases on the fee side. How do you view that? Like, it looks like it's a growing trend among millennials. That is going to clearly become a more important segment of your customer market. What's the risk here? How would you sort of look at that risk, if any? What do you do to sort of offset that potential pressure going forward?

Neil McLaughlin - *Royal Bank of Canada - Group Head of Personal & Commercial Banking*

That's a good question, and we do notice that. And a couple of comments, I guess, as we evaluate those results. I mean, we don't necessarily compare ourselves to those players, and one of the reasons is the value propositions are just entirely different. What we're offering is every single channel, contact center, app, online, into a branch, financial planning, and we can go on and on. And those players are offering a small subset of that. And for the most part, they're very few, very, very few primary banking relationships for those competitors. They usually have a secondary account there and may have parked some money, may want CIBC insurance on another tranche. So it's a very different thing. And in terms of your second part of your question in terms of how they're going there because it's free, again, we're framing this within a value lens, and we are looking in terms of our value propositions we referenced earlier. They will need to change, and we're going to change a number of them next year. There's things we provide right now that we think some clients aren't seeing the value in them, and there's fees attached to them. And we think we need to demonstrate that there is value we can provide, and some of these new value propositions here today will be part of that formula. But all that's rolling into this trajectory in terms of other income. And we're seeing it -- we're seeing mutual fund, revenues drive that. We're seeing in the credit card business drive that. But we are seeing a relatively sort of low single-digit from sort of account fees, and so I think that attaches to your observation.

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

I'll just answer that, too. Your question points are really important strategic shift in that if we continue to be the same thing to customers as we always have, we will see margin compression. We have to create new value and rebundle value and change the value chain. I mean, that's why we articulated this whole strategy, to say we're still that last inch. And we keep doing the same thing for the next 50 years? Yes. Our margins are going to compress. But we're rebundling value through ventures, through partnerships to create a different value proposition that we can put a price on. And we're counting on that revalue -- the new value creation to continue to engage Canadians. It's the right strategy.

Unidentified Participant

Okay. But I guess, bigger point is if I'm a Tangerine customer, can I not just walk into a wealth management branch if I need -- an RBC Wealth Management branch if I do need something that's a bit more closer touch point? And so I guess, is it fair to say that there is a subset of your fee-based revenue that is going to be a risk regardless of what value proposition you do offer customers?

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

But a Tangerine customer is largely a savings customer that's static. It's not a dynamic customer. They're not really competing in the core checking business. To Neil's point, they don't have an omnichannel experience that attracts that core everyday banking customer. There's -- if you look at the numbers that they put out, it's largely a static client base that's there for premium interest rate and nonactive money. And it's -- invests since the beginning and largely that today. So therefore, Neil -- as Neil is saying, we're competing on a very different premise for the core checking business. So I don't know if you're trying to insinuate the core checking customer is going to move that or not. They haven't unless they redefine that to an omnichannel experience. So we feel very comfortable competing with this omnichannel experience with these rebundle value propositions against it's free and simple.

Neil McLaughlin - *Royal Bank of Canada - Group Head of Personal & Commercial Banking*

Maybe just the last point on that. In terms of omni, we referenced scale this morning, and this idea of getting a consistent experience channel by channel by channel, these are not light investments. And so you have a small franchise with just a couple of Fin relationships. And the customers says, "Well, you're going to be -- first, can you keep pace as the cost to create fantastic, consistent experiences gets higher and higher?" And then you're just back to if I can have something that I have everything I can get at Tangerine but I can get a lot more at RBC. And Tangerine starts falling behind, and where do clients -- where are clients going to go? So I think that's another way we're looking at it.

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

How do you invest in cyber? How do you invest in data? How do you invest in all of this if you don't have the revenue line?

Unidentified Participant

I give out the chain national bank. I got a numbers 1 and then a follow-up on the debentures, more fun stuff there. On the numbers, you talked about $13 billion to $14 billion of discretionary capital. Want to tie that to the commentary you made about how you're managing your expenses. You're spending, investing in the good times, and you're ready to dial back in the less good times, down cycle, I guess. Do you take the same view when it comes to using capital to make acquisitions?

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

Our priority is, I think, is, as we've all articulated, I think Doug just articulated, is we see such a significant opportunity in the United States and in Canada with this new strategy for organic growth that organic is our priority, and we'll allocate capital to build up our lending book in retail banking and in commercial banking. Selectively, we said we're going to use our balance sheet to grow capital markets. We have a low single-digit growth target there, 3%, 4%. It's a modest growth. We don't need a lot of balance sheet to lever those -- that relationship. So capital will go towards building out our balance sheet for organic growth kind of first and second. Asset prices are really, really expensive, and we don't have strategic gaps per se in our U.S. wealth offering and our U.S. capital markets offering and our Canadian wealth management or Canadian -- so we've been very disciplined, very disciplined. We see all the same opportunities everyone else has bid on. We've been very disciplined in our capital management. And therefore, we're looking to create long-term sustainable shareholder value. And there, we'll return that capital to shareholders if we can't find a more productive use for it. And we have enough growth opportunities to meet the objectives that we stated, organic growth opportunities that we don't feel a need to buy growth with capital.

Unidentified Participant

Okay. Appreciate that. Then on debentures. More of a-- how do -- you mentioned, Dave, about having met with mixed success, I guess, less success attracting customers through apps and online offerings because people see the RBC logo, and they...

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

And our competitors are the same way, right? Your existing customers turns off of other brands.

Unidentified Participant

So if you're switching gears to this venture strategy to win customers in a differentiated way, how do you, I guess, avoid looking like a closed architecture offering when ultimately that's what it is to get them at the back end, I suppose?

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

Do you want to talk to that?

Bruce Ross - *Royal Bank of Canada - Group Head of Technology & Operations*

Yes, I mean...

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

Brand new strategy.

Bruce Ross - *Royal Bank of Canada - Group Head of Technology & Operations*

Yes. So each venture is very different. You'll see some of that when you had over and kind of look at them. We promote them 2 ways internally. We do promote them with RBC kind of in (inaudible) Drive by RBC. And the open market will promote it as Drive. RBC is obviously still there. It's just not as pronounced in the headline. And as far as bringing people into them, the path by which we will eventually connect them to RBC differs depending on the nature of the app. So when something like Drive, we want to start by getting 20 million Canadian vehicles in the app and being useful. Those people will buy another car. What we're trying to do is putting a value on the table so we're the choice for financing when they do. Now from that, there is kind of bridge into Neil's business where that loan that's now an RBC client will get a richer set of offerings, be it a great card or a discounted checking account because now we have multiproduct rebate. So I would just say each of the ventures is unique in terms of how plans to get customers and how it plans to monetize them through banking. And be happy to kind of describe some of them to you off-line. There is an example of how it might look within Drive. Within Finfit, it may very well be using our AI engine to predict what is safe to save and then giving you a vehicle to save it. And so we may ask you, would you like to save this in a high yield savings account? Or would you like to save it in investees, as an example, and then seamlessly take the customer into those? And then from there, when they're in the bank platform, do what we've done for the last 30 years, which is really good at taking a client with one product with the means by which they got here and then multiplying that through our large and diversified distribution with more insight on the customer and so forth.

Unidentified Participant

(inaudible) asset management. Just on the ventures, it looks a lot like freemium models that then monetized into financial services and products. I mean, would you ever envision some of these ventures to just have a subscription model and drive other sort of fee growth? And then do you see them sort of scaling even beyond Canada? Can these ventures go beyond the U.S. and Europe as well?

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

I love that question. Mike, did you plant that?

Michael Dobbins - *Royal Bank of Canada - Chief Strategy & Corporate Development Officer*

I did. I appreciate hearing it. So to answer the first part, some of the ventures actually do charge money. So like Ownr, for example, are paid services. We will rebate, to an extent, when you come into RBC. And it's -- our primary purpose is to grow the RBC client base as we pursue these. So it's not -- there are some of these that we run thinly. We don't want a friction on the front end that affects user growth. There is some where the value that's in there is actually being provided by partner margin to some extent, as Dave has indicated, and some do charge. As far as outside of Canada, yes, absolutely. I mean, we have a digital bank as well as City National. It is a -- I think, right now, it's a $4 billion digital bank. It mostly supports Snowbirds, but it's highly digitized, like every part of it is digitized, whether it's how you open accounts, apply for loans, mortgages, probably somewhere in the vicinity of 400,000 clients. So if we were, for example, to take a venture and we wanted to still be able to monetize through banking, we could quite easily do it through either a direct bank or, in certain cases, like Ownr, which is a business proposition. It probably worked quite well in our City National franchise, which is a bank for entrepreneurs, and so something like that could be just extended. And the capabilities aren't -- there's no geographic bound for how AI would render a logo. So extending some ventures to the U.S. would be as simple as connecting to the state of Delaware for incorporation or something. So yes, they have that optionality.

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

And it fits right on top of our U.S. digital bank wonderfully, right, because that's where our focus is. But given the asset prices in the United States, we see a disrupter opportunity, whether Finfit, Ownr, small business, higher-end consumer, but a digitally based, bundled value proposition that we think can be a disrupter. So we are -- we didn't talk about it today, but we are really excited about that optionality.

Michael Dobbins - *Royal Bank of Canada - Chief Strategy & Corporate Development Officer*

When you think about it like a Finfit, which is just really cool product, with the extendibility of save -- to save in a savings vehicle. Neil talked about the success we've had within the bank. I mean, that, on its own, could be an interesting value proposition in the U.S. and a way to kind of attract reasonable cost for low beta deposits into a solution like that. So all things that are certainly there for us as we grow and mature these ventures.

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

Okay. We have one here, and we'll go here next. I look on this (inaudible) over. Oh, do you want do that one -- first one, the way -- okay, 1, 2, 3, sorry, okay. There's a bunch of hands up.

Unidentified Participant

Thank you. First of all, I want to say I'm a university classmate of Doug Guzman's, and I'm amazed sitting here to...

Douglas A. Guzman - *RBC Capital Markets LLC - Deputy Chairman*

Be careful where you're going here.

Unidentified Participant

Apology accepted. I'm amazed to be sitting here at a business function with Doug and I'm wearing a tie and he's not. Secondly, I just had -- intrigued by the thread of the discussion here about your -- the huge investment you've made in technology and in artificial intelligence and machine learning and discussions about how you think it's making a much better underwriter of credit risk. And I'm curious to know. Obviously, the measure of all the financial institutions, their success is measured through downturns and recessions and how well they perform from a loan loss perspective and things like that. Do you think you have a competitive advantage in all the upfront technology investments that you've made that are going to make you less reactive in a downturn and allow -- you talked about how high asset prices are and things like that, and the great opportunities are always created in downturns. Do you think you're going to be more flexible and adaptive, maybe taking advantage of those than you otherwise would've been if you haven't made all these investments?

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

I would say yes because that's exactly what happened through the last recession. So the investments that Neil talked to in leveraging our understanding of clients into credit adjudication and collection capability give us a material lift in predictability and management. And you saw us heading -- from 2004 through 2007, we were, by far, by 20% to 30%, the fastest growing bank in Canada on the retail side, consumer and commercial. And on the consumer side, that outperformance, we were -- had the lowest volatility of losses through that cycle through the financial crisis. And we have that data. Therefore, the predictability, we are picking the right clients to partner with. We've taken that same model which -- I don't think other banks have even replicated yet, and we're enhancing that same platform that already performed in the last cycle much better with lower volatility or enhancing with AI. We have a booth behind you, group risk management right there, that you'll be able to see it. And you can talk to Foteini and her team over here, how -- Foteini's had a slide, we're enhancing all our models with AI but already starting as having proven that we can outgrow the market and have lower volatility through a cycle. And we can send you that data, but we've been talking about that for 5 or 6 years now, how the platform that we're leveraging already outperformed. And we keep reinvesting in that knowledge plus AI on top. I would say I can never predict the future, but based on the past, we're feeling pretty good; and through ventures, our ability to partner with clients where we can see the risk more clearly versus traditional methods of marketing. So all that combined, I think, tells a very positive risk story and how you grow your franchise. I can't see with those lights. Over here, #2, yes?

Unidentified Participant

So I actually had a follow-up on RBC's purpose statement and specifically with the "helping clients thrive" part. I was curious if there are any strategies or initiatives in place currently or that you expect to undertake that will help your clients thrive in a rising rate environment, either from the digital side or the data that you have access to on the branch level and how that might relate to the wealth management capital markets or retail banking specifically maybe with managing higher debt servicing costs?

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

Great question. Why don't we -- certainly, why don't you start on that. (inaudible) Doug, if you want to talk about that from a wealth perspective?

Douglas A. Guzman - *RBC Capital Markets LLC - Deputy Chairman*

Yes. I think we very purposely included some comments while making sure that our borrowing customers get into homes they can afford. I think this starts with this idea that we're the provider of advice, and providing advice around debt solutions is a big part of that. It's also come out in terms of the confidence you're hearing about the quality of the mortgage book. So absolutely, we can be there. And whether it's around helping clients in terms of their interest rate sensitivity, in terms of what we believe rates are going to happen and what is their absorption if rates were to go just using fixed and variable, or maybe the combination of both in our HELOC product. And I think these are things we're doing right now. And then you flip it around. We start to overlap between my and Doug's business. If it's a client that's got investable assets, what does that mix look like? But I think it does come down to this is the advice value proposition that a full-service retail bank with a full spectrum of wealth management capabilities, right, from a very small, getting-started investor up onto a ultra-high net worth. But was there anything else you want to add?

Unidentified Company Representative

Yes, a lot of what you'll see in this corner, if you have the time, is focused around -- we continue to push really hard on advice discovery-led discussions with our investing clients. And we didn't even mention at myGPS, which is a planning tool that we rolled out to our IAs a couple of years ago that facilitates them sitting with their client and making a life plan. The investees, which you'll see over there, is very much focused on goals, risk tolerance, all of them. All of them are. And as -- and the industry has shifted that way in no small measure as well. So the exercise isn't about maximizing returns. It's about actually helping people get what they want out of life, getting your kids through school, buying a second home if you're that kind of customer, retiring when you want. The investments in technology are making us better at that because we can reach more people with plans on MyAdvisor. One of the anecdotes that use -- with MyAdvisor is we can now reach all our clients if something happens in a market, and you'll get a text on your phone -- and some will have heard me say this before but -- and it will say, "The market's up 8% the last 2 weeks. I don't know if you noticed. You should know your portfolio is off 3%. Remember, you're balanced across these asset classes. More importantly, you're still on track to your goals. Do you want to talk to your adviser?" You'll hit yes on your phone. We'll say, "How about Thursday at 4:00? Or do you want sooner?" You'll hit sooner. You'll call in. The adviser has your information on the screen and hopefully get you comfortable with where you're sitting. So if you think about what we've done, we've changed that adviser to spending all of their time advising. So no longer are they leaving voice mails, trying to figure out which client wants to speak, which one doesn't. We've triaged how much you care. We've triaged if you care and how much you care. And so we're getting clients that really want to speak to us front of the queue. Those who are more relaxed, at the back of the queue. We've touched everybody digitally with information which is more than we used to do. And so a lot of these investments are so that clients thrive. These -- I think [actually] on that statement, we tend to lean more on our -- the community as being the new part of it, but good question. All of these investments are really, I think, helping clients manage their affairs and their lives through, in my case, investments or banking products [announced].

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

Or ventures. I mean, you can see how [aligned] ventures is to create more value for customers, partnerships like Petro-Canada. That money off at the pump every time becomes even more important to the average Canadian in the next cycle, next recession, so helping us thrive by solving problems and creating value. The strategy is consistent with our purpose. Oh, we have time for one more question right here. You've been waiting for a while, sorry. Last question.

Unidentified Participant

Dave, [Brian Holzer] with [Holzer, Garner and Pen]. Just on Ampli, just notionally, is this a club that's quite exclusive just to RBC partners? Or do you envisage this being something much larger internationally?

David I. McKay - *Royal Bank of Canada - President, CEO & Director*

Oh, this is a curated club that creates value that have like-minded partners who have the ability to bring connectivity and value to Canadians with the goal of building distinct competitive advantage for a limited group, but there will be different types of partners. There will be a permanent group of partners that are creating everyday value. There will be partners that come in and out that create seasonal value in different categories. So there's going to be a core group, and there's going to be a range of partners that create tactical value. So it's going to be very dynamic. It has to be dynamic to maintain Canadians' interest. So that's kind of a mixed answer, but certainly, there'll be a core group that will create consistent value to attract Canadians to that.

I think we'll to stop there. Thank you for your great questions, like really good questions. We could probably go for another hour, but we'll all be around. We're going to break for lunch now. We're going to open the booths. So I think this one of the highest. You'll be able to touch -- a lot of the themes that we talked about today and we came out in the Q&A are going to be visible in each of the booths. So we've really put a lot of effort into bringing our top talent here for you to kind of poke and prod some of the themes to see it in real life. So you can touch it and say, "Okay, Royal Bank built this." This is live, or this version 1. Here's where version 2 and 3 are going to really help bring the strategy live. So thanks for your attention today, and thanks for coming. There's lunch outside, and the booths are open. So thanks very much.
