RegTech is the new FinTech

How agile regulatory technology is helping firms better understand and manage their risks

David Dalton
Partner
Consulting
Deloitte

Sean Smith
Partner
Risk Advisory
Deloitte

Ronan Vander Elst
Director
Consulting
Deloitte

Thibault Chollet
Director
Advisory & Consulting
Deloitte

Lory Kehoe
Senior Manager
Consulting
Deloitte

Kent MacKenzie
Director
Risk Advisory
Deloitte

Regulation is one of a number of services to receive the "tech" treatment in recent times. As with its big brother FinTech, RegTech will mean different things to different people in this developing area.

While the name is new, the marriage of technology and regulations to address regulatory challenges has existed for some time with varying degrees of success. Increasing levels of regulation and a greater focus on data and reporting has, however, brought the RegTech offering into greater focus, thereby creating more value for the firms that invest in these solutions.

In this article, based on our research and interviews with RegTech companies, we seek to explore how firms can benefit from regulatory technology and in particular how they can leverage regulatory focused data to better understand and manage their compliance risks.

Furthermore, we seek to highlight:

RegTech solutions (and the underlying technology) that are becoming more prominent in the market

The benefits of RegTech

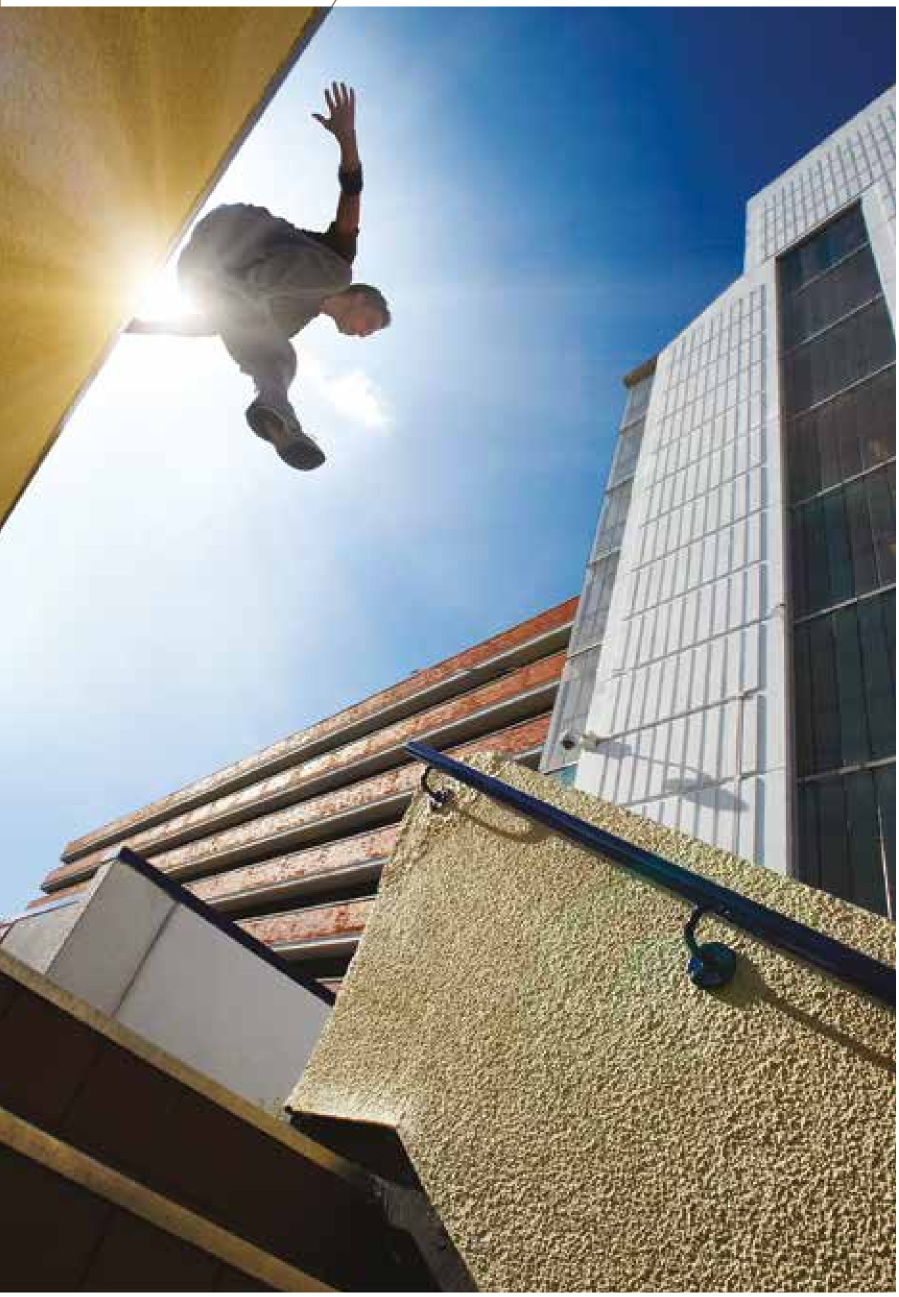
The significance of the experienced financial services professional in the RegTech/FinTech era

How best to leverage RegTech to plot your regulatory journey for the future

Regulations result in operational challenges but require strategic solutions

Increasing levels of regulation and more challenging regulatory expectations are having significant operational impacts on firms requiring people-, process- and technology-based solutions. With respect to new legislation and regulations, this can create challenges around understanding, implementing and embedding the new requirements, whereas for existing legislation there can be challenges around understanding and managing the risks.

"It is important to carefully weigh up how these pressures can be resolved," explains Thibault Chollet, Director in the Luxembourg member firm. *"Looking at what has been done at insurance companies in the context of Solvency II, many insurers realized that a standardized approach, although requiring more investment at the implementation stage, has an excellent return on investment considering the significant number of controls to be performed. Concretely, this standardized approach is based on a standard set of controls that are parameterized to meet the specificities of the different data sets. In other words, instead of implementing new rules for each dataset, the data quality project team only defines a small set of parameters. This approach drastically reduces implementation costs, as well as, recurring costs. Furthermore, it enables a much more systematic approach to quality control."*



In the past, the choice was between selecting one of the big, well-known vendor systems and building an in-house solution. The pressure of requiring fast implementation can result in tactical compliance-focused solutions which in turn can create more operational challenges than they set out to solve. Besides covering the required functionalities, the solution must fit in the (often complex and heterogeneous) architectural IT landscape of the company. Depending on the existing data architecture, the new component ensuring data quality will typically occur at the entrance to the data lake, data warehouse, or risk data mart. On the output side, reporting and visualization tools often already exist. *"However, these tools are typically used within different departments, not governed centrally and need to be adapted to meet the new legislative requirements. To meet both adaptability and accuracy requirements, firms will have to evaluate their own IT landscape,"* says Thibault Chollet.

Moreover, the technology can potentially end up costing infinitely more than any off-the-shelf or tailor-made technology solution, while simultaneously increasing potential compliance risk.

Implementation costs should not be the only expenses taken into consideration when finding the ideal technology, as recurring costs can be significant as well. Ronan Vander Elst from the Luxembourg member firm explains that having a standardized approach, based on a set of controls that are parameterized to meet the specificities of the different datasets, instead of implementing new rules for each dataset, drastically reduces implementation costs as well as recurring costs. Furthermore, it enables a much more systematic approach to quality control. Finding the right balance to address the regulatory challenge of the day is far from straightforward, as the strategic versus tactical solution debate rages on. What we have found is that there are other solutions that should be considered.

Move over, FinTech

FinTech is an amalgamation of the words "financial" and "technology." It refers to the use of new technologies in the financial services industry to improve operational and customer engagement capabilities by leveraging analytics, data management and digital functions. The sector, characterized by the presence of many small, agile startups, attracted a FinTech venture capital investment of approximately US$539 million in 2014.[1]

In order to capture and display the level of activity in the FinTech space, Deloitte has designed a sector-specific digital tool called "bridge" which:

- Connects enterprises and innovators
- Helps identify emerging trends
- Highlights areas of FinTech focus
- Provides perspectives on innovations

Bridge raises awareness in relation to how specific FinTech companies have the potential to solve defined business problems and fill capability gaps.

FinTech is high on many governments' agendas. In Ireland, for instance, Minister Simon Harris' *"Strategy for Ireland's International Financial Services Sector"* is explained as aiming to: *"drive research, innovation, and entrepreneurship in the IFS sector, with a particular focus on financial technology and governance, risk and compliance."* Governments in Singapore, Hong Kong, and the UK are all driving the same FinTech hub agenda for their respective countries, and are working hard to attract investment from global banks in this area (Citi in Hong Kong, DBS Bank in Singapore, etc.).

In effect, Fintech has resulted in and is leading to the development of new, innovative and agile solutions to the data and reporting challenges that our industry faces. But what about regulation? Are there nimble, configurable, easy to integrate, reliable, secure and cost-effective solutions available? The answer is yes… move over FinTech and make way for RegTech!

What is RegTech and why do we need it?

Alan Meaney (CEO of FundRecs) explains RegTech as follows: *"like FinTech, PayTech, and many other combinations of XXXTech, RegTech is another example of an industry that is being changed rapidly by software. There has been technology used at various levels in the regulatory space for over 20 years. However, what the new RegTech label recognizes is that the gap between software-enabled and non-software-enabled services has widened significantly."*

Technology has been used to address regulatory requirements for some time, so what is new and exciting about RegTech? Here are some of the key characteristics of RegTech:

1

Agility

Cluttered and intertwined datasets can be de-coupled and organized through ETL (Extract, Transform, Load) technologies

2

Speed

Reports can be configured and generated quickly

3

Integration

Short time frames to get the solution up and running

4

Analytics

A recent Deloitte report[2] quoted biologist Edward Wilson, who said: *"we are drowning in information, while starving for wisdom."* RegTech uses analytic tools to intelligently mine existing "big data" datasets and unlock their true potential, e.g. by using the same data for multiple purposes

1 *"Silicon Valley Bank" Report*

2 *"New Strategies In A Changing World of bank Regulation," July 2015*

The key difference between traditional solutions versus RegTech-era solutions is simple—agility

Kent Mackenzie, Director in the UK member firm, sees a significant opportunity for so-called RegTech providers to bring clarity and efficiency to the way in which regulation is interpreted, how compliance is managed and most of all how reporting is and will be automated. The use of cognitive technologies and enhanced analytics is beginning to help the industry rapidly and automatically understand not just the explicit meaning of the regulation but also the implicit meaning or "nuance" that is so often a challenge to digest and assess. As we all know, data is meaningless unless it is organized in a way that enables people to understand it, analyze it, and ultimately make decisions and act upon it, i.e., by creating consumable information. In recent work Kent has undertaken for clients by deploying a RegTech solution, they have been able to identify the "one to many" relationship for the first time, i.e. where one control satisfies many regulations or where a single regulatory paragraph requires many controls.

In its purest form, the ability to automate a reporting or dashboard view is moving many away from a cumbersome, typically spreadsheet-based approach. Indeed, this is a very pertinent technological advance, especially when one considers the inescapable challenge for the financial services sector in Europe—and indeed globally—posed by its heavy reliance on legacy systems, some dating back to the 1960s. It is estimated that in 2014, banks in Europe spent €55 billion on information technology; however, what is most interesting is that only a remarkably low figure of €9 billion was spent on new systems.[2] The balance was used to "bolt-on" more systems to the antiquated existing technologies and simply keep the old technology going.

RegTech provides senior executives with an opportunity to introduce new capabilities designed to leverage existing systems and data to produce regulatory data and reporting in a cost-effective, flexible, and timely manner without taking the risk of replacing/updating legacy systems. We believe we will witness a rejuvenated effort to tackle back and middle office legacy challenges through RegTech investment which can elicit clean, accurate, secure, and timely data that can be sliced, diced, and scrutinized in whatever format the regulator or other stakeholders require. Barry McMackin from TradeFlow succinctly explains that *"RegTech companies need to show themselves as having expert knowledge of a specific problem and an ability to solve it. On one side, technology will assist firms in complying with regulation and on the other side, regulators will require new technology to make better use of the information provided by the industry."*

How is it different—and is it actually different?

The key difference between traditional solutions versus RegTech-era solutions is simple—agility. While traditional solutions are robust and designed to deliver on your specified and "locked down" requirements, they can be inflexible and require development or configuration in a proprietary language for enhancements or changes.

Many RegTech providers use agility and are exploring how advanced analytics and assessment techniques can start to "learn" and support in accelerating the assessment of new and emerging regulations based on what has been seen previously and how that has been interpreted. In very much the same way neural

3 *Celent "IT Spending In Banking: A Global Perspective" February 5, 2015*

networks have helped predict fraud and customer behavior, Kent Mackenzie sees advanced RegTech helping to enable an automatic assessment of the impact of emerging regulation on a business.

In addition, the well-known brand name vendors' commercial models are typically aligned to multiple module purchases, meaning that the full benefits of a solution will only be realized when using multiple modules or "bolt-ons" of the preferred platform. Add in high price tags and significant lead times for change and it is clear that an agile alternative is required.

Let's not throw the baby out with the bathwater quite yet, as vendors do still play an important role according to Barry McMackin from TradeFlow: *"agility is great in product development and responding to customer and market validation but getting the product to market does require those insights that experienced software vendors have proven to have."*

Another defining feature of RegTech is that the solutions tend to be cloud-based. RegTech solutions using cloud mean that data is remotely maintained, managed and backed up.

Cloud-based solutions offer the following key advantages:

Where does RegTech work best?

While the growth of RegTech is promising, is it the panacea for all compliance challenges? Unfortunately, the answer is probably no, given the importance of subjectivity and the numerous other factors that must be considered in managing these risks.

Where we have seen it work well, however, includes heavily quant-based obligations, information-based obligations and risk identification and management tools including:

- Legislation/regulation gap analysis tools
- Compliance universe tools
- Health check tools
- Management information tools
- Transaction reporting tools
- Regulatory reporting tools
- Activity monitoring tools
- Training tools
- Risk data warehouses
- Case management tools

These tools, and RegTech in general, have yet to reach their true potential. As Sean Smith, Partner in Risk Advisory at Deloitte puts it: *"In the short term, RegTech will help firms to automate the more mundane compliance tasks and reduce operational risks associated with meeting compliance and reporting obligations. In the long term, it will empower compliance functions to make informed risk choices based on data-provided insights about the compliance risks the company faces and how it mitigates and manages those risks."*

What are some examples?

Tools such as Hadoop, Tableau, and Pentaho sit on top of a virtual data lake, organize the data (which is usually a real pain point) and allow tailor-made reporting to be created in a way that is flexible enough to meet regulatory requirements today and which can also be easily configured to meet the changing regulatory requirements of tomorrow, next month and next year. In addition, these tools enable analytics to be applied to big data. Tableau, for instance, is a visualization tool that makes it easy to look at data in new ways to help identify trends and, from a regulatory perspective, help recognize outliers, right down to the individual customer transaction level. In real terms, these features allow for the extraction of data from core banking systems with a relatively limited implementation and integration cycle and one which is a lot more efficient than replacing or upgrading a core banking system.

Examples of Irish RegTech companies include:

Fund Recs	Reconciliation software for the fund industry
Silver finch	Creates connectivity between asset managers and insurers through a fund data utility in a secure and controlled environment)
Trustev	Online fraud prevention by scanning transactions in real time to determine whether they are real or not)
Trade Flow	Trade data tracking and technology based on risk alerts
Vizor	Software provider that enables the supervision of companies by a supervisory authority, such as a central bank, financial regulator, or tax authority
Corly-tics	Software that analyzes compliance risks in banks and financial firms)

Some RegTech companies established on the Luxembourg market are:

KYC3	Customer, counterparty risk management, and competitive intelligence solution
The Markets Trust	Risk-management related needs, including quantitative asset modeling, portfolio simulation, and regulatory compliance and reporting
Asset Logic	Aggregate all fund management data into a single source to make compliance, marketing, data governance, and relationships with service providers more efficient)

London-based FundApps is a truly great example of a RegTech company. Founded in 2010, FundApps Founder and CEO Andrew White had two very simple aims for his compliance monitoring and reporting solution:

1. Make it cloud-based
2. Maintain a team of compliance experts who can update the platform as new regulations emerge

From his financial services experience, Andrew realized that core to his business success was the solution's ability to scale and flex as new regulations emerged. This would be beneficial to his overall cost and client servicing model but also in reducing the regulatory burden his clients faced and in increasing his overall value proposition to them. This was achieved through cloud technologies, accessible development capabilities, and an ecosystem at the TechHub in London which powered his growth. In addition, Andrew's success was aided by his previous FinTech adventure with MIG21 (now a PFS/State Street solution) and the network and experience he gained at the time. When pushed for insights regarding a potential exit strategy, Andrew said: "Presenting in front of senior people at the big financial institutions and seeing their reactions to what FundApps can deliver via modern cloud technology is amazing. I'm just enjoying this, it's the ride of my life."

Silverfinch, led by financial services veteran John Dowdall, beautifully demonstrates the power of technology disruption by turning data-flow and reporting responsibility in the asset management and insurance industries on its head. Silverfinch, through a platform, provides asset managers with a single venue for their portfolio holdings data that will respond to many institutional client requests in an efficient, reliable, secure and cost-effective manner. On the insurance side, through its platform, Silverfinch provides an easy, reliable and cost-effective way to request and organize data for the granular holdings data they need to feed their reporting and risk management models.

The Silverfinch method relies on data standardization. According to John, "everything in Silverfinch is about data standardization. The data we receive and the data we produce is all industry approved. The same tripartite data utility model can be applied elsewhere and expanded to a list of portfolio-based regulatory requirements."

Key observations

1 Tech-savvy silver foxes teach young dogs new FinTech tricks

One of the most interesting findings from our research is the age profile and background of RegTechers. Despite RegTech and FinTech being synonymous with 20-somethings skateboarding to work in their loft-style offices, what we learned is in fact it is the more seasoned and experienced financial services professionals who are embracing this new era of technology disruption and driving the RegTech agenda. These individuals fundamentally understand how the financial services industry and corresponding data ecosystems work (or don't!) and therefore bring innovative, scalable and—you guessed it—agile solutions to the marketplace. The importance of data has not been lost on this experienced financial services crew and due to this they have joined forces with younger developers to gather, mine, analyze, and report via truly 21st century methods. As Rurik Bradbury from Trustev outlined, "The key thing about working in financial services today: if you do not have a seasoned person in charge and a sales pitch that looks polished and mature, you fail. Bankers expect some gray hair from the people challenging their existing business processes."

2 Smaller European cities have competition

Another significant finding from our research is that large financial markets are attracting entrepreneurs from smaller European cities. This is particularly true of London, for the following reasons:

- Existing FinTech community
- Lower capital gains tax of 20 percent (soon to be 18 percent)
- Increased number of key decision makers and influencers in London across a broad range of financial services sectors
- More favorable personal taxation for knowledge workers
- Financial Conduct Authority (FCA) and Prudential Regulation Authority (PRA) fully embracing RegTech and FinTech start-ups
- Large technology talent pool
- Large financial services talent pool
- Easy company creation via online service

Other locations such as Singapore and New York are looking to expand and develop their FinTech communities. Further notable and upcoming challenger cities include Sydney, Warsaw, and Berlin.

Hong Kong—voted second best place to do business by Forbes—and the Association of the Southeast Asia Nations (ASEAN) region, however, are not without their challenges. Regulatory standardization and consistency are known complexities in Europe but the ASEAN market is most definitely not immune to this. Zac Chen, working in one of the largest South East Asian banks and a FinTech advocate notes, *"While Europe has a European Banking Authority that somewhat guides the region, we have to observe if the recent ASEAN Financial Integration*

Framework will provide some guidelines or direction, in which I hope there will be a standardized regulatory baseline or data interchange format across the region." There is a significant opportunity for RegTech solutions to be at the heart of these data standardization conundrums.

What to do now

RegTech has a very bright future, with a huge amount of opportunity for those developing this type of technology to automate and enable the world of regulatory assessment and control management, bringing clarity and control to an area of the business that is so incredibly important, but so often cumbersome and time-consuming.

Don't be scared of the new. Yes, it is a huge opportunity—but the human intervention to provide final arbitration will always be required.

As we stand at the crossroads of this new paradigm in the RegTech age, companies should ensure that they:

- Make the most of their data (as it has certainly cost enough to get there)
- Conduct research to understand their existing organizational regulatory technology
- Leverage their existing technology investment and do not discount the capabilities of powerful solutions which have been proven to overcome operational challenges
- Understand their upcoming regulatory data and reporting requirements in line with the next set of regulations affecting their business (keeping the organization's overall technology strategy in mind)
- Ask their network and peers about what they are doing and what new solutions are available
- Embrace technology
- Make a plan and plot their future

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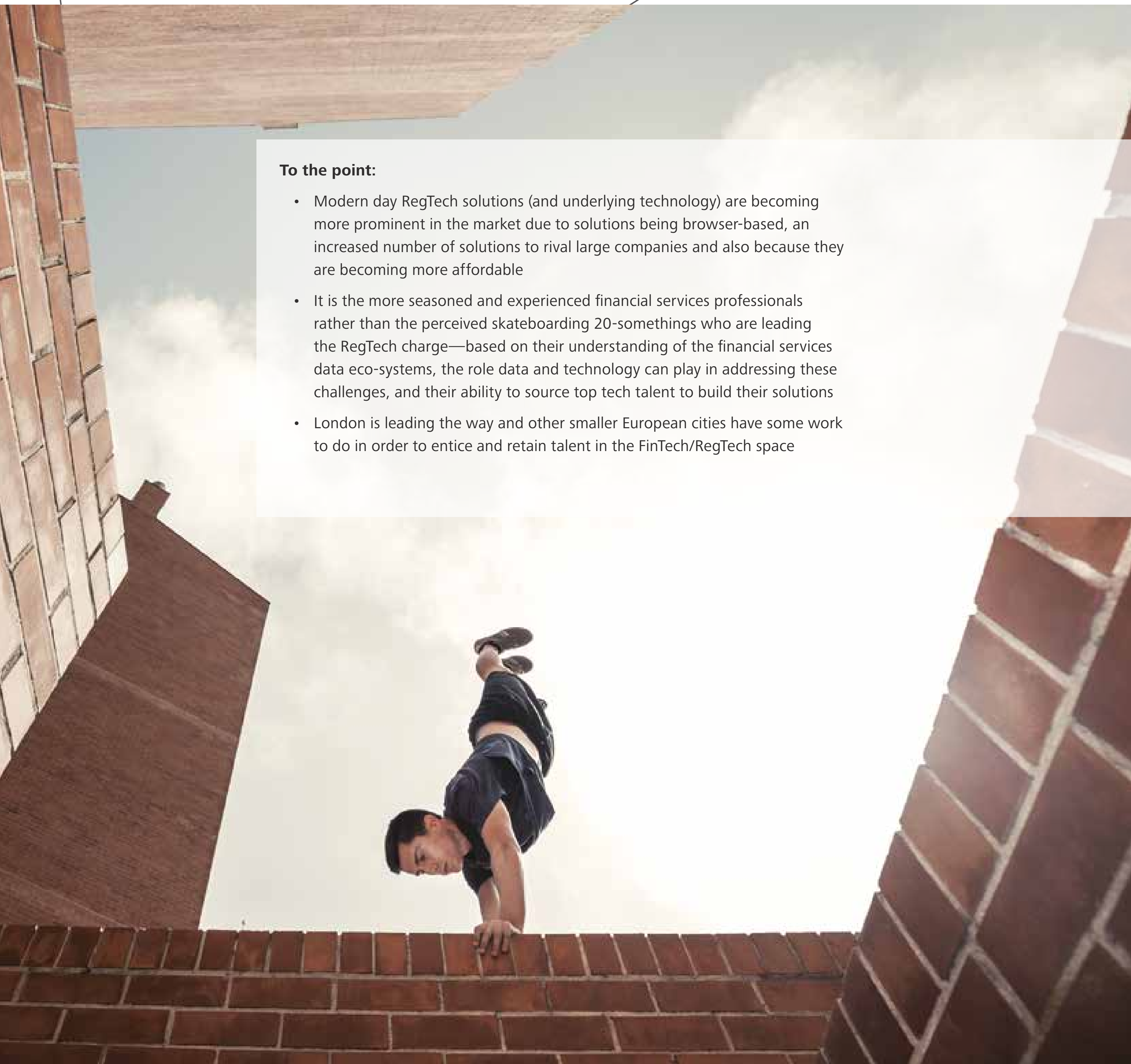

To the point:

- Modern day RegTech solutions (and underlying technology) are becoming more prominent in the market due to solutions being browser-based, an increased number of solutions to rival large companies and also because they are becoming more affordable
- It is the more seasoned and experienced financial services professionals rather than the perceived skateboarding 20-somethings who are leading the RegTech charge—based on their understanding of the financial services data eco-systems, the role data and technology can play in addressing these challenges, and their ability to source top tech talent to build their solutions
- London is leading the way and other smaller European cities have some work to do in order to entice and retain talent in the FinTech/RegTech space