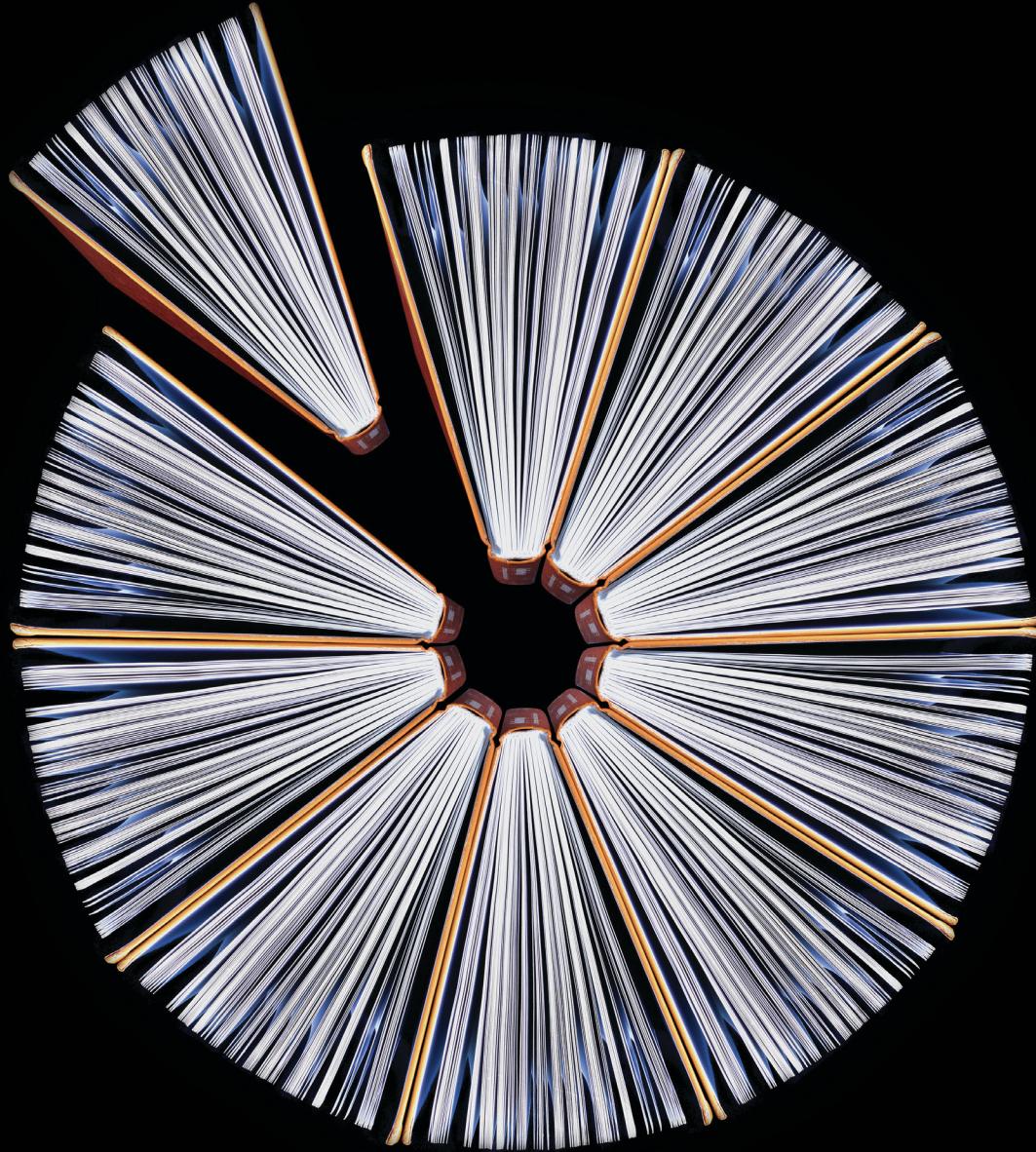


# Deloitte.



## **Global Investment Compliance Monitoring (ICM) Survey**

ICM infrastructure efficiency  
and effectiveness

Third edition | 2017

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# Introduction

Over the past few years, the investment management industry has been challenged by tightening operating margins, changes to investor behaviors, evolving consumer expectations, new regulations, and advanced technologies. These changes have caused a strain on an already aging investment compliance monitoring (ICM) infrastructure (i.e., people, process, technology, data, governance, and culture). As a result, investment managers are facing more pressure for greater ICM infrastructure efficiency and effectiveness in trying to meet day-to-day business needs, keeping pace with a rapidly changing marketplace environment (including new business priorities), and meeting evolving investor demands and regulator expectations.

An investment manager's ICM capabilities can play a critical role in helping manage and mitigate key risks by facilitating operational readiness and organizational responses to rapidly changing market conditions, new regulatory requirements, and shifting investor behavior—making ICM a strategic imperative. Yet in a difficult cost environment, investment in ICM infrastructure may not be prioritized when compared to other infrastructure investments being made by investment managers.

But where should you focus your efforts? Even as executives take steps to tackle identified ICM challenges and pain points, they are encountering a new and more challenging set of issues as ICM continues to evolve in the marketplace. To that end, Deloitte presents the findings and insights of our third ICM survey.

The survey, conducted in the second half of 2016, assessed current ICM practices at a range of investment management firms with operations across the world. We found that many executives could potentially benefit by augmenting their ICM practices in the following ways:

- Enhance the current-state operating model of the ICM function through organizational changes and infrastructure realignment
- Align risk-based resource allocation processes with the ICM function's objectives and risks
- Increase the accuracy of rules coded in the automated investment compliance system(s) with a well-defined and consistent approach throughout the ICM lifecycle

- Improve data quality and assessment processes by treating data as an organizational asset
- Understand and assess ICM costs during the client and product lifecycles to understand the profitability of client and product mandates and the impact to the organization
- Improve scenario response testing to enrich organizational resiliency

Based on the survey findings and our extensive field experience helping clients with their ICM function, we have further recommendations and additional insights on what investment managers are now doing to monitor compliance with investment restrictions. Deloitte may be able to help organizations become more efficient and effective at risk and compliance management through implementation of leading practices.

**Not appropriately prioritizing ICM may generate inefficiencies, costs, and breaches of investment restrictions, which may lead to financial, reputational, and regulatory risks.**

# Key survey findings

## Enhance the current state operating model of the ICM function through organizational changes and infrastructure realignment

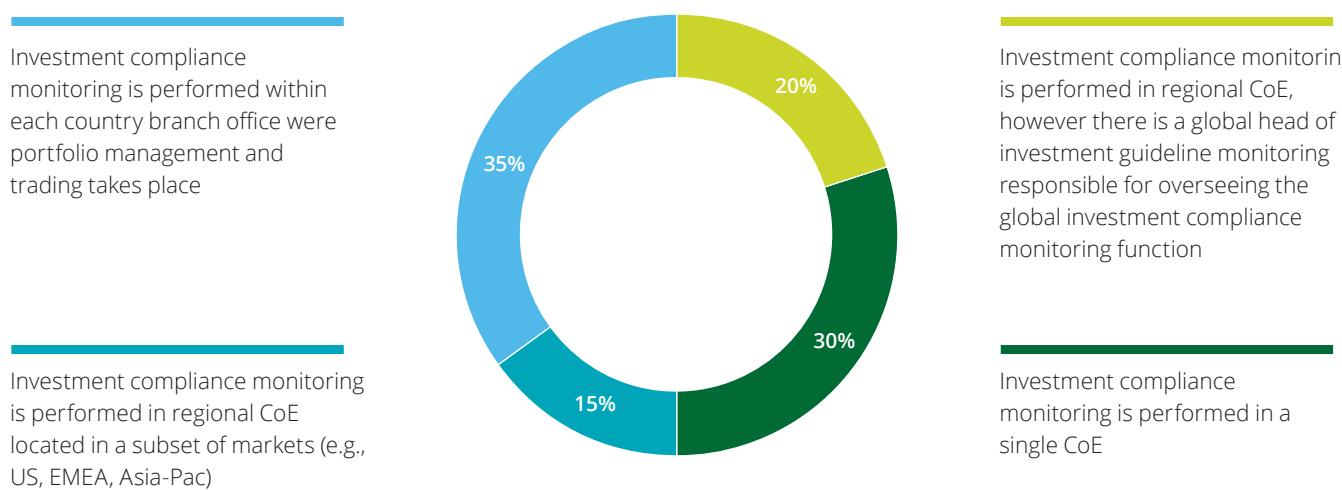
Many investment managers are experiencing growth in assets under management (AUM) through a mixture of flows and positive returns. However, corresponding growth in revenue is muted. In response, compliance functions, including other second-line-of-defense functions with ICM responsibilities such as risk, operations, and legal, are under increasing pressure to reduce overhead and other costs. These pressures come while simultaneously being asked by management and other key stakeholders (e.g., clients, regulators, and auditors) to increase the level of service

provided. While these two mandates may seem incongruous, the reality is that executives and investment compliance leaders can achieve both mandates by enhancing the efficiency, effectiveness, and extensibility of ICM processes through organizational changes and infrastructure realignment. This is especially true for organizations with global or co-located investment compliance operations.

There are three key drivers for the current-state operating model and organizational design at most survey participants: the number of jurisdictions, complexity of the distribution model, and the breadth of asset classes managed. Seventy-five percent of firms are impacted by more than three

jurisdictions, and fifty-five percent are subject to seven or more. Correspondingly, seventy percent of the survey participants have more than four product categories (i.e., registered funds, institutional/separate accounts, hedge funds, ETFs, etc.) to distribute. Finally, participants manage four to five of the six asset classes in the survey, on average. Each of these factors adds complexity to the ICM process, signaling that most survey participants have highly complex ICM requirements to create an efficient operating model.

Sixty percent of survey participants that operate in three or more countries or jurisdictions perform ICM in each location where portfolio management and trading takes place. This may lead to redundant or duplicative ICM processes. Regional centers of excellence (CoE) operating without a global head of ICM may miss the opportunity to create organizational consistency of ICM processes and associated economies of scale (see Figure 1).

**Figure 1. How is the investment compliance monitoring operating model organized?**

### Implications and insights

Our experience shows that there is not a one-size-fits-all operating model. Operating models can vary significantly based on how the various functional requirements and infrastructure elements of an organization's ICM function are configured across the organization and how they interact with each other across products, asset classes, risk culture, clients, functions, and geographies.

Regardless of the operating model, when identifying ICM functional enhancement opportunities, it's a leading industry practice to understand how the function's current-state operating model balances the "five e's" (existence, effectiveness, efficiency, extensibility, and expected value) of the ICM processes. This may also include:

- Rationalizing investment compliance related services currently provided by the ICM function against the services that should be provided

- Understanding the current ICM resource allocation model, including the allocation of roles, responsibilities, and accountabilities across the three lines of defense<sup>1</sup> (LOD) compared to the required resource skillsets and capacity to identify misalignment
- Evaluating the infrastructure elements against current or anticipated changes to people and products
- Developing detailed workflows to identify functional and process areas for optimization
- Developing a roadmap and detailed transition plans to implement the desired ICM operating model

Organizations should also consider:

- Establishing consistent policies and procedures governing the investment compliance lifecycle, including, but not limited to, contract analysis, the handling of interpretive issues, and breach validation and resolution

- Obtaining agreement regarding applicable regulatory and client contracts (e.g., investment management agreements and policy statements) and fund governing documents (e.g., prospectus and private placement memorandums)
- Assigning a dedicated resource to oversee global investment compliance operations
- Creating a cross-functional committee/working group to facilitate collaborative discussions on refining the ICM function mission, objectives, and infrastructure

These efforts can help ICM leaders achieve organizational mandates for their function to become more efficient and effective and contribute to the bottom line.

### Align risk-based resource allocation processes with the ICM function's objectives and risks

Margin compression, shifting investor behaviors and expectations, competition, new products, technologies, regulatory requirements, and aging infrastructure are influencing many organizational decisions. These decisions range from technology and data investment, product changes, and resource allocations. In an effort to blaze a strategic path forward, some decisions may not always be aligned with the ICM function's objectives and risks.

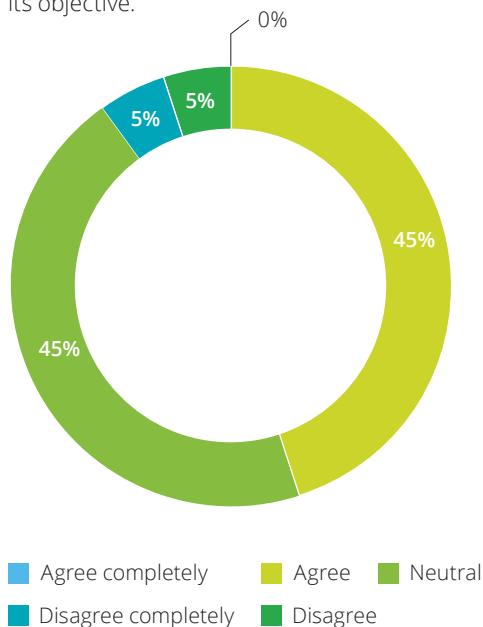
A number of factors and decisions are leading indicators for why compliance and risk officers believe that their ICM functions are insufficiently staffed (fifty-five percent of survey participants did not agree that their organization's ICM function is sufficiently staffed to meet its objectives; see Figure 2).

Data limitations also appear to be playing a role as forty-eight percent of respondents reported processing 51 or more pre-trade overrides per day, including eleven percent who were unsure.

Paradoxically, only twenty percent of survey participants reported that multiple business representatives from across the organization are responsible for aligning resources and ICM budgets with the mission and objectives of the ICM function. The chief compliance officer (CCO), chief executive officer, general counsel, chief investment officer, chief information officer, head of procurement, and the head of investment compliance were each cited as participants in the resource allocation and budget setting process. This points to ICM exclusion from participation in a unified firm strategy, if one exists.

**Figure 2. Please indicate your level of agreement with the following statement:**

The investment compliance function in my organization is sufficiently staffed to meet its objective.



Thirty-five percent of participants indicated that their organization is subject to investment guidelines that it is not equipped to monitor in the automated investment compliance system. This includes twenty-six percent of respondents that indicated that less than eighty percent of their rules are monitored via automated rules.

## Implications and insights

Organizations would be well-advised to use a risk-based resource allocation framework and approach to understand if the current resource allocation is appropriate. Effective, risk-based resource allocation frameworks for ICM functions can facilitate the efficient use of man hours, processes, and technologies. A risk-based resource allocation framework includes such factors as:

- The linkage of the ICM function and activities to organizational strategic objectives, cross-functional governance,

and the consideration of ICM risks from financial, operational, reputational, jurisdictional, and strategic perspectives

- Consideration of current and proposed investment compliance activities in recognition of changes to products, distribution practices, target clients, and asset classes
- Evaluation of the ICM control environment, including understanding the roles, responsibilities, and accountabilities (including decision rights) for compliance risk management across the three LODs

- Understanding the role of other functions with ICM responsibilities (e.g., internal audit, risk and legal, technology/data, portfolio management, and trading)

A risk-based resource allocation assessment output can help organizations identify enhancement opportunities, allocate ICM resources to mitigate risk, and control deficiencies that will drive infrastructure enhancements and create a culture of accountability.

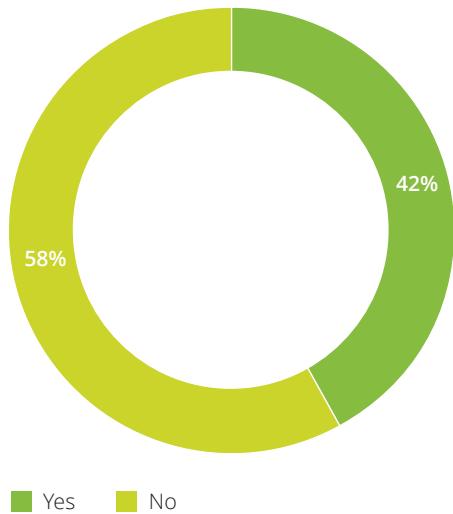


### Increase the accuracy of rules coded in the automated investment compliance system(s) with a well-defined and consistent approach throughout the ICM lifecycle

Although nearly three quarters of survey participants believe that the rules coded in their automated investment compliance systems accurately reflect the restrictions set forth by the contract documents, more than twenty-five percent did not agree.

In separate questions, fifty-eight percent of respondents reported that they do not have a process to periodically confirm the accuracy of the rules and account-specific guidelines (see Figure 3). Thirty-seven percent indicated that they do not perform user acceptance testing of newly coded rules to ensure accuracy (see Figure 4). Lastly, fifty-three percent do not have a process to identify and resolve global interpretive issues.

**Figure 3. Does the organization periodically confirm the accuracy and completeness of rules and account-specific interpretive issue resolutions with your clients?**



### Implications and insights

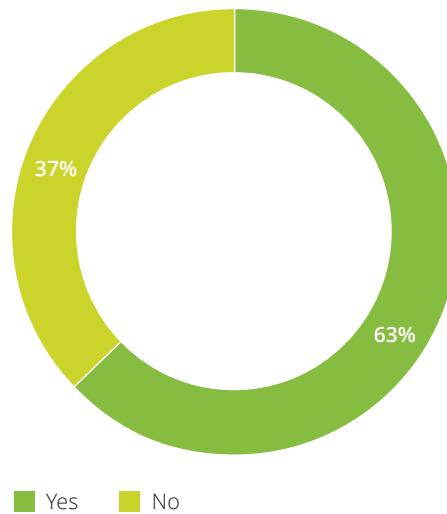
Having accurate rules that are coded in automated ICM systems is a key business requirement for an effective ICM function. Enhancing the accuracy of rules coded in the ICM system(s) requires a well-defined and consistent approach throughout the ICM lifecycle. Inaccurate rules can lead to:

- Users rejecting or bypassing ICM processes and controls
- Increased levels of false positives alerts
- Ineffective utilization of investment compliance resources
- Increased technology and data costs
- Potential for valid breaches going undetected

Leading industry practices for mitigating the inaccuracy of rules coded in the automated investment compliance systems typically include:

- Implementing a four-eyes review process to require a primary and secondary review of investment guidelines, including the

**Figure 4. Does the organization perform user acceptance testing for all newly coded rules?**



resolution of interpretive terms and issues during the contract analysis process

- Establishing centers of excellence based on skillset requirements (e.g., contract analysis and rule algorithm coding)
- Segregating roles and responsibilities during the contract analysis, rule coding, rule testing, and rule activation processes
- Developing procedures to require user acceptance testing of all new rules prior to activation, and validating the results with portfolio management and/or client relationship management
- Establishing risk-based policies and procedures to periodically review the accuracy of account rules

In addition, many investment managers are evaluating the skillset requirements and performing capacity analytics to determine if there are gaps to facilitate accurate coding of rule algorithms in the automated ICM systems. Finally, organizations should adopt a disciplined approach to maintaining the integrity, accuracy, and completeness of their rules library. Leading industry practices include:

- Documenting coding methodologies to facilitate consistency in rule coding and maintenance of the rule library
- Adopting standard rule naming conventions and abbreviations
- Adopting policies and procedures to review the rule library to check for duplicate rules

Fifty percent of survey participants do not have any means to prevent the coding of duplicate rules in the automated investment compliance system.

## Improve data quality and assessment processes by treating data as an organizational asset

Investment managers are increasingly dependent on various internal and external data sources to enrich their investment management processes. Although the increasing abundance of data creates opportunities, many investment managers are challenged in ensuring that there is a unified understanding of the golden sources of data across the enterprise, managing data replication and redundancy, and reconciling multiple data sources. This is particularly true for ICM functions that rely on the accurate and complete golden sources to perform rule monitoring. As a result, seventy percent of participants do not think that their technology and data quality is sufficient to meet ICM objectives (see Figure 5). In addition, several other data-related deficiencies persist among survey respondents, including:

- Fifty-eight percent of respondents have performed at least one assessment of data quality and availability in the past, but not with any regular frequency; furthermore, twenty-one percent of participants have never performed such an assessment
- Fifty-three percent do not maintain a data dictionary
- Seventy-one percent experience eleven or more data exceptions per day

- Agree completely
- Agree
- Disagree completely
- Disagree
- Neutral

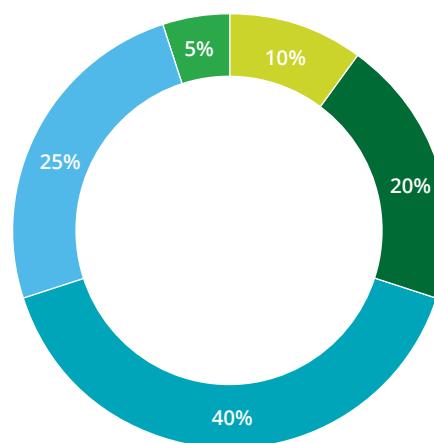
## Implications and insights

Without an understanding of available data and any limitations thereof, ICM functions may be limited in constructing the best options available to them to efficiently and effectively monitor investment compliance rules. When treated as an organizational asset, however, data can result in more efficient and effective rule monitoring for ICM functions. For example, a focus on data can reduce the number of manual rules the organization monitors. Enhanced and enriched data can also provide investment managers with the ability to perform scenario testing and forensic analytics to identify trends and patterns. Performing trend analysis on key ICM areas can also facilitate risk-based resource allocation decisions to respond to current and emerging issues and opportunities. Leading practices include:

- Formalizing the data governance framework by establishing a cross-functional data governance committee to facilitate the data requirements' coordination
- Assigning a dedicated resource that resides within the investment managers'

### **Figure 5. Please indicate your level of agreement with the following statement:**

**The investment compliance technology and data quality in my organization is sufficient to meet its objective.**



data or IT function to maintain data quality and availability in the ICM system(s)

- Identifying data owners, stewards, and consumers to establish expectations and an appropriate accountability structure
- Developing a data dictionary to identify the data that the ICM system(s) use and the corresponding definition of each data element to facilitate a common understanding when coding rules and analyzing test results
- Developing a data model to map the relationship of data used by the ICM system(s), including internal and external sources, where data is mapped to, and how it is used
- Providing periodic reporting and evaluation of data exceptions to the data governance committee to identify and prioritize changes and/or data model additions

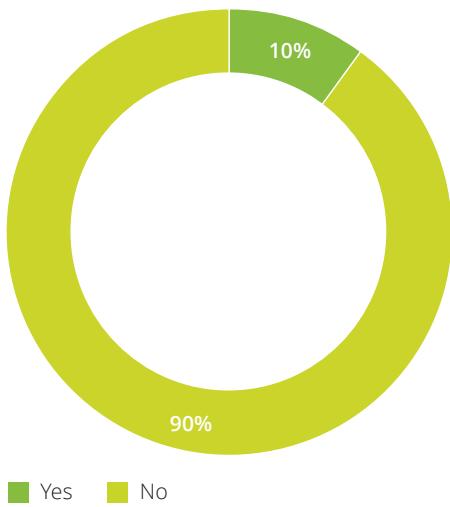
These efforts can enhance overall data quality and availability for coding automated rules, facilitating accurate rule monitoring, and analyzing rule test results. More importantly, by enhancing the overall data governance framework and management practices, organizations can realize significant opportunities to manage key risks.

Fifty-three percent indicated that their organization does not understand or effectively manage potential data divergences across technologies, analytics, oversight, and reporting functions

### Understand and assess ICM costs during the client and product lifecycles to understand the profitability of client and product mandates and the impact to the organization

Based on survey results, sixty-eight percent of respondents do not determine the costs of monitoring atypical investment restrictions during the client acceptance (see Figure 7) and seventy percent do not determine the costs during product development processes. Those that do assess the costs associated with atypical investment restrictions do not pass along the costs to the client. Furthermore, seventy-nine percent of respondents don't incorporate the costs of compliance into product profitability analysis, initially and on an ongoing basis.

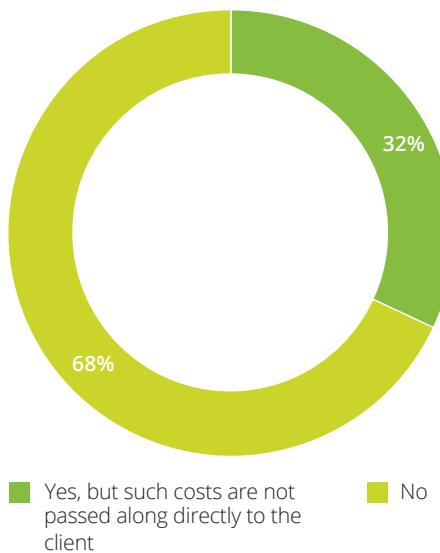
**Figure 6. Does your organization conduct a cost-benefit analysis of manual rules prior to agreeing to them?**



### Implications and insights

Failure to completely analyze ICM costs (e.g., resources, new data, manual processes, and operational or system enhancements) can erode investment manager profitability. Investment managers should implement policies and procedures that allow them to understand both initial and ongoing costs. These procedures may include measuring the impact on capacity associated with taking on new mandates and products with manual or atypical investment restrictions and custom reporting requirements. This approach can be designed to provide executives with a clearer picture of the profitability of client and product mandates and the impact to the organization, and facilitate pricing decisions.

**Figure 7. Does your organization determine the costs associated with monitoring a typical client investment restrictions?**



Ninety percent of participants indicated that they do not perform a cost-benefit analysis of manual rules during the client acceptance process (see Figure 6).

When formalizing cost and profitability analytics during the client onboarding and product development stages, leading industry practices include:

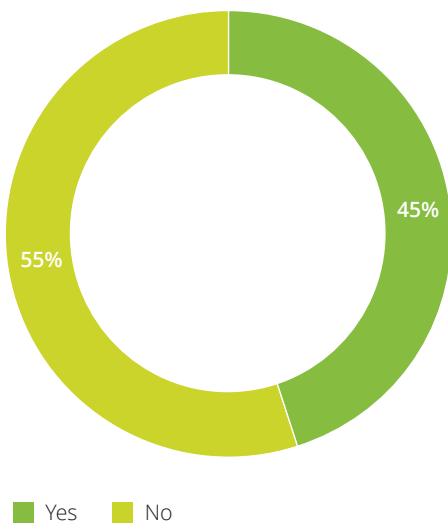
- Leveraging standardized rule templates for each strategy offered to reduce the number of manual and atypical rules
- Implementing a formalized cross-functional review and approval process of manual rules during the contract negotiation process
- Performing a cost-benefit analysis of the impact of manual rules, custom requirements (e.g., custom benchmarks), bespoke data requirements, resource capacity, product complexity (e.g., sleeved products and fund-of-fund structures) and the costs of application enhancements and data modifications (e.g., reliance on subadvisor and service provider data)

On an ongoing basis, investment managers should also implement periodic reviews to evaluate the full array of services and functions provided through ICM, including the impact of incremental costs associated with new mandates and products.

### Improve scenario response testing to enrich organizational resiliency

Over the last several years, investment managers have seen a fair share of events occurring outside of their control that impacted their ability to manage client assets (e.g., flash crashes, national elections and votes, and international disturbances impacting global markets).

**Figure 8. Is scenario response testing conducted on investment compliance data to evaluate enterprise readiness for projected events (e.g., response capabilities to macro events that result in credit downgrades)?**



### Implications and insights

ICM functions rely on complex data and rule sets to monitor investment guidelines. However, macro events (e.g., credit downgrades, interest rate changes, and other market-related events) can disrupt an organization's ability to monitor investment guidelines accurately and readily anticipate portfolio management and liquidity management challenges caused by such disruptive events. Executives should consider enhancing their ICM capabilities and implementing periodic (e.g., annual) scenario response testing. Scenario response testing can help organizations:

- Mitigate risks occurring from disruptive macro events
- Enrich overall organizational resiliency
- Align investment compliance rules to investment guidelines
- Expose data quality, duplication, divergence, and availability issues
- Evaluate organizational readiness for macro events, including potential portfolio management and liquidity management challenges

- Explore how others in the organization use investment compliance related data
- Identify other ICM infrastructure-related requirements not been previously identified

Investment managers should include the availability and quality of data used by their ICM functions as part of their overall business continuity planning. While many organizations typically plan for business disruptions that may impact the ability of the organization to perform ICM, it's a leading industry practice to plan for scenarios that could impact the accurate monitoring of rules and other portfolio management activities.

As it relates to ICM, over half of survey participants—fifty-five percent—do not conduct scenario response testing on investment compliance data to evaluate organizational readiness and resiliency for potential macro events that could be disruptive (see Figure 8).

# Emerging issues

In addition to the preceding findings regarding core ICM issues, the following arose from the survey as emerging areas of concern.

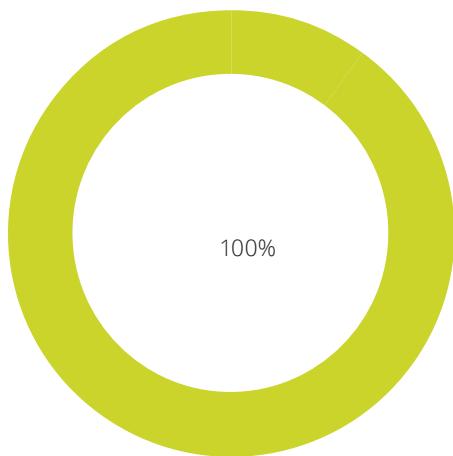
## Adapting ICM to facilitate portfolio liquidity compliance

Given the increased focus on portfolio liquidity risk management practices by global financial service regulators,<sup>2</sup> executives should consider adapting their ICM systems and processes to support firm-wide liquidity risk management programs that are designed to manage liquidity risk. Based on the results of our survey (refer to Figure 9 below), liquidity risk is currently not overseen by ICM functions.

### What to do?

Significant opportunities exist for ICM functions to help their organizations adhere to the needs of their new regulatory obligations. For example, many global regulators require that investment fund managers monitor the liquidity of portfolio holdings based on asset class liquidity. This includes establishing a minimum percentage of fund assets in highly liquid investments and establishing a maximum percentage of portfolio holdings in illiquid assets.

**Figure 9. Is investment risk monitoring performed by the investment compliance function (e.g., Value at Risk (VaR), liquidity risks, etc.)?**



In light of recent regulations and regulatory guidance issued by many regulators around the world, many investment managers are building out a dedicated liquidity risk management (LRM) function to monitor liquidity compliance. As new regulations and guidance go into effect, the ICM function can play an important role to help the LRM function:

- Understand the applicable regulations and guidance
- Design tests to monitor portfolio liquidity compliance
- Validate portfolio liquidity breaches
- Facilitate regulatory reporting

### Consider developing an outsourcing strategy to contain ICM costs and gain access to subject-matter expertise

Compliance and risk management officers, who are under increasing pressure to reduce ICM-related costs while maintaining efficient and effective ICM processes and capabilities, are exploring outsourcing strategies to meet their organizational mandates. Strategies include outsourcing component parts of their ICM function to third-party service providers that can perform ICM services more efficiently and at lower cost. Organizations are also evaluating shifting resources and processes to lower cost geographies. Based on survey responses, ten percent of participants outsource

ICM capabilities (see Figure 10). However, some ICM capabilities are performed by in-house staff. Of the activities that are outsourced, the most common outsourced ICM activity is rule algorithm development and post-trade monitoring (see Figure 11).

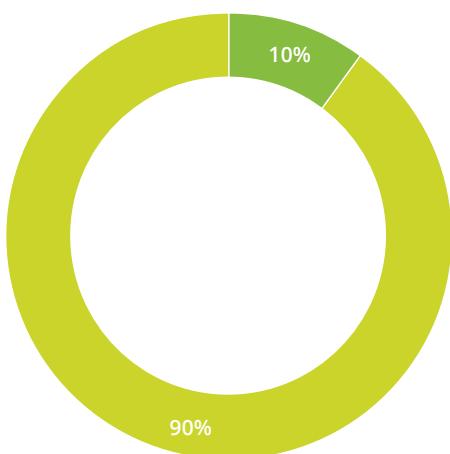
#### What to do?

When exploring outsourcing strategies for the ICM function, executives should consider:

- The frequency of the ICM activity that may be outsourced
- The scalability of the ICM process and the vendor's ability to scale operations to meet requirements

- Specialized skillset requirements and vendor knowledge domain expertise
- The impact on the organizational risk posture by outsourcing ICM activities
- Regulatory requirements (e.g., duty to oversee and permissibility to outsource specific activities)
- The impact on data and the ability of the organization to replicate data to the vendor
- Decision rights that may exist outside the ICM function that can impact outsourced processes

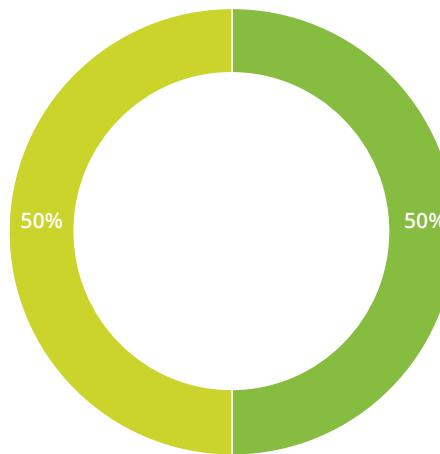
**Figure 10. Is any part of the organization's investment compliance monitoring capabilities (i.e., contract analysis, rule algorithm development and testing, pre-trade monitoring and/or post-trade monitoring) outsourced?**



■ Yes, we outsource some of our investment compliance monitoring capabilities, however some of our investment compliance monitoring capabilities are performed by in-house staff

■ No, our in-house staff is responsible for all aspects of investment compliance monitoring

**Figure 11. If any of the investment compliance monitoring capabilities are outsourced, which capabilities are outsourced? (Select all that apply)**



■ Yes  
■ No

# Conclusion

Making ICM a strategic priority can enhance control effectiveness and organizational efficiency

Pressures in the industry will continue to evolve—particularly competition for new clients in light of evolving regulations and changing investor behavior. Focusing on the strategic importance of ICM by enhancing current capabilities can provide organizations with direct and indirect benefits to address those pressures.

ICM plays a critical role in managing financial, regulatory, operational, and reputational risk. Excellence in these risk management areas reflects the industry's commitment to invest client assets in accordance with their investment objectives and guidelines, adhere to regulatory requirements, and pursue operational excellence for shareholders and other stakeholders.

Based on the survey, the foregoing analysis and insights, and Deloitte's overall experience in the field, final considerations for investment management executives to enhance the efficiency, effectiveness, and extensibility of their ICM processes include:

- Assessing the current-state operating model and organizational design of the ICM function in recognition of client agreements, regulatory requirements, and organizational objectives to identify enhancement opportunities

- Categorizing and calculating the costs of ICM and its impact on product and client profitability
- Understanding the impact that the current organizational design and state of infrastructure has on resource capacity
- Identifying ICM process inefficiencies that drive instances of user rejection and control deficiencies
- Addressing data quality and system capabilities to effectuate new regulatory requirements and increasingly complex client guidelines
- Exploring outsourcing opportunities to manage costs, gain access to subject matter knowledge, and enhance operational efficiency

Making ICM a strategic priority not only assists investment managers in living up to their customer and regulatory commitments, but can also position investment managers to be more competitive and profitable.

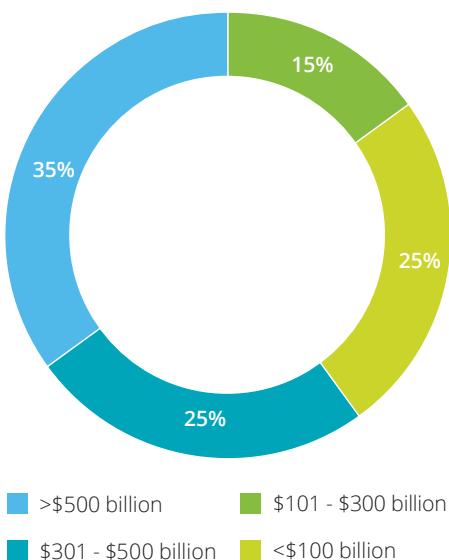
# About Deloitte's ICM survey

Similar to its predecessors in 2010 and 2013, Deloitte's third ICM survey assesses investment compliance monitoring practices in the investment management industry.<sup>3</sup> The survey was conducted in the second half of 2016 with CCOs or their equivalents at 20 investment management organizations around the globe.

Survey participants represented a diverse range of global and regional organizations, with locations and headquarters in the United States, UK, continental Europe, and Asia-Pacific, and collectively managing more than \$10 trillion in global assets under management (AUM). Thirty-five percent of survey participants were large organizations, holding over \$500 billion in AUM, twenty-five percent held between \$301 to \$300 billion in AUM, and small to midsized organizations (those with \$300 billion or less) represented forty percent.

Institutional separate accounts were the most common product offered and ninety percent of participants offered registered funds (e.g., mutual funds and UCITS). Other common products were collective investment vehicles, exchange traded funds, and hedge funds. Equity and fixed-income asset classes made up the highest share of holdings, although money markets, derivatives, commodities, and direct investments were also represented.

**AUM of ICM survey participants, 2016**



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<sup>1</sup> The Three LOD model is an organizational construct designed to facilitate risk management. Organization's that use a Three LOD or similar model delineate roles, responsibilities and accountabilities, inclusive of decision rights, across the Governance and Internal Audit functions - 3rd LOD; Risk and Control functions (e.g., Compliance, Risk and Legal) – 2nd LOD; and Business Operations – 1st LOD. Within this construct, each LOD serves a specific purpose and is accretive to the overall ability of an organization to effectively manage risk.

<sup>2</sup> For example, the US Securities Exchange Commission - Investment Company Liquidity Risk Management Program rule ([here](#)); the UK Financial Conduct Authority - Liquidity Management for Investment Firms Good Practice ([here](#)); and the Securities and Futures Commission (Hong Kong) - Circular to Management Companies of SFC-Authorized Funds on Liquidity Risk Management ([here](#)).

<sup>3</sup> Although the 2016 survey is similar in context to the prior surveys, given differences in the questions from prior surveys, the findings from each survey are presented in separate documents.

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