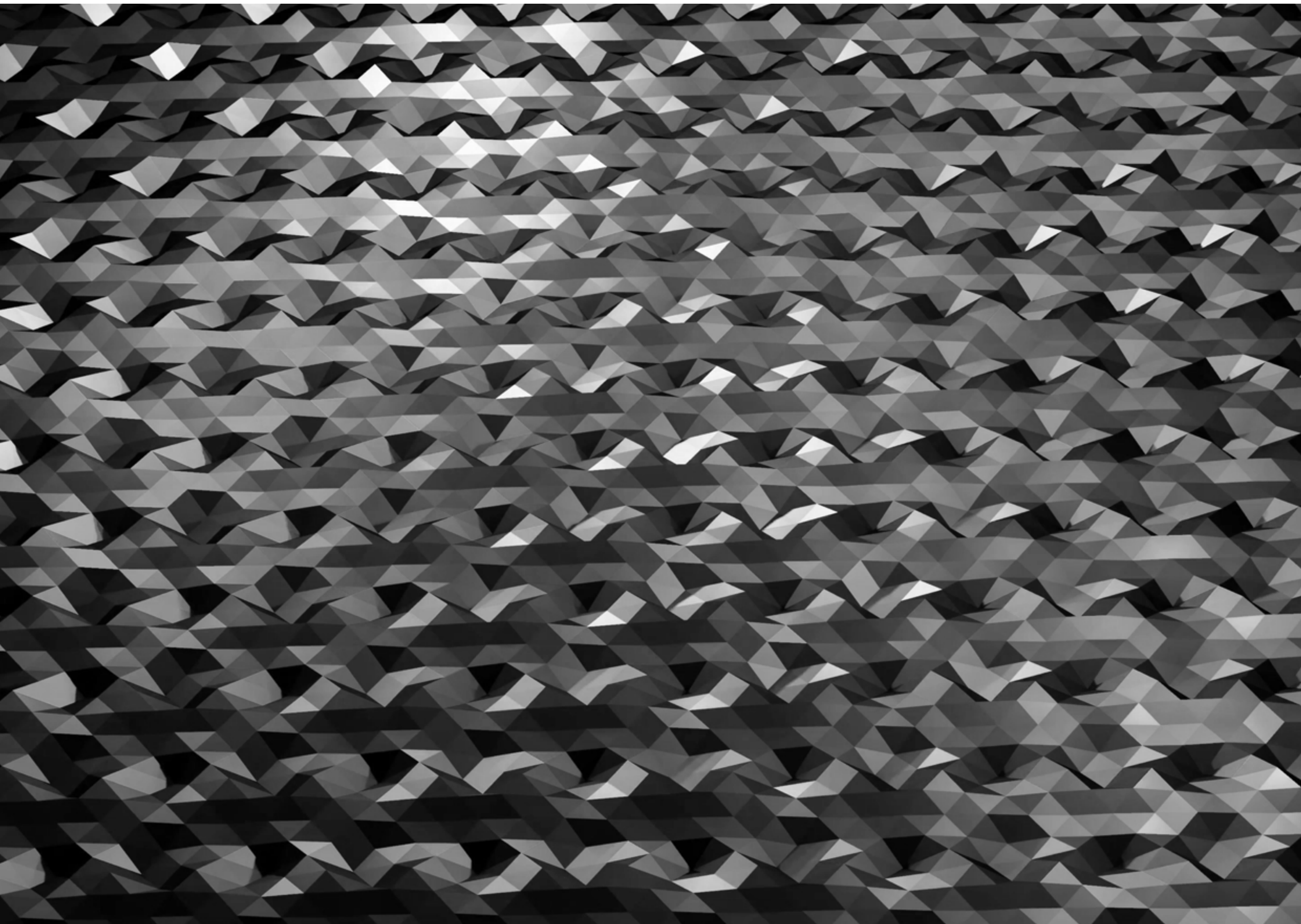
CAPCO

CAPITAL OPTIMIZATION:

THE ROAD AHEAD FOR BANKING RISK & REGULATION



SPEED READ

- 2021 is expected to be a busy year for most risk and capital management teams, with many high-impact regulations on the radar, ranging from Capital Requirements Regulation (CRRII) to the EBA's Internal Ratings Based Repair Package, whilst also planning and transforming their operating model and systems for Basel IV.
- Banks often face the same set of issues when it comes to implementing risk regulations. These include requirements definition, business strategy alignment, current and future state definition, budget and resource allocation, and change and implementation techniques.
- Management teams should reconsider their solution approach to risk and change and take a more holistic approach, which includes unlocking of capital as a key objective of their strategic plans rather than focusing purely on the implementation and compliance aspects.
- Banks should consider the following:

  a. Cross-regulatory capital impact assessments

  b. Centralization of risk framework and governance decisioning

  c. Network views of current & future state architecture

  d. Data quality remediation via graphical mapping

  e. Central pooling of specialist resources

OVERVIEW

In the years since the 2008 financial crisis and the seismic shift in global banking regulations it precipitated, capital frameworks and risk operating models across the financial industry have been in a constant state of flux. The complexity and scope of those regulations have impacted all aspects of banks' risk operations, including portfolio strategy, internal policy, risk and governance frameworks, risk methodology, reporting, data governance, and IT architecture . The ongoing challenges institutions face in implementing the recent Basel III and CRRII requirements, whilst also preparing for Basel IV and the IRB Repair Package, have once again underscored the importance of developing a more holistic approach to regulatory change and implementation.

Banks often face the same set of issues when it comes to implementing risk regulations. These include requirements definition, business strategy alignment, current and future state definition, budget and resource allocation, and change and implementation techniques. However, despite the diverse geographical and business wide coverage of these regulatory initiatives, there are common impacts across data, risk methodology, and IT architecture. For example, second order risk reporting, which is a specific EBA IRB requirement[1], is also required internally to meet CRRII large exposure reporting and concentration risk standards.

Whilst banks have traditionally had parallel and often siloed implementation initiatives, the potential synergies between the initiatives provide significant opportunities to minimize the negative impact of regulatory implementation costs on ROI. It is therefore imperative that management teams aim to rethink their approach to risk and take a more holistic approach, including the unlocking of capital, as a key objective of their strategic plans rather than focusing purely on the implementation and the compliance aspects. Ultimately, those market participants that can pivot and take advantage of capital efficiencies to the best extent possible will stand to gain a competitive edge.

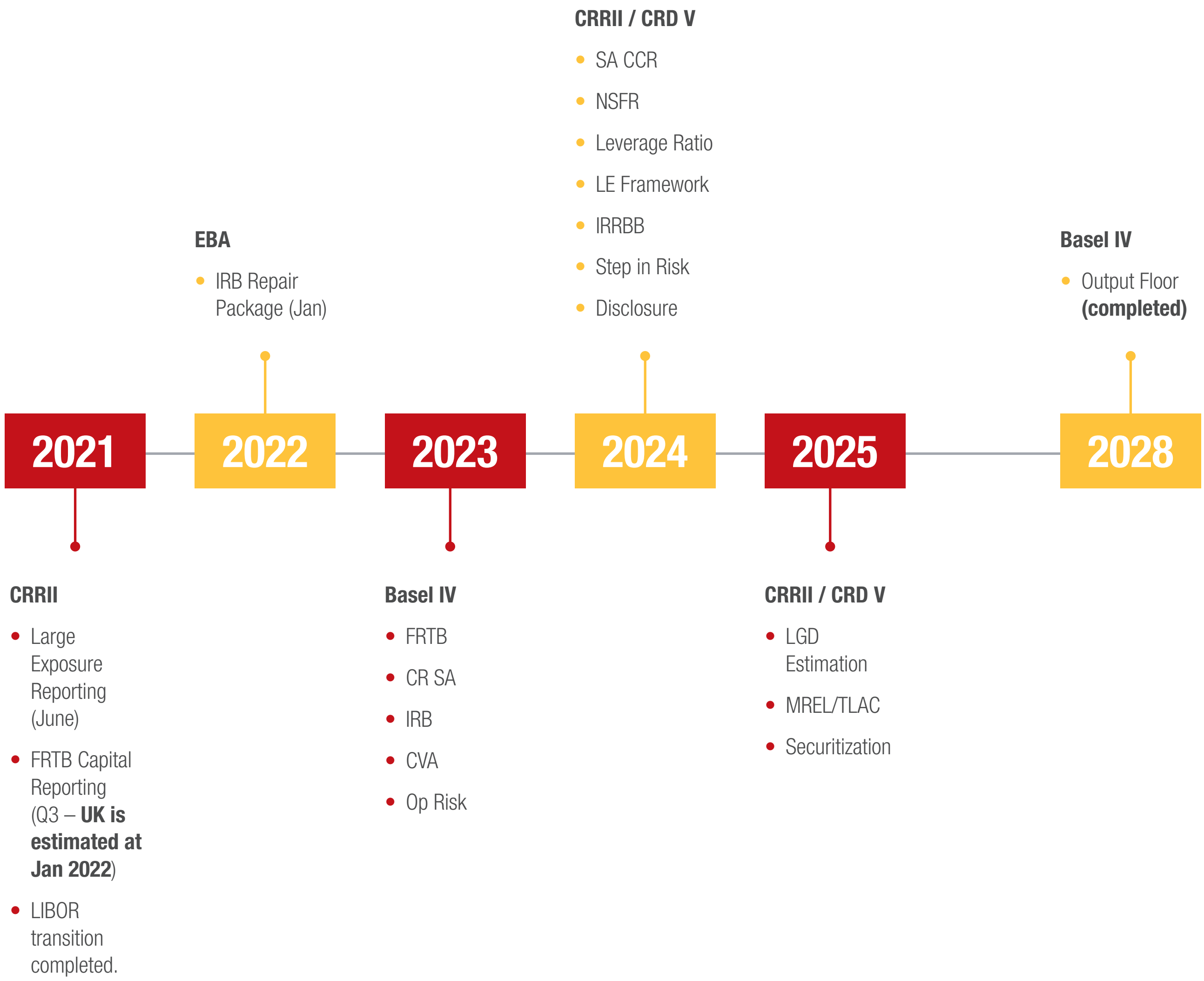
1. https://www.eba.europa.eu/sites/default/documents/files/document_library/Publications/Guidelines/2020/Guidelines%20on%20Credit%20Risk%20Mitigation%20for%20institutions%20applying%20the%20IRB%20approach%20with%20own%20estimates%20of%20LGDs/883366/Guidelines%20on%20CRM%20for%20A-IRB%20institutions.pdf

REGULATORY LANDSCAPE

Despite the extension to timelines implemented in response to COVID-19, there remains a waterfall of upcoming regulatory initiatives of overlapping scope and with conflicting delivery timelines. Figure 1. below highlights the upcoming risk and capital regulations that banks need to consider for 2021 and beyond.

Collectively, these initiatives will impact the entire end-to-end risk lifecycle across both trading and banking books. The recent rejection of the EBA's CRM Guidelines by the UK's Prudential Regulation Authority, which presents clear jurisdictional policy implications and delivery risks for banks operating across both the UK and Europe, has again highlighted the delivery challenges that banks face.

FIGURE 1. – TIMELINE OF UPCOMING REGULATORY DELIVERABLES



DRIVING STRATEGIC CHANGE

Given the scale and scope of the changes, **Figure 2**. below reflects the key planning stages that banks should consider at a strategic level when approaching regulatory initiatives.

Key considerations for each of the planning stages in Figure 2:

1 **Regulatory definition**: Whilst the regulatory initiatives can often change or be amended following industry consultations, and are somewhat open to interpretation, having clarity on regulatory definitions and/or RWA requirements is a critical foundation for effective implementation. A lack of clearly defined working assumptions can lead to parallel implementation streams across regions, businesses and functions – potentially with conflicting goals and targets. This can complicate and delay interlocks when it comes to future state definition and, by extension, planning and budgeting.

2 **Strategic goals**: The new capital requirements, in particular the Output Floor, Credit Risk Mitigant (CRM) treatment, and Modelling restrictions will affect retail and institutional portfolios across asset classes in the traded and banking book, with significant impact to market competitiveness. Banks should

FIGURE 2. – RECOMMENDED END-TO-END SOLUTION DESIGN APPROACH

take this as an ideal opportunity to revisit their business or portfolio-level strategies, identifying capital intensive asset class exposures and setting internal hurdle rates based on the bank's strategy, risk appetite and ROI commitment to shareholders. In our experience, the main challenges in achieving this effective capital management and portfolio composition lie in obtaining accurate granular RWA impact assessments: these can often be hampered by poor data, inconsistent existing processes and product groupings, and a lack of clarity on existing risk methodology across regions.

3 Risk appetite: The overarching business and portfolio strategies will determine the bank's overall risk appetite and RWA optimization strategy, as it seeks to reduce capital charges e.g., targeted RWA reducing business initiatives such as less capital intensive traded and banking book product classes can boost profitability. By having a clear risk strategy, banks can more accurately define their future state and focus their budgets accordingly, before embarking on a multi-year transformation journey which itself may inevitably be subject to change.

4 Current state definition: Before the future state can be defined, banks must review existing (and often fragmented) policies, frameworks and IT architectures that are the result of previous implementations and years of tactical fixes. In our experience this is the most important stage, particularly for IT development, as banks that have a comprehensive overview of current architecture can accurately define a more efficient and transparent future state – and the associated transition path. Historically, this has been a key source of implementation inefficiency and can sometimes derail entire delivery programs.

5 Future state definition: Having a clear signed-off future state will align stakeholders and help clarify accountability for delivery. This in turn will help drive strategic outcomes and ensure the finite budget prioritizes long-term solutions rather than tactical/conflicting deliveries. Without this, there will be conflicting visions from stakeholders, informed by existing business practices, local regulatory requirements, and legacy processes that have been in place for a long time.

6 Budgeting: With change requirements impacting across business, IT, risk and finance operations, budget and resource allocation is a core issue, made more critical by the specific skill sets required for each stage of delivery. It is common to underestimate budget requirements and the time required to secure the right talent, particularly in areas such as policy and framework, risk methodology (QRM), data governance, and IT development. The outcome can often be a lack of adequate skill sets, which are often siloed instead of being available across functions – e.g. quantitative risk modelling that covers both market and credit risk, and has applications across global and regional models.

7 Change & implementation: The holistic implementation plan should link the deliverables to strategic outcomes with clear accountability and dependencies. A lack of a formal delivery plan will likely lead to a fragmented approach, requiring a succession of replans as regulatory requirements change or as project risks emerge during implementation and are resolved in isolation without reference to wider strategic outcomes or impacts in other areas of the bank. These could create delivery delays, which would subsequently impact regulatory credibility.

The clarity this framework provides will improve the implementation techniques deployed. In our experience, banks often attempt to employ Agile techniques to increase momentum around delivery. However, while these techniques may work well in focused areas such as IT development and micro delivery, they are less effective when applied to policy and framework discussions, which often require multiple working groups and rounds of analysis before a consensus is reached, let alone a policy position be drafted. This can lead to inaccurate internal KPI monitoring, forcing clients to engage in costly, and sometimes unnecessary, replans.

PROPOSED APPROACH & TOOLS

Given the challenges banks face across the implementation cycle, and the importance of a more holistic approach to risk change, let us look at some of the tools which they can use to improve the effectiveness of their risk strategy and planning.

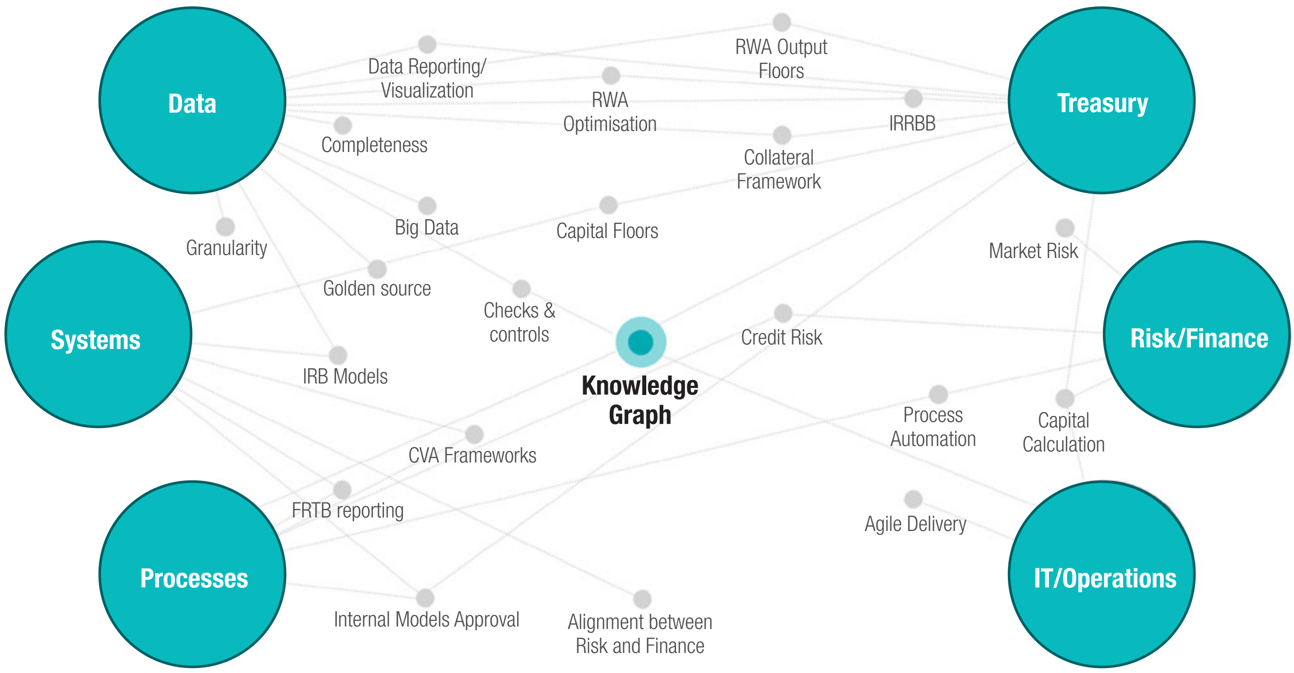
Capital Impact Assessment:

In our experience, banks that combine data analytics tools with regulatory policy at the planning stage can identify the most material RWA opportunities across geographies, businesses and products, allowing for a restructure in portfolio strategy. This means the subsequent plan and implementation can be driven by the most material opportunities across these different dimensions. In addition, RWA and capital checklists can be used to assess counterparty risk materiality on the basis of client type, product classification, and Uncleared Margin Rules (UMR) requirements. Relationship managers are then able to optimize portfolio structuring to target clients, reducing top line capital charges.

Centralized Framework Overview:

By taking a graphical thinking approach and using tools such as knowledge graphs, firms can create a clear map of existing risk and policy frameworks at both a global and regional level. This will make it easier to assess the impact of new regulatory requirements and efficiently carry out gap analysis on existing frameworks, leading ultimately to a more accurate definition of project requirements.

FIGURE 3. – EXAMPLE OF A KNOWLEDGE GRAPH



Core to defining this is a centralized regulatory and policy team across regions and risk classes, which provides a single point of authority on regulatory requirements and implementation needs. This will make it easier to assess the impacts of new regulations, and efficiently carry out gap analysis on existing frameworks, leading to a more accurate future state definition and more precise budgeting.

The previously mentioned second order risk requirement for EBA is a perfect example of this, as it is equally essential to ensure the accurate delivery of large exposure reporting (a CRRII requirement), and for supporting concentration risk monitoring.

By mapping end-to-end process flows alongside stakeholder engagement, it is possible to carry out a gap analysis across model methodology, capital reporting and collateral management. This can directly impact the design and responsibilities of the new framework, aligning policy and methodology , and ensuring IT process changes are quickly

FIGURE 4. – AN EXAMPLE OF AN ENTITY RESOLUTION TOOL

Search Problem – Blocking

Involves sorting and grouping data by one or more variables. Initial linking step that aims to greatly reduce the numbers of comparisons between files.

Manual Fine Tuning

A sample of well-established entities should be verified in the process of creating the computational model to allow better tunning of the Entity Resolution methodology.

Measuring Performance

A manual effort on a random dataset to establish the frequency of false negative occurrences (should join but did not) and false positives links (should not join but did). Step allows iteratively increase accuracy of ER.

Data Mapping

Data Analysts must inspect the data to verify the key attributes linking the systems. Crucial to create cross-relations between systems to allow more permutations and better linkage.

Classification Problem – Choosing Model

Developed Model to perform Probabilistic linking can involve various technologies including ML, weighted attribute scoring, thresholds and transitive closures methodologies.

Canonicalization – Aggregation Problem

Linked Entities must be aggregated into a single record with their combined information. This is often achieved using graph methodology to visualize the connections between entities.

identified and apportioned. This allows banks to focus on strategic solutions in favor of tactical solutions.

Current State Architecture Development:

Further to the previous point, firms need to map out existing business and region-wide IT architectures, creating a taxonomy of systems and tactical processes to assist planning and future state design. In our experience, identifying legacy systems and creating a clear end-to-end process flow is often a major challenge, especially for larger and more complex international banks.

By employing tools such as **Knowledge Graphs**, banks can create a **Network View** of the current IT architecture. The transparency this creates will help identify overlaps and synergies, to better refine the system requirements, define the future state, and ultimately the project roadmap itself.

Data Quality Remediation:

By employing analytical tools such as entity resolutions (**Figure 4.**) and complexity spectrums to provide a network view of the existing data landscape, firms can quickly establish clear data mapping, join data keys, and define attributes. In our experience the resultant transparency will assist firms in broadening and deepening their current state repositories, while ensuring a clear governance process, which will form a solid foundation for future enhancements or regulatory reviews.

Human Capital:

The complexity of risk and capital change requires a material degree of technical product knowledge, data expertise, regulatory knowledge, and an understanding of how internal bank processes work. Whilst banks often have the required skill sets split across functions, regions and businesses, it can be difficult to aggregate and scale the skills required. Therefore, these tailored skillsets often need to be complemented by employing people with strong planning, training and communication skills to complement the core SMEs. Without them, deliveries can be delayed, something that is especially true in areas such as risk modelling, policy work, collateral legality, and E2E testing.

Firms can take a different approach in respect of certain functions such as Quantitative Risk Modelling , where key skills – though hard to come by – can be employed across asset classes, risk types, and business functions. The upside is that firms can reduce the project delays caused by resourcing issues.

CONCLUSION

In summary, after a decade of consistent risk change, there is still no immediate end in sight to new banking regulations. With CRRII starting this year, and Basel IV on the near horizon, banks need to make a material effort to determine the optimal approach to implementing regulation across risk and compliance.

Taking a more holistic approach to the current and upcoming regulations, synergies can be achieved across policy, frameworks, data and IT delivery. In addition, by taking the opportunity to rethink their business strategy, firms can minimize the impact on their ROI, and in many cases enhance market competitiveness.

AUTHORS

Nikhil Talwar, Senior Consultant, nikhil.talwar@capco.com
Vikrant Patil, Senior Consultant, vikrant.patil@capco.com
Javed Ahmed, Executive Director, javed.ahmed@capco.com

CONTACT

Owen Jelf, Partner, owen.jelf@capco.com

ABOUT CAPCO

Capco is a global technology and management consultancy dedicated to the financial services industry. Our professionals combine innovative thinking with unrivalled industry knowledge to offer our clients consulting expertise, complex technology and package integration, transformation delivery, and managed services, to move their organizations forward.

Through our collaborative and efficient approach, we help our clients successfully innovate, increase revenue, manage risk and regulatory change, reduce costs, and enhance controls. We specialize primarily in banking, capital markets, wealth and asset management and insurance. We also have an energy consulting practice in the US. We serve our clients from offices in leading financial centers across the Americas, Europe, and Asia Pacific.

To learn more, visit our web site at **www.capco.com**, or follow us on Twitter, Facebook, YouTube, LinkedIn and Instagram.

WORLDWIDE OFFICES

APAC
Bangalore
Bangkok
Gurgaon
Hong Kong
Kuala Lumpur
Mumbai
Pune
Singapore

EUROPE
Berlin
Bratislava
Brussels
Dusseldorf
Edinburgh
Frankfurt
Geneva
London
Munich
Paris
Vienna
Warsaw
Zurich

NORTH AMERICA
Charlotte
Chicago
Dallas
Hartford
Houston
New York
Orlando
Toronto
Tysons Corner
Washington, DC

SOUTH AMERICA
São Paulo

WWW.CAPCO.COM

CAPCO

JN_3151