



Your bank has your trust.
Can fintech make you love it?

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CONTENTS

- 2 Executive summary**
- 3 About this report**
- 5 Introduction: Symbiosis**
- 6 Section one – customers**
- 10 Case study: With power comes responsibility**
- 11 Section two – compliance**
- 15 Case study: Fit for purpose?**
- 15 Case study: Who do you trust?**
- 16 Section three – cost of capital**
- 19 Case study: nCino: the need to streamline**
- 20 Section four – symbiosis**
- 25 Case study: The Swedish design ethic**
- 26 Conclusion**
- 27 Appendix**

EXECUTIVE SUMMARY

What will become of the nuns, the homeless and the Bank of England governor, Mark Carney, as retail banking goes fully digital?

Since the 1970s Banco Popular of Spain has relied on unique contracts with the Catholic Church for nuns to supply back-office support. Digitalisation, email and apps may render their non-spiritual roles obsolete.

And in the Nordic region, cash is fast becoming a rarity. Banks no longer worry about germ-laden banknotes and robbers equipped with guns. But how do you give money to the homeless if physical money no longer exists? Luckily, Denmark's MobilePay has an app for that.

What if fiat money disappears entirely? Will Mr Carney be made redundant if crypto-currencies become the norm? No, but government-sanctioned e-currencies are a real possibility.

The fourth global retail banking report from The Economist Intelligence Unit finds an industry in flux but more certain about its future.

In previous years, banks feared that financial technology (fintech) firms would steal all their lucrative business lines. But domination is harder and more expensive than assumed. Fully automated banking may never happen. Although retired investors love Skyping their grandchildren, they do not want to talk finance with a chatbot.

So incumbents and fintechs must learn to mix old and new. Collaboration might even make us love our banks.

To measure how traditional players and fintechs can co-exist, The Economist Intelligence Unit surveyed 200 senior retail banking executives about regulatory, customer, security and technology influences on the industry up to 2020.

- **The regulators will decide.** Capital and compliance will shape incumbents and newcomers alike. Domestic regulators warn fintechs not to expect an easy ride.
- **Into the unknown.** American banks worry about regulation the most, despite a promised rollback. European policy direction is more certain, yet onerous. Geopolitics do not help.
- **Resistance is futile.** The EU's Second Payment Services Directive and open architecture are the game changers. Banks may lose their customers' loyalty, fintechs could hit compliance barriers. Both must collaborate to survive.
- **Complacency is not a virtue.** Fear of peer-to-peer lenders and robo-advice may have peaked. Non-banks could still steal deposit and lending business—and profit—unless banks improve the customer experience.
- **No cash, no cheques.** If they are smart, banks may still win the war to build truly universal digital networks.

ABOUT THIS REPORT

In November 2016 The Economist Intelligence Unit, on behalf of Temenos, surveyed 200 global banking executives to investigate the challenges retail banks face in the years to 2020 and how they are responding.

Respondents were drawn from across the world, with 60 banking executives from each key region—Asia-Pacific, Europe and North America—and 20 from the rest of the world. Just over half (101) work for commercial retail banks, while 20% work for private banks, 15% in savings, 12% in community banks and the remainder in credit unions.

This year a bigger share (65%) work for smaller banks with under US\$10bn in assets. One in six (17.5%) work for banks with assets over US\$250bn. Their responsibilities range from finance and general management to IT lead, with 4% of respondents working in risk roles.

In addition, in-depth interviews were conducted with 36 senior executives from banks of all sizes, start-ups, venture capitalists and mutual fund managers. Our sincerest thanks are due to the following for their time and insight (listed alphabetically).

Ram Ahluwalia	Chief executive, PeerIQ
Lou Anne Alexander	Group president, payments, Early Warning
James Anderson	Executive vice president, digital payments, Mastercard
Pat Antonacci	Managing director, head of services and support, Americas and UK, SWIFT
Steve Arnison	Director, LexisNexis Risk Solutions
Peter Brooke	Managing director, finance, FTI Consulting
Ilan Buganim	Chief technology officer, Bank Leumi
Ian Clowes	Chief executive officer, Payment Cloud Technologies
Christopher Cole	Executive vice president and senior regulatory counsel, Independent Community Bankers of America
Tony Craddock	Director general, Emerging Payments Association
Olivier Crespin	Group head, Digital Bank, DBS Bank
Neal Cross	Chief innovation officer, DBS Bank
Mike Fotis	Founder and chief executive officer, Smart Money People
Ofer Friedman	Vice president, marketing, AU10TIX
Mark Horgan	Chief executive officer, Moneycorp
Vincent Hui	General manager and Head of personal banking, Bank of East Asia
Sue Hutchison	Group head, global payments solutions, treasury, D+H
Kevin Johnson	Head of Innotribe Innovation Programmes, SWIFT
Neira Jones	Advisory board member and ambassador, Emerging Payments Association

SYMBIOSIS:

YOUR BANK HAS YOUR TRUST. CAN FINTECH MAKE YOU LOVE IT?

Paul Kearney	Managing director, head of private banking, Kleinwort Hambros
Peter Kjærsgaard	Chief communications consultant, Danske Bank
Frank Kolimago	Principal and head of Vanguard Personal Advisor Services, Vanguard
Lotta Loven	Head of digital banking, Swedbank
James Mack	Chief financial officer, Aldermore Bank
Stacey Madge	Senior vice president, international banking, Scotiabank
Mark Mullen	Chief executive officer, Atom Bank
Preni Naidoo	Executive, self-service banking, Nedbank
Pierre Naudé	Chief executive officer, nCino
Abdul Naushad	Founder and executive chairman, PayCommerce
Tracey Reddings	Managing director, JP Morgan International Private Bank
Angel Rivera	Senior executive vice president and head of retail and commercial banking, Banco Santander
John Thompson	Senior policy director for financial crime, British Bankers' Association
Tuomas Toivonen	Co-founder, Holvi
Ignacio Juliá Vilar	Chief innovation officer, ING
Jeff Walker	Chief information security officer, D3 Banking
Stacey Zengel	President of Jack Henry Banking, Jack Henry & Associates

The report was written by Paul Burgin and edited by Renée Friedman of The Economist Intelligence Unit.

INTRODUCTION: SYMBIOSIS

“Cost of capital will be key.” - Pierre Naudé, nCino.

The shape of tech-dominated retail banking is becoming clearer. By 2020 your bank may no longer manage your real-time digital transactions nor your new account opening, but it will still lie at the heart of your financial world.

Fintechs' dreams of disrupting the entire banking industry may disappoint. Retail banks still hold—and will retain—a huge advantage. They have three “big Cs” on their side: customers, compliance and capital.

The big banks have tens of millions of trusting customers who interact with them every day. Successful fintechs may have only tens of thousands of customers and few primary banking relationships.

Bankers and their well-established legal teams also have decades of compliance experience. The lawyers always win, no matter what.

Crucially, the banks have a cost of capital close to zero. Fintech companies generally have much higher costs because of their capital funding structures. With profits finally rising, banks can afford to build expensive defences.

In that light, the competitive moat seems more like an ocean. Yet established banks generally still fail to create a good user experience. They have much to learn from the fintech providers—consumers want service at their fingertips. Today that type of service can be delivered via our smartphones, making it increasingly easy to breach the barriers between distribution and technology.

The solution is simple, on paper at least. Rather than hand-to-hand combat, banks are learning to love fintech in the hope that it will lead us to love our banks, too.

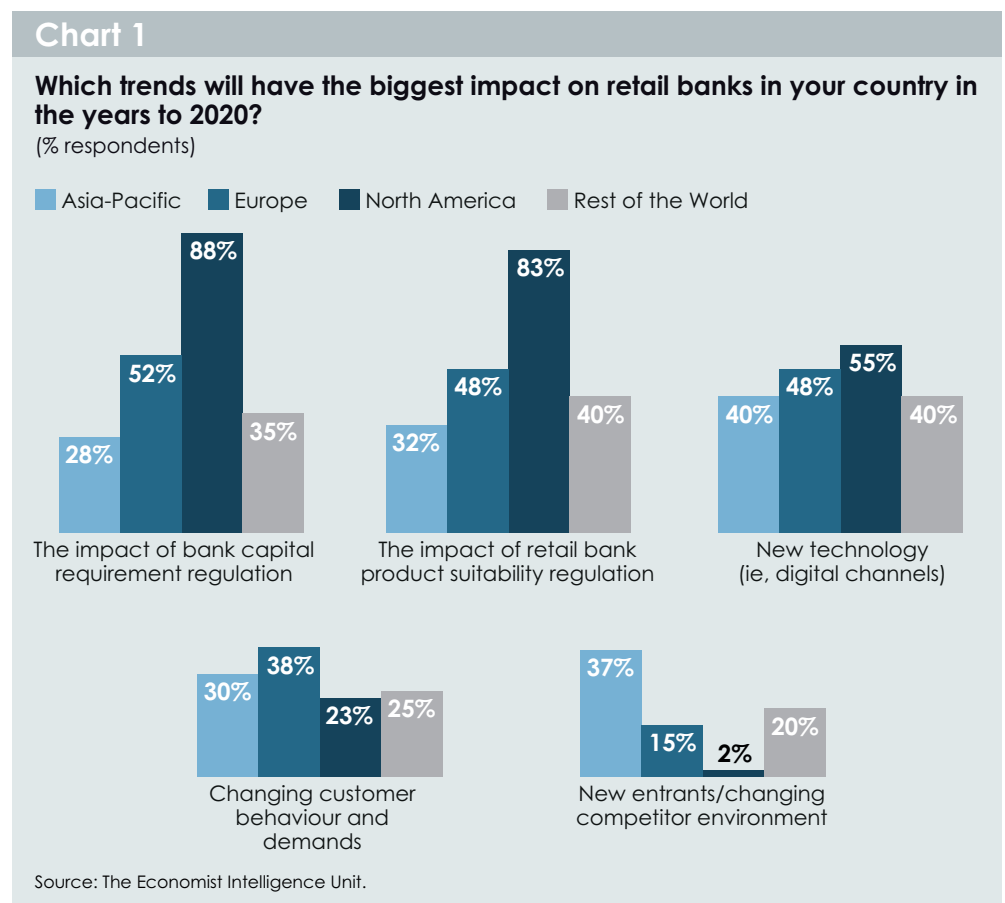
This strategic U-turn by traditional banks has been quick—less than 12 months. However, building a loving, symbiotic relationship may take a little longer.

SECTION ONE – CUSTOMERS

“Why should Apple own the customer interface and the brand?”

- Sue Hutchison, D+H

Once again, regulation continues to shape banks' strategic thinking. This year is marked by a sharp regional divergence about which rules will hurt most, and where. In 2017 we expect the opening up of a new regulatory front to bring fintech under control.



This regional divergence is particularly striking when it comes to bank capital and product suitability, with over 80% of North American respondents saying they are worried, whereas in Asia the numbers are closer to 30%.

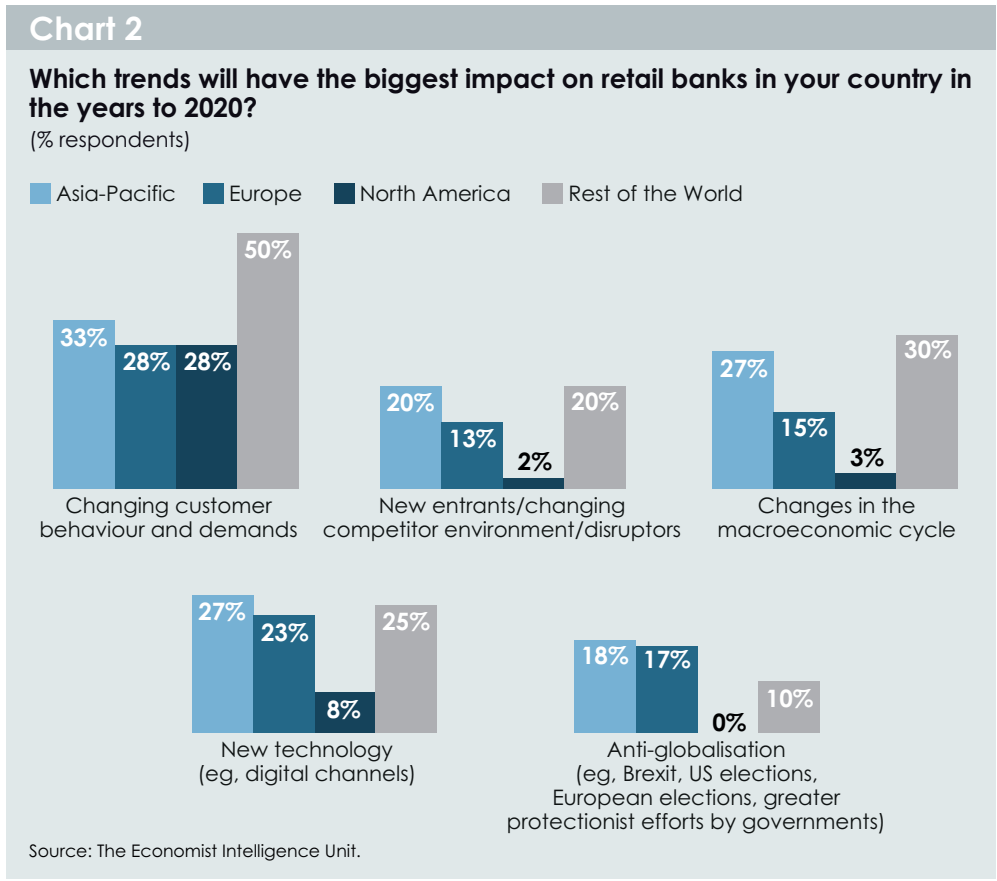
Perhaps “worry” is the wrong word, in the US at least. The president, Donald Trump, has promised to review the Dodd-Frank Act, the cumbersome rules meant to avoid another financial crisis. That should be perceived as a positive for banks both big and small. The problem is that nobody is exactly sure what he will do, how he will do it, and what type of resistance he may come up against.

Other legislators may have unwittingly thwarted competition in the panic that followed 2008. James Mack of Aldermore Bank, a UK newcomer or challenger bank, says he must set aside capital at 35% in case residential and buy-to-let mortgages turn bad. Big, established banks get away with one-tenth of that. For fintech and established banks, Brexit may well be a chance for a regulatory rewrite.

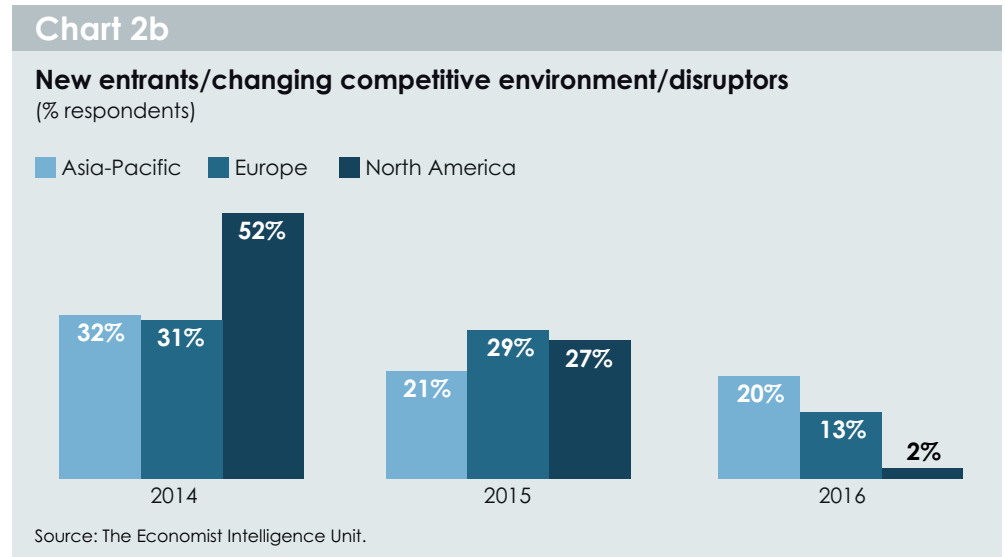
Product suitability and transparency rules are tightening. Europe is already way ahead of the US and Asia on product choice, fees and charges. Bickering European politicians may soon agree disclosure rules for all retail products, including popular insurance-linked investments, in effect ending bank staff being paid commission.

European bankers are relatively sanguine about the burden; the direction of regulatory disclosure travel is well signposted. South Africa, the Middle East and parts of Asia are slowly following suit.

In the US, new fiduciary rules could end a bias towards expensive commission-driven in-house retirement plans—or not. Mr Trump has ordered another review, pitching bankers, regulators and the judiciary into another fight.



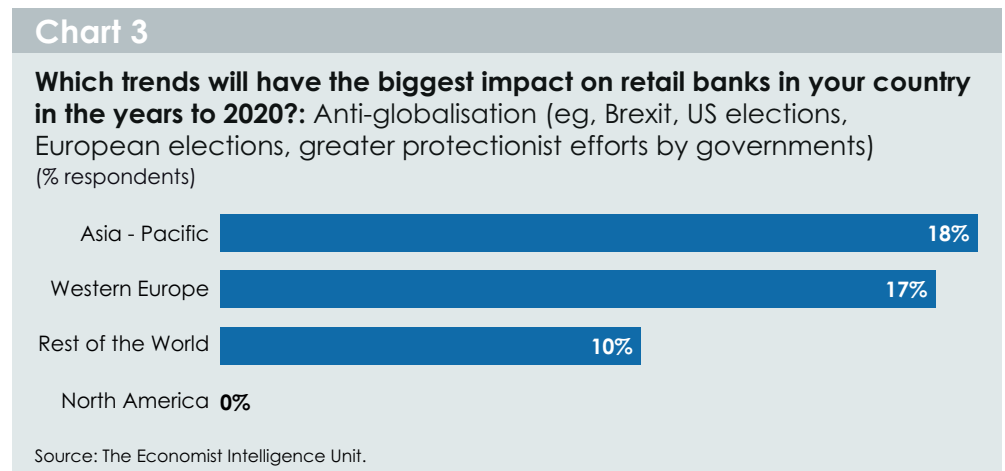
What a difference a year makes. Fear of fintechs has receded quickly, most markedly in North America, as banks finally realise they should either collaborate with each other or with fintechs to ward off attacks.



North American incumbents have realised that they need to update their infrastructure if they want to keep hold of their current customers and attract new ones. If successful, they could even disrupt the disruptors, undermining the business case for payment apps and lifestyle-led account aggregators.

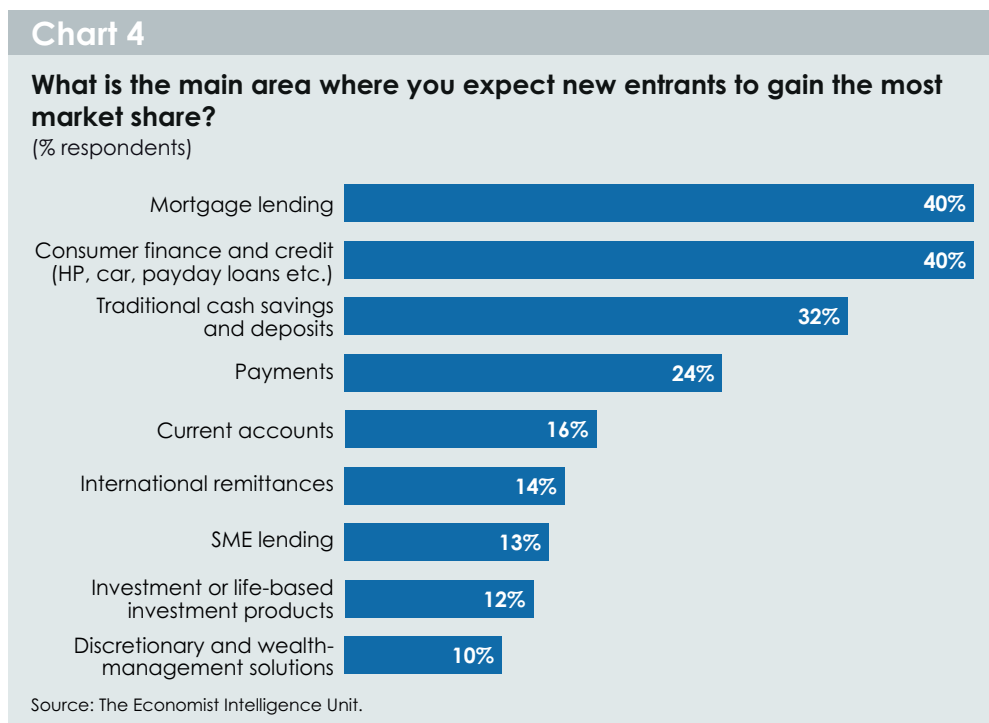
Even when not challenged by industry collaboration, new entrants (banks and fintechs) still find it tough to gain traction. Customer inertia is a huge hurdle, no matter how slick their apps.

Acquisition costs are often higher than expected, compliance costs are climbing and margins are already falling in peer-to-peer (P2P) lending, cloud services and automated



robo-advice. As early app creators and new entrants of the brave new world of all things technological are quickly learning, licencing deals and revenue-sharing models are proving a faster route to fintech scale and profitability.

Should banks be scared of the voter pushback against globalisation? Probably not yet, but it pays to be on guard. British retail banking is overwhelmingly domestic, so far more protected than investment banking from Brexit and the loss of access to the single market. Elections in Europe may throw up protectionist walls around domestic markets and incumbents.



Payment apps are a popular route into the hearts of mass retail. ING is not waiting to find out who will win in Europe, even in markets where it has no banking presence. It is spending €800m (US\$848m¹) to deliver huge savings through unified crossborder platforms and “Model Bank” formats across Europe.

Although it no longer offers bank products in the UK, innovation officer Ignacio Juliá Volar hopes that ING's new aggregator app Yolt will lead to bigger things. The app is still in its beta phase but could become a platform for more than just transactions, credit cards and spending tips. If all goes well, lending and investments could be added too.

Banks no longer fear P2P lending as they once did. In fact, they embrace it with open arms. Several interviewees have ties to Kabbage, a small business lender, to broaden their own product lines. The term P2P is fast becoming a misnomer. “Marketplace lending” is more accurate as public-facing platforms become a negligible source of

¹ Based on 30 December 2016 rate of €1.06:US\$1 https://www.federalreserve.gov/releases/h10/hist/dat00_eu.htm

business. Compared with mom and pop, institutional investors are better at evaluating credit risk, and a lesser compliance burden.

Concerns about advice and investment products have fallen in comparison to last year. Compliance and complexity are to blame, as is human nature. As Frank Kolimago of fund giant Vanguard's Personal Advisor Service points out, we all want a real person to blame if something goes wrong.

His clients, 85% of whom are aged over 50, have differing needs as they switch from building to depleting their pension funds. Fully automated competitors with younger clients may need to develop a human touch as they age, too.

Private banks feel the same way. Human interaction is a costly but effective reassurance for nervous wealthy investors. Real advisers are also likely to be better than a non-empathetic robot at convincing customers to consolidate assets from other providers.

CASE STUDY: WITH POWER COMES RESPONSIBILITY MOBILEPAY, DENMARK

It is tough to predict which payment services will win out. Domination also comes with its own issues, as Danske Bank has discovered.

In 2012 Danish banks set up Swipp, a payment app designed to thwart emerging competition from mobile-phone operators. But with 70 banks involved, the project was cumbersome and time-consuming.

Danske Bank quit the consortium and beat Swipp to market with its own app, MobilePay.

While competitors failed to unify their marketing strategies, MobilePay quickly became the app of choice for retailers and end users, 70% of whom have no banking relationship with Danske.

MobilePay is now almost universal. It is even piloting a service for the homeless, allowing charitable MobilePay users to give via a mobile number. Recipients do not need a phone themselves; money is transferred to their personal payment cards.

Swipp has since died. Its fate was sealed when Nordea was the first competitor bank to switch sides, subsequently followed by the rest of the industry.

To head off an anti-trust backlash, Danske is hiving off MobilePay into a separate unit, with strict data neutrality rules. Neither Danske Bank nor its rivals or retailers can pry into users' shopping habits to ensure that Danske has no competitive data advantage.

SECTION TWO – COMPLIANCE

“Friday night is fraudster night.” - Mark Horgan, Moneycorp.

“The SWIFT attacks were not black-swan events, they could have been avoided.” Neira Jones, Emerging Payments Association.

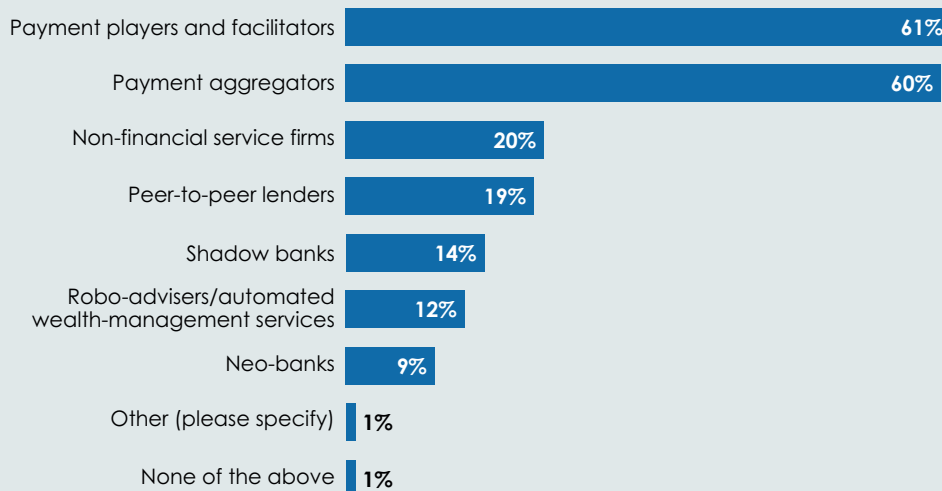
Two years ago banks were genuinely concerned that fintechs would turn their business models upside down, just as Amazon decimated independent book retailers and iTunes did the same for music stores.

The reality has proved less cataclysmic. As it turns out, regulation may well side with the banks.

Chart 5

Which non-traditional entrants to the retail banking industry will be your company's biggest competition in the years up to 2020?

(% respondents)



Source: The Economist Intelligence Unit.

Last year we highlighted real-time payments as the key battleground. The war will become more ferocious as regulatory and risk pressures build.

Fintech payment services providers (PSPs) have generated a lot of noise, but not necessarily a lot of customers or profits. As yet, PayPal, Apple Pay, Android Pay and

SYMBIOSIS:

YOUR BANK HAS YOUR TRUST. CAN FINTECH MAKE YOU LOVE IT?

Amazon Payments are no significant threat to core bank profits; after all, transactions are a high-volume, low-value business.

But payment apps are a Trojan Horse, and a significant threat to customer ownership. Banks fear being disintermediated entirely by slick user interfaces (UIs) that integrate lifestyles, shopping, budgeting tools and multiple accounts and cards.

Sadly, payment processors and banks are often unwilling to invest collectively to fight nimble fintech payment apps, currency converters and stored-value card issuers. The business case is poor without a regulatory push, says Sue Hutchison of financial technology provider D+H. Infrastructure upgrades cost billions and customers still want their transactions for free.

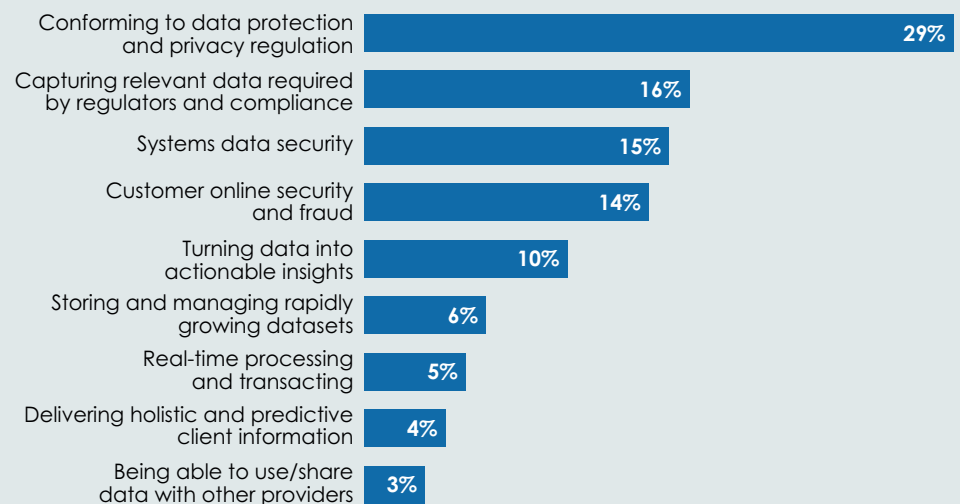
Regulation is squeezing crossborder payment costs and speeds for over 500m European consumers and businesses. National biometric ID schemes are encouraging collaborative e-wallets, apps and immediate payment systems in Latin America and India.

The Federal Reserve (Fed, the central bank) has no such remit in the US. The American market must find its own solution—or solutions. In the Wild West, it is tough to predict the winners and losers.

Chart 6

What is the biggest challenge your bank faces concerning data?

(% respondents)



Source: The Economist Intelligence Unit.

Frictionless banking poses a serious conundrum. The faster and more automated it becomes, the more open to abuse it is. Forsaking safety for speed is a fool's game, so regulators are revamping the rulebooks to accommodate the smartphone.

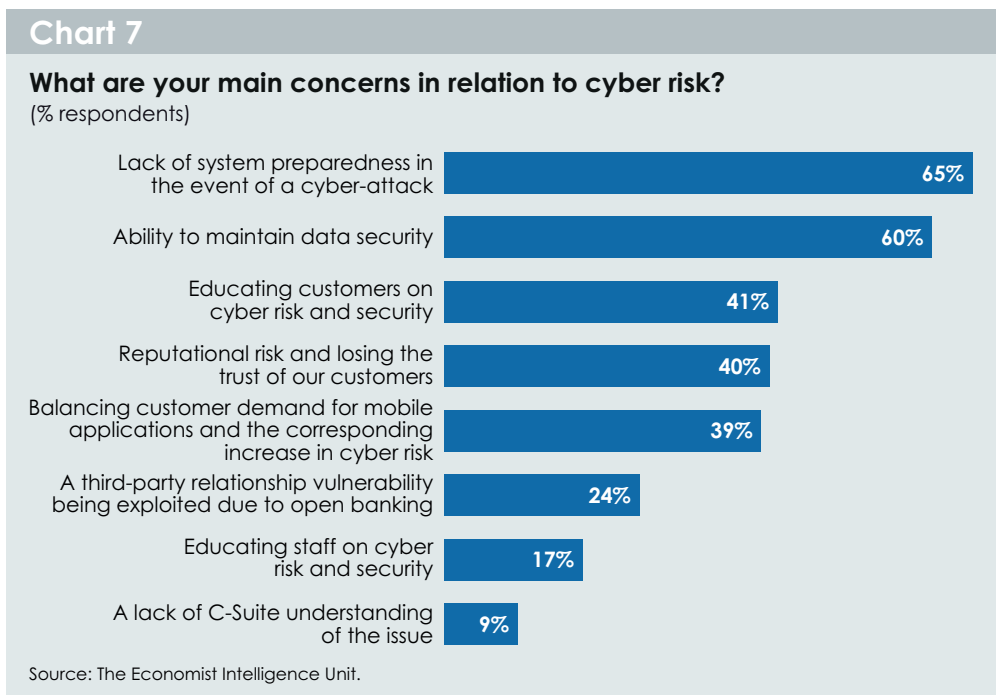
In Europe, banks and fintechs face a regulatory triple whammy. Time is running out for the unprepared.

From mid-2017 the Fourth EU Anti-Money Laundering (AML) Directive will introduce tighter procedures on customer due diligence and reporting. Cash payments above €10,000 will be banned, although France, Spain and others have already set far lower limits.

From 2018 new General Data Protection Regulations will come into force. Cyber-security will be regular front-page news once companies are obliged to declare data breaches.

Also from 2018 the Second Payment Services Directive (PSD2) will force banks to provide account data to non-banks which want them, so apps can grab payments directly rather than politely asking banks for them. That will simplify in-app shopping but will massively increase the risk of systemic external attacks and data theft.

The clincher may be the hefty fines and penalties that will follow any transgressions. Banks and PSPs will pull back from high-risk business areas. If not, customers will have to pay for heavier security and compliance.



Global efforts to combat cybercrime are fragmented. Nervous British financial institutions report some 300,000 suspicious transactions per year.² Core financial crime compliance costs banks £5bn (US\$6.15bn.³) but nets just tens of millions in dirty money, according to industry figures.

² British Bankers Association, *Response to cutting red tape review: The effectiveness of the UK's AML regime*, 2014.

³ Based on 30 December 2016 rate of £1.23:US\$1

<http://www.bankofengland.co.uk/boeapps/iadb/Rates.asp?TD=30&TM=Dec&TY=2016&into=GBP&rateview=D>

Peter Brooke, managing director at FTI Consulting, thinks banks should share information more effectively, rather than report every suspicious transaction. But banks are loath to talk to each other when the police and intelligence, tax and regulatory agencies are listening in.

The UK is experimenting with a Joint Money Laundering Intelligence Taskforce (JMLIT), where government agencies share information so banks can be more proactive. Data protection rules may need to be tweaked too.

SWIFT is also keen to repair the reputational damage done by last year's cyber heists, including the US\$81m spirited out of the account of Bangladesh Bank, the country's central bank, held at the Federal Reserve Bank of New York.

Senior executive Pat Antonacci points out that SWIFT's messaging service was not compromised and that it does not actually move any money. Even so, someone still sent messages they shouldn't have, and money has disappeared.

So SWIFT is tightening security for the thousands of banks in over 210 countries and territories that use its network. Some interviewees question whether it has gone far enough.

Members are being sent daily validation reports to tally their messages with actual money sent. As yet, there is no real-time analysis to spot unusual requests or behaviour.

The new guidelines contain 27 specific controls, although only 16 are mandatory. No bank will be kicked out of the network for failing to comply; security experts complain that the whole system remains at risk from its weakest links.

According to Mr Antonacci, banks will be free to decide whether to continue to do business with the laggards. A public naming-and-shaming policy might be a better enforcer, think SWIFT's detractors.

Yet not all safety measures are expensive or hard to implement and police.

The weekend is great for fraudsters as bank balances do not update until the working week begins, explains Mark Horgan of foreign-exchange specialist Moneycorp. Customer funds can be spirited away before anyone spots something is wrong.

Mr Horgan has a simple solution: Moneycorp's phones are switched off on Friday evening, normal service resumes safely first thing on Monday.

CASE STUDY: FIT FOR PURPOSE?

“Regulation is responsible for the continuation of fraud.” - Ofer Friedman, Au10TIX

In the rush to digitalise banking, there has been a surge in fraudulent new customer applications. Current rules really do not help, says Ofer Friedman of Au10TIX, a fraud protection company specialising in multi-channel secure customer onboarding technologies.

When customers use smartphones to photograph their ID documents, focus, flash and fat fingers can flummox the human eye and know your customer (KYC) software.

Staff must manually check fuzzy ID data against central blacklists. But what if the data are correct but the ID holder is not?

Ofer Friedman says that up to 80% of ID fraud uses genuine but stolen data, easily obtained on the darknet. This means that KYC rules need tightening, especially in the US.

In presentations, Mr Friedman has also asked senior bank security bosses to identify the image of a manipulated document from a choice of six. Not one has ever guessed correctly. Regulators should take his test to see if they can do better.

CASE STUDY: WHO DO YOU TRUST?

“The security people will always win.” - Ilan Buganim, Bank Leumi.

Being late to the party is sometimes an advantage. Israel leads the world in many technology fields, but banking is not one of them.

Bank Leumi studied American peer-to-peer and global payment wannabes before building its new Pepper digital bank.

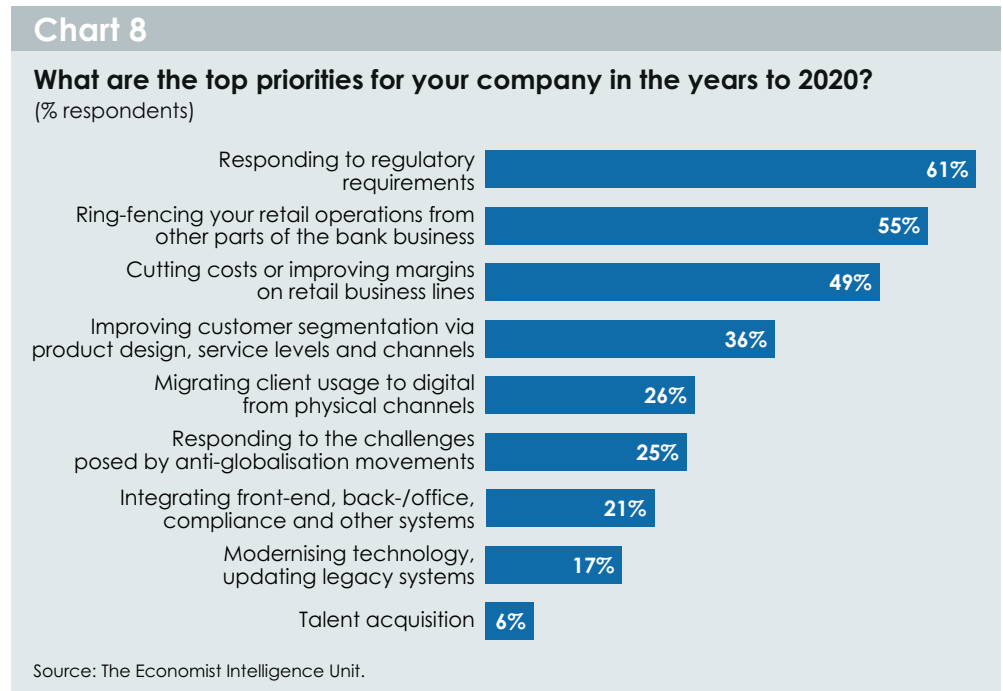
Realising that customer trust is essential, Ilan Buganim says security concerns led the design process. The bank's security team sat alongside developers and programmers. When the two sides clashed, security always prevailed.

Israeli banks take cyber-security seriously. The central bank was an early global leader in issuing specific cyber-security rules for the financial sector. Other jurisdictions have taken note.

SECTION THREE – COST OF CAPITAL

“There will be a bun fight. PSD2 capability is a strategic imperative.” - Mark Mullen, Atom Bank.

Banks are sitting on billions of dollars of free cash in low-yielding deposit and savings accounts. As the banking system is forced to open up in the name of fair competition, they need to invest in the customer experience or lose their position of trust.



Global bank capital rules are in a state of flux. Negotiations on new standards are stuck in a rut. A tough US stance could hurt Europe's national champions. With no clear direction from Mr Trump as yet, agreement is not assured.

At least migrating from legacy systems is no longer as scary as it once was. The cloud could rescue banks prevaricating over the cost, complexity and reputational horror of a core-system revamp.

Five years ago cloud-based solutions were not robust enough to support a bank's daily operations. Today, third parties can bridge the gap while an upgrade is under way, or deliver a full offsite solution at a fraction of the cost of a shiny new mainframe.

Ian Clowes of Payment Cloud Technologies says that implementing a cloud-based current-account system for 1,100 branches of An Post, the Irish post office, was fast and cheap. Even though An Post needed parliamentary clearance, the system's work stream was agreed and completed within a year.

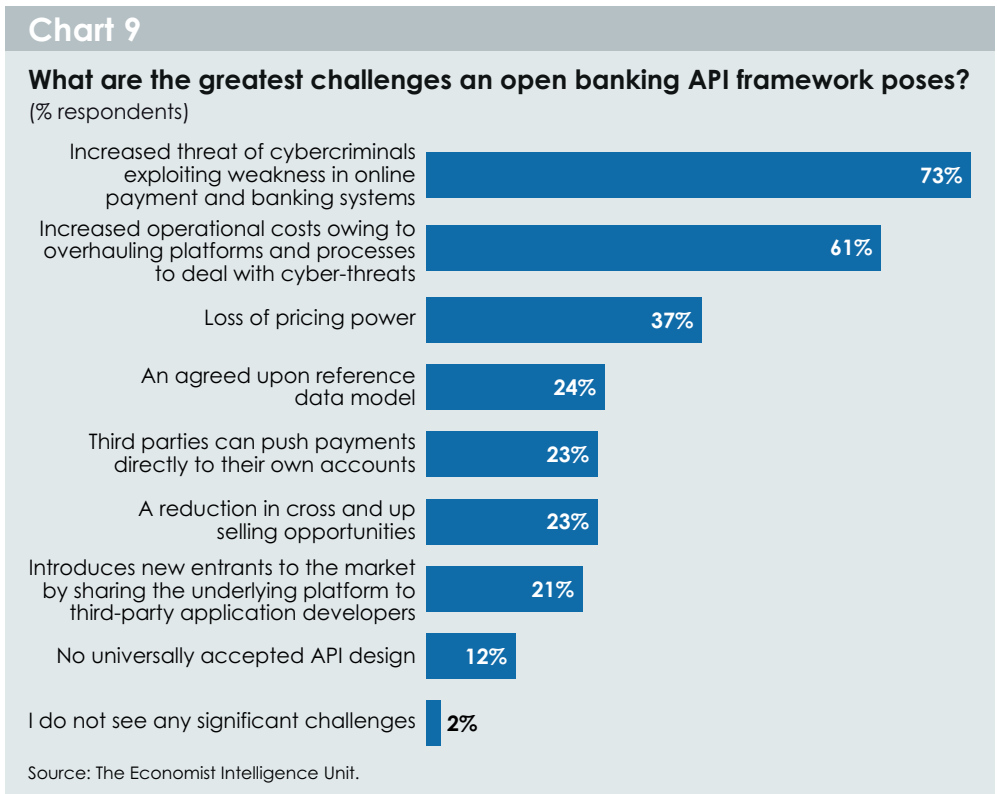
Outsourcing to multiple external partners is on the rise. Ms Hutchison of D+H argues that software-as-a-service (SaaS) platforms are ideal for smaller banks with neither the budgets nor the technological expertise to develop new UIs. Apps, online and new distribution channels can be overlaid in as little as 90 days, with no need to update existing systems.

Abdul Naushad says his PayCommerce global network is expanding fast by slashing the cost of international bank transfers between 75 countries. By aggregating and automating anti-money-laundering database checking, he offers a 40-80% cost saving over traditional channels and less compliance hassle by stopping potentially dangerous payments at source. Big banks are now signing up as the network gains critical mass, even though they have spent billions on their own systems.

Getting around stagnating returns on equity requires innovative thinking. It makes sense for banks to offer credit through marketplace structures, says Ram Ahluwalia of consultancy PeerIQ. They can earn fees and keep relationships without tying up capital for provisions, thus boosting their profitability.

As many banks lack the requisite P2P data analytics skills, especially in lending to small and medium-sized enterprises (SMEs), they increasingly choose to partner rather than compete with platforms.

Given the strength of its data analytics department and its low cost of capital, Goldman Sachs may be alone in having the brains and brawn to become a market leader. Even so, overall confidence in the sector could be shaken by a high-profile platform failure in China or the US.



PSD2 will turbo-boost open architecture. It will add significantly to system and compliance costs for incumbents and PSPs. Despite this, banks may still retain the advantage.

Consumer trust in new apps has not yet been truly tested by large-scale breaches. Newcomers play the anti-establishment card but, as Vincent Hauptert of the University of Erlangen-Nürnberg in Germany has demonstrated, they can squander the trust that banks have spent decades perfecting.

Last year his research team revealed multiple security flaws at digital bank N26. Tapping into weak digital security protocols, they altered transactions, took control of accounts in 12 seconds and even identified 33,000 of N26's customers.

N26 was notified on September 25th; incremental fixes took until December 13th.

As Mr Hauptert points out, it takes eight minutes to open an N26 account, losing it could be much faster.⁴

Mobile-only is a serious risk. When customers make a payment from their PC, they often receive an SMS message on a different device. In-app authentication may be customer-friendly, but it destroys the separation between initiation and confirmation.

But PSD2 also threatens to upend the old banking model of cross-subsidisation, where one group of customers pay for the services offered to others. As aggregators develop, bank customers may decide to buy their overdraft facility from one provider and their direct debit functionality from another bank.

The PSD2 framework also makes it abundantly clear that fintechs cannot avoid their responsibilities by claiming they do not take customer deposits. As third-party payment service providers (TPPs), they must be as robust as the banks.

The European Banking Authorities' Regulatory Technical Standards may even give banks enough leeway to restrict how, and how often, new app providers can access their precious client information.

Overzealous enforcement of security procedures could easily halt innovations in "walk-out" shopping such as Amazon Go, the US grocery store experiment with no checkouts and no queues. Retailers may not be keen adopters if banks let shoppers later deny payments via a delayed verification process.

Banks are already playing the safety card in India, where smartphone payments have rocketed following the bungled withdrawal of 500- and 1,000-rupee (US\$15⁵) notes by the Reserve Bank of India. Fintech apps have complained bitterly that banks are blocking access to users' bank accounts, citing vague security concerns. An independent e-payment regulator may be needed to sort out access and charges disputes.

⁴ https://media.ccc.de/v/33c3-7969-shut_up_and_take_my_money#video&t=872

⁵ The Economist <http://www.economist.com/blogs/economist-explains/2016/11/economist-explains-6>

The US Office of the Comptroller of the Currency has upset almost everyone with its national fintech licence idea. State regulators fear a power grab by the government. The Independent Community Bankers of America, a lobby group, fears OnDeck, SoFi and other lenders may avoid state fair-lending rules. Big banks say Apple, PayPal and Google have plenty of cash, so should stick to tough capital and compliance rules.

More broadly, European and Asian central bankers have also warned that fintechs should not expect an easy ride. To preserve stability in the banking system, compliance is mandatory, not optional.

Anti-money-laundering and know your customer (KYC) rules could force fintechs to add more staff and new processes, adding to their costs. Tighter provisioning requirements for risk could boost their capital requirements further. Investors may not want to pump in more money if profitability is less assured. Forced fintech sales could be on the cards.

CASE STUDY: NCINO: THE NEED TO STREAMLINE

Compliance considerations may stall some innovation, but they cannot stop the demand for frictionless service. Banks need to plan carefully for the human element of their process upgrades.

nCino, a cloud based bank operating system, includes a customer relationship management (CRM) workflow approach to allow customers, brokers and lenders to upload and check documentation.

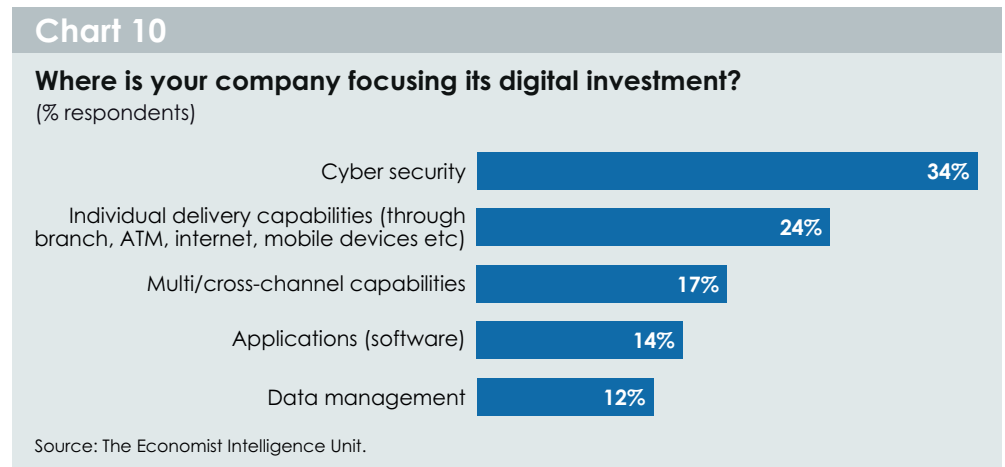
Productivity improvements are impressive at client banks: loan approval times cut by 40% and compliance costs down by 90% in some cases, calculates CEO Pierre

Naudé. But that can lead to more jobs, not fewer, as banks gain more customers as their service levels improve.

When meeting bank staff, Mr Naudé is careful to pitch the service as good for a bank's growth and job security, not as a pure cost-cutting tool. Bank employees have happily, if not effectively, worked in silos for decades, so change is scary. Instead, he demonstrates how better, faster service boosts customer loyalty and attracts new business, creating more—not less—job security for staff.

SECTION FOUR – SYMBIOSIS

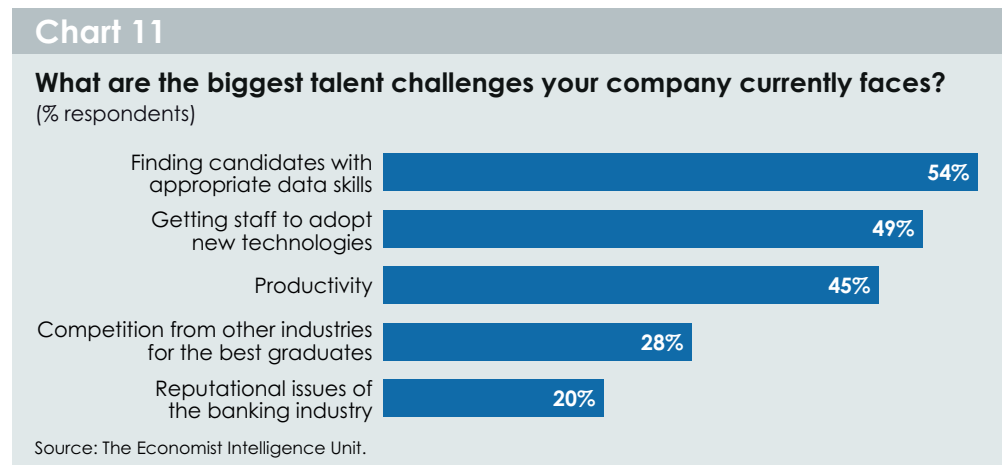
Collaboration is breaking out on many fronts. Interviewees say attitudes to partnering with, not against, fintechs have turned around in the last year. Banks need to work hard on their internal silos if they want to keep up with the new kids on the block.



Whichever digital strategies they chose, banks must adapt to local needs.

Scotiabank is experimenting with different formats in Latin America. The bank imposes its Canadian regulatory requirements wherever it operates, even if local standards are lower. But product demand has not yet converged, meaning mortgage and credit-card products and channels still differ between Columbia and Mexico, says Scotiabank's Stacey Madge.

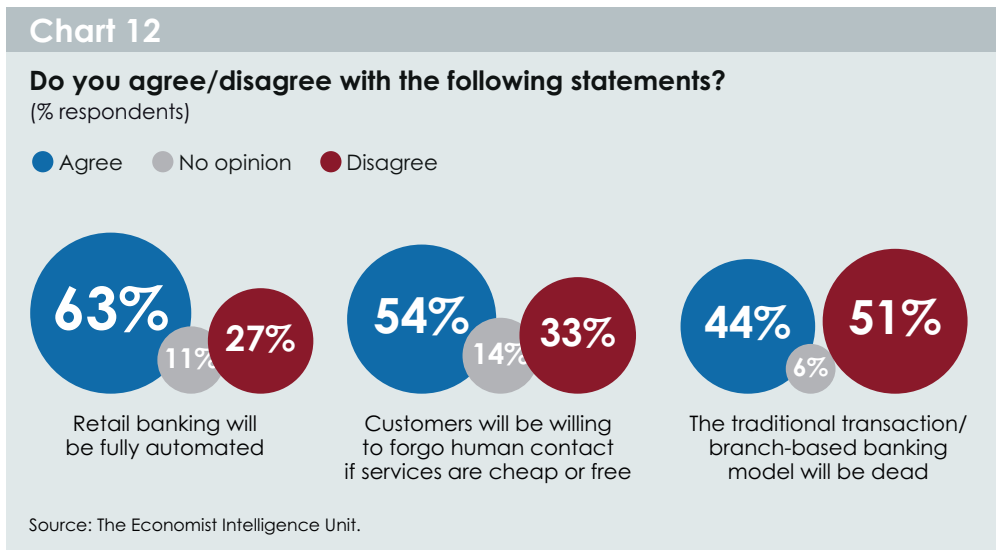
The adoption of technology differs as well. Chileans think nothing of using their thumbprint to begin a teller transaction. Mexican banks like the idea, but since they have no government ID scheme to use, they are building their own. Peru's banks are working on common e-wallets to speed up "bankerisation"—the process of bringing people into the formal banking system.



American banks have little trouble attracting tech candidates, says our survey. Millennials are sensible enough to recognise that a guaranteed salary and benefits package may outweigh the cool-factor associated with untried start-ups.

Interviewees paint a more nuanced picture. Candidates will happily work for a bank, but only of a certain size and if based in the right location.

According to Banco Santander's Angel Rivera, over 350 customers still visit each branch every day in Latin America, compared with just 200 per day in Europe. To help customers transition to new technology, Latin American branches now deploy client services managers to help with self-service tools. Other staff are learning to multitask when branches get busier.



Branch numbers continue to fall. They could drop another 30% in a decade in the US, says Stacey Zengel of Jack Henry & Associates, a provider of technology solutions and payment processing services. Yet the orthodoxy that digital banking will kill the branch may be fraying.

Steve Arnison of Lexis Nexis Risk Solutions says millennials fret about data privacy, preferring to sign paperwork in-branch when dealing with big decisions and transactions.

Human interaction may always be necessary when a FAQ or chatbot fails to please. A survey by Smart Money People found that customer satisfaction with UK incumbents which offer that human service was significantly higher than with challenger banks.

Asian banks are busy melding technology and physical premises. In space-squeezed Hong Kong, the Bank of East Asia (BEA) has a clever way to ensure it is in the right place at the right time.

SYMBIOSIS:

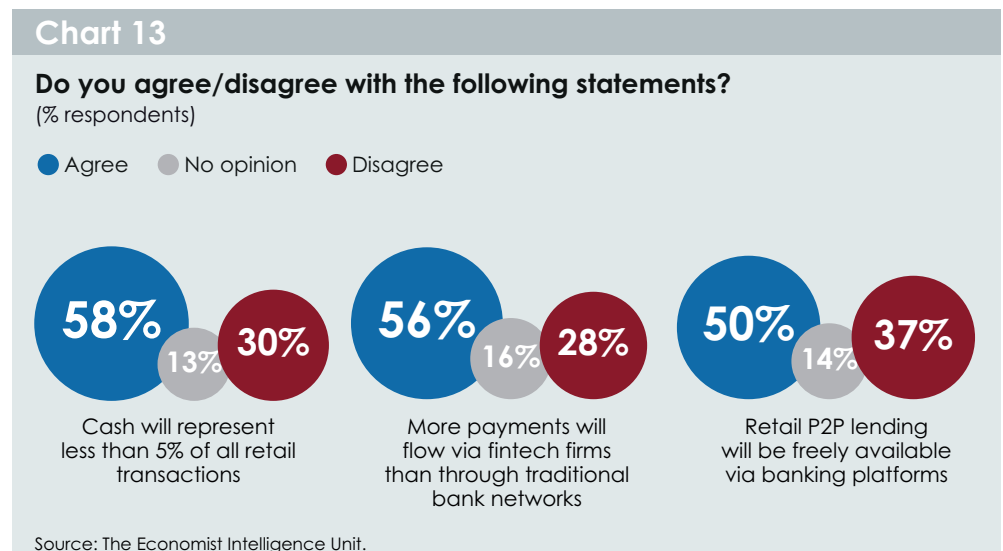
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Footfall at traditional street-level branches has dropped as customers' lives and work now centre on the territory's giant shopping malls. But securing new premises is near impossible as landlords dislike bank tenants with dowdy shop fronts and restricted opening hours.

BEA's Golden 36 Hours programme has revolutionised landlord opinion. From branch closure at 1pm Saturday, Vincent Hui's crack Golden 36 Hours team can strip and rebuild a traditional branch of its counters and security screens, creating a new, open space ready for 9am on Monday. With no back office, he can squeeze a lot of technology into less than 100 sq metres, including pop-up iTeller screens connected to offsite advisers. At one branch per week, the conversion process will not take long.

Some experiments fare better than others. Sharing space with other businesses, such as supermarkets, works, especially when working hours are extended. Full automation is less successful. Given the choice of a live body or a kiosk, the human usually gets the customer, says Mr Zengel. Kiosks are more successful outside branches and outside normal banking hours.

Nedbank is testing that theory in South Africa, and the results are promising. The bank's retail footprint has already dropped by 15,000 sq metres, with another 10,000 sq metres planned. Yet the number of staffed outlets has increased, with many employees redeployed as service champions directing customers to internet stations and "intelligent depositor" machines. A new interactive automated teller machine (ATM) could be rolled out to remote areas to broaden Nedbank's coverage.



Banks can win back market share when threatened by fintechs; universal coverage helps.

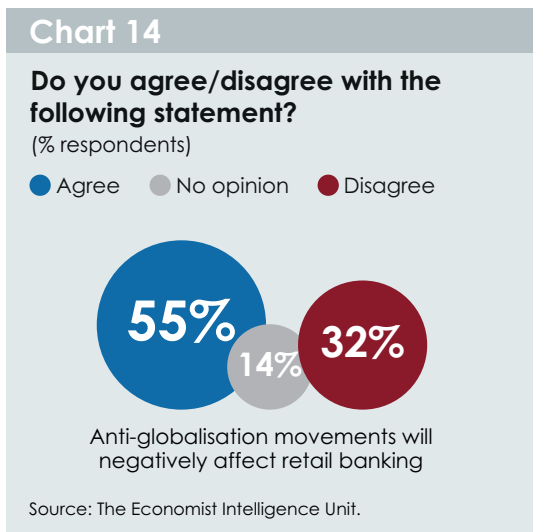
Zelle, developed by Early Warning, a company set up by US banks over 25 years ago, is just one contender in the crowded American payment app market. It also comes with

a common user interface, so using the app looks the same no matter where you bank, says Early Warning's Lou Anne Alexander.

Seemingly unconnected technological developments are also hastening the move to cashless banking. The Indian government may have unleashed a fintech tiger in South Asia thanks to Aadhaar, the country's unique biometric ID programme.

DBS Bank was first to market with its mobile-only Digibank, aimed squarely at the 1bn Indians whose iris scans and fingerprints are already on Aadhaar. Customers first sign up for an e-wallet and then convert to a full account by visiting one of over 1,500 Café Coffee Day stores. They even get a free coffee for their effort.

Over 800,000 customers have signed up since April 2016, with full account conversions running at a healthy 30% or so, says Digibank's Olivier Crespin.



Interviewees have adopted a wait-and-see approach to the impact of voter discontent in the US and Europe. It is simply too early to tell what will happen.

There are also plenty of other bottlenecks to contend with as banks attempt to roll out crossborder services. KYC comes with its own issues, even when using Europe's passporting scheme. Based in Finland, online small business bank Holvi must manually intervene when digital access to trade registries and business data is limited in other markets. While the Baltic and

Nordic nations lead, universal data access in the rest of Europe is a long way off, thinks Holvi co-founder Tuomas Toivonen.

Chart 15

What do you believe will be the most valuable use of blockchain for retail banks?

(% respondents)



Source: The Economist Intelligence Unit.

Interviewees are also undecided how blockchain will change the customer experience. To many, blockchain appears to be a solution looking for a problem.

Its impact is likely to be greater behind the scenes. But it is highly unlikely that Mark Carney (or his successor as Bank of England governor) will be made redundant as a result of blockchain.

Central banks in China, Russia, Asia and Europe are keen to harness blockchain to remove friction and cost from the global system. But they will still need reassurances that the system is secure and transparent for oversight purposes.

They are certainly far less keen on letting unregulated cryptocurrencies flourish; the UAE is among the latest to impose restrictions.

Official e-currencies may have more of a future. A digital currency backed by a central bank should engender more trust than e-money without a backstop. Bitcoin may have a limited future.

CASE STUDY: THE SWEDISH DESIGN ETHIC

“We don’t digitalise bad processes.” - Lotta Loven, Swedbank.

Why are American banks so proud of their apps that let customers photograph cheques, ask Lotta Loven, head of digital banking at Swedbank. Automating obsolete processes is something her industry would never do.

Swedish banks have collaborated on modernising payments since optical

character recognition (OCR) was introduced in 1970.

Now Swedbank hopes its centralised digital team will slash time to market and change how the bank collaborates internally in Sweden and the Baltics.

Ms Loven's team must be flexible, too. Service layers and structures are all devised in-house, while external partners usually work on app development. When new services are required, third parties may be a speedier option.

CONCLUSION

“China is the fintech capital, not Silicon Valley.” - Neal Cross, DBS.

Banks do not hire for transformation; they hire for continuity and “fit”. So they are pumping millions into fintech hubs to harness the skills and attitudes they do not have. Hubs are popping up in London, Paris, New York, Singapore and Hong Kong. Turkey, Israel and Kenya have joined the club.

Yet interviewees suggest that worries about a Silicon Valley takeover may be misplaced. Chinese payment providers have been far more disruptive in terms of speed, size and integration.

Chinese fintechs already control 50% of all domestic payments. Tencent's WeBank boasts some 30m customers—and it only got its banking licence in 2014. During the Chinese New Year in 2016 users sent six times as many transactions via the WeChat social network than PayPal registers in an entire year.

Chinese fintechs have worldwide ambitions. Alibaba's Ant Financial is waiting for approval of its US\$880m takeover of MoneyGram's extensive remittance network.

But crossborder customer acceptance will be harder to achieve. Chinese fintechs may struggle to tempt the Dutch, Germans or Brazilians away from the apps they already trust.

Global titans such as MasterCard and Visa will not give up without a fight. MasterCard's MasterPass is designed to help banks build their own e-wallets, not replace the banks themselves. But the card could survive for many years yet. MasterCard is accepted in 40m merchant locations worldwide, according to James Anderson. Building another global architecture will take time.

However banks see their digital future, they cannot afford to stand still. Investment and risk controls are pivotal to retain trust. Banks will have to work hard on another “big C” as they play their customers, compliance and capital advantage. Culture must also change if banks are to harness digital symbiosis.

Rigid corporate structures often stifle creative thinking. Bureaucratic purchasing procedures can easily mean that new bank apps often follow—not lead—the market.

Many interviewees now incorporate tech considerations alongside regular compliance and professional training. And it is not just a head-office thing; branch, back-office and call-centre staff must be included too. The more staff realise the potential—and that tech is not just a job destroyer—the more quickly cultures can change.

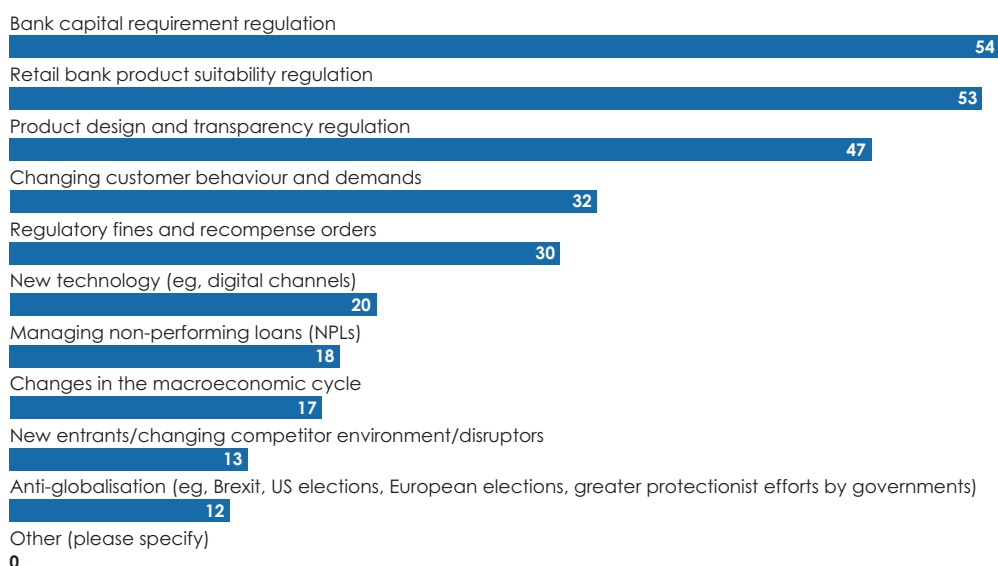
Fintechs need to consider their cultures, too. Tighter regulation and customer mistrust can hit them hard and fast. They will need to find a place for more compliance staff among the app developers and marketers.

Symbiosis works when both sides are willing to compromise.

APPENDIX

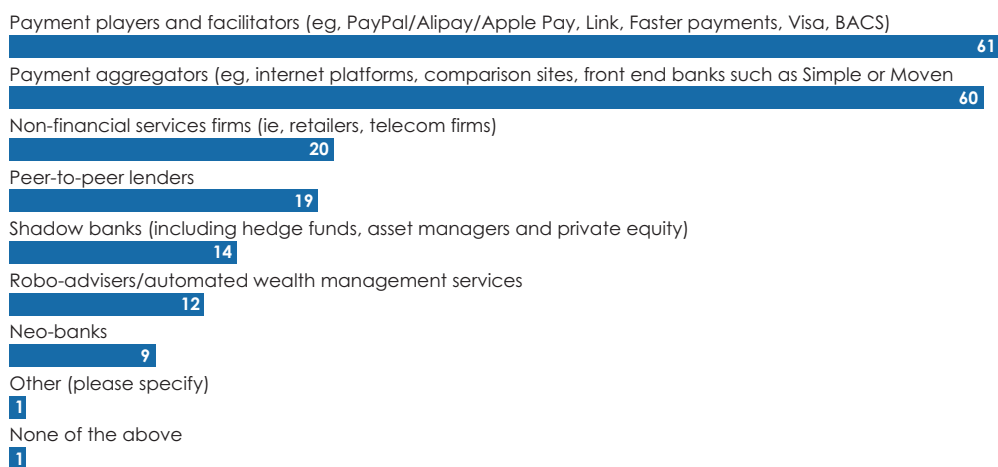
Which trends will have the biggest impact on retail banks in your country in the years to 2020? Select up to three

(% respondents)



Which non-traditional entrant to the retail banking industry will be your company's biggest competition in the years to 2020? Select up to two

(% respondents)



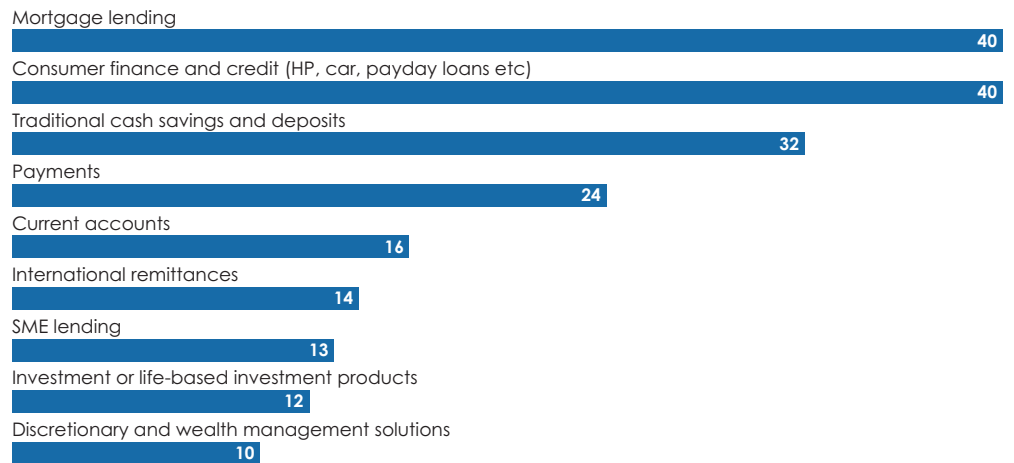
SYMBIOSIS:

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What is the main area where you expect new entrants to gain the most market share

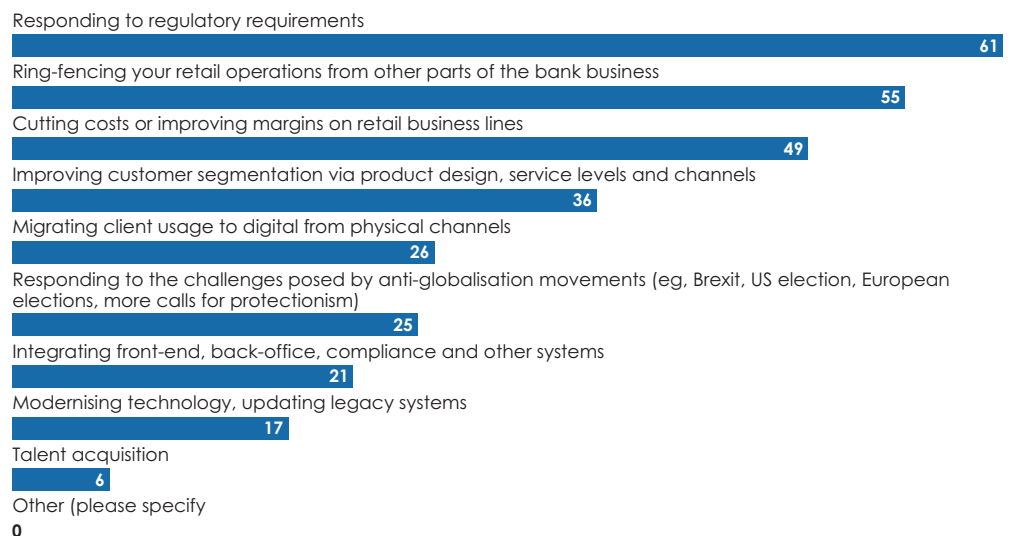
Select up to two

(% respondents)



What are the top priorities for your company in the years to 2020? Select up to three

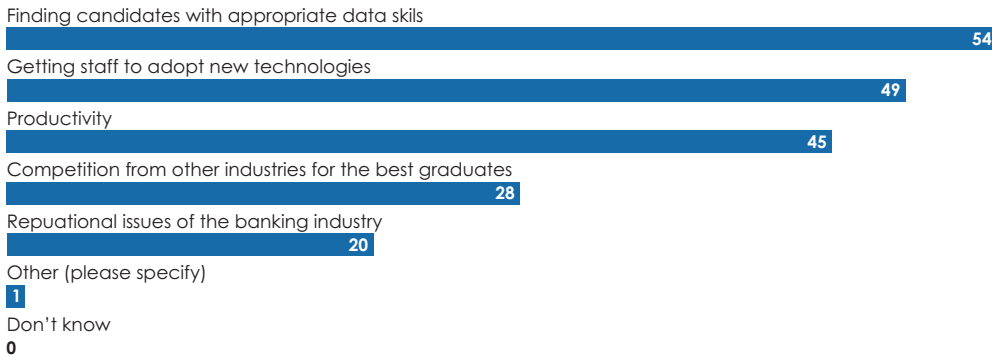
(% respondents)



What are the biggest talent challenges your company currently faces?

Select up to two

(% respondents)



What are your main concerns in relation to cyber risk? Select up to three

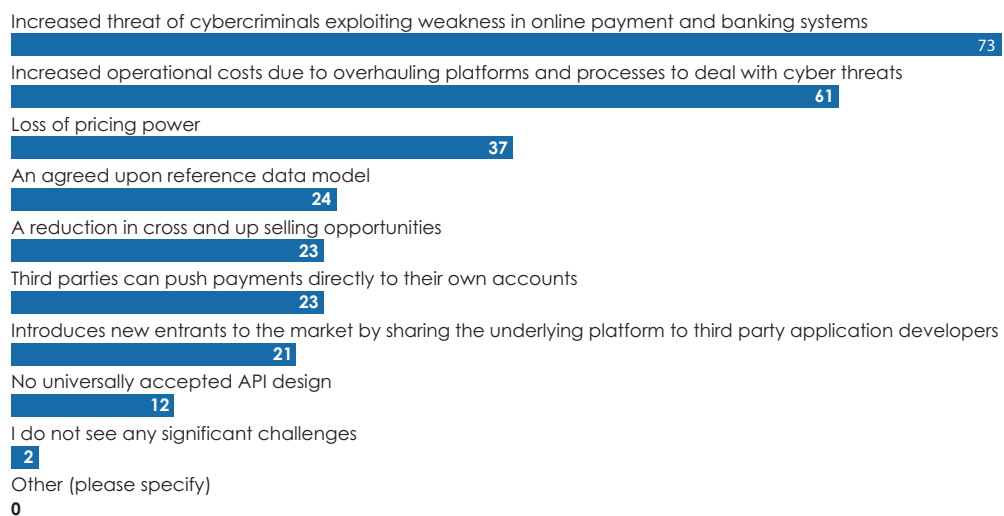
(% respondents)



What are the greatest challenges an open banking API framework poses?

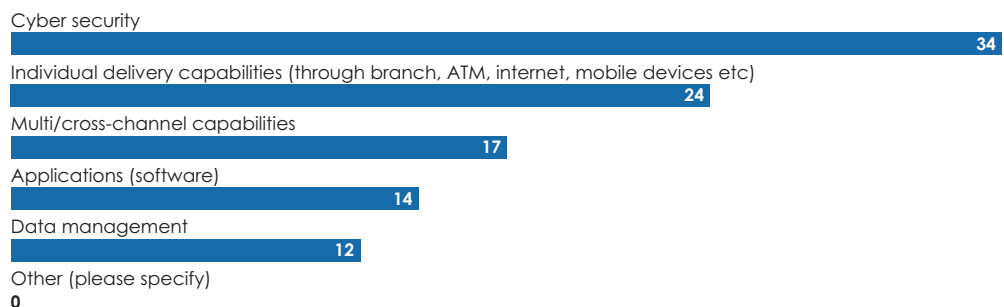
Select up to three

(% respondents)



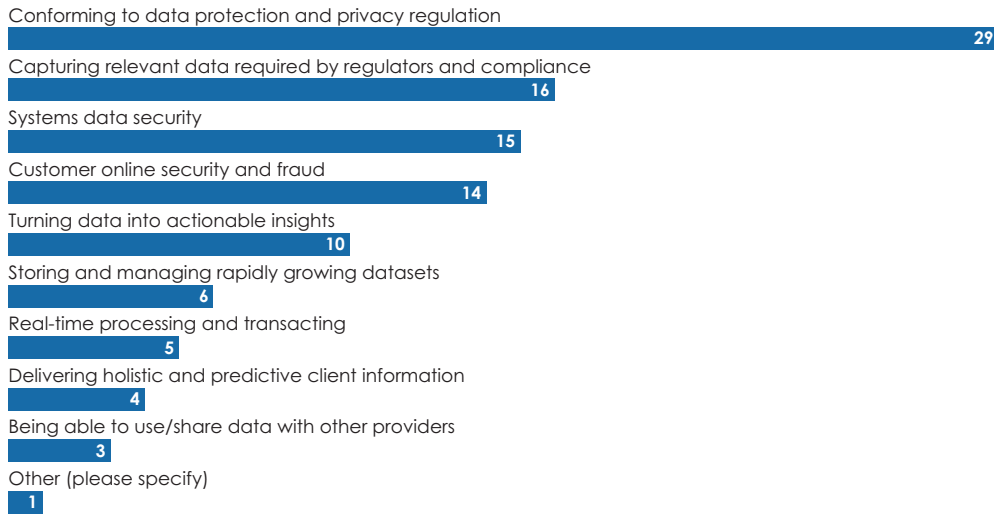
Where is your company focusing its digital investment?

(% respondents)



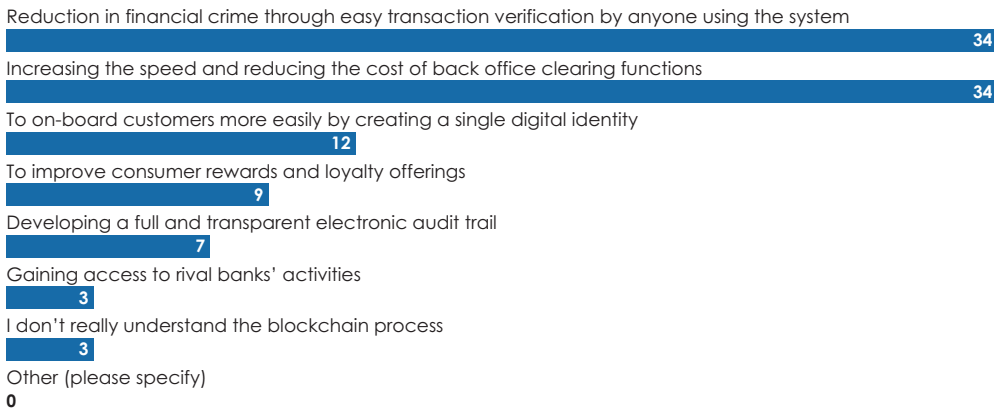
What is the biggest challenge your bank faces concerning data?

(% respondents)



What do you believe will be the most valuable use of blockchain for retail banks?

(% respondents)



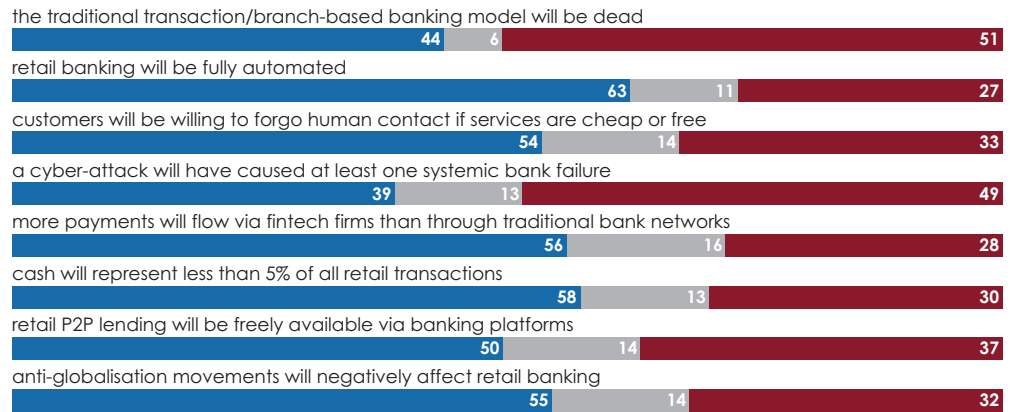
SYMBIOSIS:

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Do you agree/disagree with the following statements? By 2020.... Select 1 for agree, 2 for no opinion and 3 for disagree

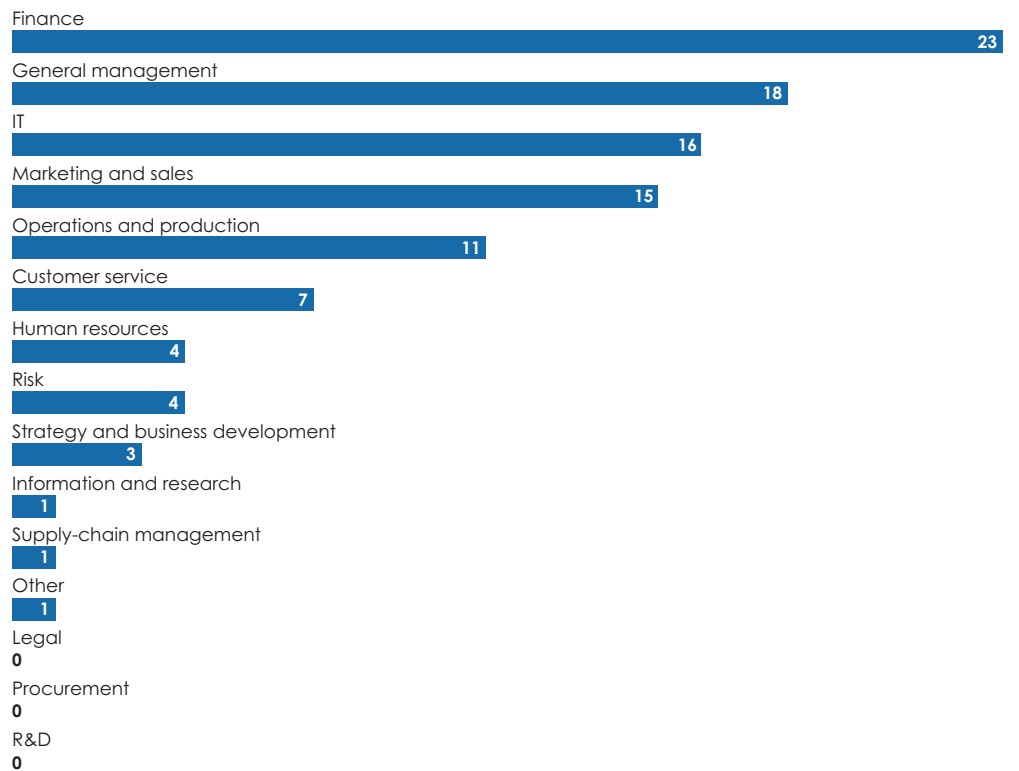
(% respondents)

■ 1 Strongly agree ■ 2 Agree ■ 3 Neither agree nor disagree



What is your primary job function?

(% respondents)



Region

(% respondents)



Which of the following best describes your job title?

(% respondents)



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