CIBC MELLON

Data Transformation in Asset Management:

Canada vs. the World

CHAPTER 1

Fundamental changes in the asset management industry have been building for some time as institutional investors have pursued innovation for competitive advantage – however, the pandemic market dislocation and remote operating environment have rapidly accelerated the pace of transformation. In a new and wide-ranging research study covering 200 asset managers from Canada and around the world, our global enterprise shows why such changes have reached a point of no return. In chapter 1 of a new "Canada vs. the World" research series, we draw from BNY Mellon's global insights and our local experience to contextualize selected areas where Canadian asset managers are leading or trailing the global consensus.

Data is increasingly being recognized as one of the most important asset classes for institutional investors – as an operational tool, as a source of competitive investment intelligence, and even as an investable asset in its own right. As sources and types of data have proliferated, the ability to interpret data and convert it into usable, relevant information has become a key differentiator in the asset management industry. Having a mountain of data and being able to utilize it effectively, however, are two different things.

In our first chapter of "Data Transformation in Asset Management: Canada vs. the World" we explore how asset managers perceive the challenges and opportunities presented by harnessing, governing and analyzing data to fuel growth. We highlight how margin compression across the industry is increasing the need for operational efficiencies. We will also turn to possible strategic solutions firms are pursuing, including market and product expansions to compete and grow, as well as look into how effective and efficient data management is the key to solving these two (sometimes competing) priorities.

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Darcie James Maxwell
Head of OMNI Digital Services
Canada

The hunger for new and greater sources of data comes from an array of opportunities. For many institutional investors, the demand is loudest from front office teams looking to keep pace with competition for investment opportunities. The pandemic has increased pressure to digitize operations and highlighted the inefficiencies most firms have in the data supply chain supporting their front office teams, but also brought to light the challenges for middle and back office operations facing an increasing gap in data infrastructure and operations.

Advanced data capabilities have the potential to transform nearly every area of the business: investment activities, as well as corporate functions, product development, distribution, sales and marketing, and more. In parallel, asset management service providers have evolved their data capabilities to better support their clientele. Data management software, delivered through both private and public clouds, continues to develop rapidly. Operational support to optimize data utilization has long been a part of the offerings delivered by outsourced providers. What has changed is their new focus on providing data that enables a wider range of analytical capabilities, providing clients the capability to unlock strategic value from data as an engine of growth. Innovation across the fintech world has also fueled a new crop of tools and technical prowess that add to the capabilities of the industry. In short, asset management leaders are rapidly recognizing data as a critical strategic focus area.

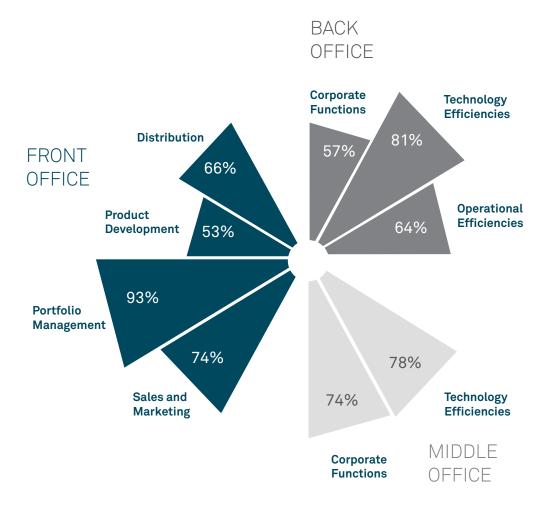## Pandemic remote environment: rapid acceleration of existing trends

Many asset managers had already embarked on digitalization before the pandemic, just as business continuity and resiliency have long been part of the conversation. However, the arrival of COVID-19 amplified the need to adopt and integrate new technologies.

Market volatility and rapidly changing conditions increased urgency. Remote working exposed the shortcomings of relying on manual and paper-based processes. The ongoing pandemic resulted in extended needs for social distancing and remote work. Above all, the pandemic highlighted the importance of business process resiliency and the kind of agility that enables asset managers to respond to – or even predict –new opportunities and risks.

Data will reshape the industry

The majority of Canadian asset managers, when asked in which parts of their organization they plan to deploy data and analytical tools, stated they plan to do so in every core process of their business. Most Canadian asset managers (85%) indicated plans to expand the use of analytics and insights in portfolio management, indicating many of their growth strategies rely on leveraging advanced data and analytics. Asset managers around the world share this sentiment, and this response highlights the importance of data to these firms, as informed investment decisions are the fundamental value that asset managers deliver to their investors. As data reshapes the role of central portfolio management, these changes flow through to every other part of an asset manager's business model as well. While front-office responses indicate a desire to increase data-based decision-making, the middle- and back-office responses indicate the work being done on costs, revealing that front offices plan to deploy data analysis and insights to achieve efficiencies.

Asset Managers plan to deploy data analysis and insights in all areas of their business.

BACK OFFICE

FRONT OFFICE

Distribution
66%

Product Development
53%

Corporate Functions
57%

Technology Efficiencies
81%

Operational Efficiencies
64%

Portfolio Management
93%

Sales and Marketing
74%

Technology Efficiencies
78%

Corporate Functions
74%

MIDDLE OFFICE

Why Portfolio Management?

While there are many use cases that drive demand for data analysis and insight, portfolio management rises to the top of all asset managers' data priorities for good reasons. First and foremost, data can support more robust investment analyses, decreasing costs to generate alpha or beta. With the proliferation of data sources, the volume and complexity of data is increasing exponentially. Effectively integrating new types and volumes of data can help managers identify opportunities, make more informed investment decisions and monitor performance. These needs drive the rapid development of tools to visualize increasingly granular information such as predictive analytics dashboards and artificial intelligence-driven heatmaps. Meanwhile, cloud-based technologies support the scaling requirements of data growth as new database capabilities allow for the inclusion of both structured and unstructured data types.

Data analysis touches on the use cases by which investment managers are able to deliver more value to investors, optimize their costs and expand their investor base. In a competitive world where transparency, efficiency and finding new growth opportunities dominates asset managers' strategic agendas, these top use cases demonstrate how data analysis can determine a firm's destiny. In addition to experiencing difficulties in managing data, asset managers further described challenges in extracting meaningful insights from it.

For Canadian asset managers, the top use cases for deploying data analytics are performance and risk management (55%) and asset selection and allocation (45%). Identification of new client profiles (45%) also make a strong showing and, even in the front office, operational efficiencies are still important (41%).
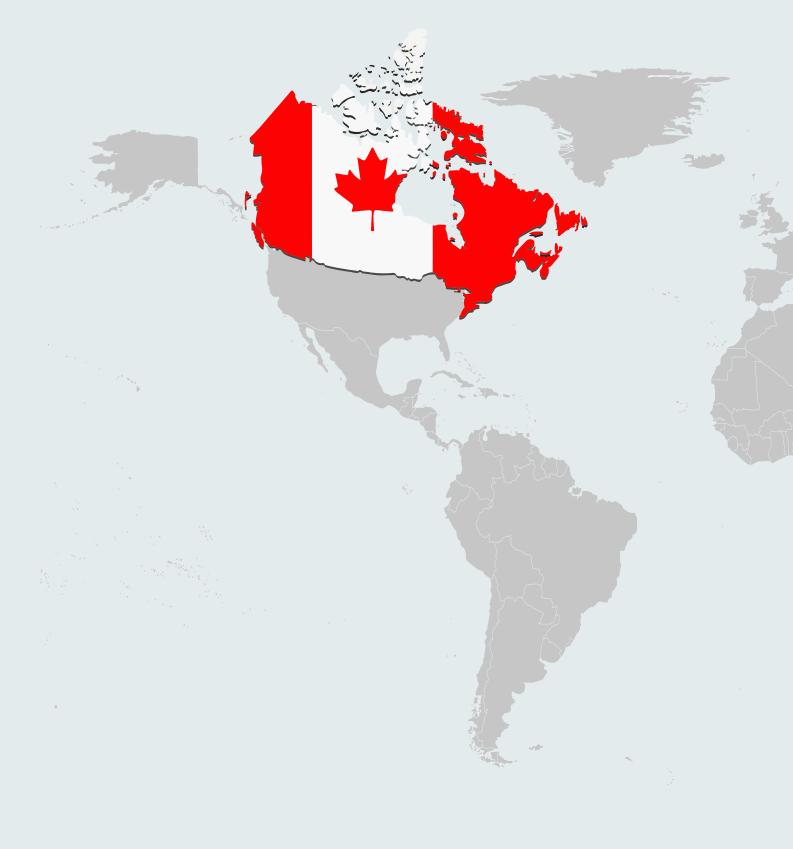
Across all regions, the most common responses appearing in the top four barriers to gaining insights included the complexity of data (54%) and the obsolescence of existing data management platforms (54%), closely followed by a lack of analytical tools to cover unstructured data types (52%) and the complexity of the analytical tools (49%).
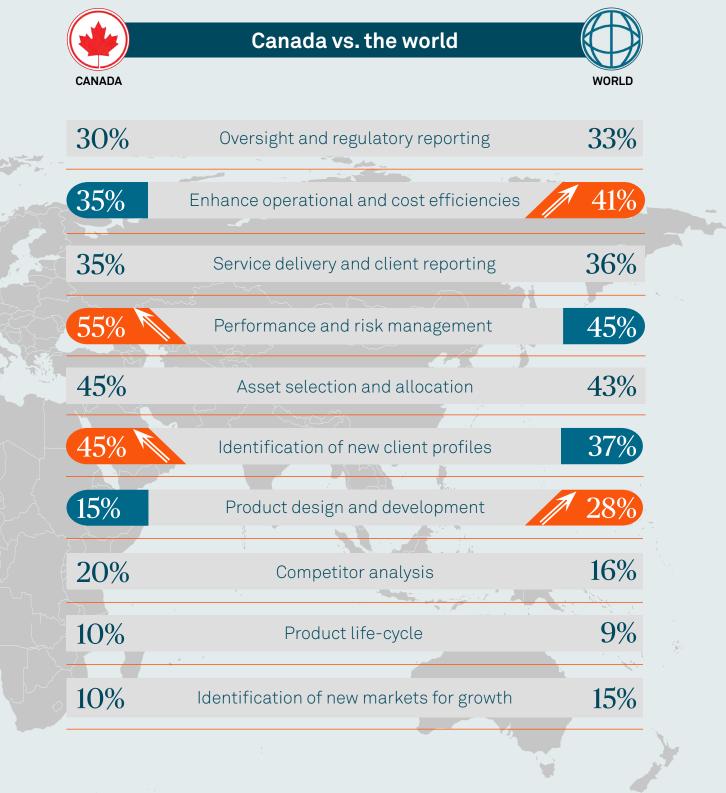
Canadian managers trail global consensus in appetite for digital talent

Consistent with the global figure, 10% of Canadian respondents said a lack of skilled staff was a barrier to extrapolating meaningful insights from their data, versus 17% among global peers. This may speak to Canadian firms' history of building and growing talent in-house, obviating some of the challenges of competing for skilled digital staff on the open market. Within the findings, we also anticipate divergent experiences related regional talent concentration. For example, large cities like New York and Toronto have a high concentration of talent as well as a significant volume of inbound opportunity-seeking talent, meaning divergent talent implications versus regional centres where clients operate with greater need to foster and grow local and in-house talent as well as work to retain it. As organizations consider their future ways of work plans and contemplate remote, flexible and in-office models, there is an opportunity for regional investment managers to access talent remotely that was formerly unavailable. These experiences aside, Canadian firms' lower demand for data talent might simply indicate they are earlier in their data journeys and as such may face a sharp increase in talent appetite.

What are your top use cases for deploying
data analysis? (Select top three)

Canada vs. the world

CANADA

WORLD

Canada		World
30%	Oversight and regulatory reporting	33%
35%	Enhance operational and cost efficiencies	41%
35%	Service delivery and client reporting	36%
55%	Performance and risk management	45%
45%	Asset selection and allocation	43%
45%	Identification of new client profiles	37%
15%	Product design and development	28%
20%	Competitor analysis	16%
10%	Product life-cycle	9%
10%	Identification of new markets for growth	15%

Challenges in Climbing the Data Mountain

Industry consensus reflects the importance of flexibility and scale to manage the variety and growth of data. Survey respondents across the globe also acknowledged the challenges in keeping up with these changes. Meaningful data tends to be stored across disparate systems and functional silos, making it challenging to aggregate, catalog and interpret in a timely manner. The most common challenge respondents cite in effectively managing data is aggregating it across fragmented infrastructure to create a single, easily accessible source to serve the enterprise's needs. Reflecting the demands of front-office portfolio management, other challenges that respondents cited among their top three included obtaining real-time, high-quality data (60%) and the reliability, completeness and freshness of data and sources (35%). Across regions, about half of respondents said the main barriers to managing data are: obtaining real time, high quality data, and difficulty aggregating across fragmented infrastructure to create a single, centralized source. Unstructured data sources can include documents that come in PDF formats, such as analyst reports, but it can also include satellite data, tweets and other social media, and myriad other newly mined sources.

Canadian respondents were largely consistent with global peers, albeit with key differences around performance management (higher prevalence) and product design (lower relevance).
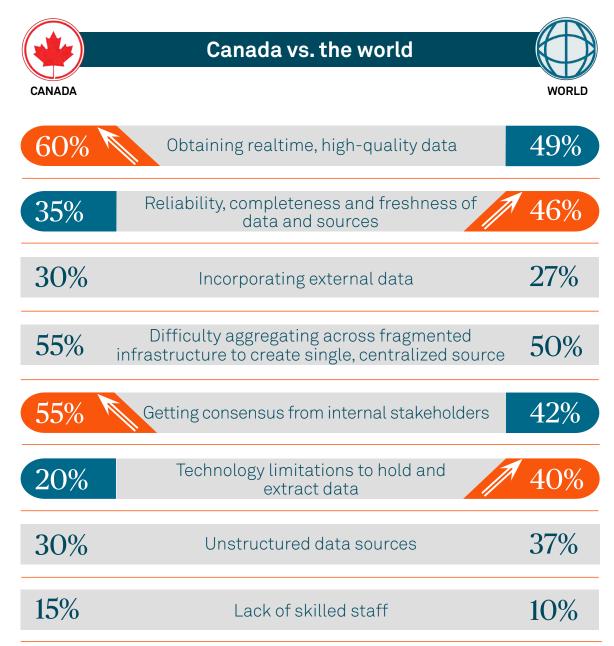
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Across regions, about half of respondents said the main barriers to managing data are: obtaining real time, high quality data, and difficulty aggregating across fragmented infrastructure to create a single, centralized source."

Cynthia Shaw-Pereira
Vice President
Client Solutions & Business
Development

Which of the following are the main barriers to managing data (i.e. collect, store, clean) effectively? (Select top three)

CANADA	Canada vs. the world	WORLD
60%	Obtaining realtime, high-quality data	49%
35%	Reliability, completeness and freshness of data and sources	46%
30%	Incorporating external data	27%
55%	Difficulty aggregating across fragmented infrastructure to create single, centralized source	50%
55%	Getting consensus from internal stakeholders	42%
20%	Technology limitations to hold and extract data	40%
30%	Unstructured data sources	37%
15%	Lack of skilled staff	10%

Beyond merely accessing the data, asset managers described further hurdles in extracting meaningful insights from it. The most common are the obsolescence of existing data management platforms (70%), followed by the complexity of data to analyze (55%). Since the consumers of data are not just data scientists but portfolio managers, client-facing teams and others across the organization, it's critical to offer intuitive, readily available tools in order to leverage the power of aggregated data.

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Most Canadian asset managers (70%) see the obsolescence of an existing data management platform as a barrier. Whether this is because Canadian managers have more sophisticated needs than global peers or they have underinvested over the years likely depends on the firm in question. In either case, Canadian managers are increasingly aware that their legacy technology is holding them back. I look forward to exploring this further in 2022."

Gord Kosokowsky
Executive Director,
Relationship Development
and Segment Co-lead,
Asset Managers

Which of the following are the main barriers to extracting meaningful insight from your data? (Select top three)

	Canada vs. the world	
CANADA		WORLD

Canada	Barrier	World
10%	Lack of skilled staff	17%
45%	Lack of analytical tools to cover unstructured data types	52%
45%	Lack of a single, centralized 'source of truth'	43%
40%	Lack of data management platform to analyze data consistently	49%
70%	Obsolescence of existing data management platform	54%
55%	Complexity of data to analyze	54%
35%	Complexity of the analytical tools	33%

Sourcing Data Talent

Creating a base level of data literacy, including the use of new tools related to data management and analysis, will be as vital for asset managers as integrating those tools into the firms' everyday operations. Success will demand high levels of collaboration between different teams. Firms will need to draw on functional knowledge as well as data science techniques to create and proliferate needed capabilities. Collaboration with service providers also is essential. Given the importance and complexity of data management, it is not surprising that companies are seeking external expertise.

Almost all respondents looking to outsource aspects of their business over the next three years will consider doing so with data management infrastructure. Across the globe, data operations also are set for further outsourcing, mentioned by 78% of respondents. However, only about half of Canadian asset managers are planning to explore or expand their outsourcing relationships in data operations over the next three years in comparison to their counterparts.

Canadians are lining up along the spectrum of in-source, co-source and out-source. We also see that clients are requesting an evolving hybrid model as institutional investors evolve their operations over a long-term plan. They want to be able to integrate a wider range of data sets, focus resources on complex analysis but also be prepared to allocate operational functions to their asset service provider. This has provided many clients with the best of both world's minimizing in-house operational activities but continuing to leverage technology to better meet their information delivery strategic objectives. We're also seeing clients leverage a co-sourced relationship for intake and interfacing with multiple data vendors, data validations and mastering, leaving the asset managers to focus on data governance and client enablement.

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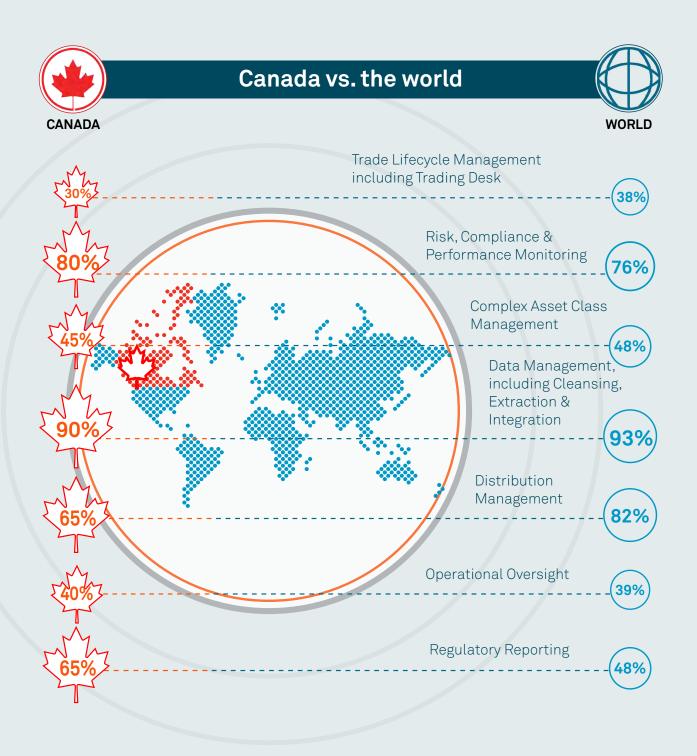**Ash Tahbazian**
Chief Client Officer

Canada vs. the world: Regulatory complexities, trade lifecycle management and distribution are key areas where Canadian mangers diverge from the global average.

Canada is known for its complex markets, and this speaks to areas where Canadian managers' expectations diverge from those of their global peers. Canadian managers are ahead of their global peers in terms of their appetite to outsource their regulatory reporting than their global peers – this may reflect either the significant complexity of the Canadian regulatory environment – which includes federal, provincial and industry self-regulatory bodies.

Like global peers, Canadian managers also indicated plans to outsource their distribution, but Canadians also diverge from the global average around appetites to outsource their trading activities – perhaps reflecting Canadian firms' view that their in-house trading operations are driving value thanks to their in-house talent, or may alternately suggest that Canadian managers are merely earlier on the adoption curve with respect to outsourcing front office operations.

What aspect of your business are you most likely to outsource in the next three years? (Select all that apply)

CANADA

Canada vs. the world

WORLD

	Canada	World
Trade Lifecycle Management including Trading Desk	30%	38%
Risk, Compliance & Performance Monitoring	80%	76%
Complex Asset Class Management	45%	48%
Data Management, including Cleansing, Extraction & Integration	90%	93%
Distribution Management	65%	82%
Operational Oversight	40%	39%
Regulatory Reporting	65%	48%

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Canadian managers are ahead of their peers in terms of their appetite to outsource regulatory reporting - this may reflect the significant complexity of the Canadian regulatory environment - which includes federal, provincial and industry self-regulatory bodies."
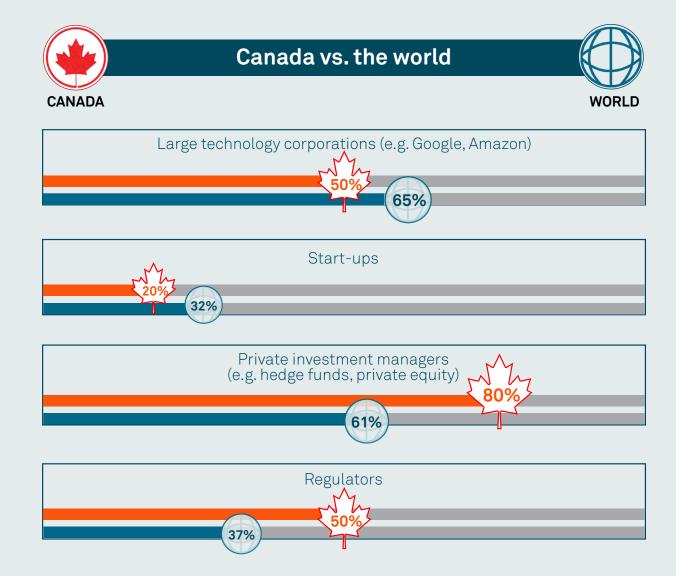
Joe Lacopo
Vice President,
Relationship Management
and Segment Co-lead,
Asset Managers

Who do you see as the biggest disruptors in the sector and why? (Select top three)

Canada vs. the world

CANADA   **WORLD**

Large technology corporations (e.g. Google, Amazon)
- Canada: 50%
- World: 65%

Start-ups
- Canada: 20%
- World: 32%

Private investment managers (e.g. hedge funds, private equity)
- Canada: 80%
- World: 61%

Regulators
- Canada: 50%
- World: 37%

> " Data and technology are driving change, challenge and opportunity - with the ability to make better and faster decisions enabling competitive advantage and driving stronger outcomes. In this accelerating world, speed to market is key, with the associated downside risks to those who fail to keep pace."

Darcie James Maxwell
Head of OMNI Digital Services
Canada

Whether your organization aligns better with a managed services model, an outsourced model or somewhere in between, we encourage you to review the attributes to each model below and think about how you can customize and leverage the performance continuum to fit your organization's needs:

Attributes Aligned with Hosting	Attributes Aligned with Co-sourcing	Attributes Aligned with Outsourcing
I am comfortable handling my own reporting requirements	I want to have the ability to integrate my own data with the information from my asset service partner	I want to be able to provide my internal stakeholders with standard analytics
My organization has robust IT capabilities and can handle accounting, data management and performance	I want to consolidate my data onto a centralized platform and have my provider track and leverage it	I want a provider to handle the technology and the operational overhead
I want my provider to equip me with tools for utilizing data in the front, middle and back office	I want the operational responsibility split between my organization and my provider	I want my provider to manage my data on my behalf

Key considerations:

- Have you mapped the data lineage and end-to-end processing requirements in your organization?

- Do you have too many separated platforms and need to look at data centralization?

- Have you created a data governance structure or team that has oversight for data across the investment process?

- Have you also identified the use cases and data needs of your organization?

- Do you have the tools to support this in a timely and accurate fashion?

- What are some of the unmet data needs in your organization?

Over the next few months, we will release the detailed findings from our global enterprise's wide-ranging study. Each chapter offers deeper insights and strategies to help clients thrive in a data-driven world.

Canada is known for its complex markets, and this speaks to areas where Canadian managers' expectations diverge from those of their global peers. Canadian managers are ahead of their global peers in terms of their appetite to outsource their regulatory reporting than their global peers - this may reflect either the significant complexity of the Canadian regulatory environment - which includes federal, provincial and industry self-regulatory bodies.

To register for advance copies of forthcoming research or to learn more about some of the performance, accounting and data solutions available through our global enterprise, contact your relationship manager.

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