Data Strategy Round Table

Zachery Anderson – Chief Data and Analytics Officer

14th June 2022

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Alexander Holcroft

Good afternoon, everybody. I'm Alexander Holcroft, and it's a pleasure to welcome you to our NatWest Group Data Strategy Roundtable here in our Coutts office. Just some brief housekeeping points before we get to the main event. We'll have a presentation from Zach on our Data Strategy then Simon will walk through the spotlight on youth customers and will then have a Q&A session that I'll host. For the Q&A session, we can take questions here in the room. And for those of you who are participating on Zoom, there is also a function to help you do that. And we also have some pre-submitted questions. So Zach, over to you, please.

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Zachery Anderson

I'm really excited to have you guys here today and to talk about what we're doing with our Data Strategy. I think you'll see I can barely contain my excitement about the work that we're doing, and I hope you'll understand why when I'm done. So, my name is Zachary Anderson. I'm the Chief Data and Analytics officer at NatWest. I'm responsible for running data management, data science in the Data Engineering teams. I've been working at the bank since February 2020. Prior to that I've worked in Data Analytics for almost 20 years and I've spent the last 13 years at the gaming company Electronic Arts. You might know them as E.A. Sports.

Today I'm going to talk to you about the work that we're doing to generate value from the use of our data across the bank for our 19 million customers and how this will help us to deliver our strategic priorities for the Group.

And then Simon Watson is going to give you a short spotlight on how data is helping us to grow our customer base in youth and students in particular. You'll be familiar with this slide. It's a slide that Alison presented in February of 2020 and it lays out the bank's strategy purpose and our key financial targets. Data and analytics underpins every part of this slide.

Data is helping us to meet our customer needs at every stage of their lives. We're leveraging our partnerships and exploring new technologies in the data and analytics space in particular. And data is helping us to simplify our customer journeys, improve our customer satisfaction and achieve our Group-wide cost targets. It helps us to make better management decisions in areas like optimising our capital allocation and understand our returns at customer levels.

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Data also supports our purpose. It's helping us to maintain a safe environment for our customers and creates a positive impact through our key areas of focus on climate, enterprise and learning. Data and analytics are the mechanism for us to achieve our financial goals and to be a relationship bank for a digital world. As you can tell, I think data analytics is the most exciting place to be in a bank. And frankly, I think data and analytics at a bank is the most exciting place to do data and analytics.

At NatWest, we have a unique data asset. In the breadth and depth of our customers, and as a result, their data. We are a leading UK bank serving 19 million customers across every region of the UK, where we have strong market share positions in Retail, Private, Commercial and Institutional Banking.

And as a result of that we process one in four of all UK payments, giving us a huge scale advantage when it comes to data and understanding our customers. In the Data Warehouse that I run, we're adding over 750 million financial transactions a month and that includes over 100,000 different unique data attributes from 200 data sources, across 68 million accounts.

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It's a huge amount of data to understand the UK economy, our customers, and what people want to achieve in their lives around their finances. To fully leverage this unique data asset, we are building a world-class data and analytics capability. That means investing in our people, our data and our infrastructure. You've already seen that as a Group, we plan to invest around 3 billion over three years from 2021 to 2023.

Around 80% of that relates to digital and technology programmes. Data and Analytics capabilities are an increasingly important part of that large investment. Let me talk to you about the people side first. In 2021, we grew our overall Data and Analytics headcount by almost 30%. Out of the 700 colleagues recruited into Data and Analytics in 2021, 255 of them were data scientists and data engineers.

And we're continuing to grow at a rapid pace this year. That's a huge growth in a very complex analytics environment. We're also focussing on learning: training our colleagues across the bank to utilise data and make better decisions. Last year we took the extraordinary decision to give every employee in the bank access to data camp online interactive classes and we created specific training regimes for people wanting to become data scientists or data engineers.

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We've seen great usage. In 2021 alone, we saw 2,900 of our colleagues actively using that content. And just recently I met with the first new cohort of previously frontline employees who are now data engineers working in our domains. Let me talk a little bit about the investments that we're making in data also. To better understand our customers, we must connect all the data that we know about them, track the changes to it in real time, and make it accessible across the bank in milliseconds.

In a digital world, operating in 'batch mode' isn't what our customers need. They expect us to be always on and real time. So in the last two years, we've deployed a real time streaming infrastructure for customer events, be they financial transactions or customer interactions with our digital channels or colleague assisted channels. We've also integrated 11 previously separate customer identity sources across franchises into a single data store.

This has provided us a unified view of our customer identity profiles, holdings, events and network relationships. We're 18 months into this journey and we now have over 60% of all of our customer profile records visible through our Central Customer DNA Database and available for use in customer journeys and decisions. In addition, we've deployed a next-best-action-decision-engine to orchestrate and drive all of our digital prompts at scale, in a customer centric way.

This utilises our extensive data lake to generate customers insights and our real time streaming capabilities to act at exactly the right time for our customers, no matter where they are. We're also improving our connectivity with partners by using APIs so that we can provide access to some of these services and our Data and Analytics insights through other digital platforms.

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Let me talk to you about the investments in cloud and data infrastructure. As I mentioned, we have over 200 data sources from our state of I.T applications feeding our Central Data Warehouse. While these applications remain a mixture of on-premise and cloud based solutions, we are increasingly using our cloud adoption of the central data assets to be able to drive insights.

80% of the Central Enterprise Data Engineering Warehouse has been migrated into cloud. Enabling faster speed to insight and making the first step towards decommissioning legacy data storage platforms possible. It's also important for us to think about this, about a shift in the gravity of data in the bank. As you shift the data to cloud, you enable the development of more cloud-based applications and a move off-prem, of much more of our services.

It also allows us to integrate third party data sources over time. In collaboration with Amazon Web Services we've developed a new data science in the cloud environment that has delivered the ability to build, deploy and run models on a massive scale more quickly and sustainably. Since 2020 in the main bank, we've now run a total of 47 data science and innovation lab experiments to develop machine learning models across the bank.

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Those labs have helped to drive an increase in the AI models in production across the bank, which now stands at 34. Over double since Q3 2020. And well the engineers in my team take great what great pride in what's been built, none of it really matters unless it comes to affect our customers and our activities, as a bank. Now I'll take you through a few specific examples where we've used improved analytics to grow our revenue and generate cost savings. I believe that to be a successful company in a digital world, you must show up for your customers where and how they want, not how you want.

You must surprise and delight them through every interaction, and you must earn the right to sell them something through empathy and understanding rather than through repetition. In early 2020 with the rollout of our new strategy, we began a set of specific experiments and activities to see how far we could go in shifting the way the bank communicates with its customers.

Based on a lot of the learnings that I'd seen in other customer centric industries. This means a move away from the repeated generic messaging that was focussed on what the bank wanted, to personalise conversational style of interactions that are supportive and helpful based on data driven understanding of customer needs and behaviours. The results have exceeded my expectations. These data driven, personalised insights are now being used at scale for our customers and we're seeing improved engagement rates and I believe we will continue to see them.

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Already this year we've had 2.3 million personalised prompts acted on by our customers engaged via our mobile app and web space. This is up from 1.4 million insights acted upon in all of last year. It's quite a big acceleration and I'll just highlight there, acted on, not just spammed out, but people actually acted on the insight themselves rather than just viewing it.

With our new campaigns this year to lending customers in the business banking and SME space, we've seen a 5x improvement in initial click through rates for our digital messages.

This has driven through a big shift in the mix of messages being sent. In 2020, 7% of our messages were helpful and 93% of them were sales messages. Over the last two years we've shifted our sales messages down and our helpful messages up. So we’ve increased to almost 30% of all messages sent are helpful, and not sales driven.

The result has been an increasing engagement in our messaging and increasing engagement in our sales messages, even though there are much less of them. To give you a flavour of what these are and why are they arerelevant, let me tell you about the highest three performing insights and tips that we showed to our customers in Retail.

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We show them their highest spend in a month. We show them the amount that they need to cover their average bills for a month. We show them the most frequent merchant that they're spending at. Simple insights but things that help you operate on a day-to-day basis. We're also extending that capability into the Wealth and Commercial customer space, via insights on how businesses can get smarter on energy usage, plus, switching to green energy.

How to reduce fees by switching cheques to faster payments and informing business owners when they're approaching their VAT thresholds. We're taking on the neo banks and the FinTechs at their own game, but we're leveraging NatWest scale and human capital and data assets to build a differentiated and delightful service for our customers.

This has helped us to drive a significant improvement in our main bank NPS, over the last two years.

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As I mentioned in the opening, our strategy is to support our customers at every stage of their lives. To do this, we have to stretch our understanding of our customers over their lifetimes and anticipate what their changing needs are all the time. Being able to understand our customers at this individual level, based on where they're at, can lead to a far timelier and more relevant messaging to them and put us in a better place to help them achieve their financial goals across their lifetime.

Customer Lifetime Value is a forward looking prediction of each customer’s needs over the next five years and also their long-term future value to us as a bank.

How do we do this? As shown in the bottom of the slide, the start of it has been to combine over a thousand pieces of information using internal and external data, including product holdings, behaviours and engagements.

We've added to that cutting edge machine learning models to understand very long chains of customer interactions and behaviours to classify changing needs and to understand their value over a long period of time.

This innovative CLV modelling approach won the Data IQ ‘Transformation with Data’ Award in 2021. The insights from these data assets and models have helped us to better understand our customers, to stretch the time frame of our thinking and to serve them more effectively.

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I'll give you a couple of Retail examples just to start. We've been proactively engaging our customers and prioritising our outreach, based on important life events, like a first job or retirement. We've been supporting students with prompts about student loans and mental well-being related to financial stress. We've been supporting the build-up of down payments for future homebuyers, years in advance of the actual home purchase.

And in Wealth, the initial results from using our CLV driven prioritisation of financial health checks has supported more informed money management choices and increase the flows into our digital investment products. As well as doubled the referral rate of customers engaging with Wealth specialists.

Leveraging the breadth and depth of our data has given us a real advantage in combating financial crime and fraud. The work the teams have done on fraud and scams has meant that while the industry losses have increased across the UK, our share of those losses has fallen. We know that customers have huge appetite to know more to better understand and protect themselves against fraud, and so we continue to invest and educate them on how we can help them. We can now target customers at specific moments when they are most at risk, based on our knowledge of their behaviour and that of the fraudsters.

For example, we're using our data with the latest network graph data-based technologies to detect fraud earlier and to help us better understand our customers relationships, the wider network and those of the fraudsters. The network graph that we've built contains over 500 million nodes and 250 million relationships between customers and who they interact with.

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And it covers a rich set of all of their transaction data, customer data and account data. I think it's probably one of the largest graphs that I've ever seen, and it enables us to deeply understand how our customers are interacting across the economy and how fraudsters are doing it also.

We've seen a 90% reduction in account opening fraud since 2019. We've used all of this customer data, digital messaging, graph technology and real time streaming capabilities to influence more than 5 million customers to turn on their debit card transaction push alerts, helping to detect fraud sooner. Because through deep analysis we saw that those opting in for push alerts lose 16% less on average than those who don't. We've seen campaigns that help customers to personalise their payment limits, which reduce customer exposure to fraud while allowing them to have access to the money in a way that fits their individual needs.

As you can probably hear from me, what matters most is how we use this power and data. And for me, it's to enable smarter, purposeful activity and use the data for good to benefit our customers and the wider society. We are able to do this by working with a large range of partners.

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Climate data and climate analytics in particular are amenable to partnerships, and they're a critical component for us to meet our targets and to help the UK economy transition to net zero. We are building a data asset that links customer information with external climate data such as EPC ratings and sector specific carbon footprints. We've partnered with CoGo Analytics to help drive the carbon shift for our customers.

We've collaborated to create a carbon tracker via the CoGo app to help people and businesses track their carbon footprint and emissions. It allows customers to understand their current carbon impact by delivering an experience in a mobile app that surfaces customer's carbon score. It provides them with relevant data and data-driven actions based on their lifestyle and transaction behaviours.

It supports customers and takes them on a journey to make an individual, but impactful change in their life. We are in flight with a pilot for small business customers also. So far this year, 250,000 small business customers have used it and have accessed their carbon footprint. Of these customers, 34% of them are engaging with the proposed carbon footprint reduction actions within the app.

And then after the initial pilot, customers have saved on average 11KG of CO_2 emissions per month. If we're able to see equivalent savings from the 250,000 customers that have access their footprint so far, that would be 2860KG of carbon a month, which is just a big number, but it really is equivalent to planting about 531,000 trees a year in carbon reduction.

All of this activity allows us to earn the right to deepen our commercial relationships with our customers and to grow our income as a result. The next best action engine and the data insights that I've talked about so far are driving that engagement up, no matter what channel and where our customers are.

To do this it's integrated the data assets that I've talked about and then assesses what of the many potential recommendations and actions to show each customer next. It then triggers the appropriate message to the right place to the customer, for example, a mobile prompt or a relationship manager action. We've used these analytics to drive agile data-led campaigns to deepen our relationships and to learn and improve over time.

And the investments been massively paying off. It's generated a +13 main bank NPS in 2021, which is an increase of six points versus 2020. And we can see major improvements in customer primacy across the Retail Bank. Data-driven prompts are playing an important role in influencing everyday sales across the entire bank. We believe that they influence 60% of our overall retail sales volume in 2021. Including 20% of mortgage sales volume and 80% of credit card loans and saving sales volumes.

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I believe this will be a key driver of our ability to grow going forward and help to deliver our group income targets. Higher engagement and higher digital sales will generate a real return for all of our shareholders. In addition, data is helping us to simplify and reduce costs in the bank by building better customer journeys and by building better, more satisfying digital experiences.

For example, we are giving customers a quick and easy and secure way to change their address, their mobile number and their email so that they can keep their contact details up to date. That might seem trivial, but it makes things much simpler for our customers and for our colleagues. It allows our frontline Retail colleagues to serve more complex customer queries and allows the customers to take this challenge on where and when they want.

Since its launch in November 2021, the self-service change of address feature has been successfully used by over 150,000 customers, saving them both time and money. As well as the change of service address in 2021, we've also launched self-service change of mobile number and January, change of email address in February and early signs are positive that these are all becoming the most popular channels to do these types of activities for our customers.

The improvements are contributing to a Retail Banking mobile NPS of +46 at March 2020. We're also using our better analytics to improve efficiencies inside of the bank. Let me talk to you a little bit about something that we've done in financial crime. So by using AI and machine learning models with our Financial Crime Hub, we've been able to make real efficiency gains in some of their core processes.

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Last year, with the transaction monitoring team, we've deployed a machine learning model that risk scores every alert and enables a 55% efficiency gain in the alerting process for those teams. That's real hours and time save so they can focus on complex cases. Overall, digital simplification and operational improvements through the use of data and AI are key drivers of our cost reduction targets.

Finally, sharper capital allocation is also being driven by data. We're building an integrated management information system across C&I to improve decision making. The initial focus in the last year has been on customer returns and later to incorporate non-financial measures, including climate. This will help us to forensically drive allocation of capital to optimise returns within the franchise and across the Group.

It's also helped us to identify products and service gaps at an individual customer level. Data capabilities such as these are helping us to drive better decisions in support of outcomes across the Group. By optimising C&I RWAs, by understanding customer returns at an individual level and better aligning our resources across C&I, and supporting the review of credible carbon transition plan assessments across the bank.

In summary, in the last two years we've dramatically enhanced our data capability, moving to a customer centric, intelligent bank that uses our unique data advantage, our knowledge of our 19 million customers to drive growth through personalised insights and purposeful actions across all of our franchises.

We're investing further in the One Bank Data and Analytics capabilities, both technologies such as our cloud-based data science environment and collaboration with AWS, and ramping up the number of data professionals in the bank who can utilise those technologies. We've made significant progress already, which is yielding results for our customers and helping to deliver our strategic priorities. But there is more to do.

We're driving hard at going further, at predicting more customer needs, ramping up the personalised engagement, deepening our data coverage for even better insights. We're also being innovative with technologies and partnerships which enable us to move faster or go further or to raise our ambition. Simplifying our customer journeys, improving our cost efficiency and sharpening our capital allocations. Overall, we have an incredible data asset.

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We have our customers trust, and we're generating insights and actions that enable us to achieve our goals. We are now leveraging all of that to better drive outcomes for our customers and value for our shareholders. I'll now hand over to Simon Watson to talk to you a little bit about how we're using some of these capabilities to grow our customer base and in the youth and student segments.

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Simon Watson

Thanks a lot, Zach, and good afternoon, everyone. My name's Simon Watson. And I lead one of three pioneer segments in the bank which is focussed on use, and my team worked very closely with Zach's team to essentially ensure that we're well equipped to grow the next generation of customers and to support families. This work supports our Retail strategy to secure more primary banking relationships and our purpose as a bank to help customers and communities to thrive.

Let me give you a bit of context and background about why we're focussed on this segment, in particular. Firstly, a bit of the market context. So the number of 18 year olds in the UK is going to grow by 25% between 2020 and 2030 and then it's going to hold there for about a decade. So, making this one of the fastest growing demographic segments in the UK population.

Secondly, the market for financial services in this segment is also growing as more parents seek solutions to help their children learn and save and spend at a younger age. Now we see a broad correlation between financial service adoption and technology adoption, i.e. there are more children using phones and tablets at a younger age, which also means that a need for some kind of payment means comes in a younger age as well.

Now, we weren't the only ones to spot that, so this also means that there is increased competition from monoline FinTechs in this market, such as Go Henry, and more recently neo banks such as Starling and Revolut have all launched propositions to target the younger age of the banking market.

So, working with Zach and the team, we undertook some deep analysis of the segment, starting with a new approach to understanding customer lifetime value. So what does it mean for us to bank a child, and then what happens to them as they grow up to be an adult customer? And also look at the segment through a wider and longer term lens.

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And this highlighted some clear challenges and opportunities for us. So firstly, the segment dynamics that I've spoken about and the new entrants meant that we were seeing a decline in our actual share of younger customers joining the bank, something that carries a high future cost to the organisation when we look at it through the through the lens of lifetime value.

Secondly, we knew that we had a higher age threshold than the segment demanded. Our accounts started at age 11 and up, and our existing products were limited to the children of existing NatWest customers. And finally, an analysis of our total retail customer base told us that up to 1 million of our Retail customers either had an unmet need in terms of where their children banked or they were banking somewhere else.

The lifetime value analysis that we did with Zach's team gave us a new view of the value of this segment. So firstly, we identified that our existing adult customers were more valuable and we had greater primacy when they joined us as a young customer. For example, 50% of our student base also joined us as children, nd we can now clearly see the value pathway between joining as a child, moving to a student, and then becoming an adult customer. And we also know the customers that joined us in childhood hold one and a half times more value as an adult, than somebody that we acquire as an adult customer. And lastly, we now know that when we serve the full family, parents become more valuable as well.

They trust us with 14% more of their financial needs. Which then also means they hold 40% more value. And that also means they are half as likely to leave us as an organisation.

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The data insights work led us to some clear strategic conclusions. So, our overall strategy is that we want NatWest Group to be the easiest and most useful bank for parents and we want to be persistently engaging and relevant for young people. And over the last year, so we've been working on this really since last April, we've identified a number of areas where we've made significant improvements.

Firstly, on simplifying our customer journeys, we've improved the core product offering and onboarding in particular, removing manual account opening and making sure that NatWest is now in the top tier. So, 90% of all of our youth accounts are opened digitally with the remaining cohort supported in branch, across contact and across video banking. We've also automated the youth to adult migration pathway in and around the 18th birthday.

So, Zach told you about the types of prompts that we're using. So previously what would have happened was customers would have had to choose to migrate to an adult account. We now warm people up when they're going into their 18th birthday, send them a celebratory message, lots of service messaging, and then they move to becoming an adult customer. The net result of that is that the increase rate in primacy goes up by about 9% in our adult base. Just that simple intervention that we've done with the data that we get and the insight we get from Zach's team.

We've also improved our core product features. So we've lowered the age of our leading digital Regular Saver account to 16 to encourage more young people to start the savings habits sooner. Again, that deepens the relationship with them as they grow into adults.

And we've added effortless payments and lifestyle features such as Split Bill, which enables particularly younger customers to go out and split payments really easily when they're going out for dinner and things like that. And then we've also added contactless cards and enabled standing orders and direct debits onto our youth accounts as people's earning needs and the need for different forms of payment kick in at a younger age.

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And lastly, we've closed our key proposition gap. We identified a gap in our proposition in how we help parents manage the money of their children and give their children easy access to pocket money from the age of six up. And this is where we acquired the FinTech Rooster money. Rooster means we've now got a comprehensive set of products that run, as we call it, from 'cradle all the way through to able', or through to independence and a new source of insights into family finances and how parents and children interact and how they use their money.

The focus on this segment and the improvements we've made before the Rooster launch, and I'll come on to that in just a minute, shows some early progress in our overall share of stock and an increase in our share of flow and our emphasis on this segment has also seen us grow our share of the student segment. If I talk now about the acquisition of Rooster money, this is the most notable change to our strategy in this space.

We acquired Rooster Money in October 2022, after early conversations with them last June. The business aligns well with our purpose. They have a mission to support parents and young people around money management, and they've got a feature-rich product with really high customer satisfaction levels. And capabilities that we can see multiple re-use cases for in other parts of the bank.

Since the acquisition in about seven months, we rebranded the business to NatWest Rooster Monday and successfully created a seamless customer connection between the NatWest Mobile Banking App and the Rooster Money app that now allows NatWest customers to seamlessly link straight into the Rooster Money. We recently offered the product free for 12 months to all NatWest Group Retail customers, so across NatWest, Royal Bank and Ulster Bank in Northern Ireland.

And we dropped the price in the open market to compete with existing players such as Go Henry. And we're now using a new customer data model to target existing customers where they either don't have this product for their children or where that need is being met somewhere else by the needs of Go Henry or Revolute.

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Rooster is now the simplest and easiest on-ramp into the bank and it takes less than 5 minutes to onboard a parent and their family. Our ambition with Rooster is simple: we want it to be the default product in this space for existing NatWest customers, and we want to win in the open market with a keenly-priced, purpose-led simple proposition with amazing customer service.

I'm going to play you a short film which will be slightly more upbeat than some of the other IR presentations you may have had in the past. And then we can take some questions from those in the room, or those on Zoom.

[VT PLAYS]

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ALEXANDER

I think I agree with you Simon, that is more upbeat than kind of the stuff that we do. So, thank you very much indeed Zach and thank you very much indeed Simon.

I'll invite the speakers, and Alison to come up to the front of the stage. I'm also very pleased to say that we have Katie joining us virtually. So, just a few quick housekeeping points. We'll go to questions in the room first, please.

There are microphones which will be passing around so if you could please speak into those. We will then take questions on Zoom. If you do wish to ask a question on Zoom, please can you use the raised hand button function and then we can bring you into the room. If you are asking a question on the microphone, could you please state your name and your company as well.

And with that housekeeping out the way, who would like to go first?

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Alistair Ryan, Bank of America

Thank you, yes I'm Alistair Ryan from Bank of America, so I guess seeing as it's technology - all these FinTech's and new banks, whatever we're calling them now. They did have a thing, they were easier to use than NatWest some time ago. And obviously that's kind of a feature of banking that somebody comes up with a new thing and you don't have to be as fast as them, you've got to be fast enough that you're offering that product before the customers all leave.

Where are you on that now, in terms of the retail experience, first thing?

And then the second thing would be, in terms of the data, it sounds to me like you're confident you can use the data you've got effectively. Is there any sense you can give us about the cost of that?

So I guess these other guys would say that it was cheap for them to provide their service because they've got some wonderful data lake, on the Cloud, and they were so much cheaper than you to provide product A, which is again is only part of the story because if you haven't got the balances, they haven't got the total revenues.

But you know, can you give us any sense of how that's progressed over the last, I guess, four years, since we had a tech presentation? Thank you.

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Alison Rose

Shall I take the first question? So, I think in terms of comparison to FinTech, one of the things I would say is that we would observe the tech is not that revolutionary. We can do that. They're very good at the customer experience and the tone of voice. And there's a lot we can learn from that.

If you look at our Retail Banking or retail transformation, 60% of our Retail customers now interact with us only digitally, so we are a digital bank in terms of that. So they're not coming into our branches, they're not using our call centre. It's all digital and 80% are using digital on a regular basis.

The difference between, you know, standalone fintechs is on the whole - and I'll generalise here - they're normally providing one product and one service and so they tend to be very monoline.

We're serving across an enormous waterfront from the most simple customer to the most complex customer, from Retail to Wealth to Business to entrepreneurs to Markets. And therefore what we're integrating is that platform ecosystem and using the data tools that Zach is using to help us be more intelligent, and how we reach those needs of those customers. So I've always said we would partner, innovate, acquire, we can definitely learn from FinTechs in tone of voice.

But I think if you look at, to give you data points, our shift to digital, our straight through processing, the consistent improvement in our customer scores and the growth in our income and now the growth in our primary customer and customer acquisition - that will tell you we are more than competitive and more than able to compete with that.

So, overall on cost, we're two years into a GBP 3 billion investment programme of which 80% is spent on data and digital and tech, and that is driving both income, cost efficiency, control environment and experience. And you can see the value coming from that through customer growth.

If you look at AUM in our Affluent Business, 17% increase in Affluent, and that's all driven by the data insights, our cost efficiency is coming out through our customer journeys and our experience coming through our scores.

So, I think hopefully those give you some data points in terms of value and investment and competition. Zach, anything to add?

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Zach Anderson

I think in the analytics space in particular, although we're second on things like cloud or 'after others', especially the FinTechs, our adoption patterns are really moving quickly now and that's really taking a lot, in my space in particular just in the data space, the moves to cloud are enabling us to do all of these things and net total reduction in the servicing costs of storing that data and processing it. And so we're kind of getting the best of both worlds out of out of these transitions that we're making now.

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Alexander

Thank you. I think we can come here next and then on to you, please. Thank you.

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Perly Mong, KBW

Hi, its Perly Mong from KBW. I've got two questions. One is culture, because obviously a lot of FinTechs say that they are faster because they are culturally more suited to that sort of business model. So, Zach, if you identify something really cutting edge or something that might challenge conventional wisdom from your data analytics, how exactly does it get through to Alison, like operationally and, you know, how do you overcome that sort of inertia of moving, as it were? So that's number one.

And number two, the other question is that when I think about the FinTech sorry, hang on a moment. I'm having a bit of a brain freeze - actually, could you just start with that? And I'll come back to you.

00:41:19:03

Zach Anderson

I might have a unique perspective given that I came from gaming to a Retail bank in the UK. The gaming space is probably widely recognised as one of the most dynamic environments of any industry in the world at this point, and things move incredibly fast. I think there's a history of the bank being slower, which you probably all recognise, but in the areas that we're really working on and where we need to compete, for example, in tone and messaging and some of these digital prompts that I've talked about, we're able to move in a matter of weeks, and I don't go to Alison.

It never reaches her level. If I need her to intervene, then we're moving too slow. We're empowering teams of people that work together as analysts, customer people, data insights people and engineers to be able to put those prompts together within an overall framework of governance and control, but move very quickly to do that. And we saw some of that during COVID where we needed to be able to stand up messaging around the COVID loans very quickly in a matter of days.

We needed to help people who are rolling off of those loans or had mortgage holidays to be able to manage those mortgage holidays without having to call in. And those with went in in a couple of days or even a week. And so those are the kind of speeds that we're able to move that. So I won't comment on other people's culture, but in my experience, this bank moves pretty fast. And especially when it's needed and there's a big opportunity. And so I hope that helps.

00:42:49:14

Perly Mong, KBW

Yes, that does. And sorry, I do remember my second question now. How do you measure success? Because obviously you've given us a lot of very, very useful data points, etc. But another criticism that some FinTechs might say is that because you have deeper pockets and it's not like a life and death issue, as it were, for some of the FinTechs, so how do you measure success to know that which one is actually worth investing in and persevering with, and which one would you cut? You know, instead of thinking, maybe I'll stick out for a bit longer.

00:43:23:21

Alison Rose

One thing I would say when you think about FinTechs, we have a FinTech mindset and the level of data engineering and approach we have against our 19 million customers. So we can apply this sort of change of scale. And Zach made a really good point. There's this perception that banks move too slowly and FinTechs move super fast, I would really counter that, the Bounce Back Loans were a great example. We were able to deploy a fully end-to-end digital Bounce Back Loan, so a fully end-to-end digital lending product to the market within a matter of days using our robotics capability, our data capability, our insight activity. When FinTechs who are super fast and super smart, were taking much longer than we were.

So I would just really counteract marketing messages versus fact and the capacity we have in terms of a 19 million customer base and an ability to reach market.

In terms of how we measure success, we have really detailed OKRs where we track outcomes. We're very customer led. The models that Zach was referring to around lifetime value, propensity modelling, he's tracking real time insight data usage, click-through adoption and fast experimentation and deployment.

So we're tracking all of those types of measures at an operational level. And then at an investment level, we track the outcome of investment through to - are we making a return on that investment, are we acquiring customers, are we driving efficiency, are we increasing productivity? So it is those measures that we look at and because we're building lifetime value, it's really about the customer segmentation and acquisition that we drive through that.

00:45:12:12

Zach Anderson

The key to me in the decision making is how fast you learn. Did you have a clear expectation of what you expected to happen when you took the action? And then can you get immediate and fast feedback and either correct or move on to the next thing or end it? And that's the space where we've really been innovating. We have control groups across the bank for all of our customer segments and all of our interactions so that we can monitor and learn when we take a specific action. What is the result in the control group versus the non-control group and then adjust or make adjustments. And really -especially in these spaces like digital prompts -it's a war of half a percent here and there, over time to make them better and better. And so that learning cycle - and remember our strategy is and our purpose is about learningso it fits really well with the culture of the bank - that learning cycle in fast repetition is what's enabling us to make those individual gains on each message to figure out that we need to reduce massively some of our sales messages because nobody was clicking on them as we built those control groups, we could see the outcomes that were happening with our customers and for our customers and then adjust our activities to make them stronger and stronger, but in a matter of days and weeks, not months and years.

00:46:30:00

Perly Mong, KBW

And Alison, if you look at three metrics for tracking digital progress, what do you look at?

00:46:37:01

Alison Rose

Engagement, adoption and deployment.

00:46:42:19

Alexander

Thank you. And if we can come over here- and just reminder, for those of you who are joining us on Zoom, if you wish to ask a question, please use the raised hand function. Thank you.

00:46:54:05

Omar Keenan, Credit Suisse

Thank you. Omar Keenan, Credit Suisse. Thank you for the presentation. My question is on the customer lifetime value analysis. I was just wondering whether it generated any really surprising insights that you can share with us about how to do Retail Banking radically different.

I just wonder whether you've just arrived at either some counterintuitive conclusions – I don’t know what that could be - whether you think cutting non sterling transaction fees and giving up revenue in the near term might affect customer satisfaction or something else along those lines that would really surprise us.

Then my second question is just on the core banking system, I don't know how relevant that is, to the discussion today. But I'm not an IT expert. But is everything that you want to do in terms of cloud and analytics - what are the sort of limiting factors there from any legacy infrastructure? Thank you.

00:48:06:09

Alison Rose

So, customer lifetime value, I think is a different way of learning about your customers and where the value pools are and therefore helping us prioritise where we want to support customers through their lives. And I think Simon- I think the work he did on Youth - is a great example of that in terms of what we learnt about the value to parents of having Youth accounts.

So if you looked at it through a traditional lens, of acquiring youth accounts is loss making because you don't make any money from it. But if you acquire Youth and think of it through a long term, lifetime value, it's actually your future affluent customers and value to parents and is a near-term revenue opportunity as well as a long term with both retention and value.

Those sorts of insight just give you a relationship view rather than a product view which allows you to prioritise your product view and the insight. And then also as we build into our journeys our behavioural analytics, with the test and learning that Zach is doing, you can see how behaviour will dictate adoption or predictive behaviour.

So I think it helps us think more deeply. Simon is there's anything you'd add?

00:49:19:13

Simon Watson

I agree with that and I think the other insights that it forces you to look at - the networks of relationships inside your customer base that you would otherwise not look at. So the relationship between families and what they value and things like clubs and societies and charities in which we're also very strong. So it does, throw out the interesting insights that you previously wouldn't have considered just looking at it product by product.

But as Alison says, I mean the really big insight is the fact that, really you're looking at this on a very short term basis in terms of number of Youth accounts we're looking at, we're acquiring. Now we're considering this about, basically the future adult base of the organisation and then the quality of the earnings that comes from that.

And then there's a kind of a medium point where we know that parents trust us more when they trust us with their children. But they trust us more to do things like home insurance and they trust us with things like their lending and they trust us to be on top of their wallet and on top of their phone in terms of their spending.

So all of that comes out of the modelling that we've done with Zach's team.

00:50:16:05

Zach Anderson

I think even in specific journeys - and I mentioned one in my presentation - what we were doing in the home buying journey was, most of our work on advertising was marketed at people who had come by and clicked on our website and started a mortgage journey or were looking for a broker or something like that.

And what we were able to do by using the CLV modelling is to push that out and say actually your home buying journey starts when you start saving for your down payment. Which is often years in advance, especially for a first time home buyer. And so if we can engage them through that, save for a down payment journey then that puts us at top of mind when it's time to buy a mortgage.

And that's what I meant by it allows us to earn the right to sell them a mortgage as opposed to just blasting and spending marketing money to acquire a mortgage. And so I think that that kind of insight is a radical change in the way we're thinking about the longevity of our relationship and how developing that relationship, even for a mortgage journey, starts at a much earlier point.

I won't do too much more on the other journeys, because I think they've given us some unique insights that maybe are an advantage at this point.

00:51:29:16

Alison Rose

And your second question was on….

00:51:34:20

Omar Quinn, Credit Suisse

Whether interest legacy infrastructure was a limiting factor.

00:51:39:18

Zach Anderson

If I'm honest, I was worried about that coming into the bank. I mostly worked on cloud based, modern, kind of what you might say is modern versus legacy infrastructure. What I've found is that it hasn't limited us, first of all, our legacy, our mainframe infrastructure is really up to date and advanced in the way it operates.

And it's very open in the ability to extract data from it, in multiple different ways and in multiple different time frames. So then what we've done is be able to abstract over that what you might say is a modern cloud architecture that enables us to do things like build really sophisticated machine learning models where you need scale and let the mainframe do what it's really good at, which is calculating daily transactions and keeping the ledger straight.

And so I don't have to worry about that. I can do all of these bigger things at the higher level and not be impeded by it, not interrupt it and move much more quickly by this abstraction layer in cloud.

00:52:50:12 - 00:53:18:15

Aman Rakkar, Barclays

Good afternoon. It's Aman from Barclays. Two questions. First of all, around the investment spend, the GBP 3 billion, I guess, two kind of subquestions in here. First of all, Zack, if you're able to comment on this, one thing I always struggle with is appraising the quality of investment spend that banks deploy. How does that compare, the GBP 3 billion, 80% of which is directed towards data and technology. How does that compare with your prior company? I'm always interested in that comparison between investment spend between a bank and a tech company. A related question on the GBP 3 billion probably for Alison - that was formulated in a different backdrop. If I look at the inflationary environment now, you know, services inflation, wage inflation for tech staff, products, services, the supply chain, is presumably affecting the cost of that investment?

There naturally has to be some degradation in the kind of things you're looking to deploy that into. Given that, costs are probably much higher than what you thought when you put that cost plan together two years ago. So is that a fair characterisation? And where is that coming from?

I guess the second question, if I can was just around this this this FinTech "Neo Bank" environment, I guess the cycle is arguably turning against them. Be it the operating cycle, the funding environment and some of the valuations. Historically, you would have had a difficult trade off in terms of building versus buying. How do you see that now? Is there a greater propensity to buy something? And is there an opportunity to pick up some of the talent from these companies? Thank you.

00:54:43:19

Alison Rose

So why don't I answer the third one first? And Zach, you can answer the first one and then I'll come back to the second one.

With FinTech valuations we're definitely getting into a different cycle. And we've been through lots of cycles, so we understand what those are. I've always taken the view - and it's a core part of our strategy - that we will partner with FinTechs. We think of FinTechs in terms of what we can learn from them. I think being humble as a big bank is really important. So for a lot of our innovations we've partnered, we will acquire - as we've done on Rooster money - if we think it is a capability fit and can accelerate our strategy. So Rooster filled a really cool gap and was a really good asset. And that is very much the approach that we will take. Partner where we can learn, develop together, acquire if we think it is the right decision to acquire, that will give us an acceleration on our strategy and we'll always make the value play.

We'll always evaluate whether it's a good use of our capital to spend it on acquisitions in any point of cycle in the market. It's about sort of building in long term value. I think we will continue to be opportunistic providing it fits our strategy.

[To Zach] Do you want to do your question then I'll answer the inflation one.

00:56:01:03

Zach Anderson

It's a little different if I'm really honest. It's a little difficult to compare. I see the desire that you have. It's a little difficult to compare. I mean, EA had around a billion dollars of annual investment in its

R&D space also, which is kind of equivalent to the investment that we're talking about here. And so I think, frankly, that space might be harder.

There's a lot more real failures of game development on average than there is in the banking space. I'd say more of our projects come to fruition from what I've seen in the last two years, than games come to fruition, in the gaming space. I think that's why that's one of the things that drives the gaming space to be fast in killing things and moving on to the next thing.

And I think we are developing a lot of that mentality within our investment portfolio. To look at the outcomes and the OKRs that Alison was mentioning so that when something's going wrong, we can make a quick call and not make a multi-year investment in something that, probably we knew was going to fail years ago.

We try not to do that. We monitor the OKRs, the actions and then assess whether the recovery plans for something that's going wrong are going to be worth it or not, and then move on to the next thing so that we use our allocation well. And so I'd say, I think in the two years that I've been here, the investment programmes have yielded better results probably than in the gaming space at least. But it's two really difficult industries to compare on.

00:57:40:10

Alison Rose

On the investment cycle, as I said, with the GBP 3 billion investment programme, we're really focussed around the core strategy that we talked about, building customer lifetime value, a real focus on simplification which is our journey programme and through the tech and data investment. We're definitely fighting for talent in the same way everyone is. And you can see Zach's got a great track record in acquiring data and engineering talent, which is coming through.

And the focus of our investment is yielding the results. You can see in our quarterly results that we talked about an 8.6% increase in income, 4.6% drop in costs and continuing to be capital accretive. We're able to meet our investment demands, meet all the targets that we have talked about and continue to generate capital and growth in our core business and meet all of our distribution commitments in terms of distributions to shareholders.

So we feel we're managing that. We're keeping a very close eye on inflation and making sure we pay very fairly. Our pay award to our staff earlier this year was fully supported by our social partners as the highest pay increases we've given in five years. And we deployed it to where it was most important to go to some of our lowest earners to make sure that they were insulated against some of the challenges and to hot skills where we need to make sure we're being competitive.

I'm very comfortable we can continue to meet our targets and deploy our strategy. And obviously, in terms of the environment, this sort of cycle environment is something that that's our job to manage.

00:59:27:14

Zach Anderson

I think there's maybe one other comment that I might just make on the talent environment in particular, because everybody asks it and when I meet with other CDAOs across the world, it's a common conversation. Our purpose is our unique aspect of hiring. And the commitment to climate. Our leadership at COP is incredibly visible. Data scientists can work wherever they want.

They want to do good. They want to use those skills to have an impact, not just get a salary. And they want to work someplace where they can learn and they can evolve those skills and stay on the cutting edge. And I think increasingly that combination is what NatWest offers. That gives us the ability to hire, you know, 255 data scientists and data engineers last year and even more this year.

That's our development of our climate data and analytics team, in specifics. We're getting hundreds and thousands of applications of really highly qualified people for those positions because that's where people want to work. They want to work on something that has a big impact in the world around them and not just make money for somebody. And so our propositions around customer, around supporting the community, around supporting the climate and around learning really resonate in those populations, especially in the competitive environment that we exist in.

So it's not just about money, it's also about when you have lots of choices and they all pay pretty well for a young person, you can look at other options, and our proposition has been really effective at doing that.

01:01:05:00

Alex

Thank you. Andrew next, please.

01:01:10:11 - 01:01:33:19

Andrew Coombs, Citi

Andrew Coombs from Citi. Two questions from me, please. First, on one of the examples you gave, which was on Self Service ability to change the address, the mobile number, email as a way of saving some cost, improving the NPS. I guess my query would be why has it taken so long to introduce that? It seems like quite an obvious thing to do.

Was it a fraud issue? Back in yesteryear you'd have to go into your branch with two letters from a gas company or whatever it was to prove your address. What's changed? Two factor authentication or, what's triggered that change now? And is there anything else you can do on top of that given what's changed?

And the second one, a bigger picture question, you can see a lot of really helpful examples here, but can you talk big picture about how the GBP 3 billion investment is changing your average cost to serve the customer and the average cost to acquire a customer please?

01:02:20:18

Zach Anderson

I can take the first one. I've only been at the bank for two years, so I won't comment on why it's taken so long. But I will say that because the bank's been built up over time with lots of acquisitions it has quite a complex real estate. It was quite hard, until we started developing our single customer profile system, to be able to then push back that information to all the systems because you had to build a very complex - if you had somebody update something in a mobile app, you had to get it back into all of those identity systems in order for the processes that were built off the back of them to operate. And so as we've built the customer D&A platform and as we add more and more journeys and activities onto that platform, it gets easier and easier for us to do things like let you change your mobile address, or your mobile phone number or your address in a way that just helps make everything easier. I won't speculate on before I was here, but that's what I found as I tried to do those kinds of things.

And your second question in there was, are there other things? I think you'll see lots.

The reality is that kind of capability will weave its way into every journey and customer interaction across the bank where some of the best things that we've seen recently, with using that kind of data to help Cora, our chatbot, better understand when people interact with the chatbot, what their intents are and therefore improve our containment rate of those to really high numbers, when people engage with chatbot, they don't tend to go anywhere else, they get the resolutions there. But that's because we have a really good profile of all the things that they've been doing and can anticipate what that need is and therefore the chat bot interacts in a more natural way and is able to solve those needs.

01:04:21:22 - 01:04:46:20

Alison Rose

On your question of the investment in average cost to serve. You can see the benefit of that. It is cheaper if someone is doing a completely digital journey straight through processing, you are reducing the number of hands that are touching something. So our accounts opening is a great example. In 2019 it was 17% straight through processing. It's now 70%. That means our error rate is less, our customer satisfaction, NPS, is much higher, and our cost of service much cheaper because it is through that. And also our productivity in customer acquisition is faster. I think when we did our tech spotlight, we did provide some details on price points of individual transactions…

01:05:12:07

Alexander

It was less than 1 pence, when we did it digitally.

01:05:14:07

Alison Rose

So you can see the cost. So the more that customers are -if you think about a Retail Bank of 60% entirely digital and contained, that is going to be a higher satisfaction, lower cost to serve, higher productivity rate. And so we do look at those outcome measures from those investments.

01:05:35:10

Zack Anderson

And adding people to it just allows scale with very little cost. It's much more like my old world of gaming. Another customer in a game just helps and hardly increases the cost levels at all. And so with all of this capability you just scale as you add customers.

01:05:51:16

Alison Rose

And you saw us talk at the quarterly results, we talked about customer acquisition and how the bank was growing primary relationships, which is customer acquisition. So that was a very significant move, probably something we haven't seen in five or six years. But now we're growing primary acquisition. That cost of acquisition is very good. Not only is it attractive, it is cheaper as well.

01:06:27:18

Rohith Chandra-Rajan, Bank of America

Rohith Chandra-Rajan, Bank of America. One area where I presume data analytics can be particularly powerful, is credit risk analysis, not something that you particularly touched on the presentation and obviously is the main transactional bank for most of your customers, that puts NatWest in a strong position to start with. But I was wondering if, there's been particular innovations where you've put the disparate bits of data together that you have internally or combined them with external data to get a better view in terms of the credit outlook for your customers?

01:07:05:19

Zach Anderson

I think there's more to do, but we have seen some good gains in those areas. One of the ones that we've been recently working on is understanding customers better when they're going into default and trying to predict and help them as they do that earlier in that process. And that's part of that credit decision cycle in total.

So the ability to help those customers that are in most need and to support their journey has been a really great place for us to start that. I think we'll continue to see improvements as we build up the customer profiles and overall credit decision making. Obviously, that's a highly regulated part of the bank and so will we have to manage how we meet the regulators in that space.

And that we evidence those decisions to make sure that they're fair and transparent to our customers.

01:08:02:01

Alvaro Serrano, Morgan Stanley

Hi, Alvaro Serrano, Morgan Stanley. A couple of questions from me. One is on the revenue opportunity, with much better data from your clients, presumably some of the addressable market for some of the products increases dramatically. I'm thinking of things like mass affluent segment. Is there something you can give us - an example of the revenue opportunity? I don't know whether you have better information, e.g. there's 50% uplift, I don't know, some sort of good stat or something you can share with us. I just want to get my head around whether we're going to be able to see it in the fee line in in two or three years time, excess growth there versus where should we be looking at?

What should we be looking at in terms of P&L?

And second, really to cost inflation and maybe a different way of asking the same question is, I don't know if you can comment on the sort of attrition rates in in your tech staff for the 700 you hired last year, has that been a problem? Some other banks are talking about slowing development. "We can't hire the people just slowing down development more and paying up ridiculous prices". So when you're managing that problem how do you do it?

01:09:35:01

Alison Rose

So on mass affluent, one of the things we did last year was bring together a wealth segment and focus on, wealth and affluence. We have a significant number of affluent customers within our business. And rather than predicting the go forward, I'll point you back to our quarterly results and our results last year, we've seen a 17% increase in our Assets Under Management through that quarter.

We've seen a doubling of the flows that are going into what we call our digital "NatWest Invest", "RBS Invest" which is reaching in, which is our non-advised "Robo-advisory" journey. And that's really sticky fee-based revenue, that's where our partnership with BlackRock has allowed us to reduce our costs and Zach's work on customer lifetime value and propensity modelling has really driven that AUM acquisition.

So we're able to target customers and give them personalised insights to drive that. So, I think if you looked at that 17% versus the market that will tell you we're acquiring and growing. And just to give you a sense, five years ago Coutts was, in terms of its Assets Under Management on behalf of the bank, was 17 billion Assets Under Management is now just under 37.

It took three years to grow a billion through our digital advisor journey and one more year to grow another billion. So I would point you to that and maybe later on in the year we'll give you a bit more of a spotlight on that in a little bit more detail so you can get confidence on that. But that's driven by the scale of data insight and acquisition and the platforms that we've built and the join up across the bank of our client assets from that perspective.

01:11:35:06

Zach Anderson

You asked about an example, but I think we're seeing that everywhere we're doing this, like our ability to engage, target and also interact with our really amazing Relationship Managers in all of the businesses, through both the digital channels, but, helping them to understand what customers they should call and prioritise, has been just really effective in this.

I think I mentioned we're doing some work in BB right now and we're seeing just incredible improvements, frankly, improvements that I was shocked to see like 5x improvements in clickthrough rates of engagement in our messaging and then follow ups with RMs as a result, are pretty incredible. So, I think it's a really strong capability for us as we develop it and get it better and better and scale it, we're more at scale in retail than we are so far in commercial.

And I'd say the Wealth business is growing really quickly because that interaction between RMs, digital, and these prompts has proven incredibly effective.

Your question on inflation costs and hiring. I'd say I don't think we've ever disclosed our retention rate. So I won't start that here, but I'm pretty comfortable with retention right now. I mean, it is a little higher than it was historically, but it doesn't feel out of hand.

We're managing it, I would say. And so far, with our overall strategy to partner, to hire and to build our internal talent, we haven't run up around not being able to do the things we think are important and those real revenue opportunities. So I think I feel pretty confident in where we're going and the hiring that we're doing.

Would I'd like it to be faster? Yes. It might be one of the things we talk about the most. But we're delivering pretty large scale in what we're doing right now. I think it'll be very interesting to see how that plays out with some of the slowdowns and re-evaluations of FinTechs, big tech slowing down, the space in Crypto changing, those are all the same skill sets.

And so as all of that shifts and we're still hiring at pace, I think we might see some changes in that environment across the world because these are really global talent pools.

01:14:16:16

Jason Napier, UBS

Thank you. Jason Napier from UBS. The first question was - you referenced in the presentation greater efficiency on the part of financial crime, prompt resolution. I just wanted to what extent better data represents upside to dealing with, you know, cyber risk, AML, KYC and all the other things that are banks' responsibilities in modern finance.

And then secondly, the transition to the cloud. You mentioned that your per unit processing costs are down and that that's a net win. How do contracts work as far as inflation is concerned when there are only three or four or five providers globally, and one of the big inputs is electricity. And as you said, they're perhaps having a tougher time than they were in the past.

How do they price themselves? How do you control costs in that space?

01:15:10:11

Alison Rose

On financial crime, just to address that one. Yes, better data helps the more. And you can see with the example that Zach gave around fraud, the more data insights, the more predictive data analytics we use, the more payment profiling and modelling we do on that, the more helpful it is. And I think that is what we're trying to move to, and we are moving to with the significant investments we're making and continue to make in this space is into the predictive rather than the backwards-looking and being able to spot those different patterns, and pattern recognition is incredibly helpful.

When we rolled out the biometrics, which is a tool we have on the mobile phone, we can track the way you usually log into your phone if you do it online, and how quickly you are to move, we can build up a pattern that helps us predict so that data analytic is a is a huge tool in terms of being able to profile spot an unusual behaviour.

And the big challenge around fraud and the whole explosion in fraud at the moment is these impersonation scams, which won't show up as an unusual behaviour because these people are profiled over long periods of time. A romance scam wouldn't show up, but we're increasingly trying to build those sorts of analytics on the more global volume throws.

01:16:53:06

Zach Anderson

What banks have gotten better at and us in particular is, those immediate ones - somebody took your phone or took your card - those kinds of things have gotten so good now that they're having to do these kind of longer plays. But, in my mind, it's my humble opinion that that's actually a beautiful place for machine learning, because machine learning models and big long lines of data chains are really good at classifying.

That’s what Google's built, your search history and what they build their business on, is long chains of events. And so we're very quickly able to leverage these large data assets that we've built to be able to understand long chains of those events and then be able to see patterns in that that you wouldn't recognise if you were just sitting on a front desk and dealing with it every day.

But when you look at the data, you can see it and then make more interventions more quickly. Or at least limit the losses more quickly, which are both really good strategies.

01:17:53:11

Alison Rose

Your question cloud and inflation and contracts, I mean, we tend to build long term partnerships and there's obviously an underlying commercial supplier agreement. But actually if you look at our big providers like AWS, it's a much broader strategic partnership where we we're building different insight and different models and different solutions, for example, to SMEs, which we're developing.

And so it's a much more integrated sort of contract. And we tend to buy into long term contracts rather than shorter term when we're building strategic partnerships. So we try and factor that in. But we can't stop inflation, but we try manage it within our own cost base.

01:18:41:01

Alexander

Thank you. We have just a couple of questions come in from outside the room. So Zach, one to you, and Simon one to you. So how do you best manage the risk associated with your customer’s data being shared with third party organisations? Some may not have the same stringent security protocols as yourself. And then, Simon, a question on one of your slides, it says, how do you manage more parent value? How do I square the numbers behind the 14% more parent needs, but this generates 40% more value. Could you give an example?

01:19:16:00

Simon Watson

The 14% is - so really customers have seven core financial needs. But we know that when they use more of our products, they become more prime customers. So you get more on interchange and you get more through the usage of all the products in total, which is where the value increase comes from. So look at the two things separately, rather than saying that one directly equates to the other. And then you've also got the fact that that then spreads out. Now we've got household finances and we've got the kids in play and as the kids grow up as well, that adds more value to us. So you look at students, students have got a kind of profitable payback 18-24 months out of graduating as well. So we take all of that into account. When we look at the customer lifetime value.

01:19:58:05

Zach Anderson

The first way that we deal with the risk with third parties is we have a really deep process as part of purchasing a third party service where we might share data with them to evaluate their capabilities, their standards, and make sure they fit within our rules. I think increasingly we're also actually pulling back our data.

More and more services are allowing us to be able to do our own processing of data, either in public cloud or in our own data centres where they offer us a service but don't end up having access to the customer data itself or we're able to obscure the customer data. So there's very little risk of the customer data being shared by the third party.

I think you'll see this over time that more and more companies are trying to hold their data, in very secure locations and then bring the processing capabilities to that location, whether that's public cloud, internal private cloud, or in a data centre itself, if it's a really secure thing that we need to do. And so that's giving us the ability to control and prevent breaches at a higher and higher rate, I think.

01:21:10:19

Alexander

Thank you. We have one question coming in from Ed Firth. I think it's audio only. Ed, can you hear us?

01:21:19:22 - 01:21:24:15

Ed Firth, KBW

Yes, I can. Yeah. Does that work?

01:21:25:02 - 01:21:26:10

Alexander

Yes, welcome. Your question, please.

01:21:27:08

Ed Firth, KBW

Yeah, I had two questions. If I may. The first question was one of the messages that seems to come out of your presentation is that digital only customers are happier customers, more efficient customers, cheaper customers, et cetera. And it just strikes me, isn't that the sort of core of one of your challenges, that the new entrants are only targeting those customers? And yet you're also having to keep the branch network going and manage cash and coins etc. And I see the FCA today are again picking up the sector on closing branches.

So, I mean, it feels like if you're not careful, you're running a race with lead boots or something. So do the regulators appreciate that? And do you get any sense that the government etc. will actually help you in terms of perhaps getting rid of the old style banking so you can compete on a level playing field?

So I guess that was the first question. Should I go to the next question as well?

01:22:30:08

Alexander

Yes please

01:22:31:12

Ed Firth, KBW

So my second question was - I'm not a tech specialist, but I understand that for all the major banks are still running a core mainframe system. And I think Zach alluded to that earlier. And equally I see that none of the new tech companies in the last 15-20 years run a mainframe system.

So, I assume there is some reason why people have moved on from mainframe systems. It's not a problem now Zach but as you look forward to the sort of innovations that are coming through over the next five to ten years, or that you expect to come through, at which point is running a core mainframe system, do you think going to start to be a major problem for you and perhaps something that you're going to need to upgrade?

And what are the challenges or the practicalities of actually doing that? Thanks very much.

01:23:23:10

Alison Rose

Do you want to go first Zach?

01:23:24:

Zach Anderson

Sure. You'll answer the second one? I think it's a good question. Obviously, we have a lot of back book in the mainframe, and so managing that back book and keeping those products and propositions alive is important for the continuation of the bank. I think there are a lot of experiments in the world right now going on across financial institutions and with various cloud providers and other technology providers to do migrations of mainframe type systems to cloud.

And I think we're watching, monitoring and engaging with all of them to see when and if that might be appropriate as part of our strategy.

Right now, I think the cost versus benefit doesn't suit us, and the ability to continue to upgrade our mainframes, make them cheaper or faster, more flexible and more open, which are the investments we're making, seem to be a better investment thesis for us, even, I'd say in the five year time frame probably.

But that doesn't mean that more and more of our processes outside of that core ledger aren't being moved to cloud because they don't have that need. And that enables us to do all the kind of fancy things that we've talked about today, like machine learning models and distributing the data to our customers more easily. So I think, we're continuing to watch and evaluate. But right now it's not blocking me from doing anything I think we need to do to deliver against our strategy in the medium term, even.

01:25:04:02

Alison Rose

On the question of branches, I mean, we consider our branch network to be an asset. So actually our customers who go to our branches are increasingly less doing transactions and more receiving service and help and advice and different elements, and also different levels of support that we can provide, for example, our city centre branches might be hosting entrepreneurial hubs and supporting entrepreneurs as well as, more remote branches may be providing more educational support.

And so our branches are less of a cost issue for us. I mean, we refund more, for example, on fraud costs to customers than we spend on our branch network. So I think just to level set in terms of cost, I think in terms of customers who use digital, the 60% who’re entirely digital are completely comfortable, the 80-90% who are using digital and branch and face-to-face.

That is a service that they're also happier with. Where you get the real improvement experience is in the straight through processing because that's where being right first time improves making the transactions invisible, making customers really happy. It's when the basics go wrong that they tend to be very unhappy. So I think from our perspective as a really significant bank in the UK where we're serving as I say that broad church of people some of them who need branches, some of them who are who are migrating to digital. I think the regulator is very focussed on, quite rightly, the vulnerable customers, and they tend to need access to branches and face-to-face as well as digital, and we will follow our customer behaviour. The reason that our branch network has reduced and you know we announced some branch closures recently, is based on customer behaviour changing and we'll follow that customer behaviour. But I wouldn't think of our branch network as a huge cost hanging around our neck.

It's not, it’s actually an asset from a brand perspective and it's used very differently. But you're quite right, new start-ups. Again, back to my monoline approach. We’ll start with one product, one service, completely online. We’ve got to make sure we serve all customers, but do that in the most efficient, most effective way and follow customer behaviour, which is where we're continually investing to make sure that we're providing those services.

01:27:35:13

Simon Watson

I'll just add one thing to that, which is to say that I think we've done a very good job through the pandemic of decoupling face-to-face service that customers want, at that point of need, by introducing things like video banker and being able to scale that very quickly. So customers do want to still have a face-to-face relationship with us, but they're more likely now to embrace technology such as video banking. So that means that the branch space is open to do different things. That's moved very, very quickly and I'd say in the last 36 months.

01:28:07:12

Alexander

Thank you very much indeed. With that, we'll bring the session to a close. So thank you all very much indeed for participating today. There are at the back of the room, some refreshments, speakers will be here. So very happy to continue the conversation. And also just to say that the presentation transcript will be available on the IR website. But thank you all very much indeed for coming out today and thank you to the speakers.