‘RegTech is the new FinTech’

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

Regulation is one of a number of services to receive the “Tech” treatment in recent times. As with its bigger brother FinTech, the definition of RegTech will mean different things to different people in this developing area. While the name is new, the marriage of technology and regulation 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 underlying technology) which are becoming more prominent in the market;
- The benefits of RegTech;
- The significance of the experienced financial services professional in the RegTech / FinTech era;
- Why Dublin has some work to do to establish itself as a RegTech / FinTech friendly location; and
- 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. In respect of new legislation and regulation, 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 weigh carefully how these pressures can be resolved”, explains Thibault Chollet (Deloitte Director, Luxembourg). *“Looking at what has been done at insurance companies in the context of Solvency II, many insurers realised that a standardised approach, although requiring more investment at*

implementation, has an excellent return on investment, considering the significant number of controls to be performed. Concretely, this standardised approach is based on a standard set of controls that are parameterised 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 towards quality control".

So far, the choice was between the big well-known vendor systems and building an in-house solution. The pressure requiring a 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 the data quality will typically occur at the entrance of the data lake, data warehouse or risk data mart. On the output side, reporting and visualisation tools often exist already. *"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 bespoke technology solution, whilst simultaneously increasing potential compliance risk.

Not only the implementation costs should be taken into consideration when finding the ideal technology, as recurring costs can be significant as well. Ronan Vander Elst (Deloitte Luxembourg) explains that having a standardised approach, based on a set of controls that are parameterised to meet the specificities of the different data sets, 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 towards quality control. Finding the 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 further solutions which should be considered.

Move over FinTech

FinTech is an amalgamation of the words "financial" and "technology". It refers to new technologies in the financial services industry, used to improve operational and customer engagement capabilities by leveraging analytics, data management and digital functions. The area, characterised by many small agile start-ups, has attracted the attention of global FinTech venture capital investment of circa \$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; and
- Provides perspectives on innovations.

Bridge accelerates learning on how specific FinTech companies have the potential to solve defined business problems and fill capability gaps.
In Ireland, FinTech is at the centre of the Governments and Minister Simon Harris' Strategy and Vision for International Financial Services 2020, with the strategic goal being detailed as: "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 investments from global banks in this area (Citi in Hong Kong, DBS in Singapore).

In effect, FinTech has resulted in, and is leading to, the development of new, innovative and agile solutions to 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 welcome RegTech!

What is RegTech and why do we need it?

Alan Meaney (CEO of FundRecs) explains as follows: *"Like FinTech, PayTech, and many combinations of XXXTech, RegTech is another example of an industry*

1 Silicon Valley Bank Report

being changed rapidly by software. Technology has been used at various levels in the regulatory space for over 20 years. However, the new RegTech label recognises that the gap between software and non-software enabled services has widened significantly".

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

1. Agility – cluttered and intertwined datasets can be de-coupled and organised through ETL (Extract, Transfer Load) technologies.
2. Speed – Reports can be configured and generated quickly.
3. Integration – short time frames to get solution up and running.
4. Analytics – A recent Deloitte report[2] quoted biologist Edward Wilson *"We are drowning in information, while starving for wisdom"*. RegTech uses analytic tools to intelligently mine existing "big data"data sets and unlock their true potential e.g. using the same data for multiple purposes.

Kent Mackenzie (Deloitte Director, Edinburgh) sees a significant opportunity for so-called RegTech providers to bring clarity and efficiency into 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 explicit meaning from 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 organised in a way that enables people to understand it, analyse it and ultimately make decisions and act upon it i.e. by creating consumable information. In recent work Kent has undertaken for clients in deploying 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 multiple 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 advancement, especially when one considers the unescapable challenge for the financial services sector in Ireland, Europe and indeed globally, of its heavy reliance on legacy based 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[3]. 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 that are 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 scrutinised 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, regulators will require new technology to make better use of the information provided by the industry"*.

How is it different – Actually different?

The key difference between traditional solutions versus the RegTech era solutions is simple - agility. Whilst 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 the agility and are exploring how advanced analytics and assessment techniques can start to 'learn' and support in accelerating the assessment of new and emerging regulation, based on what has been seen previously and how that has been interpreted. In the same way neural networks have helped predict fraud or customer behaviour, Kent Mackenzie sees advanced in RegTech supporting in automating an assessment of the impact of emerging regulation on a business.

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

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

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 realised 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 bath water 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 experienced software vendors have proven"*.

A further defining feature of RegTech is that the solutions tend to be cloud based. RegTech solutions using the cloud means that data is remotely maintained, managed and backed up. Cloud-based solutions provide the following key advantages:

- Cost – you pay for what you use;
- Flexibility – customised control over data, access to and sharing of data;
- Performance / Scalability – ability to easily add or remove service features; and
- Security – data encrypted during transmission and while at rest.

Where does RegTech work best?

While the growth of RegTech is promising, is it a 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. However, where we have seen it work well 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 see its real value, as Sean Smith, a partner in Risk Advisory, Deloitte put 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 longer term, it will empower compliance functions to make informed risk choices based on data provided insight about the compliance risks it faces and how it mitigates and manages those risks"*.

Give me some examples?

Tools such as Hadoop, Tableau and Pentaho sit on top of a virtual *data lake*, organise the data (which is usually a real pain point) and allow bespoke reporting to be created in a way that is flexible enough to meet your 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 visualisation tool that makes it easy to look at your data in new ways to help identify trends and, from a regulatory perspective, help recognise outliers, right down to the individual customer transaction level. In real terms, these 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:

- FundRecs (Reconciliation software for the Funds Industry).
- Silverfinch (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).
- TradeFlow (trade data tracking and risk alert based technology).
- Vizor (software provider that enables the supervision of companies by a supervisory authority, such as a central bank, financial regulator or tax authority).
- Corlytics (software that analyses 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).
- TheMarketsTrust (risk-management related needs, including quantitative asset modeling, portfolio simulation, as well as regulatory compliance and reporting).
- AssetLogic (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 truly a great example of a RegTech company. Founded in 2010, FundApps founder and CEO, Irishman 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 realised that core to his business success was the solutions 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 that he gained at this 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 utility, 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 utility, Silverfinch provides an easy, reliable and cost effective method to request and organise data to the granular holdings data they need to feed their reporting and risk management models.

How Silverfinch's utility model works is down to data standardisation. According to John Dowdall *"Everything in Silverfinch is about data standardisation. 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 that it is in fact the more seasoned experienced financial services professionals who are embracing this new era of technology disruption and are driving the RegTech agenda. These individuals fundamentally understand how the financial services industry and corresponding data eco-systems work (or do not!) 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 which is why they have joined forces with younger developers to gather, mine, analyse and report in real 21st century means. 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 grey hair from the people challenging their existing business processes"*.

2 – Dublin and many other smaller European cities have competition

Another significant finding from our research is that the Emerald Isle, known as a great place to do business (ranked 4th best country in the world to do business by Forbes), does not always seem to be the case, particularly for RegTech companies. Each of the companies we interviewed outlined that more could be done to make Ireland a better and easier place for RegTech and FinTech start-ups. One notable comment was *"In our senior management meeting last week, we were taking stock of our client list, very few were Irish. That got me thinking, why are* *we based here?"* This is a pertinent point when we consider that the majority of decision makers are based outside Ireland. As Rurik Bradbury from Trustev says *"For bigger sales, enterprise deals, you need to have multiple meetings in person, sit across the table, and look in the other person's eyes. It's a simple geographic fact, there is only a limited number of key decision makers of global companies being physically in Ireland compared to other locations"*.

Other locations such as Singapore (voted 8th best place country to do business by Forbes) and New York are looking to expand and develop their FinTech communities. Other notable and upcoming challenger cities include Sydney, Warsaw and Berlin.

Hong Kong (voted 2nd best place country to do business by Forbes) and the ASEAN region however is not without its challenges. Regulatory standardisation 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 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 guideline or direction, in which I hope there will be a standardised regulatory baseline or data interchange format across the region"*. There is a significant opportunity for RegTech solutions to be at the heart of these standardisation data conundrums.

In particular, London (voted a surprising 13th) is attracting entrepreneurs from smaller European cities due to the following reasons:

- FinTech community.
- Lower capital gains tax 20% (soon to be18%) versus 33% in Ireland, for example.
- Increased number of key decision makers and influencers in London versus Ireland across a broad range of financial services sectors.
- More favourable personal taxation for knowledge workers.
- FCA and PRA fully embracing with RegTech and FinTech start-ups.
- Large technology talent pool.
- Large financial services talent pool.
- Easy company creation via online service.

Alan Meaney (FundRecs) emphasises *"With Ireland's base of financial services knowledge workers and software capabilities we have an opportunity to develop a RegTech cluster in a similar way the IFSC was seeded over 25 years ago. Government are moving in the right direction with IFS 2020 under the leadership of Simon Harris TD but it will take a coordinated effort from all stakeholders to compete with more established centres like London"*.

What do i do now

RegTech has a very bright future, with a huge amount to 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 huge opportunity. However, human intervention, to provide a final arbitration, will always be required. As you stand at the crossroads of this new paradigm in the RegTech age, ensure to:

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

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