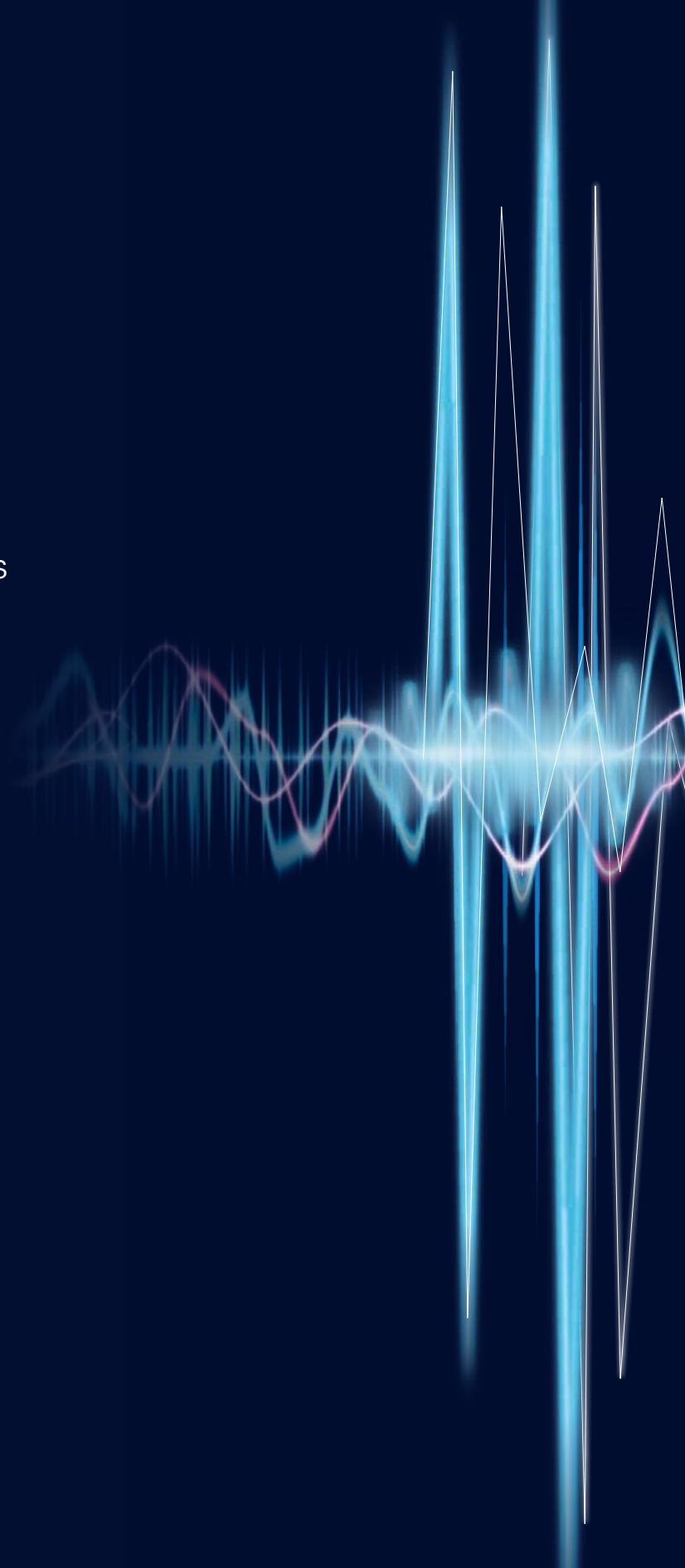




30 Voices on 2030

The future of financial services



Interconnected,
collaborative, frictionless

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collaborative, frictionless

Hear the 30 Voices

Our 30 Voices on 2030 cover every facet of the financial services industry and beyond – from fintech to big banks, from software to social enterprise. Taken together they create a valuable chorus of expertise and insight.

That's why we've gathered them together online too. A special section of our website hosts videos of all 30 Voices, enabling you to listen, share and engage with a wide range of financial services thinkers all in one place.

Visit www.KPMG.co.uk/30Voices to watch and listen to the voices of change.

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Jonathan Holt

KPMG

Jonathan Holt is Head of Financial Services at KPMG in the UK.

I love working with organisations that embrace disruption and think about how they're going to change their business as a result.

Anticipating and making the right strategic choices to prepare for tomorrow can be difficult. No one wants to be a Betamax in a VHS world.

We've interviewed 30 people from across the financial services industry and beyond – exploring a world where blockchain is commonplace, where customer behaviour is different, where artificial intelligence (AI), platformisation, fintech, insurtech, regtech – and every tech in between – has changed the financial services ecosystem and business models.

Some of the change our Voices predict is merely evolutionary; some is radically different from what we have today.

We've discovered that financial services will become vastly more interconnected and collaborative – and virtually frictionless.

For me, four key themes emerge.

First, **data** will fundamentally change the business of financial services. It will be at the heart of how financial

services will make money in 2030. Yet many financial services CEOs are not embracing the simple fact that their very business model will need to change. And fast.

Embracing this concept should make us think very differently about the way that we use and manipulate data in the future. It will create new ecosystems where choosing the right collaboration partners and alliances will also be critical.

Second, the **customer** relationship will change by 2030. Embedding financial services with lifestyles and business life-stages will be key, as will matching financial services to meet the immediate gratification these demand. Good service will mean frictionless transactions: safe, fast and automated. And whilst AI will power mass personalisation and micro-consumption, a human touch will always be needed.

Third, in 2030 **regulation** will focus far more on activities, rather than on the company or person performing those activities. Regulators need to adapt and adopt far more automation moving forward.

And finally, **business models**. We'll still have some super-scale

businesses that operate economies of scale. But we're going to see more nimble and niche providers pick off individual activities within a wider ecosystem. Technology businesses and data engineers – with their own scale and sophisticated approach to data – will be key players.

Taken together, these themes suggest that by 2030 industry boundaries will disappear. New entrants will disrupt and steal market share. Existing players will become disintermediated from their customers.

So you've got to know what makes you special, and the value you give to your customers. Otherwise you will become irrelevant.

These 30 Voices will help you, and the industry as a whole, challenge thinking on what the future of financial services holds.

Stand still and you will be out of business.



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Anton Ruddenklau KPMG

Anton Ruddenklau is Head of Digital & Innovation for KPMG Financial Services in the UK and KPMG's Global Co-Head of Fintech.



Multiple Voices....Multiple Scenarios....

We have a financial services industry that is not fit for purpose in an age of digital transformation. Still selling the same old products in the same old way, clinging to the hope that a colourful website or a well-designed mobile app will convince customers they are doing something different.

What to change? Given all the time and money lavished on digital initiatives in recent years, you'd think most would have worked this out by now. You'd be wrong.

In this new era of open financial services, the barriers to entry are tumbling down. Technology-enabled collaborative partnerships operating in a connected ecosystem underpinned by free-flowing data now stand every chance of stealing the incumbents' lunch.

Our 30 Voices have been open about their views on what needs to change. However, they didn't all agree and several parallel business models seem to be emerging.

Imagine the financial services industry as a universe which is constantly expanding at the speed of light. Within it, there are several 'star' constellations that operate differently. For example:

- The 'Red Dwarf', where incumbents are eclipsed by stronger brands, and become a faint, distanced player, where their customer interface is through an affinity brand and instead they simply provide the infrastructure and funding mechanism of financial services;
- The 'Milky Way', where an orchestration of alliances and partnerships have atomised the current landscape and where financial services is part of a much bigger digital ecosystem;
- The 'Sun', where customers are segments of one powering highly personalised services and offer their data for services or payment;
- And finally 'Earth', where purpose is fundamental – a values-based finance model evaluated through contributions to society.

The reality is, no one really knows what is going to happen. But talk to those that constantly challenge their thinking in our industry and one thing is clear:

Start planning for multiple parallel universes.

Be bold and place bets. Experiment with ideas in the knowledge that they can be dropped if they don't work out. Work with new partners with fresh thinking about the financial services of tomorrow. Spend time with your customers to see first-hand what they really want.

None of this is beyond the reach of the financial services industry. But we must all recognise that we have a responsibility – it is our duty to pass on a better range of products and services than we inherited.

30 Predictions for 2030

A different kind of Financial Services CEO in 2030



CEOs will convene broad alliances rather than run big companies



Successful CEOs' strategic decision-making will be data-driven



Financial services will operate with small, flat management teams



Emotional intelligence will beat a premium for financial services leaders



Intangible assets will dominate the balance sheet

Data is the new currency



Data will be the most valuable currency of all



Open APIs will connect technologies to create vast new data lakes

100%

Analytics competency will be a crucial competitive differentiator



Data scientists will be financial services' biggest wage earners



Consumers will understand the value of their data and demand a return

Business models predictions for 2030



The platform model will be the only game in town



New entrants from fintech and big tech will displace big-name brands



Branch networks will continue to shrink



Tools such as AI-driven robo-advice will replace personal relationships



Distributed ledger technology will drive operating efficiencies

Financial Services regulation and trust



Financial services businesses unable to establish trust will disappear



The leading firms will look like their customers, inclusive and diverse



Regulators will focus on activities and outcomes, not products



Regtech will transform supervision



Digital identities will be in widespread use

The future Financial Services customer

2000

The Generation 2030 consumer will redefine the customer proposition



AI will power mass personalisation and micro-consumption



Customers will reject generic products for services that achieve their goals



Good service will mean frictionless transactions: safe, fast and automated



Democratised finance will reach previously marginalised groups such as vulnerable individuals and SMEs denied credit

How Financial Services functions will operate



Financial services will employ fewer people, but pay them more



Automation will completely eradicate manual processing



Firms operate in the cloud, with IT managing procurement and deployment



External partners will proliferate, including "innovators in residence"



Distributed ledger technologies will render central counterparties irrelevant

30 Predictions for 2030

What does the future of financial services look like in a world of digital transformation?

The digital disruption of financial services is well underway, from the explosion of fintechs to the opening up of financial services. But what will the industry look like when the dust has settled? In a dozen years' time, how will the transformation we are now going through have played out?

We spoke to 30 industry leaders – chief executives, regulators, entrepreneurs, associations, technologists and others – to gain a picture of what financial services might look like in 2030.

Addressing issues such as the CEO's role in 2030, the way customers will act, the future shape of businesses and how regulators will govern the system, our 30 voices painted a vivid and – at times – unfamiliar landscape.

The opinion-formers in this KPMG research have some very clear visions of the future. Their predictions for the industry span the six pillars where KPMG also envisages dramatic change to:

- The role of the financial services CEO
- The business model of the future
- Tomorrow's customers
- The growth of data and analytics
- Regulation and trust
- The operational shape of financial services firms.

In each case, our interviewees believe the world will look radically different in 2030. And that businesses that lack the agility and imagination to adapt will be left behind.



A different kind of FS CEO in 2030

- 1 CEOs will convene broad alliances rather than run big companies
- 2 Successful CEOs' strategic decision-making will be data-driven
- 3 Financial services will operate with small, flat management teams
- 4 Emotional intelligence will be at a premium for financial services leaders
- 5 Intangible assets will dominate the balance sheet

In 2030, the financial services (FS) CEO will need to be able to lead a changing cast of people, processes and structures, exploiting new technologies to re-imagine their businesses and execute on their strategic vision.

What does that mean in practice? Importantly, FS leaders will become orchestrators of alliances, responsible for co-ordinating a community of product and service providers, rather than managing large conglomerates that aim to offer a one-stop shop.

In a digitalised marketplace transformed by the opening up of financial services and customer demand, our 30 Voices envisage CEOs running lean, core businesses that leverage platforms and partnerships to deliver a much broader range of customer outcomes. Driving insight from their data analytics and modelling, they will operate within an adaptable ecosystem into which customers can plug in and out on demand.

The skills of the FS CEO will therefore need to change. With less of a role for functional leaders, and more emphasis on technological vision and the emotional intelligence required to build partnerships, the CEO of 2030 will have different priorities. In the digital economy, the business's most valuable assets will be intangible.



Business model predictions for 2030

- 6 The platform model will be the only game in town
- 7 New entrants from fintech and big tech will displace big-name brands
- 8 Branch networks will continue to shrink
- 9 Tools such as artificial intelligence driven robo-advice will replace personal relationships
- 10 Distributed ledgers will drive operating efficiencies

FS firms used to operating in walled gardens need to accept this model's days are numbered. Our interviewees expect industry boundaries to have melted away by 2030. Instead, expect "platformication" – FS firms operating platforms through which customers will choose products personalised for their needs from a range of providers.

Meanwhile, the divides may be between customer-facing businesses operating in verticals across the financial services sector – but able to exploit artificial intelligence (AI) and machine learning (ML) for mass personalisation – and those providing process and systems support behind this public interface, often exploiting new technologies such as blockchain.

Moreover, with the competitive landscape transformed by new entrants – both from the start-up fintech community, and from the world of big technology – the question of who sits where is up for grabs. Many of the big-name banking brands may have disappeared from sight, their leaders choosing to focus on providing the pipework for their industry. In their place, with FS widely disintermediated, the global tech brands have the power to connect with customers.

It's a similar story in the telecommunications industry where market leaders have repeatedly attempted to rethink the value chain to take their business models beyond the provision of a utility service into areas such as media and entertainment. These businesses are exploiting the data travelling across their networks to generate new revenue streams.



The future FS customer

- 11 The Generation 2030 customer will redefine the customer proposition
- 12 AI will power mass personalisation and micro-consumption
- 13 Customers will reject generic products for services that achieve their goals
- 14 Good service will mean frictionless transactions: safe, fast and automated
- 15 Democratised finance will reach previously marginalised groups such as vulnerable individuals and SMEs denied credit

The demands of Generation 2030 pose profound questions for the FS sector, as they will expect a one-stop shop for products and services, bespoke treatment and instant gratification; FS businesses will need to cope with the trend towards micro-consumption. Customers will look for solutions that deliver outcomes linked to their life- or business-stage events, rather than focusing on products, with personalisation delivered through automated analytics, AI and ML rather than personal relationships. Long-term customer loyalty in this context – and meeting long-term financial objectives – will require FS providers to understand the new generation of consumers of financial services, whether B2C or B2B.

Continued digitisation means the branch network is likely to continue to dwindle, though some may choose to maintain a high street presence to burnish their community credentials. Technologies such as AI-powered robo-advice will also render traditional relationship management increasingly redundant.

Nevertheless, customer service will be more important than ever. The dominant providers will be those that enable delivery of an array of high-quality and competitively-priced solutions via a frictionless platform. Moreover, as innovation reduces the cost to serve, a wider group of customers will benefit, with the FS industry finally addressing the needs of those previously excluded from financial services and credit including vulnerable customers and small and medium-sized enterprises.



Data is the new currency

- 16 Data will be the most valuable currency of all
- 17 Open APIs will connect technologies to create vast new data lakes
- 18 Analytics competency will be a crucial competitive differentiator
- 19 Data scientists will be FS's biggest wage earners
- 20 Consumers will understand the value of their data and demand a return

Data will be fundamental to the way financial services make money in 2030. Yet many CEOs are asking the wrong questions – most are responding incrementally and, at best, tactically with better front-end digital services for customers or process improvements in the back-office. But they're not addressing the more fundamental issue – that their very business model will need to change. And fast.

Lessons need to be learnt from other industries – take automotive – rather than focusing their energies on minor adjustments to preserve their traditional car sales businesses. Rather, they are reinventing themselves around concepts such as mobility and data – arguing that the digital ecosystem will generate higher revenues than automotive manufacturing.

With open architecture and a platform business model dominating FS, data analytics and application programming interface (API) management must become core competencies. With empowered and intelligent customers able to make choices quickly and easily, firms unable to deliver a frictionless and bespoke proposition will become irrelevant.

This will play out differently according to the financial outcome sought. In insurance, for example, data will underpin much more accurate risk-based pricing, while in banking it could support better stewardship of the household finances, from utility switching services to advice on spending and budgeting.

Crucially, however, FS businesses will have to win the trust of customers who are much more aware of the value of their data – and much less willing to give permissions for its use without perceiving a clear utility to them.



FS regulation and trust

- 21 FS firms unable to establish trust will disappear
- 22 The leading firms will look like their customers, inclusive and diverse
- 23 Regulators will focus on outcomes, not products
- 24 Regtech will transform supervision
- 25 Digital identities will be in widespread use

Digitally-enabled consumers will be better informed and engaged – and will judge FS providers by the outcomes they deliver. Those outcomes will be broad, spanning the personal results secured for individual customers and the wider impacts on society; for example, customers will expect FS providers to be more inclusive and diverse. Those businesses that fall short will rapidly lose trust and, ultimately, the mandate to serve.

Data has a part to play in this transformation too. Distributed ledgers will become the source of 'trust', locking in data from transaction histories, contributing to more sophisticated risk assessment models.

In this context, the regulatory agenda will shift away from product supervision, particularly as the traditional verticals of the sector break down. Instead, financial regulators will build new structures to monitor the activities of the firms they police.

As they do so, regulators will have access to new tools, with "regtech" solutions powered by AI and analytics, enabling more efficient and effective supervision. Regulators will also use these technologies to share information with one another, across both national and international boundaries, supporting efforts to combat financial crime.

At the same time, an international consensus on data management and processing will protect the privacy and security of individuals – and provide standards and protocols for consent. Customers will therefore be more comfortable giving permissions. Digital identities, backed by governments, will be widespread, reducing the burden of anti-money-laundering and Know-Your-Customer regulation on customers while making life more difficult for fraudsters.



How FS functions will operate

- 26 FS firms will employ fewer people, but pay them more
- 27 Automation will completely eradicate manual processing
- 28 Firms operate in the cloud, with IT managing procurement and deployment
- 29 External partners will proliferate, including "innovators in residence"
- 30 Distributed ledger technologies will render central counterparties irrelevant

As automation and AI accelerate, the workforce of the future will focus on higher-value work across the enterprise with a single view of the truth, rather than operating in siloed functions. This will require the recruitment of staff with different skills. Organisations will employ fewer people overall, as the need for manual processing is eradicated, but their employees will be more highly paid, as they exploit their abilities to parse data for competitive advantage.

Businesses will not only be more collaborative internally, but will also work more closely with external partners, including innovators and entrepreneurs. They will leverage the flexible labour market to build such partnerships when needed, not least since collaborators may not want to formalise working relationships. These shifts will require a move away from legacy IT systems to cloud-enabled architectures that offer speed and agility. The role of IT will be to manage the procurement and co-ordination of best-in-class solutions "as-a-service" when they are needed, not look after on-premise systems.

Along with people and systems, process will change, too. More efficient straight-through processing will eradicate manual interventions – even outsourced business process contracts will no longer be required. Distributed ledger technology will underpin transactions, providing immutable records with no need for central counterparties.

Is your business ready for this new world? Read on for more detailed visions of the future from each of our 30 leading thinkers.

“CEOs today
tend to think
in entities and
structures...”

Future CEOs
have to recognise
that they manage
services”

David Duffy, CEO of CYBG

Adam French
Scalable Capital

"Today's job titles will disappear, not the jobs"

In 2030, I expect financial services to be a lot more integrated, a lot more connected than today. The first area where we've started to see that connectivity has been in the payment space. When you take an Uber today, you don't actually think that you're interacting with the world of the finance. But you are. When you leave the car, the money is just taken.

The area that everyone is trying to connect better is retirement savings. The state doesn't want to provide for these anymore. Companies are moving out of what we used to call final salary pensions. And people don't understand enough to take an effective journey enabling them to be able to retire comfortably.

The way it plays out in 2030 is that as saving becomes more interconnected into your daily life, you don't need to think about it as actively. People like me, who work in financial services, engage with it every day. I love looking at the latest technologies. I love checking to see what's going on in my investment accounts. But 99 percent of the population just want it to happen without thinking about it.

The only way you're going to be able to deliver a solution is by connecting savings to everything else you do on

Adam French is the Chief Executive and co-founder of Scalable Capital. With more than 30,000 clients and €1 billion under management, it is one of the fastest growing digital-investment managers in Europe.

a day-to-day basis in the same way that other technologies – such as the social networks and big retailers of the world – are interconnected with your life. If financial services can do the same thing – if your pension is automatically accruing savings without you really having to think about it – in a very smart way, that is ultimately the best solution.

That also means the role of the Independent Financial Advisor will be different in 2030. Humans still need to guide people, to make them comfortable with investing. But in 2030 their role shifts away from being an asset allocator – because technology can do a fantastic job at that – to a relationship manager, trying to hold people's hand through

the process. It will be a hybrid model, where humans have the relationships with the clients and then technology works as efficiently as possible in the background. I see us using that model at least in the next five to 10 years. Thereafter, who knows?

Cybercrime and cyber risk is probably one of the main risks of the financial services industry for the next 10 to 15 years. People are asking, 'what is going to happen to my money? Does it just go into a black box and never come out?' Those questions are even more important now that those operating at scale are moving everything to the cloud.

The software you run online isn't static. It's always being upgraded.



It's always having bugs fixed. It's always being iterated. That means new vulnerabilities appear all the time. In addition, there are so many firms out there sitting on technologies that are 20 or 30 years old, and it's only become more challenging to migrate on to more flexible, more modular frameworks.

Right now, you just have to develop for a few platforms. You have the web and smartphones as the interfaces. As we move to the next technology,

which will be even more connected, it means more vulnerabilities, more work to keep everything robust and up-to-date.

So it's not surprising that as a CEO, one of the main things that I worry about is how we're dealing with cyber. It takes the skill set of a CTO to be able to answer those questions effectively. And the traditional CEO probably isn't as up-to-date with that type of threat to their business as they are with the traditional threats, the

traditional risks. The only way you can really create an effective framework around it is to get the right people into the business to help you manage that risk and to educate yourself on the developments being undertaken right now in the sector.

I'm optimistic about the future. Today's job titles will disappear, not the jobs. Different jobs will appear. People will be empowered to do more interesting work. Progress does happen – and it will happen.

Adrian Grant

9 Spokes

"Data, in 2030, is relevant... if it's relevant"



Adrian Grant is co-founder and Executive Director of cloud business 9 Spokes. From New Zealand, the business offers SMEs a cloud-based dashboard that unifies data on a single page or app, called a "pane of glass." Prior to 9 Spokes, Grant was the CEO of Umbrellar Cloud Hosting.

How do you see the SME market evolving to 2030?

The SME sector has been neglected by most banking institutions. Not deliberately, but because they're a really difficult market to serve at an intimate level.

Data will be key. With sufficient data on a business, banks will be able to provide tailored solutions for a customer segment of one. For those companies that are aggressively seeking a relationship of intimacy with their bank, they will be able to have that relationship where, today, they don't have it.

What impact will Open Banking have? Well, it's permission data, isn't it, in terms of Open Banking. You have to

have a relationship of trust, relevancy and intimacy between the bank and the SME.

With Open Banking, the relationship between the client and the service provider fundamentally changes, because the customer holds the power; they all have a choice. In the past, everyone had a personal banker. If you go back to 2000, that relationship started to become online and impersonal. The banks changed. They went to an online market model.

They retrenched significant staff. A lot of people became disenfranchised, in terms of that relationship.

Look forward, and you see the closure of a 40-year journey from offline and personal, to online and impersonal, to 2030, when successful relationships will need to be – and will be capable of being – both online and personal.

What will be the role and value of data in 2030? Data, in 2030, is relevant... if it's

relevant. I know that sounds a bit of a strange statement but you can have data for data's sake, and that doesn't necessarily help you. Very few decisions within the SME segment are based on analytics today, they don't have a lot of live visibility of data – it's often weeks or months retrospective from the date that it's required. So that change, in terms of the timeliness of data, will help businesses make smarter, more timely decisions.

This live data – along with Open Banking – will have a significant impact on businesses in terms of how they get access to capital in 2030. Providers will be able to identify those businesses performing well, lowering their risk to provide credit. If the bank can see that data, permissioned of course, they can start talking about how they can help them improve their business. That doesn't exist today.

Which innovations do you think will be the breakout success by 2030? One is blockchain – not from a crypto perspective, but actually a ledger and register of interests that is accurate.

Whether it's smart contracts, or loyalty programmes, or subscription models, there's no question that blockchain will mature to being a very

solid tool. But that will take time to bed in. The second area will be artificial intelligence. And that is, literally, the ability to trawl through data – and present insight or information that's relevant – that you literally don't have a capacity to do manually. Combine those two things, and you're actually going to have a much clearer picture of how a business is performing.

Do you see a different regulatory picture developing by 2030? You see a lot of fintechs coming into the market, trying to disrupt the major financial services companies. But ultimately, the regulator will protect the consumer. So anyone who thinks that that noose is going to be looser, I think, would have to be dreaming.

How will firms collaborate in 2030? Everyone's going to be a platform company, or have a platform type element to their business, which means you have to run with the hare and hunt with the hound. In some cases, you can have an exclusive relationship; in others, you're going to have a relationship where they are both a competitor and a friend. The days of a walled garden around your business are probably gone.

How optimistic are you that we'll have frictionless financial services? I am optimistic. It just means speed, as far as I'm concerned, with trust and authority, in terms of how the process works. Today, transferring funds between countries can be a relatively slow process. People are disrupting that today, saying, 'why is that a slow process?' The frictionless part is the easy part to do, but it's time to bed down the technology.

How should those in the c-suite prepare for 2030? Don't leave it until tomorrow. Look at your business and your business model, and understand how it relates to the platform economy that's now coming into play. We're seeing it in tech companies with the Facebooks or the Ubers – banks should see themselves as platform players too.

Alex Storey

Disruptive
Technologies

"A service-based model changes how we save and spend"

Alex Storey is UK Director of Disruptive Technologies, a Norwegian technology company that specialises in bringing buildings and the physical environment online with wireless sensors. It currently produces the world's smallest wireless sensors for logging data.



Urbanisation is a huge global trend that will impact the way we live and how we use financial services. Affordability issues will drive many new technologies.

Whether it's Maglev, or hyperloop, or driverless cars, there will be a movement away from the primacy of certain cities. These new technologies will change where we work, where we shop, how we bank and it will mean we will be less centralised around certain cities. It's not a house-price issue as much as a transport-infrastructure issue.

Think about the last big change: the internet. We now have a digital existence that sits alongside our physical existence. In that digital world, everything is connected, everything is tracked, and everything is catered and relevant to us. There will be a similar revolution in the built environment and transport infrastructure.

Our business, Disruptive Technologies, aims to be part of that change. The data we collect using our wireless sensor technology offers building owners and tenants clear and measurable savings and a better user experience. It could be around wellness; making sure that the

temperature is right; or other types of environmental factors and efficiencies.

Wireless sensor technology gives owners and operators the opportunity to be more efficient and to offer healthier, more enjoyable experiences to tenants. It allows them to differentiate their property. It will be increasingly likely to see two buildings on the same street valued and enjoyed very differently.

Changes to mobility are also interesting from a data-gathering perspective. If you look at a ten-year horizon, driverless cars will play a much greater role. It will go hand-in-hand with different ownership models. It won't be that we'll all have a driverless car sat on each of our drives. It opens up more of a service-based model. That changes how we save and spend, so there are big implications for financial services just from those changes alone. And I expect to see similar disruption in the area of property ownership.

Another big change will be human capital. We're going to see increased demand for people with highly technical skills, but also generalists who can be adaptable. People will move between industries a lot more and you'll start to see those with

technical skills increasingly move into sectors like financial services and real estate.

There's also going to be a challenge around talent attraction. Businesses will be competing with everyone for the top staff, not just within their own sector. So the environment people are working in, whether that's the structure of the working week or the actual physical environment, is going to be very important.

While I'm naturally optimistic about the future, my hope is that the money and the effort going into technology is going to shift away from the developed world, where the focus is on letting people spend their money a little bit quicker, into areas where there are genuine big opportunities and big challenges. There are two billion people in the world without access to a bank account. It'd be great to see technology and the huge amounts of data that are currently being collected actually be able to be applied to those sorts of problems rather than just the day-to-day of the relatively wealthy sections of society.

Dr Andrei Kirilenko
Imperial College
Business School

“Understanding
how to operate
in start-up mode
is going to be
more valuable”

Dr Andrei Kirilenko is Director of the Centre for Global Finance and Technology at Imperial College Business School, and a world expert on the technology and regulation of automated financial markets.

What are the game-changing technologies for finance?

Mobile telephony; cloud computing, the ability to have computing power and memory capacity on demand so that you don't have to actually build your own racks of CPUs; and blockchain.

This is significant because at the time these three technologies came out, the established financial services industry could not cope. It was busy surviving the consequences of the global financial crisis – and this gave rise to fintech, to upstart technology companies without the legacy, without the compliance burden, without having to answer, ‘why did we have to bail you out?’ And this has fundamentally changed the industry.

Regulators are quite keen to have these technology companies come and challenge the incumbents. Why? Because technology performed amazingly well during the global financial crisis. Tech companies didn't need to be bailed out, did they?

What about other drivers to 2030?

I wouldn't call it a battle, but I see a fintech competition between the West and China. Because of the country's capacity and the size of its market,

financial services in China were able to leapfrog a lot of legacy issues – and now are in a very good position to compete directly with the West.

How will we see regulators react?

Markets and financial institutions have automated. They're basically massive computers, but regulations are still written in natural business language. That has to be translated at the end of the day into lines of code. But once it's implemented, you don't really know what the developer has done.

It would be useful to provide blueprints in the regulations in the form of computer language. Regulations are easily convertible into logical schemas because what they basically say is, ‘you can do this under these conditions, you cannot do this’.

How should regulation evolve with robo-advice and algorithms, then?

Regulators push hard to ensure enough disclosure is given to the customer or investor in order for them to make a properly informed decision. So, once the disclosure is given, the idea is they understand the risk. In the area of robo-advice and algorithms, what will need to be disclosed is how exactly these

robo-advisors came up with the suggestions that they came up with. Even though an algorithm gave that advice, companies will probably have to disclose – if they're engaged in the regulated activity – why that is.

Will regulators tackle blockchain?

Blockchain arose as an essential part of cryptocurrencies. Then it evolved as a database of sorts, to record in a very highly-encrypted fashion provenance of valuable objects and data – from diamonds to land registries, that sort of thing.

What's interesting is that inside the blockchain itself is an economically scarce digital resource. This is actually very difficult to create because digital objects are very easy to copy. It's an incredible invention.

Regulators have basically been standing on the sidelines, seeing whether or not it's going to go away on its own or whether or not somebody's going to hack it and the public is going to lose trust in it. But regulators also recognise that blockchain has value as a financial asset, too.

It's an unbelievable invention that has proven its value, and it's going to find its way – and whether a new



regulatory paradigm will have to be created for it, or it will fit into the existing paradigm like a digital commodity remains to be seen.

What skills will a CEO in 2030 need?

The next generations of leaders of the financial services industry will come from engineers, computer scientists, applied mathematicians. These are large, complex systems that run on code based on mathematical principles – and if you're not that person, then you need to decide, what is your role in this scheme?

Your career progression as a leader could be a start-up, then regulator, then move to a larger financial institution, then a start-up again. The technology is going to change. Business practices and competition are going to change. So experience of technology and understanding how to operate in start-up mode is going to be much more valuable.

At the same time, there is also a need within regulators for people who really understand new technology trends and business practices, the new ways of doing things. People like that are going to be moving around because they need to educate themselves. They need to stay connected. They need to be part of a global network.

Anthony Thomson
Entrepreneur



“Financial services companies have lost sight of the customer”

Anthony Thomson is founder and former Chairman of both Atom Bank and Metro Bank. He's also the co-author of *No Small Change*, a book about marketing in financial services.

How is financial services going to change in terms of the shape of the industry and the companies that are within it by 2030? I don't think you can take financial services in isolation. There are so many companies that are partly in financial services, partly in retail, partly in technology. There's a real overlap between them.

It's consumers that drive financial services businesses to a great extent. And a lot of people talk about trying to restore trust with consumers – because frankly, as an industry, financial services has treated the consumer appallingly for the last hundred years. And I go to conference after conference where everybody talks about 'how are we going to regain the trust of customers?'

We're not. Our challenge is how we manage the distrust that customers have. And that distrust is healthy. People should have a healthy scepticism. Our job is to make sure we're transparent enough, that we're clear enough, that we put the customer first sufficiently for the customer to realise it.

There are two types of trust, psychologists tell us. Cognitive trust is about competence. Do I trust my bank not to run away with my money?

Yes, I do. You'll pay my standing orders? Yes, you will. So I trust you to be competent.

Associative trust is, 'do I trust you to put what's important to me ahead of what's important to you?' The answer is, no, I don't. Financial services start way back in terms of associative trust. Some of these new companies, they start a bit closer because they have no track record of being bad.

But the real question is, what is the purpose of the financial services industry? I am a great believer that profit is a by-product of doing something well for the consumer. If you give the customer a better product or service or experience and you manage your business well, you'll be profitable.

But in general, banks and financial services companies have lost sight of the customer. They think they just exist to make money – and consumers are starting to see through this. They are going to say increasingly, 'what is your bigger purpose?'

It's not just financial services – every company needs to look at how they can help people in that process of what the psychologists would call self-actualisation.

Who are the winners of 2030 going to be? Is it going to be the existing financial services companies? Is it going to be some of the bigger consumer groups? I have to say there's a grave danger that a lot of the financial services companies will become like the plumbing in your house. You won't even know that their service exists. I am with Bill Gates – who summed it up brilliantly when he said, 'everybody needs banking; nobody needs banks.'

So what do I think the bank CEO of 2030 is going to look like? They have to look very different. We are very bad in the UK, and across Europe, in terms of recognising different characteristics within people – just look at the gender disparity. That has to change. We have to reflect the customers we have. We have to be leading businesses that meet the needs of real customers.

And speaking as a sad, white, middle-aged bloke, I very much hope that I'm the last of my generation!

“Don’t think you
can hold on to
your business
model...”

...as long as
possible and
assume everything
will be alright”

**Charlotte Crosswell,
Chief Executive of Innovate Finance**

Blair Turnbull
Aviva

"Insurance
will be more
predictive in
2030"

Blair Turnbull is Managing Director, Digital & Retail, for UK & International at Aviva. Prior to his current role, he was Group Strategy Director at Aviva.



Insurance has always been 'at the bottom of the cliff,' where we pick up risks that have become realities and then pay out claims. What we want to do by 2030 is get to the top of the cliff, where we can start to prevent risks.

Say in 2030 you wake up and walk to the bathroom. By the time you're ready to put your clothes on, your bodily diagnostics will have been updated; smart technology will know whether you're high or low on glucose, or whether you're slightly anaemic. That information will be communicated to your fridge so that by the time you are in the kitchen, remedial breakfast choices are highlighted. Insurance technology will have also communicated to your shopping list that you'll need extra orange juice because you're deficient in this or that nutrient.

If you face a travel delay, technology will send you notifications to help you avoid bottlenecks or even accidents. If you're travelling overseas, that will be evident in the data, so we can offer you travel insurance. You'll have much more events-based insurance; it'll be more intuitive, easy and targeted.

The way people will buy insurance will also change – think Netflix of Insurance – breaking binding annual

cycles and offering a more affordable solution, all in one place. Imagine walking into a supermarket and buying one item at a time. Your shopping would go on forever. But unfortunately that's how insurance is today. When I look forward, I see huge value in having deeper relationships with customers for longer, and a real focus on trying to break the cycle of one product at a time.

People won't tolerate expensive insurance. One thing we can guarantee about insurance in 2030 is that it'll be more affordable because of all the data and the technology that's being built in. The risks will be different. And our ability to manage the risks will be enhanced.

So in our 2030 world of automation, digitisation and artificial intelligence, where does the human fit in? Humans are inherently good at problem-solving and creativity, thinking outside an algorithmic box. We're also naturally social animals, so we're going to want to interact. You're going to want to talk to a human, not a bot, about a critical illness or a loss.

What we want to do is get rid of the repetitive tasks around changing your address, say; or sending you paper. We want to free up people to have

really genuine, emotive conversations – helping customers, whether it's a loss of a loved one, the loss of a favourite asset, or a health issue. That's where we see deep value and that's why there will always be a mix. Digital will take up repetitive tasks, people will offer rich conversations.

There's a race on to get to the right place in terms of the technology. Start-ups kicked off the revolution, and there's always a place for them. But as you look forward, the big tech businesses, and companies that have the large balance sheets, will win more and more.

They will consolidate, too. We already see a lot more convergence, with start-ups quickly moving to partner with more established players. But look at the top 10 companies in the world right now: only two of them were there 10 years ago. If we look forward to 2030, how many of them will be there?

The nature of change is very different to what we've seen in the past. We have to take insurance from a challenging, hard, jargon-filled, begrudging experience to one that is beautifully simple and rewarding. If we don't, traditional insurers will become obsolete.

Charlotte
Crosswell
Innovate Finance

"Huge issues
need to be fixed.
It has to be a
global effort"

Charlotte Crosswell is the Chief Executive of Innovate Finance, an industry body representing 250 fintech firms across the world, with members split between start-ups and incumbents.

In 2030, we're not going to be talking about fintech; financial services is going to *be* fintech. It will be embedded into our day-to-day world, whether that's a banking app, Apple Pay or something else. Technology and innovation will enable more convenient services and options available for consumers.

There is always going to be a need for big financial services firms. However, by 2030, they will all become a lot nimbler – and embed fintech into everything they do.

Artificial intelligence will eventually underpin everything. We're already seeing that now, but it's just the beginning. Technology will allow consumers to make more informed choices and better understand what they're looking for. Decisions are going to be much easier.

By 2030, consumers are also going to own and control their data – GDPR is just the start of that journey. But GDPR will continue to be important through to 2030 because it gives back to the consumer confidence in the system.

Open Banking is another example of this. It gives consumers a choice – to decide whether they want their bank

to release the data so they get better products. Although it's still very early days here in 2018, initiatives such as Open Banking will become the norm.

From a government and regulatory perspective, it's also likely we're going to see greater impact around the Know-Your-Customer and anti-money-laundering efforts. Blockchain – as a distributed ledger technology – will enhance the integrity and transparency of data. It's going to be a more seamless transition when we exercise choice of provider.

Regulators are currently working alongside fintechs to collaborate and to educate one another. We're seeing regulators hire from fintechs, and vice versa. It's necessary if they're to understand the technology across verticals. It's not an option to sit there and try to have the old way of working. These two worlds will only continue to blend more closely over time.

By 2030, we'll be more aware of the risks – particularly around areas such as cyber crime and privacy – and hopefully there will be safeguards in place. But huge issues need to be fixed, and regulators cannot just work nationally on this. So over the next 12

years, these efforts will become collaborative efforts on a global scale. Security agencies will realise that, if they try to solve it on their own, financial crime from one jurisdiction to another will still take place.

My advice to CEOs, then, is to not be complacent. Don't think you can hold on to your business model as long as possible and assume everything will be alright. Although it's a challenge, as many investors want immediate returns and quarterly reporting can be unforgiving, management teams need to remember to prioritise investment for the future.

Investments need to be made now in areas such as artificial intelligence. In financial services especially, artificial intelligence and robo-advice is going to unpin everything in 2030. Management teams also need to think about how that's going to affect jobs, skills, and training.

Now is not the time to put your head in the sand and assume it's not going to affect you. It's going to affect everything within financial services. But I'm a glass-half-full person: it's ultimately the consumer who benefits.



Claire Calmejane
Lloyds Banking Group

Claire Calmejane is Risk Product Owner at Lloyds Banking Group. Prior to this, she served four years as Director of Innovation and Digital Centre of Excellence where she set up the LBG Innovation Labs, an internal sandbox to de-risk strategic investments and support the development of the fintech ecosystem.

“Speed and adaptability is the new competitive battleground”

How different is banking in 2030?

The aim of financial services will remain the same: to support customers at the key moments of life, such as when they go to university; when they get married; or when they want to buy a home – but also in difficult moments such as bereavement. Our customers are more connected, with 13 million of them using online banking, nine million of these on mobile, and 70 percent of their needs met online.

As smart technologies create a connected network around our lives, our experiences related to money and financial services are going to be more integrated. Already, in 2018, we are seeing more personalisation

through the digital channel. We can see examples in devices such as the Amazon Echo or Google Home.

If we look holistically at the customer experience, we will keep seeing evolution linked to this digitisation of our day-to-day lives – after all, there are today more users of smartphones than users of toothbrushes. US citizens spend on average 5.9 hours per day on their phones. People move from ownership to subscription, with Netflix going up 26 percent in 2017 and Spotify 47 percent. And they self-train on YouTube. We are seeing the rise of smart technologies around us: smart cities, smart education, transportation, health.

Will regulation be driving change in 2030?

By 2030, the regtech environment will be much more mature and it's a great opportunity to make the protection of the customer simpler. But for me, the most compelling force for change will still be competition, with fintechs setting the bar high in customer experience, and technology giants entering the financial services chain by providing credit or payment services. Add to this that the cost to set up a new company is very low today, and the average lifespan of a top 100 company is about 15 years.

Speed, adaptability and partnerships mean it's critical to have the 'running shoes' on and be able to sprint. It's also important to leave no one behind – to keep an inclusive approach to meeting all customers' needs.

What does all that mean for banks' culture?

In 2030, the brands that will be winning the most customer loyalty will have adapted their culture, their organisation and their values to their customers. That begins when your leadership reflects your customer base by being diverse. At Lloyds, 51 percent of our customers are women. To reflect that, women are present at the top table, making decisions and designing the customer experience; our CEO has set a target of 40 percent women in senior roles by 2020.

The second area is talent. Don't hire for a job – try to have some double-loop thinking, rather than single-loop thinking. Pick people that will set-up a different type of thinking standard, and bring new skills in your organisation. Data, technology, engineering or innovation skill sets are important in product development. Embrace these disruptors – they will be the ones that



also drive your growth and your digitisation forward. This is no longer a nice-to-have conversation. We know companies that can bring this type of talent have more ability to think out of the box, to de-risk their long-term strategy and to perform better financially.

And the third point is to use technology to do more and better business. This will mean being able to partner with other brands to capture a fuller experience for the

customer. It's also going to be how we become more efficient as organisations, so we release more time for people to add value in the day-to-day customer experience.

What technology emerging now will be important to FS in 2030?

I'm an IT engineer by background. I graduated in Artificial Intelligence [AI] 13 years ago. And I always have a happy moment when people ask me about AI and machine learning. These are not new technologies, but

the development of AI over the last two years has been phenomenal. In that time, we created a similar amount of data as has been created since the internet began – and the speed of processing brought by cloud computing and quantum computing is changing the possibilities and the opportunities. They can offer real value for both the customer and for the organisation.

The biggest opportunities for AI technologies – machine learning, deep learning, cognitive science – are in the transformation of the enterprise across all industries. It's operations-facing as opposed to customer-facing and driving efficiency in our organisations.

What advice would you give to a CEO?

Focus on the people. We can talk about technology, but really the digital transformation is a people story. It's about how do you bring your people with you, and how do you up-skill some of your organisation and meet your customer needs.

Colin Bell
HSBC

"Data analytics
will form the
core of your
financial crime
unit by 2030"

Colin Bell is Group Head of Financial Crime Risk at HSBC. He previously worked in risk and compliance roles at UBS and Barclays, following 16 years in the British Army where he held a variety of command and staff appointments, including operational tours of Iraq and Northern Ireland.

How will the financial crime risk landscape evolve?

There is a constant challenge for banks to keep pace with the threat landscape. Organised, sophisticated criminals are innovative and adept at looking for new ways to abuse the financial system.

Financial services is also becoming increasingly complex, with a mix of traditional and new business models. For example, payments systems are opening up – but these processes becoming more fragmented will unfortunately mean new opportunities for criminals to exploit. Payments moving across different systems and across borders pose a particular risk.

Constant criminal innovation means that we, too, have to be innovative. New technology is allowing the industry to become far more effective at detecting suspicious activity and helping law enforcement seize more criminal assets.

What tools will we be using?

By 2030, developments in artificial intelligence, blockchain and machine learning will transform our ability to assess potential threats and financial crime risks. We will be able to determine whether the behaviour of an individual customer presents an

increased risk, close to the time when a transaction takes place. And for the huge majority of legitimate customers, this process will be seamless.

Smart analytics will be standard; it will form the core of the financial crime unit within a financial institution. The analytics unit will be generating leads and deploying predictive tools that should enable banks to become more agile in developing responses to new threats. Not keeping pace with these developments will pose a major risk to any bank that is left behind.

In 2018, we rely on processes such as Know Your Customer to fight money laundering. How will that evolve?

The flow of information between governments, banks and regulators is an area where we have real potential to improve. By 2030 we envisage widespread use of digital identities, backed by governments. That will make the identification and verification of a customer much easier, and less burdensome on them. The seamless integration and distribution of information will be critical in binding financial institutions and regulators together in the fight against crime.

However, that must be balanced against the need to protect privacy and personal data. The ownership of data,

and the right to understand where it goes and how it's used, has already become a business-critical issue.

How do you see regulation keeping pace with evolving financial crime?

As we exploit the potential of data, and innovation like artificial intelligence, regulations will need to adapt. As an industry we will need to collaborate with regulators on this journey.

Regulation should be flexible enough to recognise new models for generating intelligence, not just suspicious activity reports. Regulators will want to address how regulation can allow banks to make full use of their data, whilst maintaining protection for customers.

It would clearly be advantageous for a global institution to have a consistent approach amongst its regulators. But I don't see that happening in the short to medium term. We'll still see different standards in different jurisdictions for a number of reasons. But the growth of partnerships between regulated firms, government agencies and regulators is very welcome. Hopefully, the main components of financial crime regulation, such as the need to know your customer and reporting suspicious activity, will continue to be harmonised.



Can you give us a couple of pointers for CEOs in the run-up to 2030?

Developments in technology will determine the risks banks face and the way they manage financial crime. This, in turn, will place a huge premium on being able to manage vast amounts of data at their disposal.

So the first pointer, which may sound relatively mundane, is to manage your data well. The nuts and bolts of new approaches to financial crime will be a bank's data architecture. It will be critical to be able to access data in a way that allows the best possible use to be made of emerging technologies.

And second, ensure everybody in the institution understands the importance of Know-Your-Customer, in terms of what they do, why they do it and who they operate with within that network.

Of course, these two things are interlinked. In the future, technology and data will provide a far more detailed view of customers and their transactions; something that we're already exploring at HSBC as part of our intelligence-led approach to financial crime risk management.

We have a huge opportunity to tackle this risk in a much more effective way in 2030 than we do today.

Colin Platt
Blockchain Insider



Colin Platt is co-host of *Blockchain Insider*, a dedicated weekly podcast hosted by 11:FS. A former blockchain lead at BNP Paribas Global Markets, Colin has sat on the steering committee for R3CEV, and Post-Trade Distributed Ledger Working Group (PTDL).

“Blockchain will restructure financial services by 2030”

What does the world look like in 2030?

Much more connectivity. People are able to interact in a more seamless manner. That could challenge a lot of regulation. We could, at an extreme, see the complete disappearance of many sectors of the financial services industry. That doesn't mean the companies themselves are gone. But at least some of their very big profit centres will. Things like trade finance may no longer need to exist.

Will cryptocurrencies make banks redundant by 2030?

No, I don't see banks going away. Cryptocurrencies started as a payments mechanism. Financial services make money out of lending rather than payments. Taking deposits

and lending money will still exist in 2030. Will it be done by banks? Good question. Will it be a blockchain? Probably not. But cryptocurrencies could be central. Distributed ledger technologies, like the technology we're seeing out of companies like R3, Digital Asset Holdings and others, could radically change how financial services are set up and how they're distributed to clients.

What does that mean for a bank? If I choose to give them my information, tell them who I am inside of a distributed ledger – and depending on how we set it up – they could make a decision about, say, whether they want to lend money to me. Do they want to offer a mortgage? Do they want to offer

insurance services? But at the end of the day, I have control over how that data is used, with whom I share that data, and exactly what services I'm looking for. That's a radical change in how banks, and financial services more broadly, work with their clients.

Beyond crypto, what's your view on public blockchains?

Even in 2030, I see a fundamental problem with public blockchains. Public blockchains, ones that use cryptocurrencies, are very poor for payments, they're too expensive. If we look at what happened in 2017 and 2018, the price of a single Bitcoin transaction was averaging about \$50 to \$70. People complain about SWIFT fees. But at a bank level, they are about \$5 or \$10. Bitcoin will get even more expensive, because what they're trying to serve is not high-speed, small payments. That's better handled by a more centralised technology. So we're going to start layering payments on top of these systems, in second or third or fourth level, depending on what exactly you're trying to do.

If we pull this into non-public or permission-distributed ledgers, it may be more efficient. But they're still not suited for things like micropayments.

What value do traditional financial services companies offer in 2030? They're still doing a lot of the same value-adds they're doing now. They will have removed a lot of the constraints they have now. But when you lose some of those constraints, you're losing some profit avenues, too, which may exist simply by navigating the current infrastructure.

Another thing for them to worry about is that within distributed ledgers, with or without a cryptocurrency, there will be more competition between financial institutions. Margins could come down. That's not to say it's going to destroy their business. But as we've seen in many other industries when new technologies come along, it's not about extending where you are and guarding your margins or trying to take a bigger share of that market.

How do regulators cope with crypto?

If the cryptocurrency experiment succeeds, by 2030 it will be a very large asset class. It's also a difficult asset to control. It is more akin to the Internet, where even if there are central points inside of it, no single sovereign body is able to control it in its entirety. We may even see versions of the Great Firewall of China, where countries say, 'we don't want citizens

working with cryptocurrencies.' In the next 12 years I'd like to see regulators come to understand the potential, and how best to inform financial institutions and citizens about making something positive out of it, rather than making it a wild west of financial services.

Regulators have the ability to work with law enforcement to fight the more egregious crimes. Potentially scarier is the fact that people can move money more quickly. You can move a Bitcoin in 10 minutes – with some layers on top of it, more quickly. So regulators need to understand it – but bear in mind that everything is in the open. If you can trace back transactions, you know when there are crimes being committed.

Any advice for CEOs?

Invest in innovation – not just to be able to show people your cool lab and your accelerator, but to bring people into your organisations from the outside, give them free rein and ask, what could happen? My second piece of advice is don't be afraid. Where can you make smart investments and take those very scary things – things that challenge your core business – and either spin them out or keep some kind of control within the organisation.

"Banks think
they just exist
to make money..."

Consumers are
going to say,
what is your
bigger purpose?"

**Anthony Thomson,
founder and former Chairman,
Atom Bank and Metro Bank**

David Duffy
CYBG

"In 2030, you're
not validating
the consumer –
they're
validating you"

David Duffy is CEO of CYBG, which operates the Clydesdale and Yorkshire banks. He was CEO of Allied Irish Bank and held senior roles at Standard Bank International, ING Group and Goldman Sachs International. He has also been recently appointed as the FinTech Envoy for England.

In 2030, there won't be banks in the way we think of them today. Banks traditionally operate a vertical model. They own all the pieces – and they own the customer. Open Banking has changed that. Tech will disintermediate a majority of the processes banks now manage. That's fundamental and not well understood yet.

Disintermediation is not just down to Open Banking. Technology companies can offer a better service in the same business at 10¢ and 20¢ on the dollar. When I look at the future model for CYBG, we will be an orchestrator of various alliances. I don't think we will be structured as a bank.

This will all be driven by the consumer experience. The consumer's appetite for anything complicated is zero. They don't expect to have to do a lot of paperwork or processes. Instant gratification and convenience at a low cost is what consumers want.

We need to consider the consumer's lifestyle. How do they live? What do they want to react to? What do they do in an ecosystem which is mostly digital and frictionless? We need to focus on solving problems for them in a frictionless way. That's going to be critical to any solution that we all put

on the table. We need to recognise that financial products are a small component of a larger frictionless digital ecosystem consumers live in.

National grids of data are often seen as the backbone behind this evolution. I'd be a little cautious about whether it's just national. It may be that the data requirement could be universal, not national. It's about ownership of a unique identity on the internet.

If that becomes a reality, you may be looking at a very different operating model, where point-to-point communications and purchases are centred around your unique ID. Will a bank even be required? That data is your data – and people have to pay to get access to it. The outcome is probably a unique ID, allowing you to operate as a global digital citizen. And it could be blockchain-based.

Over time people will realise their data is valuable. The more instances of discovery that happen around that, the more a blockchain-type model begins to supplant a Facebook-type model. Blockchain could democratise the internet and return it to its roots.

If the evolution of data develops in that way, you have to win the customer's trust. You have to convince them they

should do business with you. It is no longer a requirement for the customer to convince you. It will require a very different mind-set for bankers.

The branch is a very interesting concept in that future evolution. For instance, China Construction Bank – it's one of the top four Chinese banks, not a fintech start-up – has a branch in Shanghai that is totally automated. It's open 24 hours day. You access it via facial recognition or with your phone. It's run by robots and avatars. And thanks to machine learning and artificial intelligence, the rate of learning is so phenomenal that any one of those robots or avatars has the equivalent of a hundred years of experience of thousands of bankers. They can speak many languages and can talk to you on numerous topics. The robots are also presented in a human, friendly way. And that's just what we have here, in 2018.

By 2030, we'll also have cyborgs – humans who have artificial limbs, implants, brain chip components to generate muscle mobility, implanted heart monitoring devices, and in some cases, many of the above items at once. So, you have robots that appear to be human; and humans that appear to be robots. And they are all interacting in a virtual world controlled



by AI and machine learning. Then you will have another section of society going back to basics. They don't want to be in this technology universe. There are young people who absolutely opt out of all technology. So in 2030, we're at risk of societal conflict driven by the humanoid and cyborg populations conflicting with those who have opted out of technology.

How do we regulate all that in 2030? Part of me would be delighted if there was no role for it – though you must

be realistic. There's a different, but more important, role for regulation in 2030. You will have a very distributed digital world with access to credit in a very different way. So the role of regulation will have to be primarily focused on protecting the customer or the consumer.

There will be lots of offerings in the digital world that are inappropriate for the person that's being offered them. And helping protect that person from making bad decisions will be part of

the regulator's responsibility. That all means unless you are an extremely well-versed and continuous learning-oriented technologist, don't apply to be a bank CEO in 2030. Many CEOs tend to think in entities and structures; a future CEO is going to have to recognise that they manage services. They own some. They part own others. They don't own others. You don't have nice structures.

You are basically conducting an orchestra of moving parts that come in and out of your ecosystem on an ongoing basis. And within that context you manage an organism not an organisation. Also, you manage robots, cyborgs, and humans. You might have to think of a different name for the human resources department.

There has never been a point in life where so many threatening things are moving at such speed and impacting the market that we operate in. For any CEO to survive, you have to presume that you will be eliminated, and your company will be disintermediated.

Work back from there, and figure out how you survive.

Emma
Bickerstaffe
The Big Issue



Emma Bickerstaffe (née Rose) has recently left her role as Head of Strategy and Planning and Chief of Staff, HSBC UK, to follow her passion of creating a more inclusive financial system. Working in partnership with The Big Issue Group, she is leading the creation of The Big Exchange which seeks to remove barriers to banking and provide six million financially excluded people in the UK access to banking services.

"Solutions driving financial inclusion will come from the developing world"

The financial services industry has historically focused on providing products and services to people who generate revenue. But this leaves a significant number of people who don't have access to banking services – which causes all sorts of issues around poverty and debt.

By 2030 we'll see a more inclusive sector and solutions to support those individuals. There will be some incredibly valuable business models and technologies to create a more

inclusive financial system. Our challenge is piecing them together into a cohesive proposition.

But there's a big difference between offering a basic bank account and financial inclusion. Many people, even with an account, don't necessarily have access to credit, to insurance, to other products that are critical to support their wellbeing.

One of the biggest barriers for people is lack of data. They might not have a passport, a driver's license, or a national ID. Some people don't have a fixed residential address. So the traditional approaches to 'know your customer' and verification of identity are not suitable.

It's unlikely 100 percent of transactions will be digital or online, even by 2030. There will always be situations that require some human interaction. Lending to vulnerable customers is one of them.

The customers we're talking about might have less than £100 in savings. They're looking for very small-value, short-term loans to get them through to the next pay cheque. With those customers, the opportunity to discuss their needs in detail, ensure that it's the right product for them, check

affordability – that it's a responsible loan – will always be needed.

The way that we assess credit will also change in future. One of the things The Big Issue is championing in partnership with Experian is the Rental Exchange. Lord Bird's related Creditworthiness Assessment Bill, currently going through Parliament, aims to require lenders to include rental data in their credit decisions in the same way they look at mortgage payments. That will allow us to consider a much broader range of data to assess creditworthiness.

Regulation has a huge part to play in helping us address these challenges – financial inclusion is at the top of the list for the Financial Conduct Authority. Their focus on conduct and customer outcomes will continue, and this will be a fantastic benefit to customers of financial services. They don't necessarily have all the answers; I'm not sure there is a perfect solution. But the willingness to collaborate on these challenges will continue through to 2030.

A lot of the solutions will come from the developing world. They're solving real issues where traditional banking models don't apply. When we start thinking about identity, peer-to-peer

lending and payments, for example, the solutions in some of those markets are actually far superior.

I would like to see the High Street branch in 2030 become more of a community centre, too, perhaps multiple banks under one roof and opportunity for customers to come together and focus more on financial education – it'll be an opportunity to support customers in a very different way than today.

CEOs in financial services have a really challenging 12 years ahead. Their agenda is already full. Full of regulatory change – and addressing some of the legacy issues and challenges over the past few years, both in terms of financial crime, conduct issues, but also just in terms of out-dated infrastructure.

The CEO of 2030, then, needs to think about how they can balance all these pressures. How can they invest in technology to address those legacy issues, but also create an agile environment for the future?

A focus on customers is key. Most of our CEOs know that – but this will only become more important. And developments in technology really allow this to come to life.

Henk Van Hulle
Post Office

"Success in 2030
will be the ideal
fusion between
the physical
and the digital"

Henk Van Hulle is Director of Innovation at the Post Office. He was previously Director of Post Office Money and Head of Savings and Investments.

In 2030, while there will have been a total revolution on the digital front, the human dimension of financial services and the role the FS market plays in society will not, must not, be forgotten.

The Post Office has already become the last bank – and often the last shop – in town, and that's why we will still play an instrumental role in 2030, particularly for the vulnerable, for the deprived people in society. We are there for them on their doorstep.

Two-thirds of people in the country will suffer from some form of mental health challenge. The recent Jo Cox Loneliness Commission Report suggests that nine million people will suffer from loneliness in the UK. The young, perhaps surprisingly, are represented disproportionately in this group. So the need to look after the vulnerable in society – people who are excluded from the digital advances, and those suffering from financial exclusion – will be greater than ever.

Where does the Post Office fit into this picture of Britain in 2030? Historically, we were the Post Office Savings Bank, and in many ways we will continue to evolve our role in line with that heritage. In 2030 we will be 370 years old. We will still be relevant because we are focused on our social purpose:

to be at the heart of communities, physically as well as online; and to be better able than most to offer support to those in need across the country.

What will be different, of course, is the range of tools we will be able to draw on to enable communities to access critical services in our 11,500-strong network of hubs – offering true nationwide access to financial and other essential services for all.

In 2030, people won't own assets as we understand the concept today. People just won't need to own things to use them – for instance cars, if they even still exist! Likewise, people may not need to own a house anymore, or the appliances we currently fill them with. Let's face it: even today, you can live in London via Airbnb in 50 different houses in a year and not have appliances, or a car.

This presents a profound challenge in financial services: if people don't own assets like they currently do, how can you lend to them? What will you lend against? How will you make money? The business model will be completely transformed into services, into usage, instant usage. It's a completely different model. It's a service-driven model: the pre-eminent differentiator will be customer experience.

Successful companies in 2030 will therefore be those that understand how to create seamless customer experiences, personalised services, instant and relevant to consumers. Yet not all experiences will be digital only. They might be used digitally. They might start digitally. But the full end-to-end experience will still entail a mix of digital, human and physical.

My advice to CEOs is to focus on why you are in business. What is your purpose, your strength? Why do you want to still be around in 2030? Answering that compellingly is going to be instrumental to success or failure and finding one's place in the financial services ecosystems of the future. It will become very important, particularly with Generation Z, but also with the millennials. They will buy from, and work for, brands they can relate to, and to certain values they expect from those brands.

Finally, I'd encourage boards to not think about an end to physical presence. People dream. People have visions. You know, people surprise each other. They do things, delight each other; robots never will be able to do that. So success in 2030 represents the ideal fusion between the physical and the digital, and that's why the Post Office will still be there.



Marcus Treacher
Ripple

"Blockchain is redefining the fabric and plumbing of the financial world"



Marcus Treacher is the SVP of Customer Success at Ripple, the enterprise blockchain solution for cross-border payments. He was formerly Head of Electronic Banking at HSBC.

When you get to 2030, the payment system, I think, will be much more ubiquitous and seamless and much more embedded in people's lives and the operation of organisations and robots around the world. Making a payment, receiving a payment, investing, borrowing, will feel very much part of the day-to-day activity. When a payment happens between a buyer and a seller, or two people working together, that transaction will happen invisibly to those involved.

Today, there's very much a demarcation between shopping, banking, running a company, getting to treasury. In the future, those lines will be blurred. A very good outcome will be a world whereby people just get on with their lives,

they interact, they work together. The exchange of value that underpins that activity will be invisible, instant, seamless.

There are currently many competing technologies. Any of them, arguably, are profound, whether it's artificial intelligence, blockchain, the rise of cloud computing, mobile. What's unique about today's world is all of these changes are in play together, and that creates many potential outcomes which need to

be thought through and prepared for in the commercial world and also the lives that we lead.

Any one of those major innovations will have a pretty profound impact on our future lives. Organisations are starting to rethink who they are, how they work, what their boundaries are, how they interact with the value chain and how they behave within society.

These technologies are compounding and layering so that they have,

collectively, a much bigger impact. Blockchain is interesting because that whole collection of technology is redefining the fabric and the plumbing of the financial and commercial world. Change at that base level has a much more profound impact on how organisations and people work and what they do than making changes at the top level. I believe that blockchain will be a fundamental component of financial services in 2030.

It's only when an industry gets comfortable with a new technology that it starts to look at ways of transforming itself. And blockchain is the technology that will inspire the financial services industry to rethink the way that it works.

Whenever innovation occurs, it seems a long way away from the mainstream. But it moves very quickly into that mainstream. The Wright brothers got their basic plane off the field in 1903; 11 years later, the first commercial airline opened in Florida. So you can move very quickly to real, viable propositions. Today, that timespan is much shorter.

There's a big similarity here between the development of the internet, 20 years ago, until today and what's



happening now in the financial services world and blockchain. Before the internet was fully adopted, information was very carefully guarded and controlled by individual data-providing organisations. After the internet, the interaction and the ability to collaborate is much greater.

I think the banking world will have a very similar evolution, from a very uncollaborative model, to one which is much more open and also much more inclusive.

Technology is starting to redefine how organisations actually work, that's leading to a whole different way of thinking about how to embrace technology. You'll see initiatives that



are really redefining how banks and financial services are constructed, how they work, how they deal and interact with their customers, their counterparties, really kind of breaking up and recombining what makes up a bank, what makes up a financial services company, in a way we haven't seen before.

The limit is really going to be privacy, ethics – and how society thinks about data, rather than the technology limits today. That's a result of this shift from message-based information sharing, where every bank is an island that's sharing information with other islands, to a blockchain model where data is much more interactive and much more freely sharable among counterparties.

And that brings me to my biggest concern about the run-up to 2030. The worst thing a CEO can do today would be to put their heads down, live in today's world, and put things off until tomorrow. If that happens, by the time it's obvious things are changing, it's going to be too late. The attitude of a business leader will really determine whether they thrive in a world of new technology or whether they ultimately fall by the wayside.

Melissa Kidd
Redburn Partners

“Financial
services
will be
democratised”

Melissa Kidd covers global economics at analyst firm Redburn Partners. She was previously Director of Research at Lombard Street, where she wrote on global equities.

The future of financial services is more interconnected, collaborative and frictionless. So says Redburn Partners' Melissa Kidd, who studies how disruptive technologies are shifting the FS landscape. She says companies must keep pace with the technologies that help people make the most of their time and money – while they also pioneer services that improve everyone's quality of life.

Financial services business models are evolving. Kidd points to new payment systems and ways to offer unsecured credit to individuals on the B2C front; meanwhile cloud computing and AI are disrupting B2B services. They're all opening the market to responsive start-ups that offer improved, value-added services.

“By 2030, the financial services industry will be more democratised,” she says. “It's been quite exclusive and unwieldy, a bit inaccessible to certain consumers. The smartphone revolution allows retail investors to take more of a creative approach to the way they allocate their money and access high-quality investment advice more easily.”

Kidd also anticipates a proliferation in the number of investable assets, such as ETFs or peer-to-peer loans.

People are saving more over time, she says, so there is a need for alternative investments that will satisfy the need for returns.

“We're in an era of very exciting technological progress,” she says. “Smartphones didn't exist before 2007 and cloud computing's only just gaining a lot of traction. We're barely started with autonomous vehicles. And I'm optimistic that the labour market disruption we're seeing is also likely to be beneficial in the end.”

This will have major implications for the kinds of people the industry will require to succeed in 2030, she adds. “Some of the disruptive technologies that we're seeing affect the services sector will free up individuals to have more creative roles, move across industries and have a higher return to soft skills.

“A CEO should be drawing on different talent pools because it may be that the skills that you needed in your workforce five or 10 years ago are not going to be the ones that you need in 10 years' time.”

But it's emerging tech that really defines the next decade. “There are huge inefficiencies in the traditional financial system, which

by 2030 can be eradicated,” Kidd says. “Crypto-currencies are all the rage as a speculative investment. But the technology that sits behind them, blockchain, is potentially incredibly useful. If you're a central bank, an e-currency gives you a far greater degree of control over the money supply than you would have in 2018.”

Rather than printing money (through quantitative easing) or offering credit through the banking system, a digital system might introduce more control for central banks and efficiency to capital markets.

Kidd is particularly excited about the potential for data gathering and analysis to explain what is happening in the economy, making interest rate or tax policy more effective. Unreliable inflation, productivity or GDP data could be fixed by 2030. And big data is capturing new economic forces, such as the impact of AI.

“If we can use data processing more effectively – if we can fix the economic models – we should be able to actually have a smoother economic cycle,” Kidd says. By 2030, that means better capital allocation, more income equality and much shorter work weeks – so that people have more free time to enjoy life.



“Businesses will
be defined by
their data...”

Unlocking consent
for this data will
be all-important
for lenders”

Roger Vincent,
Chief Innovation Officer at Trade Ledger

Michael Rogers

Curve

"Everyone will be treated as a segment of one"

Michael Rogers works in Operations and Analytics at Curve, a fintech that connects all of a customer's accounts onto one smart card and an app. A former consultant, at KPMG he worked with the world's largest financial institutions on digital transformation programmes.



The major trends already underway in the financial sector are increasing fragmentation, choice and complexity. This is unlike most industries, which are seeing greater consolidation and winner-take-all outcomes.

There are over 10,500 active fintechs today – compared to 4,400 in 2010 – each focused on catering to an underserved niche. Today, large banks are still akin to supermarkets: you pick their standard, largely own-brand, products from the shelf.

Over the next decade, banks face a choice of how to position themselves. They can play the role of match-maker, connecting customers to the best providers, stocking the shelves of the supermarket with their own brands and those from niche providers. Alternatively, they can use the data they have to create completely personalised products, tailored to the individual's needs.

This combination of access, selection, price, experience and personalisation are all things banks should be offering to their customers. The idea of 'a segment of one' is that digital organisations no longer need to choose between scale and personalisation. At scale, everyone can be treated as a segment of one.

A third possibility looms over incumbents of every industry, and it's the tech giants. Many believe their entrance into the market would commoditise the providers of financial services into utilities.

So how might these possible futures play out?

Many banks will focus on being the sole financial provider to a customer. For European banks, distribution accounts for 47 percent of revenue, but 65 percent of profits, with a four to five times better ROE than the 'manufacturing' side of the business. This will give rise to new business models, such as 'identity as a service'. The manufacturing side will become increasingly commoditised.

Many fintechs are following this marketplace-type approach, using APIs to plug in a number of complementary products and services. There has been a 184 percent compound annual growth rate in the number of financial APIs available between 2005 and 2017. As the world becomes more connected, what a company owns matters less than the resource it can connect to.

These two approaches are at odds. Organisations must be aware of the



choices they are making: do you build moats? Or do you build bridges?

The most important implication playing out in the digital revolution is the empowerment of consumers. As Jeff Bezos said in his most recent annual letter, customers are 'divinely discontent.' They always want a better way. It is crucial for organisations to understand 'the jobs to be done,' these won't change.

The rise of the API economy and distributed ledger technology could truly reinvent how value is exchanged within the economy. Today these technologies are being used by incumbents to drive efficiencies and lower costs. I can foresee a 'Second Economy,' previously described by

economist W. Brian Arthur, where transactions happen with no human involvement in a "vast, silent, connected, unseen and autonomous fashion". For individuals, these transactions could be triggered once you complete an Uber ride, say, or be the automatic pay-out of parametric insurance contracts.

Another factor that should not be overlooked is the values and expectations of younger generations. By 2030, millennials are likely to control as much as \$25 trillion of wealth globally.

Right now, this is playing out in the rise of impact investing. Those working in the sector would be wise not to underestimate the narrative that has built up around financial services in the decade after the financial crisis. We're going to see a push towards social initiatives as a way of rehabilitating brands and allowing firms to compete, not just for customers but also for talent.

In 2030, the banks that have survived will have created strong brands that instantly resonate with 'trust and security'; can deliver tailored services through proprietary data or partnering with others; and are deemed to have a strong social purpose.

Nick Middleton

UBS Wealth
Management

“Finance will
become more
accessible and
frictionless”

We need to make finance much more accessible. That means we need to get away from the jargon, the acronyms and the abbreviations that we use today. It also means addressing the lack of financial education in schools and universities. It would be great if by 2030, we could fix this because it is a problem for society, not just for wealth managers.

Numeracy and financial education are really important, but the real key is how you get that into schools and into the workforce. This is going to become even more important to how clients interact with us – and how, in a dynamic investment landscape, digital technology is going to impact behaviour.

Nick Middleton is Executive Director at UBS Wealth Management and Co-Head of UBS SmartWealth, a life goal oriented investment management and expert advice platform. He has worked in the wealth management industry for 22 years, and was previously Senior Investment Director at Rensburg Sheppards.

From the client perspective, I see technology becoming more intuitive, empowering people to take more control of their finances. With the ability to bank with different companies and have it all collated into one or two places through aggregators, for example, people won't be wedded to one particular supplier. That's good for the consumer because it means more choice while creating more competition for us.

At the same time, people's attitudes towards investment evolve as the number and types of asset classes available to them expand. We're already seeing quite a lot of that with the growth of Socially Responsible Investing (SRI) and impact investing.

We can now offer a very high level of SRI overlay on portfolios and we're not very far away from offering full SRI compliance. I can see demand for that continuing to grow.

Our expertise in other areas is also continuing to improve, notably in alternative investments such as hedge funds, where we've historically been strong.

And that brings me back to the issues of accessibility and financial literacy, because in their absence, you have friction. Any kind of friction when you're trying to buy a financial product means that people are more than likely to abandon the effort, especially in this day and age when everything is so much more instantaneous. It's no different whether they're buying something on an online retail portal or trying to invest their ISA. The more friction you put in people's way, the less likely they are to carry through the transaction. As such, I see technology, which removes a lot of friction, playing a key role in enabling individuals to invest.

For high-net-worth individuals, however, the risks and the stakes are much higher, so there will always be a need for human interaction.

Many high-net-worth individuals have complexity around their affairs, such as operating businesses in one area of the world and living in another. Having the expertise that enables these people to deal with a single person or institution that understands their financial circumstances and can offer solutions will continue to be very important indeed.

Looking across the boards of many companies today, we will need to see a switch of focus at a governance level to ensure that the right skills and technologies that companies will need in the future are represented. CEOs really need to understand the technology, and getting people around them who can advise them on how to make technology both accessible and frictionless is going to be essential to their success.



Nick Ogden
ClearBank



“By 2030
customer
relationships
will be fluid”

Nick Ogden is the founder and Executive Chairman of ClearBank, Britain's first new clearing bank for over 250 years. He also founded WorldPay in 1997; Multi Media Investments in 1993; and in 2009, Voice Commerce Group and Cashflows.

Today, I can book a flight to the US, walk outside, go to Heathrow, get on the plane, and be there in a few hours. But if I want to open a bank account, it still takes me at least a day. The immediacy of travel compared to the latency of financial services is the best way of demonstrating why the years up to 2030 are going to be transformational.

But you don't just suddenly transform and arrive somewhere new. You have to go through a series of processes. And the ability for this market to change was stifled as a consequence of the global financial crisis.

Regulators have started to recognise that the open market envisaged by the EU in 2006 with the payment services directive hasn't been delivered. Now we have PSD2; we have the UK banking regime opening up to new challenger banks via Open Banking. That gives us an enormous stepping stone toward 2030.

By then, the industry might actually understand that it has to talk to its customers. There's been a serious lack of engagement. It's almost as though, when financial services people arrive in their offices, they forget the outside world. They suddenly become bankers, not consumers.

But just because you've been in business for 200 years, that doesn't guarantee you're going to stay around for another 200. Just because you have an enormous balance sheet does not mean that you're going to be there long-term.

Fintechs are offering accounts distributed between banks globally to deliver real-time payment capabilities – which banks can't produce. Well, they could, if they collaborated and communicated. But it's those opportunities that enable the agile businesses to eat into existing customer bases.

By 2030, the full impact of Open Banking will have come through, although it's going to be slower than many predict. The infrastructure, identity management, the impact of GDPR – they're going to slow the process down. That's an advantage for the incumbents... if they make use of the time.

And over the course of the next few years, more automation will fall in. For example, we have to screen transactions to comply with global anti-money-laundering rules. With the right data structures, and using technology like Hololens to visualise transactions, you can manage flagged

transactions in 30 seconds as opposed to three or four hours.

By 2022, the market will have started to change. Transactional banks, such as ClearBank, will be providing global, 24/7, real-time payment capabilities for customers. We have to.

Then you'll have portals of financial services providers, giving your customer the opportunity to get the best deal possible for them, at the time they want it.

By 2025, blockchain processing speeds will have caught up and be fast enough for transactional financial services. AI, too: the data we're capturing within ClearBank will power our AI in 2020 and beyond. We need to be collecting the data today, so that when our algorithms start producing analysis, those decisions are approaching 100% accuracy.

So by 2030, CEOs will be focused on some of the same challenges they face today – liquidity, leverage, and all the rest of it. But they're going to have to be really focused on the customer relationship – because by 2030 that will be fluid. If you're just relying upon historic brand strength, you may not be in a place you want to be – and your share price won't, either.

Ning Tang CreditEase

"Our platform is going to enable us to do more intelligent risk management"

Ning Tang is founder and Chief Executive Officer of CreditEase, one of China's largest financial technology companies. He launched CreditEase in 2006 after working in senior roles in both technology and financial services. He has worked both in Asia, including a period with Grameen Bank in Bangladesh, and in the US, with DLJ.

Ning Tang's prediction for 2030 is simple. "I expect the term 'fintech' to have disappeared well before then," he says. "All financial services will be technology driven, but the point is we are simply utilising technology to make financial services more comprehensive, inclusive and helpful to the real economy."

The distinction is important, he argues, because it goes to the heart of the value of new technology as an enabler of better services for customers, rather than as an end in itself.

"The way we approach technology is to first look at the needs of our customers, whether consumers or small businesses, and then to think about which technologies can help us do a better job of meeting them," he explains. "Companies like ours need to have a powerful ability to identify and utilise the right technology, but we have to start with the use cases."

So which needs is CreditEase most excited about meeting between now and 2030? Mr Tang points to four areas where transformation is now possible.

"Today in the US, in Europe and in China we still haven't addressed the small business lending challenge. In China alone, there are 60 million

small businesses that are hungry for credit solutions," he says. "What is going to change the game is small businesses going digital and cloud-enabled, so that both front end and back end are connected. That will give fintech companies a unique opportunity to analyse their operational and transactional data to create much better risk management systems for the small business community. We'll be able to offer many more businesses high quality financial services."

Mr Tang is also determined to give rural customers much better access to a wider range of financial services. "We are already doing something very innovative in China: micro-leasing equipment to rural people," he says. "The machines include sensors connected to the Internet of Things that send data to our platform, which is going to enable us to do much more intelligent risk management."

Similarly, Mr Tang sees technology powering the reach of sophisticated wealth management services currently only available to high-net-worth customers. "In China alone, there are more than 200 million middle-class investors and they are hungry for online wealth management," he says. "Ageing will be a very big issue in China, and elsewhere, and we can

provide the financial support people will need during their extra decades. Right now, they're not used to long-term investment, or thinking about the strategy of how to construct a balanced portfolio for 20 to 30 years."

Mr Tang is also inspired by the potential to exploit technology to grow seed funding. "Angel investors are key to the development of the new economy and we need to move away from the 'three Fs' – this idea that only family, friends and fools are willing to provide financing to start-ups," he says. "I was myself an angel investor, but we don't have enough of them."

"Right now, it's offline – we go to a teahouse to talk about investment. But we can do more digitally: angel investors and entrepreneurs can interact on a platform, not only to provide finance, but also to support mentoring and networking. It can build bridges between older generation managers and young entrepreneurs. Also, as the data on the platform accumulates, we can use it to analyse what kind of start-ups are most promising. That will be very powerful!"

In each of these areas, Mr Tang believes, technology can play a big role in building inclusion and supporting the public good. But to



maximise the advantage will require further regulatory support, he argues.

"Financial services will continue to be heavily regulated – for good reason," he says. "But new models such as the sandbox concept will play a key role. In the UK, where we already have five investments and where the sandbox concept was implemented, the regulatory environment is conducive to a healthy fintech ecosystem. You might say the whole of China has been a huge sandbox – our practitioners are supportive, good listeners and they're using new technologies themselves, so-called regtech."

The final ingredient towards his vision for 2030 is CEOs and management teams prepared to continually reinvent their business. One reason why CreditEase has a \$1 billion fund investing in other fintech businesses globally, he explains, is that it offers continual exposure to new ideas.

"Every business should transform itself every five years," Mr Tang says. "Figure out where you will need to be in five years' time, how to strategically map out the path to that point, and how to execute on that plan with both a firm commitment to transformation and enough flexibility to respond to inevitable changes."

Paul Humphrey

Fidelity
International

"Asset
management
in 2030: client
front and
centre"

Paul Humphrey is Director
of Strategy and Planning
at Fidelity International.
Prior to his current role, he
was a Management Consultant
at Barclays.

Can you describe asset management in 2030?

For me, the two aspects of our industry that will change most dramatically will be the depth of relationship we will seek to build with individual investors and, secondly, the evolution from investment product to investment solutions in the retail market.

Our retail clients will expect to receive clear advice based on full knowledge of their circumstances, coupled with seamless access to the best investment solutions. Clients will expect to be offered bespoke investment solutions, tailored to their precise needs; the nature of underlying funds or instruments will be of limited relevance to them.

Clients will hold asset managers accountable for delivery of the investment outcomes they seek and will be unwilling to pay for under-performance. Charges will be transparent and low.

Clients will define their investing objectives in their own terms; maybe growth, security of income or, perhaps, a happy retirement, nest egg for the future... Our role will be to interpret these needs and concerns, and to use our expertise, supported

with the best technologies and data, to translate these into the best investment solutions.

As a consequence, the value chain of asset management will evolve. In the past, the value of our industry has manifested in investment product; in the future, I believe it will be within the client relationship and investment outcome.

How will your clients, and their needs, differ from today?

I don't believe clients' fundamental needs will change; the need for financial wellbeing, for a secure retirement, for a home, for financial freedom and such like, these will be as relevant in the future as today.

However, there will be different expectations as to how these needs are met. Our retail clients will expect to be empowered, to enjoy unfettered, straightforward access to whichever services or products they need; they will demand the highest level of transparency; they will expect instant fulfilment; they will require us to operate our businesses and invest in a responsible, ethical and a sustainable manner; they will expect to be treated as an individual, with solutions tailored to their precise individual circumstances.

As an industry, we will need to react to our clients' changing context, needs and outlooks. How do we better support the self-employed, the gig workers in saving for retirement? How do we encourage the young earners to save enough to support their later life? How do we help young earners balance the conflicting pulls on their income - housing, education, saving and fun? How do we make investing relevant and engaging for the savers of tomorrow?

What does that mean for customer management?

Winning firms in 2030 will be those who have developed the deepest relationship with their clients. If you can earn the respect and trust of your clients, then you will be well placed to understand and meet their needs.

Our clients will demand more for less. They will be attracted to those firms who can deliver the best, deepest and most valuable engagement, and may care less as to whether these are traditional financial brands or not.

How will technology change the industry?

It will create new ways of engaging with clients. It will help us collaborate with our clients to better understand their needs and develop the best



solutions. Our business is driven by the need to deliver the best outcomes for clients at the lowest price, both elements of which are supported by technology.

Artificial intelligence, image recognition, natural language processing and such like, will all be brought into service to gain an advantage for clients' benefit. Technology, interconnectivity and greater collaboration between market participants will deliver

opportunities for markedly improved client experience.

What are the characteristics of success in 2030?

Trust is paramount; our clients must trust us with their financial lives. When we are encouraging clients to share their most intimate financial details with us, trust and integrity are non-negotiable. Clients need to trust us to do the right thing with their assets, their data, their financial wellbeing.

Finally, what strategic advice would you give to a CEO?

We know so much will be different in 2030; but also that much will persist - fundamental needs for financial security and freedom, for good advice, for value and, above all, to be supported by a trusted partner.

“Innovation
shouldn't have
to be dependent
on regulation...

It should be
the other
way round”

**Seamus Smith,
Executive Vice President Worldwide
Payments & Banking at Sage**

Peter Randall
SETL

"In 2030, the entire world will be moderated through blockchain"

From speeding up and simplifying cross-border payments, to improving online identity management, blockchain will revolutionise financial services by 2030, says Peter Randall. He's CEO of SETL, which uses blockchain technology to streamline post-trade administration, reduce costs per trade, simplify processes and reduce inefficiencies.

"In 2030 the entire world will be moderated through blockchain," he says, comparing its impact to the mobile phone revolution. "It's going to bring massive changes to our industry, in our economic arguments, and to economic activity."

Blockchain could also solve some of our greatest societal problems, making it easier and cheaper for all consumers to engage in financial markets. In turn, that will allow us to tackle issues around healthcare, pensions and education.

"For example, how can we provide pension care for people who are living longer?" he asks. "One of the best ways is allowing people to be more involved directly themselves in markets. And if regulators allow people to be more involved in markets, they want to make sure those markets are fair."

Peter Randall is a founder and CEO of blockchain start-up SETL, which is looking to cut the \$65 to \$80 billion that banks spend each year on clearing and settlement. Randall was the founder and first CEO of pan-European equity trading platform Chi-X.

There's a problem, however. The underlying structure of negotiated financial trades is sluggish. Randall says that blockchain technology could allow for real-time settlement – and that, in turn, would help to reduce risk and improve liquidity. It will also remove the need for intermediaries.

The knock-on effect, he says, is that the cost of running systems will fall. "And as the costs of the system fall, guess what happens to revenues?"

Blockchain may also hold a solution to data privacy – a defining debate of the next decade. "Distributed ledgers will allow people to take control of their private data," he says. "And only when those individuals have agreed they

wish to deploy their data is it usable." So what three pieces of advice does Randall have for financial services CEOs in the run up to 2030?

"Cut your costs," he says. "It may sound very trivial. But it's very difficult to do, because so often you've got legacy infrastructure that's incredibly expensive to run, and nobody knows what happens when you're going to turn this stuff off."

"Second, make sure that the data you capture and store can be shared with regulators. And, of course, you can do that very simply with a distributed ledger.

"Third, and this is extraordinarily important, the world of 2018 is only really beginning to wake up to the threat of cyber security and the threat of hacking, and the threat of fake news," he concludes.

Data is powerful – and can be powerfully misused. Addressing that problem will be a key mission in the run up to 2030.



Ram
Ramachander
Hitachi Europe

Ram Ramachander is the Chief Commercial Officer for Hitachi's Social Innovation Business Division in EMEA, and Chief Digital Officer for Hitachi Europe Ltd, responsible for building and commercialising new Internet of Things and AI digital businesses based on social innovation in areas such as energy, video intelligence, transport, manufacturing and government.

"Wider collaboration and connected ecosystems are the future"

A good example is renewable energy and electric vehicles (EV). Europe has one of the largest proliferations of renewable energy capabilities globally. At the same time, bar China, Europe is predicted to have the largest uptake of EV internationally. Combining electrical vehicles with a new energy system will be a massive disruptor to current infrastructure, business and financing models.

We don't currently have the right thinking about the infrastructure required to cope with this kind of disruption. What's needed is a focus on the entire ecosystem and value chain around EV and renewable energy – and look at innovation in this context.

Take the entire value chain and then start to deploy a technology stack – an AI-based technology stack – and build solutions around this.

We need to co-create solutions within ecosystems, working with customers who are impacted in that area of the value chain, and working with government to ensure policies and investments are aligned.

A great example is Hitachi's smart island project on the Isles of Scilly that aims to use technology to both



reduce the carbon footprint of the island whilst optimising renewable energy. Our objective is to help the community to reduce the price of energy on the Isles of Scilly by 40 percent. What we will learn from this will help social housing, council homes, renewable energy policy. It could possibly eradicate energy poverty.

Another example is data engineering at airports. We have video recognition systems, and use metadata and video data to improve parking efficiency, operational efficiency, security, and to optimise retail performance. We use live sensors to track congestion of the airport and people flow. This is happening now.



Finance is an important part of these data ecosystems. But I don't think they've addressed it well yet. The finance community needs to have a conversation about what this means.

The relationship between technology firms and government policy is key. The government need to get more proactive to open up a broader, much deeper dialogue around the future of AI. Governments tend to have a peripheral perspective of

what the impact could be. I would welcome more government collaboration with the private sector, more knowledge of what's happening and support more investment around co-creating transformation.

If I had one piece of advice to a financial services CEO, it's to open up business beyond where your boundaries lie today and explore new ways to engage with the growth of digital infrastructure.

Get involved in complex ecosystems – even if it might feel uncomfortable. Big opportunities will come from it.

Rob
Bernshteyn
Coupa



“The best companies will have shown their ability to reinvent themselves”

Former enterprise software product lead and consultant Rob Bernshteyn is CEO and Chairman of the Board at Coupa Software – a cloud platform for business spend management. Coupa is helping financial services businesses deliver value through real-time spend visibility, control, compliance and agility. Bernshteyn is a guest lecturer at Harvard and Stanford business schools, and a frequent contributor to *Forbes* and *Fortune* magazines.

In 2030, what data will a financial services (FS) CEO need to make good decisions?

CEOs will have access to critical business data at their fingertips. And that data will help them understand their customers, their suppliers, their talent base, and, of course, their financials from every angle. And they'll be able to make decisions on a moment's notice on how to command the resources of their company to win in a highly competitive global marketplace.



How else will systems evolve for FS?

With hyper-competition, particularly in the FS industry, companies will have to be even more operationally efficient. A lot of the inefficiency in organisations today exists in the back office. They're still using paper. They're using out-dated processes. They are not fine-tuned. With some process redesign and best-in-class technology, they could streamline. Everyone can move up the value chain – as long as they're maintaining agility and streamlining business processes through technology solutions. That's what's exciting about it.

What's driving hyper-competition?

Talking to CEOs, they're very cautious that they may be disintermediated in certain areas of their business. They know they have to be willing to change, and they have to be very agile. They have to think through potential new business models that can help them leverage their core competencies, their relationships, their insights, to design a future that will allow their organisation to grow.

What's the future of procurement within FS organisations?

Procurement has the opportunity, now more than ever, to become a strategic player in organisations, to drive real business value. And there

are constructs to that business value. One is to automate everything that could be automated – while maintaining as much agility as possible – using IT and best-in-class business process redesign. Procurement can also play a huge role in driving real value through savings, compliance, visibility and better supplier interactions.

How will business value be measured in 2030?

The concept of value-as-a-service will be pervasive. That's an approach where a company, such as Coupa, works with customers to not only automate business processes and be a technology vendor, but also deliver ongoing value week-to-week, year-to-year, that's quantifiable. That value could be based on a certain amount of savings that are targeted and realised. That value could be in terms of the compliance that's being delivered for the company. It could be visibility into opportunities for new supplier relationships or different interactions that the company may not have yet.

Should FS businesses look for accelerated automation, then?

In the future, FS companies won't be bogged down – they will be able to change their business processes on the fly. They will have found ways to

collaborate, for example, with technology providers to help streamline things that would typically involve a lot of human intervention. That collaboration will have helped them take their game to a different level of new value-added services, which is really at the core of what they're about in 2030.

So what's the recipe for success for an FS CEO in 2030?

Strategy, execution and agility. There is a very real pressure on the entire industry to continue to rethink what they're great at – and what they need to focus on to stay ahead of the game. That's a strategic question. From an execution perspective, they need to continue to get much more operationally efficient across their back office and in all of their collaborations across the company.

And lastly, it's about agility. Not to set themselves up in a situation where they aren't able to nimbly change based on constantly shifting marketplace dynamics.

Digital transformation is an element that supports all three. In 2030, the best companies will have shown their ability to continue to reinvent themselves. That will continue at a more and more rapid pace, frankly.

Roger Vincent
Trade Ledger

"Financial
services
will be
democratised"

Roger Vincent is a specialist in the commercialisation of open data. He has built extensive knowledge in the use of data for risk management in a career including roles at Lloyds, Barclays, Equifax and most recently with technology start-up Trade Ledger, where he is now running the UK operations.



Successful banks in 2030 will take advantage of what they already have – huge customer bases that won't necessarily erode over time. They will have consolidated trust by mastering data-driven customer experiences delivered through contextual omnichannel engagement platforms, underpinned by artificial intelligence and robotic automation.

The banks of 2030 will differ in their adoption of technology, which in all of the successful players will be built around cloud. While cloud is not a new concept to financial services, adoption has yet to be widely seen across the large incumbents.

One promising area of adoption is in online banking services, where a number of players have started to create new platforms for innovation. By 2030, banks will adapt these platforms to create new marketplaces as cloud and APIs allow them to become increasingly interconnected with specialist third parties who they add to their wider ecosystem.

This allows them to create customer journeys, and products and services, that are dynamic and tailored to what their customers need at certain stages of their life. The future is a diverse mix of customer bases and different

demographics; platforms will allow the banks to react to these different types of consumers, and not just a single customer journey.

Consumer choice is going to expand significantly by 2030. You may see banks starting to offer you utility switching, or broadband deals – because you allow them to access your data to help you better manage your finances.

For lending in 2030 we will see the term 'SME' or 'sole trader' disappear. Businesses will instead be defined by their data. The majority need credit to survive or grow, but many struggle to get accepted for credit because banks misclassify them or because they cannot access the relevant data about how the business is performing. In 2030, all this data will be available for the business to use in real-time; unlocking consent for this data will be all-important for lenders.

GDPR, Open Banking and PSD2 will cause a paradigm shift in the way an organisation stores or utilises their customer data. When we start to see more empowered data sharing, we will also start to see a more buoyant environment for nurturing small businesses – and, ultimately, we will see a significant knock-on effect to the

whole UK economy. After all, the six million small businesses in operation today, and in the future, are the powerhouse of domestic GDP.

We can take the idea of open data further – for example, looking at trade network data to understand and track exactly where all goods or components are in a supply chain. If an order is sitting on a moving ship heading for the UK, rather than sitting in a port somewhere overseas, lending to a business could be much lower risk because the bank will know its stock is on the way.

This open data has significant value for businesses; so much so that they can look to add it to their inventory as an asset class to help guide their company valuations in 2030. It could also provide visibility into the availability of working capital or even result in the banks providing lower cost of capital.

When this new approach to data arrives, it's going to create an influx of new metrics that allow us to understand a business, and the risks associated with that business, in a completely new way. That's going to be a more interconnected way, too – not just local to UK businesses. It's global.

Saker Nusseibeh

Hermes Investment
Management

“What we do has
been unchanged
since Joseph
started investing
for Pharaoh”

Saker Nusseibeh is the CEO of
Hermes Investment
Management, one of the largest
institutional asset managers in
the UK. He is also the founder of
the 300 Club, a group that looks
to right the wrongs of finance.

Let's cast our minds forward to give us a picture of the investing landscape. What we see is a failure of the Chicago School – the idea that investing is simply a pursuit of financial returns. Designing investment for maximum financial return in the short term, we see from 2030, led to societal fissures – and, in the long term, did not lead to sustainably high returns.

Here in 2030, people have realised that investing for the long term actually means taking a lot of other factors into consideration – factors such as the purpose of a company, contribution to society as a whole, fairness, treatment of workers and a long-term horizon. Perhaps the seminal moment was in 2018 when BlackRock, the largest index manager in the world, sent a letter to its portfolio companies, beginning to hold them to account on a much wider set of measures.

If we look at customers' expectations from our vantage point in 2030, they want something more sustainable – not necessarily 'ethical'. They realise that simply increasing share prices over a two- or three-year horizon as an end game is misguided. That does not lead to a happy society.

Most investors have realised in 2030 that if they ask their investment firm to

pursue the highest possible price, at the cost of everything else, what they can buy with their money is actually less – in terms of the cost to the environment, of global warming, of the cost of water, the cost of food. And tension in society is worse because of disparity in the distribution of reward.

You can see this happening as early as 2012: consumers started asking more questions about the integration of ESG [environment, sustainability and governance] into financial reporting. In 2018, we were talking about gender diversity and pay gaps – and that's also directed by a feeling that things are inherently unjust.

So how do we square the idea of a human approach to investing that meets these needs with, say, blockchain automation or faster trading processes? How do the two sit side-by-side here in 2030?

Balancing innovation and technology with the needs of consumers and the financial industry is a tension which is fascinating, partly because every generation believes it's new and doing something that's remarkably different.

In asset management, we all think that we are smarter, better, cleverer, more



educated than in the past. But actually what we do as an industry has been effectively unchanged since the time of Joseph and his coat of many colours. We take some savings from today and we put them aside to be spent in the future. Joseph had nothing at his disposal except labour to gather the harvest and build his grain stores, some money and some trading capabilities. Today we have blockchain and all the other technology. The methods change, but the purpose and the mechanics are actually the same.

So as I sit here in 2030 and I look back at all the changes we've seen, what advice would I give my predecessor if I were able to travel back to 2018?

I'd say, first off, distinguish between the advances of, and changes to, technology, regulation and politics. What we do has not changed much since Joseph took on Pharaoh's investment portfolio, it's still about providing for the people at a future point in time; it's still about taking a resource from today and husbanding it for expenditure in the future.

If you look after your clients, if you have an efficient structure, you will thrive. It's right to worry about the future – but you can't predict too far into it, it just does not work. The future will be what it will be. The real question is whether you are strong enough, resilient enough and quick enough to be able to react to it.

My advice to all CEOs in 2018, then, is recognise that our businesses are built on talent – so concentrate on people. And not just on the people who work for you, but people in society as a whole. Our business is here to serve society, the whole of society, and if we lose sight of that, society will turn on us, and we will pay the price.



"In 2030 all
these ecosystems
will be totally
frictionless for
a customer..."

We need to prepare
for that now"

**Sebastien Marotte,
VP EMEA Google Cloud at Google**

Seamus Smith

Sage

“Prepare your organisation for the ecosystem economy”

What are the forces defining the journey to 2030?

Senior executives are now more preoccupied with disruptive technologies and how markets are going to evolve. I'd call out the API economy – the ability to connect one enterprise to another seamlessly as the end customer is concerned – as a huge facilitator of change. There's no question that high velocity, repetitive administration areas of any organisation will be ripe for change through the deployment of artificial intelligence and other automation technologies.

How's that changing strategy for FS?

Organisations need to think about ecosystems. Previously you'd view an organisation as a competitor – when,



Seamus Smith is Executive Vice President Worldwide Payments and Banking at financial software giant Sage. He previously worked at GE Capital, American Express and PayPoint.

actually, when you look at that organisation in the light of today's technology partnership possibilities and access to customers, you might think of them as a prime target for collaboration.

How does data fit into this more collaborative ecosystem?

There's no question that data is the fuel of the digital economy. The fourth industrial revolution that's transforming industry is changing accounting from a fixed look back in time to be more proactive – how your business will be in the short, medium, and long term. Data science, machine learning, artificial intelligence, the ability to absorb, extrapolate and present that data in a meaningful way – those are the things that are going to change the game, on that I'm clear.

How does proactive use of data affect what Sage will be doing in 2030?

It's going to enable us to pre-empt challenges that a business will have. For example, we can see if it's due to receive a large payment just before payroll is due. If that invoice doesn't get paid on time, the business is going to have a cash flow problem. Emerging technologies can inform decisions around credit and lending, drawing on data from other sources like invoices, as well as credit history.

So data allows businesses to be better evaluated for risk, then?

There's no question that while the insurance industry has made a lot of progress in risk-based pricing and premium calculation, there's still some way to go. When I talk to customers about insurance, there's still a sense that policies are still fairly standardised. Maybe business owners would appreciate more ability to decide on what's really important for their company from an insurance perspective, versus those risks that they're happy to live with day to day.

I predict more tailoring of insurance policies to customer requirements using multiple levels of data to inform the risk management and premium calculation around those insurances.

How will they square that with enhanced data protection?

We will see more organisations offering data custodian services, security services, analytical services. Over time consumers are going to realise that data is such a key ingredient of commercial success. We will see businesses and consumers taking more ownership of their data.

And regulation?

Innovation shouldn't have to be dependent on regulation. It should be

the other way round. There are some good examples of self-regulation in certain Asian markets, where they've developed and deployed services that have been well-adopted by consumers and businesses.

What's clear is that regulators often don't understand the technologies that they're set up to regulate. Ultimately market forces – of consumer and business adoption – will continue to break down previously-held barriers. If I were being bold, the notion of self-regulation may return to popularity.

You're a payments specialist. What's going to change there?

There will be a huge and rapid adoption of artificial intelligence machine-learning technologies as an interface to access payments, banking, and related services. There's no question that organisations need to be prepared for that. You already see consumers and businesses making moves to technologies that reduce friction in their lives.

Any other advice for FS CEOs in 2030?

Prepare your organisation for the ecosystem economy. Make sure your organisation – your leadership – is open for business across platforms that maybe it isn't today.

Sebastien
Marotte
Google Cloud

Sebastien Marotte runs Google Cloud for Europe, Middle East and Africa. It is the fastest growing business within Google, helping enterprises adapt to new technologies based on the cloud, artificial intelligence, mobility, machine learning; and to innovate and create new services and products for their customers.

“All these ecosystems will be totally frictionless for a customer”

Google Cloud’s mission is to help organisations drive digital transformation. The combination of IT power and new digital technologies is helping large organisations to rethink their business model and their interaction with their customers.

The financial services industry is no different: it is placing the customer at the very top for IT decisions. Actually, banking and financial services are leading this kind of strategy. And in 2030 we will be at full maturity when it comes to cloud technology, artificial intelligence, machine learning. And financial services is probably the industry that will benefit the most.

The traditional big banks will still be here. They bring a lot of capability around regulation, they have access to capital, they have a massive customer base. Fintech brings an amazing expertise in technology. And it’s the combination of the two – in a more collaborative environment, not so much a competitive one – that will constitute the ecosystem in 2030.

My aspiration for 2030, as a banking consumer, is to access services the same way I access a search engine at Google – just asking questions. And even not asking questions, actually. We’re looking at predictive and proactive processes that can advise me on what I need to do to improve my savings, say, and my personal situation in life, my family situation.

This ecosystem will also integrate new services to meet new customer needs. Data will be absolutely critical, even more than it is today. The banking industry is able to collect the most comprehensive data on its customers. Banks know who you are, what kind of services you buy, how you spend your money, where you holiday – things that should translate into better services to customers.

What we are hearing from these large banks is that they want to shift from building and maintaining their own IT infrastructure to focussing on these real business questions – to better sell to their customer, to reduce cost, to increase security, but also to create key differentiators.

With the cloud technology already available and at an advanced stage, they don’t need to build the IT infrastructure themselves. It is so much safer to host your data or your application in a cloud infrastructure – plus the fact that you can host the huge volume of data required to deliver what these financial services organisations want to offer in 2030.

We will access information from everywhere, using a massive number of additional devices compared to 2018. We’ll keep investing massively on securing these environments. Security will still be an issue. But if you think about 2030, we will apply, probably, a lot of the concepts we have already set up in 2018.

One huge question, still outstanding, is will artificial intelligence replace the role of the adviser? I don’t think so; but it’s going to be an amazing tool for these financial institutions to better advise their customers.



The advice to CEOs is that they need to understand technology. They need to invest more time in thinking how they can turn this new digital environment into a real business, into innovation around new services to the customer. Then how, as a CEO, can they change the culture in their organisation? Because I don’t believe that you can keep on running large financial institutions the same way as you ran them in the past 10 years.

It means building a culture that will help us to better collaborate and also to attract new talent. It starts with a transformation programme, implementing new tools and new processes to introduce collaboration across the ecosystem.

So 2030 will be a time where all these ecosystems will be totally frictionless for a customer. We need to prepare for that now – and it will all be worth it by the time 2030 arrives.

Sopnendu
Mohanty
Monetary Authority
of Singapore

“Be ready for
an open
ecosystem”

Sopnendu Mohanty is the Chief FinTech Officer of the Monetary Authority of Singapore (MAS). He is responsible for strategies and regulatory policies around technology innovation to better manage risks and strengthen competitiveness in the financial sector. Prior to joining MAS, Mohanty was Global Head of the Consumer Lab Network and Programs at Citibank.

For fintech innovators – and even big banks and insurance businesses – 2030 can seem a long way off. For financial regulators, however, building long-term foundations for the industry is at the very heart of the job.

But they still have to weigh up short term interventions, as well as deal with the current rapid pace of innovation. “The future of financial services relies on this whole technology journey,” says Sopnendu Mohanty. “If we can get it right, we will craft our story appropriately for the next 10 years.”

He argues that the ecosystem of 2030 is not going to be built around enterprise technology. “It’s going to be the small pieces of puzzles coming together. Start-ups will offer the little pieces of a beautiful solution that need to be connected through the central nervous system.”

That corpus rests on two foundation technologies, he says. First, application programming interfaces (APIs) that allow different systems to share data. And cloud computing creates the environment for sharing in real time. Both offer a challenge to regulators planning for 2030. “Most of the software is written for cloud, and there needs to be some kind of guideline or clarification from the regulators,” says

Mohanty. And the cloud is by definition trans-national. “The policy challenges will be how we build data residency in ways which can be scaled.”

MAS has been at the forefront of regulatory thinking about these questions. And one solution Mohanty and his colleagues are considering is treating a lot of the compliance components as shared utilities.

“There are growing demands in areas that are not great for competitive advantage,” he explains. “Like know-your-customer [KYC]: can we build public infrastructure around KYC, in a way that helps both the financial sector and non-financial sectors? In that way, you focus innovation on the real value chain for the consumer.”

Mohanty raises fascinating questions about privacy and market access as we consider the evolution of any ‘universal’ digital ID.

“If I know your Google searches, and I’ve found out you are searching for, say, symptoms of cancer, am I going to offer you an insurance policy? How much transparency is good for the society in terms of providing financial services?” But, he adds, there’s also a risk that by 2030 we will have gone too far the other way.

“My worry is that more and more countries are getting extremely protective about the data they’re creating. If that happens, it will become locked in countries, and then the ability to use data across borders will be limited. Consumers demand frictionless banking. They are looking for financial services that are cheap and safe, and offer the best consumer experience possible.”

One response from the regulators over the next decade may well be to mirror this fragmentation of the industry, by setting broad standards where they’re sensible and in consumer interests – but helping to facilitate innovation where it complies with these norms.

“There’s a huge shift from a large enterprise regulation to activity-based regulation,” says Mohanty. “That means that if you are doing a small activity, you’ll be proportionately regulated based on that activity.”

Optimising the consumer experience is a central mission for regulators – which broadly translates as frictionless financial services with transparent risk, protections and control over personal data use. But they also have an opportunity to use technology to minimise the compliance burden on firms. So what else does he think the



financial services CEO needs to prioritise for 2030?

“Indulge in technology,” says Mohanty. “There’s a bit of a notion now that ‘I don’t have to engage in tech, I can stay at a very high level.’ That option does not exist even now. Look at Jack Ma [CEO of Alibaba], he’s deep into the technology. Future CEOs must get their hands dirty.”

“Second, indulge in talent – and make them feel part of your ecosystem, make them feel proud of their work. People are looking for opportunities to work on great projects.”

“And third, be ready for open banking, be ready for an open ecosystem, be ready for cross-sectoral connectivity.”

Regulators such as MAS are also clearly getting ready – for a world in 2030 when both the internal classifications within financial services and the boundaries around regulated activities are breaking down.

Spencer Lake
nCino Inc

"Banks will need
to be agile,
tech-savvy
competitors
in 2030"

Spencer Lake is Board member and adviser at nCino Inc, a cloud banking developer; Chairman of Inforalgo Information Technology, a UK-based data management company; and Non-Executive Director of CityFibre, a smart cities communications infrastructure developer.



The future of financial services could be bright if, in a connected environment, banks can start to differentiate themselves and put in place more singular enterprise solutions for their customers. Otherwise their banking model for 2030 and beyond is a race to the bottom due to commoditisation.

The world is becoming more and more specialised. The logical response to this, whether your customers are corporates or individual consumers, is for banks to develop vertical rather than horizontal product capability. That means deconstructing the historical labyrinth of systems that they have, and putting in place more singular enterprise solutions that can deliver what the customer needs.

So, for example, a bank might want to consider focusing on payments – or credit, or capital markets, or foreign exchange – and develop front-to-back, end-to-end capabilities that can map into a bigger system.

Banks get very caught up in the operational aspects of what they do, as opposed to what the end customer wants – even as technology and customer preferences are evolving fast. They need to change their model relatively quickly or they

will fail. Open Banking, as it plays out, will force banks to consider setting up a new structure. Most likely, this will involve implementing technology as a front-to-back solution, so that a customer can get best-in-class execution.

The next step for banks will be to take the data and the content from the historical model and port it over, effectively creating a new bank, a 'sidecar' that sits in parallel with their existing business.

The big, very successful tech firms all start with a much more agile, customer-centric model, whether it's an iPhone that is focused on you, or the services that go with it. In some cases, like Alibaba through Ant Financial, they are adding banking to what they already do – creating a complete sidecar, based on a business model that is super profitable and growing at the speed of light.

The response needs to be for banks to partner with fintech entities that can also offer frictionless, seamless, very efficient front-to-back service off of a singular device.

So – can banks rearticulate themselves, given their historical configuration, to be winners? Or do

they have to set up sidecars and effectively start over? It's a question that every bank is grappling with.

But unless banks become much more flexible in their current structure and/or own a sidecar that they can leverage off of, they will lose market share.

The bank CEO of the future will really need to understand the dynamics of successful technology companies, and somehow incorporate them into the bank's historical structure to have a fighting chance at success.

But I suspect the CEO of 2030 – along with the CIO and COO – is going to need a different DNA from those of today because the bias towards extending from what they already know is going to be too great.

If you were to start completely afresh instead, you'd bring in much more of a tech-operationally focused person who can understand exactly how the wires are crossed – and work within the organisation, but also have a very clear view as to what the customer wants. You can build from there.

Steve Grob
Fidessa



"The rule has to be, there are no rules"

Steve Grob has been Director of Group Strategy at Fidessa, a leading trading and investment platform, since 2005. Prior to Fidessa, he was founder and CEO of specialist derivatives software house Future Dynamics, a pioneer of the shift from open outcry to screen-based trading in world derivatives markets.

The thing that excites me most about 2030 is the millennial generation and how different they are from my generation. I take great inspiration from my children in that they're motivated by immediate gratification, whether it's music, art, or fashion. They're going to be doing exactly the same thing with financial services. It's going to be about micro-consumption at a very, very fast rate.

The future will see the complete breakdown of traditional boundaries.

It's going to be about technology, about connecting people with sources of liquidity in order to achieve their financial aims; and I'm not sure people realise just how different it's going to be. When technology enables you to execute those financial goals from individual to individual, assuming it can be done safely and within the regulations, why do you even need financial institutions?

Competition's going to come from every which way. There's a positive to that, which is you're free to extend your competitive horizons into all sorts of new directions. The idea you can only look at where you might be threatened from, or where you might generate new revenue sources from, is one that I would challenge.

Take capital markets. They were always organised very strictly. You were either an investment management firm, a broker-dealer, an exchange, a clearer or a custodian. Those business models already started to overlap because of technology. As we head to 2030, those boundaries are going to melt away.

The future of frictionless financial services is all about persistence of data through the transaction lifecycle. That's something that capital markets haven't been particularly good at to

date. Capital markets are brilliant at producing data. What we're less good at is doing anything useful with it.

So companies are going to have to look at their competitive edge – whether it's their balance sheet, research, algos, their coverage, whatever it is – and say, technology's all about delivering that as effectively to customers as possible. But they don't actually have to own that part of the technology stack.

If you buy something from Amazon marketplace, you know the price and whether it is in stock. If you had to wait three days to know whether you'd been successful in your purchase, you'd think that was mad. But that's exactly how capital markets work. So

there's huge room for improvement. When you think about it that way, you start to see all sorts of possibilities to improve the current model. It's significant that one of the landmark tradeshows in our industry is an event called TradeTech – and the biggest contributor there this year by a country mile is a firm called Google.

CEOs need to draw inspiration from all the other business models that are springing up. You can see that's already happening with things like Crowdcube and other crowdfunding sources that are completely changing the way primary markets work. That means if you've been making money out of opacity in financial markets, all that's going away into something that's highly transparent, highly converged and global.

My advice for CEOs moving into 2030 is to be incredibly excited about the opportunities – but watch out because competition's going to come from somewhere you don't expect. They will have to be really good at three things: machine intelligence, connectivity and agility. If you can master any two of those then you're more likely to win. The rule has to be: there are no rules. Or perhaps the old rules will no longer apply and there will be new ones – dictated by the next generation.



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