

# Managing Risk, Leveraging Technology and Building Resilience for the World's Official Institutions

Insights on the importance of data integrity and the resiliency challenge



**As data continues to grow in importance, official institutions today face increased complexity in operating models and require heightened diligence.**

**In this white paper series, State Street partners with Operational Risk Consulting to explore these challenges and engage in a discourse to navigate them.**

# The Importance of Data Integrity and Security



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## Markets had predicted apocalypse for official institutions during the economic crisis caused by the pandemic.

They expected official institutions to use their resources for fiscal stimulus and to minimize damage to their domestic economies. However, sovereign wealth funds and institutional investors were resilient to the early pandemic market conditions and maintained strategic discipline, even during severe market volatility. The role of data in this investment decision-making cannot be underestimated.

In the 21st century, investment is a data-intensive activity for official institutions. Understanding client needs, analyzing market activity, and keeping pace with regulatory requirements and a host of other information demand a clear focus on data.

Investment management is becoming more complex as investors look into alternative asset classes and explore efficient investment strategies. Data analysis has also grown in complexity. Assets or portfolios are no longer assessed through a single or even a handful of metrics.

This makes effective data management crucial to an organization's competitive edge. While the value in improved data management is widely recognized, organizations seeking to make this transformation face challenges connected to building integrated systems with common data standards and analytic capabilities, while maintaining resilience, data integrity and data security.

The challenges are at two levels: existing systems and new technology; and the improvement of data management practices.

### Legacy and Innovation

Legacy systems are often unsuitable for current needs as they are poorly integrated, work in siloes, and are unable to share data and analytics in transferrable formats. However, many organizations face challenges while investing in advanced technology as it is difficult to integrate new technology effectively with legacy systems.

Data integration has become even more challenging due to the growing importance of data and analysis offered by third-party providers, whose data systems cannot be integrated easily with an organization's existing data infrastructure.

Now, the focus for many organizations is on technology investments and partnerships that provide a holistic view of their internally and externally sourced data – enabling easy access to data that can be used in different operational areas, in the formats best suited to various functions.

Many are looking to cloud computing as a partial solution including the creation of 'data lakes' – repositories of raw information that can be accessed and analyzed for a wide range of operational needs. However, this process remains nascent in enabling new business applications.

### **Data Management Challenges**

The key challenges organizations face with data management are:

- Cybersecurity concerns hindering open data exchange
- Multiple data and information standards
- Lack of available capital to invest in upgrading technology and systems
- Difficulty in integrating internal IT systems with third-party systems

The COVID-19 pandemic has amplified the need for effective data management. A lack of effective systems put restraints on investment performance and portfolio liquidity, and has led businesses to increase their investments in data systems and processes.

Nearly three-quarters (74 percent) of respondents to our 2020 Growth Readiness Study<sup>1</sup> said that the use of alternative data, such as satellite imaging or social media posts, had become a greater priority as a result of COVID-19. Most of the respondents said that they were more likely to use an external provider for alternative data analysis than to build infrastructure in-house.

Alarming, more than half of the survey respondents said that their organization did not have the processing and artificial intelligence systems needed to make the best use of these external data resources.

The pandemic has also added to the challenge of cybersecurity, as remote working became the norm across many firms during 2020.

As conversations and data sharing is carried out remotely, the need for increased attention to cybersecurity and improved information protection protocols will become more critical than ever.

Though organizations are facing a combination of interlinked challenges around data management, the post-pandemic world will be full of opportunities to overcome data complexity.

<sup>1</sup> State Street engaged Longitude Research to field a global survey of 618 industry executives from more than 20 countries, during September 2020. Respondents spanned senior executives in investment, operations, distribution and C-Suite roles, representing institutional asset owners, asset managers and insurance companies.

# Operational Risk Consulting Introduction: The Resiliency Challenge



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**“If you always do what you’ve always done, you’ll always get what you’ve always got.” The grammar is not ideal and the quotation’s origins may be contested, but the message is one of timely importance. Whether the statement is accurately ascribed to Twain, Einstein, or Ford, is of little significance compared to the value of its inherent call to periodically re-evaluate and change.**

## **A Shifting Landscape**

If the world has learned anything during the COVID-19 pandemic, surely it is that despite humankind’s overwhelming achievements and advances, sometimes we have no control over the sheer force of external events. While fundamental, wholesale change to existence may not be required in response to developing situations, ‘adaptation’ most certainly is.

Organizations must be prepared for change. This includes Sovereign Wealth Funds (SWFs) and other institutional asset allocators.

When developing their operating models, official institutions must accept a fundamental premise that what was fit for purpose in the past may no longer meet the demands of current or future challenges.

The unique complexity faced by official institutions requires heightened diligence when considering whether their operating models sufficiently mitigate the scale and type of challenges faced. The risk universe, fund size and composition, and organizational structures of official institutions starkly differ from those of other asset allocators or investors, requiring a more prudent approach to manage the risks associated with their operating models.

## **The Operating Model Challenge**

Investment operations standards must change periodically to keep pace with developments in portfolio diversification, environmental objectives, infrastructure, service provider consolidation, technological advancement, data needs, emerging risks and regulatory requirements. The key challenges faced by official institutions investors today can be defined within two broad categories: data integrity and systems and cyber security and operational robustness.

Let us consider each of these themes in the context of the Basel Committee on Banking Supervision's definition of operational risk as being the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events. This time-honored parameter consistently acts as a yardstick by which operating model considerations and their practical implementation should be measured. When reviewing their operating models, official institutions must be mindful of the risks associated with either not changing at all or changing at the wrong pace or in the wrong direction. The good news is, solutions are available and, if carefully planned and applied with robust governance, prevention is certainly better than cure.

### **Data Integrity and Systems**

Official institutions are huge consumers of data – data integrity is paramount for them. Yet data is good only when accurate and has no benefit if incomplete or inaccurate.

Given their scale and complexity, official institutions face several data-related challenges:

#### **Data Aggregation**

Official institutions often struggle with multiple data sets from various vendors and sources. Data is often fragmented by asset class or by liquid and illiquid strategies, with some data more readily available and accurate than others. The ability to view accurate, aggregated data has long been an obstacle, with some official institutions having to consolidate data and assemble a top-level view. A single source of trusted data is the target end-state.

### **Data Management**

Given the volume and disparate sets of data official institutions work with, data quality can sometimes be compromised. Official institutions perform a critical overlay role as users of investment-related data and, with the increasing complexities associated with global and regional investments across the spectrum of asset classes, can find themselves acting as data checkers.

### **Data Locale**

Some official institutions require their data to be stored locally. This can limit their access to global data warehousing services and requires them to develop bespoke local data storage solutions.

### **Investment Systems**

Official institutions are major users of powerful in-house investment systems. These are hugely complex, both in how they are implemented and how they run on an ongoing basis. Challenges may arise through incomplete or inappropriate configuration, as well operational knowledge to maintain.

### **Cyber Security and Operational Robustness**

2020 was the year 'operational resilience' became everyday parlance in the investment industry and investment operations teams were placed in the spotlight. The vital role investment operations plays in developing and administering an official institution's operating model as well as the overall success of the organization's objectives, was perhaps better appreciated than ever before. After all, a funds' investments and the return they generate are only as good as the operational infrastructure supporting them.

The added strain placed on operations by the COVID-19 pandemic has also attracted the unwelcome attention of cyber criminals. More broadly, over the last decade, the understanding of cyber security and protection against the threats posed by cybercrime have become common aspects of life. This has made it critical for official institutions to consider the significance of cyber security and operational robustness. The same high standards taken by official institutions to protect against the increasing cyber threat landscape need to be passed on to their third and fourth parties to reduce vulnerabilities in the wider eco-system.

The need for an official institution's operating model to be founded on a framework of appropriate controls and processes, complimented by a system of robust challenge and oversight, is now more imperative than ever. Despite that, investment operations teams grapple with several challenges that test operating model robustness.

### **Internal Framework**

Implementing an agile, robust operating model is a considerable undertaking. True collaboration with third-party vendors yields enhanced results when both parties work in tandem. Challenges may arise; however, when internal frameworks require development or official institutions and service providers are not strategically aligned and have divergent practices, technology platforms or other operating model limitations.

### **External Relationships**

Official institutions require not only technical and data solutions, but also client service, relationship management and counterparty operating models

that appropriately support their ever-evolving needs. Of all the institutional investors, official institutions, perhaps need true, strategic partners the most. Their mandates and investment schedules are more prone to change as they must evolve to match policy decisions. With change a constant factor, cracks can occur when service providers and partners do not offer the degree of holistic support required. These can develop into fissures if left unnoticed or unattended.

### **Partner Oversight**

Appropriate monitoring of external vendors is critical to a well-controlled, robust official institution's operating model. Whether it is external investment manager operational due diligence, custodian selection and monitoring or periodic review of key counterparties, an ongoing third-party oversight framework is a critical yet complex constituent of an organization's operating model, and can help protect an official institution from immeasurable risk.

### **COVID-19 Implications**

The global pandemic has challenged conventional ways of working. Though necessary and appropriate, such wholesale changes to client support structures, operating models and day-to-day service delivery frameworks require increased oversight and constant re-evaluation of the emerging risk landscape. The pandemic has affected the entire gamut of the operating models of organizations supporting official institutions. This in turn, has placed huge responsibility on official institutions to understand and manage these external risks, as well as their own internal COVID-19-related risk implications.

**About State Street**

State Street Corporation is one of the world's leading providers of financial services to institutional investors including investment servicing, investment management and investment research and trading. State Street partners with official institutions, sovereign wealth funds, central banks and other official institutions globally to help address their biggest challenges.

**About Operational Risk Consulting**

Operational Risk Consulting or 'ORC' is a UK-based specialist risk management advisory firm, which advises institutional asset owners on managing the operational risks associated with investing. ORC's key objective is to help raise investment operations standards.



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