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This publication is part of the Deloitte Center for Regulatory Strategy, Americas’ cross-industry series on the year’s top regulatory trends. This annual series provides a forward look at some of the regulatory issues we anticipate will likely have a significant impact on the market and our clients’ businesses in 2020. The issues outlined in each of the reports provide a starting point for an important dialogue about future regulatory challenges and opportunities to help executives stay ahead of evolving requirements and trends. For 2020, we provide our regulatory perspectives on the following industries and sectors: banking; capital markets; insurance; investment management; energy, resources, & industrials; life sciences; and health care. For a view of the other trends affecting capital markets in 2020, we encourage you to read the Deloitte Center for Financial Services companion paper.

We hope you find this document to be helpful as you plan for 2020 and the regulatory changes it may bring. Please feel free to contact us with questions and feedback at CenterRegulatoryStrategyAmericas@deloitte.com.
Economic outlook
We may see weak growth in a number of regions in 2020, with significant downside risks. Regulators’ and supervisors’ work programmes are likely to be heavily influenced by their assessment of the economic conditions under which firms will be operating. Increased trade tensions, especially between the US and China, are likely to fragment markets further, dampen growth and create a harsher business environment for financial services firms.

In the United States, the yield curve on Treasury bonds was inverted until recently, which has in the past been a harbinger of recession. Equity valuations are high due, in large part, to monetary easing: The US equity market is more overvalued on some measures than at any point since the dotcom bubble.

Meanwhile in China, growth has continued to slow and gross debt surged from 171% of Gross Domestic Product in 2008 to 299% in 2018. High debt levels could become unsustainable if growth slows further.

In our view, the risk of a recession is highest in Europe. Growth in Germany is expected to be as low as 0.5% in 2019, partly due to its manufacturing sector’s vulnerability to poor export markets, although some recovery is expected in 2020. Italy is facing political uncertainty, economic stagnation and resurging financial turbulence, while servicing high public debt. And the UK faces an uncertain outlook, in part due to Brexit. Therefore, while growth for the Eurozone in 2020 is projected at 1.4%, which is similar to its postcrisis trend rate, significant downside risks remain.

Central bankers are likely to respond with further monetary easing, with the US Federal Reserve Board and the European Central Bank having already cut rates further and renewed their asset purchase programmes. However, with interest rates at an unprecedented low, and with a record amount of sovereign and even corporate bonds trading at negative nominal rates, the effectiveness of such measures in isolation is debatable. Authorities may consider using macroprudential measures, such as allowing banks to run down countercyclical buffers. Governments are also likely to face pressure to increase spending to stimulate growth, especially given the backlog of infrastructure spending in some countries.

These macroeconomic trends and conditions will put even more pressure on financial services firms’ business models, at a time when competition from new entrants and major digital players is also increasing. We expect supervisors to have a heightened focus on business model resilience, through stress testing, and on the quality of risk governance and oversight.

Banks may struggle to regain profitability, and even to maintain margins, through their traditional business model in a low, or negative, interest rate environment. For example, Japan has had a zero or negative interest rate policy for nearly two decades. Japanese banks have struggled with low interest margins and face increasing supervisory scrutiny on business model sustainability. A reduction in cross-border financial flows as risk appetites reduce may also narrow banks’ growth opportunities. Banks will need to redouble their efforts to control costs and refocus on more profitable business lines. However, they will need to be mindful of conduct risk. Supervisory focus on credit risk is also likely to intensify.

Investment managers too will likely struggle to perform well in an environment characterised by high asset prices and low growth potential. The increasing scrutiny by investors and regulators of the value generated by active management is likely to drive a continued

Global foreword
After a decade of global regulatory reforms defined by the financial crisis and misconduct issues, the regulatory environment is now changing profoundly. The international consensus on regulatory reform is fraying. Political appetite for globalisation is retreating, and trade tensions are mounting. Technological change and social concerns, including environmental sustainability, are rising on regulators’ agendas. Financial services firms need to be prepared to respond to these trends.
“search for yield” and encourage investment in more exotic and less liquid markets. We expect supervisors to focus increasingly on how investment managers and distributors satisfy themselves that funds holding higher risk assets meet the needs and risk appetite of their target market.

The fraying international consensus
With the postcrisis reforms near completion and the political environment becoming less supportive of international cooperation, global standard-setting bodies—particularly the Basel Committee on Banking Supervision and the Financial Stability Board—have less ambitious plans to introduce new standards than in previous years. Work to implement the remaining aspects of the G20 financial regulatory reforms has slowed, with many jurisdictions behind in implementing Basel III (“Basel IV” to industry).10

Given the current economic conditions, political concerns will grow if regulation is seen to impede competition, new lending or investment. We are already seeing a deregulatory stance from the US authorities, including a limited relaxation of the Volcker Rule.11 Other countries may follow, and we might even see competitive deregulation.

While deregulation might reduce some compliance costs, global firms will face more complexities and expenditure as regulatory standards across jurisdictions diverge in timing and substance. The G20 highlighted market fragmentation was an area of concern in 2019, and the Financial Stability Board has an ongoing work programme in this area.12 It is unlikely that global standard-setters will be able to reverse fragmentation that has already happened, but their efforts could reduce future divergence.

More accountability for senior individuals
In contrast, regulators are increasingly holding senior individuals to account for the compliance, professional standards and culture of their firms. Following the introduction of the UK’s Senior Managers and Certification Regime, similar regimes have emerged, or are emerging, in several other jurisdictions, including Ireland, Australia, Hong Kong Special Administrative Region, Singapore and South Africa. Other jurisdictions are driving increased accountability through different mechanisms. The US Federal Reserve Board has proposed guidance which seeks to delineate the roles, responsibilities and accountabilities of senior management and the board better.13 The Belgian Parliament recently announced the introduction of a “Banker’s Oath” similar to that which the Netherlands introduced in 2015.14 In response to these initiatives, firms will need to foster a culture of accountability through measures such as balanced incentive plans; strong governance and controls; and appropriate monitoring, reporting, escalation and disciplinary action.

Regulating technological innovation
Policymakers and regulators will continue to be challenged by the need to respond to the pace and scale of technological change. The financial services regulatory debate will be characterised by issues such as whether to expand the regulatory perimeter, risks associated with increasing use of artificial intelligence, the impact of innovation on operational resilience and cybersecurity, and digital ethics. These are global issues, but a lack of political will and adequate international bodies in some policy domains will likely hinder efforts to align regulatory approaches.

Cross-sector policies will increasingly affect financial services firms, although these will differ across regions. For example, in relation to data protection, the EU is taking a stricter stance on individuals’ right to access and control personal data than the US and China.15 Globally, the emergence of tighter data localisation requirements will also introduce additional obstacles to cross-border data flows.

The growing evidence that ineffective implementation of technological change can increase cyber and operational risk is also attracting regulatory scrutiny. International standard-setters will likely try to establish baseline common approaches for operational resilience, but we expect progress on cyber-resilience to be made mostly at the G7 and European levels.

These trends will affect firms’ ability to use and share data to innovate, enhance their cross-border resilience, and deliver value and security to their clients.

Regulators and supervisors will also need to accelerate their own digital transformation. Well-resourced regulatory data science and analytics capabilities will be essential to understand and supervise a financial sector characterised by an increasingly blurred regulatory perimeter and greater technological complexity. Part of the solution may be for financial, security and data protection authorities to share resources, capabilities and insights more effectively. We see efforts in this direction, but more work is needed before regulators and firms can reap the benefits. Progress will more likely be achieved at national than at international level, mainly because of the absence of cross-sectoral global standard-setting bodies.
Responding to social concerns

Environmental sustainability is a rising social concern, and in Europe and Asia, a major focus for financial services regulators. In the US, it is not—at least not at federal level. However, even where regulators do not introduce specific requirements, firms will need to consider how climate change and unsustainable business models will affect their asset and liability exposures, as well as the new opportunities that may arise from the increasing customer demand for “green” products, including green investment funds.

Financial inclusion is another area of focus globally. The World Bank Group estimates that in 2017 there were still 1.7 billion adults without a basic transaction account, primarily in Asia and Africa. It has a goal for all adults to have access to an account to store money and make payments by 2020. In developed countries, regulators are focused on barriers to financial inclusion such as overly complex processes and lack of accessibility for “nonstandard” customers, including the elderly or people with disabilities. Firms should expect to be challenged by regulators if their services are unduly hard for certain groups to access.

Conclusion

Although the postcrisis wave of regulatory change is subsiding, there is much to attract regulatory and supervisory attention in 2020, and firms should not expect scrutiny to abate. Against a darkening economic background, there will be increased focus on firms’ financial and operational resilience, how they adapt to technological change and innovation, and how they respond to political and social pressures in areas such as sustainability and financial inclusion. In an environment where boards and individual senior managers are increasingly being held to account for their actions, financial services firms will need to ensure they have the foresight, governance, skills and operational capabilities to adapt and respond effectively.
Introduction

With the increasing prevalence and effectiveness of technology around the globe, the status quo is no longer an option. To keep up with the pace of change, the capital markets industry should continue evolving its approach to navigate the myriad of challenges that it is facing, and more importantly, the opportunities that it can take advantage of in this fourth industrial revolution. Regulatory, legal, and compliance functions are being asked to do more with less while grappling with new and emerging challenges that stem from the near-ubiquitous use of advanced technologies to meet the increasing cost pressures and need to deliver value beyond limitations with traditional approaches to testing, monitoring, analysis, and supervision.

In this digital world, new threats are emerging along with new laws and regulations to help protect consumers and the markets. Regulators, both domestic and foreign, are focused on data privacy protections to mitigate the risks that result from improper collection, handling, storage, and use of data. Cyber threats continue to become more sophisticated and more damaging, putting even more urgency around developing protections from bad actors, both external and internal.

Against this backdrop, capital market firms should continue to modernize and rationalize their regulatory, legal, and compliance functions and their practices. Capital market firms that take an enterprise view of regulatory risk management may find efficiencies that lead to streamlined and rationalized programs. A modernized compliance function can help achieve compliance as efficiently and effectively as possible by "thinking forward" and then harnessing the leading compliance practices and technologies to comply with current and future regulatory requirements. Some companies are even looking at their regulatory and compliance risk management programs as a competitive differentiator that enables them to be more nimble in the marketplace.

Regardless of how the changes promulgated by lawmakers and regulators affect capital market firms, it is imperative that firms continue to modernize and rationalize their regulatory, legal and compliance risk management programs so that they can meet applicable laws, regulations, and oversight and monitoring expectations in a sustainable, efficient, and cost-effective way.
Conduct risk

The mitigation of conduct risk continues to be a key area of focus for large financial institutions globally. The heightened regulatory scrutiny over the way firms and their employees interact with clients and markets has persisted and, in some cases, increased. There is also increased regulatory focus in certain new jurisdictions.

While many firms have been addressing these requirements through enhanced control environments, global regulators have similarly been investing in their oversight capabilities and have developed increasingly sophisticated tools and techniques to identify potential misconduct by firms. With this, we continue to observe conduct-related incidents that result in substantial fines, penalties, and potential reputational damage for firms. In 2019, regulators have levied fines of approximately $1.78 billion across at least 160 individual incidents in the United States, United Kingdom, and APAC region.

Regulatory guidance with respect to conduct risk has to date been primarily principle-based, rather than rule-based. This principle-based guidance has led to the industry adopting a variety of different approaches. However, there is now increasingly broad consensus within the industry that any effective solution to these areas will involve firms making intelligent use of technology and advanced analytical tools. Technology can enable firms to work with large data sets to detect misconduct by identifying trends and anomalies dynamically rather than trying to codify static use cases and thresholds which are much harder to calibrate and easier to manipulate. Similarly, technology is also playing a key role in designing solutions that link compensation to conduct in a more consistent and transparent fashion.

In our view, there remains a significant opportunity to improve the management of conduct risk through a) enhancing monitoring and surveillance capabilities to detect and prevent misconduct across the first and second lines of defense, and b) aligning compensation and incentives to consider employee conduct and drive toward broader changes to overall culture.

Detection of misconduct in the first and second lines

In recent years, most financial institutions have made significant investments in ramping up their misconduct detection capabilities within the first and second lines of defense. These efforts have been driven by regulatory impetus globally, and by the advent of more sophisticated tools and technology that allow for advanced monitoring and surveillance. The Market Abuse Regulation framework that took effect in mid-2016 is a prime example of the regulatory focus on further strengthening the market abuse framework and expanding the scope of behaviors that firms are expected to detect and monitor. However, a large portion of the industry continues to struggle with significant gaps in coverage across regions and products, as well as with developing a framework that can adapt to new and evolving risks. Common pitfalls we observe in the industry include:
• Gaps and inconsistencies in monitoring and surveillance coverage across global regions. Typically, the focus has been on large trading hubs in EMEA and North America, with more significant gaps existing in other regions and smaller countries.

• Inability to adapt monitoring and surveillance tools to identify newer patterns of behavior, as opposed to focusing on simple rule-based monitoring and surveillance that only looks for static thresholds.

• Focusing on data sources in silos rather than linking various data sources (e.g., the inability to link information from trade surveillance to inputs from communication surveillance).

• Supervision framework inconsistencies that limit supervisors’ ability to generate meaningful insights from the monitoring and surveillance data that is presented to them.

• Lack of high-quality data to monitor and surveil, especially for large global organizations with multiple sources of data.

We believe that use of more sophisticated analytical tools will likely be an important piece for companies seeking to address the monitoring and surveillance puzzle. Increased industry adoption of cloud platforms will also serve to further unlock powerful data analysis capabilities. As firms refine their misconduct monitoring and detection capabilities, they should evaluate how to connect different types of data, including transaction data, communication data, and other employee indicators. Also, some firms may need to better define the risk prioritization criteria as they roll out monitoring and surveillance capabilities to various geographies, businesses, and asset classes. The risk prioritization should consider the inherent risk profile of the business and the maturity of other mitigating controls, as well as any other region- or country-specific risk or regulatory drivers.

**Linking conduct with compensation to drive culture**

While financial institutions, as part of their conduct risk management programs, have made enhancements to their performance review processes, compensation continues to largely be based on financial metrics. Regulators globally, including the Federal Reserve Board (FRB), Financial Stability Board (FSB), and Royal Commission have highlighted the need for financial institutions to rethink their performance review processes and incorporate non-financial metrics into their performance management frameworks.

Firms should be considering how to take the financial and nonfinancial performance data collected as part of their conduct risk management program and apply it to year-end performance evaluations and determination of compensation. This would likely include providing managers with relevant metrics, scorecards, and summaries of various conduct and compliance infractions for their employees. Common pitfalls we see during implementation of such approaches include:

• Failing to apply meaningful reductions to compensation that truly reflect both the nature and severity of conduct and compliance infractions. Reductions in compensation should be large enough to provide an effective disincentive for future misbehavior.
• Failing to clearly document the link between compensation adjustments and conduct and compliance infractions. Firms should be able to show the original proposed compensation and then any reductions arising from infractions, with the link explicitly documented and communicated to the employee.

• Failing to maintain adequate documentation and supporting rationale for decisions related to compensation adjustments. Firms should have a clear record of why adjustments were made (or not made) for conduct and compliance infractions.

• Considering conduct and compliance infractions only during financial compensation. Firms should also consider conduct and compliance infractions during promotion cycles and when doling out additional responsibilities.

We believe this topic will likely be a key focus area for the industry in 2020 and that financial institutions should consider proactively using advanced technology and data analytics capabilities to assess employee conduct and then incorporate those insights into the performance review process. To drive the appropriate behaviors, firms should also make the conduct data available to managers and employees throughout the year as a central part of ongoing performance management discussions.

A well-defined linkage between conduct and compensation can not only help financial institutions reinforce good conduct, but also serve as a key driver for lasting changes in employee behavior and the overall organizational culture.

1. This $1.78 billion figure comes from Deloitte’s ongoing tracking and monitoring of enforcement actions on a variety of regulatory websites such as MAS.gov, Europa.eu, CFTC.gov, SEC.gov, etc.


LIBOR transition: Time is running out

The pressure is on as the 2021 deadline approaches for the global London Interbank Offered Rate (LIBOR) transition. Regulators around the world have been working feverishly over the past year to find replacement rates and build out working groups. Also, to support the transition, they continue to publish guidance and collective expectations for the industry, including the “Practical Implementation Checklist for SOFR Adoption.”

In the United States, efforts by the Alternative Reference Rates Committee (ARRC) have brought greater clarity to the transition. The Secured Overnight Funding Rate (SOFR), which is the proposed replacement rate for US dollar LIBOR, has been increasingly accepted as a viable alternative. For instance, debt issuances—as well as trading volumes of exchange-traded futures and swaps—that are tied to SOFR continue to increase. Also, SOFR futures volume on the Chicago Mercantile Exchange (CME) crossed $1 trillion in 2019. However, recent liquidity challenges in the US repo market have raised new questions about the stability of SOFR as an alternative, driving the daily volatility in SOFR to record levels (although the impact on the 90-day average, which will be the basis for most transactions, was negligible).

The ARRC has held extensive consultations with industry groups, including the International Swaps and Derivatives Association (ISDA), the Structured Finance Association (SFA, formerly SFIG), and the Loan Syndications and Trading Association. Also, in 2019, the ARRC published fallback provisions for floating-rate notes, bilateral loans, securitizations, and syndicated commercial loans. Fallback language for other products is in progress.

Meanwhile, the Financial Accounting Standards Board (FASB) has convened a project to address accounting issues that could arise from the transition, and has designated SOFR as an accepted benchmark for hedge accounting.

Other jurisdictions have made progress as well. In the UK, over US $30 billion in floating-rate notes tied to the Sterling Overnight Index Average (SONIA) were issued in the first half of 2019. In Europe, the Euro Short Term Rate (ESTR) began publication in October 2019. Elsewhere, countries such as Switzerland and Japan have also made progress on identifying a replacement rate. Although much progress has been made over the past year, more work is needed. Initial assessments have been done, and banks now have a better understanding of their exposure transitioning away from LIBOR. Many banks have begun to realize that the transition away from LIBOR will have a widespread impact, requiring changes to front-to-back processes and supporting systems, a product replacement strategy, ongoing client communications, active management of conduct risks, and adjustments to contract language for existing and future exposure. To accelerate implementation, modernizing such processes and systems and executing on a well-thought-out transition plan should be considered a priority. Banks should proactively work with their corporate and buy-side clients to help ensure a smooth transition process.

5. FASB Accounting Standards Update No. 2018-16, Derivatives and Hedging (Topic 815): Inclusion of the Secured Overnight Financing Rate (SOFR) Overnight Index Swap (OIS) Rate as a Benchmark Interest Rate for Hedge Accounting Purposes.
The journey toward compliance with uncleared margin requirements continues, although a smaller number of entities than originally anticipated will be in scope for 2020.¹

The original compliance deadline was September 2020, with more than 1,000 entities expected to be in scope. However, in 2019, the Basel Committee on Banking Supervision (BCBS) and the International Organization of Securities Commissions (IOSCO) announced an intermediate average aggregate notional amount (AANA) threshold, giving many firms an extra year to comply with final implementation of the initial margin (IM) regulations. In addition, there has been additional clarity on certain products and jurisdictions around the application of margin requirements.

The move was a response to concerns about the industry’s capacity to meet the original deadline, as a number of smaller firms would have required negotiation and documentation with every counterparty, as well as setting up additional custodial accounts for every relationship.

In 2020, only firms with more than $50 billion in notional holdings will be in scope; firms with more than $8 billion in notional holdings will be added to the scope in 2021. The framework does not specify documentation or custodial or operational requirements if a covered entity’s bilateral initial margin amount does not exceed the framework’s $50 million initial margin threshold.

The 2019 announcement gave many financial end users an additional year to prepare. Those entities should use the extra time to conduct preliminary AANA calculations and assess if any adjustments are needed. They should also understand the IM requirements and prepare for impacts, monitoring change in thresholds going forward.

**Actions items for 2020 in-scope firms**
Firms with more than $50 billion in notional exposure should focus on the following activities in 2020:

- **Identify in-scope legal entities** and calculate legal entities’ aggregate average notional holdings to determine the correct implementation phase.

- **Identify affected counterparties and custodians**, including any affiliates, and develop an outreach plan to re-paper relevant agreements and schedules.

- **Determine and implement a methodology to calculate IM** that is acceptable under regulations; implement and exchange the initial margin; and develop an approach for counterparty dispute resolution, considering cross-border requirements.

- **Establish or update relationships with custodians** and implement new operational processes to segregate, post, and collect collateral by T+1 each day.

- **Contact and execute required agreements**, such as IM credit support annexes (CSAs), control agreements, and custody agreements with counterparties and custodians; build comprehensive contract life cycle management processes and tools.

- **Enhance systems and processes** and implement operational, technology, and data processes so that relevant data attributes can flow upstream and downstream and enable timely straight-through processing.

Whenever possible, firms should learn from the experiences of previous phases in which larger, more sophisticated entities faced and addressed many of the same challenges.

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Digital contract management

Over the past three to four years, many regulatory requirements have arisen that revolve around various types of contracts (e.g., the Qualified Financial Contracts (QFC) record-keeping rule, QFC stay rule, IM rule, LIBOR, EU General Data Protection Regulation (GDPR), and California Consumer Privacy Act (CCPA)). This has created a strong need for organizations to digitize and process their contracts (in addition to measuring, monitoring, and understanding the breadth and depth of their contracts).

Many organizations are starting to look at digitizing their contract life cycle management (CLM) activities, not only to enable straight-through processing in near-real time and achieve timely compliance with the new regulations, but also to make their business-as-usual processes more sustainable while turning contract information into powerful insights that can inform business strategy.

A phased approach

The goal of many organizations is to achieve a full view of all contracts, along with extensive self-service capabilities. However, such capabilities are likely a few years away. For now, organizations are treading cautiously, using phased implementations to ensure their technology tools, operational processes, and governance are brought up to par with the new processes.

Typically, the first phase is gathering and digitizing contract cabinets, creating a full view of all contracts and related attributes, and then establishing key performance indicators (KPIs) and key risk indicators (KRIs). The next phase is using natural language processing to automatically extract the information necessary to satisfy various regulations.

The holy grail is fully digitized contract management from end to end: creating contracts digitally; negotiating digitally over a platform; and executing, storing, and automating controls/escalations as defined by policy and standards. This would provide a comprehensive view of contracts across the organization (including bottlenecks, upcoming due dates, etc.), enabling the organization to monitor, manage, and govern contracts more effectively while gaining new and valuable business insights—such as understanding global obligations hidden away inside contracts.

Moving forward

Given the many tools and technologies springing up in the marketplace, organizations are taking their time to carefully assess their options and plan a course of action. Steps to achieve implementation of digital contract management include:

• Act early to establish a broad program with key stakeholders
• Assess compliance dates and map the various regulatory requirements
• Identify, assess, and prioritize various types of contracts and related areas (such as collateral management) based on global locations and businesses
• Develop a strategic vision and roadmap to build out digital contract management capabilities
• Evaluate tools, technologies, and platforms against the strategy and roadmap
• Establish the infrastructure for near-term and long-term CLM processes
• Build out the change management with associated operational processes, governance, controls, and standards
• Implement, test, train, and deploy organization-wide, monitoring and measuring progress based on the KPIs and KRIs established upfront

Digitization can significantly improve the efficiency and effectiveness of contract management while generating new and valuable business insights from contract data. As such, organizations should view digital contract management as a strategic opportunity—not just a tactical move to ease compliance with contract-related regulations.

Let’s talk

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Reimagining the future of securities operations: Overview and regulatory expectations

Operations leaders in the securities industry have an unprecedented opportunity to be transformation agents for their organizations, with rapidly advancing technology, constrained margins, challenging macroeconomic factors, and increasing service demands on operations driving the transformation effort. Progressive operations leaders already recognize the possibilities of the digital age and many have mapped out an ambitious vision for the future state.

Concrete action plans are helping their organizations successfully navigate uncertainty and transform operations into a more strategically focused, technologically modern, and operationally agile function that can:

• Deliver a seamless experience for clients and constituents
• Support business growth strategies
• Drive efficiency improvements to self-fund new business capabilities and drive margin expansion
• Operate effectively within the organization’s risk appetite

These forward-thinking leaders understand the urgency and are making strategic shifts to effectively capitalize on digital capabilities that will likely be fundamental to surviving and thriving in the era of digital disruption.

Regulatory considerations

One crucial transformation requirement is the need to address regulator concerns and avoid compliance missteps. In an event at the Columbia School of Law, the New Special Study of the Securities Markets: Columbia/Financial Industry Regulatory Authority (FINRA) Technology Conference held on Oct 4, 2019, there was significant discussion on emerging technologies in the financial sector. Common terms such as financial technology (FinTech), regulatory technology (RegTech), and operations technology (OpsTech) are all associated with leveraging new technologies for innovative applications in the broker-dealer ecosystems. And while these technologies are attracting a great deal of interest in the marketplace, they are also attracting the interest of regulators. The US Securities and Exchange Commission (SEC), FINRA, and US Commodity Futures Trading Commission (CFTC) have all set up offices focused on technology innovation so they can better understand, adopt, and regulate new technologies in the financial services industry.

• The SEC’s Strategic Hub for Innovation and Financial Technology (FinHub) is a resource for information about the SEC’s views and actions in the FinTech space. As financial technologies, methods of capital formation, market structures, and investor interfaces continue to evolve, FinHub plays an important role in facilitating the SEC’s active engagement with innovators, developers, and entrepreneurs.
• FINRA’s Office of Financial Innovation (OFI) serves as the central point of coordination for issues related to significant financial innovations by FINRA member firms, particularly new uses of FinTech.
• LabCFTC was created to encourage responsible innovation in the markets that the CFTC oversees, and to help accelerate the CFTC’s engagement with FinTech solutions that might help it carry out its mission and responsibilities more effectively and efficiently.

As firms think about technology changes to their infrastructure, it is essential for them to consider their current and anticipated regulatory and compliance obligations.

Drivers for change

Current operating models in the securities industry require modernization to effectively keep up with evolving client demands, regulatory requirements, and business growth strategies. Since the financial crisis, many operations functions have been significantly underfunded, as spending was allocated to the regulatory agenda. To meet business and compliance objectives, operations leaders executed tactical initiatives that have collectively contributed to the current inflexible operating environment.

Over the span of more than a decade, end-user applications (e.g., spreadsheet macros) have proliferated, processes have fragmented with the rise of near-shore and offshore operations. While this has helped to reduce costs, many operations teams are still spending significant time performing core client and transaction processing in a disconnected and manual manner—hands-on-keyboard, manual data movement across systems, manual reconciliations, etc.—which can lead to errors, rework, and inconsistent service delivery throughout their processes. The current operating environment is rife with opportunities that have been available for years; however, the following factors are pushing organizations onto the “future of operations” digital journey now:
• **Margins are under attack.** Conversion to decimalization, the reduction in market volatility, and the focus on risk-weighted assets (RWA) have reduced trading spreads. Advisory businesses, while growing rapidly, are under considerable fee-structure pressure that has led profit margins to deteriorate by nearly a third over the past decade.¹ Due to increased competition from low-cost providers, commoditization of advice by robo-advisors, and new transparency standards and enhanced investor protection measures imposed by regulators, fees charged to clients are decreasing, while the costs to serve and comply are rising. And despite the recent market correction in profitability, many believe return on equity will never reach pre-crisis levels.²

• **Exhaustion of traditional cost-reduction levers.** Traditional cost-cutting has been taken to its limit in the form of process reengineering, lean workforces, layoffs, low-cost location-based strategies, etc.; looking ahead, organizations will no longer be able to pull these traditional levers to realize material cost benefits. For example, location strategies no longer offer the cost arbitrage they once did. Business process outsourcing locations have undergone significant market correction, with the cost of an offshore resource increasing by a factor of three over the past decade. Also, with different resource models, there are various regulatory, operational, and compliance obligations that must be complied with. Outsourcing, near-shore, and offshore models all still require company management to have an effective control environment—and management is still on the hook for any issues that may arise.

• **Evolving internal and external client demands.** The current technology-driven environment is giving rise to a new breed of internal and external clients who are tech-savvy, well informed, and highly connected and who desire immediacy in activities and outcomes. These connected clients have more data and choices, and they are demanding services consistent with their daily retail interactions. Also, they are demanding experiences that feature simplicity, self-service, and transparency throughout the journey, which is forcing institutions to transform their traditional portfolio of offerings and services and to modernize their internal operational processes to meet current and future service expectations with speed and agility.

• **Looming talent shortage.** Historically low unemployment rates and a mass exodus of retiring baby boomers have created a highly competitive job market and a talent shortage for skilled labor.

In responding to these factors, it is important to address regulatory obligations and requirements, including the need to demonstrate a strong control environment, and the need to anticipate cyber concerns and maintain and enhance resiliency.

**What the future looks like.**
The future of operations will be drastically different from the current model. The current operating model relies on a labor force of specialists with discrete expertise in specific domain areas (e.g., corporate actions). It also relies on complex legacy systems and infrastructure. The future of securities operations will likely move away from departmental processing to managing an evolving ecosystem. In this ecosystem, a large number of core processing functions will be supported by external vendors and collaborative technologies, enabling operations to unlock value across multiple dimensions including cost, service, and risk. The
operating environment will shift from legacy platforms and end-user computing tools to innovative technologies hosted on scalable and distributed platforms. Technologies such as cloud computing, business process management, robotic process automation (RPA), cognitive intelligence tools, and predictive analytics will enable operations to reduce work, execute near-real-time processing, and provide transparency consistent with internal and external clients’ evolving expectations. Operations leaders who can manage effectively in this new environment may benefit from greater agility, responsiveness and resilience.

The next-generation operations ecosystem will likely consist of the following:

- **Augmented workforce.** The operations workforce of the future will comprise human and digital labor working symbiotically to perform core processing. This new operating environment will be driven by new skill sets. Human labor will be more fluent in technology and data and will include subject-matter experts, bot engineers, operators, and data scientists. In addition, human labor will move away from performing repeatable processes and will focus on generating insights, as well as continuous process improvement to drive efficiencies. In parallel, digital labor will comprise simple processing bots, virtual agents, and advanced algorithms to augment decision-making, process large data sets, identify patterns, and predict outcomes. Also, there are now software solutions that simulate human conversation through audio and text features.

- **Focus on client-centricity.** Financial institutions are initiating human-centric client experience transformation to respond to evolving client expectations and to address competitive pressures. Many are launching multiple programs to improve the client journey and provide a positive client experience—for example, launching digital client and front-office-associate experience journeys, and enhancing front-office workstations. To deliver service in the digital era, the scope of these efforts is expanding from front-office client journeys to end-to-end, front-middle-back-office operational processes.

- **Network of strategic and innovative tools (FinTech, RegTech, OpsTech).** In the future, operations will likely pivot from costly, internally developed platforms to standardized, leading-class solutions provided by external vendors, market collaborators, and innovative technology providers. The external partnership model will enable operations to access standardized and leading-class solutions for performance optimization while transferring the burden of maintenance to the providers and sharing the cost of industry-wide competitive and regulatory changes across the provider’s user group. However, companies should not lose sight of the resiliency and third-party risk management programs that regulators expect. Often, new vendors focus on technology for technology’s sake and lack the full 360-degree lens that considers operational control, regulatory reporting obligations, privacy requirements, and protection of PII.

- **Next-generation evolutionary architecture.** The technology landscape of the future will comprise a complex network of internally developed applications, vendor products, and ecosystem platforms. In this complex landscape, applications and supporting business capabilities will have to be orchestrated effectively using forward-looking architectural principles, such as the application programming interface (API) imperative. The API imperative involves leveraging APIs, often as microservices, to deploy services and platforms both within and beyond the enterprise. An API-based architecture can enable business capabilities to evolve independently and rapidly with upstream or downstream software components—with minimal dependency constraints. Combining a product focus with evolving business capabilities will enable operations to co-create products in faster, iterative sprints with technology teams.

- **Leading practices from other industries.** To enable this transformation, operations functions will look beyond financial services and take inspiration from the retail sector to redesign their core processes. For example, operations could aspire to emulate the online retail experience, in which both the client and front office have transparency into the order life cycle from point of sale to point of delivery, and in which post-order processing is automated.
The digital future of operations is imminent
The vast majority of executives in the securities industry have recognized that change is imminent for the operations function. A poll conducted at the most recent Securities Industry and Financial Markets Association (SIFMA)’s Operations Conference indicated that the majority of responding operations leaders believe their work will be transformed by emerging technologies within three to five years. Progressive leaders in this space have developed a vision for the future of operations and are adopting a modularized approach to execute on their vision. Many have started with proofs of concept for various tools and technologies to gain familiarity, launching scaled transformation programs that encompass:

- Hiring of new skill sets (e.g., data scientists, bot engineers) and realigning existing “superstar” resources to a lean team focused on piloting transformation in a limited area.
- Launching processes and data improvement initiatives to standardize the current operating environment and capitalize on new and traditional technologies.
- Creating the workforce of the future by training the current operations workforce to be more data- and technology-savvy.
- Partnering with external providers or vendors to build out their knowledge base and establish an ecosystem network.

Keeping regulators informed
Although new technology systems may perform certain activities differently, they still require policies and procedures and need to conform and comply with the recordkeeping obligations of 17a-4. Also, leading practices suggest there should be clear documentation on the thought process, decisions that were made, and the system’s ability to perform as designed. Being able to provide a regulator with insight and documentation during an examination is essential to maintaining the regulator’s confidence that the organization was thoughtful about the solution sets they developed. So is having an exam planning system that shows what changed since the last examination. Helping regulators understand and develop new ways of regulating emerging concepts and technologies will be an important aspect of creating a win-win environment.

Reg BI aims to provide retail customers with full and fair disclosure about the products and services offered by broker-dealers so those customers can make investment decisions pertinent to their needs and investment goals while understanding the associated risks. As part of the SEC's rule-making package, firms are required to file with the SEC and deliver to customers a Customer Relationship Summary Form (Form CRS). In no more than two pages,2 a broker-dealer or investment adviser is required to disclose information to its customers about the firm's business practices, including: its registration status; its relationship and services to the customer; the fees, costs, conflicts of interests, and standards of conduct related to those services; and the firm's disciplinary history. The compliance date for both Reg BI and Form CRS is June 30, 2020.

In addition to the general obligation, Reg BI has four component obligations:3

**Disclosure obligation**
The disclosure obligation requires a broker-dealer to provide to retail customers, prior to or at the time of the recommendation, in writing, full and fair disclosure of all material facts related to the scope and terms of the relationship and all material facts relating to conflicts of interest that are associated with the recommendation.

**Care obligation**
The care obligation requires a broker-dealer to, among other things, exercise reasonable diligence, care, and skill to understand the potential risks, rewards, and costs associated with the recommendation and have a reasonable basis to believe that the recommendation or series of recommendations is in the best interest of the customer.

**Conflict of interest obligation**
The conflict of interest obligation requires a broker-dealer to identify and manage conflicts of interest, whether through mitigation or elimination and, at a minimum, disclosure. This obligation also requires written policies and procedures reasonably designed and enforced to identify and manage such conflicts.

**Compliance obligation**
The compliance obligation requires a broker-dealer to establish, maintain, and enforce written policies and procedures reasonably designed to achieve compliance with Reg BI. This obligation is designed to ensure that broker-dealers have controls, testing, training, and periodic review in place to prevent Reg BI violations.

**Key preparation activities**

**Evaluate current-state gaps.** Firms should prepare for changes driven both by Reg BI and by various state fiduciary rules (e.g., New York Department of Financial Services 187). When evaluating gaps in the current state, it is important to take a broad view that considers the potential impacts to people, processes, technology, and strategy.

**Assess “solely incidental” practices.** Firms should evaluate their business practices, particularly with regard to discretionary trading and account monitoring, to ensure the practices align with the SEC's expectations for what constitutes an advisory activity. In its interpretative guidance release,4 the SEC clarifies that a broker-dealer exercising unlimited investment discretion over a retail customer's account would be deemed advisory in nature and thus bound by a fiduciary duty of care.

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Identify and manage conflicts of interest. Reg BI requires firms to identify and manage conflicts of interest related to their business practices. To that end, firms should consider developing formalized procedures for identifying, documenting, disclosing, and managing conflicts of interest.

Evaluate sales practices and compensation programs. Under Reg BI, certain types of sales contests and sales quotas are explicitly prohibited as they create conflicts for broker-dealers and their associated persons to act in the best interest of their retail customers. As such, firms should evaluate their sales practice and compensation programs to ensure they meet standard of care obligations.

Evaluate potential customer and financial advisor life cycle impacts. As required by various obligations, including Form CRS delivery requirements, firms should holistically evaluate the life cycle needs of their customers and their representatives to determine the potential impacts and associated costs that may result from the new requirements.

Consider multiple federal, state, and individual requirements. With various states and some professional organizations (e.g., the Certified Financial Planner Board) adopting (or considering) their own rules to govern the standard of conduct for brokers, dealers, and their associated persons, firms should evaluate their overall readiness efforts and the collective impact of potentially overlapping, duplicative, or divergent requirements. Such an evaluation is recommended to ensure a firm is efficiently and effectively meeting all of its regulatory requirements.

Prepare for workforce readiness. As with any major change initiative, successful implementation and workforce adoption will require an effective strategy for communication, training, and change management. Firms should carefully consider the impacts on employee retention and overall company engagement.

2. For dual registrants that include their brokerage services and investment advisory services in one relationship summary, it must not exceed four pages.
3. Ibid.
Regulators are expanding their role in overseeing and guiding the “infrastructure resiliency” of their regulated entities. This direct supervisory oversight of system integrity, security, and resilience within a business—which can be quite detailed and, at times, even prescriptive—is a major departure from regulators’ traditional arms-length approaches to operational and IT risk management.

In effect, it imposes a rigorous testing and supervisory process to help ensure that companies:

- Are following appropriate processes and procedures
- Can identify and mitigate risks in a timely manner
- Have sufficient controls in place to ensure a high level of system integrity, security, and resiliency monitoring for a wide range of risks and threats—from data breaches and cyberattacks to system capacity and the impact the system is having on external markets and societal infrastructure

Additionally, regulators are concerned about market access and customers’ ability to gain access to the markets should there be an adverse event within the ecosystem.

In 2015, the SEC approved Regulation Systems Compliance and Integrity (Reg SCI) for the US National Market System, clearing firms, and alternative trading system venues. Those platforms, or SCI entities and SCI systems, are currently operating under the requirements. In the event of a system outage in an SCI system or SCI entity (an SCI Event) the organization must file a report with the SEC describing the event, actions taken, and follow-up remediation. We have seen several instances of regulatory actions taken against SCI entities in the form of fines.

Introduction, implementation, and operation of the Reg SCI program have generally strengthened firms’ core operations by improving:

- Governance. Having effective internal governance over systemically critical systems, using a formal governance framework that clearly defines roles and responsibilities (i.e., three lines of defense) and helps ensure the proper procedures and processes are being followed.
- Remediation. Having a clearly defined path and process for escalating problems to a management level where timely remediation can occur. Also, having clear processes and procedures for handling critical risks, such as how to notify customers in the event of a data breach.
- Effectiveness testing. Ensuring that the system is operating effectively and doing what it is supposed to do—meeting the needs of internal and external customers and users—while complying with applicable rules and regulations.

Although every industry is somewhat different when it comes to infrastructure resiliency, many of the requirements and challenges that various industries face are fundamentally the same. Here are some important leading practices that companies in all industries can consider to help satisfy the demands for more robust infrastructure resiliency:
• **Top-down and bottom-up risk management.** More and more C-suite executives are recognizing the importance of operational integrity, and are driving efforts and governance from the top down. However, many companies lack bottom-up controls with sufficient granularity to identify and address critical risks. Effective infrastructure resiliency requires both.

• **Business ownership of IT risks.** Infrastructure resiliency is a strategic business issue, not just an IT issue. Companies need improved transparency so the business can supervise how information systems are developed and managed, rather than leaving it to IT. Business executives need to have a clear view of the risks, along with accurate information about whether those risks are being managed effectively.

• **Coordinated solutions to uncoordinated requirements.** In response to the complex and often redundant or conflicting guidance from various regulators, companies need to develop practical solutions and approaches that feature common controls, common processes, and common systems to assess and address risk across the enterprise—all under the oversight of common governance.

• **Better documentation of functional requirements to support testing.** Infrastructure resiliency starts with clear and thorough documentation about what a system is supposed to do. This is critical to the design process and provides essential input for testing.

• **Processes and tools to protect customer information and deal with breaches.** Companies need to make conscious efforts to protect customer data, supported by formal guidelines and other mechanisms. They also should develop in advance clear processes and procedures for dealing with breaches, instead of reacting on the fly after a problem occurs.

• **Solutions that can help address the issue of third-party risk.** In a business environment where companies are increasingly disaggregated and reliant on business ecosystems, managing third-party risk (risks within a company’s value chain partners and service providers) is just as important as managing risk within the four walls of the business.

• **A documented risk assessment process.** The process should clearly define how risks will be identified, prioritized, and addressed—and what controls will be used to monitor those risks.

• **Culture shift.** Infrastructure resiliency cannot be achieved solely through new systems and processes; ultimately, it relies on employee behavior and organization. Companies need to make sure people are following the procedures. This requires educating and training business owners—as well as professionals in Compliance and Legal—about the importance of IT controls. Perhaps even more important, it requires a culture of compliance in which people throughout the organization have a natural inclination to do what they are supposed to.

The first step to achieving infrastructure resiliency is to clearly understand the general regulatory trends and a company’s specific responsibilities. The next step is to perform a comprehensive review of the company’s IT risk program to ensure that management can fulfill its supervisory obligations in overseeing the development and operation of systems used in the business. This includes conducting a review of the IT governance structure, as well as establishing policies and procedures to ensure industry-leading practices are in place for all critical systems that could cause harm to the company’s customers and financial viability and to societal pillars such as the financial markets. This also applies to systems operated by third-party vendors. Companies today should ensure that adequate processes and tools are in place for monitoring, testing, and reporting, such that management can adequately assess the overall level of systemic risk and determine if the company’s IT controls are being properly enforced.
Consolidated Audit Trail (CAT)

Over the past year, significant progress has been made on CAT implementation by the national securities exchanges (collectively, the self-regulatory organizations (SROs)), FINRA, industry members (broker-dealers and CAT reporting firms), and the plan processor of FINRA CAT.

The SROs have started to report selected data to the CAT, while industry members have been preparing for industry testing and building out CAT capabilities following guidance from the SROs (via publication of the industry members’ technical specifications). The first industry testing window opens in December 2019, prior to the planned production environment go-live in April 2020.

Regulators (predominantly the SEC) are currently focused on the safeguarding of Personally Identifiable Information (PII), a topic the SROs and FINRA have been discussing and addressing over the course of the CAT development and implementation. Given the large volume of secure information being handled, many eyes are on the SROs as they work through various approaches to managing PII. At present, the SEC staff and SROs have indicated that they are considering additional ways to protect and limit PII reporting into the CAT.

Key focus areas and challenges

With the April 2020 go-live date fast approaching, many firms are well underway with CAT reporting implementation and are focused on internal testing and preparing for industry testing. To achieve efficient reporting in accordance with the CAT guidelines and timelines, industry members need to consider a variety of dimensions when developing comprehensive internal test plans that cover enhancements to system architecture and technology solutions. Industry members should also consider testing of process components, such as submission management, exception management, and governance. Compliance testing is another priority for industry members as they continue to assess their regulatory compliance with the CAT.

Figure 1. Timeline for large firms

<table>
<thead>
<tr>
<th>December 2019</th>
<th>May 2020</th>
<th>August 2020</th>
<th>December 2020</th>
<th>April 2021</th>
<th>December 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>File submission and data integrity industry testing begins for options</td>
<td>File submission and data integrity validations go-live for option</td>
<td>Intra-firm linkage validations go-live for options</td>
<td>Exchange linkage validations go-live for options / IM-to-IM linkage validations go-live for options</td>
<td>Representative order linkage (2c) go-live</td>
<td>Options manual and complex orders (2d) go-live</td>
</tr>
<tr>
<td>File submission and data integrity industry testing begins for Equities</td>
<td>April 2020</td>
<td>July 2020</td>
<td>September 2020</td>
<td>October 2020</td>
<td>January 2021</td>
</tr>
<tr>
<td>File submission and data integrity validations go-live for equities / intra-firm linkage validations enabled in test for equities and options</td>
<td>Intra-firm linkage validations go-live for equities / IM-to-IM linkage validations enabled in test for equities and options</td>
<td>Exchange and TRF linkage validations enabled in test for equities and options</td>
<td>Exchange and TRF linkage validations go-live for equities / IM-to-IM linkage validations go-live for equities</td>
<td>Industry members testing begins for representative order linkages (2c)</td>
<td>Industry members testing begins for options manual and complex orders (2d)</td>
</tr>
<tr>
<td>File submission and data integrity industry testing begins for Options</td>
<td>July 2020</td>
<td>September 2020</td>
<td>October 2020</td>
<td>January 2021</td>
<td>July 2022</td>
</tr>
<tr>
<td>File submission and data integrity validations go-live for equities / intra-firm linkage validations enabled in test for equities and options</td>
<td>Exchange and TRF linkage validations enabled in test for equities and options</td>
<td>Exchange and TRF linkage validations go-live for equities / IM-to-IM linkage validations go-live for equities</td>
<td>Industry members testing begins for representative order linkages (2c)</td>
<td>Customer and account go-live</td>
<td></td>
</tr>
</tbody>
</table>
Functionality for industry testing of equities and options will be made available in four sub-phases, starting with simple file submission and data integrity checks in December 2019 and ending with coordinated industry testing for exchange and TRF linkage in September 2020. It is expected that industry members will be required to perform a minimum level of testing prior to being certified to submit data into production; however, details of this process have not been published by the plan processor of FINRA CAT.

Industry testing will be conducted in increments as new functionality is released to the testing environment. Incremental functionality within testing will be conducted by the plan processor, while industry members are required to submit data, assess feedback from the plan processor, and validate any reported CAT errors.

Industry members should consider the following challenges, among others, as they focus on internal and industry testing:

- **Data readiness challenges.** Industry members should assess their current data-readiness capabilities, such as data sourcing, data quality, data validation, and overall data governance to identify gaps, and take remedial actions for enhancement.

- **Regulatory compliance challenges.** Not only must industry members report to and comply with the CAT, but they must also continue to comply with several regulations (e.g., Order Audit Trail System (OATS), Electronic Blue Sheet (EBS), and Markets in Financial Instruments Directive (MiFID)). While it is expected that some of these reporting obligations may change or be reduced due to the CAT implementation, there will be an overlap with which industry members must contend for some period.

- **Operational challenges.** CAT reporting may lead to changes in business processes, such as customer onboarding procedures and customer data maintenance. Investment managers may have to develop new procedures, define new processes, identify resources, and expand their current infrastructure to process and retain data for CAT compliance.

- **Technology challenges.** CAT implementation is likely to have a substantial impact on industry members’ technology infrastructure. The requirements will also likely necessitate changes to systems and data processing, transmission, and reporting tools. Industry members should consider the use of technologies and digital enablers to increase efficiency and capacity, and to reduce the risk of errors from manual procedures.

**Moving forward**

Although there are a number of key challenges ahead for CAT reporters, industry members should immediately begin to identify how their current operations—including technology platforms and reporting procedures—will be affected by the CAT requirements ahead of the April 2020 deadline. The use of technology enablers, such as RPA, can help standardize and automate data aggregation and reporting capabilities. Investment managers should consider using these types of tools to help resolve testing obstacles that they encounter during the industry testing window.
Volcker 2.0

The original Volcker Rule was finalized in December 2013 (the 2013 Rule) to prevent banks from engaging in impermissible proprietary trading and to prohibit them from owning hedge funds or private equity funds. The FDIC, Office of the Comptroller of the Currency (OCC), FRB, CFTC, and SEC (collectively, the Agencies) jointly released proposed amendments to the 2013 Rule in July 2018. However, strident opposition and industry feedback led to a revised version of the proposed amendments, which were subsequently published on August 20, 2019. All five implementing Agencies have now formally approved the Final Rule, which becomes effective on January 1, 2020. Banking entities will have until January 1, 2021, to comply, but they can adopt (in part or in full) the provisions of the Final Rule any time after January 1, 2020.

Key considerations for banking entities with regard to the Final Rule include:

- **Tailored regulatory impact.** The Agencies created a three-tiered approach to apply the compliance program to banking entities based on the size of their trading assets and liabilities. The Final Rule increased the threshold for “significant” trading activity from $10 billion to $20 billion based on the average gross sum of trading assets and liabilities over the previous consecutive four quarters as measured on the last day of quarter-end. Banking entities generally know which tier they fall into; however, firms that are close to one of the thresholds should carefully evaluate their trading assets and liabilities to ensure they fall below the applicable thresholds.

- **Resource and process optimization.** Now that the Final Rule has been formally adopted by all implementing Agencies, banking entities must understand where they fall within the scope of applicability and what the requirements are across the simplified and six-pillar compliance programs. Given the reduced compliance requirements, banking entities—especially those that are under the $1 billion “limited” trading threshold—can shift their focus toward reorganizing their resources. However, banking entities with “moderate” or “significant” trading assets and liabilities may benefit from an assessment of their existing compliance programs and processes to identify maintenance needs and potential modifications.
• **RENTD requirements and limits.** It is important to note that the core requirements and limits related to “Reasonably Expected Near-term Demands of Clients, Customers and Counterparties” (RENTD) remain in effect and that regulators will be scrutinizing these limits as part of the ongoing exam process. As discussed in our previous publications on RENTD and limit setting, the process of calculating RENTD and then translating it into defensible limits that can be used to establish the presumption of compliance will remain a critical exercise for most banking entities in the significant and moderate categories. For derivatives, there are potential areas of relief related to market making and risk management inventory constructs; trading desks focused on derivatives should evaluate these new requirements to determine if their RENTD analysis and limit-setting processes need to be updated.

• **Metrics reporting.** The Final Rule makes several meaningful changes to the metrics reporting requirements. Although some of the changes offer relief (e.g., elimination of certain metrics, and extension of the submission timeline), the addition of new metrics such as transaction volume and positions will require assessment and development of new data flows and reporting capabilities. The Final Rule’s overall alignment with how most covered banking entities view and manage risk will likely mitigate these impacts; however, banking entities should undertake a formal assessment of the requirements and identify any gaps that need to be addressed.

• **Foreign banking organization (FBO) considerations.** The TOTUS and SOTUS exemptions have been modified to make it easier for FBOs to qualify covered activities related to proprietary trading and covered funds.

• **Deferrals and additional rulemaking.** Looking ahead, the Agencies intend to issue further rulemaking on fund-related issues, such as the definition and applicability of “covered funds” and “banking entity” (and their potential exclusions).
Security-based swap dealer capital, margin, and segregation rules

On June 21, 2019, the SEC adopted final rules establishing capital margin requirements and segregation rules for security-based swap dealers (SBSDs). Specific areas of the rule include capital, margin, and segregation and are outlined below:

- **Capital** – Establishes minimum capital requirements for SBSDs; increases the minimum net capital requirements for broker-dealers that use internal models to compute net capital (alternative net capital (ANC) broker-dealers); establishes capital requirements tailored to security-based swaps and swaps for broker-dealers that are not registered as an SBSD, to the extent they trade these instruments.

- **Margins** – Establishes margin requirements for nonbank stand-alone SBSDs with respect to noncleared security-based swaps.

- **Segregation** – Establishes segregation requirements for SBSDs and broker-dealers for cleared and noncleared security-based swaps.

While the final SEC capital rules may address and help clarify several comments received in the proposed version of this rule, the following are some notable points in the rule finalization, as well as some open questions requiring regulator guidance.

### Table 1. Notable Points

<table>
<thead>
<tr>
<th>No.</th>
<th>Area</th>
<th>Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Minimum net capital requirement</td>
<td>Minimum net capital requirement comprises:</td>
<td>All minimum net capital components are applicable to the following:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• The greater of a fixed-dollar amount, and</td>
<td>• Stand-alone SBSDs (using internal models)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• a 2% margin factor, plus</td>
<td>• Broker-dealer SBSDs (using internal models)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• the existing ratio-based minimum net capital requirements in Rule 15c3-1</td>
<td>• Stand-alone SBSDs/Over-the-counter derivatives dealers (OTC DDs)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• either the 15-to-1 aggregate indebtedness ratio or the 2% of</td>
<td>The existing ratio-based minimum net capital requirements in SEC Rule 15c3-1 are</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• customer aggregate debit items ratio</td>
<td><strong>NOT applicable</strong> to:</td>
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<tr>
<td></td>
<td></td>
<td>All minimum net capital components are applicable to the following:</td>
<td>• Stand-alone SBSDs (not using internal models)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Stand-alone SBSDs (using internal models)</td>
<td>• Broker-dealer SBSDs (not using models)</td>
</tr>
<tr>
<td>2</td>
<td>Net capital deductions</td>
<td>SEC capital rules allow for a deduction for electing not to collect margin.</td>
<td>Deduction is applicable to:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>**Deduct 100% of the amount of margin that would have been required to</td>
<td>• Nonbank SBSDs only</td>
</tr>
<tr>
<td></td>
<td></td>
<td>**be collected from the security-based swap or swap counterparty in the</td>
<td>**Deduction is <strong>NOT applicable</strong> to:</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>absence of an exception.</strong></td>
<td>• ANC broker-dealers that are not registered as SBSDs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>**Deduction is <strong>NOT applicable</strong> to:</td>
<td>• Other types of stand-alone BDs</td>
</tr>
<tr>
<td>3</td>
<td>Model-based capital</td>
<td>Credit risk charge comprises the following:</td>
<td>All credit risk charge components are applicable to the following:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• A counterparty exposure charge;</td>
<td>• ANC broker-dealers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• A concentration charge by counterparty;</td>
<td>• ANC broker-dealer SBSDs</td>
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<tr>
<td></td>
<td></td>
<td>and</td>
<td>The portfolio concentration charge is <strong>NOT applicable</strong> to:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• A portfolio concentration charge</td>
<td>• Stand-alone SBSDs</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Stand-alone SBSDs/OTC DDs</td>
</tr>
<tr>
<td>4</td>
<td>Portfolio margining</td>
<td>With respect to total return swaps on equities, counterparty credit risk</td>
<td>Stand-alone SBSDs may use a model to calculate IM for nondeared equity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(under-margined) charges apply;</td>
<td>security-based swaps, provided the account does not hold equity security</td>
</tr>
<tr>
<td></td>
<td></td>
<td>however, SEC Rule 240-15c3-1a does not appear to apply a market risk</td>
<td><strong>positions other than equity security-based swaps and equity swaps</strong> (e.g., the account cannot hold long and short positions, options, or single stock futures).</td>
</tr>
</tbody>
</table>
### Capital markets regulatory outlook 2020 | Security-based swap dealer capital, margin, and segregation rules

#### Table 2. Open questions noted with the final rule

<table>
<thead>
<tr>
<th>No.</th>
<th>Area</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Model-based application</td>
<td>Can a firm apply to the SEC for credit risk models and not market risk models? The following was noted on page 669 of the SEC final rules: “(2) Credit risk. A security-based swap dealer whose application, including amendments, has been approved under paragraph (d) of this section may compute a deduction for credit risk on transactions in derivatives instruments (if this paragraph (e) is used to calculate a deduction for market risk on those positions)...” It appears a firm will need to apply for models for market risk charges to use models for credit risk charges.</td>
</tr>
<tr>
<td>2</td>
<td>Credit risk charges</td>
<td>Certain firms are computing credit risk charges via the SEC Credit Risk Charge Deduction Letter. Elements of this letter do not appear to be addressed in the final capital rules. Outstanding: Will SEC acknowledge this?</td>
</tr>
<tr>
<td>3</td>
<td>Capital deductions</td>
<td>The final rules state that cleared security-based swaps that reference equity securities may take a deduction using the method specified in SEC Rule 240-15c3-1a. However, this section of the SEC rule has not been revised to address this product type.</td>
</tr>
<tr>
<td>4</td>
<td>Total return swaps (TRS)</td>
<td>With respect to total return swaps on equities, counterparty credit risk (under-margined) charges apply; however, SEC Rule 240-15c3-1a does not appear to apply a market risk minimum.</td>
</tr>
</tbody>
</table>

The SEC capital rules for security-based swaps were published on June 21, 2019, and deemed effective August 20, 2019. The compliance date is 18 months after the later of (1) the effective date of the final rules establishing recordkeeping and reporting requirements for SBSDs; or (2) the effective date of the final rules addressing the cross-border application of certain security-based swap requirements.

### Compliance timeline

<table>
<thead>
<tr>
<th>June 21, 2019</th>
<th>August 20, 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rules published</td>
<td>Effective date</td>
</tr>
</tbody>
</table>

18 months after the later of:
1. the effective date of the final rules establishing recordkeeping and reporting requirements for SBSDs; or
2. the effective date of the final rules addressing the cross-border application of certain security-based swap requirements
The SEC capital rules for security-based swaps were published on June 21, 2019, and deemed effective August 20, 2019. The compliance date is 18 months after the later of (1) the effective date of the final rules establishing recordkeeping and reporting requirements for SBSDs; or (2) the effective date of the final rules addressing the cross-border application of certain security-based swap requirements.

In addition to the items covered above, on September 19, 2019, the SEC published final rules for Recordkeeping and Reporting Requirements for Security-Based Swap Dealers, Major Security-Based Swap Participants, and Broker-Dealers.\(^3\) Given the above compliance timeline for capital rules, the industry should begin analyzing the final SEC Capital and Recordkeeping Requirements to determine the impact to operations, as well as what pro forma capital numbers might look like. Both sets of rules interplay with each other.

Moreover, certain SBSDs are also registered swap dealers with the CFTC. While the CFTC has proposed and re-proposed its capital rules for swap dealers, such rules are not finalized. However, as proposed, the CFTC capital rules for swap dealers make several references to the SEC capital rules. Dually registered SBSDs and swap dealers will need to pay close attention as the CFTC looks to finalize its capital rules.

Approval to use models for capital (both market and credit risk) will be a key consideration for SBSDs and swap dealers. The SEC and CFTC will continue working together on approving models for capital. Specific to those applying for models, this will require a control framework that is fit for purpose, as well as new and/or additional financial reporting and associated record-keeping requirements.

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1. SEC, “SEC Adopts Capital, Margin, and Segregation Requirements”
Intraday liquidity refers to the amount of cash and liquid securities an organization has available during the business day to fund its payment obligations. Prudent, active monitoring and management of intraday liquidity enables banks to ensure they have sufficient cash and highly liquid securities (e.g., US treasuries) available to meet their payment obligations. Although banks have been aggressively implementing capabilities and processes related to the overall management of liquidity, most do not have the technology, data, and processes in place to actively monitor their liquidity position throughout the day. However, now that banks no longer have to focus as much effort on simply meeting the regulatory requirements for liquidity, they should increase their focus in intraday liquidity risk management and liquidity optimization.

Growing pressure from regulators

Regulators—both in the US and globally—have increased their focus on a bank's ability to not only report on its intraday liquidity usage after the fact, but also get smarter about its intraday liquidity risk during the current day. Banks deemed to have an insufficient understanding of their intraday liquidity risk are required to hold more cash and liquid assets in a “liquidity buffer.” As such, continuing to ignore the importance of intraday liquidity can create opportunity costs and reduce a bank's competitiveness relative to its peers.

Several banks in the US and globally have started to use the rising regulatory pressure as leverage to develop a comprehensive intraday liquidity management program. These programs are focused on developing a strategy for the global management and monitoring of intraday liquidity that includes operating model, governance, technology, data, and process considerations.

Banks that already have the capabilities and organizational/governance structure in place to support active intraday liquidity monitoring and management have a clear competitive advantage over their peers. This has further motivated some organizations to focus on their intraday liquidity functionality. As noted earlier, there is a significant opportunity cost associated with holding large amounts of liquidity in a buffer, thus limiting investment in new business initiatives and products that could yield a greater return than Level 1 high-quality liquid assets. Also, building out the capabilities to monitor and manage intraday liquidity can enable an organization to determine its cost of liquidity and then allocate that cost to individual business lines in the form of funds transfer pricing (FTP). Liquidity functions that don’t have a robust FTP framework in place take the risk of increasing their own costs by not passing on the cost of funding to the parts of the business where it belongs. In addition, lack of transparency and lack of an FTP framework make it hard for management to determine the true profitability of a business.

Regardless of a bank’s own internal motivation for increasing its capabilities related to intraday liquidity, we expect regulators will likely mandate that banking organizations improve their understanding of their intraday liquidity risk—and that large banking organizations be able to actively manage, monitor, and report on that risk on a same-day or real-time basis.
Banks should be careful not to find themselves flat-footed as their peers move forward quickly to develop global intraday liquidity capabilities—and as regulators begin to make active monitoring, management, and reporting a mandate.

Banking organizations need to take a critical look at what capabilities and gaps they have in their intraday liquidity monitoring and management practices today, and then determine their priorities, timelines, and appetite for investment. Technology—enabled by data that is high-quality, granular, and readily available—will be a fundamental requirement for any bank looking to enhance its intraday liquidity capabilities. However, technology investments and data enhancements have a long tail and should be pursued immediately.

Meanwhile, organizations should identify quick wins for intraday liquidity—such as T+1 reporting and optimizing stress-testing models—that can generate value for the organization and can be integrated into a longer-term program. Capitalizing on these quick wins buys time and could potentially free up investment dollars to develop and support the business case for a longer-term intraday liquidity program.
Global liquidity optimization

The financial crisis prompted a globally coordinated effort to create a series of new regulations that now underpin a more robust and stable financial system—with today’s banks better capitalized and more liquid than before the crisis. However, there has recently been a retreat from global coordination, as well as a reduced appetite for cross-border regulatory cooperation.

Signs of regulatory divergence are increasing, as regions look to tailor regulations to local conditions. This was highlighted in a recently published report by the FSB, which examined areas where supervisory practices and regulatory policies may give rise to market fragmentation.

**Key regulatory developments**

In tackling the challenge of global liquidity optimization, there are several important regulatory developments that affect the treasury function. These include:

- **Net Stable Funding Rule (NSFR).** Global regulatory fragmentation is particularly evident with the implementation of the NSFR. According to a recent progress report by the BCBS regarding the adoption of the Basel regulatory framework, only 10 countries out of 27 BCBS members have NSFR regulations in place, despite the January 2018 deadline.

- **Stress testing.** Previously, liquidity stress testing focused on measuring the impact of combined stress scenarios over relatively short time horizons (generally 30 to 90 days). Now, there is a rising trend in the industry to assess sustained liquidity stress over longer horizons (nominally 180 days, but in some instances as long as one year). The European Central Bank (ECB) performed its first liquidity regulatory stress tests earlier this year to review the net liquidity position over a 180-day period. Some regulators are keen to understand a firm’s view of liquidity positions under internal liquidity stress and to compare it with the NSFR. Additionally, many firms are enhancing their liquidity modeling capabilities for resolution planning following the guidance issued by the FSB. This is another example of regulatory divergence, as regulators globally have adapted, or are in the process of adapting, these guidelines to form their approaches and finalize policy around liquidity and funding in resolution.

- **Ring-fencing.** Another area that has seen regulatory divergence is that of ring-fencing. In the United States and European Union, regulators have moved to implement segregation of activities on a geographic basis. In the United States, FBOs were required to establish US intermediate holding companies (IHCs) by July 2016. In contrast, similar rules in the European Union were recently approved as part of the CRD V/CRR II legislative package, which requires non-EU banks with assets in excess of €40 billion to establish an intermediate parent undertaking (IPU). However, this requirement is subject to a three-year phase-in period and thus will not be applicable until June 2022. In the United Kingdom, regulations took a different approach and required segregation of activities on a product basis that required core retail banking services to be separated from investment and international banking activities by January 2019. This has a direct impact for treasurers of UK non–ring-fenced banks, which can no longer rely on retail deposits and must raise funding from the market.

- **Leverage ratio.** This is one regulatory requirement where there appears to be consistency and coordination across most jurisdictions in applying the BCBS three percent leverage ratio minimum requirement. This was most recently confirmed in the EU, where a three percent baseline leverage ratio has been agreed upon, with a leverage-based global systemically important banks (G-SIB) buffer calibrated at 50 percent of the RWA-based G-SIB surcharge—both of which can be met with any Tier 1 capital.

Global liquidity optimization
Looking ahead

Despite the challenges of divergent regulations, firms need to focus attention on optimizing their operational approach. Treasury functions have seen a buildup in compliance costs from numerous regulatory programs and now have an opportunity to review their operating model, streamline regulatory and management information (MI) reporting processes, identify synergies between teams, enhance/achieve daily (T+1) liquidity coverage ratio (LCR) reporting, rationalize data sources, and reduce costs.

As part of their scrutiny of capital and liquidity, supervisors increasingly expect the Internal Capital Adequacy Assessment Process (ICAAP) and Internal Liquidity Adequacy Assessment Process (ILAAP) to be fully integrated and embedded into banks’ internal risk management and business decision-making processes. To meet these expectations, firms need to rethink the governance structure of their internal risk management activities.

Overall, the global regulatory landscape for banking looks set to become increasingly divergent and fragmented—a trend that, if left unchecked, could have significant implications for banks with substantial operations in multiple jurisdictions. The potential impact is particularly great for current efforts to create a regulatory, risk, and compliance infrastructure that is more streamlined and sustainable. It is in this environment that firms need to review their current approach and identify optimization opportunities to more efficiently navigate complexity.

Let’s talk

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2. BIS, Seventeenth progress report on adoption of the Basel regulatory framework, October 16, 2019, https://www.bis.org/bcbs/publ/d478.htm
Staying ahead

The regulatory landscape is constantly shifting. Some changes are big enough to grab headlines. Others are nearly invisible but can have a big impact. For the latest regulatory updates and insights please visit www.deloitte.com/us/CapitalMarketsRegulatoryOutlook.
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