



Fintech, Regtech and the Role of Compliance in 2019

By Stacey English and Susannah Hammond



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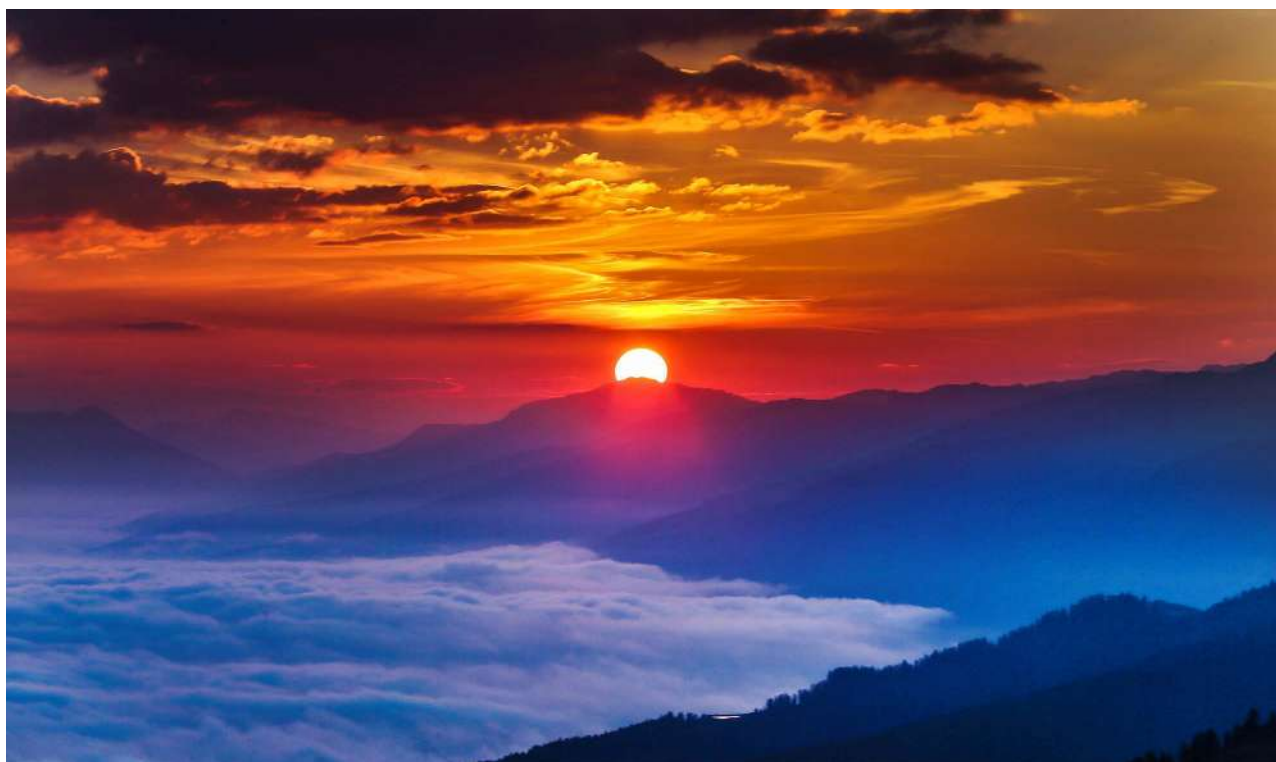


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With thanks to Chloe Bloomfield, Helen Camfield and James Douse



EXECUTIVE SUMMARY

Thomson Reuters Regulatory Intelligence has undertaken its third global survey to assess the impact of developments in regtech and fintech on the role, remit, and expectations of the compliance function in the financial services sector. The research represents compliance and risk practitioners around the world from almost 400 financial services firms. Last year's report was read by 4,500 practitioners, including regulators, professional bodies, consultancies and law firms, and globally significant financial institutions (G-SIFIs).

As with all Thomson Reuters Regulatory Intelligence analysis, the findings have become a trusted and credible source of insight for firms, regulators and their advisers worldwide. The report is intended to help regulated firms with planning, resourcing and direction, and to allow them to benchmark whether their resources, skills, strategy and expectations are in line with those of the wider industry. As with previous reports, regional and G-SIFI results are split out where they highlight a particular trend.

There is an emerging sense of pragmatism around the adoption of new technology. The potential benefits of fintech, regtech and insurtech are widely acknowledged but there is a growing realism about the implementation challenges and the practical reality of achieving the actual efficiencies or other improvements

promised. It is an added challenge for firms to determine whether or not technology providers themselves will be able to deliver the solutions under consideration. The need for risk and compliance functions, as well as all other parts of the business, to have the appropriate technological skill sets has never been more pertinent.

In addition to building and maintaining the appropriate skill sets to be able to evaluate possible regtech, fintech or insurtech solutions, firms are working with a near universal need to revamp legacy systems while also continuing to embed massive regulatory rulebook changes.

Key findings:

- There has been a marked increase in the need for risk and compliance functions to have more involvement in assessing the implications of fintech innovation. The percentage of firms who identified their risk and compliance functions as needing to be more involved in fintech, regtech and insurtech has more than doubled from 15 percent in 2017 to 32 percent in 2018. There has been a parallel drop in those reporting that their risk and compliance function is fully engaged and consulted in their firm's approach to fintech from 37 percent in 2017 falling to 18 percent in 2018.

- Board involvement in the firm's approach to fintech, regtech and insurtech has fallen. The percentage of firms who identified their board as needing to be more involved in fintech, regtech and insurtech has almost doubled from 15 percent in 2017 to 28 percent in 2018. There has again been a parallel drop in the board being seen to be fully engaged and consulted down from 36 percent in 2017 to 19 percent in 2018. This trend is echoed among G-SIFIs (34 percent reported the board as fully engaged in 2017, 13 percent fully engaged in 2018).
- The biggest financial technology challenge for firms has remained consistently, year on year, as the need to upgrade legacy systems and processes. Other challenges foreseen include budgetary limitations, the adequacy and availability of skilled resources together with the need for robust cyber resilience. The greatest potential benefits from fintech include enhanced productivity, efficiency and accuracy, better product delivery and customer experience as well as improved compliance monitoring and reporting.
- There is a growing urgency to further invest in specialist skill sets to accommodate developments in fintech. The percentage of firms who reported that they need to invest in specialist skill sets for the risk and compliance function but have not yet done so, has almost doubled from 18 percent in 2017 to 34 percent in 2018. A new question was introduced in this year's survey on the need to also widen the skill set at the board level to accommodate developments in fintech, insurtech and regtech innovation and digital disruption. While over a third (34 percent) of firms reported investing in board level specialist fintech skills at least to some extent, a further third (37 percent) had identified the need for specialist skills but has not yet done so.
- Implementation of regtech solutions in compliance management has slowed down. In 2018, 9 percent of respondents reported having implemented a regtech solution in comparison to 30 percent in the prior year. In contrast those who reported that they hadn't implemented a regtech solution but were considering it, has almost doubled from 17 percent in 2017 to 35 percent in 2018. Almost half (44 percent) of firms and more than half of G-SIFIs (57 percent) have a mix and match of regtech solutions developed in-house and externally, depending on the challenge to be solved.
- The top three areas where compliance and regulatory risk management is most likely to be impacted by regtech has shifted substantially year on year. In 2018, the top areas were reported as being compliance monitoring, financial crime, AML/CTF, sanctions and then onboarding and KYC. This is in contrast to the prior year, where the top three areas were reported as interpreting regulations and their impact, the implementation of regulatory change and capturing regulatory change.
- In terms of the impact of fintech/regtech on the compliance function itself, there has been a substantial easing of apparent longer-term fears. In 2018, only 9 percent reported that in the longer term the implementation of fintech/regtech solutions could lead to fewer compliance staff being needed. This is in comparison to 36 percent in the prior year. Respondents continue to report that the successful deployment of fintech/regtech should drive up efficiency and effectiveness allowing more time to focus on value-add activities (64 percent in 2018, 69 percent in 2017).
- There is significant variation in the budget expected to be available for regtech solutions over the next year. On the one hand, 31 percent have reported that the budget will grow (38 percent in 2017) but, on the other hand, 25 percent reported that their firm does not have a budget for regtech solutions (9 percent in 2017)

We hope the findings are useful in developing and benchmarking your firm's practices.



Stacey & Susannah

INTRODUCTION

Participants in Thomson Reuters Regulatory Intelligence's third survey on fintech, regtech and the role of compliance represented the entire spectrum of financial services firms and were spread evenly across the world, from G-SIFIs to fintech challenger firms. G-SIFIs were asked to identify themselves to enable comparison between themselves and other, smaller, firms. The survey closed in Q4 2018.

The report provides insight into how risk and compliance functions are responding to the challenges and benefits presented by the digital and technological transformation. Individual fintech, regtech and insurtech solutions are not considered but rather the areas and issues for firms, boards and risk and compliance functions to take into account when reviewing the deployment and use of possible technology-enabled solutions. Where the appropriate permission was received, anonymized quotes have been included to highlight specific issues in the own words of risk and compliance practitioners from around the world.

Technology and its associated risks and challenges has universally become, and will remain, a boardroom issue. A key challenge for all risk and compliance functions is to continue to rise to that challenge and to be able to assist the board in the identification, management and mitigation of technology risk whilst also seeking to gain the most benefit from the potential solutions being developed.

"Digitisation is not just a change to systems and processes; truly sustainable digital transformation also requires a change of culture. The culture shift needs to extend from the leadership and the digital innovation teams to all parts of the firm's operations and to their key stakeholders, internally and externally. This includes the risk and compliance functions of financial firms to safeguard the digital transformation, and the regulatory community to address the changing market and consumer demand."

UK Finance, Parker Fitzgerald. Joint Report – "Sustainable Financial Services in the Digital Age". (May 2018)

Part of the challenge associated with the proliferation of fintech, regtech, insurtech and supotech is the lack of a common vocabulary and definition. At the supranational level, the Financial Stability Board's working definition of fintech is "*technology-enabled innovation in financial services that could result in new business models, applications, processes or products with an associated material effect on the provision of financial services.*" Whereas at the European level the European Securities and Markets Authority has defined fintech as "*a type of financial innovation that relies on Information Technology to function, e.g. internet, cloud etc. and that can result in new business models, applications, processes, products, or services*

with an associated effect on financial markets and institutions and the provisions of financial services." The definition is similar but, again, different at the jurisdiction specific level, with the UK Financial Conduct Authority defining fintech as "*the intersection between finance and technology. It can refer to technical innovation applied in a traditional financial services context or to innovative financial services that disrupt the existing financial services market.*" The UK FCA has then defined regtech as the "*sub-set of fintech that may facilitate the delivery of regulatory requirements more efficiently and effectively than existing capabilities.*"

“RegTech involves technological innovations that are explicitly designed to help us regulators do our jobs, and to help firms meet their regulatory obligations. Together with innovation hubs, RegTech provides an opportunity for a positive regulatory dialectic. We are in constant contact with firms, listening to them and communicating where we believe innovations may be beneficial to the financial sector and to our own work in particular.”

Steven Maijor, Chair of the European Securities and Markets Authority. Keynote address at Afore Consulting’s Second Annual FinTech and Digital Innovation Conference: Regulation at the European Level and Beyond. (February 2018)

The results of this year’s survey show that some of the initial high expectations surrounding the successful deployment of fintech and regtech solutions have been met with a distinct level of pragmatism being shown with, for instance, a drop (from 30 percent to 9 percent) of firms reporting that a regtech solution has been implemented. This, together with

an increasing sense that risk and compliance functions need to find the time, space and skilled resources to become even more involved in the consideration of fintech and regtech, has resulted in additional caution being shown by firms before committing to the deployment of technological solutions.



REGULATORY DEVELOPMENTS AND ACTIVITY

Regulators around the world are seeking to encourage the potential benefits of fintech whilst minimising the possible risks and challenges. This is particularly the case where ‘good customer outcomes’ could be compromised. One approach used by regulators is that of a ‘sandbox’ where new solutions can be tested and developed without having to be fully compliant with all relevant regulatory requirements from the start. The use of sandboxes is seen as a way of testing a proof of concept without the barriers to entry of the full weight of the rulebook.

“Most regulators around the world seem to be encouraging innovation while taking a proportionate approach to regulation. This often involves a graduated approach to regulation, depending on the activities of the new participants. For example, many jurisdictions have some type of regulatory ‘sandbox’ in which new participants can develop their services without the full weight of regulation. Some jurisdictions authorise payment service providers under less onerous conditions than apply to full financial institutions.”

Michelle Bullock, Assistant Governor, Financial System, at the Reserve Bank of Australia. Keynote speech - “Financial Technology and Payments Regulation” delivered at the 5th Bund Summit on Fintech, Shanghai. (July 2018).

The fintech regulatory and policy developments around the world are seeking to achieve a balance between encouraging a potentially beneficial disruptive technology to flourish whilst at the same time protecting customers and financial stability. Individual jurisdictions are not only continuing memoranda of understanding but also developing ‘sandboxes’ to encourage innovation. At the supranational level, consideration is being given to how best to coordinate the supervisory approach to again encourage innovation but with an eye on the potential customer protection issues which could arise from, say, the

approval of a low-grade solution by a limited regulatory sandbox which then spreads around the world.

Given the potential risks, the concept of regulatory sandboxes is neither universally used or universally agreed as the only or optimum way for regulators to support fledgling technological solutions. All regulators agree that fintech solutions could be beneficial but there is no single agreed supervisory means of encouraging innovation whilst maintaining the protection of customers.

“The New York State Department of Financial Services fiercely opposes the Department of Treasury’s endorsement of regulatory ‘sandboxes’ for financial technology companies. The idea that innovation will flourish only by allowing companies to evade laws that protect consumers, and which also safeguard markets and mitigate risk for the financial services industry, is preposterous. Toddlers play in sandboxes. Adults play by the rules. Companies that truly want to create change and thrive over the long-term appreciate the importance of developing their ideas and protecting their customers within a strong state regulatory framework.

Mario T. Vullo, Superintendent for the New York Department of Financial Services. Statement on Treasury’s Endorsement of Regulatory Sandboxes for Fintech Companies and the OCC’s Decision to Accept Fintech Charter Applications. (July 2018)

While many regulators maintained the view that innovation should have a fundamentally positive, the stance has been tempered by the publication of a range of reports analysing the implications and risks posed by innovative technologies (see timeline on page 11). With a rise in technology related incidents, the importance of operational resilience has risen to greater prominence – not just with fintech and other solutions but also

in the day-to-day use of technology. As just one example, in the UK, a number of banks have suffered IT incidents and outages during the updating of legacy systems which, due to the poor customer outcomes, became a regulatory and political issue. Firms around the world are on notice that whilst innovation is encouraged, it must not be at the expense of the customer.

“New technologies create threats that are extremely difficult to anticipate. And from a regulatory perspective, this is a fundamental challenge.”

Megan Butler, Executive Director of Supervision – Investment, Wholesale and Specialists at the UK Financial Conduct Authority. Speech - “Cyber and technology resilience in UK financial services”. (November 2018)

In her speech at the Australian British Fintech Cyber Catalyst in July 2018, Cathie Armour, Commissioner at the Australian Securities and Investments Commission, used the example of ASIC’s Innovation Hub as a way regulators have had to adapt

to the technological needs of the day and continually strive to support engagement with new fintech and regtech start-ups and technological change.

Australian Securities & Investments Commission

Five components of the Innovation Hub

- | | |
|---|---|
| 1 | Engaging with fintech and regulatory technology start ups, as well as the physical hubs and co-working spaces for start-ups |
| 2 | Informal assistance for eligible fintech and regtech start-ups - ASIC’s goal is to help new businesses consider key regulatory requirements early on in their development |
| 3 | Tailored guidance for innovative businesses to access information and services relevant to them via ASIC’s website |
| 4 | A senior internal taskforce to assist in analysis of new business models - the taskforce draws together knowledge and skills from across ASIC, and is complemented by internal working groups on digital financial advice, marketplace lending, equity crowdfunding, blockchain and crypto-assets |
| 5 | A Digital Finance Advisory Committee (DFAC), which provides ASIC with advice in this area. The committee includes members from the fintech community, academia and consumer advocates as well as other financial regulators |

This table restates a speech by Cathie Armour, Commissioner at ASIC, on ASIC’s approach to innovation, at the British Fintech Cyber Catalyst in July 2018. Speech available at <https://asic.gov.au/about-asic/news-centre/speeches/asic-s-approach-to-innovation/>

Alongside continuing efforts to foster cross-border cooperation via MoUs and other agreements, the year also saw the creation of the Global Financial Innovation Network. The Network, which consists of 12 financial regulators and related organisations, is intended to provide a more efficient way for innovative firms to interact with financial services regulators as well as create a framework for cooperation between those regulators on innovation related issues.

The adoption of regulatory sandboxes and innovation hubs continued globally. In the United States, Arizona became the first State to offer a fintech regulatory sandbox; the U.S. Securities and Exchange Commission (SEC) subsequently

launched a strategic hub for innovation and financial technology. In a bid to facilitate quicker experimentation and increase the speed of introducing innovative financial services into the market, the Monetary Authority of Singapore (MAS) released proposals for a new regulatory sandbox for fast-track approvals.

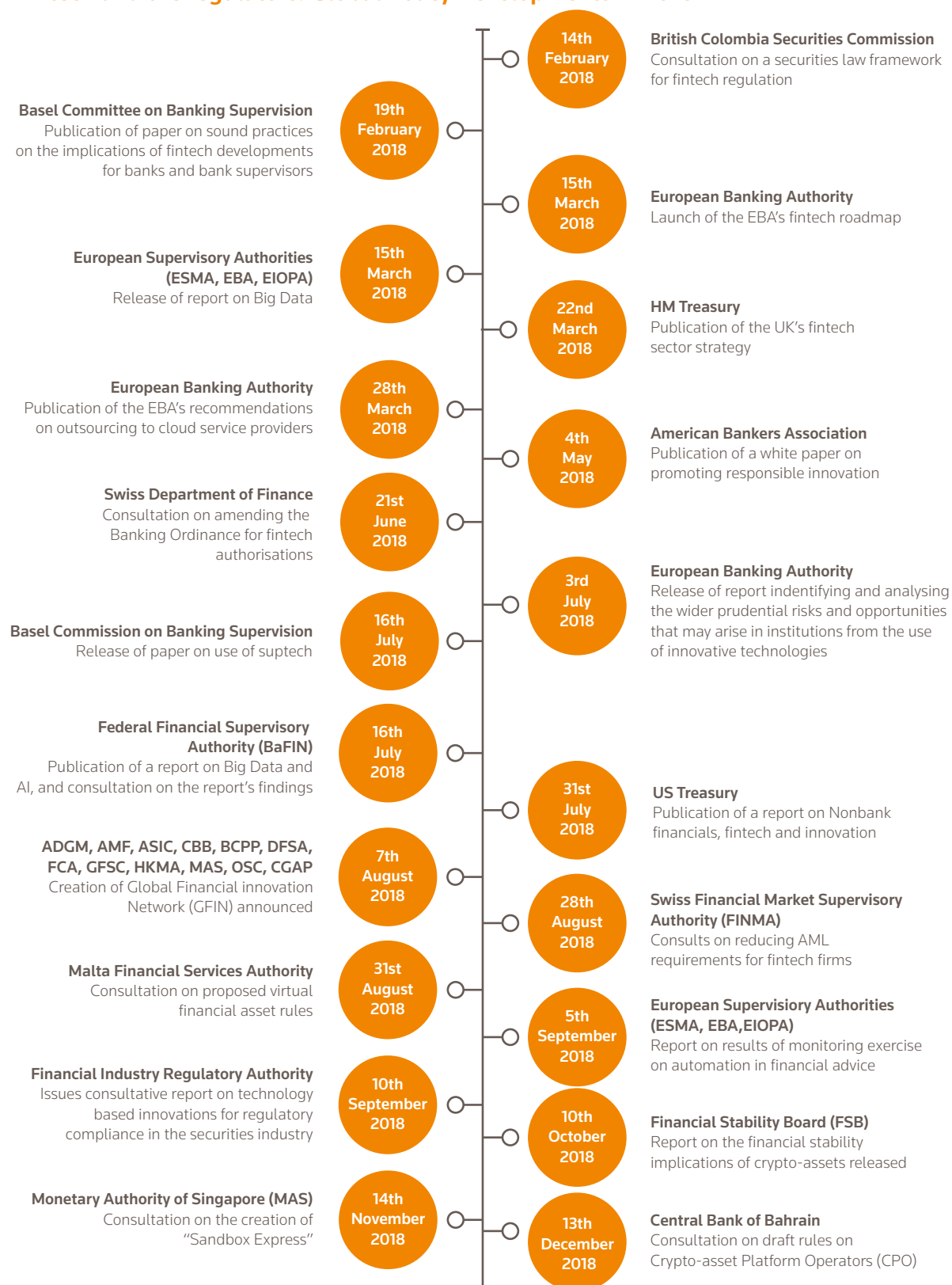
To seek to keep pace with the technological innovations regulators themselves are increasingly using ‘suptech’ to monitor and oversee firms. In October 2018, the SEC published its latest strategic plan setting out its primary focus areas for the next four years, which included the need to adapt to technological advancements.

“As technological advancements and commercial developments have changed how our securities markets operate and spurred the development of new products, the SEC’s ability to remain an effective regulator requires that we continually monitor the market environment—and adapt. We should expand our focus, expertise, and, as necessary, our scope of operations in vital areas such as market monitoring analysis, market operations, including clearing and settlement, and electronic trading across our equity, fixed-income, and other markets.”

U.S. Securities and Exchange Commission, Strategic Plan Fiscal Years 2018-2022. (October 2018)



Fintech and the regulators: Global Policy Developments in 2018



Source: Thomson Reuters Regulatory Intelligence – Fintech, Regtech and the Role of Compliance in 2019, by Stacey English and Susannah Hammond

Regulators are also seeking to ensure that the use of technology brings not just innovative solutions but also customer benefit. In Singapore, the MAS has set out principles to promote fairness, ethics, accountability and transparency in the use of artificial intelligence (AI) and data analytics in the financial sector. Specifically, the MAS has focused on the use of AI and data analytics as part of the human decision-making process in the provision of financial products and services. The principles are designed to assist firms in contextualizing and operationalizing governance of use of AI and data analytics in business models and seek to promote public confidence in the use of the technology.

The MAS has made clear that it remains up to firms whether or not they use AI and data analytics, but if they chose to deploy them the principles apply to all solutions (whether developed in-house or externally) and senior managers and the board need to be fully informed and aware of the potential issues arising.

In a similar but different vein, the Hong Kong Monetary Authority has set out guidelines on electronic banking and the criteria it will use in authorizing 'virtual banks'. At a high level, the same supervisory approach will be applied for conventional and virtual banks, with the added stance that virtual banks should play 'an active role' in promoting financial inclusion.

Global regulatory engagement on technology and innovation



At least **36 Memorandums of Understanding (MOUs)** were signed between regulators in **2016** (10) and **2017** (26), forming frameworks and enabling access to information

At least **30 Memorandums of Understanding (MOUs)** were signed between regulators and industry bodies in **2018**, forming new frameworks and enabling access to information



Source: Thomson Reuters Regulatory Intelligence – Fintech, Regtech and the Role of Compliance in 2019, by Stacey English and Susannah Hammond

"Authorities around the world have a joint interest in an open and frank discussion of public policy goals and responses. We must work together both to harness the promise of big tech and to manage its risks. Global safety and soundness will benefit from more cooperation between supervisors and more information-sharing, especially as big tech firms operate across national borders. As in most financial regulation, international coordination is the name of the game."

Agustín Carstens, General Manager at the Bank for International Settlements. Keynote address at the FT Banking Summit, London. (December 2018)

INDUSTRY OPINION

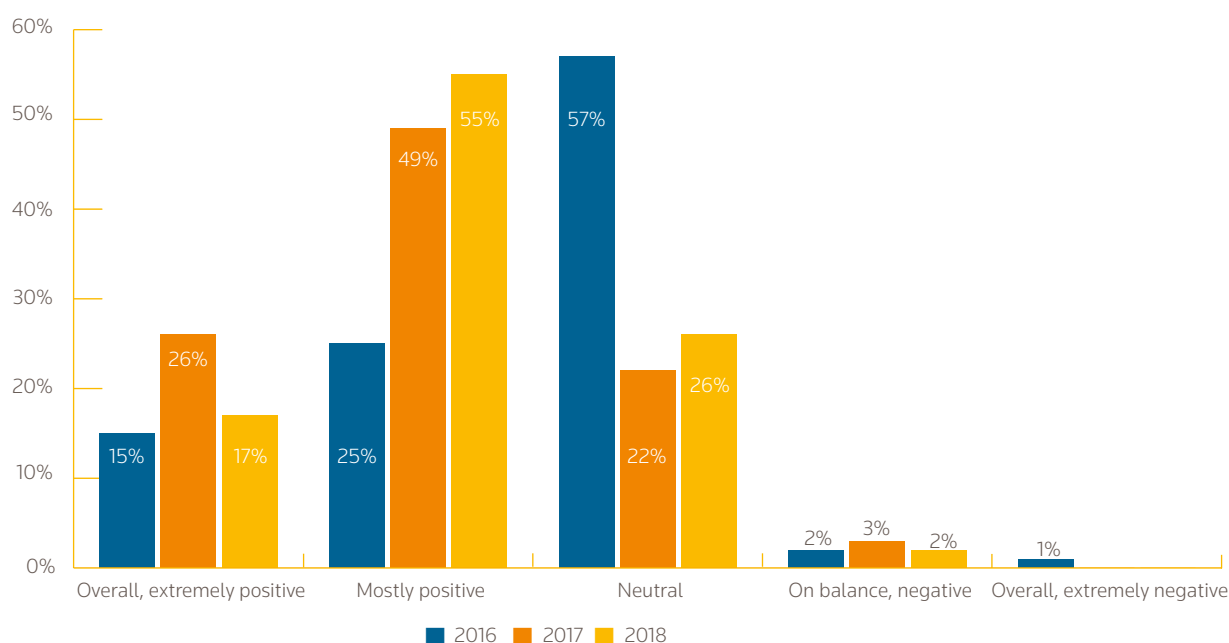
The greatest benefits you expect your firm to see from financial technology in the next 12 months are...

"...great efficiencies and effectiveness in compliance monitoring to give more time back to adding valued assessments, risk assessments..."

Senior Compliance Practitioner and MLRO, Continental Europe

Survey respondent, Thomson Reuters Regulatory Intelligence – Fintech, Regtech and the Role of Compliance in 2019

What is your view of regtech innovation and digital disruption?

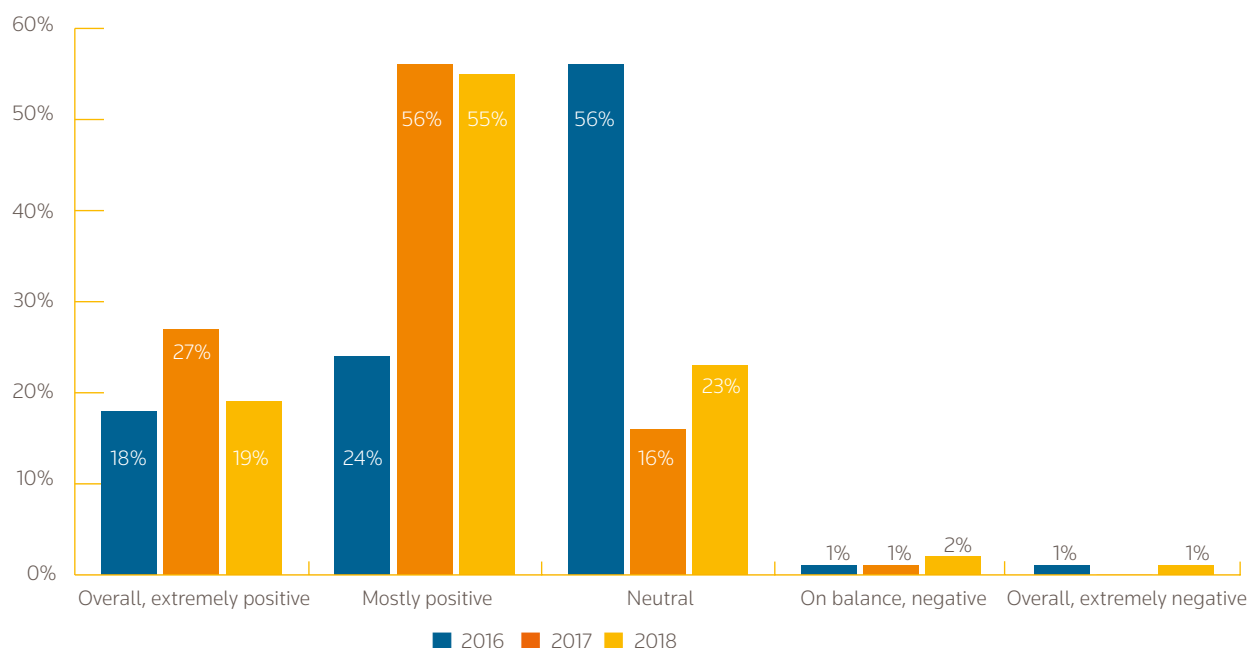


Source: Thomson Reuters Regulatory Intelligence – Fintech, Regtech and the Role of Compliance in 2019, by Stacey English and Susannah Hammond

The positive view of regtech innovation and digital disruption previously held by firms has cooled slightly: 75 percent in 2017 versus 72 percent in 2018. Whilst there remains a distinct improvement in the industry's outlook when looking at the

three-year picture, there has been a reduction in firms reporting an extremely positive view of regtech, from 26 percent last year to 17 percent this year. The results are echoed in the industry's view of fintech innovation and digital disruption.

What is your view of fintech (including insurtech) innovation and digital disruption?



Source: Thomson Reuters Regulatory Intelligence – Fintech, Regtech and the Role of Compliance in 2019, by Stacey English and Susannah Hammond

Firms have also cooled slightly in their view of the potential benefits of fintech (including insurtech) innovation and digital disruption.

From a regional perspective, almost a third (30 percent) of firms in the rest of world (collectively Australasia, Africa, Middle East and South America) have an extremely positive view of fintech (including insurtech), in contrast to 19 percent in the overall population. For regtech innovation and digital disruption, the ROW is also an outlier with 23 percent reporting an extremely positive view, in contrast to 17 percent in the overall population.

The industry view of the greatest benefits expected to be seen from financial technology in the next 12 months has evolved from prior years. A constant theme was the sense that fintech should be able to deliver improved efficiency, accuracy and productivity. In 2019, greater benefits are expected to be seen in compliance monitoring and reporting together with improved product delivery and customer experience, both of which will be of particular interest to the compliance function.

The greatest benefits you expect your firm to see from financial technology in the next 12 months are:



Source: Thomson Reuters Regulatory Intelligence – Fintech, Regtech and the Role of Compliance in 2019, by Stacey English and Susannah Hammond

The greatest benefits you expect your firm to see from financial technology in the next 12 months are...

"...to reduce the human effort/error in manually creating regular compliance reports for monitoring purpose..."

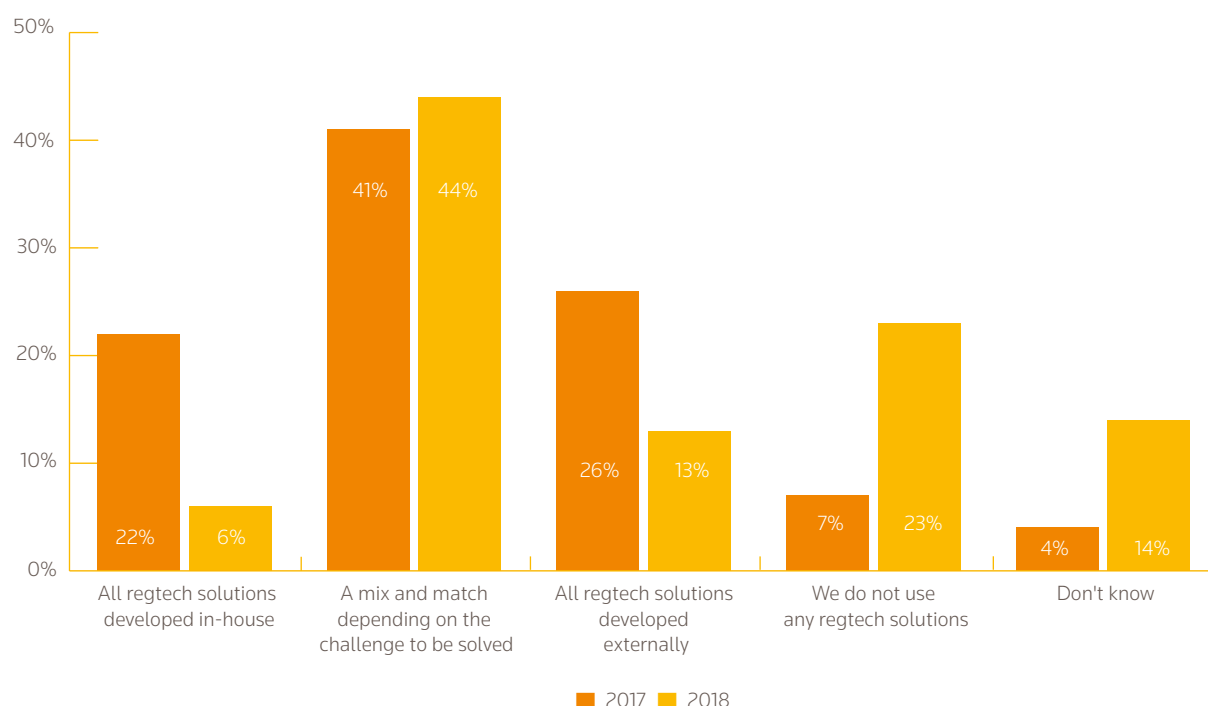
Senior Compliance Practitioner, Asia

Survey respondent, Thomson Reuters Regulatory Intelligence – Fintech, Regtech and the Role of Compliance in 2019

Another change from the prior year is the potential for 'know-your-customer' monitoring and client onboarding to be enhanced, which for firms dealing with the swathes of changes to the prevention of money laundering requirements and sanctions compliance challenges could be of real practical benefit.

There was a mixed picture reported by firms on the question as to whether they were developing regtech solutions in-house or looking at external solutions. One element of consistency was the most popular approach being 'a mix and match depending on the challenge to be solved', which was 44 percent for 2018 (41 percent for 2017). Elsewhere, the responses showed distinct variations year on year.

Are you developing regtech solutions in-house or are you looking at external solutions?



Source: Thomson Reuters Regulatory Intelligence – Fintech, Regtech and the Role of Compliance in 2019, by Stacey English and Susannah Hammond

The approach to developing regtech solutions also highlighted significant variation. In 2017, 22 percent of firms reported that all regtech solutions were being developed in-house compared to just 6 percent in 2018. In parallel, in 2017, 26 percent of firms reported that all regtech solutions were developed externally, which halved in 2018 to 13 percent. The apparent driver for both year-on-year changes is the rise in those firms reporting that they do not use any regtech solutions, which has increased from 7 percent in 2017 to 23 percent in 2018. It may be that at least some firms

had deployed regtech solutions in prior years but had, for whatever reason, chosen to not to continue.

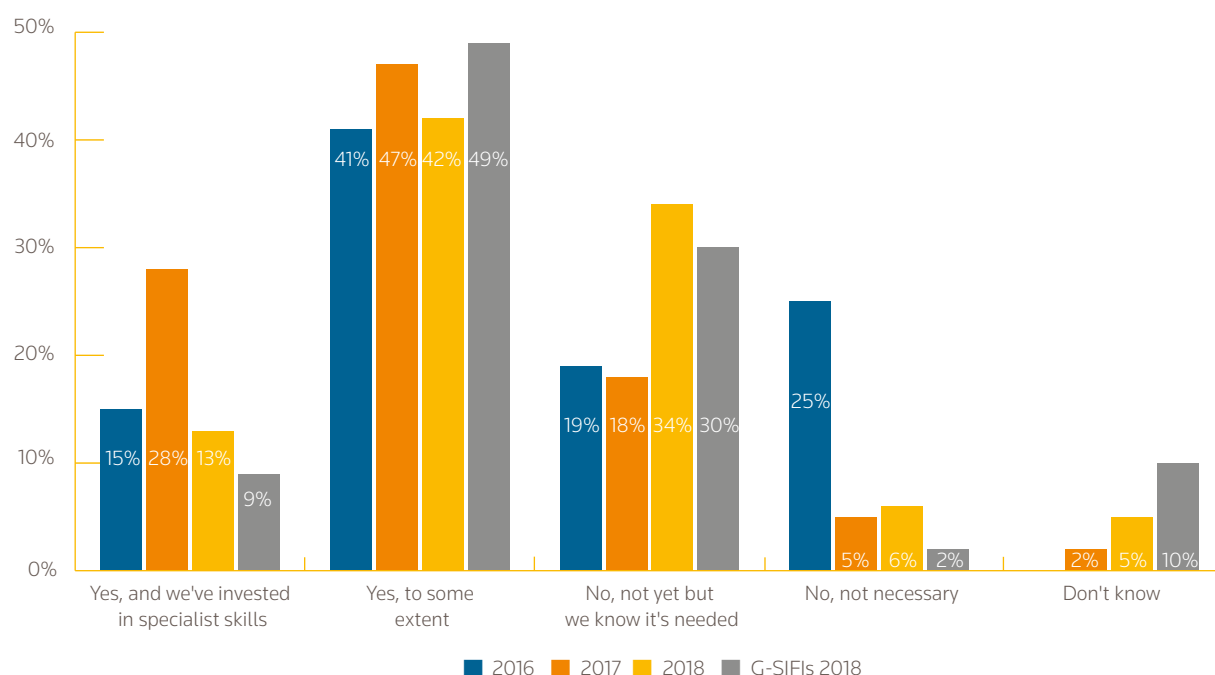
Wherever regtech solutions are built and/or deployed it is incumbent on the risk and compliance functions to be involved in all stages of the process to seek to ensure that compliance functionality is not only enhanced but that good customer outcomes are protected. The practical steps in the lifecycle of a regtech solution were featured in our previous report: <https://legal.thomsonreuters.com/en/insights/reports/fintech-regtech-and-the-role-of-compliance-2017>

BUDGET AND SKILLED RESOURCES

"...machines have largely substituted for human hands not heads. Workers have been able to improve their skills and take on newly created sets of cognitive, higher value tasks – tasks beyond the cognitive limits of machines."

Mark Carney, Governor of the Bank of England. Speech – 'The Future of Work', at the 2018 Whitaker Lecture, Central Bank of Ireland. (September 2018)

Have you had to widen the skill set within your risk and compliance functions to accommodate developments in fintech, insurtech and regtech innovation and digital disruption?

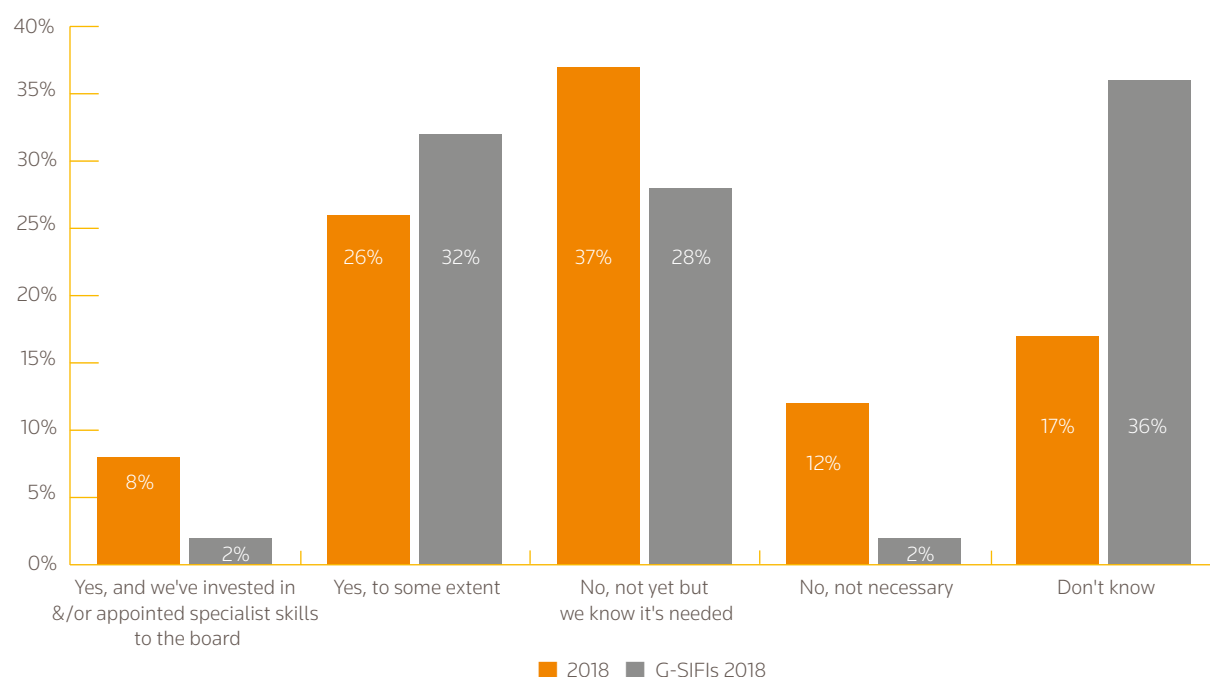


Source: Thomson Reuters Regulatory Intelligence – Fintech, Regtech and the Role of Compliance in 2019, by Stacey English and Susannah Hammond

The continuing need to invest, and reinvest, in the latest specialist skills within risk and compliance functions to accommodate developments in fintech, insurtech and regtech innovation and digital disruption remains a challenge. Of perhaps most concern is the 34 percent (30 percent in the G-SIFI population) who reported knowing that a widening skill sets was needed but that it had not yet happened. It ought to be stating the obvious, but firms will not be able to either get the best out of possible solutions and not be able to avoid the worst of the risks if they do not have skilled resources available, preferably in-house.

Regionally, 20 percent of firms in the Middle East are leading the way having already widened skill sets within risk and compliance functions to accommodate developments in fintech, insurtech and regtech innovation and digital disruption. Regulators such as the Dubai Financial Services Authority (DFSA) and the Abu Dhabi Global Market (ADGM) have introduced a number of initiatives and training and education programs related to fintech, including signed cross-border fintech agreements, digital sandboxes and industry events.

Have you had to widen the skill set at the board level to accommodate developments in fintech, insurtech and regtech innovation and digital disruption?



Source: Thomson Reuters Regulatory Intelligence – Fintech, Regtech and the Role of Compliance in 2019, by Stacey English and Susannah Hammond

“Let me start with the most critical part of ecosystem - people. The shortage of tech skills and talent is a global phenomenon. For a small city-state like Singapore, it is almost existential and that is why it is our top priority.

Singapore is taking a multi-pronged approach: our institutes of higher learning are adapting their curriculum with industry input to develop students who are able to work with emerging technologies; our FIs are putting in place programs to help re-skill mid-career professionals to take on the jobs of the future; and we will continue to welcome and embrace top talents from across the world to augment our own talent pool and raise the game here.”

Ravi Menon, Managing Director of the Monetary Authority of Singapore. Speech – ‘Singapore FinTech – innovation, inclusion, inspiration’ at the Singapore FinTech Festival 2018. (November 2018)

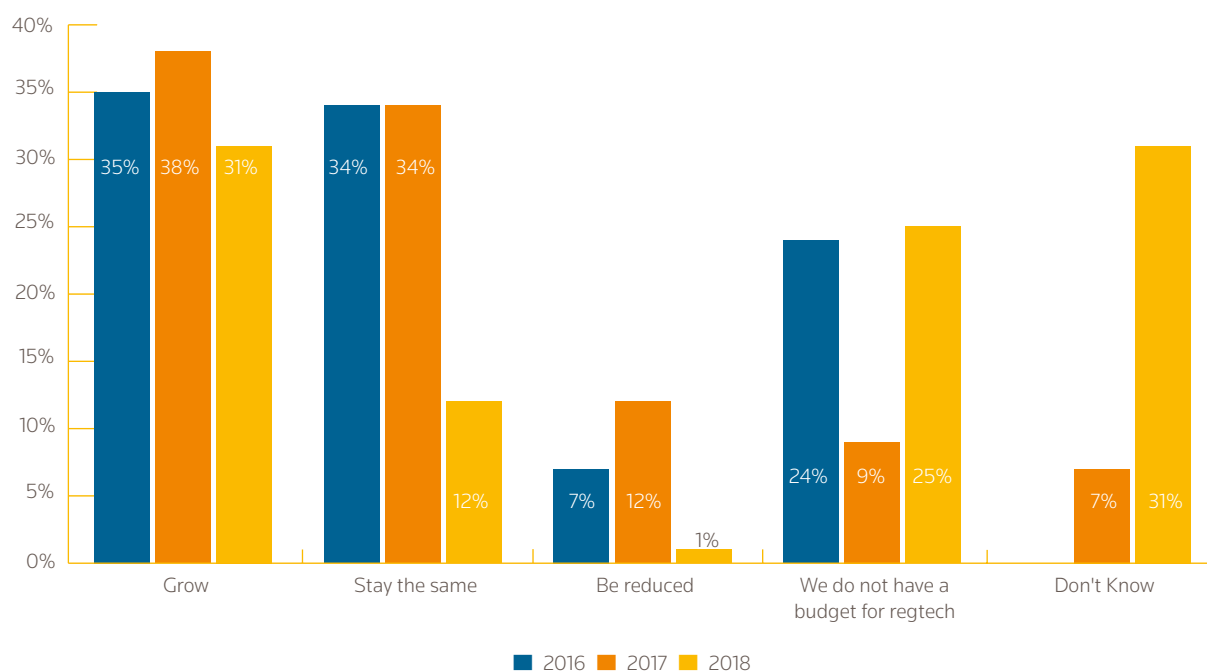
Firms cannot and must not leave fintech, regtech and insurtech to the compliance or IT functions. In an increasingly technologically enabled world, it is clear that all areas of the firm, the board expressly included, need to have the appropriate level of up-to-date knowledge and skills. From the results of the survey, there are some particularly notable responses. Over a third of firms (37 percent) know that they

need to widen the skill set at board level to accommodate developments in fintech, insurtech and regtech innovation and digital disruption but have not yet done so. In many firms the upskilling of the board (and indeed other areas of the firm) should be made a priority to both ensure that the best use can be made of the evolving technological solutions and also to seek to ensure current operational resilience.

The need for risk and compliance functions to have the relevant specialist skill sets holds true for all technological solutions but is particularly pertinent when evaluating possible regtech solutions which should, ideally, make risk and compliance

activities within the business more efficient and effective. Indeed, investment in specialist risk and compliance skills could be seen as just one use of a budget allocated to regtech solutions.

Your firm's budget for regtech solutions over the next 12 months will:



Source: Thomson Reuters Regulatory Intelligence – Fintech, Regtech and the Role of Compliance in 2019, by Stacey English and Susannah Hammond

As with prior years there is a mixed picture in terms of budget specifically allocated to regtech solutions. Over the last three years there has been a relatively steady third of firms reporting that the budget for regtech solutions will grow. This is in contrast to a quarter (25 percent) of firms reporting that they do not have a separate budget for regtech.

Regional trends also show an equally divided picture, where similar proportions of firms expect their budget for regtech solutions to grow, in contrast to those who did not have a budget at all. A third (33 percent) of firms in the United States and Canada expect their budgets to grow, compared to 25

percent with no budget. Similarly, over a quarter (27 percent) of firms in the UK and Europe expect budgets to grow, compared to 22 percent who do not have a budget.

In order to be able to take reasonable advantage of the potential benefits offered by regtech, firms do need to allocate appropriate skilled, preferably in-house, resources to the research, assessment and commissioning or purchase of a solution. As mentioned previously, there would be worse ways to spend a regtech budget than to build and maintain the specialist skills required to take best advantage of any solution.

The greatest financial technology challenges you expect your firm to face in the next 12 months are...

"...proliferation of immature fintech solutions in the marketplace..."

Compliance Practitioner, Asia

Survey respondent, Thomson Reuters Regulatory Intelligence – Fintech, Regtech and the Role of Compliance in 2019

INCREASING ROLE OF TECHNOLOGY IN PERSONAL LIABILITY

“Ensuring that each and every one of us behaves with integrity on a day-to-day basis is fundamental. In a competitive and fast-moving environment, where technologies are changing our businesses and the economy, and where the regulatory authorities and our customers are demanding greater transparency, higher ethical standards, and increased dialogue, it is our culture that will make us stand out.”

Frédéric Oudéa, Chief Executive Officer at Société Générale. Société Générale website. Accessed December 2018.
<https://www.societegenerale.com/en/about-us/responsibility/compliance>

Around the world senior manager accountability regimes are on the rise, with Singapore and Ireland just two examples of jurisdictions which have announced recent policy changes. The accountability regimes are, by and large, based on the UK Senior Managers and Certification Regime which codifies the allocation of responsibilities to individual senior managers,

with the expectation that they will take ‘reasonable steps’ to ensure compliance with all relevant rules and requirements in their part of the business. It therefore follows that anything that causes a compliance breach, such as a technology failure, could well become a source of personal liability as well as a potential enforcement matter for the firm itself.

What is the one thing you would like technological innovation to be able to deliver for your firm?

“For AI to be able to objectively assess whether an adviser is acting in their client’s best interests when they provide personal financial advice...”

Head of Compliance, Australasia

Survey respondent, Thomson Reuters Regulatory Intelligence – Fintech, Regtech and the Role of Compliance in 2019

The U.S. does not have a separate personal accountability regime but that has not stopped regulators from holding senior executives personally responsible for technology failures. In August 2018, the U.S. SEC fined Aegon \$97m for failings which had, at their root, faulty algorithms used for allocating billions of dollars in clients’ funds. Two former top executives at the firm were named individually by the SEC in the case for the alleged compliance lapses and were fined \$65,000 and \$25,000.

The failings at Aegon were compounded by senior managers not informing customers about the faulty algorithms once they had been made aware. As the SEC put it: ‘investors were repeatedly misled about the quantitative models being used to manage their investments, which subjected them to significant hidden risks and deprived them of the ability to make informed investment decisions’.

“...advances in data science have already brought huge benefits to society, such as smarter ways of detecting financial crime and market abuse, cheaper and faster transactions and greater access to affordable financial advice and guidance. The UK FinTech industry is world leading and bursting with new ideas. But there is no room for complacency.”

Charles Randell, Chair of the Financial Conduct Authority and Payment Systems Regulator. Speech - “How can we ensure that Big Data does not make us prisoners of technology?” given at a Reuters Newsmaker event, London. (July 2018)

As another angle on technology-driven personal liability, in June 2018, the UK Parliamentary Select Committee took the significant step of declaring it had ‘no confidence’ in the chief executive of the TSB bank after a series of IT outages.

“As a result, the Committee considers that the TSB Board should give serious consideration as to whether Dr Pester’s position as Chief Executive of TSB is sustainable. The Committee has lost confidence in his ability to provide a full and frank assessment of the problems at TSB, and to deal with them in the best interests of its customers. It is concerned that, if he continues in his position, this could damage trust not only in TSB, but in the retail banking sector as a whole. I ask that the Board consider the Committee’s view as a matter of urgency.”

Extract from letter of no-confidence in Dr Pester, UK Parliamentary Select Committee (June 2018)

The TSB issues were ones of operational resilience and an apparent inability to robustly implement new IT systems. Commenting on the correspondence, Mrs Morgan, the chair of the Select Committee said: “Since the IT problems at TSB began, its public communications have often been complacent and misleading. This tone has been set from the top – by Paul Pester – and whether intentionally or not, he has not been straight with the Committee and TSB customers. Dr Pester’s statements that ‘everything is running smoothly for

the vast majority of our [...] customers’ and that ‘there will be no barriers’ to customers switching accounts, and his denial that there were problems on TSB’s fraud reporting line, are all examples of this. The Treasury Committee, therefore, has lost confidence in Dr Pester’s position as Chief Executive of TSB, and considers that the TSB Board should give serious consideration as to whether his position is sustainable.” Dr Pester stepped down as CEO of TSB bank in September 2018.

Technology in all its forms is an inherent part of business. In December 2018, research by North Carolina State University's Enterprise Risk Management Initiative and Protiviti was published, assessing the top risks for business as seen by the board and other senior managers. Technology featured heavily in the top risks for 2019 which were:

Top 10 Global Risks for 2019

1	Existing operations meeting performance expectations, competing against 'born digital' firms
2	Succession challenges and ability to attract and retain top talent
3	Regulatory changes and scrutiny
4	Cyber threats
5	Resistance to change operations
6	Rapid speed of disruptive innovations and new technologies
7	Privacy/identity management and information security
8	Inability to utilize analytics and big data
9	Organisation's culture may not sufficiently encourage timely identification and escalation of risk issues
10	Sustaining customer loyalty and retention

This infographic is extracted from a joint publication by the ERM Initiative in the Poole College of Management at North Carolina State University and Protiviti, on executives perspectives on top risks in 2019. Report available at <https://erm.ncsu.edu/az/erm/i/chan/library/2019-erm-execs-top-risks-report.pdf>

However firms utilize technology, they would be well advised to consider the increasing potential for personal liability for their senior managers as and when IT and technology are compromised. Equally, senior managers themselves need to ensure that they have sufficient up-to-date skills to identify, manage and mitigate any and all risks arising from the use or failure of technology.



BOARD AND COMPLIANCE INVOLVEMENT

“As supervisors, we need to ensure that bank management and boards are exerting strong and effective leadership with robust governance. That means holding management and boards of directors to high standards in terms of culture and conduct, even when the numbers look rosy. It means ensuring corporate values are clearly articulated and incentives are squarely aligned with a bank’s strategic goals. It means identifying, communicating, and mitigating risks in a timely and effective manner.”

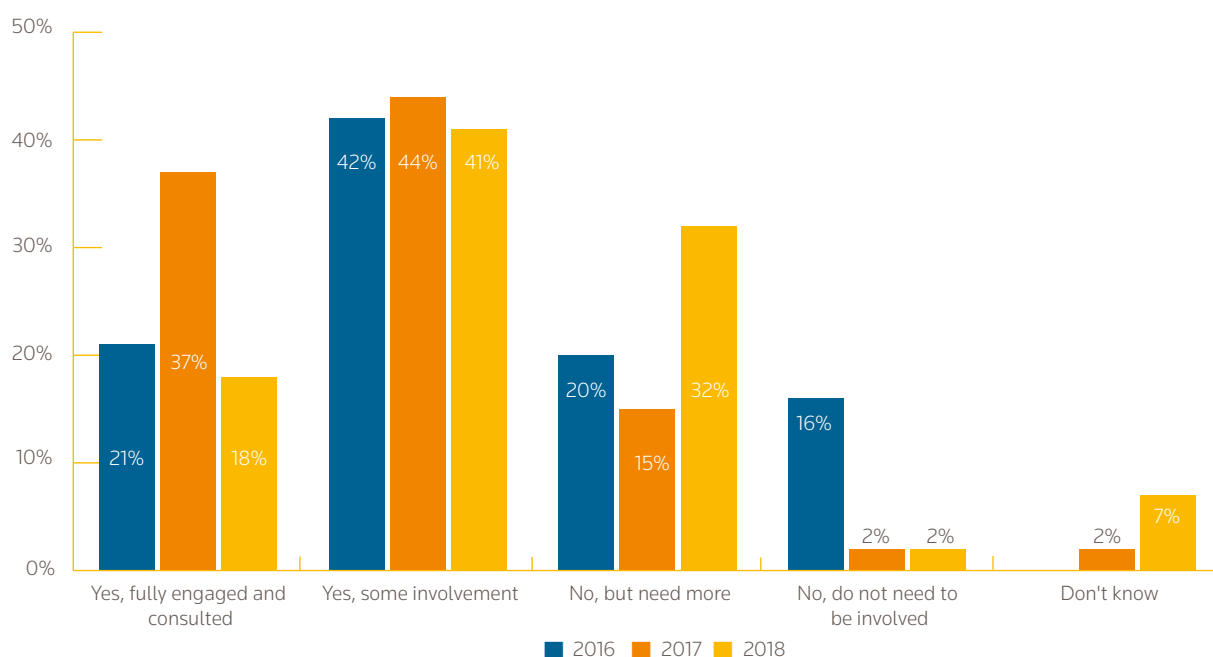
John C. Williams, President and Chief Executive Officer of the Federal Reserve Bank of New York. Speech – “Now is the Time for Banking Culture Reform” at Governance and Culture Reform Conference, New York City. (June 2018)

The immediate concern flagged by whether or not the risk and compliance functions have enough involvement in their firm’s approach to fintech, regtech and insurtech is the doubling (from 15 percent in 2017 to 32 percent in 2018) of those participants reporting that more involvement is needed. The challenge for risk and compliance functions will be how to ensure they not only have the capacity and capability but are actively engaged and included in discussions. Resources, particularly skilled in-house resources, are always at a premium and risk and compliance

functions are likely to need to be able to juggle competing priorities to fulfil their firm’s need for more risk and compliance input into the approach to fintech, regtech and insurtech.

For some firms, more risk and compliance function involvement could be facilitated by additional investment in skills. Though as highlighted on page 19, a third (34 percent) of firms reported that they knew investment was needed to widen risk and compliance skill sets but that investment had not yet been made.

Do the risk and compliance functions have enough involvement with your firm’s approach to fintech, regtech and insurtech?



Source: Thomson Reuters Regulatory Intelligence – Fintech, Regtech and the Role of Compliance in 2019, by Stacey English and Susannah Hammond

Regionally, over a quarter (26 percent) of risk and compliance functions in Australasia have been fully engaged and consulted on their firm's approach to fintech, regtech and insurtech, in contrast to 18 percent in the overall population. This may have been influenced, at least in part by the establishment

of the Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry in December 2017, spotlighting issues around culture, individual behaviour, the role of compliance and encouraging firms to address such matters.

The greatest financial technology challenges you expect your firm to face in the next 12 months are...

"...technology adaptation speed differs amongst units within the firm. To provide adequate support, it may result in a stretch of current staff as compliance adaptation of technology is slower and availability of regtech with proven track records is also low..."

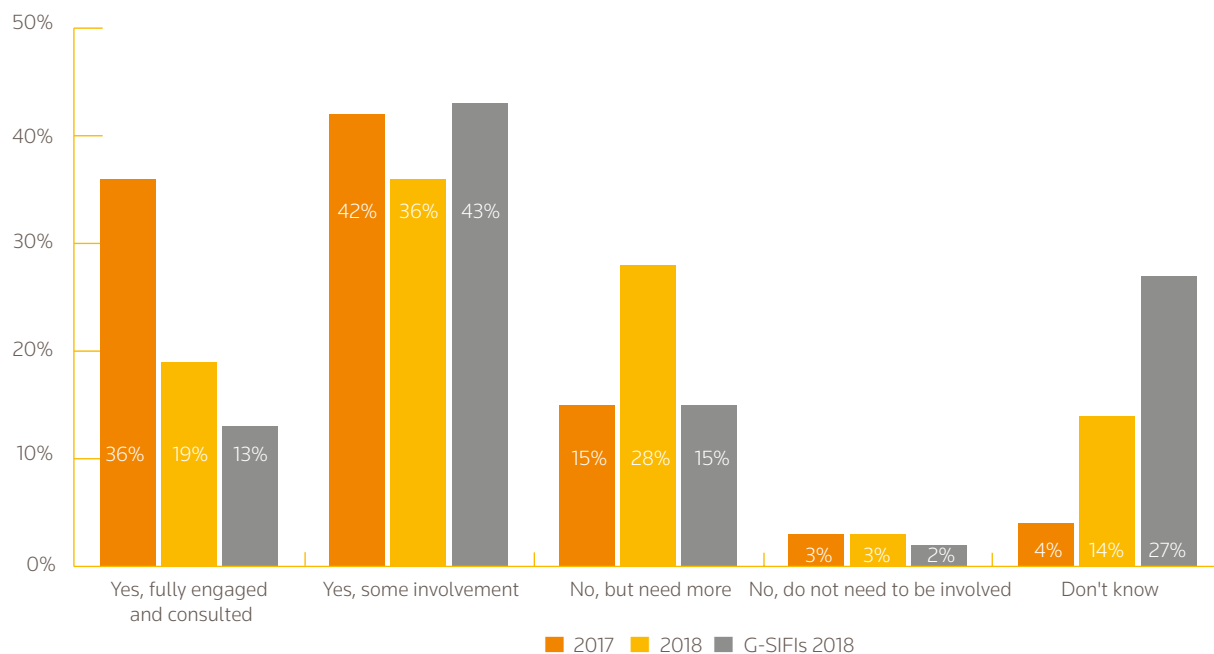
Compliance Officer, Asia

Survey respondent, Thomson Reuters Regulatory Intelligence – Fintech, Regtech and the Role of Compliance in 2019

Similar concerns have been highlighted with regard to the level of board involvement in the firm's approach to fintech, regtech and insurtech. In particular, participants reporting that their board is fully engaged and consulted has almost halved

from 36 percent in 2017 to 19 percent in 2018, together with a doubling (15 percent in 2017 climbing to 28 percent in 2018) of those reporting that their board needs to be more involved.

Does your board have enough involvement in your firm's approach to fintech, regtech and insurtech?



Source: Thomson Reuters Regulatory Intelligence – Fintech, Regtech and the Role of Compliance in 2019, by Stacey English and Susannah Hammond

It is incumbent on boards to set the tone for all aspects of their business – fintech, regtech and insurtech expressly included. If boards are seen to be interested and engaged with technology, and by association have the requisite skill set to lead the strategic approach, then the firm concerned will have a very much better chance of successfully deploying fintech, regtech and insurtech and reaping the associated benefits. A disengaged board with limited skills risks not only damaging their firm's chances of deploying technological solutions and maintaining operational resilience but also has an increased

chance of personal liability in the event of an IT or technology failure.

Regionally, firms in the Middle East and Australasia led the way when asked about their board's involvement in the approach to fintech, regtech and insurtech, with 40 percent (Middle East) and 39 percent (Australasia) of boards being fully engaged and consulted. On the other end of the spectrum, boards in the U.S. and Canada were significantly less involved, with just 8 percent reported as being fully engaged and consulted.



IMPACT ON COMPLIANCE

“Fintech business models can broadly impact banks’ operational processes and strategies, as well as IT processes. As a result, supervisors may want to review the adequacy of their human resources, including hiring not only IT experts but also data scientists, mathematicians and statisticians, for example, as well as providing training programmes to ensure appropriate responsiveness to developments in financial technology.”

Basel Committee on Banking Supervision. Sound Practices – Implications of fintech developments for banks and bank supervisors. (February 2018)

The elements of compliance and regulatory risk management which are most likely to be impacted by regtech have shifted year on year. In last year’s research the top three areas were identified as:

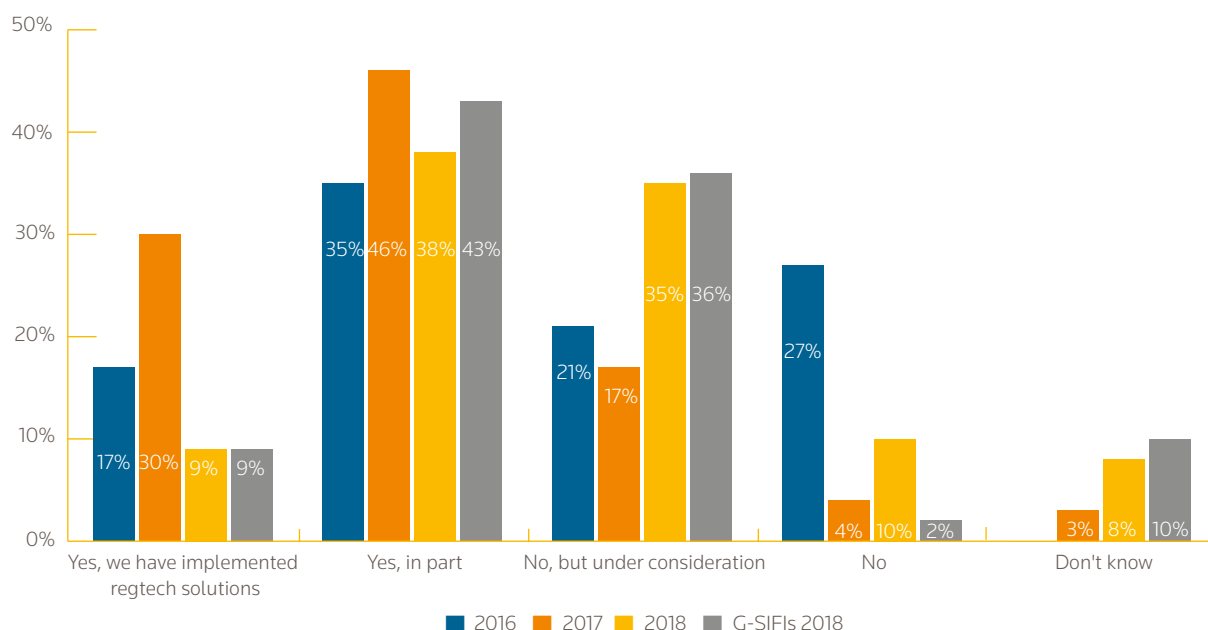
1. Interpreting regulations and their impact (21 percent in 2017, 2 percent in 2018)
2. Implementation of regulatory change (16 percent in 2017, 6 percent in 2018)
3. Capturing regulatory change (16 percent in 2017, 4 percent in 2018)

Whereas this year firms expect the following areas to be most impacted by regtech:

1. Compliance monitoring
2. Onboarding and KYC
3. Financial crime, AML/CTF and sanctions

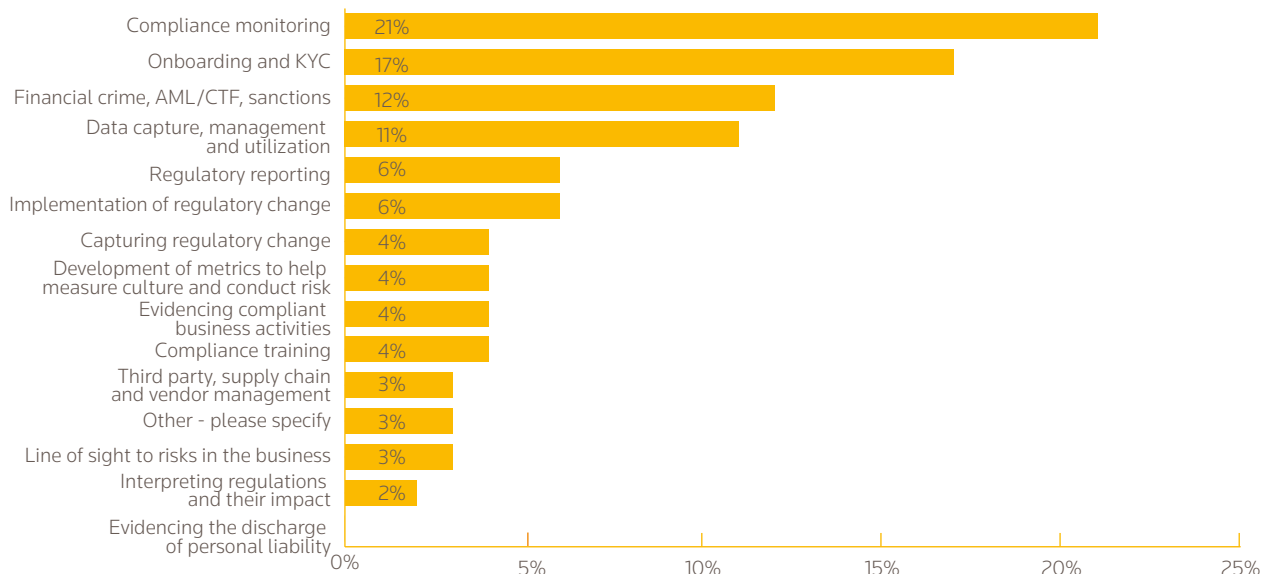
This may reflect that previous years were particularly focused on the huge regulatory change programs associated with the introduction of legislation including the Markets in Financial Instruments Directive II and associated Regulation. The shift going into 2019 is a focus on being able to streamline the processes involved in compliance monitoring, onboarding and the obligations around financial crime.

Are regtech solutions impacting how you manage compliance?



Source: Thomson Reuters Regulatory Intelligence – Fintech, Regtech and the Role of Compliance in 2019, by Stacey English and Susannah Hammond

Which part of compliance and regulatory risk management is most likely to be impacted by regtech at your firm?



Source: Thomson Reuters Regulatory Intelligence – Fintech, Regtech and the Role of Compliance in 2019, by Stacey English and Susannah Hammond

Much of the above is echoed in the September 2018 report on the rise of regtech published by the U.S. Financial Regulatory Authority (FINRA) which identified for consultation key areas of innovation, benefits, risks and regulatory consideration. The report closed for comments in November 2018. FINRA reported that U.S. broker-dealers are exploring and using a variety of regtech tools to enhance their regulatory compliance efforts and have, in particular, begun to utilize tools in five main areas:

1. surveillance and monitoring
2. customer identification and AML compliance
3. regulatory intelligence
4. reporting and risk management, and
5. investor risk assessment

“Data and how it is reported, analysed and used is increasingly becoming priority work for ESMA and other regulators and supervisors in Europe and beyond. The increased quantity, and the more frequent submission of data, present an opportunity for regulators to enhance their understanding of the institutions and markets they regulate.”

Verena Ross, Executive Director, European Securities and Markets Authority, speech “Towards a genuine single European financial market – the role of regulation and supervision” at the CIRS Annual International Conference 2018, Lisbon. (June 2018)

The other aspect of the overall impact of fintech, regtech and insurtech on compliance is the specific impact of technology on the compliance function itself. A change year on year is the substantial reduction (36 percent in 2017 down to 9 percent in 2018) in those reporting that the adoption of fintech/regtech could, in the longer term, lead to fewer compliance staff being needed. This could be due to the growing realisation that fintech/regtech solutions can potentially take on the more routine compliance tasks leading to efficiencies and enabling compliance staff to spend more time on more value-add higher skill compliance activities.

This is borne out by the consistency (69 percent in 2017, 64 percent in 2018) in the belief that the successful deployment of fintech/regtech should drive up efficiency and effectiveness, allowing more time to focus on value-add activities. For some firms that potential efficiency and effectiveness goal appears to be hampered by the quarter (27 percent in 2017, 25 percent in 2018) who still need more resources to evaluate, understand and deploy fintech/regtech solutions.

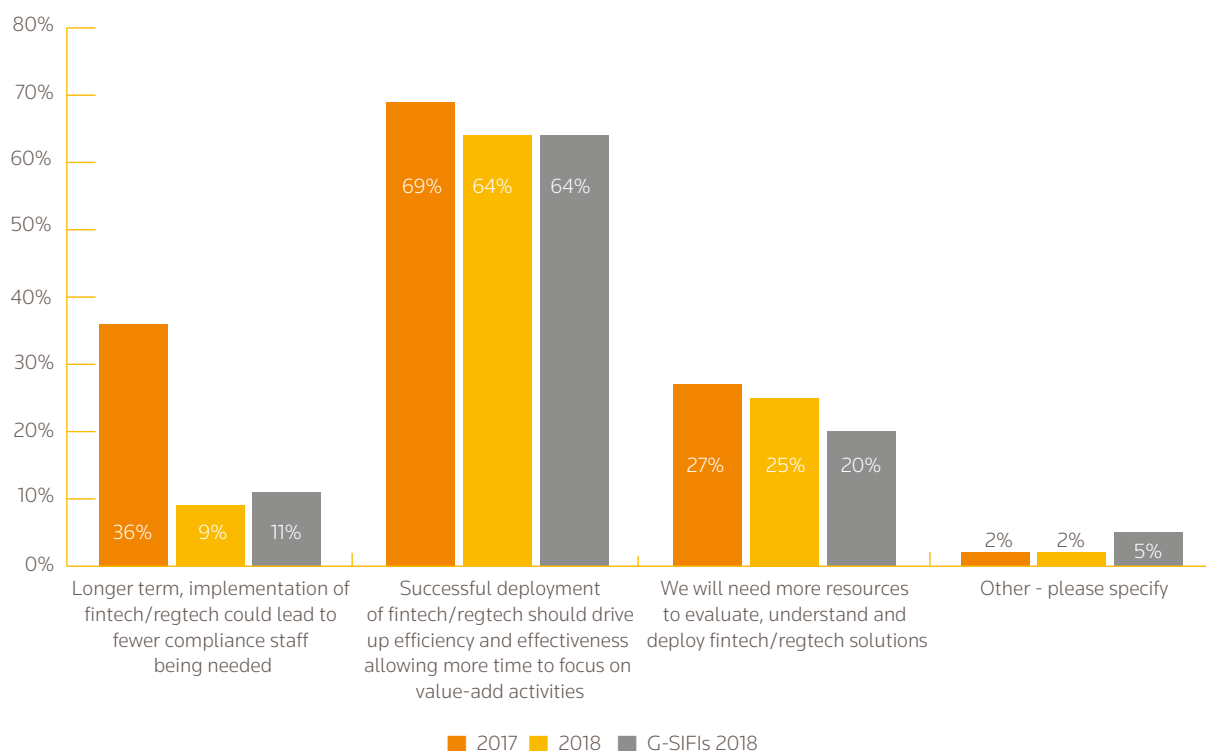
The greatest financial technology challenges you expect your firm to face in the next 12 months are...

"...updating and configuring systems to enable effective use and reduce manual work arounds..."

Senior Risk Practitioner, United Kingdom

Survey respondent, Thomson Reuters Regulatory Intelligence – Fintech, Regtech and the Role of Compliance in 2019

What will be the impact of fintech/regtech on your compliance function?



Source: Thomson Reuters Regulatory Intelligence – Fintech, Regtech and the Role of Compliance in 2019, by Stacey English and Susannah Hammond

CHALLENGES FOR FIRMS

“When a regulator uses RegTech, I think you can call it SupTech. With the assistance of technology, we have been able to identify irregularities, control deficiencies and non-compliance which would otherwise go undetected.”

Julia Leung, Deputy Chief Executive Officer and Executive Director, Intermediaries, at the Securities and Futures Commission Hong Kong. Speech - “New Technologies and Asset Management: A Time of Great Promise and Great Peril?” at the Hong Kong Investment Funds Association Luncheon. (April 2018)

The greatest financial technology challenges you expect your firm to face in the next 12 months are:



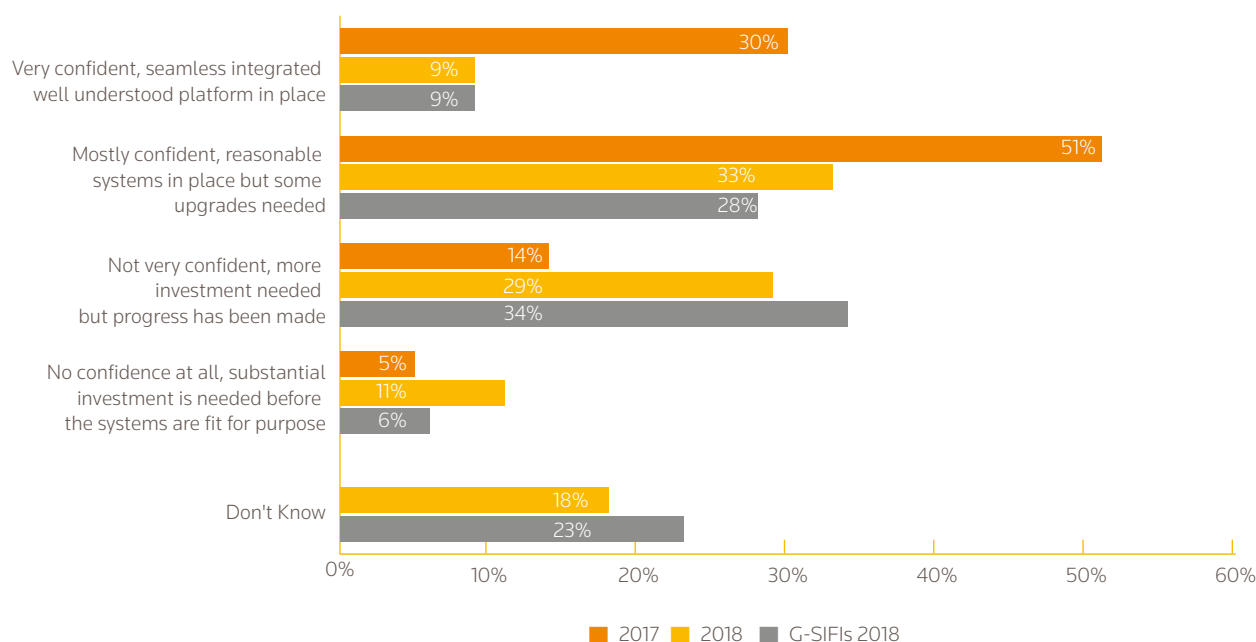
Source: Thomson Reuters Regulatory Intelligence – Fintech, Regtech and the Role of Compliance in 2019, by Stacey English and Susannah Hammond

The challenges for firms have remained reasonably consistent year on year with the biggest challenge still being the need to upgrade legacy systems and processes. This is backed up by a continuing lack of confidence in the ability of firm’s IT infrastructure to be able to support fintech, regtech and insurtech solutions. Indeed, the apparent lack of confidence has grown year on year, with 29 percent (14 percent in 2017) reporting that they are not very confident that their IT

infrastructure will be able to support fintech, regtech and insurtech solutions with more investment needed but progress having been made.

It may be that the increase in the lack of confidence is due to firms beginning to consider fintech, regtech or insurtech solutions which has, in turn, driven the detailed analysis of their firm’s current IT infrastructure leading to concerns being highlighted.

How confident are you that your IT infrastructure is/will be able to support fintech, regtech and insurtech solutions?



Thomson Reuters Regulatory Intelligence – Fintech, Regtech and the Role of Compliance in 2019 by Stacey English and Susannah Hammond

“When technological change is disruptive and widespread, the productivity effect is generally insufficient to counteract completely the destruction effect, partly because of the time it takes for the full potential of new technologies to be realized, and partly because of the phenomenon of greater job polarization...”

Mark Carney, Governor of the Bank of England. Speech – ‘The Future of Work’, at the 2018 Whitaker Lecture, Central Bank of Ireland. (September 2018)

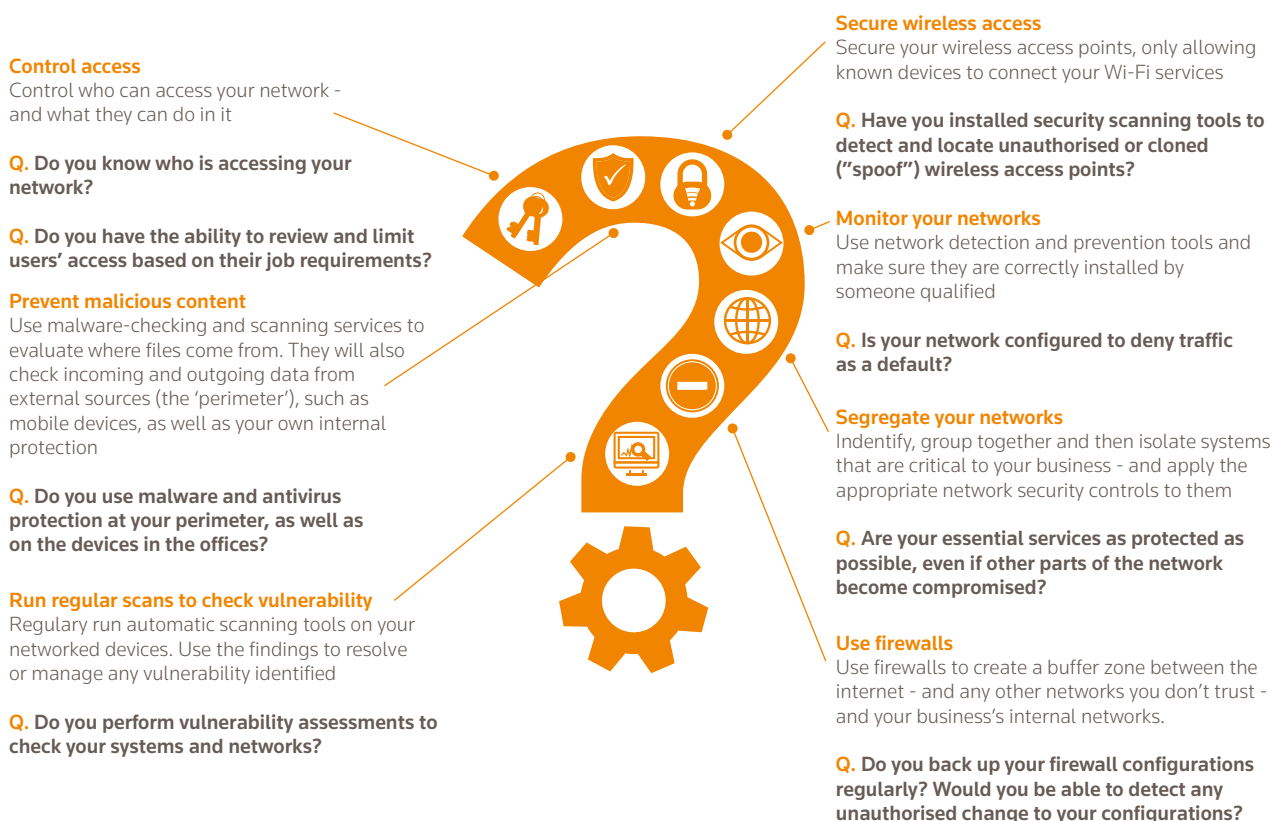
CYBER RESILIENCE

Another key challenge identified was the need for cyber resilience. Hardly a week goes by without another firm reporting that it has been hacked or otherwise compromised with often substantial amounts of customer and other data impacted.

“...in a context of firms’ increasing reliance on digital systems and platforms and the risk of cyber-attacks, operational resilience is on track to become as embedded in our supervisory approach as financial resilience. In this area, we are primarily focused on the continuity of the business services that a firm’s customers and the wider economy rely upon. We will prioritise our interventions proportionally based on safety and soundness and any potential financial stability implications of potential operational disruptions.”

The UK Prudential Regulation Authority’s approach to banking supervision. (October 2018)

UK Financial Conduct Authority: Network security - the basics



This infographic is extracted from FCA publication on basic network security practices, which restates existing National Cyber Security Centre (NCSC) material available at www.ncsc.gov.uk/guidance/10-steps-network-security

Regulators worldwide have already begun measures to intensify cyber security efforts. In November 2018, the Australian Prudential Regulation Authority (APRA) published the final version of its prudential standard (Prudential Standard CPS 234 Information Security), which aims to support APRA-regulated entities' resilience against and reaction to information security incidents, including cyber threats.

"Despite APRA's broad satisfaction with industry's approach to cyber security to date, there is absolutely no room for complacency. We expect all entities will need to lift their efforts to comply with the new standard. Once the standard is in place, APRA will start assessing compliance through our normal supervisory processes and will consider requesting formal independent audits of compliance in due course. Internally, we are also strengthening our supervisors' abilities in this area by broadening their knowledge of cyber risk. In this way, our frontline supervisors will be better equipped to engage with you, assess your cyber preparedness, and give guidance on any areas that warrant improvement."

Geoff Summerhayes, Executive Board Member of the Australian Prudential Regulatory Authority. Speech – "Computer Terminal Velocity: APRA's response to an accelerating risk" delivered at the Insurance Council of Australia Annual Forum. Sydney. (March 2018)

Regulators are also seeking to help firms prepare for and deal with the aftermath of any kind of cyber incident. In particular, firms need to be aware that they may incur potentially substantial costs following a cyber-attack or cyber incident – even if they were not the targeted firm, including remediation and litigation costs, increased cybersecurity protection, lost revenues, increased insurance premiums, reputational damage and damage to the company's competitiveness.

"...we are focused on aligning our expectations with existing best practices, such as the National Institute of Standards and Technology's Cybersecurity Framework and identifying opportunities to further coordinate cyber risk supervisory activities for firms subject to the authority of multiple regulators. We support industry efforts to improve harmonization across the sector, which are complementary to achieving our regulatory safety and soundness goals."

Randal K Quarles, Vice Chairman for the Supervision of the Board of Governors of the Federal Reserve System. Speech at the Financial Services Roundtable 2018 Spring Conference. Washington DC. (February 2018)

CLOSING THOUGHTS

“Although I am excited about the potential for regTech and finTech I cannot end this discussion without admitting that they also give me a certain level of trepidation. With each technological advancement that occurs, the Commission must confront a new opportunity for cyber threats to develop.”

Michael S. Piowar, Commissioner at the U.S. Securities and Exchange Commission. Remarks at the 2018 RegTech Data Summit – Old Fields, New Corn: Innovation in Technology and Law. (March 2018)

What is the one thing you would like technological innovation to be able to deliver for your firm?



Source: Thomson Reuters Regulatory Intelligence – Fintech, Regtech and the Role of Compliance in 2019, by Stacey English and Susannah Hammond

The financial services industry’s wish list for technological innovation is long and wide. The practical reality is that there are challenges to overcome in order for firms to begin to realise the potential benefits offered by fintech, regtech and insurtech. At a minimum, many firms need to invest, potentially significantly, in the upgrade of their IT infrastructure, which is itself a challenge, not least because whilst that an upgrade is underway the expectation is that good customer outcomes will be unaffected. Another investment seen to be needed is in specialist skills for both the board and the risk and compliance functions.

Even after investments have been made in IT infrastructure and specialist in-house skills, challenges remain surrounding the solutions themselves. Achieving the much-anticipated benefits appears to be a growing challenge and is inextricably linked to the stage of development, testing and capability of the technology and solutions. While of course any new development will be iterative, solution providers (whether external or internal) need to take care not to over promise and under deliver.

The greatest financial technology challenges you expect your firm to face in the next 12 months are...

"...Regtech providers stepping up to meet the needs of customers, and not trying to get customers to fund their development..."

Senior Compliance Practitioner, Australasia

Survey respondent, Thomson Reuters Regulatory Intelligence – Fintech, Regtech and the Role of Compliance in 2019

All of that said, there still remains significant potential benefit to firms and their customers from robust fintech, regtech and insurtech solutions deployed successfully on a secure IT infrastructure by highly skilled in-house specialists. Much of the benefit is focused on process with the potential to automate with increased accuracy and speed. The end game being smoother, efficient operations enabling risk and compliance functions to focus on more 'value-add' matters.

Last, but certainly not least, is the increasing role that technology is being seen to play in the personal liability and accountability of senior managers. Senior individuals can, and will, be held responsible for the misuse, failure or lack of resilience of any and all technology and as such would be very well advised to ensure that their skill set is, and remains, as up to date as possible. Regulators and politicians have shown themselves to be increasingly intolerant of senior managers who fail to take the expected reasonable steps with regard to the deployment of and transparency around the state of the firm's technology.

About the authors



Stacey English is head of regulatory intelligence for Thomson Reuters with over 20 years of regulatory compliance, risk and audit experience in financial services as a regulator and practitioner. She is co-author of 'Conduct and Accountability in Financial Services: A Practical Guide' published by Bloomsbury Professional.

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The new book *Conduct and Accountability in Financial Services: A Practical Guide* by Stacey English and Susannah Hammond is available now to purchase from Bloomsbury Professional. Use code TRRI1 for 15% discount.

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