The Economist Intelligence Unit

A DIGITAL FUTURE:
financial services and the generation game

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EXECUTIVE SUMMARY

The next billion

The financial services industry is already at the sharp end of intergenerational and technology change. As baby boomers and Generation X give way to Generations Y and Z (known as millennials and centennials), fintech start-ups are challenging banks, advisers and insurers to improve the user experience.

The "next billion" will demand even more personalised and cheaper financial services. Few incumbents have truly faced up to the new mindsets, products and distribution this will entail.

This report examines these shifting needs and expectations, primarily in Europe and Latin America. It also studies how the industry is responding and what remains on the strategic to-do list, from multi-channel distribution to artificial intelligence by way of chatbots, cyber-security and virtual currencies.

The result is our 3-4-2: three customer expectations; four strategies that financial firms, particularly retail banks, can follow; and two outcomes—one good, one less so.

Customer expectations:

- All generations expect three things of their finance providers: trust, transparency and time-saving.
- Even the younger generations are wary of security issues with mobile-only services.
- The physical branch will remain an important point of contact for complex matters and—crucially—a profitable sales channel.

Four strategies:

- Vegetate: doing the minimum to comply with regulation is low-cost, but banks and other providers risk becoming "dumb pipes".
- Capitalise: providers with consumer trust can profit from their tech investment by offering new digital identity-checking and other services to third parties.
- Keep up: if your bank has to open up, so do others. Some are attempting a land grab to try to become aggregator hubs of choice.
- Own it: the high-cost option is platformisation—becoming a true digital hub for one-stop shopping, lifestyle and travel services.

Two outcomes:

- Those that take the most defensive route risk being sidelined as retail finance goes digital.
- Bolder providers realise there is much to gain by rethinking their offering entirely, collaborating with tech leaders while retaining their customers' trust.

ABOUT THIS REPORT

A digital future: financial services and the generation game is a report sponsored by Banco Santander for presentation at the Tenth Santander International Banking Conference, written by The Economist Intelligence Unit. It assesses how people's expectations of their financial services providers are changing and how technology must be deployed to meet them.

The report is based on extensive desk research and in-depth interviews, conducted in August-October 2017 with 14 representatives of financial institutions and companies. We would like to thank the following participants (listed alphabetically) for their time and insights:

- Shiraz Ali, director, frictionless payment business, Arab Financial Services
- Steve Arnison, commercial director, LexisNexis Risk Solutions
- David Birch, author and adviser on financial technology
- B Chandrasekhar, chief executive officer, Arab Financial Services
- David Horton, head of innovation, Synechron
- Neira Jones, ambassador, Emerging Payments Association
- Aaron Lipeles, global head of service transformation, Luxoft
- Jake Palenicek, director, financial services, YouGov
- Carlos Orta Tejada, vice president of regulatory policy, Comisión Nacional Bancaria y de Valores
- Frank Jan Risseeuw, chief executive officer, Yolt
- Daniel Rojas, founder and chief executive officer, Rocket
- Julie Ruvolo, director of venture capital, Latin American Private Equity & Venture Capital Association (LAVCA)
- Paul Traynor, managing director, BNY Mellon
- Suresh Vaghjiani, managing director, Global Processing Services

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INTRODUCTION

The future is here, almost

October 2022, Ouro Preto, Brazil

João is in a hurry; he is also excited. After a shift at his second job, his boss has made his position permanent. To celebrate, he intends to buy a self-driving hybrid car. Uber has not yet reached his town.[1,2]

His bank has noted his improved credit score—his blockchain tax code was amended instantly. At 25, this centennial is a prime catch.

João asks his phone to book an appointment at the bank to discuss a loan. After recent data breaches, he is wary of making financial commitments via an app.

He arrives at the branch at 10 pm. Most of the staff have left for the day, but no matter. After scanning his iris, the bank's virtual assistant appears instantly on screen.

The chatbot has already assessed João's transaction history and devised a budget for him. The loan is agreed instantly, packaged with low-cost insurance from an independent broker. A fingerprint seals the deal; no papers are necessary.

Before João leaves, the chatbot has an idea.

His car could help pay for itself if João rents it out via the bank's peer-to-peer app when he is working. He could even have e-cash to spare. Perhaps sweeping R50 (about US$16) a month into a pension plan would be sensible? Compounded over the next 50 years, João could build a nest egg worth R880,000.

As he leaves the branch, a message pops up on his phone: "Welcome to the future of finance".

Banks, insurers, wealth managers and fintech start-ups are rushing to make João's expectations a reality. Technology has already changed how we interact with retail finance. There is much more to come.

[1] Uber. Find a City. https://www.uber.com/en-GB/cities/

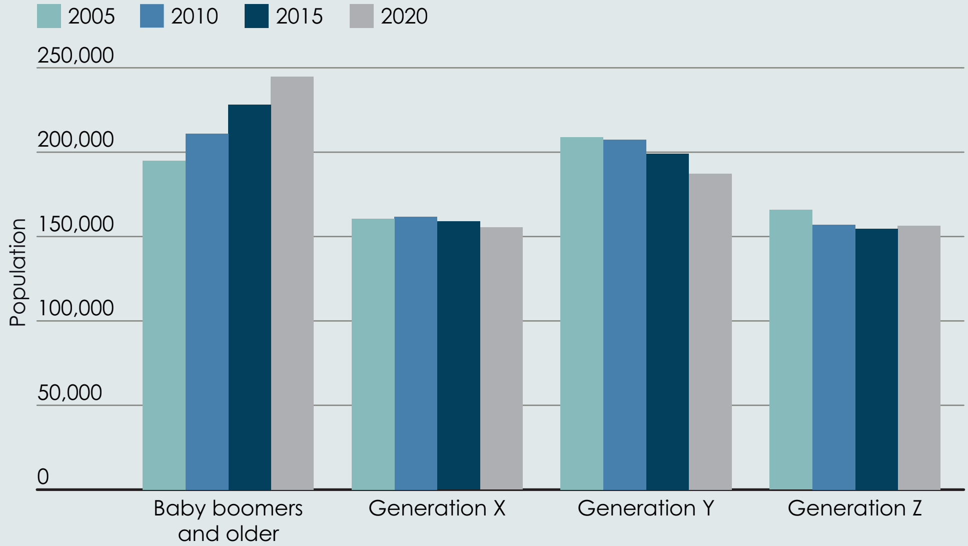
[2] IBGE. Brasil em Síntese. 2017. https://cidades.ibge.gov.br/brasil/mg/ouro-preto/panorama

CHAPTER 1
BYE-BYE BABY BOOMERS

Around 83m people are added to the global population each year. Although fertility levels have risen in Europe, they remain below the required replacement rate. One-quarter of the European population is already aged 60 or above. That share is expected to double by 2050, putting pressure on pensions and healthcare.[3]

Chart 1: Population by generation

The millennials and centennials are already gaining ground in Europe[4]
(in thousands)



MY GENERATION

The boundaries between generations are fuzzy; definitions vary. For this report, we use the following years of birth:

Baby boomers, born 1946-64

Generation X, born 1965-76

Generation Y/millennials, born 1977-95

Generation Z/centennials, born 1996-

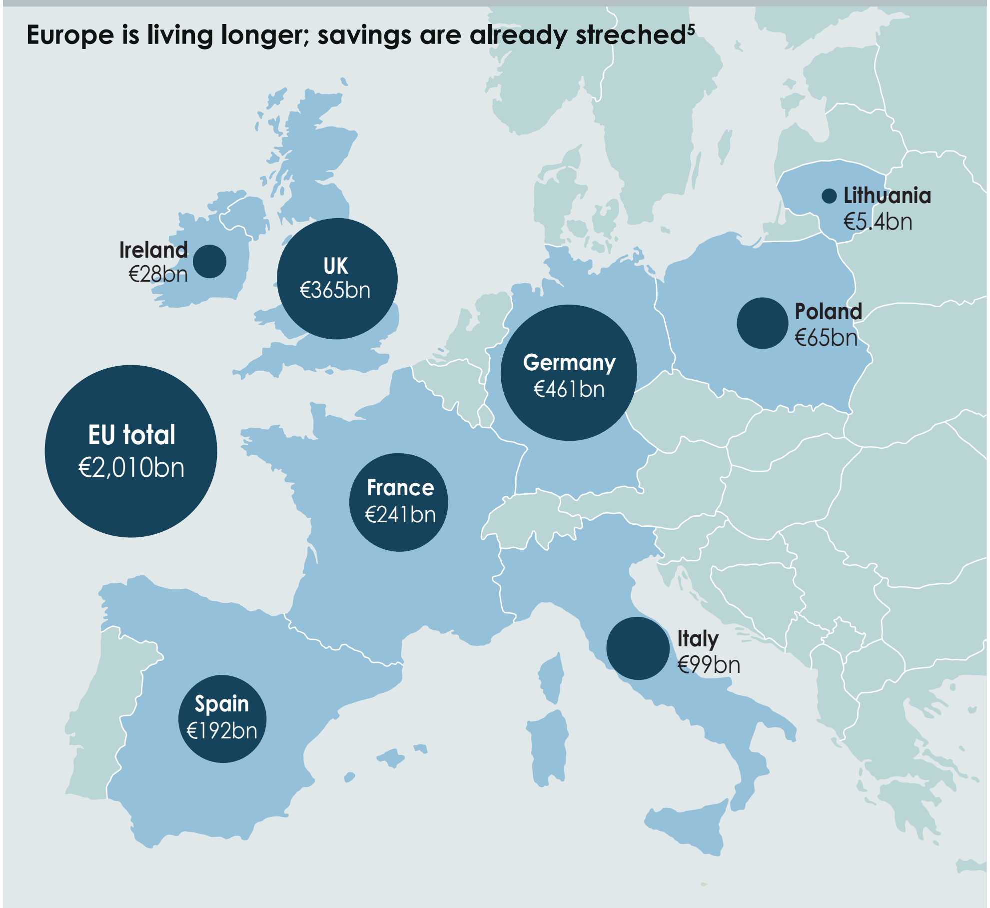
Younger generations face financial strains too. Uncertain career patterns will add to Europe's "savings gap"—the difference between what people save and what they need for a comfortable retirement. Those retiring over the next 40 years will collectively need to set aside an extra €2trn per year, roughly 13% of EU GDP.

[3] United Nations, June 21st 2017. https://www.un.org/development/desa/en/news/population/world-population-prospects-2017.html

[4] UN Population Division. https://esa.un.org/unpd/wpp/DataQuery/

Map 1: Mind the European Gap

Europe is living longer; savings are already streched[5]



The gap has increased markedly where post-crisis austerity measures have slashed pension benefits. Persistently high youth unemployment levels make it hard for younger generations to close the pension gap in some countries.

[5] Aviva, "Mind the Gap", September 2016. https://www.aviva.com/media/upload/Aviva_Mind_the_Gap_2016_Quantifying_the_pension_savings_gap

Developing nations, new opportunities

Prosperity brings change too. In Asia and Latin America, insuring families and possessions is increasingly important as the middle classes expand.

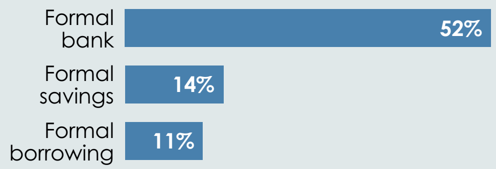
But Latin America also suffers unique structural barriers. Vast swathes of the population have little or no contact with banks, investment companies or insurance providers. Frequently non-supportive legislation, large underground economies and high costs deter millions entering the formal banking system.

The continuing high rates of unbanked people are not surprising. For example, even after regulators pressured banks to cut rates by more than half, Brazilian credit-card holders still pay near 200% per year for revolving credit.[7] Banking services are currently simply unaffordable for many.

Chart 2: Financial exclusion

Latin Americans have limited contact with formal bankings services[6]

(% respondents)



[6] World Bank, Global Findex, 2014.

[7] Associação Brasileira das Empresas de Cartões de Crédito e Serviços, August 2017. http://www.abecs.org.br/app/webroot/files/media/5/1/6/1b7e0a453ff30dcdf885b932d33f8.pdf

CHAPTER 2
SHIFTING EXPECTATIONS

Technology is changing how we work, shop and relax. Digitalisation aims to deliver seamless, personalised banking, wealth management and insurance—in-branch, online or via smartphones, wearables and other devices. But in a world where Generations Y and Z cannot imagine life without social media or mobiles, how wide is the intergenerational gap? It is not as big as one might expect.

THE THREE Ts—WHAT CUSTOMERS WANT

Intergenerational attitudes are remarkably similar. Familiarity with Google, Amazon and social media is pushing up customer expectations.

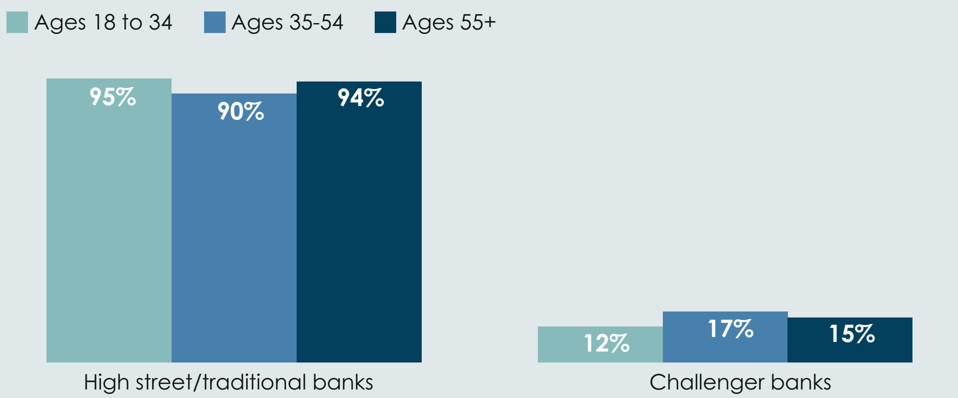
- Trust: customers trust their bank, but they hate the user experience (UX).
- Transparency: they want products and services with no hidden surprises.
- Time: successful solutions deliver convenience. After all, time is money.

The new traditionalists

For every generation, bank and savings accounts are usually the first point of contact with retail financial services.

Chart 3: Who do you bank with?

British millennials still prefer traditional banks[8]
(% respondents)



Source: YouGov

[8] YouGov, *Millennials and Banking*, September 2016.

Research by data analytics firm YouGov shows consistent expectations across mainland Europe and the UK. Millennials want online and mobile banking by default but are surprisingly traditional when choosing a primary bank. They prefer the incumbents with physical branches to "mobile only" fintech challengers.

British millennials still prefer traditional banks.

"It stems from a lack of sophistication. It is not a lack of intellectual sophistication, more a lack of experience. Digitalisation leans heavily on the self-service aspect," says Jake Palenicek, director of financial services at YouGov.

Millennials may require more hand-holding than many challenger banks can deliver. Fintechs may need to change their fixation on youth. Customers over the age of 35 have more complex financial footprints and experience, so may make greater use of smartphone apps for banking, loans and investment. Generation Z has as yet little use for multi-function financial apps.

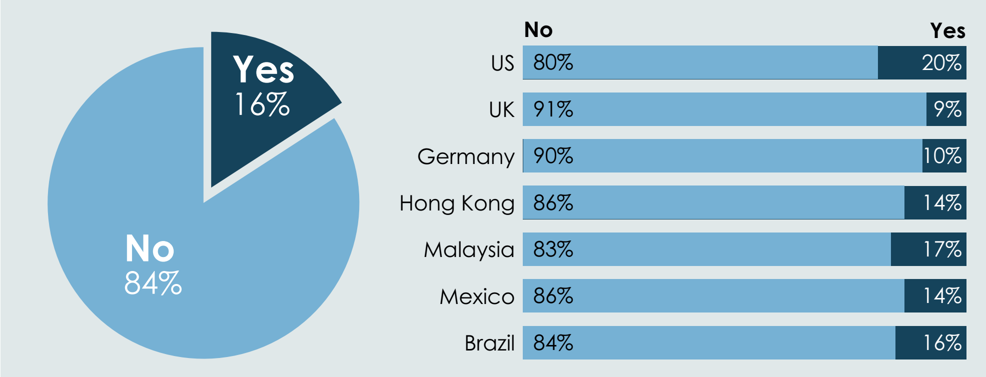
Digital natives, safety first

A study by LexisNexis Risk Solutions, a global provider of information and analytics, supports "mobile first" digitalisation strategies, but not a "'mobile only" approach. If providers want to upsell more profitable products, customers still need someone to talk to.

"The millennial generation really is not happy with the level of personal information that is shared by mobile. They are queuing up for convenience, but only when they feel comfortable and secure," says Steve Arnison, commercial director at LexisNexis Risk Solutions.

Chart 4: Millennials worry abut identify theft

Victim of identity theft?[9]



[9] LexisNexis Risk Solutions, Millennial Study, Privacy vs Customer Experience, October 2016 https://www.lexisnexis.com/risk/downloads/news/Millennials-Global-Summary.pdf

It is easy to see why millennials are nervous about cyber-security: 16% of them have already suffered identity theft, and 65% would think twice before sharing personal information.

"You would think millennials would be happy to open an account by a digital route. Our research tells us not. They will spend up to two hours in a branch to open it," notes Mr Arnison.

For low-level transactions, millennials like one-time passwords (OTPs) delivered by text message. For more complex interactions, Mr Arnison suggests a layered approach, with bio-scans that track physical movement to increase security without compromising convenience.

He also thinks banks could do much more to teach all generations to interact safely online. He is impressed by the initiative of a UK high-street bank that has aired TV adverts about revealing PIN numbers by phone, being distracted at ATMs, phishing, vishing, Wi-Fi scams, and how easy it is to lift personal and account details from social media.[10] The industry needs to follow its example.

[10] Youtube. Barclays UK. Barclays | Digital Safety | TV ad. June 5 2017. https://www.youtube.com/watch?v=w2tW50CD6Aw

CHAPTER 3
A FRAGMENTED FINTECH RESPONSE

The retail finance industry has yet to really face an iTunes or Amazon moment that rewrites the business model. Nobody knows what the market-changing app will be.

"Fintechs are certainly disrupting the user experience. But they are not really disrupting revenue at the moment," says David Horton, head of innovation at IT consultancy Synechron.

Banks are partnering with or acquiring fintech start-ups. Some have even launched their own app-based challenger brands. That could cannibalise their existing customer bases, a strategy worth following if new and successful business models can be migrated back to the main brand.

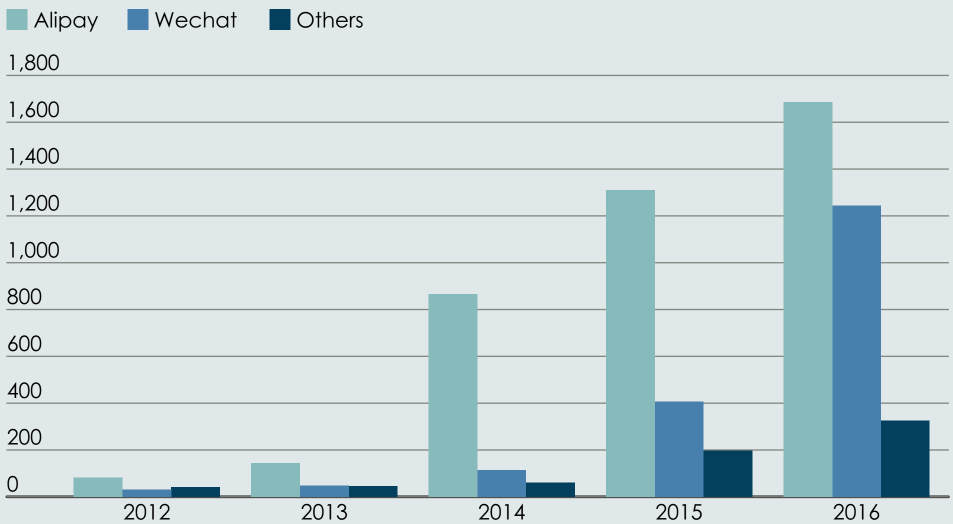
"They know there are benefits to artificial intelligence and to automation. The challenge is how fast they can go," notes Mr Horton.

Ecosystems with Chinese characteristics

Chinese tech giants are several steps ahead of everyone else. Thanks to light-touch regulation, they have raced into "platformisation"—ecosystems that allow other services to be bolted on to their apps.

Chart 5: The great leap forward:

Banks trail Alipay's and WeChat's integrated payments[11]
Mobile payments by value
(yearly total mobile payments, US$ bn)



[11] Better Cash Alliance, *Social Networks, e-Commerce Platforms and the Growth of Digital Payment Ecosystems in China: What it Means for Other Countries*. https://btcaprod.s3.amazonaws.com/documents/283/english_attachments/Better_Than_Cash_Alliance_China_Report_April_2017_(1).pdf?1492605583

Transactions on Alipay, linked to e-commerce giant Alibaba, and Tencent's WeChat wallet have multiplied twentyfold in four years. Payments through non-banks grew by 60% in the first quarter of 2017 alone, according to the People's Bank of China, the country's central bank.[12]

And that's not all. Both wallets also feature apps within apps, allowing users to buy flights, train tickets and more from third parties without ever leaving the Alipay or WeChat ecosystems. Simple interfaces make investing easier too. Users have cleared bank deposit accounts to invest in Alipay's Yu'e Bao (leftover treasure) fund, already one of the largest money-market funds in the world.[13]

API OPENING THE DOOR TO COMPETITION

Open banking standard application programme interfaces (APIs) will be a boon for Apple Pay and other payment initiators. Currently they have to negotiate access with each bank. APIs do away with that complexity. Hence, Apple Pay is available from more card issuers in API-ready Britain than in France, Ireland, Italy, Spain and Switzerland combined. It is not yet available from banks in Latin America. It is not clear why Apple hasn't developed a wallet for this market and has instead allowed other competitors, such as Android, to gain first-mover advantage.[14]

Open banking: don't worry, be API

European and Latin American disruptors can only dream of such domination as seen in China. But the EU's Second Payment Services Directive (PSD2) could be the boost they need. It will end banks' monopoly on how payments are made. It could render technophobic banks virtually invisible.

By January 2018 all retail banks in Europe must open up basic account information to qualifying, regulated third parties, "account information service providers" (AISPs) in the jargon. They must also allow "payment initiation service providers" (PISPs) to instigate transactions.

The banks must devise standard application programme interfaces (APIs) to allow PSD2 access. The experts interviewed for this report anticipate a rush of account and payment aggregators into the market in the years ahead.

But "open banking" must not compromise security. For the first time, AISPs and PISPs are being drawn into regulation on anti-money-laundering, know-your client, security and reporting security breaches. Some fintechs may find the cost of cyber-security too heavy.

[12] Josh Ye, " Big banks on notice that they're losing ground to China's fintech giants", *South China Morning Post*, August 9th 2017. http://www.scmp.com/business/companies/article/2106105/big-banks-fear-theyre-losing-ground-chinas-fintech-giants

[13] *Financial Times*, "Chinese money market fund becomes world's biggest", April 26th 2017. https://www.ft.com/content/28d4e100-2a6d-11e7-bc4b-5528796fe35c

[14] Apple, retrieved 22 August 2017. https://support.apple.com/en-gb/HT206637

"Regulators want more competitive and efficient financial industries. They also want stability and security," says David Birch, an author and adviser on financial technology.

Even so, many banks view PSD2 as a threat to their very existence because it could fragment their business models, which rely on high transaction volumes to generate profits.

Instead, banks should factor the true cost of data into their strategic plans. They face a brutal disintermediation if they fail to do so. Banks that sit behind aggregator platforms will lose the ability to cross-sell more profitable products.

"Structurally, the loss of that data is more important to the banks than the loss of the fees on payment transactions," warns Mr Birch.

TWO OUTCOMES LEVERAGING TRUST, SECURITY AND LIFESTYLES TO SURVIVE

Financial firms face a binary outcome in the Second Payment Services Directive (PSD2) arms race. Those that respond creatively will thrive, adding new services to replace lost transaction revenue. Those that don't face a future of increasing irrelevance. Neira Jones, an ambassador for the UK's Emerging Payments Association, identifies four strategies that banks can follow in the looming application programme interface (API) wars.

VEGETATE: This is the bare minimum banks can do to comply with PSD2, thinks Ms Jones. They must open up access to competitors but have no defence strategies.

"Vegetate does not mean doing nothing. Compliance is not a choice; non-compliance is a risk," she warns.

Although "vegetate" is the lowest-cost option, banks risk becoming "dumb pipes" and losing a fuller view of customers' spending habits.

CAPITALISE: Some banks may look to monetise their investment in API architecture and maintain their traditional roles as trusted guardians using their new infrastructure, offering existing or new services such as digital identity provision. This may generate new revenue streams, but it remains a defensive strategy.

KEEP UP: If your bank has to open up, so do others. Some are attempting a land grab to try to become aggregator hubs of choice.

"Suddenly the banks realise they can adopt an offensive strategy by becoming third-party providers themselves. I have not seen many doing that yet," Ms Jones says.

OWN IT: The high-cost option is platformisation, a true digital transformation. Standardised APIs should make it easier to switch from one aggregator to another. The banks must get creative to retain customer loyalty by allowing non-financial providers onto their platforms, becoming one-stop shops.

"WeChat and Alipay already do this. They have a complete understanding of what customers want," Ms Jones points out.

CHAPTER 4
EUROPE'S WEAPON OF CHOICE

The revolution is not just about open banking. Insurers and asset and wealth managers also need to deploy new technologies to survive as regulatory pressure pushes up costs and squeezes margins.

The following is an outline of the key technologies being deployed in each business line to help incumbents keep up with the fintech pack.

Banking: the chatbots are coming!

Banks are busy testing which distribution channels work best for different client segments and services. Branch networks are shrinking as cash becomes less important in the transaction mix. With less need for tellers, tomorrow's branches will be smaller and more accessible.

Branches will also need to interact more seamlessly with other channels, particularly if they want to boost their cross-selling capabilities. Artificial intelligence (AI) and chatbots (computer-generated speech or text) could help that interaction and deliver a more personalised service.

Off-the-shelf chatbot software is available; Amazon even helps you build your own on its popular AWS cloud computing service.[16] But such software is not an instant plug'n'play solution. Chatbots need at least three months' training to learn a bank's products and services, according to Mr Horton of Synechron.

"There is no magic AI that just works," he warns.

Wealth management: robo-advice and regtech

Advice from private bankers has always been for the very wealthy. EU regulation has made it even more exclusive in recent years. However, robo-advice—the provision of digital financial advice based on mathematical rules or algorithms—could open the market to the masses and create new revenue streams.

European regulators worry that commission paid to advisers leads to product bias and poor client outcomes. But banning commission in the UK and Netherlands had unintended consequences. Clients balked at the cost of paying for advice upfront.

Such bans decimated the mass-market bancassurance model, which distributes investment and assurance products alongside banking, in those countries as banks stopped promoting products from their own (known as "captive") asset management arms. If technology can deliver on two fronts, bancassurance 2.0 may soon be a reality.

TALK IS CHEAP

Chatbots lower the cost of customer service

In India, 82% of digibank's customer support runs through Kasisto chatbot tools, at one-fifth of the cost of doing the same at a traditional bank.[15]

[15] P Crosman, "Chatbots to humans: stand aside, I got this", *American Banker*, June 19th 2017. https://www.americanbanker.com/news/chatbots-to-humans-move-aside-i-got-this f

[16] Amazon Lex, August 25th 2017. https://aws.amazon.com/lex/

GAFA: EXISTENTIAL THREAT?

Will Google, Amazon, Facebook and Apple—collectively known as GAFA—decimate other payment methods? Maybe, but not yet.

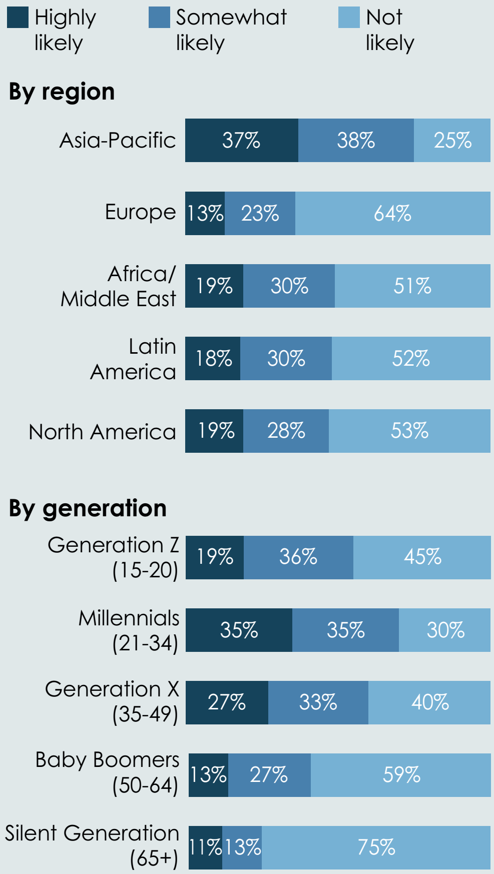
For all the noise around Android Pay and Apple Pay, actual data on transaction volumes are scarce. But according to market researcher eMarketer, retail sales via mobile devices remain a fraction of total sales: just 2.4% in Germany, 1.4% in France and 0.4% in Brazil.[17]

Consumers appear wary of entrusting all their transactions to a phone app. The head of UK challenger bank Monzo recently apologised for outages, urging customers to carry a backup card—hardly a vote of confidence.[19]

Regulation is a barrier too. GAFA already profit handsomely from largely unregulated business lines. They may not want the compliance burden of a move into banking. Instead, GAFA may focus on specific roles, such as data analytics (Google) or payment processing (Amazon).

Graphic 2: Ready for the switch

Will users pay by smartphone in the next six months?[18]
Use of mobile payments in bars, restaurants, retail stores
(%)



First is the cost of delivery. Robo-advice relies heavily on AI to replace expensive human brains with algorithms. Just as Google predicts the question you are typing with uncanny accuracy, so developers expect to provide nuanced answers to complicated client questions.

Second is the cost and risk of getting it wrong. Regtech hopes to reduce the cost of compliance by removing the risk of human error altogether.[20]

When branch staff were paid by the volume of sales, not the quality, results were often disastrous. British banks have so far paid at least £43bn (US$56.7bn) in compensation for

[17] Nielsen, *Mobile Money: From shopping to banking to payments, how mobile is transforming commerce around the world*, October 2016. http://www.nielsen.com/content/dam/nielsenglobal/eu/docs/pdf/nielsen-global-mobile-money-report.pdf

[18] Ibid.

[19] Monzo, August 4th 2017. https://monzo.com/blog/2017/08/04/apology-from-monzo/

[20] Regtech is associated with fintech and refers to using information technology in the context of regulatory monitoring, reporting and compliance.

"ALEXA, BUY AMZN"

Voice-activated financial advice is close

For a taste of what artificial intelligence (AI) can do, look at Echo, the smart speaker from Amazon. US users can already ask Alexa, Echo's personal assistant, to check stock prices at Fidelity Investments and make credit-card payments with Capital One.

Voice-activated financial advice might be next. Given the complexity involved in linking customer relationship management systems, compliance procedures and voice, it would mark a big step up from relatively simple transaction chatbots.

Swiss financial services company UBS is already testing its "Ask UBS" service with Alexa.[21] One day, we may all have access to a personal, private banker, 24 hours per day.

mis-selling payment protection plans.[22] A more responsive AI system should result in more targeted suggestions that actually suit client needs—and keep legal teams happy.

Regtech is also being deployed behind the scenes, says Aaron Lipeles, global head of service transformation at software development company Luxoft.

Fund managers and investment banks both have two objectives. The first is that everyone follows the rules, be they traders barred from using chatrooms to rig markets or dealers who must now share pre- and post-trade pricing.

The second is cutting the costs of trading, custody and monitoring units. Investment banks used to bolt on new separate systems as they rushed new products to market, building up a "technical debt". Amalgamating those legacy systems may appeal; Mr Lipeles warns that such projects often fail because banks bite off more than they can chew.

"If you combine 50 systems, you end up with 51 legacy systems two years later as the project proves too complex," he warns.

Digitalisation makes it easier to isolate problem systems and to experiment with solutions. However, problem areas, solutions and cost savings can be unexpected. Luxoft recently used AI to guess how a bank's disorganised data should have been classified to generate customer reports. Reclassifying manually would have been costly and time-consuming.

"The bodies aren't buried exactly where you think," says Mr Lipeles.

Insurance: risk and the Internet of Things

General insurance is all about pricing risk correctly. Car and home insurers see a future in

[21] Finews. UBS and Amazon Develop Digital Tool. October 20 2016. http://www.finews.com/news/english-news/24845-ubs-amazonartificial-intelligence-amazon-alexaask-ubs

[22] New City Agenda, April 11th 2016. http://newcityagenda.co.uk/the-top-10-retail-banking-scandals-50-billion-reasons-why-shareholders-must-play-a-greater-role-in-changing-bank-culture/

the Internet of Things (IoT), where our possessions can be tracked, assessed and repaired or replaced automatically when things go wrong.

However, our interviewees believe that insurers lag banking and wealth management in their tech deployment. Life and pension insurers have a lot of catching up to do if they are to tailor their products to millennial and centennial needs.

From cold to caring

Two studies by BNY Mellon are blunt: insurers are not interested in shaping products for millennials, let alone finding out their needs.[23,24] If they listened more closely, they could appeal to a much wider customer base and offer a more holistic solution to their lifetime needs.

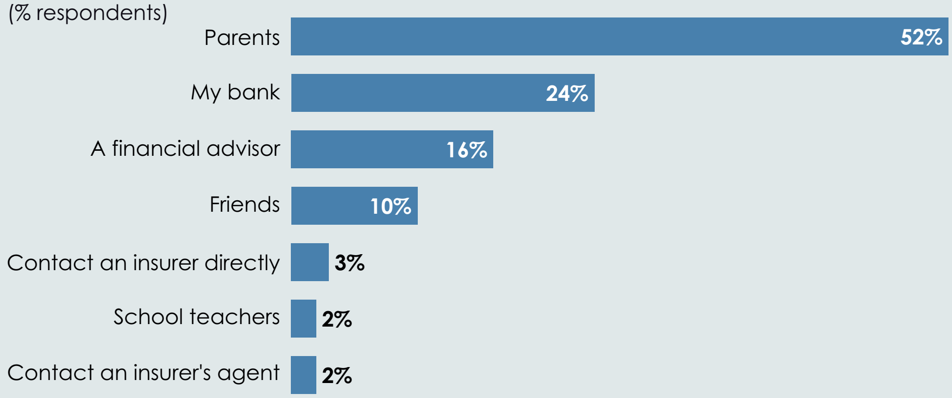
Few generations are financially literate. Baby boomers with work-based defined benefit (DB) schemes do not need to understand pension tax efficiency and compounding. Generation X has access to low-cost, commission-driven financial advice. Generation Z is being taught about money management in schools. Millennials appear to have no such luck, so turn to the people they trust most: their parents.

"Insurers need to target the parents, building trust and helping with advice," says Paul Traynor, managing director at BNY Mellon.

According to Mr Traynor, long-term savings products also need a major rebuild. Policymakers and marketers have yet to realise that millennials expect to work to 70 and beyond. They certainly do not dream of early retirement at age 55.

Chart 6: Mum and Dad, financial advisers

Millennials have no choice but to ask their parents for advice[25]
Rank these financial sources of financial advice, in order of which you would approach first
(% respondents)



Source: BNY Mellon.

[23] BNY Mellon, Generation Lost, October 2015 https://www.bnymellon.com/_global-assets/pdf/our-thinking/generation-lost.pdf

[24] BNY Mellon, *The Generation Game: Savings for the New Millennial*, September 2014. https://www.bnymellon.com/_global-assets/pdf/our-thinking/business-insights/the-generation-game.pdf

[25] Ibid.

Younger generations naturally focus on their short- and medium-term needs, such as education fees or setting up home. They need flexible products that help them pay off debts, save and then develop a pensions habit.

Mr Traynor notes that it is perfectly possible to bundle existing savings and pensions products together to allow for early drawdowns. But insurers would have to accept slim profits in the "lean years" before sufficient pension assets are amassed.

"If they don't invest in the millennials, they will not have a business in any case," he warns.

Insurers still need to work on mass-market distribution channels, including online. Banks are more adept at high-volume, low-value business, so could help them "re-intermediate" if the user experience is improved, according to Mr Traynor.

Providers will have to mind their language too. Their overtly regulated social media messaging comes across as "creepy" and "silly" to younger generations.

Millennials (and Generation Z) are also bombarded by so many messages each day that the "carefree, silver-haired couple on a beach" no longer registers. Communications need to be honest, confrontational and shocking, says Mr Traynor. Seventy-seven percent of millennials want to be told the stark reality of their post-retirement finances.

"It has to be more in-your-face, like an anti-smoking message," he adds.

CHAPTER 5
LATIN AMERICA: SOCIAL INCLUSION FOR PROFIT

Latin America must deliver on the basics before attempting complex cross-selling of more profitable investment products. Innovations developed in Europe and the US do not necessarily suit the local market.

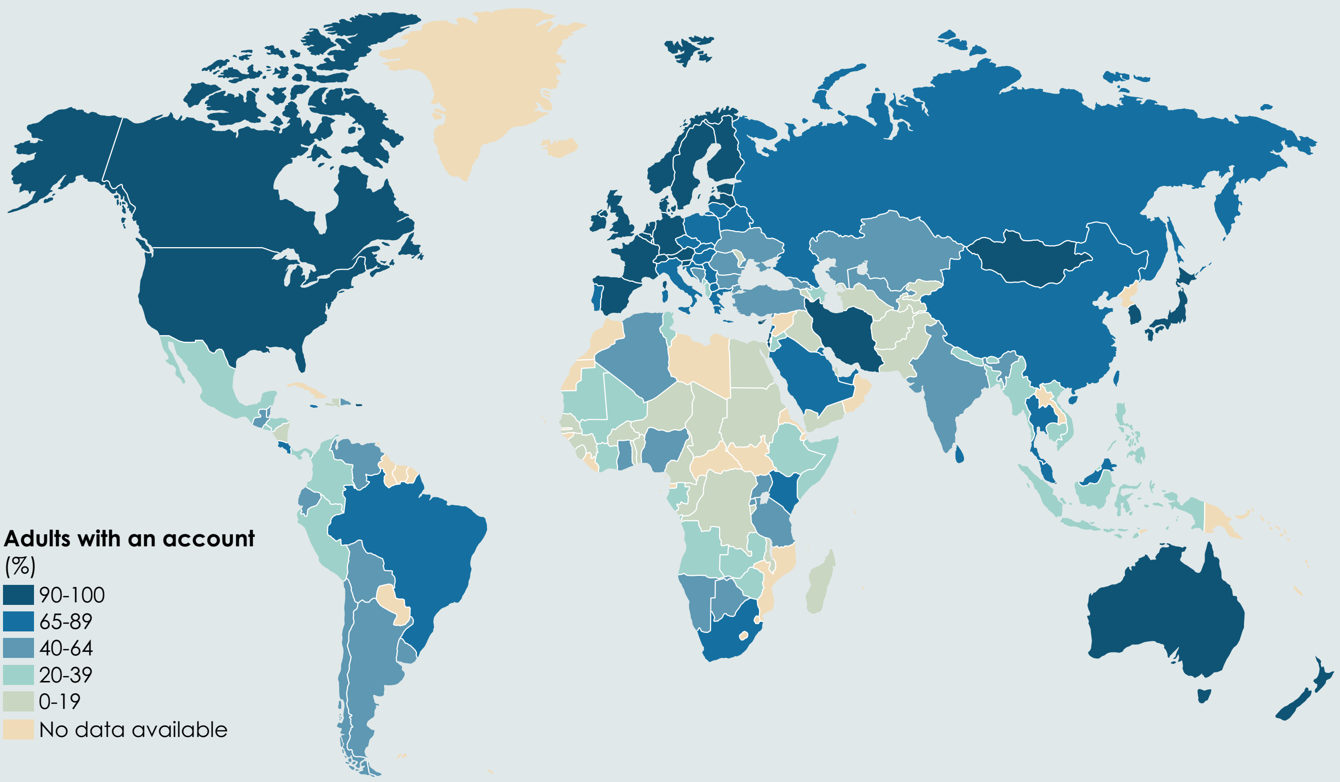
"We've evolved past the idea that everything innovative trickles out of Silicon Valley into emerging markets," says Julie Ruvolo, director of venture capital at the Latin American Private Equity & Venture Capital Association (LAVCA).

More than half of the Latin American population is online. Brazil and Mexico are two of the top four global markets for the monthly usage of Facebook and Google. Uber's biggest Latin American markets are São Paolo and Mexico City. "Yet compared to the US, few Mexicans have credit cards, and most find it hard to transact online", says Ms Ruvolo. They are not alone; only a limited number of South Americans even have basic bank accounts.

[26] Note: World Bank, Global Findex Database 2014,Financial Inclusion around the World, http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2015/04/15/090224b082dca3aa/1_0/Rendered/PDF/The0Global0Fin0ion0around0the0world.pdf#page=3

Map 2

Account penetration around the world[26]



Source: Global Findex database.

As Latin American couriers frequently have to deal with cash payments on doorsteps, delivery firms are creating their own solutions to slash the risk of theft. A Mexican service for hiring domestic staff is experimenting with loans for freelance cleaners to expand their businesses as few entrepreneurs can access bank finance.

"It's exciting to watch how not just fintech start-ups but mobile commerce and delivery start-ups are starting to bridge the payment gaps: on-to-offline, peer-to-peer, and mobile-to-consumer," says Ms Ruvolo. "The question for the traditional banking players is, will they support or suppress these emerging technologies?"

Some incumbents continue to focus only on the upper- and middle-income groups. But there are signs that banks take the fintech threat seriously, including those fintechs that serve the historically underbanked lower-income classes.

A proposal in Brazil would have cut payment times to merchants for credit-card transactions from 30 days to two. That would have improved retailers' cash flows, encouraging them to promote card payments, but could have effectively shut down Nubank, a new credit-card player. It would have insufficient funds to pay retailers before its cardholders pay off their debts had the law been passsed.

UNTAPPED: THE UNBANKED IN MEXICO

London's Emerging Payments Association recently headed to Mexico City seeking fintech trade deals in a post-Brexit world. Suresh Vaghjiani, managing director of Global Processing Services and the six firms with him were received, but sales talks did not go as planned.

"What was interesting talking to the banks and finance ministry was that so many customers had bank accounts, but did not know how to use them," Mr Vaghjiani says.

Millions of Mexicans still feel banks are unsafe or they could lose access to their cash, he believes. Some banks have little desire to educate them. This belief is supported by a World Bank study that indicates that Mexico has some of the lowest accessibility scores in Latin America.[28]

Mexico–cash only

Mexicans do not use their accounts or bankcards much.

% of populaion over 15, in the last year

Used account to receive wages	17.2%
Used credit card	11%
Debit card	27%
Bought goods or paid bills online	6%

"Banks would lose money on these accounts if people used them. They would rather not have these customers at all," says Mr Vaghjiani.

Regulators know this is absurd. The finance ministry has collaborated extensively with the UK's Financial Conduct Authority to encourage innovation. Mr Vaghjiani is already planning his next trip.

[27] J Leahy, "Fintechs target Brazilian banks' fat margins", *Financial Times*, August 22nd 2017. https://www.ft.com/content/78058d7c-7c90-11e7-9108-edda0bcbc928

[28] World Bank, Global Findex, 2014. http://datatopics.worldbank.org/financialinclusion/country/mexico

But with 10m people having applied for a Nubank card (although cardholder numbers are likely to be lower), Latin American banks increasingly understand the opportunity.[27] Two of Brazil's largest banks have now joined forces to offer no-fee cards to take on Nubank directly.

Latin American banks often blame tough capital requirements and poor customer credit histories for high interest rates and low penetration rates. Mexico-based Rocket, a fintech company which connects millennials with affordable credit, hopes to dismantle some of the roadblocks by educating both banks and their potential customers.

Half of Rocket's 600,000 users have completed its simple credit questionnaire to obtain bank credit cards, making it the biggest online lead generator in the country. The company has streamlined one issuer's online application process from 45 to 17 questions. It is also collaborating with the industry on new products for the 50% of Rocket users with insufficient credit histories.

"We are the bridge," says Daniel Rojas, the founder and CEO of Rocket. Many banks do not understand how online works or have their own capabilities, "so we help them develop the technology and procedures to receive prequalified leads".

Customer education also plays a big role. Maintaining regular contact with Rocket card users has helped reduce the average default rate from 30% to 11%.

Mexico's new fintech law could boost the introduction of other solutions to financial exclusion dramatically. The law has multiple aims: bringing existing fintechs into the regulatory framework, developing an open API architecture and creating a sandbox for yet more innovation.

Carlos Orta Tejada of the Comisión Nacional Bancaria y de Valores (Mexico's Banking and Securities Commission) says the law will boost competition, level the playing field and provide more certainty for fintechs and their customers.

"The general fintech framework is about disclosure, so users are aware of the risks," he says.

Many fintechs see benefits in being authorised, not least for easier access to institutional investor capital. Banks will also be allowed to own peer-to-peer (P2P) lending, crowd funding and e-money businesses, but not to operate or distribute them under their main brand names to avoid confusion or contagion if a new venture fails.

The banking sector is more divided over open APIs, notes Mr Orta Tejada. Diehards oppose change, while others see benefits in deploying collaborative low-cost services to the many parts of the country that remain banking deserts.

CHAPTER 6
CULTURE SHOCK

Internal culture is a barrier to progress, particularly in larger organisations. Traditional branch network hierarchies are not used to the pace of innovation, nor the risk-taking, that digital development entails. Leadership is critical to combining new ideas with customer service and security. If the board and executives do not commit, the culture, organisational and systems changes will not take place.

"If you don't have C-level backing, it becomes so much harder to do," says Synechron's Mr Horton.

Branches remain the biggest operational cost in the face of upheaval. They may also be more profitable strategic assets than many assume as digitalisation takes place.

"The branch is still the highest acquisition channel for customers. For complaints handling and complex transactions, it remains a profitable proposition," according to Mr Horton.

Those that have rationalised are already reaping the benefits. Lower operating costs have been matched by increased product sales. One Synechron client now sells more insurance through branches than any other channel.

Net Promoter Scores (NPSs, a measure of how likely a customer will recommend a brand, product or service) have risen as branch staff spend time educating customers how to use its online facilities. Channel heads need to stop competing and start collaborating on these synergies.

SOFT SELL

Platformisation adds non-banking value—carefully

Yolt is enthusiastically targeting the UK aggregator app market, even though ING, its parent bank, has no presence in the country.

Aggregation could be a lonely game in the Netherlands, as customers tend to stick with one bank. The British are far less loyal. Yolt's CEO, Frank Jan Risseeuw, wants to capitalise on the British love of comparison websites, but encouraging users to buy more products is a sensitive area.

"It is about getting smarter with your money. Users have to be the initiators," he says.

Yolt's first platform agreements are with Runpath, an energy contract comparison provider, and Moneytis, an international money transfer fintech. Mr Risseeuw thinks customers value Yolt's transparency over offering them a single, exclusive deal with an individual firm.

Staff training is vital. Body language must adapt now that tellers are not behind safety glass. The skill set needs to be one of hospitality, not sales. "Retooling programmes now feature training sessions at airlines and the Ritz Carlton," says Mr Horton.

Incentives need reworking too. Key Performance Indicators (KPIs) used to focus on queue management and waiting times. Tomorrow's metrics may encourage longer customer dwell times as a chance to discuss cross-selling opportunities. Helpfulness and articulation will be as important as hitting sales targets.

CHAPTER 7 REGULATION—FROM PAST TO FUTURE

Regulators have spent much of the past decade clearing up after the financial crisis. Now the focus is on the future. European regulators are particularly keen to understand what technology can deliver and where the risks lie.

World domination

GAFA are not the only ones that could overturn traditional financial services.

Blockchain, the technology that made Bitcoin possible, is essentially democratic bookkeeping. Computers in a network accept and update identical records. These distributed ledgers could reduce the need for centralised counterparties or stock exchanges.

Central banks are already looking at how they can regulate blockchain to assure transparency, cyber-security, data protection and privacy and systemic stability.

Those hosting blockchain nodes can potentially "mine" or issue their own money, as occurs with Bitcoins, which can be traded as cryptocurrencies. Some believe cryptocurrencies will render central banks redundant.

That seems unlikely. Bitcoin prices are volatile, the systems have been hacked several times, and it would be hard to scale up the transaction authentication process in real time, even for the smallest of countries.

THE EMPIRE STRIKES BACK

China is regulating its financial innovators

Just how dominant could a big fintech become? Or be allowed to become? For an answer, look to China—again.

The People's Bank of China (the central bank) is unhappy with Alipay's "cashless week" promotions urging app users to ditch physical money. According to reports, it thinks the events interfere with the normal flow of the yuan through the economy.

So the bank is getting tough on Ant Financial (Alipay's parent) and WeChat Pay.[29] From next June all mobile payments must be channelled via a government-controlled clearing centre.[30] That will allow competitors more access to valuable data and will dent the duopoly's control of the mobile payment market.

GAFA incumbents and fintechs should take note.

[29] https://www.chinamoneynetwork.com/2017/08/10/chinas-central-bank-rejects-alibaba-tencents-push-for-cashless-society

[30] G Wildau, "China targets mobile payments oligopoly with clearing mandate", *Financial Times*, August 9th 2017. https://www.ft.com/content/3bcb5150-7cce-11e7-9108-edda0bcbc928

“We are not heading towards a single world currency. We are not heading for a Star Wars-style galactic credit,” says fintech author and adviser David Birch.

Politicians and regulators will want to remain in charge. If blockchain is to thrive, it will only do so if regulators let it interact with the real world.

Blockchain may force the industry to work together more closely, think others. Insurers may establish closed blockchains, for example, to automate car accident claims. Or a combined land registry, credit score and mortgage approval system could speed up house purchases and slash costs.

CONCLUSION

With smartphones, the internet and even wearable technology embedded in the daily lives of Generations X, Y and Z, the technology revolution will change retail financial services forever. Digitalisation is inevitable, with the emphasis on three key customer needs: trust, transparency and time.

The revolution is under way in Europe, North America and Asia. Regulators in Latin America and the Middle East, where cash still reigns, are also encouraging fintech innovation through sandboxes, as is being proposed in Mexico, and fintech hubs. Mr Chandrasekhar of Arab Financial Services calls it a "Bring, Test, Prove, Launch" approach.

Mr Chandrasekhar and others are looking to China and India for inspiration as they can more easily bypass legacy systems. In India, a government biometric scheme and last year's demonetisation provided a huge catalyst for the adoption of e-wallets and payment apps.

While incumbents can choose whether to take a defensive stance against innovation or actively embrace it, all providers and challengers must remind themselves regularly that trust will be the key to their survival as digitalisation spreads. Customers trust that their data will be secure, that transactions will be handled correctly, and that the long-term products they buy will protect their homes, families and retirement. New is not always better when customers are let down, particularly as brand loyalty wanes.

Internal cultures will change too. Current departmental barriers will be removed as collaboration grows. Incumbents must get more creative and faster at testing new ideas. Fear of failure is no reason to do nothing.

Fintechs still have work to do. They will have to focus heavily on compliance and cyber-security to meet customer security and transparency expectations, and prove they can operate at scale. Many are finding the best way to do this is to collaborate with banks, while banks find the best way to innovate is by partnering with fintechs. By working together and listening to millennials and centennials, existing brands can build on their trusting customer bases to deliver fintechs' creative solutions and have the most positive outcome of the two scenarios presented in the beginning of this report.

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