Insights for the Financial Services
and Real Estate Industries in Ireland
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**BURNING QUESTION**
Sustainability in financial services firms

**PATH TO CEO IN FINANCIAL SERVICES**
In conversation with Colin Hunt, CEO, AIB

**DIGITAL ASSETS SURVEY**
Taking the pulse of digital assets in financial services

**ORGANISED AGAINST CRIME**
Combating illicit finance
IN THIS ISSUE

01
FOREWORD
Introduction from David Dalton, Partner and Head of Financial Services, Deloitte Ireland.

02
FORGING RESILIENCE
In conversation with Colin Hunt, Chief Executive Officer, AIB.

03
BREAKING NEW GROUND
Profiling the winners of our Financial Services Innovation Awards 2021.

04
BURNING QUESTION
Sustainability in financial services firms.

05
ORGANISED AGAINST CRIME
Combating illicit finance.

06
A CATALYST FOR TRUE CHANGE
Accelerating transformation through cloud.

07
A SHIFT IN FOCUS
Customer experience in digital banking.

08
TAKING THE PULSE OF DIGITAL ASSETS
Exploring the findings from our Digital Assets Survey 2021.

09
DELOITTE IRELAND FINANCIAL SERVICES PARTNER TEAM

PATH TO CEO IN FINANCIAL SERVICES

BURNING QUESTION
FOREWORD

Welcome to the sixth edition of FinSight, a collection of the latest articles and perspectives from Deloitte professionals, as well as from experts and senior leaders across the financial services industry.

Since our last publication at the start of this year, our industry, and the wider society, is thankfully now in a much better position in recovering from the COVID-19 pandemic. It is testament to the incredible resilience everyone has collectively shown in the face of a crisis like few others.

It has been a time of profound change; but the nature and shape of that change is not yet fully apparent. As we emerge from the COVID era, the acceleration of digital transformation has been very evident. But digital is not a destination; it’s a mode of transport. With new technologies emerging all the time, it’s important to have one eye looking ahead to what’s next.

Our articles on cloud and digital banking in this edition cover the various aspects of such a change. Digital technology is a set of tools that can transform every aspect of an organisation, but implementing it is not as easy as flicking a switch. The twin obstacles of culture and legacy systems must be overcome in order for true digital transformation to take root.
Unquestionably one of the biggest trends affecting the sector is digital assets. Our report in this edition looks at its disruptive effect and industry attitudes to it. This is a fascinating look at an area that, while not yet fully mainstream, has grown beyond niche interest.

Looming even larger still on the agendas of all businesses in financial services and beyond is the issue of sustainability. We cover this extensively in these pages, with global and Irish perspectives from Deloitte experts. It is also a subject that AIB Chief Executive Colin Hunt addresses in stark terms as part of our feature interview. For all businesses, the commitment to get to net zero potentially means re-evaluating entire operating models. As we urgently look for ways to reduce our carbon footprint, everything is up for discussion – from sourcing raw materials to production processes, and the ways of working.

Speaking of transformation, the future of work itself has undergone a revolution – as we have covered extensively in previous editions. As I write this, offices have recently begun to physically reopen once more on a phased basis. It is another opportunity for organisations to rethink and do differently. Now may be the time to find a new working model that’s right for them – one that’s inclusive, not imposed from above. It calls for leadership by listening and dialogue, and a culture of trust and flexibility.

All of these elements combined are providing a unique opportunity to redraw strategy. The incentives for facing forward have never been greater, and the consequences for not doing so are considerable.

This is not to sound an overly pessimistic note. One of the latent themes from this edition’s content is that we are a long way from exhausting all of the possibilities in the sector. There is so much as-yet untapped potential in financial services, from delivering superb customer experience that increases loyalty, to creating new products and services, and to making operational changes that deliver tangible benefits to the organisation. The
very existence of FinTech alone is proof of this potential. Our feature profiling the winners of this year’s Deloitte Financial Services Innovation Awards is testament to the ideas springing forth from this industry.

As a side note, one theme that emerges from this article is the tension between ‘build vs buy’. Traditionally, financial services companies have looked to produce their own solutions in house, but there is a growing argument that partnerships can be a more fruitful way to tap into innovation. Doing this requires a different mindset and openness to ideas. This can put it into conflict with a culture of ‘not invented here’, which reflexively rejects ideas that don’t come from within. In the new world of flexibility, it makes sense to tap into the agility of organisations that work differently.

That is why it is all the more important to have a strategy that can unlock potential from every possible angle; a plan that is sufficiently broad and ambitious not just to repeat yesterday’s goals ‘but with digital’. Instead, it should leave space for innovation and experimentation, for new ways of working.

At Deloitte, when we handle strategy exercises with clients, we use a framework called ‘play to win’. The starting point is to focus on ambition since that is what will ultimately define the strategy. It’s the essence of what an organisation wants to be, in the form of statements capturing the key elements. In our experience, it helps to focus on four pillars.

- **Humans first** – that’s fundamental to any business, but especially now
- **Where are the major intersections in your business with the marketplace?**
- **How does the business harness enabling technology in setting its ambition?**
- **Does the ambition trigger change that’s just focused on existing customers and existing services or is it truly transformational, opening new customers and new markets?**
At a time when there are so many important trends and themes evolving in the post-COVID world, now is the moment for redefining ambition and rethinking strategy. That is not to say it will be easy; for legacy organisations in particular, regulatory considerations have a tendency to consume thinking and dominate the day-to-day agenda. Boards and executive teams need to create the mental bandwidth to evaluate, analyse and reflect on their growth, ambition and strategy.

If the past 18 months have taught us anything, it’s that ‘this is the way we’ve always done it’ should not be organisations’ instinctive go-to position. Instead, such a time of upheaval presents a vital opportunity to rethink strategies and to re-evaluate old ways. Let’s grasp the opportunity.

Kind regards,
David Dalton
In our ‘Path to CEO’ series, AIB Chief Executive Officer Colin Hunt talks about the forces that shaped his growth as a leader.
CAN YOU SHARE YOUR PROFESSIONAL JOURNEY TO DATE? WHAT HAS ENABLED YOU TO ACHIEVE SUCH AN INCREDIBLE CAREER?

I never set out to be CEO: it wasn’t part of my career plan or career trajectory. It’s almost through a series of events that I found myself in this position. I genuinely did not expect, ever, to be CEO of the country’s largest bank. What I would say in terms of my own personal development, as I look back on it now, you would almost think: here’s somebody with an almost programmatic approach to career planning because he worked in risk, in treasury, in equity capital markets, in debt capital markets, in lending, in corporate advisory, then became CEO. It’s almost as if it was a training plan over 20 to 25 years; it wasn’t. I was very fortunate to have opportunities at various points in my life that helped me to develop, learn and grow as a financial services professional.

One standout was probably NatWest in London. I worked there when I was 23 for about two and a half years. And that was moving from Ireland to the UK, having responsibility thrust at me. I worked in country risk. And that was a stretch assignment. It was about going in, using my economics training and background, working directly for the head of the unit and being given a lot of responsibility at a reasonably young age. I grew a huge amount. It was a stretch in having real responsibility and real authority; a quantum leap. I wasn’t treated as a 23-year-old, I was treated as somebody who knew what he was doing! Certainly, I got on with the job and I did it to a good performance level – that was really important. Probably more than anything else in my entire career, those two and a half years in London really shaped me as a professional. Those were the formative years of my career journey.

DID IT FEEL LIKE A TOUGH ENVIRONMENT AT THE TIME?

No, not at all. I think it was a very progressive environment, where people were given a job and expected to get on with it. There was lots of support and a keen interest in developing skills. It was a very supportive, developmental environment. The second major developmental phase was when I was in Goodbody Stockbrokers. I was 29 years of age when I was appointed Head of Research. It was a big call for the Managing Director Roy Barrett to make and I think it was, again, a stretch assignment. I had never managed a team of people that large before. I had never had that sort of breadth of responsibility before. I certainly was not the identikit perfect candidate for that role when I was given the job, but it was a great period of development, growth and learning and it certainly has had a huge impact on me ever since.

I think that I have been lucky in that I have been given roles that were a stretch because that prepares you to be a CEO – because no matter how many textbooks or manuals you read, you don’t know what it’s like until you are one. For anybody stepping up from group executive level to being the CEO, there is a stretch; there is a period of learning and development. There’s any amount of books written about what it’s like to be a CEO but none of the ones I’ve read, certainly, have captured the way the real experience turns out to be.
Without a guidebook, when you took on the CEO role did you lean on your own experience?

Lived experience, absolutely, is very important but also a supportive network of mentors and advisors. Ultimately, it is a lonely position and you do make the lonely calls yourself, but I have been fortunate in my career in that I’ve had people who have mentored me and supported and encouraged my development, and that’s been extraordinarily helpful.

What is one characteristic you believe every leader should have?

If you pick up a book on leadership or read one of the articles that litter the internet about leadership, they’ll all say things like ‘competence, integrity, strategic vision, energy, people leadership’. All these things are necessary, absolutely. But there’s one that very little attention is paid to that I think is a key differentiator amongst great leaders – and that is resilience. I think it’s critically important.

If you’re talking about being a CEO, it’s a very demanding position. It is almost all-consuming and you need to be personally very resilient in my view. There is an organisation with millions of customers, shareholders, thousands of staff who are dependent on you, ultimately. And you need to be able to take the knocks, dust yourself off, get up again and go at it. I think it’s a key differentiator and probably we don’t talk about it enough.

I think the resilience of people has been sorely tested in the past 18 months and in large part, people have come through it extraordinarily well... if you had said 18 months ago and plotted out exactly what was going to happen, you would not have projected that we would be in the position we are in today, in the country, and I think that is in large part a tribute to the resilience of the Irish people. It’s about dealing with the task ahead; it’s about jumping the next fence. And if you fall at the fence, you get up and you jump it again.
CAN YOU NAME A PERSON WHO HAS HAD A STRONG IMPACT ON YOU AS A LEADER: SOMEONE YOU HAVE DIRECT EXPERIENCE OF WORKING WITH, AND SOMEONE WHOSE WORK YOU’VE ADMired FROM AFAR?

I’ve been absolutely blessed with having amazing mentors and amazing bosses throughout my career who pushed me and promoted my development. There are at least eight or nine people who are responsible for the person that I am today, and I won't single any one of them out. My family have always been very supportive; friends, acquaintances, bosses, all have been brilliant in terms of encouraging my development.

In terms of leaders I’ve admired from afar, Paul Polman is my leadership hero. Somebody who was extraordinary and took a long-term approach. He wasn’t focused on the next quarter’s results. He put sustainability at the heart of everything that Unilever does, and that wasn’t easy in a company like that at that point in time. I have huge, huge time for him.

[Editorial note: As Unilever CEO from 2009-2019, Paul Polman developed an ambitious plan to double revenues while reducing the company’s negative effects on the environment by half. In 2016, he helped rally business leaders to support the Paris climate accord.]

HOW DO YOU SEE THE GENDER BALANCE IN THE FINANCIAL SERVICES INDUSTRY? WHAT NEEDS TO CHANGE?

In the financial services industry, like a number of other industries, as a whole there is a marked gender disparity or lack of diversity at top levels of organisations. And it seems that as you go further up the career pyramid, females fall further into the minority. I’m delighted that we are in the position that we have broad equality at the executive committee level at AIB, and we have equality at the board as well. In advancing the diversity and inclusive agenda, it is very, very important that females see role models in-role, performing well to very high standards.

My hope is that we make such steady progress on this front as an industry that it ceases to be an issue. Diversity and inclusion will no longer be an issue when we stop talking about it; but we do need to talk about it. And diversity comes in multiple forms. It isn't good enough to sit and wait and say that over time, we'll have a percolation that will lead to broad gender diversity.

It’s vitally important for people working their way through their developing career, that they see people who look like them in very senior roles. And to be honest, it does change the dynamic around the table. I think that conversations with a balanced executive team are perhaps more direct than they would be with the traditional male-dominated teams. And it leads to better outcomes, absolutely. I'd say it’s more direct and more open.
YOU SPOKE ABOUT THE IMPORTANCE OF A GOOD SUPPORT NETWORK AND THE NEED TO BE RESILIENT – HOW DO YOU BALANCE YOUR PERSONAL AND PROFESSIONAL LIFE, TO ACHIEVE THAT?

I think you’ve got to time your holidays and try to protect them. You have to plan holidays carefully. You obviously have to be mindful of when business is busy, and the diary of board meetings. I’m a pure traditionalist in terms of holidays: I take a week for mid-term, and I take a week at Christmas, and a good two weeks in August. They are sacrosanct in my diary, inasmuch as it’s possible for any dates to be sacrosanct!

And I do try and keep work to the working week. Occasionally, it does stray into weekends. I’m an early riser so I spend a few hours on Saturday morning preparing for the week ahead and getting my head around whatever documents I need to read for meetings. You just need to be quite disciplined about your diary and you need to recognise the fact that you might be a CEO, but you
also have other responsibilities as a husband, as a father and as a friend. I remember somebody said to me years ago, the most powerful word in the English language is ‘no’. It’s important to maintain discipline.

**WHAT ARE YOU DOING TO ENSURE YOU CONTINUE TO GROW AND DEVELOP AS A LEADER?**

We have a rolling programme of executive development at AIB which uses in-house resources and external supports as well, and that’s something that myself and my team work on. We invest a fair amount of time in that, and that’s really important.

As I said, a huge amount of learning in this position is on-the-job learning. I’m very fortunate I have a great team around me, and we have an open and transparent style of engagement. We are very, very generous with our feedback to one another and that’s very important in terms of continuous development. There’s a mixture of some informal but also formal programmes in the bank – but that has been more challenging throughout COVID-19.

**DURING COVID, MANY INTERACTIONS MOVED FROM BEING FACE-TO-FACE TO BEING VIRTUAL. AS A LEADER, HOW DO YOU HAVE TOUGH CONVERSATIONS WITH PEOPLE IN THAT ENVIRONMENT?**

Be direct, open, honest, transparent. Notwithstanding the fact that we all think Teams is great and Zoom is great – and we’ve had a quantum leap in terms of the technology we’re all using – it does not replace the quality of the communication on a face-to-face basis. It doesn’t come close to it. I think that there’s a huge amount of non-verbal communication that we miss.

**DID YOUR STYLE ADJUST AS A RESULT OF THE CHANGES OF THE PAST 18 MONTHS?**

I don’t think it’s adjusted; I’ve had the same guiding principles. I think that leaders have to be agents of change. Nobody ever left a leadership position and people said: ‘that person was an outstanding leader who changed nothing’. So you should aspire to be an agent of positive change in your organisation.

You can have the greatest strategic vision and the greatest clarity of thought about where you want your organisation to go, but ultimately, the change is entirely dependent on the quality of people you work with. And as I look back at the pandemic, I have to say people stepped up. I’ve been hugely impressed with the way that people conducted themselves with energy and dedication and professionalism, at a time when everybody was under huge pressure because of home schooling, or concerns about their parents’, or friends’ or their family’s health. And I’ve been very much taken with that. But ultimately, leadership is all about people: putting people into the right positions, encouraging them, and giving them space to grow and develop. And supporting them.
YOU’RE ON RECORD AS SUPPORTING THE TRANSITION TO A LOW-CARBON ECONOMY, AND AIB IS HIGHLIGHTING SUSTAINABILITY IN ITS MARKETING AND ADVERTISING. AS AN ‘AGENT OF CHANGE’ IN YOUR ROLE AS CEO, HOW DO YOU VIEW THE IMPORTANCE OF THE CLIMATE CRISIS?

Inevitable and irreversible. Terrifying. I still don’t think the majority of people grasp the nature and scale of the crisis that is staring us in the face. Unless we tackle this, the pandemic will not be the biggest challenge this generation has faced, in my view. And there’s no vaccine for climate change. So we need to take immediate action.

There’s a word that is used with wild abandon in this country, which is existential. Brexit was described as an ‘existential’ threat. No; Britain might be poorer, it might be isolated, but it’s going to continue to exist after Brexit. We’re going to continue to exist after Brexit. But climate change is existential: it threatens the future existence of this species on this planet: let’s call a spade a spade. And we have to accelerate the transition to a lower carbon future, now. And AIB has a huge role to play as a major Irish bank. We will do what we need to do but we also want to encourage others to join us.

It will require a massive collective effort by government, by business, by banks, by individual consumers, by farming, to actually solve this problem or at least ameliorate this problem. And we have a big role to play. It’s going to be very capital-intensive. We have a very strong balance sheet, and we look forward to deploying it. It also is very appealing from a product perspective, and from a balance sheet perspective, because it’s long dated loans that are effectively low risk. As I keep on saying, it is possible to do well while doing good.

We want to encourage others to join us on this journey because we are conscious of the fact that our role is to act as a provider of capital – but others need to invest the capital.
There are three things that we want to do. We want to be supportive and active and promoting provider of capital, advice, equity, debt – that’s one. Secondly, to be a sustainable business in our own right. We have a net zero commitment by 2030 and we’re working very hard at delivering; we’ll do it. And thirdly, we expect the third-party providers that work with us to have the same sustainability goals that we do. So, we’re supporting our customers, driving our own low-carbon transition, and encouraging our third-party suppliers to come on the journey with us as well.

This interview took place on 03 September 2021.

Ultimately, leadership is all about people: putting people into the right positions, encouraging them, and giving them space to grow and develop. And supporting them.
BREAKING NEW GROUND

PROFILING THE WINNERS OF THE DELOITTE
FINANCIAL SERVICES INNOVATION AWARDS
The financial services industry can trace its origins back centuries, but that tradition doesn’t stand in the way of continued innovation. Technology continues to make new services and features possible and to create new opportunities for winning customers. To recognise this progress, Deloitte created the Financial Services Innovation Awards, to highlight companies and individuals that are breaking new ground right here in Ireland. Banking & Payments Federation Ireland (BPFI) and Financial Services Ireland (FSI) are supporters of the awards programme.

First held in 2019, the awards were postponed in 2020 due to the COVID-19 pandemic. This year, the winners were revealed at a virtual ceremony. Entries came before a six-person judging panel comprising Brian Hayes, CEO, BPFI; Furio Pietribiasi, Chairman, FSI, and CEO, Mediolanum International Funds Limited; Carol Gibbons, Head of ICT & International Services, Enterprise Ireland; Ciaran Hancock, Business Editor, The Irish Times; Gulru Atak, Head of Innovation, Citi; and David Dalton, Head of Financial Services, Deloitte.

Speaking at the virtual ceremony, David Dalton said the awards celebrated continued innovation in the financial sector during a challenging time, even as many businesses still count the cost of the pandemic. “Innovation in financial services has never been more important, so we are very pleased to announce the winners of this year’s awards, after having to postpone last year’s ceremony,” he said. “If businesses can take away one learning from the last year, it is that digital adoption is no longer an optional extra – it must become a core principle of all business offerings as we emerge into a post-pandemic Ireland. Financial services companies are at the heart of this change.”

In this article, we take a closer look at the winners in each category and hear directly from them about what made their ideas resonate not only with the judges, but with the market and their customers. We also cover how each of them responded to the operational challenges of continuing to scale and grow during the COVID-19 pandemic.
Instead of taking a bank and trying to replicate that, we looked at a blank sheet of paper and thought: ‘how should a truly innovative and functional FinTech service work’?

Michael Russell
Country Communications Manager, Revolut

Banking
Revolut’s rapid rise might be well known in financial circles, but what might be less familiar is the company’s approach to innovation and how it’s driving an ambition to become a “global financial super app”.

“We put a lot of focus on our product philosophy and our innovation mindset,” explains Michael Russell, Country Communications Manager with Revolut. “The example I give internally is, Tesla didn’t take an old car and try to electrify it; they started from the wheels up. Instead of taking a bank and trying to replicate that, we looked at a blank sheet of paper and thought: ‘how should a truly innovative and functional FinTech service work?’”

One of Revolut’s values is ‘getting it done’, and the team talks in terms of 10x – that is, ten times cheaper or faster – so it sets ambitious goals for every product. “What helps our product philosophy, if you look at our cadence of product launched, we do a lot in a short space of time,” says Russell.

For each product, from payment accounts, and open banking to travel insurance, and holiday booking, Revolut sets up a dedicated team of engineers, product owners, product marketers, and dedicated regulatory resources. Russell describes this as “quite modular without being siloed” and it enables teams to move smoothly without pulling resources from other parts of the business.

Constantly launching new customer-focused products has helped to propel Revolut to more than 16 million users worldwide and rising. But the company doesn’t follow the Silicon Valley playbook of ‘move fast and break things’, Russell says. “Generally speaking, FinTechs cannot be as fast as a social network or a photo sharing app. We’re in a highly regulated environment so you have to balance your pace and innovation with a responsibility to regulators and customers. We have checks the whole way through so that we know what we’re bringing to market is robust enough from a regulatory perspective and still game-changing from an innovation perspective, and is enhancing the customer experience.”
Insurance
The winning product in the insurance category, Hannover Re’s ‘hr | mule’, started as a proof of concept at the reinsurance company’s Irish operation. It’s since continued through trial stages into a full product target with €6 million in R&D investment to develop it further, backed by IDA Ireland.

Niall Mulvey, Hannover Re Ireland’s General Manager, says the idea came from seeing an opportunity to change the way medical assessments are looked at in providing insurance, and save time in the process. The ‘mule’ part of the name stands for ‘making underwriters’ lives easier’.

Many of the company’s offices routinely handle more than 10,000 cases like this every year, and the process involves physically reviewing unstructured information – potentially hundreds of pages of doctors’ handwritten reports, and prescriptions – to assess the severity of any impairments of the policyholder.

hr | mule leverages natural language processing and artificial intelligence technology to analyse those documents and summarise the salient points needed in making a decision. Mulvey says the tool targets more than 20% improvements in decision making speed. He adds that this benefits policyholders too, as it can help ensure comprehensive considerations of the full, available information faster.

As the product developed, it grew beyond solving the technical challenge of gaining insights from unstructured data. “Design thinking and user experience (UX) has grown in importance,” Mulvey confirms. “As we started to get towards trialling and feedback from users, we understood that the technology on its own isn’t going to solve the business problem – the interface and being able to navigate in a transparent, understandable way was key. If it doesn’t work for the underwriter in their daily job, it’s not a solution.”

Mulvey says he was delighted to receive the award not only as recognition for the team’s work but also because it highlights the quality of talent available in this country. “For us, it increases the recognition of the strength of Ireland on the roadmap of excellence in digital. The quality of data science and digital skills that’s coming through from universities is phenomenal.”

Investment Management
One of the biggest questions facing financial services firms when they need technology to underpin a new product or service is whether to build or buy. Many choose the latter approach, and that helps to create a market for companies like Fund Recs, winner in the Investment Management category.

“We describe ourselves as outsourced innovation for our clients. They hire us for the investment that we make,” says Fund Recs CEO and Co-Founder Alan Meaney.
Fund Recs automates the previously manual process of reconciling a company’s internal records, like share portfolios, with those of a bank, broker or custodian. Since it was founded in 2013, it has won 30 clients including fund administrators, asset managers, and audit firms.

The company recently launched its Velocity platform which empowers fund administrators to process valuations faster and with increased oversight. This follows the launch of Fusion in 2019, which gives users control of their data.

Building trust with customers is critical, which is why Fund Recs has chosen industry certification in the SOC 2 and ISO 27001 standards as a way to do this. Winning the award from Deloitte is an extra validation, Meaney says. “When we’re pitching to large financial services firms, there’s an element of credibility we need to establish. Part of that is existing success and expertise of the team, but also recognition from industry peers.”

News of the award has generated market interest for Fund Recs, and some of those discussions have moved to full sales conversations. “It’s been great for us and continues the positive momentum,” adds Meaney.

Over the next 12 months, the Dublin company aims to double its clients and headcount, which currently stands at 30 people. “Fusion solves a big problem for customers where the data they have is in non-standard format. It’s something everyone struggles with. A lot of clients are looking for automated solutions, and digital transformation became a buzzword during COVID-19. Now it’s number 1-3 on the priority list instead of 5-9. As a solution provider, we want to ride that wave.”
Most Disruptive FinTech and overall winner

As overall winner of the 2021 Deloitte Financial Services Innovation Awards, and in the Most Disruptive FinTech category, AYLIEN has been through several stages of innovation - first through its technology and feature set, and more recently through refining the interface the user sees when they’re interacting with the product.

“Good user experience [UX] is paramount in this new wave of FinTech,” says Parsa Ghaffari, AYLIEN’s CEO. “Expectations from end users have gone up. The likes of Slack or Intercom have set a very high bar for good UX and what a user expects from an SaaS platform. That requires an investment into the talent. Traditionally, we’ve been an API company serving developers and data scientists and now we’ve infused front end and UX talent into our company with designers who understand UX, and we have started to ramp up by looking for design leads and front-end engineers.”

When readying its pitch for the award, AYLIEN had just finished extensive testing of a new product called RADAR, which uses artificial intelligence to analyse massive amounts of news and regulatory information to identify emerging risks. The timing proved ideal. “The whole process was a great forcing function and a great opportunity for us as a go-to-market team,” says Mike Waldron, VP of Marketing. “We spent time refining the product positioning, talking to early adopters about the core benefits and the potential impact on their business. That was a really useful exercise even if we didn’t win – but then of course we got very excited after winning the award because it was external validation of what we were offering that we could talk about with prospects.”

AYLIEN has ambitious goals for RADAR. Early indicators from the market are positive, and AYLIEN are currently working with existing and new customers in the financial services space who are ready to start using RADAR – even those with their own data science teams. “We have a single integrated solution that combines the best of data
aggregation, machine learning and data analytics at scale with a simple user interface. The combination of all these factors means it’s cheaper to buy than to build in-house,” Ghaffari says. The company is also gaining interest from investors and planning to expand its team around the turn of the year.

**Social or Sustainable Entrepreneurship**
Winning in the sustainability category, Dublin-based Mail Metrics has managed to grow 40% year on year by combining business process outsourcing with cost reduction and doing good for the environment.

Traditionally, financial services companies communicated with their customers by post. Mail Metrics helps companies in highly regulated sectors like banking and insurance, life and pensions to outsource their mailroom services. It then goes further by enabling those organisations to change how they communicate with their customers, replacing paper documents with SMS messages, secure online portals or secure email.

“By helping customers to go digital, although sustainability is not always the key driver, it obviously has a massive reduction in their carbon emissions because they’re not printing and posting letters. By sending something electronically compared to by printing, you can expect to reduce the cost per communication by up to 70%,” says CEO Nick Keegan.

“We’re solving a genuine problem. The demand is there – it can be seen by the fast growth of the business. We found a niche and we really doubled down on it.”

Having signed its first customer in 2015, Mail Metrics has grown organically ever since. This year, it acquired two companies, Dublin-based Persona and UK operator Forth Communication, adding €12 million in annual recurring revenue to the business and bringing staff numbers to 100 people. Now, it’s actively looking for further growth through acquisition in Ireland and the UK.

Keegan says the social media response to winning the FSIA award has made the Mail Metrics team reflect on how it can do more for sustainability. The company is looking into initiatives like planting trees to further offset carbon emissions and putting a carbon calculator on its website to show customers what they can save by working with them.

“Sustainability is front and centre now; customers are asking about it,” he says.
Remote and resilient: how the award winners coped with COVID-imposed lockdowns

The 2021 Financial Services Innovation Award winners stayed operational during COVID-19, even as restrictions forced mass office closures to cope with the pandemic. Technology helped to ease the transition to remote work, but as their experience shows, sometimes other challenges emerged.

“We have collaboration tools that we didn’t have five years ago, like Zoom, Slack and Teams, to enable us to work together remotely,” says Alan Meaney, Fund Recs CEO and Co-Founder. “In my experience, you tend to be more productive at home working remotely, but you can find yourself at 2pm not having had lunch. We had to build a bit more flexibility around the working hours, and to try and support the team around their individual circumstances. We tried to be aware of the stresses people were under both from COVID-19 and also being isolated from their work colleagues.”

It was a similar experience for AYLIEN. “With modern IT infrastructure, everything has been in the cloud from day one,” says CEO Parsa Ghaffari. “However, the bigger issue was at a human level: it’s been a tough period for everyone including our team. We tried our best to maintain the same productivity, but we also held numerous social events to maintain our connectedness, and we increased the frequency of ‘all hands’ meetings, so no critical piece of information would get missed.”

Many of the companies were still hiring during lockdown. Hannover Re grew its digital team over the past 18 months and the results surprised Hannover Re Ireland’s General Manager Niall Mulvey. “It has worked well. For example, I would have been of the bias beforehand that you couldn’t hire as effectively without a face-to-face meeting. The virtual face-to-face meeting has shown its value in many ways. Hiring-wise, it’s been much more effective than I previously envisaged.”
Revolut also scaled up its Irish operation significantly during COVID-19. More than 50 of its 60-strong team in Ireland were interviewed, hired, and onboarded remotely. “Now we’ve got people working in places like Kerry and Waterford – talent working all over the country that would have previously been unavailable to us. The productivity has gone up,” says Michael Russell, Country Communications Manager with Revolut.

Mail Metrics stayed resilient because of the nature of its business. “Despite the macro environment, our customers still need to correspond with their customers. They needed their pension statements or insurance renewal notices. Even during COVID-19, we grew because all of our customers remained open,” says CEO Nick Keegan. This created some practical challenges since the company’s offices needed to remain open. “For anyone who had to come into the office, we had to split the teams up to keep people isolated from one another. If we had had an outbreak, that was a big deal for us, so we put a lot of focus on our disaster recovery and business continuity planning, so we were well prepared in that respect. We had to figure out duplication of resources, organise different pods for people, and ensure we had no single point of failure. Touch wood, there was no impact.”

Now we’ve got people working in places like Kerry and Waterford – talent working all over the country that would have previously been unavailable to us.

Michael Russell
Country Communications Manager, Revolut
Mastercard’s transformative approach to building new solutions is why its Chief Innovation Officer, Ken Moore, won the Leadership Award at the Deloitte Financial Services Innovation Awards. Spearheading Mastercard’s global R&D and innovation initiatives, Moore and his teams play a critical role in launching solutions that power the company’s shift from card-based payments to a diversified technology player.

Mastercard is working on leading-edge solutions that span new payments networks, digital identity, cyber security, a wide range of AI-based services, and next-gen commerce. And Ireland has played a significant role in that evolution. A new purpose-built campus in Sandyford will house the company’s global R&D headquarters and its European Technology Hub. Mastercard intends to grow to more than 2,200 employees in its Dublin Tech Hub over the next three years, a testament to financial services innovation happening on these shores.

“As a company that employs 25,000 people overall, a significant portion of our workforce will be based in Ireland then. And these are high quality, largely technology roles, building products for our global client base,” Moore says, describing himself as “incredibly proud” of his part in that journey.

Moore says Ireland has a lot in its favour as a base for innovation. “Technology has democratised where we can work from, while Ireland clearly ticks a lot of boxes – it has the talent pools of the broader European market, the technology ecosystem here and the university graduates.”

With that said, the Irish operation’s growth within Mastercard “didn’t come overnight ... it took time,” Moore adds. “It’s about constantly building your reputation for the ability to create and execute on new solutions.” He points out that while most people credit Thomas Edison with inventing the
lightbulb, it had in fact been worked on by others for years. The difference was, Edison commercialised it. “That starts to talk about what innovation is: it’s the hard yards of turning an idea or concept into something new that creates value.”

Moore describes his remit as ambitious and forward-looking, helping to position Mastercard and its clients to stay ahead of emerging trends, technologies, and changes in consumer behaviour. However, when discussing his teams’ areas of focus, he stresses the need to build a diversified portfolio of work with disruptive and riskier ideas balanced by more adjacent ones with a higher probability of success. “Unfortunately, numerous innovation labs focused solely on a disruptive future that was too far away at a time when innovation tomorrow and the day after was more important. Many of those labs have ceased to exist so it’s about balance.”

To achieve this, he is also building a culture of learning and exploration. “It’s about enabling your team to work on some of the most pressing problems facing us today, demystifying emerging tech and how it could solve those problems. One of our central tenets is how to build a learning culture within Mastercard and offer a place where talent continues to develop and upskill,” Moore said.

Throughout Moore’s career in financial services, the two consistent themes have been his ability to spot the potential in emerging technologies and his approach to balancing innovation with execution. Before joining Mastercard, he was a founder of Citi’s innovation lab in Dublin. Founded in the depths of the financial crisis, Moore speaks fondly of his time with Citi and credits it with helping to make him a “practical innovator”. He points out that at the time of its founding, “people in financial services were worried about what had happened yesterday and what was happening today; far fewer people were worried about the future. Here was someone from Ireland saying: ‘there’s a different way’.”

Another constant throughout his career has been convincing people to join him on potentially risky journeys into the unknown. “If you take ‘leader’ in its purest definition, it’s someone who has followers. I would define a leader as someone who is a little inspirational or visionary because you have to excite people about what’s possible. Most leaders – and I strive for these qualities myself – have a mix of IQ, EQ, and DQ (decency quotient). When they pilot the ship, they have the vision to take a bold course of action but recognise that it takes the whole crew to reach the destination.”
1. Ken Moore, Chief Innovation Officer, Mastercard (left), accepting the Leadership Award from David Dalton, Partner & Head of Financial Services, Deloitte (right)

2. Our judges: Brian Hayes, CEO, Banking & Payments Federation Ireland, (left) David Dalton (centre), Ciaran Hancock, Business Editor, The Irish Times (right)

3. Our host Gráinne Seoige

4. Nick Keegan, Founder & CEO, Mail Metrics (left), winner of the Sustainable Entrepreneurship Award, with Ciaran Hancock, The Irish Times (right)

5. Brian Hayes, CEO, Banking & Payments Federation Ireland

6. Daniel Casari, Agile Project Manager, Hannover Re, winner of the Insurance Award, with Gráinne Seoige

7. Parsa Ghaffari, CEO, AYLIEN (left), accepting the Most Disruptive FinTech Award and Overall Winner Award from David Dalton (right)
BURNING QUESTION

SUSTAINABILITY IN FINANCIAL SERVICES FIRMS
Sustainability has never been more urgent than it is now. When the Intergovernmental Panel on Climate Change (IPCC) released its report in August 2021 outlining the scale of human-induced climate change, the message could not have been clearer: only by acting now can we hope to limit global warming.

What might be less well known is the significant and influential role that the financial services sector can play in this effort. There are several key reasons why.

The world is moving towards a climate-centric culture, and banks, investment managers and insurers are expected to do the same. Banks are a large part of everyone's daily life, so there is an expectation...
on them to lead by example and to take on an advocacy role. Banks have extensive supply chains so they can influence the behaviours of suppliers as well as customers.

For their part, customers are starting to demand more environmentally friendly products. The sector needs to continue developing its own green products such as loans, bonds, and mortgages. Some banks are beginning to offer incentives like lower interest rates for buyers of A-grade energy-efficient houses, or loans to convert their homes to lower-carbon technologies such as solar panels.

Regulations will play a growing role in enshrining sustainability in financial institutions. Today, regulations are already forcing wealth managers to redirect capital to more sustainable investments, and to sustainable products.

In the EU, there are at least 20 regulatory frameworks that are being revised to take account of climate change. The EU Corporate Sustainability Reporting Directive will introduce substantial changes to the current sustainability reporting regime and will apply to all corporates of a certain size.

The EU Sustainable Finance Disclosure Regulation came into effect in March 2021, obliging investment management firms to assess the sustainability risk of a product and make disclosures to the market. This is a relatively unusual case of regulation moving faster than the market; normally it’s the other way around. At some point in the next five to seven years, we expect to see a convergence between regulation and the market, with a common language emerging around company disclosures.
In the past, as financial institutions moved towards a culture of protecting the consumer, sustainability tended to fall to the conduct risk and compliance teams. Now, however, the issue is far too big. It needs to become embedded in the organisation’s operations, starting with the ‘tone from the top’ where the board is bought in to the strategy, there are policies in place, and it’s connected to the bank’s risk appetite.

Boards of banks are skilled in running banks – a task that historically has always been about maintaining share value. Now, however, many banks are hiring climate scientists and risk modellers to assess the financial impact of climate change on the organisation. Those are technical skills and fields of expertise that banks didn’t have before, and consequently boards need to upskill or acquire skills to oversee that activity in the bank.

Enterprise risk management has evolved over the years, and now encompasses both financial risks such as liquidity and capital adequacy, and non-financial risks like conduct risk and money laundering. The sustainability issue requires finance, compliance and risk management to work together horizontally, not in silos. Sustainability is fundamentally about having a strategy that’s intended for the business to survive long after the current executive has finished its term.

Even before the IPCC report, it has been noticeable how momentum on sustainability has picked up speed in the last year. There are still degrees of maturity in the sector: some of the leading global names have been very active, making significant financial commitments to sustainability.
For example, the insurance sector is ahead of the curve on physical assets and risks because that’s their business, assessing risk, which positions them well for the ‘E’ in ESG. However a bank would have needed to develop conduct risk, diversity and inclusion and governance frameworks over the past number of years, which positions them well for the ‘S’ and the ‘G’. The investment management sector already must make sustainability disclosures to investors about risk in the product.

At an industry level, there is a lot of research underway and planned into the social impact of climate change. It is also worth saying that the financial sector in its current form has a significant carbon footprint. Historically, the international financial sector has high volumes of travel, particularly among executives. Many operate their own data centres which are heavy consumers of energy. Many domestic banks still have extensive branch networks, and even after rationalisation there is a large footprint of physical buildings.

Some firms have out-of-date practices like company cars (although this could also become a potential opportunity to convert to electric vehicles). Changes to long-standing practices need to be deep and lasting, not a PR opportunity; regulators are conscious of, and watching for, efforts that come across as ‘greenwashing’.

So, what should Irish financial services providers do to get ready for this changed environment? The first step should be to ensure they are equipped to respond to the various forces of regulatory demand, customer demand, or climate risk modelling demands. There should be a major focus on skills assessment to ensure the bank has the capabilities it needs – or has a clear plan to get them.

Making a difference on climate change is a path everyone must make together. No one organisation can do everything on its own, and without greater collaboration between large organisations, this won’t work. If one organisation is out in front, it will make no difference to the trajectory we are on with climate change. This is not a race for first place; we all need to cross the finish line together.

Therefore, banks need to evaluate with whom they should partner. For reporting purposes, a lot of data needs to be harnessed to make accurate reports to shareholders, investors, and customers.
There may be a digital play to get hold of that data to analyse it. Alternatively, the answer to the partnership question might not be obvious: it could even be a competitor (when it comes to climate change, there is no competition). It is vitally important for the industry to collaborate with other entities and individuals on this issue. It’s not a simple change to financial regulation; there’s much more at stake.

Financial services providers have a huge societal role – and as large employers themselves, they have an unrivalled position to change the dialogue around climate change. The large named banks will need to lead from the front: in how they interact with customers, and large corporate clients, they can have a major influence by sharing best practice and by developing attractive products that encourage sustainable activity.
Climate change
Climate change preparedness has quickly become a business imperative for financial services firms as stakeholders progressively demand accountable action. In the human-centred future of financial services, how a firm addresses issues of climate change will play a vital role in attracting and retaining customers and talent and driving growth. With increasing regulation and potential for systemic risk implications, how can you better assess the impact of climate change on your business while being a responsible corporate steward? Learn how strategic climate risk management can help you thrive in the economy of the future by identifying sustainable investment opportunities that elevate your bottom line while creating opportunities to make a positive impact on the communities in which you do business.
Imagine the financial services industry of the future, where leading banks, securities firms, wealth managers, asset managers, and insurers have incorporated risks relating to climate change – such as extreme weather, the potential for losses, regulatory guidance, and stakeholder pressure – into a broadened risk agenda. These organisations will have navigated, embraced, and even benefited from a journey of centring climate change as a key strategic issue, finding ways to proactively address climate challenges. Capital markets and society-at-large can benefit from their transformation and innovation.

Until now, taxpayers have borne most of the risk involved with transitioning to clean energy and energy-efficient solutions. But in the future, the private sector will need to play a significantly bigger role. The deployment of technologies and solutions to combat climate-related challenges will largely depend on the financial services industry’s willingness and ability to address key funding gaps.

In this not-so-distant future, sustainable finance will become engrained in the business, and the integration of climate risks into day-to-day activities should become the norm. As they prepare for this eventuality, financial services firms can certainly take a page out of the playbook they have used to identify, model, measure, manage, and report non-financial risks that are difficult to quantify and track. But in many respects, incorporating climate risk into existing risk frameworks will be a unique, and sometimes disruptive, challenge.
What a comprehensive climate programme looks like
We believe the industry will rise to the occasion, while recognising it is quite specialised and nuanced. The end state may look quite different for an asset manager, a wealth manager, a bank, a brokerage firm, or an insurer. Business leaders will need to work hard to understand the aggregate effects and benefits of every decision they make.

But certain shared traits will define ‘climate-centred’ financial firms of the future. These organisations will be constantly sensing, monitoring, and communicating climate-related risks and reflexively adjusting their corporate, business, and risk strategy to align with the changing landscape. Specifically, three factors should set climate-centred firms apart from their less-prepared competitors:

01. **Climate-infused governance and corporate strategy.**
Firms will incorporate climate considerations into every strategic decision. They will institutionalise this mindset throughout the organisation and promote it more broadly through external partnerships and advocacy.

02. **Targeted product and service innovation.**
New offerings will address market demands for environmental sustainability and protection against climate impacts.

03. **Enhanced risk management capabilities.**
Climate-centric information should be expanded, which can enable firms to manage the financial implications of climate change on a day-to-day basis, generate new insights, and bolster reporting.

Importantly, these end-state factors go beyond firms’ commitments to reduce their environmental footprint and transition to a carbon-neutral setting. Here, we explore changes only the financial services sector is positioned to implement, given its long-standing role as a capital provider and facilitator of spending and investment decisions across the economy.
Figure 1. Elements of a comprehensive climate programme in financial services.

01 Governance, corporate strategy and disclosures
Clear escalation and decision-making framework for climate risks, as well as the firm’s climate narrative in the market.
- ‘Tone from the top’ and governance structure
- Climate risk alignment with long-term corporate strategy
- Effective climate-related financial disclosures

Chief Executive Officer, Chief Sustainability Officer, Head of Corporate Responsibility or equivalent.

02 Business strategy, products and services
Development and adaption of business strategy and operating models to a low-carbon economy.
- Resilence of business models to climate change
- Market segmentation and prioritisation
- New products and services

Head of Sustainable Finance or equivalent.

03 Risk and compliance
Integration of climate considerations into risk management frameworks and compliance with regulations.
- Integration of climate risk to ERM framework
- Climate risk assessment, capabilities and tools
- Firm’s compliance with climate-related regulations
- Internal audit validation of climate risk

Chief Risk Officer, Chief Compliance Officer, Internal Audit Head, Head of Stress Testing and Capital Planning Executives.

Source: Deloitte analysis
A climate-centred firm of the future should have a clear philosophy, position, and intentions related to climate risks.

Governance and corporate strategy

A climate-centred firm of the future should have a clear philosophy, position, and intentions related to climate risks. Financial firms will need to realign their business models to integrate climate, as well as other environmental, social, and governance (ESG) considerations, into all business decisions. Climate risks and opportunities will no longer be regarded as separate from the core business; they will become intrinsic to a firm’s success.

The board of directors will play a vital role in setting the right tone at the top. It will need to develop a clearly established structure for climate oversight. Board members will need to become more proficient in climate and other ESG risk matters, and they should be regularly briefed when new issues emerge. This can enable the board to ask relevant and difficult questions that probe management’s direction and strategy.

Specific climate-focused initiatives will be driven by sustainability and climate risk professionals. These will include climate scientists and financial modelers who understand the intricacies and overlap between climate science, policies, and financial risks. Climate-centred organisations may still have a dedicated sustainability team or chief sustainability officer, but they will rely more on issue and topic specialists who will be integrated throughout the company. Meanwhile, the CEO will have overall management responsibility. Climate-related goals will likely cascade down through the organisation by aligning them with employee incentive compensation.

Financial firms can use an integrated management reporting system that quantifies the financial implications of climate-related decisions to inform decision-making. High-quality and reliable climate and other ESG disclosures and external communications should provide insights to market participants, consumers, and policymakers into how effectively the company manages ESG impacts and dependencies.
Already, leading financial firms are forming specialised teams to support enhanced disclosure and transparency of climate-related business risks and opportunities, and how they are being managed. Firms should widely disseminate this information by using a ‘stakeholder first’ lens to help prioritise and get ahead of multiple evolving expectations. Over time, they should establish clear policies and processes that reinforce their positions on climate and ESG goals.

Finally, a key to each firm’s success in this arena will be their ability to effect broader change. To help accomplish this goal, firms could create or join multisector and multidisciplinary industry partnerships and regulatory collaborations that focus on accelerating ESG and climate risk transformation efforts. Modelled on the work of the Commodity Futures Trading Commission’s Market Risk Advisory Committee, these opportunities will bring together stakeholders from all industry sectors, including competitors, to help solve the most challenging issues facing the industry, and can help advance new climate-focused practices. These collaborations should strengthen relationships with regulators and supervisors by helping reduce systemic risks.

**Targeted product and service innovation**

While investors and regulators expect businesses to have a plan for managing climate risks, customers increasingly want product and service offerings that align with their views and beliefs. Some leading firms have already started creating dedicated businesses and offerings built around sustainability, diversity, and other ESG-related mandates, with climate being one of the most prominent themes.

These efforts should crystallise in the future; firms should offer a full suite of climate-related products and services that tie back to their specific business models. Here’s how that may likely develop in each sector:
Banking and capital markets
Having experience funding low-carbon companies and projects, climate-centred banks and brokerage firms should be able to differentiate among degrees of risk and profitability across their client portfolios. Credit decisions may be based on specific and idiosyncratic variables and expectations, with advanced pricing models linked to transparent and established industry taxonomies to categorise activities across the ‘brown-to-green’ lending spectrum. Firms should integrate climate assessments into new product approval processes. They should also continuously assess clients’ existing and potential stranded assets, those prone to write-downs related to climate issues, and use this information in pricing.

Carbon pricing in the United States may become a reality in a few years. With or without a legislative mandate, firms should move forward; they could use derivatives to push more capital toward sustainable investments or allow market participants to hedge risk based on ESG factors.

In fact, an entire market of ESG exchange-traded and OTC derivatives is already developing. Many of these products, such as interest-rate or credit-default swaps, have a climate-specific component. While catastrophe and weather derivatives have been used for years to guard against natural disaster losses or provide allowances when temperatures are above or below predetermined thresholds, they will likely become more prevalent and part of the sector’s core offerings and portfolios.

We anticipate retail banks will also tap into consumers’ increased awareness and interest in climate-conscious products. Picture mortgages that incentivise eco-friendly borrowing (for example, to add solar panels to a home), or credit cards that allow borrowers to track the carbon impact of each item or service they purchase.

Insurance
Climate and ESG issues have already become a central focus for the insurance industry. Recent years have witnessed a surge in the number of catastrophic events related to climate change, such as wildfires, heat waves, reduced crop yields, and coastal and inland flooding.

These events will require insurers to develop more dynamic modelling approaches that rely on past loss experience and uncover nonlinear effects, including correlations between climate hazards, social impacts, and economic activity. Climate-centred insurers will likely offer products that cover climate risk more directly, expanding into other ESG effects. To some extent, this is already happening. For instance, you can purchase insurance that protects food supplies against the impact of climate change. In the future, climate-centred insurers will detect, price, and cover a broader range of similar relationships as part of a wider socioeconomic solution.
In addition, insurers will likely expand their offerings from helping customers simply transfer risk to mitigating, preventing, or recovering more quickly from climate-related catastrophes. For example, insurers could offer lower premiums to encourage the use of more resilient construction methods. These firms could collaborate with the public sector (such as municipalities, regulators, and policymakers) to improve construction standards and develop policies that limit growth in areas prone to physical hazards. They could also help governments decide where construction should – and shouldn’t – be developed.

Climate-centred insurers should continue to balance asset and liability management activities, matching risks with corresponding climate- and ESG-driven assets (for example, divesting from thermal coal and reinvesting in green energy alternatives). Insurers will likely focus on optimising risk pools that minimise the asset and liability mismatch related to climate or other ESG risks, recognising that climate-related catastrophes have immediate effects on other ESG risks.
Wealth and investment management
The wealth and investment management industry is already developing and distributing solutions that cater to investors seeking ESG and other nonfinancial objectives. Leading investment managers are currently using these two strategies to incorporate climate risk and ESG metrics into their portfolio construction process:

- **Integration strategies:** Seek to maximise financial return by incorporating ESG principles into the investment process or through engagement activities.\(^6\)
- **Thematic strategies:** Aim to make a measurable impact on specific issues through their investments, such as investing in renewables.\(^7\)

In the future, more wealth and investment managers will likely differentiate their products to cater to the demands of institutional and retail investors. As they continue to broaden their product array, they may develop index funds and customised strategies that are aligned with ESG-related goals, such as the United Nations’ 17 Sustainable Development Goals (SDGs), to track the returns of positive-impact companies.\(^8\) For each of these products, investment managers will need to share how they compare to the market in terms of ESG climate metrics and how this impacts performance, or how they perform against broadly utilised ESG ratings (for example, MSCI ESG Ratings). These efforts will likely accelerate the classification of green and sustainable products and should include relevant disclosures.

As part of this evolution, climate-centred wealth and investment managers should actively monitor and engage with target companies and advocate active, visible, and credible climate risk management strategies and capabilities. They should also invest in capabilities to identify true climate and ESG impacts. This is important because, as the risk of greenwashing increases and ESG disclosure becomes more common, it may become more challenging to separate ESG leaders from laggards. The Organisation for Economic Co-operation and Development’s Business and

While investors and regulators expect businesses to have a plan for managing climate risks, customers increasingly want product and service offerings that align with their views and beliefs.
Finance Outlook 2020 found that, for Standard & Poor’s 500 companies, ESG scores from major rating firms are highly variable and show low correlation with actual results. This suggests that raters have fundamentally divergent views about ESG performance.9

Advanced wealth and investment firms should have the content and domain expertise to overcome these gaps, particularly where ESG data is unreliable, not available, or where accepted standards do not exist. They should go beyond incorporating self-reported data or climate/ESG metrics from third-party providers and perform deep sector or even firm-level analysis to create bespoke data sets of firms they invest in. At one leading financial firm, their in-house sector analysts’ expertise in firms’ business models, product strategies, operational nuances, and regional characteristics has become a critical component in evaluating ESG and climate (and financial) performance.10

As other investment firms seek to replicate this kind of success, they will need to be transparent about their methodologies, allowing investors to evaluate the quality and granularity of their data and how it is used to build portfolios. Analytical rigour will likely be a major differentiator that sets leading financial firms apart from their competitors.

Large global firms may also be able to influence the political debate about climate change. Sovereign bond ETFs have been designed to weigh countries on their level of risk from climate change.11 This development may prompt countries to change their approach and policies as the link between climate change and creditworthiness may grow stronger.

**Enhanced risk management capabilities**

In the future, climate-centred organisations will have the capacity to manage climate and other ESG risks. Financial regulators recognise that a changing climate poses systemic risks to the US financial system. Regulation will continue to evolve and grow, and climate-centred financial services firms should actively contribute to the dialogue.

Firms that develop advance climate risk modelling capabilities may be better prepared, resilient, and ready to manage climate risk as part of their credit evaluations. They will also create products that account for similar hazards. Creating this type of enhanced risk management may allow climate derivatives to hedge better against climate-related risks, enabling firms to efficiently invest in green bonds and other instruments supporting a low-carbon future. In reality, nothing should stop individual firms from creating such structured products, customised to specific client needs, as long as they are well informed about the vulnerabilities.

Climate risk should therefore become a regular feature of risk management discussions. Today, financial firms have defined thresholds for market risks they are willing to bear. These include factors such as issuer default and correlations; liquidity risks, such as intraday settlements and maturity gap mismatches; and credit risks associated with counterparties and underlying issuers. Tomorrow, climate risk will be just as narrowly defined – people
will no longer need to explain what they mean by the term. Furthermore, climate risk should be embedded in risk taxonomies that capture climate-related physical, transition, and liability risks, and there should be a comprehensive ERM framework that fully integrates these risks. Frameworks will, of course, take different shapes across sectors. But establishing data quality standards, common models, and operational processes can help set expectations across the industry and harmonise risk taxonomies to incorporate climate risk.

To help develop and infuse these risk capabilities, organisations will need to put dedicated teams in place that explore the overlap of climate change, economics, and financial modelling. The analysis these teams provide may blur the lines between climate change and economic risks, uncovering the intricacies of macroeconomic and microeconomic transmission channels. They will work at the client/counterparty level and at the portfolio or fund level, identifying correlations between climate risk and other ESG issues. Climate-centred firms should also consider employing in-house teams of climate scientists to help develop possible scenarios. To complement their analyses, lead economists in financial firms will likely rely on these climate teams as a main source of information.

Digital solutions can help support these efforts. Firms can use several emerging tools and techniques, such as artificial intelligence–driven risk simulations. Firm leaders should incorporate climate risk and ESG into capital allocation decisions. Geolocation and climate exposure analyses and dashboards should aggregate across climate scenarios. Some of this aggregation will likely be standardised across the industry, allowing for interactions and dialogue with regulators.

**A fast-moving opportunity**

Without a doubt, climate risk is a growing challenge to businesses and society at large. At the same time, the world is moving toward a cleaner, more sustainable future, and industries of all stripes are transforming their businesses to do their part. Given its vital role in capital formation, we believe the financial services industry has a predominant
role in addressing these interrelated challenges. Shareholders, regulators, politicians, employees, and other key stakeholders all recognise this – and they're beginning to up the pressure on financial firms to mobilise.

But the onus to act is greater than that. There’s an enormous opportunity on the horizon for those who can effectively mitigate climate risk. Differentiation is as difficult as it’s ever been in the financial services industry. Being climate-centred – and building businesses and practices around the end state discussed above – can be a powerful lever to help firms rise above collective commoditisation. It’s a simple proposition: give the world what it wants and needs, and you’re likely to garner success. And the world won’t wait. Already, leading firms are pushing ahead with climate-driven initiatives and putting teams in place. Transformative opportunities are still there for the taking, but they won’t be for long.

Endnotes
4. For a thorough discussion in determining what is green/brown, please see Network for Greening the Financial System (NGFS): Network for Greening the Financial System, A status report on financial institutions’ experiences from working with green, non green and brown financial assets and a potential risk differential, May 2020.
6. GS Equity Research: “ESG is no longer optional, but approaches differ across asset managers,” February 22, 2021
7. Ibid.
ORGANISED AGAINST CRIME

COMBATING ILLICIT FINANCE
As criminals become increasingly sophisticated, they’re finding new ways to channel illicit money through legitimate banks. In the process, they’re managing to stay one step ahead of the industry. This has a potentially significant impact on Ireland, given its role as a dynamic international financial services hub: a leading player for wholesale banks and investment funds and part of a heavily intermediated international financial landscape.

Over the past two decades, financial institutions based in Ireland have spent a lot of time raising their standards to comply with increasing anti-money laundering (AML) regulations, keeping customer documentation up to date, and remediating issues as they arise. Every year, financial institutions invest a large proportion of their costs into maintaining this
Simply complying with regulations doesn’t prevent a bank from becoming a victim of crime. And the fight against financial crime has become fully digital, following the changed working models after COVID-19 leading to an accelerated shift towards fully digital environments.

But have the banks’ systems kept pace? Are their internal control frameworks strong enough to track suspicious data points, and highlight transactions that seem out of the ordinary? In the physical world, a human employee could compare a passport photo with the person standing in front of them waiting to make a deposit. Face to face contact and human interaction have been very effective in identifying suspicious activity in the past. In the digital world, we rely on algorithms to spot that activity and mark it as unusual. For example, if an account that has had regular monthly lodgements of €10,000 suddenly has deposits of €150,000 at a time, that’s a potential red flag. This kind of detection technology can be costly, and large financial institutions can be slow to adapt.

Another way for financial institutions to detect potential illicit financial flows and identify emerging trends in criminal activity is through information sharing. However, the data sharing forums currently in place are not fit for purpose and they need to be much broader in scope for today’s digital world.

Retail banks, FinTechs, regulators, accountancy practices, legal firms and law enforcement all have their own discussion forums but there is no single, central utility gathering information, detecting patterns and developing typologies of illicit finance activity.
This matters, firstly because without a unified forum, the lack of up-to-date near-real-time sharing of information between all stakeholders is causing delays in investigating suspicious sources of money.

Secondly, it also makes it difficult to measure the cost of financial crime, and specifically illicit finance, to the industry and the economy. In an Irish context, when the Garda National Economic Crime Bureau reports instances of financial crime to the Central Statistics Office, this tends to appear as one number, so we don’t have a breakdown of illicit finance. Similarly, financial institutions may be obliged to report issues around illicit finance to the Central Bank of Ireland, but there is no aggregate data that is shared in the appropriate circles.

But if data can be a help in the fight against financial crime, it can also be a potential hindrance. Under the General Data Protection Regulation, organisations are only entitled to collect the information they need to retain based on the business requirements. The more personal information a bank holds about its customers, the greater their obligations are from a data protection perspective.

This is a difficult balancing act: how far should a bank go to demonstrate that it knows who its customers are? The delicate line between properly addressing the threat of illicit finance and respecting the individual’s right to data privacy is set to remain a key issue.
WHY ORGANISED ILLICIT FINANCE DEMANDS AN ORGANISED GLOBAL RESPONSE

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"Combating illicit finance"
Illicit finance is a major threat to the security and prosperity of all nations. It not only enables criminals to profit from the most heinous crimes, but also finances terrorist atrocities. It causes an immense financial and human cost to society, business and government; a cost that we cannot, and should not, bear.

Organised financial crime prevails over a disorganised system
In an increasingly interconnected, digital world, those engaged in financial crimes are continuously evolving their international operations, working across multiple jurisdictions. They act with a speed and sophistication with which the siloed ‘system’ – government, law enforcement, regulators, corporates, and financial institutions – struggle to keep pace. For example, the Financial Action Task Force (FATF) has identified just how quickly criminals have exploited the COVID-19 pandemic to commit fraud and money laundering.

Despite some excellent examples of successful collaboration, strategic system-wide cooperation continues to be needed. Less than 1% of the billions of dollars laundered annually are ever recovered (Source: Global Initiative Against Transnational Organized Crime).

The regulated sectors, for instance, financial services, have taken significant steps to protect customers and the economies in which they operate. Investment in people, processes, and technology to monitor customer transactions for signs of risk has been huge, and regulatory pressure has been high. Despite this, it has proven extremely difficult to effectively stem the flow of illicit finance.

The word ‘flow’ here is appropriate. Like water, financial crime always takes the path of least resistance, quickly finding its way into the cracks. And a system is only as good as its weakest link. Which is why it’s vital that all system stakeholders collectively – and quickly – address their current weak spots.
Crucially, this requires a commitment from all parties to take an empowered, proactive stance rather than a defensive, reactive one: to own a common ambition and approach, effectively sharing intelligence on individuals and groups so financial crime can be tackled swiftly. Strong international leadership is vital, and it is encouraging to see the fight against illicit finance in all its forms as an area of focus for the new administration in the US.

Only by working collectively as a single, coordinated system can public and private organisations effectively fight illicit finance. Only together can we change how it’s perceived, opposed, and prevented.

Five steps to collectively tackle illicit finance
From Deloitte’s engagement across the illicit finance regime, we believe there are five key steps which the ecosystem should take collectively in response to the threat.

1. Improve alignment
A greater alignment of preventative effort across the public and private sector, concentrating on high-value activities, is paramount.

   This should include better sharing of information and intelligence, such as emerging typologies and tactical data sets, which would sharpen the regulated sector’s ability to identify suspicious activity.

Anecdotally, some banks report that as little as 1% of transaction-monitoring alerts identify information that warrants reporting to national intelligence authorities, suggesting significant effort and capacity in the system is arrayed against activity that does not lead to outcomes.

2. Renew the focus on effectiveness
In some cases, the ability to align resource to where it’s needed most is inhibited by legislative and regulatory frameworks, or their interpretation.

   It is important that financial crime risk management frameworks are implemented by organisations and regulated to prioritise the effective delivery of outcomes rather than focusing on technical compliance as an end in itself.

This article was first published by Forbes ‘Why Organized Illicit Finance Demands An Organized Global Response’, May 2021.
There are encouraging signs that innovative approaches are being considered and progress is being made, such as within the Deloitte US’s recent consultation on enhancing the effectiveness of Anti-Money Laundering (AML) programmes.

3. Increase collaboration
The adage “the whole is greater than the sum of its parts” is certainly true of the illicit finance regime.

Improved collaboration could also enable global public sectors to leverage the capacity and capabilities of the private sector to help drive a more disruptive agenda and secure better outcomes. As an example, global law enforcement could look to the approach taken by the US Department of the Treasury and Department of Justice (DoJ). The DoJ has worked with the private sector for the best part of a decade, bringing in forensic accountants, open-source intelligence analysts and more, which has enabled them to make a dramatic step-change in the seizure of criminal assets.

4. Embrace new technologies
While the proliferation of emerging technologies, including new payment platforms, cryptocurrencies and Digital ID, represent criminal opportunity – with Treasury Secretary Janet Yellen commenting that when Bitcoin is used “it’s often for illicit finance” – it also provides an opening for the ecosystem to start designing out vulnerabilities.

Emerging analytics and encryption technologies will allow us to “see more” in data and enable new kinds of data sharing in compliance with overarching privacy principles.

5. Make broader connections
Illicit finance requires all sectors to play a strong, active role. This goes beyond financial services, governments and law enforcement. Within the global corporate sector social media, Internet Service Providers, and telecommunication companies can all be vectors through which fraudsters access their victims. All have a preventative role to play.

The challenge is significant and requires considerable reform of the current system. But from Deloitte’s experience of working with organisations across the ecosystem, we know that everyone involved wants the same outcome: to prevent crime, protect citizens and customers, and disrupt the criminals. The task, for leaders in both governments and industry, is to harness their shared ambition and go on this transformational journey together.
A CATALYST FOR TRUE CHANGE

ACCELERATING TRANSFORMATION THROUGH CLOUD
To compete and to innovate at the speed the banking and financial services market is now moving, cloud is an essential tool. In this article, we will look at the shift to cloud-driven business transformation, the benefits it delivers, and what this means for an organisation.

For financial services providers, there are many business benefits for moving to the cloud. It facilitates a shift from intuitive to data-driven decision-making, allowing businesses to gain improved customer insights and deliver enhanced services. Underlining data’s importance in this new world, cloud allows easier and faster integration of an organisation’s data with third-party data and third-party analytics.

To stay innovative and agile, financial services companies need to strengthen strategies to invest in cloud for innovation and to modernise legacy systems.
Cloud provides the opportunity to renovate complex legacy IT infrastructure and to manage the cost and support of the IT estate. It increases the speed at which the business can bring new technology platforms into operation. The power of cloud has made it possible to innovate faster, whether that is achieving internal operational improvements or launching new products and services.

**Success story: Metro Bank**
For example, the UK-based retail bank Metro Bank was able to extend its market reach and respond to digital challengers after successfully updating its website and refreshing its mobile banking app. It was able to accomplish this in a 12-month period while delivering an award-winning app that attracted new customers. Metro followed this up with the launch of an account opening solution that allowed customers to complete the process in less than 10 minutes.

The upheaval since the beginning of last year has accelerated progress towards digital-powered services even more. According to industry analyst IDC, cloud infrastructure spending worldwide rose by 39.1 per cent in Q2 2020 – the period immediately following the first wave of the COVID-19 pandemic.

**Benefits of cloud transformation**
This recent period of uncertainty has made the ability to adapt even more valuable. Cloud technologies enable organisations to be more agile and alleviate some of the constraints and limitations of legacy technology. Using the cloud as a platform means organisations can innovate quickly and reduce the time to market for new products. It also enables them to respond at pace to changes in market or regulatory conditions.

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FinSight | **Accelerating transformation through cloud**
as a platform means they can innovate quickly and reduce the time to market for new products. It also enables them to respond at pace to changes in market or regulatory conditions.

What’s more, the cloud’s ability to store and process large volumes of data allows organisations to gain a single view of the customer, of risk, or of a single regulatory reporting hub. For example, as there are several different types of risk, credit risk would give a single view of the bank’s loan exposure in principle. A single customer view would give the customer value and exposure point of view with the trickle-down of next best action, which might be to upsell or cross-sell a related product.

Even before COVID-19, many industries had already been making progress towards embedding the cloud computing model in the core of their operations, making them more intelligent, automated, and optimised. Banks and financial services providers have traditionally struggled to do so at pace because of the complexity, scale, and technical debt of their legacy technology landscape.

**What this means for your organisation**

The potential for innovation in banking is enormous, and while many financial players are creating cloud-enabled digital solutions to differing levels within their organisations, they all face common challenges for successful cloud adoption. These include strategy, culture, legacy technology, talent, regulatory compliance, and risk. Legacy technology and regulatory compliance are often seen as the hardest to overcome but all of these challenges have solutions.
Clear cloud adoption strategy
All roads now lead to cloud. But before the work of cloud adoption begins, the business needs a roadmap for the journey. The reality is, no business has unlimited resources to spend on innovation and on modernisation. What’s needed is a clear strategy that reflects the macro challenge – the as is state of IT systems and the proposed direction of travel. Upgrades to key systems need planning on a phased basis based on the strategic priorities in the business.

Culture shift
Above all, cloud needs clarity about the ambition of what the business wants to build. This is essential for creating the right foundations. Ultimately, cloud is a way to consume IT, so getting the best out of cloud involves change in how the business delivers IT today. It is a cultural change as much as a technological one, and it needs the organisation and IT teams working in closer alignment, moving to a product mindset rather than a project mindset.

Legacy technology
Most FS organisations have been investing in IT for many decades. In this time the technology landscape has grown and evolved, core systems have been built in-house, bought from third parties, or acquired through acquisition – and in all likelihood, they were built in many different ways. These systems provide the backbone of the business and are indeed a legacy to be cared for dearly, but this also comes at the price of technical debt and high operational costs. Hybrid cloud architectures can allow organisations to unlock the power of cloud while continuing to extract value from legacy core.

Two-speed IT
When looking at cloud transformation, a client could consider a two-speed IT architecture which would allow their teams develop their customer-facing capabilities at high speed while decoupling legacy systems for which release cycles of new functionality stay at a slower pace. This can help avoid challenges in ICT where a combination of different banking-product lines, among them credit cards, investments, and checking and savings accounts, are often in silos and may have to be managed with different speeds.

Talent and resources
As the rate of change of technology increases, it becomes harder to keep the systems and the in-house talent needed to maintain them up to date. Added up, they create an overhead in the organisation that needs to keep those systems...
Cloud needs clarity about the ambition of what the business wants to build. This is essential for creating the right foundations.

running. This consumes a lot of IT effort, and because resources are finite, there’s less scope to transform, modernise and innovate.

The strategy of moving to a cloud operating model must acknowledge the need for the right skills – which may be different from the resources in the business today. It also needs the right vendor relationships based on decisions to build, buy, or outsource.

**Regulatory compliance**

The regulatory context for cloud adoption often creates concerns and confusion in the banking industry. The idea has incorrectly endured that regulators are opposed to or a roadblock to banks adopting cloud technology, but Deloitte research elsewhere has shown that being in a heavily regulated industry need not stand in the way of moving to the cloud.

In fact, moving to the cloud can make it easier to comply with regulations because it makes it easier to track, trace, and audit data. By having data in one place, rather than dispersed across multiple core systems, it’s easier to respond to questions from regulators – while also improving levels of service to customers because the information is easier to access. Instead of taking weeks or longer to cross-check records, the data is available quickly in a single view.

**Addressing risk**

Security is at the core of every banking function, and in many cases, cloud can improve an organisation’s risk posture because the level of protection available in the cloud is often far greater than any individual business could apply by itself, with highly granular levels of access control that ensure better management and protection of the data.
What’s more, there are robust, independent, globally accepted standards for moving to the cloud. Frameworks including ISO 27001, for example, are in play, making cloud safer and providing a lot more security around movement of data. The rigour they apply to companies’ security can make compliance with regulations like the EU GDPR easier.

None of this is to downplay the effort of getting to the cloud. It’s hard. Whether building greenfield digital applications in cloud, or migrating core systems and all their data, it is a material investment with lots of risk. However, if banks and financial providers get it right and gain, for example, a single view of their customers or loan books, that is game changing for the business.

Endnotes
2. Deloitte Luxembourg, *Regulatory barriers to the Cloud in financial services: perceived or real?*
COVID-19 has infused the urgency to transform the way business is conducted across the world. It has accelerated the pace of digital transformation, spurring organisations to innovate faster or risk losing eminence or even going out of business. Fortunately, this urgency of transformation can be supported by rapid advances in digital and software systems. Cloud computing is one such technological marvel that has taken the world of business by storm. It can help organisations find a way to survive and thrive in an uncertain business environment.

Organisations have just touched the surface of cloud that still has huge untapped potential. They need to brainstorm on how to build cloud into their strategies to capture maximum value, and put cloud at their core.
This paper discusses how technology has shaped up from the past two decades to the present day of cloud computing; while bringing in a host of technological advances fuelling the present generation of businesses. It also covers accelerators for cloud adoption and the driving force behind those accelerators. Thereafter, it details what we consider barriers preventing organisations from embracing cloud to the same extent as some other first movers and digital natives. The paper finally concludes with a view on how businesses can move forward when you are either the disruptor or the disrupted!

**Growth of the cloud infrastructure** has been so profound, courtesy of its push-button accessibility, that it has transformed how businesses look at technology now.

**Rise of the cloud**
Modern-day cloud computing is a result of multiple advances made in several underlying technology infrastructures, such as hardware, software, networking, and storage. Over the past two decades, Big Tech companies have grown exponentially. However, growth of the cloud infrastructure has been so profound, courtesy of its push-button accessibility, that it has transformed how businesses look at technology now. Earlier in the days of mainframe computers, the focus was on managing large and complex business transactions, large data warehouses, and reporting. IT infrastructure required huge capital expenditure and changes to systems were slow, prone to errors, and costly.

**How monoliths gave way to microservices**
Technology companies, such as Google, Amazon, and Uber spawned new business models on the back of tech innovation. They became both creators and consumers of the technology they were producing. Bigger, faster, and cheaper became the mantra driving tech innovation.
Soon enough, massive monolith systems started to be decoupled with the launch of client server technology. It was an intelligent innovation that, in part, came out of the fundamental understanding that software systems can be fragmented into independent components and then made to talk to each other to perform desired operations.

This concept of decoupling led to an innovation in distributed server technology, which was not new, but its application to build commercial grade applications took time to evolve. The idea was to use resources such as servers and storage more effectively and efficiently to improve returns on IT capex.

Software engineering paradigms were combined to build decoupled modular applications based on microservices + API frameworks. Infrastructures of massively scalable compute and storage systems were upcaled; application and data were no longer needed to be packaged in a single monolith architecture.

Business imperatives (agility, faster go-to-market, lower costs, and scale), technological innovations (distributed computing, microservices, API economy, serverless, and cloud), and academic research (faster algorithms, and cheaper and more efficient compute and storage devices) converged to bring about the explosion in the world of business we are witnessing today.

Welcoming big data, Machine Learning (ML), and Artificial Intelligence (AI)

Hardware design and software engineering paradigm shifts led to the emergence of big data whose roots can be traced to the original map-reduce paradigm developed by Yahoo.

Moreover, data, data analytics, and data management gained importance as a discipline. ML and AI have become new buzzwords.

A dearth of skilled talent

Using new-age technologies requires advanced skills. Businesses migrating their local captive data centres to cloud, need data scientists, and software developers to fill the roles thus created. New roles, such as product owners, scrum masters, and agile coaches mirror the needs of modern software development paradigms predicated on agile principles (such as iterative software development in time-boxed sprints, autonomous teams working as pods with cross-functional skillsets, frequent product releases, and automated deployment and releases). This has led to a serious dearth of talent and the need to re-skill (retire/retrench) the existing workforce.
Data generation and dissemination saw a sudden and massive rise. And, big data had to have its own set of processing standards to convert raw data into information. ML algorithms became one of the ways of taming big data to distil useful information. Data scientists could run these algorithms and other advanced ML technologies to crunch huge volumes of both structured and unstructured data taken directly from massive storage systems (data lakes). Moreover, they could successfully make predictions and classifications. This was the precursor to AI.

Data-related job roles and opportunities have mushroomed across the globe. Even Harvard Business Review calls the role of a data scientist “the sexiest job of the 21st century”.

Cloud infrastructure (provided by Amazon Web Services, Microsoft, Google, etc.) allowed the widespread use of these technologies. This scale would not have otherwise been possible.

The chart below tracks the evolution of technologies from the days of the mainframe to the present day of cloud and advanced analytics, including ML and AI.

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Not on cloud? You have no position on earth either
ML programmes require technological infrastructure at scale, robustness, and resilience that only cloud systems can provide. The earlier avatar of IT infrastructure; ubiquitous data centres, are gradually being replaced with large networks of machines with almost infinite resources via public clouds. Amazon, Microsoft, and Google are pioneers of the cloud revolution.

Reports from Gartner, Forrester, and others assert that digitisation, AI, and ML will lead the tech transformation agenda, necessitating it for companies to invest (if not already done) in building cloud capabilities in 2021 and beyond.

Cloud is no longer merely a technology upgrade. Many large IT service providers and other companies using technology (in-house, or through subsidiaries and captives or outsourced vendor-partner arrangements) are recognising cloud's immense influence on their business models.
Digital transformation using cloud

Digital became the catchphrase to denote organisations’ penchant for using innovations and creating their own space. Various companies embarked on a multi-year journey to bring about digital transformation. For instance, banks are increasingly realising that they can and need to ‘own’ the technology and become more digital. Digital-first banks have been launched that use technology to open contactless banking channels, highlighting the redundancy of traditional branch banking models.

Companies across industries use cloud to eliminate expenses incurred when setting up physical IT infrastructure in-house, as well as gain nimbleness, scale, elasticity, resilience, and business continuity. Computing has changed and the evidence is overwhelming. For example, smartphones of today wield more compute and storage power than big servers of yesteryear.

New-generation ML and AI applications have become more mainstream. They are being used to run routine business operations – ranging from detecting real-time fraud, checking credit worthiness, and designing shelf spaces in retail.
shops for better product placement, to predicting machine downtime. This changing scenario has led organisations to quickly build digital assets and expand their use, along with creating a more digital-savvy workforce. Organisations are incurring capex and opex to keep pace with digital transformation.

**Old or new conglomerates to ride on cloud**
In the past decade, we have witnessed the massive influence of Big Tech on industrial and world GDP. Facebook, Amazon, Apple, Netflix, and Google (FAANG) have been major wealth creators for investors. Some big companies even have trillion-dollar valuations, although quantifying the exact impact of these companies on the world economy is difficult. In October 2020, in the middle of the ongoing pandemic, Apple, Microsoft, Amazon, and Alphabet had each crossed the threshold of $1 trillion market capitalisation. Some of these companies did not exist as recently as 30 years ago and yet have become the epitome of digital revolution. Therefore, these are called digital natives.

Cloud computing is the megatrend of the next decade with firms such as Shopify, Twilio, Salesforce, and Adobe matching up with or even going ahead of FAANG. Old giants, such as Microsoft and IBM, are also evolving and adapting to maintain their leadership in the technology space with cloud as the fulcrum.

Digital natives’ growth is spurred by their ability to use their in-depth technological expertise to solve existing problems in new ways, and to forge new business models almost on the fly. This phenomenon has given rise to new coinage – start-ups and unicorns.
Acing cloud adoption to get ahead in the technology transformation game

Although cloud infrastructure enables services such as pay-as-you-go, capacity-on-demand, reduced overhead charges, and business agility, its demand is influenced by various factors. Some of these factors are as follows.

Changes in business models

Business model innovation is a holistic concept requiring a manager to take a step back and apply system-wide or system-level thinking. It looks at both sides of the coin — an outside-in angle (from a demand perspective) and an inside-out angle (from a supply perspective).

The demand perspective drives business model innovation from a customer experience, pricing, speed, and perspective competition. The supply perspective changes equation parameters from the way raw material is procured, quality, failure rates, etc.

The silver lining of embracing cloud

Many Indian companies are re-thinking their models of distribution using technology, specifically cloud. For example, a leading Indian digital marketplace for lending products is driving technological innovation in its offerings. Its cloud capabilities have made loan disbursals and credit card issuance completely digital. A FinTech has built digital solutions for KYC verification, income and employment validation, repayment set-up, and consent on loan agreement. A large section of customers will now be able to access credit much quicker from the comfort of their homes through an easy contactless process as each former physical, step in the lending process has now been built digitally. The digital stack has enabled the provision of unsecured loans within 3-5 hours from an earlier disbursal time of 3 to 7 days. A key feature of the firm’s platform enables it to provide customised lending solutions to customers using a predictive algorithm model.
In the Indian context, let us consider the “cloud kitchen” model (adopted by Swiggy, Faaso’s, and others) as an example of business model innovation. Value addition can be driven from multiple perspectives. In a traditional franchise-oriented model, location is important for a restaurant and rent-to-sales ratio is high. However, cloud kitchens do not need a good location, leading to a significant drop in the rent-to-sales ratio. They can offer other premium brands without worrying about food fatigue from customers. They also have a level of independence that allows them to add other brands and have preferential pricing.

To the right are some trends that we think allow for enable business model changes (in line with the value proposition that cloud offers).

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The digital shift
Value is created in accessibility and filters.

Remove the middlemen shift
Value is creating a transparent layer of communication between a buyer and a seller.

The platform effect
Value is created in the interaction, not in the transaction.

Solution-driven shift
Value is created not in the product but in aspects that can be repeatable.

Warp speed shift
Ensure that delivery is done at 10x-100x speeds of the conventional methods.
Changes in customer expectations

Modern customers do not hesitate to throw their weight around and flaunt their power. Organisations need to provide choices to win customer loyalty. When customers do not have choices with a particular organisation, they move on − often after just one bad experience. Moreover, customer expectations are rapidly changing, fuelling the growth of cloud-oriented models, as covered in the points to the left:

Targeted approach
Organisations need to offer more differentiated experiences to connect with and attract customers. They need to personalise offers to suit customers’ interest after analysing metadata.

Rise of the citizen developer
Creating solutions/platforms that allow non-technological people in an organisation to have a point of interface with customers has become a new growth driver for cloud services. Citizen developers create new business applications and innovative platforms that have a simple user interface with a drag-and-drop function to map prospective customers’ journey.

Internet of everything
Data engineering and integration points with various devices are just exploding, as the need to differentiate and create a seamless experience for customers is helping companies generate higher top-line growth.

Changes in customer consumption behaviour
The consumption story of the Indian customer is undergoing a transformation. Most startups now focus on the hinterlands of India – the real ‘Bharat’ where e-commerce is driving growth of cloud. However, the changing scenario is a result of factors such as rising household disposable income, changing spending behaviour, shifting demographic and societal expectations, and shrinking family support structures.
The need for innovation
The need for innovation is clear. Businesses today realise that cash is king, operational expense is better than capital expenditure (as it brings a higher degree of control to investments). Organisational culture and environment, along with cloud technologies, play a key role in enabling innovation. Organisations need to empower developers and create the right environment for them to create software applications that enhance business performance.

This makes cloud a wonderful platform to try out new proofs of concepts, to curate experiences for customers, and to improve at faster rates.

Barriers to cloud adoption
Organisations are not keen on going the cloud way because of a number of challenges. This observation is also shared in a Deloitte report titled ‘Cloud is here: embrace the transition’. Some of the factors that prevent organisations from adopting cloud are as follows.

- **Integrating cloud platforms used within an organisation:** This process requires overcoming issues related to network connectivity, security, authorisation and authentication, and operations and management. Failure to resolve these issues may lead to running parallel IT operations for cloud-based and legacy platforms, posing challenges to the overall adoption of cloud systems.

- **Data security and privacy:** Public cloud environments require data to be stored on a shared infrastructure managed by Cloud Service Providers (CSPs), representing a fundamental shift from traditional IT practices. Though client IT teams have access to and control of public cloud usage, the fear of being incapable of taking requisite steps in case of a cyber-attack leads to some resistance in these teams towards cloud adoption.

- **Multi-tenancy:** It also hinders cloud adoption as CSPs use it to optimise server workloads and reduce costs by sharing workloads across
multiple environments. The potential security threat of side-channeling (when an attacker gets information through a shared tenant’s node) can sway a client to deciding against adopting cloud.

- **Compliance and regulatory risks:** Moving to a public cloud platform requires giving some level of compliance controls to a CSP. Many organisations find this challenging as CSPs do not negotiate their standard terms and conditions. Different kinds of clients use public cloud environments, and providers do not customise services to meet unique or specialised requirements.

- **Vendor lock-in:** Entering into a contract with a CSP poses various challenges, such as financial penalties for early termination of a contract, and no flexibility to renegotiate prices (if commercial costs change through the contract period), and migrate to another CSP offering more attractive services. These challenges have played a significant role in dissuading firms from adopting cloud. In addition, the lack of coordinated cloud standards across cloud service providers has made it difficult for firms to move workloads between CSPs and/or private clouds.

- **Zero cost savings:** Some organisations do not see any cost savings and some even experience cost escalations. The increase could be because of the lack of:
  - Understanding of workloads suitable for cloud environments and those requiring high resource utilisation; several upstream/downstream integrations may not be ideal candidates for cloud migration and can be heavy on the pocket
  - Forecasting investments related to technology (for example, network redesign, and identity and access management toolsets) and staff (new roles, training, etc.) to enable proper fiscal management of a hybrid IT environment
  - Adequate monitoring of cloud service usage that can significantly increase costs billed on a pay-per-use basis
Rising above the clouds of challenges

Although numerous challenges exist that hinder cloud adoption, some of the steps that organisations can take to address them are:

• **Formulating cloud adoption and purchase guidelines:** Put in place guiding principles, as a part of enterprise-wide guidelines, for purchasing and adopting cloud solutions. Consider operational performance metrics (not only features and functionalities) in software evaluation and selection decisions.

• **Modernising operating models and enterprise practices:** Invest in upgrading existing enterprise IT architecture and tools, such as cloud service expense management, to identify and right-size overprovisioned resources, take advantage of pricing changes, and identify ways to cost-effectively use and release IT resources to reduce cloud expenses.

• **Encryption and shielding:** Put in place robust security provisions, such as encryption, key rotation, and tokenisation. Procure multi-factor authentication and digital certifications to safeguard data in the cloud. Deploy web application firewalls preventing cross-scripting or SQL injection attacks, and special shield services preventing DDoS attacks. Align security architecture with CSPs’ architectural constraints. Train staff on cloud security provisions and foster a culture of constant vigilance.

• **Cloud vendor landscape evaluations:** Establish fundamental guidelines around compliance and regulatory requirements for cloud services that will serve as a baseline for vendor evaluations. Look for baseline compliance requirements, such as user identity and access management, data protection, incident response, and data residency requirements, while evaluating cloud vendors.

• **Mature vendor management capabilities:** Organisations find it critical to approach cloud service contracts as an ongoing set of relationships – consistent monitoring of the cloud market is imperative for various firms.

• **Cloud vendor agnostic services and containerisation:** Build these services to reduce dependency on a single vendor. Use containerisation technology to increase workload portability across cloud environments.

• **Business case:** Invest in creating business cases justifying workload migration to cloud environments to mitigate risks related to cost management. Revisit the business case after the transition to validate its realisation.

• **Cloud suitability analysis:** Assess workloads in terms of functional (availability, requirements, hardware dependence) and technical fit (application architecture, integration requirements) for cloud migration. The assessment can yield results related to rationalisation of the application portfolio, thereby reducing application costs.

• **Cloud governance:** Establish adequate governance mechanisms that account for who uses cloud services, how many services can be used, and what approvals are required.
Conclusion
We are roughly a decade from when cloud computing started, and, in such a short time, this technology has become an inevitable part of every organisation's growth strategy. This paper delves into the evolution of technology, force multipliers, and accelerators causing rapid adoption of cloud by businesses and enterprises. It also uncovers challenges preventing organisations (especially in the public and government sectors) from embracing cloud services. From a technology and business perspective, we believe the future of work, skillsets required, and the overall economic and human impact of technology will continue to evolve at an even faster pace than seen before. New-age technologies, such as blockchain, IoT, and quantum computing will usher in a new era of technology innovation. These technologies are still nascent. But, just as with innovations we have seen so far, we are sure to witness faster emergence of these technologies from labs to the business battlegrounds where new-age companies will take over the baton from their legacy counterparts. The time is ripe for the next inflection point.
About CII
The Confederation of Indian Industry (CII) works to create and sustain an environment conducive to the development of India, partnering with the industry, Government, and civil society through advisory and consultative processes.

CII is a non-government, not-for-profit, industry-led, and industry-managed organisation, with more than 9,000 members from the private and public sectors, including Small and Medium Enterprises (SMEs) and MNCs. It has an indirect membership of over 300,000 enterprises from 294 national and regional sectoral industry bodies.

For more than 125 years, CII has been engaged in shaping India’s development journey and works proactively on transforming the Indian industry’s engagement in national development. CII charts change by working closely with the Government on policy issues, interfacing with thought leaders, and enhancing efficiency, competitiveness, and business opportunities for the industry through a range of specialised services and strategic global linkages. It also provides a platform for consensus building and networking on key issues.

Extending its agenda beyond business, CII assists the industry to identify and execute corporate citizenship programmes. Partnerships with civil society organisations carry forward corporate initiatives for integrated and inclusive development across diverse domains, including affirmative action, livelihood, diversity management, skill development, empowerment of women, and sustainable development, to name a few.

As India marches towards its 75th year of independence in 2022, CII, with the theme for 2021-22 to build India for a new world: competitiveness, growth, sustainability, and technology, rededicates itself to meeting citizens’ aspirations for a morally, economically, and technologically advanced country, in partnership with the Government, industry, and stakeholders.

With 62 offices, including 10 centres of excellence, in India, and 8 overseas offices in Australia, Egypt, Germany, Indonesia, Singapore, the UAE, the UK, and the US, as well as institutional partnerships with 394 counterpart organisations in 133 countries, CII serves as a reference point for the Indian industry and the international business community.
Over the past year, many traditional banks have become increasingly concerned about digital challengers encroaching on their territory. As customers have flocked in their millions to apps and online channels providing easy-to-use digital services for many day-to-day transactions, there’s an understandable fear that less frequent contact with customers could cause the bonds of loyalty to fray.

But banks still have a critical advantage, and a window of opportunity to use it. Today, banks’ strength is in their deep relationship with customers for more complex services such as applying for mortgages or investments. Customers still need help and advice in these areas, and the nature of the transactions makes them ‘sticky’; that is, they provide more opportunities to engage with customers and therefore retain them.
Even as the new digital arrivals expand their own products and offerings, delivering an elevated user experience as they do so, there is still time for banks to get a step ahead in this space. The key battleground is in customer experience, which is where the digital challengers like Revolut, N26 and others are winning today. So, what do banks need to do to deliver a compelling experience for customers that will increase loyalty and ‘stickiness’?

Going digital isn’t enough. Banks need to move away from simply replacing physical experiences like visiting branches with online self-service. It needs a mindset change; a shift in focus away from looking at digital purely through a lens of cost saving or operational efficiency. Instead, financial providers need to consider digital services in terms of outcomes. Think of it as going from ‘me too’ to ‘you first’. Digital is a way to differentiate themselves by delivering positive, frictionless experiences that keep customers loyal and engaged.

It’s critical to get execution right, and this has been a challenge for banks in the past. Traditionally, typical financial services organisations have been divided into teams or ‘empires’ – commercial, operations, distribution, technology, and marketing – each with their own director. Everyone talks about the customer, but no-one really joins the dots. Doing this requires the business to anchor around shared goals or outcomes that keep everyone aligned: will this product keep the customer satisfied? Will it drive increased loyalty?

This is as much a discussion about cultural change and capability as it is about technology. Focusing on customer experience calls for an approach of working in value streams, and it needs companies
to be organised in a way that helps them focus on one goal. It needs everyone in the entire organisation aligned with the same vision, and a collaborative approach where everyone works together as one cross-functional team. It needs people on the ground who feel empowered to make decisions and where the structures and governance don't get in the way of moving at pace.

This kind of change typically falls down where there is no clear business vision, no product owner, no structure to drive cross-functional ways of working, or no forward-thinking view on technology.

Where digital technology plays a critical part is in making decisions about what path to choose. Instead, partnerships and alliances are a way of building capability instead of banks building the infrastructure themselves. This reduces the risk or impact of failure by lowering the cost of entry. Instead of allocating millions of euro into getting a digital transformation off the ground, partnerships enable rapid proof-of-concept work that doesn't need the same level of upfront investment. At a strategic level, it needs clarity on the bank's future technology architecture and making sure that it is interlocked with the business strategy.

As well as being open to partnerships, this approach also calls for new skills that banks might not traditionally have used. Putting the customer experience first requires design thinking and ability to create different experiences for customers for products like mortgages and investments, or integrating beyond banking propositions to broaden relevancy. It needs product owners with a mindset focused on delivering business outcomes and value rather than obsessing around milestones as the measure of success. Some disciplines and capabilities can be instilled within teams, provided
banks are willing to make the right pivots on their organisational structure. It can be achieved with experienced, high-quality people who can be champions who drive the change, know how to get people working in a different way and moving in the new direction.

The biggest challenges we see in financial services are where the business and IT are working together, but only in a transactional way. The big change to strive for is where they come together as one and have a product and shared goals orientated mindset.

The battle for hearts and minds of banking customers is by no means won. Banks have the customer relationship; it’s theirs to lose. But they can’t take this state for granted; they need to execute well, and act now.
COVID-19 and the resulting digital acceleration is causing the very fabric of the banking ecosystem to reorganise around digital experiences more than ever. Definitions for ‘table stakes’ features within digital banking products are shifting rapidly, and competition is converging in search of profitable primary relationships.

Across all age groups, interaction preferences were shifting quickly towards digital before COVID-19 and have only accelerated since, with digital experience now the primary driver of attrition and a major factor when choosing a primary bank.

Traditionally, digital has sought to replicate in-person interactions but a frictionless and emotive digital experience is now quickly becoming the core of the bank’s value proposition.

Competitors have recognised this shift and are investing heavily to address existing pain points with new entrants in particular accelerating the innovation tempo. We believe six product features will become table stakes over the next 12 months, with further differentiation focused on specific customer segments and their unique needs.

Establishing primacy is the focus for these new entrants, as digital-only challenger banks are often still only used as secondary accounts. Today, half or more of digital-only banks’ clients are unprofitable, and deposit profitability is further challenged by low rates. But as digital native challengers evolve their product offerings to include lending and fee-generating products, they are likely to win a larger share of customers’ banking business.

In delivering a compelling, emotive digital experience, banks typically struggle with two major challenges.

First, banks struggle to design unique, meaningful, and emotional experiences for their customers. Customer-centricity is often not at the centre of how banks approach offer development and go-to-market strategy design. Experience design and development capabilities are nascent, and banks tend to focus on superficial customer needs to ensure relevance for their entire customer base instead of differentiating by addressing unique needs of priority segments.

The second major challenge is delivery, with digital transformations complicated by a set of common internal and external challenges (e.g., constraining investor expectations, lack of FinTech enterprise readiness, etc.). We’ve learned from what has and hasn’t worked, and have identified nine principles which underpin successful transformations. These include a continuous focus on momentum via test and learn and establishing self-funding mechanisms amongst others.
Retail banking channel preferences are shifting towards digital faster than ever due to COVID-19. For those Americans that still preferred in-person channels in 2020, the new norm of social distancing and quarantining created a forced-adoption effect. Temporary bank branch closures and fear of high-contact surfaces have pushed this group to online or mobile banking. This acceleration towards digital will create long-term industry impacts more radical and transformative than many first imagined.

The foundation of the banking ecosystem has greater incentive now more than ever to reorganise around digital.

Accelerating towards digital channels
Prior to the emergence of COVID-19, the US retail banking landscape was already seeing a dramatic shift in channel preferences towards digital. Across all age groups, branch usage declined on average -35% over the previous five years, and the number of digital interactions rose by 15%. This change was most pronounced within the youngest age cohort of 18 to 24-year-olds, where branch usage dropped by nearly half.

This shift accelerated during the pandemic. Across all age groups, the share of Americans who did not use financial services online fell by over 30%. From simple payment transactions to obtaining advice on their finances, all types of services began to be used online for the first time by many Americans.

% change in quarterly channel usage by age group (2015 - 2020)

New digital normal
Retail banking channel preferences are shifting towards digital faster than ever due to COVID-19. For those Americans that still preferred in-person channels in 2020, the new norm of social distancing and quarantining created a forced-adoption effect. Temporary bank branch closures and fear of high-contact surfaces have pushed this group to online or mobile banking. This acceleration towards digital will create long-term industry impacts more radical and transformative than many first imagined. The foundation of the banking ecosystem has greater incentive now more than ever to reorganise around digital.
Digital experience (or the lack thereof) is now the primary driver of attrition. In a 2020 survey of 2,000 Americans designed to measure the change in banking preferences as a result of the pandemic, we found that the most important driver of a client's likelihood to switch during COVID-19 is a poorly designed mobile platform, as opposed to other traditional top factors like poor customer service and high prices.

Not only are poorly designed digital experiences now driving more attrition, but they are also one of the most important factors consumers consider when switching primary banking providers. Over 50% of those surveyed indicated a well-designed banking app is a primary consideration factor when choosing a bank. The propensity to switch banks is significantly weighted towards customers with high future earnings potential, often with an above college education, underscoring how banks are at risk of losing valuable customers.
Digital laggards show strongest shift in behaviour

Partially driving this acceleration has been the ‘catching-up’ of those with lagging preferences. For individuals who used legacy payment methods, the new norm of social distancing and quarantine has had a forced-adoption effect. Temporary bank branch closures and fear of high-contact surfaces have pushed this group to move online (or to their phones) for their banking and payment needs. The effects are here to stay, even as parts of the country lift restrictions on social distancing.

The more analogue the payment method, the greater the adoption of digital. For example, individuals who primarily wrote cheques are adopting mobile payments the quickest, even faster than consumers who primarily use cards. Only 13% of cheque users don’t plan to use digital payment tools at all in the future, compared to 20% of card users.

Over 80% of consumers who depended upon cash and cheques as their primary forms of payment prior to the pandemic plan to use more digital payment tools post COVID-19.

Digital laggards aren’t the only segment quickly changing preferences. Communities whose health has been disproportionately impacted by COVID-19 are also quickly and permanently adapting. Diverse communities (e.g., Black/African Americans, Hispanic/ Latinx Americans, etc.) are 50% more likely than the average American to increase adoption of mobile or digital tools as a result of the crisis. Those living in cities/urban areas are 63% more likely. These groups have witnessed COVID-19’s impact first-hand in their communities and are changing payment preferences as a result.

Whilst these findings may not necessarily come as a surprise, we believe these shifts are likely to be real and permanent. The pandemic has changed the medium of customer interactions, and preferences will continue to evolve the longer this crisis unfolds.
Designing meaningful experiences

Banks’ ambitions for digital experiences have traditionally been to replicate in-person interactions, making purchasing and servicing journeys available online. This ambition missed a broader opportunity to make banking more human, and banks are now moving beyond product enablement to deliver a digital proposition that elicits trust through intimacy, relevance, and perceptiveness. Digital channels are quickly moving beyond being simply another channel to becoming the core of banking value propositions.

Over the past decade, banks focused on making in-person purchasing and servicing journeys available through digital channels in order to deliver convenience to customers and cost efficiencies to the bank. This approach delivered an experience familiar to what clients were used to in branches but lagging other industries, which used digital to re-imagine the experience. Today, in comparing their banking experiences to industries like tech, fitness, and mobility, customers experience a common set of pain points. We’ve identified these pain points as consistent themes across our ethnographic research with Americans.
Common customer pain points

**Inconvenient self-admin tools**
as customers can’t update/manage their personal information without calling or visiting a branch and don’t have the tools to delegate permissions to others. One FinTech is solving this with a robust cybersecurity system, that offers biometric ID if customers cannot recall their password for all banking activity.

**Generic insights lacking guidance**
as banks have always offered experiences and solutions that are not customised per customer relationships. To address this, one universal bank launched a digital and automated financial coach that helps customers buy a home or save for retirement through a mobile experience.

**Rudimentary notifications** offered by financial institutions don’t really help, as customers want to be notified whenever they make a transaction and when there are offers suited for them. Fixing this, one super regional bank’s AI assistant monitors accounts and automatically notifies customers about suspicious charges, free trials, and balance charges.

**Out-of-sync information** on their accounts can cause customers to misspend as the finances/transactions don’t update in real time, which one FinTech has solved for its customers through real-time tracking of account balances after each transaction.

**Disorganised personal finances**
as Americans continue to manage their money on spreadsheets, as banking apps don’t make it easy for consumers to organise and manage their money. One FinTech bank offers “spaces”: personalised subaccounts that accept instant transfers from users to help visualise savings and track financial goals.

**Fragmented experience across channels**
with no connection between the user self-service and employee channels. To make the experience more integrated, one universal bank provides payment confirmations through all digital channels and trains representatives to handle calls from digital-first customers.
Many incumbents and FinTech competitors recognise these pain points and are working to address them as described above. This is particularly true of digital-only challenger banks who are accelerating the innovation tempo. For example, the onboarding process for incumbents is on average twice as complex as those of challengers (37 vs. 72 clicks to open an account digitally), leading to increased attrition. The average rate of customer attrition due to issues with the digital onboarding experience ranges from around 25% to 40%, and 26% of all customers surveyed say that an easy enrolment and login process is most important when choosing a digital bank.

As a result of these pressures and in recognition of these common pain points, over the following 12 months, several product features will become table stakes. Americans expect their banks to minimise the mundane and deliver convenient experiences in everyday activities.

**Table stake digital banking features**

1. **Quick and seamless onboarding** driven by touchless technologies, including face scanning and document recognition, done end to end in 3-5 minutes
2. **Real-time spend notifications** as transactions occur that can be personalised as needed
3. **Integrated management tools** backed by dashboarding capabilities on web and mobile apps, giving a full view of customers’ finances
4. **Goal-based sub-pockets** that allow customers to organise their money as they wish
5. **Basic spend insights** offered via spend analytics dashboards that are intuitive, customisable, and easy to use for personal finances
6. **Advanced access and security** to help prevent lockouts and aid in easy recovery via biometric login features
Differentiating digital banking in 2021 and beyond

To differentiate beyond these table stakes features, banks will need to maximise the meaningful, providing deeper solutions to top-of-mind issues. This could include:

- Help me set and achieve my financial goals
- Provide me insights on how I can change my spending patterns to save more
- Nudge me in the right direction, giving me notifications I didn’t even know I needed
- Customise the pricing and rewards of your products to me and my situation
- Allow me to start something on my app and finish it in a branch
- Provide me with personalised recommendations at my moment of financial need

There is no ‘one-size-fits-all’ solution to the unique needs of individuals. Winning firms create unique, tailored, and distinctive segment-specific experiences.

Through our work with clients, we’ve observed 40+ different product features being tested in segment-specific propositions and organised these around eight general needs:
As a retail banking customer, I want my bank to help me...

### Learn

* ...learn what to do with my money to ensure long-term success
  - Potential features:
    * Collaborative goal setting
    * AI-powered financial coach
    * Community boards
    * Educational material
    * Next best action rule-set

* ...pick the right products and services for my financial situation
  - Potential features:
    * Omnichannel onboarding
    * Customisable products
    * Customisable rewards
    * Easy alert and funding setup
    * Build credit profile and history

### Plan

* ...budget wisely, but still be able to ‘treat’ myself on occasion
  - Potential features:
    * Customisable sub-accounts
    * Spend and budgeting insights
    * Premium financial assessments
    * Scenario planning
    * Integration with product affordability tools

* ...stay up-to-date with my progress towards achieving my goals
  - Potential features:
    * Event and location based nudges
    * Progress trackers
    * Real-time notifications on progress towards goals
    * Customisable dashboards
    * Milestone benefits

### Manage

* ...worry less about whether or not I paid my bills this month
  - Potential features:
    * Automated cash sweeps
    * Digital invoice/bill management
    * Omnichannel servicing
    * Real-time fund movement
    * Rules engine

* ...celebrate successes and reap the rewards I deserve
  - Potential features:
    * Dynamic relationship pricing
    * Seamless account graduation
    * Earn rewards based on achieving milestones
    * Third-party partnerships rewards
    * Offers engine

### Secure

* ...feel safe from fraud and be secure in case of emergency
  - Potential features:
    * Customisable notifications when purchases are made
    * Emergency savings accounts
    * Fraud insurance
    * Permissions and entitlement

* ...give back to the social causes I care about
  - Potential features:
    * Connect to causes that matter
    * See impact of donations
    * Receive auto-generated donation tax form
The degree to which individuals experience these needs varies across different financial life stages, and each of these 40+ features is being positioned in products targeted at a specific segment. There is no ‘one-size-fits-all’ solution to the unique needs of individuals. Winning firms create unique, tailored, and distinctive segment-specific experiences.

### Student
- Beginning to think about finances
- Lack of consistent source of income
- ‘Frenzied’ years: focus on kids, home, career
- Want to preserve flexibility and access to money
- Mentality of “it is what it is”
- Most go from save to spend
- Try to preserve lifestyle

### Young professional
- Experiencing independence
- Retirement not on radar
- More emphasis on consuming vs saving
- Want to preserve flexibility and access to money
- Forward-focused: serious about retirement

### Starting a family
- ‘Frenzied’ years: focus on kids, home, career
- Want to preserve flexibility and access to money
- Making tradeoffs to make it work
- Forward-focused: serious about retirement

### Mid-life
- Making tradeoffs to make it work
- Forward-focused: serious about retirement
- Mentality of “it is what it is”
- Most go from save to spend
- Try to preserve lifestyle

### Retiree
- High yield savings
- Reverse mortgages
- Estate planning

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**Product focus**
- Checking accounts
- Credit cards
- Students loans
- Auto loans
- Lines of credit
- Savings accounts
- Auto loans
- Lines of credit
- Savings accounts
- Auto loans
- Lines of credit
- Savings accounts
- High yield savings
- Reverse mortgages
- Estate planning

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**FinSight | Customer experience in digital banking**
We have anchored these differentiation features against a traditional life stage view because our clients are often segmented this way, however, there are new tools to help banks understand their customers. Whilst life stage is a meaningful predictor of need, our clients are increasingly looking for a sharper picture of customers and asking themselves “how do we detect, respond, proactively address, give comfort/confidence to those who need it?” In order to help answer these questions, Deloitte developed the “Values Compass,” a proprietary tool that gets to the bullseye of what matters most to humans – the things that truly motivate our feelings and actions. The Values Compass maps cardinal human values – ambition, curiosity, belonging, and certainty – along with corresponding intermediate points to provide a visual reflection of a customer’s values in aggregate. We defined four cardinal human values rooted in a sense of personal achievement (Me), belonging (We), curiosity (Unknown), and control (Known).

Perhaps knowingly or unknowingly, banks attract different types of customers based on their brand and value propositions. Bank A’s customer base skews towards the top right ‘Sharing with others’ dimension. Bank A’s Cafés have reimaged the in-person banking experience through a shared community space that is warm, inviting, and inclusive to all. The strong communal aspect provided through free working spaces, happy hours, and money workshops appeals to a customer segment that values sharing with others.

Attracting clients of the opposite dimension, Bank B’s purpose-driven mission to reduce economic mobility barriers is demonstrated through free financial literacy programmes and a wealth of tips, tricks, and guides targeted to customers at any point of their financial journey. The strong emphasis on providing education has attracted a customer segment that values learning new things.

The values compass can be a powerful tool to better understand clients. If you would like to learn more, we encourage you to read Deloitte Digital’s report *We’re only human: Exploring and quantifying the human experience, 2019.*
FinSight | Customer experience in digital banking

Note: The Values Compass is Deloitte’s proprietary asset based on data from 200K unique respondents across 1,018 variables.
Delivering experiences

Nearly nine out of 10 banks experience issues related to digital transformation, with efforts complicated by a set of common internal and external challenges (e.g., constraining investor expectations, lack of FinTech enterprise readiness, etc.). Learned from what has and hasn't worked, we have identified nine principles of success, which underpin any successful transformation.

### Internal challenges

1. Investor expectations for financial institutions constraining investments in digital transformation

2. Inconsistent data regimes restrict financial institutions’ ability and appetite to generate value

3. Lack of enterprise readiness by FinTechs limit the ability for partnerships with incumbents

4. Prescriptive and/or outdated regulations constrain large-scale digital transformation initiatives

### External challenges

1. Evolving talent models force financial institutions to re-think the workforce of the future

2. Lack of enterprise agility and coordination for activating partnerships

3. Traditional risk-conscious culture clashes with an appetite for pursuing innovation

4. Ambition to meet short-term targets misaligned with longer-term transformation needs

5. High regulatory-driven change burden leaves insufficient resources for transformation
Architecting the technological and operational transformation needed to deliver these next generation experiences has proven challenging for many incumbents. In our research, we have found that nine common challenges impede experience transformation efforts.

These internal and external challenges are often interlinked, and as such, there is no single panacea or formal playbook for overcoming them: one size does not fit all.

But in reflecting on our experience as transformation architects, we have identified nine principles which consistently underpin success. These nine principles are anchored around three broad themes of: ‘getting it,’ ‘owning it,’ and ‘doing it.’
Get it
When undertaking transformations, incumbents often do not spend enough time upfront getting alignment around the need for change, causing projects to go long or fail. Successful firms demonstrate three principles to make sure the organisation ‘gets it.’

PRINCIPLE #1:
Leaders are aligned around a common vision and are measured on shared goals, where desired business outcomes are brought to life in measurable objectives that guide the transformation. Detailing the winning ambition with measurable operational objectives and outcomes allows leaders to clearly understand trade-offs between options and make better decisions. It also allows everyone within the organisation to understand and appreciate what success looks like. Examples of this could include: improve customer satisfaction scores by 30%, reduce response time by 40%, or reduce manual processes by 50%.

PRINCIPLE #2:
An end-to-end view is taken and capabilities leveraged from outside of the firm’s four walls.
In many cases, the levers for realising most of a transformation’s benefit targets are outside the control of a single business function and can only be captured with complete buy-in and engagement from elsewhere in the organisation or external partners. Leveraging capabilities from the broader ecosystem can promote benefit realisation, particularly if the functions are non-core capabilities to the business. This is particularly true as industry players are developing AI-driven centres of excellence around given processes, and offering those processes ‘as a service’ to others.
PRINCIPLE #3:
Operational risks related to workforce engagement and adoption are mitigated by communicating often and appropriately. Identifying and communicating with the full spectrum of stakeholders, early and often, is critical to establishing and maintaining momentum, performance, and results. This starts with building awareness and bringing employees along the transformation journey by letting them know of upcoming changes. It also means minimising the anxiety that prevents adoption by continuously clarifying how employees will be impacted by the programme. Communicating early and often is critical to the success of large-scale transformations. Finally, successful banks establish a disciplined communication programme that uses data analytics to measure and report impact and effectiveness.

Challenge
A large national bank had undertaken a transformation, but lack of leadership and stakeholder alignment was stalling the programme and deployment of a target operating model.

Solution
Leveraged interactive forums for organisational debate and productive decision making, with goals to:
• Jointly define the vision and guiding principles for the programme
• Obtain buy-in from stakeholders across the organisation
• Provide a view of the future-state experience for internal and external customers

Impact
• Helped align, commit, and mobilise a $200 million operating model transformation programme with clearly identified sponsors and drivers
• Accelerated the high-level design phase and garnered buy-in from 75 key stakeholders in record time
• Tackled an ambitious implementation timeline, despite the size, complexity, and autonomy of the businesses
Own it
Banks who successfully transform also empower individuals within the organisation to own the change. They have strong champions, detailed bottoms-up roadmaps, and build the right skills and training for employees.

PRINCIPLE #4:
A realistic roadmap is developed to aggressively manage interdependencies, understanding and deconflicting critical path/resource demand.
Transformations need roadmaps and business cases, and in order to develop realistic ones, successful firms start with thorough process examination. Process taxonomies give you confidence that no stone is left unturned, and starting with banking value chains and operational value maps can help bankers identify where the opportunities are and how to sequence activities in order to realise benefits.

PRINCIPLE #5:
Having a charismatic, risk-tolerant champion spearhead the transformation initiatives allow for that individual to serve as an agent of change for the firm and speed up decision making.
A strong change approach goes beyond developing key messaging and identifying critical stakeholders – it also needs a strong change leader. As digital transformation is a cross functional undertaking, the primary stakeholder championing the change can come from one of many traditional internal verticals. Depending on where in the organisation they come from, these champions will typically have a set of characteristics that are essential to implementation.
These are:
• Secures the mandate for change
• Curates early success stories
• Proactively manages outcomes
• Knows when to be persistent and when to be patient
• Builds a culture of trust
• Is collaborative and advocates co-creation

**PRINCIPLE #6:**
Employees are empowered to own their future by building the skills and talent to support the future operating model.

Work performed in the back office will evolve along with modernised processes and enabling technologies, which in turn will require new skills and new ways of continuously growing capabilities. Doubling down on your commitment to elevating the human experience at work through integrated talent processes can reinforce the vision and purpose of your transformation. Focus on the workforce of the future and identify skills, gaps, and pathways to develop their talents and further their careers.

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### Case study: Enterprise-wide digital upskilling

**Challenge**
The client needed to formulate a progressive, enterprise-wide strategy to grow digital capacity via continuous learning and a capabilities-driven talent strategy.

**Solution**
- Developed a firm-wide capabilities and skills framework aligned with the client's vision for a digital future, client experience, and domain knowledge
- Employed an iterative process to define the key capabilities and skills of the future and develop an approach to broad adoption
- Developed an impact measurement framework to evaluate progress against digitalisation goals

**Impact**
- Designed capability and skills framework to align business units and talent processes on workforce requirements to enable associates to adopt consistent, progressive, and agile behaviours and mindsets
- Created a consistent set of expectations around digital, from acquisition to learning to succession planning
- Aligned leadership to a single vision for a digital learning organisation
Do it
Even with alignment and empowerment, momentum can run out without sustainable funding and quick wins. Successful banks find ways to start and sustain the transformation, underscored by three principles.

PRINCIPLE #7:
Execution has occurred from the get-go with initiatives managed in a portfolio approach, through piloting sprints to generate momentum and increase confidence in the transformation. Nothing builds momentum like a real, successful example. Focus on your sphere of control to identify business processes and willing owners as a basis for a prototype initiative to generate excitement and confidence. Ideation sessions and rapid prototyping can help quickly drive alignment and jumpstart a transformation.

PRINCIPLE #8:
Execution discipline and accountability are keys to success through an effective cost transformation office with strong leadership and governance and an M&A deal-like rigour and focus. Stand up and run a transformation office with a structure that facilitates the programme visioning, alignment, and decision making. A transformation office structure can also be designed to ensure rapid decision making, issue resolution, and right engagement of key stakeholders and corporate functions.
PRINCIPLE #9:
Funding is allocated wisely through a self-funding model, by releasing only for value-add and foundational capabilities setting up a challenge forum to make funding decisions. Build a set of foundational capabilities to generate cost savings, and establish a self funding model by using rapid cycles of prototyping and re-investing benefits from quick wins. The savings generated from each initiative, through rapid assessment and prototyping, can continue to grow and fund future projects. This approach can enable the incremental transformation of a bank’s technology and operations, whilst promoting sustainability through new capabilities.

**Challenge**
The bank needed new ideas, input from a variety of perspectives, and alignment across senior leadership to kick-start a transformation programme.

**Solution**
- Surveyed the bank for key issues and problems and collected the voice-of-the employee, synthesising it into key pain points and themes
- Aligned senior leaders around key issues and themes and identified bold ideas to address them
- Formed multi-disciplinary teams (e.g., programmers, designers) to develop working solution prototypes

**Impact**
- Developed conceptual prototypes on Deloitte machines to simulate the end result (e.g., look and feel) for eight different ideas over a two-day period
- Prioritised potential solutions to implement and obtain alignment from senior leadership
- Identified potential owners for the different solutions and generated excitement and buzz to drive the transformation
Conclusions

Whilst several uncertainties about the future remain, the outline for how the future of financial services will look post COVID-19 is starting to emerge. Over the next six to 12 months, banks have the unique opportunity to reimagine their retail banking offering in order to build trust and loyalty amongst customers, through frictionless and emotive digital propositions that elevate the human experience. This will require banks to move beyond thinking of digital as a tool to simply reduce cost, and to start imagining what a banking value proposition that has digital at its core will look like. The digital business model transformation journey will not be easy, as the challenges that need to be overcome are plentiful.

But every bank is unique, and there is no standardised playbook that can be followed. Some of the nine principles success we identify in this report will be more relevant for some than others. The first step is knowing where to start, and prioritising the actions and journeys that yield the highest return. And with digital transformation no longer being optional, there is really no reason not to start sooner than later.

Endnotes

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TAKING THE PULSE OF DIGITAL ASSETS

IN FINANCIAL SERVICES ACROSS EMEA

Digital Assets Survey 2021
As any good medical professional knows, the first step to assessing the health of a patient starts with taking the pulse. The same is true in business: when we wish to understand the current state of a market, we look for its vital signs. For this report, Deloitte has gathered insights from a cross-section of leading global financial organisations across EMEA, which provide a valuable perspective on the health of the digital assets market today.

Why now? Current market conditions make this an interesting moment for digital assets: in January this year, the value of all cryptocurrencies surpassed $1 trillion for the first time.

On the demand side, interest in cryptocurrencies from investors, initially from crypto enthusiasts, but increasingly also from retail clients – primarily millennials, high net worth individuals, family offices and institutions – keeps growing. This rise in demand is occurring despite significant volatility and significant technological and legal risks. These investors require new crypto exchange, trading and custody services that most banks and asset managers currently are not offering. Out of the 25 financial services organisations which Deloitte spoke with, almost half report appetite from customers for digital payment using cryptocurrencies. I would suspect that those that are heavily exposed to changes in the securities value chain will be investing in digital asset services; they see the opportunity but clearly also the threat.

There is also another factor. When COVID-19 first hit in early 2020, there was widespread concern that banks would be affected as they were in the 2008 financial crisis. However, that scenario did not materialise. The economy is recovering, and many banks are showing stronger than expected earnings. This gives them the means and the opportunity to invest in digital assets.
Clearly, it will be a battle between established players and start-ups for leadership in digital assets, but allow me to make a bold prediction: I believe that the early adopters of blockchain have an opportunity to leapfrog the FinTech players and make up the ground that traditional banks lost to FinTechs over the past decade. I say this because, in my opinion, the biggest development in digital assets is not cryptocurrency but the underlying blockchain/DLT technology.

To be clear, I am not saying this will happen in the short term. Blockchain is a complex foundational technology and for it to transform financial services it requires the adoption and agreement on standards by many market participants. Many important questions of privacy, scalability, cybersecurity, data and consumer protection, will need to be addressed. This survey shows that market participants are building digital asset/DLT/blockchain teams in-house and are beginning to establish digital asset services units; some are even building their own DLT or blockchain. We can expect to see investments in digital asset strategies increase in the next two to three years.

Time matters: as the adoption of TCP/IP, which laid the groundwork for the development of the internet shows, it can take more than 30 years until a foundational technology can reshape the economy. Digital assets and the underlying blockchain technology, no doubt, have the potential to transform EMEA financial services. The critical question is when. That is why it is so important to start taking the pulse of digital asset activity now.
Introduction
This report was spurred by the enormous and growing interest in digital assets, and their increasing move towards the mainstream over the past year. To date, cryptocurrencies have had the highest profile in this space, but the digital asset category is in fact much broader.

Our Deloitte Global Blockchain Survey 2021 clearly showed the market is preparing for a wave of disruption across the digital asset space. For this report, we sought insights from 25 leading financial services organisations with operations in EMEA, aiming to gauge industry attitudes toward cryptocurrencies, stablecoins, central bank digital currencies (CBDCs) and tokenised securities. Our respondents span a cross-section of established banks and wealth management firms, to consultancies and crypto startups.

In our engagement with the market, we asked several questions with the intention of gaining a realistic perspective on financial services firms’ current adoption of digital assets; whether they are committing significant investment to it or at an experimentation stage, and to identify potential barriers to mainstream adoption. Will digital assets replace or be an alternative to fiat currency? Could the blockchain infrastructure underpinning it become a key part of banks and financial providers’ platforms?

This report breaks down the key findings into five sections, covering cryptocurrencies, payments, tokenisation, regulations, and decentralised finance (DeFi). For those still becoming familiar with the space, we include brief definitions of each category, together with a breakdown of key research findings relating to each one. As our engagement shows, some financial services providers clearly see an advantage in moving early, but the race is by no means run. Many are still watching developments, or awaiting more regulatory clarity, before committing investment. For this audience, we close each section with a series of practical questions that financial providers should consider as they start to map their digital asset strategies.
Methodology
Deloitte engaged with 25 leading financial services industry organisations across EMEA between May and July 2021. An industry survey was conducted along with one-to-one interviews with leading organisations to gain insights and perspectives on the digital asset landscape and to understand strategic positioning of these large organisations. Our respondents were a mix of global banks, digital asset platforms, FinTechs and crypto custody solution providers located in the UK, Switzerland, Luxembourg, Germany, France, Spain, Portugal, Belgium and Ireland. The respondents were primarily C-suite or upper management along with innovation leads, public policy representatives and owner/partners.

A note on definitions
Cryptocurrency is a digital asset or crypto asset created as a digital medium of exchange. Coin ownership records are stored in a secure digital ledger, or blockchain, to protect transaction records. There are three main subcategories of crypto assets: exchange tokens, security tokens and utility tokens. In the current digital approach, cryptocurrencies are a means of payment that enables swift and straightforward transactions, wiring funds via bank accounts and crypto money without the use of fiat money.
Executive summary

Our research highlighted that executives in leading financial services firms operating in EMEA have a very good understanding of the digital assets space: cryptocurrencies, crypto payments, crypto custody and the potential of tokenisation and its impact on industry over the longer term. Indeed, much of this awareness is being driven by demand from their customers. High net worth (HNW) customers are seen as the biggest group seeking services in the digital asset space. While many have put an accountable senior executive in place to lead their digital asset strategy, few have plans to offer services relating to digital assets yet with many adopting a fast follower or wait and see approach. The industry continues to see regulatory uncertainty around digital assets as a key barrier impacting digital asset adoption.
Digital assets

- Digital assets are viewed as being a major disruptor to how financial services firms operate in the near term.
- Digital assets are already viewed by many as a distinct asset class.
- The majority of respondents do not see crypto replacing fiat currencies but would welcome a more stable ‘digital euro’ form of digital currency.
- Approximately half of the organisations we engaged with have a dedicated senior executive accountable for digital assets.

Digital payments and cryptocurrencies

- Respondents see strong demand from their customers for some form of mechanism to support crypto payment.
- Most have no immediate plans to provide services in this space yet.
- Partnering with third parties was seen as the best option to provide digital payments or cryptocurrency services as opposed to building the infrastructure internally.

Tokenisation

- Most see tokenisation of financial securities (i.e. debt, real estate or illiquid assets) as the fastest growing area in tokenisation.
- More than half the respondent group report that clients have approached them to help issue digital securities.
- Tokenisation of securities was seen as a material long-term opportunity.
- A small number plan to offer tokenisation services in the next year.

Regulation

- Our respondents view the lack of regulation in Europe as a significant barrier to widespread adoption of digital assets in investment products.
- Regulated financial services firms are currently challenged with providing digital asset services as these services are not part of the licencing requirements.
- The majority of respondents see uniform global regulation of digital assets as a key enabler of digital asset adoption.
1. How do EMEA financial institutions view digital assets?

Latest developments
Digital assets is a broad category, and cryptocurrencies remain at the vanguard, having hit a milestone in April 2021, reaching a combined valuation of more than $2 trillion. This is helping to push digital assets from the fringes of financial services to the mainstream. The term ‘digital assets’ can mean something represented in digital form that has intrinsic or acquired value. As well as cryptocurrencies, the category includes utility tokens, exchange tokens and security tokens, together with new models for the security value chain from issuance to custody and settlement.

While ESG concerns such as the carbon footprint of cryptocurrencies along with the unregulated nature of this space is causing some hesitation from institutional customers, high-profile investors are nevertheless paying closer attention to the digital asset space. Some of the world's largest banks and payment institutions including Citi, Goldman Sachs, JP Morgan, BNY Mellon and Mastercard are actively working in this area, and many other banks and large financial services companies are also considering their options.
Our survey provided some key insights on industry attitudes towards digital assets:

**Digital asset growth**

- Altcoins
- Bitcoin
- Stablecoins
- Tokens
- Digital Securities

It is thought that digital securities will see the most growth over next 2-3 years.

**Major disruption**

- Disagree
- Strongly Disagree
- Strongly Agree
- Agree

There was a clear belief that digital assets will result in major disruption to financial services operations in the near future.

**New entrants are perceived as the bigger market threat**

- Established financial services
- New entrants

The biggest threat for digital assets market is believed to be two times more likely to come from new players or entrants.

**Digital euro**

- Disagree
- Strongly Disagree
- Agree
- Strongly Agree

Are in favour of a Digital Euro, issued by the Eurosystem, complementing the cash offer.

81%

**Investments are happening**

- Have a digital assets/DLT/blockchain team
- Appointed a senior executive accountable for digital asset strategy and offerings
- Invested in DLT prototypes
- Planning venture capital investment in digital asset servicing companies

An even split between:
- Early adopter
- Fast follower
- Wait and see
Clearly the digital asset space has gained traction and momentum and while the industry still seems divided on how they want to respond or how imminent they foresee the disruption; investments are being made.

**Key insights**

Interestingly, while the appetite for digital assets is strong among our group of respondents, the majority saw digital securities, tokenisation and stablecoins as the types to experience the fastest growth in the next two to three years over bitcoin or altcoins. Christopher May, co-CEO and co-Founder of Finoa agrees; “In terms of pure volume and growth, I think stablecoins will see the biggest growth, not because they will be an investable asset but because they will power the growth of the whole digital asset ecosystem.”

What we garnered from our engagement with the market was the general agreement that digital assets will have a role to play in the near to medium term. The majority of the participants we engaged with believe digital assets are already a distinct asset class from traditional financial assets and over half either agree or strongly agree that digital assets will result in major disruption to how financial services organisations operate in the near future. This sentiment signals that the financial services sector is starting to prepare or at least hold an awareness that digital assets will play a significant role in their operations in the near future but the true impact on what this disruption will be is yet to be seen.

But where will this disruption come from? Largely, respondents believed it would be new players or entrants that would hold the biggest threat. From a strategic stance, our respondents were almost evenly split on how they were positioning themselves; with one group of respondents considering themselves ‘early adopters’, another indicating they are a ‘fast follower’ and the final group adopting a ‘wait and see’ strategy. This divide highlights the current state of the market; some players are making bold bets while others are holding out to see where the market falls. However, with a majority in either the ‘early adopters’ or ‘fast followers’ categories, it is clear that momentum is starting to take shape and organisations are preparing their response to the anticipated disruption.
Regardless, what was signalled was that investments are starting to be made in preparing for the disruption. Over half of the organisations we engaged with currently have a digital asset/DLT/blockchain team with an accountable senior executive, and the majority placed this offering as part of their core organisation. The current focus does not seem to be on building their own distributed ledger or blockchain. Instead, respondents indicated they were involved in industry-wide consortia, had invested in developing DLT prototypes or were planning venture capital investment in digital asset servicing companies.

In terms of medium-term investment in this space, again the responses we received were mixed. For every firm we spoke with saying they will commit €1-5 million on digital assets, another is not planning any investment at all in that timeframe.

So what does this tell us? Clearly the digital asset space has gained traction and momentum and while the industry still seems divided on how they want to respond or how imminent they foresee the disruption; investments are being made. For organisations with European operations, the majority don’t view cryptocurrencies as the priority growth area, but the concept of digital representation of value in some form (stablecoin, CBDC, securities, tokenisation) is clearly on the cards.

Questions for boards and executive teams
- What is your corporate customer demand for servicing digital assets?
- How well do you understand the economics and the business case for providing crypto products and services?
- What types of platform will you need to launch crypto trading or crypto custody?
- How much integration will you need to provide crypto services?

Are you seeing significant uptake in digital assets by any of the below groups?

- High Net Worth Individual: 31%
- Retail Investors: 25%
- Corporate Investors: 27%
- Institutional Investors: 17%
2. Where will cryptocurrencies fit in the payments ecosystem?

**Latest developments**
As the global payment system becomes increasingly digitised, cryptocurrencies, stablecoins, and private initiatives like Facebook’s Diem are all jockeying for position. Many platforms are emerging to facilitate near-instant digital payments, while some large retailers and well-known brands now accept payment using digital assets. Initial coin offerings, or token sales, can create a payment instrument so that it’s possible to pay for goods or services using a digital ledger.

81 countries (representing over 90 percent of global GDP) are now exploring the introduction of their own digital currencies (CBDCs). Alternative digital currencies like these, and stablecoins, have their value pegged to other assets that are less prone to high fluctuations.

This may act as a counterbalance to the volatility in the cryptocurrency market which has led many regulators worldwide to issue warnings for, or even ban, some digital currencies.

**Key insights**
The question of payments was interesting, with our findings suggesting a skew in favour of stronger demand that much of the market is not preparing to supply. While just over half of our respondents recognised that there was an appetite from clients for some form of cryptocurrency to facilitate digital payment, most had no plans to provide crypto-payment services.

Of those planning to offer or already doing so, our sample group was twice as likely to rely on third-party providers than to build their own payment services infrastructure, while a smaller amount is pursuing both options.

A similar pattern emerged around crypto custody services; based on our engagement with the market, there is more appetite from clients than there are firms prepared to offer services.

A majority of our respondents did not believe cryptocurrencies would replace fiat currency, but instead favoured a more conservative and less volatile digital currency in the form of a Eurosystem issued ‘digital euro’.

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**Do you see an appetite from your clients for use of some form of cryptocurrency payments?**

- Yes: 43%
- No: 33%
- I don’t know: 24%
Axel Wieandt believes this is because “crypto is not about new money, but about blockchain”. His belief is that the industry is now beginning to focus on the underlying blockchain technology and is seeing more value in the protocols, processing efficiencies and transaction costs instead of speculating with crypto currencies and creating more money.

This more cautious perspective in EMEA contrasts with the Deloitte Global Blockchain Survey, which found that 76% of respondents believe digital assets will serve as a strong alternative or replacement for fiat currencies in the next 5-10 years.

Questions for boards and executive teams
- How do crypto payments fit into your payments strategy?
- Have you evaluated different types of crypto payments for the most suitable fit with your business, and alignment to your customers’ needs?

Most respondents favoured a more conservative and less volatile digital currency.
3. Is tokenisation nearing a tipping point?

**Latest developments**
In addition to cryptocurrencies and stablecoins, security tokens are also gradually taking hold. Tokenisation is still at an experimental stage but if a critical number of infrastructure providers make the move, there is real potential growth in this space.

Tokens are digital equivalents of real-world tradeable assets. In financial services, that might be an equity, a government bond, or ownership of property. It is likely we will see other financial assets tokenised like debt, equity and other financial instruments.

Tokenisation allows for direct ownership and removes barriers to trading. The potential elimination of brokers, clearinghouses and other middlemen would remove commissions and other charges, thereby reducing transaction costs. Because the tokens are recorded and held on a blockchain, the value is transferred almost instantaneously, making them easier, faster, cheaper and more accessible to buy, sell, or exchange. Instant settlement will free up liquidity and eliminate the need for back-office reconciliation.

Recently, much of the public attention has focused on NFTs, or non-fungible tokens, for works of art, pieces of writing, or even lines of code, often changing hands at auction for large sums of money. In the financial world, tokenisation has the potential to make a significant impact on the underlying capital market infrastructure; for example, an aviation leasing company could tokenise an aircraft, allowing investment in a fraction of the entire asset.
When we asked our survey group which types of digital assets are likely to experience the fastest growth in the next two to three years, digital securities and tokenisation were clearly out in front of cryptocurrencies. A majority expect digital securities to grow fastest, followed by tokenisation. More than half of our survey group say that clients have approached them to issue digital assets like tokens or to assist with tokenisation of real assets. A strong majority see tokenisation of securities or financial instruments as a significant potential long-term opportunity.

As for launch timelines, our group was split evenly between those who expect to provide tokenisation-related services within the next 12 months, those anticipating a one to two-year timeline, and others seeing launch on a horizon of more than three years from now. There is clear indication that tokenisation of assets is a discussion point at board level, but our research might indicate that few will follow through to pursuing projects over the coming year.

Axel Wieandt remarks that it is “telling that a clear majority of the organisations Deloitte spoke with see tokenisation as a long-term opportunity. In terms of the penetration of this technology, I believe we are approaching a tipping point. It is critical to see what the exchanges will do, but clearly the financial institutions, informed by their clients and their own experiences, think that this technology has real merit and is here to stay. They are thinking about the resources they will need to have in house, where do they position themselves and how to add value. Their offering will have to be increasingly compatible with a tokenised environment.”
Questions for boards and executive teams

• Have you assessed the opportunities for applying tokenisation in your own business operating model?
• Where does your digital asset strategy focus: are you a first mover or fast follower?
• Does the strategy include a roadmap with timelines and timeframes for adoption?
• Have you considered the technical challenges with tokenisation, such as allowing ways for different blockchain networks to connect to each other?

Do you see the tokenisation of securities/financial instruments as a significant long-term opportunity for your company?

- Yes: 76%
- No: 10%
- I don’t know: 14%

If yes, what timeline do you see for organisations offering services to tokenisation?

- Next 12 months: 31%
- 1-2 years: 31%
- 3+ years: 38%

Do you see the tokenisation of securities/financial instruments as a significant long-term opportunity for your company?

- Yes: 76%
- No: 10%
- I don’t know: 14%
4. What role will regulation play in the digital asset space?

**Latest developments**
So far, developments in cryptocurrencies, stablecoins, and security tokens have largely taken place without the involvement of European banks and asset managers. However, as more digital assets start to appear, regulators and central banks are increasingly making their voices heard in the space. On 5 January 2021, the Office of the Comptroller of the Currency (OCC) in the US approved the use of stablecoins for settlement of financial transactions by banks, which was seen as a boost for other payment platforms, as stablecoins are less volatile compared to traditional cryptocurrencies.

Soon after, the European Central Bank proposed a regulation, Markets in Crypto-Assets (MiCA), as a measure to enable and support digital finance while mitigating the risks. The framework is intended to bring into scope other cryptocurrencies, security tokens and stablecoins which are not caught by existing regulation.

At the same time, cryptocurrency’s unpredictability as an asset class, and its decentralised nature, have led many regulators worldwide to issue warnings for or even ban some cryptocurrencies. For example, in October 2020, the FCA banned the sale of crypto derivatives to retail customers and exchange traded notes that referenced crypto assets given then complex nature of the investments.
Regulators’ presence in the digital asset market is the subject of debate: some argue over-regulation at an early stage of market development could hinder innovation. Conversely, if regulation is insufficient or unclear, institutions may not feel they can confidently adopt new digital asset service models. There is also significant divergence in legislative and regulatory frameworks around digital assets, although for now it appears customers can choose which jurisdiction they prefer. There is no definition of ‘security token’ in EU regulation. Crypto-assets may qualify as ‘transferable securities’ or other types of ‘financial instruments’ under MiFID II. Other digital assets may fall under regulatory frameworks like AMLD 5 which regulates the AML requirements of the company rather than the specific digital assets. The widespread nature of existing regulation can be a barrier and also hinder existing regulated firms from launching crypto services.

**Key insights**

When we gathered the insights for this report, many executives either agreed or strongly agreed that uniform global regulatory response will be critical to digital assets becoming more mainstream. Interestingly, a clear majority of respondents believe the lack of regulatory requirements presents a high barrier to digital asset adoption. This was also reflected in the Deloitte Global Blockchain Survey in which 63% of respondents viewed regulatory barriers to be the biggest obstacle to the acceptance and use of digital assets globally.

While new regulatory measures are starting to be introduced, it appears that awareness of these changes are still split; with some of the people we spoke to being ‘very’ or ‘somewhat’ familiar with the EU’s Markets in Crypto Asset (MiCA) but a sizeable number are not. This is not surprising given that feedback was only provided on MiCA in December.
2020. It is expected that more detail will be provided by the European Commission once they have considered the feedback from the market and updated the proposed framework.

By reducing the volatility and regulatory uncertainty that exists today, this could help digital assets to make a breakthrough in the European financial system this decade. As our responses gathered indicate, many market participants believe global regulatory clarity will be critical to digital assets becoming more mainstream.

Questions for boards and executive teams

- Have you evaluated the regulatory approaches in different jurisdictions, and whether varying definitions could affect where your firm gets licensed for crypto trading?
- Do you need to start building relationships with regulators in your preferred jurisdiction?
- What is your risk appetite in this space and how will this affect your approach to working with regulators?
- How will your choice of jurisdiction affect the blockchain platforms you need to integrate with?
05. DeFi predictions: how decentralised can finance get?

Latest developments
As the name suggests, decentralised finance, or DeFi, removes intermediaries from transactions. Although cryptocurrencies have been around for more than a decade, DeFi is still an emerging area. By using blockchains, which by their nature are distributed and shared, banking and lending agreements between two parties can happen without needing the involvement of financial intermediaries such as exchanges, brokers or banks.

Instead, transactions are conducted using smart contracts, sometimes peer-to-peer but increasingly through liquidity pools and automated market matching. DeFi’s supporters claim this makes financial transactions secure and more transparent than the private systems employed in centralised finance. DeFi is already proving highly dynamic, even as it is still at the experimentation phase. At the end of 2020, cryptocurrencies worth $19 billion had been invested in various decentralised financial applications. By the beginning of February 2021, that figure had more than doubled to more than $40 billion.

Key insights
Although DeFi is still an emerging area, the financial providers we spoke with show a strong awareness of the concept. A significant number claim a good understanding of the concept, although not as many are actively making plans for it. This would appear to indicate that the timeframe for mass DeFi adoption across the EMEA financial system remains some way off.
Puneet Singhvi, Managing Director, Digital Assets and Financial Markets Infrastructure head, Citi Markets, echoes this sentiment and believes firms need to continue business assessments of DeFi protocols. At the same time, with anything in finance, sensitivity around risk, regulations and consumer protection is critical.

**Are you aware of/do you understand the concept of DeFi (borrowing and lending digital assets)?**

- I have never heard of the concept of DeFi: 9%
- I am aware of the concept of DeFi: 29%
- I have a good understanding of how DeFi works: 29%
- Our organisation is actively exploring how DeFi will impact our business: 33%

**Questions for boards and executive teams**

- Have you assigned a person in your organisation to maintain a watching brief in order to stay close to developments?
- Are you monitoring customer demand to see if the concept is starting to resonate with customers?
- What experiments or proofs of concept could you carry out in order to build capability internally so as DeFi matures, your organisation is ready and able to move quickly?
Conclusion
As this report was being prepared, crypto’s market cap reached more than $2 trillion for the second time this year. It feels like a disruptive moment: that figure is too large a level of investment for digital assets to simply disappear.

It may be more useful to think of digital assets as being at a similar stage of maturity to the internet two decades ago. By coincidence, the then-combined value of the top five dot-com era companies was also $2 trillion. (Cisco, Intel, Oracle and Microsoft are all still with us.) Amazon, one of that era’s big winners, had a market cap of close to $4 billion. Today, it is valued at $1.5 trillion.

If the digital assets space follows a similar growth curve, it indicates the potential opportunity. Yet from taking the pulse of the EMEA market for this report, the conclusion is that there is no clear intent in the market to go after this space aggressively. Most players have adopted an approach of ‘fast followers’ or ‘wait and see’, even though awareness of digital assets, cryptocurrencies and tokenisation, and to some extent decentralised finance is very high.
To address a market that is fast becoming too big to ignore, financial services providers need to take some critical steps today:

1. Assign an executive who is accountable for digital assets.
2. Have a clearly agreed strategy at board level – even if that approach is to wait and see for now.
3. Risk and compliance teams should actively monitor regulatory activity around digital assets. Then, banks need to start assessing the potential impact of crypto payments on their own payment strategies.

4. Your CIO team should start finding and adding skills in blockchain and digital assets to the enterprise architectural capability. Lacking those capabilities could be a significant barrier when the organisation wants to make a decisive move in this space.
5. Many banks are focusing on innovation and on trying to build out a FinTech ecosystem. When doing this, they need to consider digital asset players as part of that ecosystem thinking and design.

The strong degree of waiting and seeing from our market engagement suggests EMEA financial services players are not yet fully confident that digital assets will be successful immediately. However, the rapid progress seen elsewhere suggests it is important to be best prepared, as it looks increasingly likely digital asset market adoption will be a question of when, not if.
Our Digital Asset Services
Deloitte brings together a multi-disciplinary team with a broad set of capabilities and a deep understanding to realise value through blockchain and digital assets. Our services provide clients with end-to-end support on their digital asset journey:

Strategy:
Executive education, market research, and positioning of digital asset opportunities within broader firm strategy.

Market entry:
Identification of specific, addressable market needs and solutions, paths to market entry, and frameworks to support decisioning.

Business case:
Identification and collection of internal and external data to support estimates of revenues & costs. Analysis of outcome scenarios, constraints affecting execution of business plan.

Roadmap:
Tactical implementation plan with sequenced activities to enable solution; vendor assessment and development of solution architecture; governance and executive alignment.
Implementation:
Development services including systems integration, QA testing, and go-live readiness.

Digital asset classification:
Navigating through the rules and standards set forth to classify digital assets for tax purposes and ensuring the right considerations are thought through fully explored from the beginning.

Tax optimisation and structuring:
Optimising and structuring value capture systems across trading, custody, asset servicing, and funding to not only navigate tax uncertainties but also identify winning models.

Ongoing tax & regulatory compliance:
As tax structures shift, we are a trusted partner, ensuring ongoing compliance is maintained as new tax guidance emerges and matures.

Risk assessment:
Comprehensive assessment of business, cyber, financial risks and more, leveraging our deep understanding of traditional and emerging risks related to digital assets.

Audit readiness:
Provide insights to companies preparing for a financial statement audit on accounting policies, financial reporting procedures, and controls documentation.

Accounting & advisory services:
Advising companies on accounting for digital assets including analysing complex contracts, performing accounting research, developing accounting policies, and drafting relevant disclosures.

Financial advisory & controls:
Understanding of operations and reporting requirements across the entire digital assets lifecycle to help mitigate potential impacts including the application of COSO to blockchain (in collaboration with our Audit practice).
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