Modernizing regulatory reporting in banking & securities
Where to get started
Automation and cognitive intelligence technologies can significantly improve business processes by streamlining existing activities that are highly labor-intensive and time-consuming – enabling organizations to complete thousands of hours of manual work in just minutes with little or no human involvement.

Automation solutions tend to focus on highly manual tasks that are routine, repeatable, and time-consuming. In contrast, cognitive intelligence solutions generally focus on higher skill tasks that require significant knowledge, judgment, insight, and expertise.

In banking & securities, robotic process automation (“RPA”) is already widely used to automate workflow and decision-making for a variety of rules-based core processes, such as loan origination and collections. As the technologies mature, many firms are expanding their use of automation and cognitive intelligence (“CI”) to drive efficiency, effectiveness, and productivity throughout the enterprise.

One area that can benefit greatly from these innovative technologies is regulatory reporting. In the future, the entire regulatory reporting process will likely be automated end-to-end, from source system data to report mapping and business rule automation to report generation. However, reaching that point will likely be a complex undertaking that could take many years to complete.

Rather than wait for full transformation, firms should capitalize on the significant improvement opportunities available today by focusing on key parts of the regulatory reporting process that are primed for automation and CI. By embracing regulatory reporting’s complexity and leveraging these technologies, organizations can lead in banking & securities, navigate risks and opportunities, and disrupt the status quo. This article highlights key opportunities, and offers practical considerations to help firms avoid potential pitfalls.
Where to focus
To maximize the savings and other benefits from RPA and CI, it’s important to focus on the areas within report preparation that can provide the biggest return on investment. These may include:

• Optimization of data extraction from origination systems, systems of record, data warehouses, and other systems that are being performed manually by various data providers
• Standardization of data aggregation and development of reporting templates
• Enhancing regulatory reporting capabilities for both management oversight and report review processes, including reconciliation, variance analysis, etc.
• Streamlining and enhancing reporting data quality and data lineage documentation should also be considered for automation, given the focus on data integrity, documentation, and overall report accuracy
• Development of regulatory report review and analysis packages using CI technology such as Natural Language Generation (“NLG”)

Typically, these activities are resource intensive, repetitive, and have a very short turnaround time. In the event of any errors or discrepancies identified during the reporting process, some or all of the steps may need to be repeated.

Given the history and maturity of any organization, the regulatory reporting requirements for all of the above steps can be further refined to make these actions rules-based and thereby enabling a bot to be programmed to do those actions. For instance:

• Data extraction: File name, location, time, and format can be defined by rules and a bot can be programmed to extract the data as soon as it is available.
• Activities such as data cleansing and validation can be automated based on clear requirements regarding column names, format, type, etc.
• Aggregation, variance analysis, and reconciliation may be slightly more complex actions (e.g., criteria for aggregation involving complex calculations and reconciliation including several steps using “if-then” scenarios). However, if these processes are well defined and requirements are clear, bots can be programmed to perform those actions

Depending on an organization’s maturity level in the processes and technology environment, the extent of the automation for the above instances may vary.

In addition to report preparation processes, organizations should consider automating controls monitoring and testing, both process controls (onboarding, recording, reconciliation, review and approval) and data controls (specifically data quality checks at each transformation point of the reporting data flow).

Finally, review programs performed by both Quality Assurance teams and by Internal Audit also provide opportunities for RPA and for use of cognitive tools such as Natural Language Processing (NLP), as well as NLG.
**Business benefits**
Applying RPA and CI to the realm of regulatory reporting can improve efficiency, effectiveness, and productivity. These benefits may include:

- Execution of currently manual tasks on a 24x7 schedule with minimal human supervision
- Redeployment of skilled resources to more value add tasks
- Enhancements in quality of data, documentation and overall report accuracy
- Ability to further streamline the process with every cycle by enhancing the bots with additional logic based on new requirements and errors identified during any submission cycle

**Getting started:**
RPA is not a one-size fits all panacea for the end-to-end regulatory reporting landscape. Complete automation would require a complex, multi-year implementation and transformation in the mind-set and culture of the organization. However, organizations do not need to wait for complete automation and can target improvements in the short term by using automation and CI in areas that typically emphasize efficiency, productivity, and process enhancement – an approach that requires a relatively small investment and a short implementation timeframe.

- **Quick wins.** These initiatives can generally be completed in less than two to three months, enabling a firm to validate concepts and demonstrate benefits before scaling up. An example is automating the data extraction and data cleansing activities, or automating a set of testing activities that have high frequency and volume.

- **Intermediate opportunities** – medium-term (4-8 months) initiatives around process optimization, standardization efforts that can accelerate strategic solutions

- **Strategic solutions.** These initiatives have a more ambitious scale and impact—and typically generate greater savings—but in most cases can still be completed in 8-18 months. Examples include automating large groups of tests in targeted areas/sites, workflow management, and enterprise-wide reporting requirements (FR Y-14, FR Y-9C, etc.).

Firms should consider pursuing a two-pronged strategy focusing on activities where automation and CI can deliver tangible benefits in the short time-frame. Starting with quick wins helps build momentum and support, making it easier for people to embrace innovation and overcome resistance to change and fear of the unknown. Any benefits achieved in terms of resources and time can be realigned with other strategic initiatives. The early successes can then be expanded or extended to other parts of the regulatory reporting process – with the ability to provide greater benefits with reduced risk in the long run.

**Challenges**
There are a number of common issues and challenges that typically need to be addressed in order for automation and CI to be effective. In the early stages of an implementation, organizations may have to address several challenges, some of which include:

- Sustainability and maturity of existing processes and systems could potentially impact automation, especially if they are constantly evolving
- Reporting structure siloes and lack of enterprise-wide governance and accountability
- Fragmented data architecture and data quality issues
- Impact of processing errors can be magnified by high-paced bots
- Bot-related errors can negatively affect the integrity of reports and may generate incorrect results
- Changes to the IT platform will affect critical element of the workforce, including replacement/repurposing of the FTEs – and may require additional training for the workforce

None of these issues are true deal-breakers; however, they need to be managed efficiently to reduce their impact. To address risks effectively, it is important to define a framework and a governance structure to establish the IT and business interaction model, along with a strong control environment focused on automation.
Conclusion

RPA is demonstrating its capacity to improve process effectiveness and efficiency, expand capacity, and boost quality. It is also a harbinger of more to come. Breakthroughs are occurring in cognitive automation, artificial intelligence, and other tools which are designed to automate ever-more complicated, judgment-based tasks. At the same time, the world of regulatory reporting is only becoming more and more demanding with very stringent requirements and timelines. It is imperative that organizations not lose sight of the long-term benefits while focusing on some of the key activities that can be automated in the short term. While it is impractical to try and automate everything, institutions should consider performing a cost-benefit analysis to determine whether undertaking an automation effort for a process or activity makes business sense. Other levers, such as organizational and process optimizations, can also deliver big returns. Finally, it is important to remember that new tools and techniques are emerging constantly that may provide previously unimagined opportunities. While something may be impossible today, who's to say it still will be tomorrow?

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