

1 RegTech, the new magic word in FinTech

Using innovative technologies to address regulatory compliance

Addressing regulatory requirements is, in terms of cost and resources, one of the greatest burdens that financial institutions are bearing today, and it is becoming increasingly complex. Now, a number of innovative FinTech companies are trying to ease the problem by using innovative technologies.

Dealing with regulatory changes

Financial regulation has been in a state of major change since the global financial crisis. **A stronger focus on risk prevention is making requirements increasingly complex:** financial institutions must deal with meeting the requirements of multiple regulatory jurisdictions with fast-changing requirements while regulators demand access to an increasing amount of granular data to ensure compliance.

For financial institutions, addressing those regulatory requirements is highly burdensome, complex and costly. According to The Institute of International Finance (IIF), compliance can cost a financial institution over \$1bn every year. McKinsey found that regulatory fines and settlements in 20 large US and EU universal banks increased by 45x in the 2010-2014 period¹. And an estimate for financial institutions is now around 10-15% of total workforce dedicated to governance, risk management and compliance. The main issues for financial institutions are compliance costs, reliance on manual processes in data management and traditional issues related to the quality of data, such as accuracy, lack of common definitions or different formats. **The amount of data produced by financial institutions is increasing and regulators demand access** to improve their vision of systemic risk and of the behaviour of the different agents involved in the financial ecosystem. The challenge is now **how financial institutions will be able to address compliance in an efficient and less resource-consuming way while improving the quality of data reported to supervisors.**

In this scenario, **a new breed of companies under an umbrella concept labelled RegTech has emerged inside the FinTech ecosystem**, arousing interest from regulators, central banks, corporate banks and traditional risk and regulatory consultancy firms. In fact, due to their potential to improve the relationship between regulators and financial entities, there are currently two initiatives respectively led by the UK Financial Conduct Authority (FCA) and by the IIF aiming to foster the deployment of these companies as an important piece of the development of an efficient financial ecosystem.

What is RegTech?

The term RegTech refers to a set of companies and solutions that marry innovative technology and regulation to address regulatory requirements across industries, including financial services. RegTech companies focus on the automation of manual processes and the links between steps in analytical/reporting processes, the improvement of data quality, the creation of a holistic view of data, the automated analysis of data with applications that are able to learn during the process, and the generation of meaningful reports that can be sent to regulators and used internally to improve key business decision making.

Why this sudden interest in regulation coming from the FinTech world? The business opportunity is clear, but companies are also realising that a better understanding of what drives a market's regulatory framework is key to successfully disrupting it. RegTech can be a big game changer for the incumbents – both banks and regulators. It may not seem as revolutionary as Uber was in the transport business, but financial services have been so deeply transformed by regulation that the landscape has been altered beyond recognition. In

1: McKinsey (2016) *A best-practice model for bank compliance*

fact, regulatory changes are considered a source of disruption by 87% of Banking CEOs, according to a recent study by PwC².

Every business area where regulation and compliance have an impact is a candidate to explore RegTech solutions. Some examples include international tax regulations to enforce tax transparency, international accounting standards, regulatory reporting and liquidity risk management. Anti-money laundering and combating the financing of terrorism (AML/CFT) regulations is an area with strong regulatory requirements too, as are advisory services and investor protection.

Needless to say, the use of technology for compliance is not new. However, **RegTech promises agility, speed, increased integration and analytics.** RegTech cannot deliver a solution for static requirements: it has to be a self-learning machine. That is why RegTech is usually cloud-based, which significantly cuts the costs and reduces the implementation time.

RegTech is an emerging trend and there is neither a closed definition nor a track record to confirm its potential benefits. However, companies in the RegTech space are focusing on:

- **'Big data' applications and techniques:** there are a number of novel technologies available for real-time processing, 'big data' storage and integration of heterogeneous and textual data.
- **Data mining and advanced analytics tools:** there is an increasing range of machine learning, computational statistics, complexity and statistical physics algorithms (such as Deep Learning) that offer the potential of powerful data mining and simulation techniques for enhanced decision making.
- **Visualisation tools:** due to the complexity and quantity of data involved, regulators require powerful tools for the visualisation, understanding and reporting of multiple heterogeneous data sources without the need for extensive expertise in programming.
- **Biometrics and social media analysis** such as Know Your Customer (KYC) tools for AML/CFT compliance.
- **Real-time and system embedded compliance/risk evaluation tools** have the potential to improve operational efficiency and effectiveness, for example in trade surveillance, financial crime risk monitoring, anti-money laundering, customer profiling and conduct risk monitoring.
- **Software integration tools:** innovation in software that allows off-the-shelf accounting and compliance tools to interact directly with regulatory reporting systems.
- **Predictive coding**, which looks to identify patterns of activity, such as unusual use of communications, non-routine patterns of leaving the office, non-completion of training, or missing mandatory leave, which may flag potential conduct concerns.
- **Open platforms and networks** for sharing of data, format standards and common processes.

A first step towards dynamic regulation

RegTech's promise is to **leverage existing systems and data to produce regulatory data and reporting in a cost-effective, flexible and timely manner without the risk of replacing/updating legacy systems.**

However, **this is only a first step towards a more ambitious vision on data-led dynamic regulation.** Major efforts are being made to predict compliance problems through the use of advanced dynamic anomaly and pattern response systems, prediction markets alongside statistical systems, and automated surveillance. Another area of development is "firm-wide compliance architectures" with in-built compliance, using thousands of predictive analytic 'sniffers' automatically across the firm, that are automatically attracted by any new process and identify anomalies for human attention. As a future goal, what these initiatives are trying to reach would be, in the words of Andy Haldane, Chief Economist of the Bank of England:

[...] I have a dream. It is futuristic, but realistic. [...] It would involve tracking the global flow of funds in close to real time [...], in much the same way as happens with global weather systems and global Internet traffic. Its centre piece would be a global map of financial flows, charting spill-overs and correlations.³

2: PriceWaterhouseCoopers (2015) *Achieving success while managing disruption*
3: Haldane, AG. (2014) *Managing global finance as a system*. Bank of England.

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