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RegTech in the cognitive era

Insights from Gene Ludwig and Bridget van Kralingen

IBM Institute for Business Value

An industry at a crossroads

"Cognitive solutions have not existed in the financial services industry until now. These solutions will mean not just more effective decision making by risk and compliance professionals, but better risk management for the bank, its shareholders and customers."

Bridget van Kralingen

The financial services industry is at a crossroads: It is operating on inadequate, legacy systems and being held back by a manual, labor-intensive approach to regulatory compliance. Managing the abundance of data – banks could be handling data volumes in the tens of exabytes before 2020 – is making the industry's job even harder.[1] These limitations are amplified by shifting customer demographics and demands, and many firms are struggling to achieve meaningful and consistent gains in return on equity. And compliance responsibilities and expectations for banks and their executives have never been higher.

Growing challenges

The answer to this growing challenge is cognitive RegTech (regulatory technology). By leveraging RegTech across the entirety of the banking enterprise, firms can combine data, technology innovations and new methodologies for regulatory compliance and augment the ability of compliance teams to do their jobs more efficiently and effectively.

There has been significant regulatory change since the financial crisis of 2008. To date, the only way for an organization to reduce risk and improve compliance has been to spend more. But the cost of compliance has diverted resources from growth investment and delivering for customers.

Firms have met these challenges by hiring and retaining more and more people. This approach, however, is not sustainable, as there are not enough qualified compliance professionals available to fill these roles, and existing technologies have not been able to bend the cost curve.

Companies today are spending ever-increasing amounts on compliance and risk. Failure to comply carries significant costs, as well. Global banks have paid more than USD 320 billion in fines and penalties since 2008.[2]

Further, human performance is variable. Even the most capable compliance professionals – tasked with poring through copious and unstructured regulatory documents – can get tired, sick or distracted. This mission-critical activity has been managed in an inefficient, unscalable manner. The industry needs a new approach.

"Our world – and certainly finance – is evermore dynamic and complex. Accordingly, to run our businesses well, we need to have compliance and risk-management systems that are both effective and address this complexity. Only the combination of advanced technology and domain expertise can get us there."

Gene Ludwig

Enter RegTech and cognitive compliance

"Human beings are and will always be necessary to solve risk and compliance problems – human intelligence, human ability and a strong culture are center stage. But the current situation is not sustainable. Humans alone are not going to be able to meet these challenges. Advanced technology tools are essential."

Gene Ludwig

RegTech is the digitization of manual reporting and compliance processes. It promises substantial cost savings for the financial services industry.[3] Deploying the right combination of expertise and technology can help firms manage new and changing regulations. Cognitively enabled banks will have the tools to help prevent fines, penalties and reputational risks, and they will be able to scale these solutions without continually adding to compliance teams.

Innovations in cognitive computing, such as machine learning and natural language processing (NLP), can transform the regulatory compliance process and introduce efficiencies not previously possible. For example, true cognitive systems can process millions of documents, reading as many as800 million pages per second in natural language.[4]

Today, there are any number of RegTech vendors claiming to employ advanced technologies, or that have deep skills and capabilities to help solve a particular compliance or risk problem. Yet siloed solutions are not the whole answer. Risk and compliance should be viewed as an enterprise-wide issue that must be managed accordingly. There is a significant opportunity to implement an end-to-end, integrated risk- management approach to regulatory compliance that improves efficiency and effectiveness.

Such an integrated approach calls for:

- *Industry expertise and deep domain knowledge:* Cognitive systems are literally taught by experts – whether doctors, researchers, wealth advisors, customer service reps or veterinarians.

  When considering RegTech systems, inquire about who did the training. Was it done by programming experts or regulatory experts? Was the solution trained to understand the intent of regulations, or just to recognize keywords? Is there consideration for the front, middle and back office and the implications of the same regulatory mandates as applied across the firm?

  Simply identifying new regulations is not a path to success. Understanding the intent of the regulation is critical in determining how best an organization should respond. Again, this requires deep domain expertise.

- *Data insights:* Data is a key factor in gaining competitive advantage. Organizations that are able to access, understand and generate actionable insights from their data put themselves in a position to foster and strengthen trust, which can lead the transformation of the firm as well as professions and industries.

  Similarly, it is not just about crunching on large volumes of data; it's about finding the hidden insights in the data, across both structured and unstructured data (such as video and social media). This requires truly cognitive technologies that can understand, reason and learn.

Most important, it is no longer sufficient to rely solely on domain expertise or advanced technology; it is the integration of these capabilities – with many abundant data sources – that differentiates a RegTech solution. And, it is exactly this combination that is required to tackle the increasingly complex risk and compliance challenges the industry faces today.

"What we need to do is pivot and start to utilize the emerging technologies to be able to take risk-management and compliance responsibilities, which will only get more complex over time, and deal with them in a sustainable and effective manner. Real progress will not be made without advanced technology."

Gene Ludwig

Cognitive can be a game changer for RegTech and the financial services industry. Just as oncologists are using cognitive systems to help determine the best cancer treatments, financial institutions can now arm themselves with the technology to make better informed decisions to manage risk and compliance processes and obligations, including regulatory change management, anti-money laundering (AML) efforts, know your customer (KYC) campaigns surveillance and stress testing.

By freeing up time and brainpower for risk and compliance officers to think strategically, RegTech can help them confidently guide their firms through regulatory change and move their organizations from being reactive to proactive about protection.

"There is a lot of promise for cognitive capabilities to significantly improve the way regulation and compliance occurs today."

Bridget van Kralingen

Cognitive in RegTech

When exploring RegTech solutions, firms will find the technology to be particularly beneficial across four focus areas:

Regulatory compliance – Fines, penalties and enormous compliance teams no longer have to be "the cost of doing business." The right combination of expertise and technology can help professionals quickly understand and manage new and changing regulations. Cognitive computing can transform the compliance process and programs – introducing effectiveness and better outcomes.

Financial risk – The Fundamental Review of the Trading Book (FRTB) is the most significant and complex update to market risk regulation in a generation. t represents a fundamental change to the way banks run their business – getting it wrong means banks could face with increased capital charges, representing millions of dollars and lost opportunities to grow the business. The challenges facing banks to get it right by the December 31, 2019 deadline are significant.

Financial crimes – Fines for not having appropriate safeguards in place for AML and KYC compliance have reached billions of dollars across the financial services industry. Machine learning can streamline remediation and investigation activities, dramatically reducing the time required for complex investigations.

Security – While the average global cost of a data breach was USD 158 per lost or stolen record across all industries, financial services experienced an average cost that was 40 percent higher, at USD 221 per record.[5] Cognitive capabilities can help firms stay ahead of rapidly evolving cybersecurity threats to their data by helping uncover hidden threats and automating insights.

Experts on this topic

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Armonk, NY 10504
Produced in the United States of America
June 2017

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GBE03845USEN-01

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