FROM MANUAL TO AI-UTOMATIC

Bringing Financial Institution Compliance into the 21st Century
A tsunami of regulations

A tsunami of global and local regulations, combined with an unprecedented volume of fines, is forcing financial institutions (FIs) to transform their approach to compliance. Keeping track of and balancing these regulations is complex, especially for those that operate internationally, while failing to do so is costly. In Europe, for example, FIs still face major challenges implementing Basel III due to data quality, standardisation and governance issues. Meanwhile, Basel IV is already being discussed and changes proposed.

Increased focus on compliance

Australian FIs face a similar challenge. In addition, the wide-ranging implications of the Royal Commission’s recommendations demand an increased focus on compliance. Due to the rapid pace at which regulatory obligations are being proposed, global FIs are considering new operating models—moving from a reactive to a more proactive approach when managing their regulatory obligations.

Key considerations

This paper provides key considerations in managing those obligations in a holistic manner, and focuses specifically on the potential use of artificial intelligence (AI) to generate process and operational efficiencies.
Global financial institutions (FIs) must today comply with a huge volume of local and international regulatory obligations which at times overlap and which can be interpreted differently depending on jurisdiction.

Non-compliance can result in steep penalties. Over the past decade, FIs globally have been fined more than US$28 billion for failures over money-laundering and sanctions violations with almost another US$10 billion levied for enabling tax evaders. It is little surprise that global banks have reportedly doubled the number of compliance staff since the mid-2000s, with estimates that compliance teams now comprise 10 percent of those banks’ employees.

It is not just the volume of new regulations that is a challenge—their impact can be complex too. For example, an Australian bank with operations in the European Union must comply with the stringent data privacy rules of the General Data Protection Regulation (GDPR), as well as with Australian data privacy guidelines. It is a complex process to understand each regulation, interpret it along the various business lines, validate its applicability and then embed the right processes and controls to ensure compliance.

There is much to keep them busy—Figure 1 lists some of the Australian and international banking-related regulations or guidelines that have been issued since 2017 or that are likely to be in place by 2022.
Figure 1: Australian and international banking regulations

- CRR: Central Clearing of OTC Derivatives (Jan 2018)
- IFRS 15: Jan 2018
- PRIIPs Key Information Docs for PRIIPs* (Jan 2018)
- PSD 2: 12 Jan 2018
- Regulatory Capital Rules (Jan 2018)
- Enhanced Leverage Ratio Compliance (eSLR) 1 Jan 2018

- IFRS 9: Hedge Accounting (Jan 2018)
- Automatic Exchange of Information (Jan 2018)
- MIFID II (Jan 2018)
- Qualified Financial Contracts (Jan 2018)
- Interim holding company (FBO) 1 Jan 2018

- PRIIPs: Packaged Retail and Insurance-based Investment Products
- Source: Accenture

2018

- International Conference of Data Protection & Privacy Commissioners 23 Oct 2018
- AFME AI—Considerations on the ethical use of AI Nov 2018
- CRR: Central Clearing of OTC Derivatives 1 Jan 2018
- FCA High Cost Credit Review Dec 2018
- CP23/18: Managing the financial risks from climate change Dec 2018
- Delivery of Common API Standards Q1, 2018
- Financial Crime, Information security 10 May 2018
- FIDR, Bank Recovery and Resolution Directive 1 Jan 2019
- GSII, Trends in Solvency Supervision 1 Jan 2019
- New Rating System 1 Apr 2019
- Benchmark Regulation 1 Jan 2020
- AMLO – FINMA, AML Ordinance 1 Jan 2020
- DLT 1 Jan 2020
- AMLCO–FINMA, AML Ordinance 1 Jan 2020
- UK Operational Resilience Timeline to be confirmed

2019

- Council of Europe Guidelines on AI and Data Protection 25 Jan 2019
- FCA to publish DIP18/B: Climate change and green finance Mar 2019
- FCA review of retained Consumer Credit Act provisions Apr 2019
- SM&CR/SIMR Mid 2019
- CMA reform to Competition in Audit Sector Mar 2019
- EMIR, Central Clearing of OTC Derivatives 9 May 2019
- Pillar 2 Liquidity 1 Jul 2019
- IFRS 16: Jan 2019
- Pillar 2 Liquidity 1 Jul 2019
- PSR & EMR 1 Aug 2019
- SEPA Direct Debit Core Rulebook 17 Nov 2019
- Initial Margin, non-centrally cleared derivatives 1 Sep 2020
- Measurement of Credit Losses on FI 1 Jan 2020
- MREL, Minimum requirement for own funds and eligible liabilities 1 Jan 2020
- Insurance Capital Standards to IAIGs 1 Mar 2020
- ML6, Sixth Money Laundering Directive 3 Dec 2020
- DAC 6 reporting of cross-border tax arrangements 10 July 2020
- California Consumer Privacy Act 1 Jan 2020
- Long Term Guarantees measures 1 Jan 2021
- IFRS 17: 1 Jan 2021
- LIBOR Dec 2021

2020+

- Revised IRB framework 1 Jan 2022
- FRTB – BCBS deadline 1 Jan 2022
- Distributed Ledger Technology Applied to Securities Markets 12 Jan 2023

*PRIIP: Packaged Retail and Insurance-based Investment Products

Source: Accenture
Traditionally, FIs managed the need to assess, interpret and implement regulatory obligations through a manual, reactive, time- and resource-intensive and error-prone approach, which often leads to non-compliance.

Leading FIs are instead considering new operating models to see how they can become proactive in regards to obligations management. This article will look at ways to do this, and in particular how to apply advanced technologies in pursuit of compliance.

We believe DARQ technologies (distributed ledger technology (DLT), AI, extended reality and quantum computing) will catalyse change across organisations and processes. It is clear that they offer businesses extraordinary new capabilities. One key role is played by AI which is the second in a group of the four DARQ technologies that Accenture research shows are being deployed far more widely by businesses in a range of areas.3

As we shall see, FIs can deploy AI and related technologies in a range of areas as they seek to build a more efficient compliance operation.
A HOLISTIC APPROACH TO REGULATORY OBLIGATIONS MANAGEMENT IS KEY

Leading FIs are transforming their obligations management capabilities by focusing on standardisation and by embracing new technologies.

That embrace covers related areas too. Take financial crime, for instance: this trillion-dollar industry includes cyber fraud, money-laundering, terrorist financing and corruption. In combating it, many FIs have stepped up their use of technology (known as regtech) that helps them focus on adhering to regulatory standards. In doing so, they increasingly rely on advances in areas such as AI, DLT, data analytics, machine-learning and robotics automation.

Many FIs, in other words, are deeply familiar with the benefits these technologies can bring, and they should consider how these can help them on the obligations management front too.
In deciding where to apply them, FIs should keep in mind how these can fit within a holistic approach comprising the following four pillars:

**Pillar 1**

**A consistent global operating model that is enforced by an obligations-management framework**

- In order for FIs to improve the risk and compliance aspects of their operating model, they must implement robust structures and frameworks at the organisational level to manage their obligations.

- An Obligations Management Framework is key in developing a global compliance standard. This enforces consistency across the organisation, and incorporates aspects such as interpreting regulatory texts, risk-in-change assessment, and continuous monitoring and control through compliance plans.

- FIs that put this framework in place will benefit from cutting costs and lowering operational risk. Additionally, by developing best-practice compliance procedures, they will stand out from their competitors.

**Pillar 2**

**A reference architecture for compliance risk-management to assist shared understanding, communication & collaboration**

- A well-designed reference architecture is essential to ensure a shared understanding of problems and solutions. Without it, problems cannot be explored from multiple angles, and ideas cannot flow effectively.

- One challenge is that each specialist comes with their own language and underpinning concepts, which obstructs shared understanding, communication and collaboration. Having a reference architecture in place helps here by enhancing re-use and innovation, and addresses concerns over speed, cost and quality. This is imperative in managing an ever-changing regulatory landscape.
Pillar 3  
A strong governance, risk and compliance (GRC) system that is bolstered by AI to create a more robust approach

- FIs face the burdensome (and often manual) task of keeping track of regulation amendments, assessing how applicable they are and their impact, and modifying their business operations to ensure compliance. It is therefore important that they implement robust GRC systems across their value chain to enhance this process.

- Integrating AI can further improve how effectively the identification, assessment and modification process operates, which results in more meaningful and value-driven changes across the organisation. Combining GRC and AI can allow organisations to shift their compliance lens from one that is reactive and inward-looking to one that is proactive and outward-looking.

Pillar 4  
A human-centric and data-led approach to enable user adoption

- Successfully transforming the obligations management model requires that changes are managed in a human-centric way. Organisations must therefore create a change experience which is personalised, engaging and inspiring. This requires applying design-thinking methods to develop interventions targeted at moments that matter in user journeys for various personas. An iterative and agile approach with ‘real-time’ course correction based on data-driven insights and value measurement will ensure the new approach is adopted, viable and sustainable across the business, operations and support teams.

While each pillar offers numerous benefits, this paper will look closely at Pillar 3—a strong GRC system that is bolstered by AI. Although AI is not a panacea, we believe it can prove valuable in numerous GRC processes across the full lifecycle of any regulation, as the next section will show.
#3

**THE AI-POWERED REGULATORY LIFECYCLE**

There are seven stages in the regulatory obligation lifecycle—from the moment the obligation arises through to the reporting stage. Here we look at each to see where applying AI can accelerate how regulatory obligations are discovered, assessed and implemented.

**Stage 1**

**Obligation trigger**

The process starts when a regulator notifies FIs of an upcoming regulation that they will need to implement at some future date. We call this first stage the **obligation trigger**.

Natural Language Processing (NLP) and other technologies can replace the current time-consuming, manual processes of assessing and disseminating new or amended regulations, or of evaluating improvement opportunities such as incorporating a new code of practice.

NLP can scan thousands of unstructured documents in a range of languages from regulators worldwide. One global FI, for instance, recently used NLP to translate MiFID II obligations into smaller, actionable steps to create an obligations library.

Obligations extracted using NLP can then be used to prepare or enrich Knowledge Graphs (see Figure 2), which link processes, obligations, risks, controls and accountability. This allows FIs to use advanced analytics to identify patterns and relationships from previous Knowledge Graphs, providing traceability in terms of their obligations and associated business processes and controls.

In addition, incorporating workflow integration between an FI’s NLP solutions and its GRC platform can ensure even greater efficiencies in managing its regulatory obligations.
Figure 2: Sample knowledge graph for markets in financial instrument directive (MiFID) cross-selling practices

The diagram above depicts how an obligation library can be created using knowledge graphs and mapped to risk and controls. This enables accelerated change impact assessments due to new regulations or amendments. Decomposition of a regulation into sections (e.g. “Section 6: Full disclosure of price and cost”), paragraphs (e.g. “Para 12-1”) and associated additional articles (e.g. DOC_Cross_Selling_practices”) assists in traceability of regulatory mandates. BPM_P1_SP_2 depicts a business process and its associated subprocess which is relevant to “cross selling practices” regulatory mandate under MiFID, whereas control_EEA_01 depicts control linked to risk “control & culture”.

Source: Accenture
Stage 2
Regulatory interaction

The second stage is regulatory interaction. During the consultation period, many FIs struggle to interpret an obligation clearly, resorting to industry forums to discuss linked challenges and seeking guidance from the regulator. Additionally, compliance and legal teams typically track all regulatory guidance and associated changes manually.

Both factors can result in a lack of traceability and the absence of a single source of truth, which risks the FI failing to comply. Again, using an integrated NLP and GRC solution would enable better traceability of regulatory guidance and accountability.

In addition, by enriching the Knowledge Graphs that were created in Stage 1, FIs can easily predict the impact of any regulatory amendments on their business units, as well as on their processes, risks and controls. This also provides assurance to regulators that the FI’s obligations have been properly interpreted and implemented.

Stage 3
Impact assessment

The third stage is the impact assessment. This is the point where business units manually review legislation to identify regulatory requirements, and undertake a gap analysis to determine any control gaps or weaknesses in associated business processes.

Having a well-documented and integrated risk and control taxonomy is a prerequisite at this stage to determine how much impact an obligation will have. Some global FIs with well-established taxonomies are already working towards automating their control gap assessments. FIs can use AI and machine-learning to conduct that gap assessment and significantly cut the amount of effort required to prove the robustness of their control environment and their readiness to adopt new obligations checkpoints.
Stage 4
Determining accountability

The fourth stage involves determining who is accountable for the various regulatory aspects and assigning responsibility. Australia’s Banking Executive Accountability Regime (BEAR) and its Banking Code of Practice (BCOP) require transparency in each step of the business processes.

Here, too, ever-changing operating models combine with evolving roles and responsibilities, leaving global FIs often struggling to provide regulators with clarity on which executives are accountable and responsible for managing the regulatory obligation lifecycle.

Resolving this requires an efficient data architecture, and using available data on obligations and business processes in conjunction with human resources information to substantially enrich Knowledge Graphs. AI can help here by managing and reporting who is accountable for key business processes under the new obligation.

FIs can also deploy advanced analytics to compare previous Knowledge Graphs and see which teams are best tasked with specific responsibilities.

Stage 5
Delivery and action

The fifth stage is delivery and action. AI solutions can simplify a range of functions, from designing controls to performing a gap assessment of policies and frameworks and ensuring traceability of regulatory obligations.

Take the process of designing controls and assigning ownership: FIs currently map controls manually against obligations. This is both inefficient and results in a lack of monitoring. Using AI tools to extract obligations and map those to a Knowledge Graph links processes, obligations, controls, risks and accountability. These tools can also be used to see what lessons can be learned, and in this way help to minimise compliance gaps.

Another aspect relates to policies. New regulations require that FIs define new policies or update existing ones. An NLP engine can process existing policies and the new obligations to suggest what is needed to comply. This helps FIs by accelerating policy- and framework-gap assessments; also, given that FIs will enjoy better visibility of the workforce affected by a policy change, this also helps them to manage change effectively across three lines of defence.

A further requirement is that FIs monitor changes and ensure traceability. AI tools can do this far better by updating the Knowledge Graph that monitors not just regulatory documents but also repositories of internal knowledge, such as processes and controls or the employee database.
Stage 6  
**Operational compliance**

The sixth stage is *operational compliance*, which again is a manual process that – due to the inability to map obligations automatically to risks and controls - results in a lack of monitoring. FIs can use a combination of machine-learning and Robotic Process Automation (RPA) here, cutting the manual burden, providing traceability of execution, and increasing assurance of their controls.

Using machine-learning and RPA can significantly reduce the efforts required for key risk management processes, such as control assurance.

Stage 7  
**Reporting**

Finally, there is the *reporting function*. Again, the process of reporting to the executives and the board is manual, and often based on reporting metrics rather than insights.

FIs could instead use AI and machine-learning to generate predictive insights for executives and the board, rather than relying on reactive metrics-based reporting.

A robust Knowledge Graph supported by efficient data architecture can also help FIs see beyond standard data patterns, and instead provide a risk management approach that is both predictive and pre-emptive.
First, FIs must decide whether AI and other technologies can help them to automate certain steps and processes in the end-to-end lifecycle of regulatory compliance, making their obligations management more efficient.

Second, they must consider whether these can make them more proactive in anticipating future regulatory changes.

There is no single right answer. But it is the case that, although AI and technologies like RPA cannot solve for every issue FIs face in this arena, they can, if deployed wisely, make them more responsive and lower the risk of non-compliance.

Globally, banking executives are aware of AI’s potential across the business spectrum: recent Accenture research showed that 47 percent said AI would have a greater impact on their organisation over the next three years than any of the other so-called DARQ technologies - distributed ledger/blockchain technology, extended reality and quantum computing (see Figure 3).
Figure 3: Technologies ranked by banking executives in terms of which will have the greatest impact on their organisation over the next three years

- Distributed Ledgers/Blockchain: 17%, 24%, 29%, 27%
- Artificial Intelligence: 47%, 20%, 16%, 14%
- Extended Reality: 15%, 22%, 26%, 14%
- Quantum Computing: 19%, 32%, 26%, 21%

Greatest impact | Third greatest impact
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Second greatest impact | Fourth greatest impact

Global n = 6672; Banking n = 784

Additionally, as that report noted, 90 percent of banks are already experimenting with one of more of these DARQ technologies. AI is leading with 43 percent adoption across a range of uses, from credit-decisioning to customer service chatbots, with AI-augmented operations delivering cost savings of 20-25 percent.

As Australia’s FIs and their global peers are compelled to manage an increasingly complex regulatory agenda, it is clear that the current manual method of assessing, disseminating, monitoring and reporting compliance-related issues is outdated. As with other aspects of the financial services industry, AI and other technologies can help: they hold the promise of being able to handle huge amounts of data that will make this process both more efficient and less costly, and will lower the risk of non-compliance. Using AI and other solutions can also allow FIs to engage proactively with new or updated regulations, to increase the automation of their existing compliance regime, and to reduce human error.

Relying on technology to satisfy regulators, however, is admittedly of a different order to employing a chatbot, and it is little surprise that some compliance officers worry about the financial consequences should such solutions fail. It is therefore important to adopt a holistic approach to managing these obligations. Perhaps the better question for FIs is not whether to incorporate AI and related technologies, but how best to do so in order to meet their organisation’s needs.
About the Authors

Tales Lopes
Managing Director
Finance, Risk and Compliance
Practice Lead for Australia and New Zealand,
Accenture Financial Services
tales.s.lopes@accenture.com

TejPratap Randhawa
Senior Manager
Finance, Risk and Compliance,
Australia and New Zealand,
Accenture Financial Services
TejPratap.s.Randhawa@accenture.com

Alexandre Hirohashi
Technology Consulting
Senior Principal,
Finance, Risk and Compliance,
Australia and New Zealand,
Accenture Financial Services
alexandre.hirohashi@accenture.com

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Contributors

Jennifer Pham
Manager, Management Consulting, Accenture

Marta Arza
Consultant, Management Consulting, Accenture

Christina Kukec
Consultant, Management Consulting, Accenture

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