



# GLOBAL PENSION INVESTMENT TRENDS

THE IMPORTANCE OF TECHNOLOGY INNOVATION

The view from investment, operations, and technology decision makers

**Institutional  
Investor**



**SimCorp**

**Deloitte.**

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# Foreword



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## PENSION FUNDS GLOBALLY ARE FACING MOUNTING PRESSURES

Today, pension funds around the world face the daunting task of generating sufficient returns to provide adequate and sustainable retirement incomes for their members in the context of an ageing population. If we add the large funding gap, liquidity constraints with members' tapping into their pension savings from the fallout of the pandemic, shifts in stakeholders' expectations, regulatory burdens and the low yield environment, challenges abound. While the rapid rebound of the markets after a sharp correction in 2020 has provided some respite, this alone will not be sufficient to improve the long-term solvency of pension plans.

At the same time, as stewards of investments on behalf of broad coalitions of workers with a new sustainability agenda, pension managers are also under growing pressure to invest responsibly with a watchful eye on the environmental, social, and corporate governance (ESG) activities of their holdings.

## MORE DRASTIC PORTFOLIO SHAKEUPS ARE NEEDED

To ensure plans remain fully funded, pension managers must make more thoughtful analyses across a broader range of investment choices and new asset trends like private markets and ESG in search of yield. To that end, they are being forced into more drastic portfolio shakeups, driving the need for a more nimble operating model.

- Pension funds need to adopt an agile management of their portfolios that enables them to capitalize on market opportunities quickly and increase the much-needed diversification to fund future liabilities.
- Given the increasing funding gap, we can expect a more pronounced push towards illiquid investments, such as alternatives as well as more complex investments, which in turn require more sophisticated risk management and mature data management capabilities.



**Michael Borawski**  
*Principal*  
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- Incorporating ESG data across the entire value chain will be fundamental to deliver on the increasing ESG mandates with a promise of better risk-adjusted long-term returns. As regulators increase their push for integrating ESG into the portfolio and risk management framework, access to 'one source of truth' will become a necessity.
- The demand for greater transparency on performance, risk and investment decisions will put data front and center. As volumes and complexity of financial and operating performance data increase, the process of collecting, aggregating and reporting data will need to become more streamlined.
- Furthermore, competition is fierce, with new players entering various parts of the market, putting further pressure on firms to contain costs. This has already led to a wave of divestments and acquisitions, and more is to come as pension funds worldwide are focusing on their core businesses, bringing the insourcing/outsourcing dilemma to the fore.

## AN OPTIMIZED OPERATING MODEL IS WHAT WILL SET FUNDS APART

The portfolio shakeups stress the need for an agile and consolidated operating model that minimizes operational friction and improves operational efficiency. Leading pension funds rely on a core technology platform that facilitates nimble and diverse investment strategies, fully supported by sophisticated risk management, scenario analyses and stress testing capabilities.

Pension funds are having to balance driving innovation forward, while retaining control and managing costs. This has led to a shift towards combining the best of two worlds: a core operating platform with an open architecture, which integrates with a wider ecosystem of niche fintech solutions, enabling firms to quickly take advantage of new technology innovation.

Ultimately, technology – and technology-enabled business services – become the gateway to accelerating differentiation through innovation, enabling pension funds to remain competitive and generate better returns for their members.

# Introduction

With ageing member populations leading to more payout than contributions, pension funds across the globe are facing mounting pressure to optimize costs, while accelerating time to market for new investment strategies that yield better long-term returns.

At the same time, pension funds globally are facing increasing pressure to align their investment and asset management practices with evolving standards of ESG practices and mandates. While utilizing modern information technology is vital for managers of large pension funds to meet these new criteria, they vary in their approach and integration of technology solutions and innovations.

To shed light on where industry executives are converging and differing on key issues, we conducted a survey of more than 135 investment and IT decision makers at pensions, both public and private, in North America, Europe, and Asia-Pacific with \$10 billion or more in assets under management. We also interviewed several executives to get additional context on the survey findings. For more information on how the survey was conducted, see "About this research" on page 19.

We designed this survey to yield information on a number of factors, including:

- Do most pension funds now manage their assets internally? What are the consideration factors for insourcing vs outsourcing?
- How are growing commitments to ESG being reflected in investment strategies across North America, Europe and APAC?
- What near-term changes do pension funds foresee in their private market exposures? And what are the challenges in administering these investments?
- What are the greatest data management challenges facing pension funds today? And what technology initiatives are they prioritizing to support their investment priorities?

This report aims to offer insights on these questions and others, revealing context that investors may use in assessing how their own organization's methods and approach compare to current industry practices and trends.

These are highlights of the survey findings:

- Most respondents (59%) manage their assets internally, while 37% use a hybrid internal-external model and just 4% manage assets externally.
- Nearly three out of five respondents (58%) expect to increase their ESG portfolio exposure by more than 20% within the next two years. About one-quarter (23%) expect their ESG exposure to increase by 50% or more.
- Approximately one-third of respondents (31%) plan to increase their private-market investments by more than 20% in the next two years. The other two-thirds (67%) plan to increase them by less than 20%, with the majority (43%) planning to increase them by 10% or less.

- A great majority of respondents say they struggle to achieve a holistic view of investments across all asset classes, especially investments in ESG (78%) and private markets (83%).
- The greatest challenges respondents face in data management include having too little time to do roll-outs and updates (73%), a lack of scalability to support data increases in volume and type (55%), and difficulty in corralling data from multiple sources into one common view (54%).
- Respondents are most likely to seek technology platform support for ESG investments tracked on spreadsheets (48%) and straight-through processing (STP) across the investment lifecycle (45%).

To add context to the above numbers, this report will explore four key themes that have emerged from the survey findings:

- Pensions seek to retain internal control of their asset management while outsourcing their “non-core” IT, data management and operational needs.
- Pensions managers are adapting to increasing ESG commitments, and the challenges and opportunities they bring.
- Investment decision makers have growing interest in private market investments but are hindered by operational challenges.
- Pensions often struggle with data management limitations and in response they’re making technology upgrades a top priority.

# I. Insourcing of Asset Management, Outsourcing of Data and Operational Needs

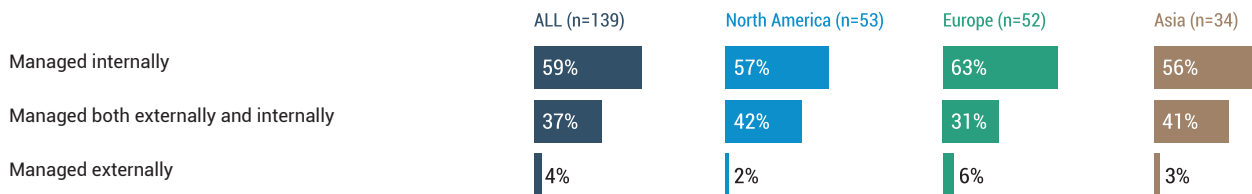
## INTERNAL TEAMS OVERSEE NEW, BROAD MANDATE

Pensions are most likely to manage their substantial holdings through talented internal teams of professionals, according to this survey of more than 135 investment decision

makers at pensions in North America, Europe, and Asia-Pacific. (See “About this research” on page 19.) A solid majority – 59% – say they manage their assets internally, and another 37% use a combination of internal and third-party asset managers (see Figure 1).

**FIGURE 1. SURVEY RESPONDENTS MANAGE ASSETS INTERNALLY OR WITH A HYBRID MODEL OF INTERNAL TEAMS AND THIRD-PARTY ASSET MANAGERS**

### Do you manage pension assets internally or do you have an external manager?

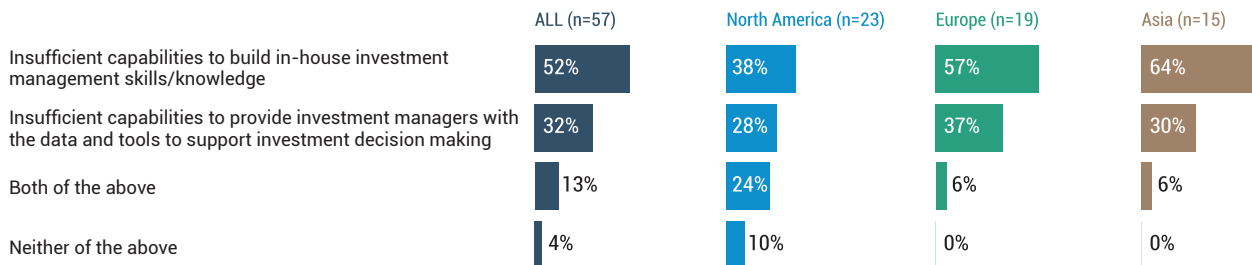


When queried on their rationale for calling on third-party asset managers, a majority of survey respondents (52%) cite a lack of in-house investment management and knowledge (see Figure 2). The inability to provide managers with data and tools to support sound decision making was cited as the primary reason by

nearly one-third of all respondents (32%). Notably, the problems of internal resources and data management seem especially acute in North America, where nearly one in four respondents (24%) cite both factors as principal reasons behind their in-house versus third-party manager decisions.

**FIGURE 2. LACK OF INTERNAL EXPERTISE AND BANDWIDTH DRIVE PENSIONS TO THIRD-PARTY MANAGERS**

### What prevents you from avoiding external fees and bringing all your assets in-house?



## IMPLICATIONS FOR INSOURCING VS. OUTSOURCING

Performing asset management and investment processing internally, externally, or with a hybrid (internal-external) mix is a fundamental decision in choosing the pension fund's core operating model. This choice will have implications for the portfolio management toolkit, ease of data accessibility, the system landscape required to support emerging asset classes, use of complex ESG metrics, and other issues.

Managers that understand the importance of having the flexibility to choose the operating model that best supports the business needs will have an advantage.

At a minimum, insourcing asset management requires an effective operating model that will support business growth and lower the cost of infrastructure. It must utilize a robust and scalable platform that supports:

- Rapid onboarding of new asset classes
- Efficient sourcing, processing and storage of increasingly complex data
- Expansion to new markets

The most important consideration in choosing an operating model is achieving a holistic, accurate and real-time view of the pension fund's complete portfolio across all assets and entities – including public and private assets, liquid and illiquid assets, and internal and externally managed assets.

If a firm is located in an expensive labor market, or one where it is difficult to find talent, outsourcing asset management and investment processing could be a viable option. However,

trade-offs with outsourcing include a lack of accessibility and control of investment data, and a lack of flexibility in leveraging new fintech innovations. Furthermore, outsourcing could be a costly operating model as most vendor pricing increases as AUM grows.

## OPTIMIZING THE OPERATING MODEL

By keeping asset management and investment processing in-house where it is needed, firms can maintain full control of their investments and focus their limited resources and expertise on performing business tasks that add value.

There are two in-house models. In the first one, the firm manages the technology and innovation landscape internally without assistance. In the second model, the firm selects a business partner that offers technology-enabled business services.

An outsourced business service for investment processing allows the firm to leverage technology expertise from partners with experience in technology and innovation. For example, some of the more progressive technology partners have expertise in front-to-back office platform consolidation, sourcing fintech options, and building relevant APIs to support innovation (for front office operations, ESG investing, etc.). The most progressive solution providers not only provide software as a service, but also deliver the expert consultancy needed to become a true business partner.

Many pension funds are planning to adopt this operating model. Survey results indicate that 23% of respondents are prioritizing the outsourcing of their middle and back-office processing, while 17% plan to outsource their data management operations.

## PENSION EXECUTIVES CALL FOR IN-HOUSE ASSET MANAGEMENT

During interviews we conducted with decision makers in pension funds, a director of research and senior investment officer at a \$90+ billion pension fund in the U.S. offered these thoughts on the advantages of bringing asset management and data management in house:

“Our goal is to do more and more in house. For the most part, our assets are currently with external managers. There are certain things that we do internally, whether it's co-investments, or we set up some of our investment strategies, so that we have discretion.”

“Because of technology, we understand that whoever has the data or owns the data can do some really interesting things with that data and translate it into better investment strategies. This realization has really

transformed our mindset of saying, ‘Okay, we’re not going to be an administrator. We’re going to be hands-on. We’re going to bring talent in-house, we’re going to change the way that we deal with data... We’re going to use all of these things to have that be our competitive advantage, and not just rely on discussions with the consultant.’”

“As we grow as an industry and embrace innovation, we are in a position that we can be the ones that are actually driving the different investment strategies.”

A senior vice president of technology and innovation at a \$180+ billion pension fund in Canada revealed that his firm had shifted increasingly to an in-house model in recent years:

“It’s a combination. I would probably say about four years ago it was mostly external, but then the strategy has changed to become an active in-house manager.”



## II. Growth of ESG – Challenges, Implications, and Opportunities

This difficulty in managing assets internally comes amid pensions' efforts to expand their allocations to ESG strategies. Survey results indicate that 58% of pensions expect to increase ESG exposure by 20% or more within the next two years (see Figure 3).

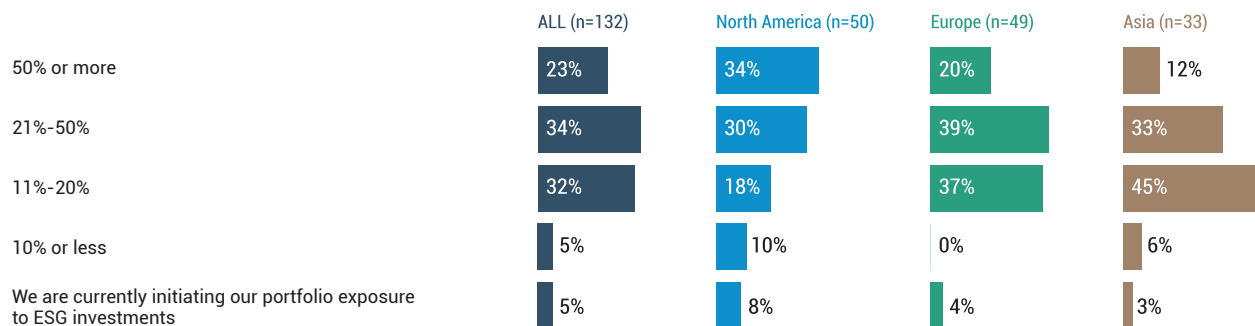
Respondents from pension funds in North America are especially likely to increase

their ESG exposure; more than 34% of these respondents will grow this exposure by 50% or more within the next two years.

Pension funds in Asia-Pacific are the least likely to increase their ESG exposure within this time frame. Only 45% of these respondents expect to see an increase of 20% or greater in ESG exposure within two years.

**FIGURE 3. GROWING ESG MANDATES AND SEARCH FOR RETURNS DRIVE INVESTMENT STRATEGIES. CONSEQUENTLY, MORE THAN HALF OF RESPONDENTS EXPECT TO INCREASE THEIR ESG EXPOSURE BY 20% OR MORE IN THE NEXT TWO YEARS.**

*In the next 12-24 months, how much do you plan to increase your portfolio exposure to ESG investments?*



### CHALLENGES IN ADMINISTERING ESG INVESTMENTS

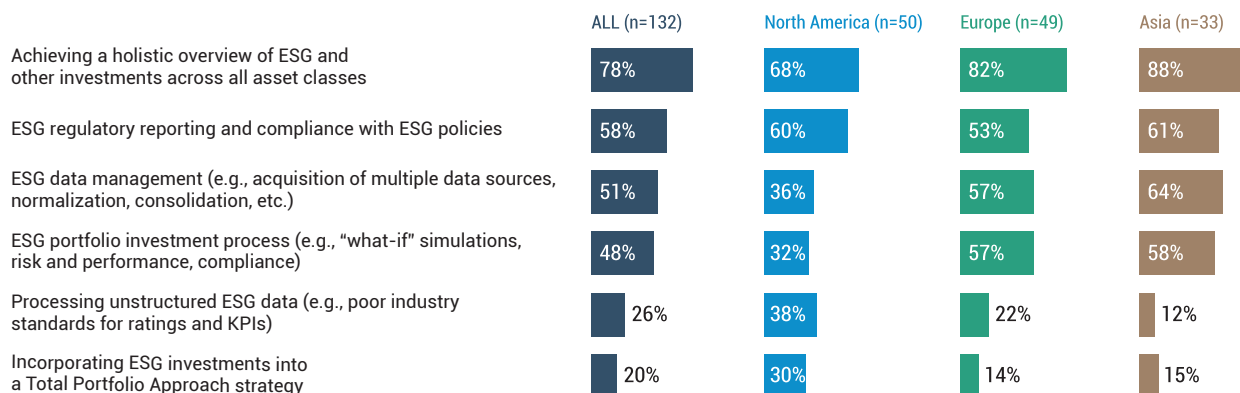
Executives in pension funds in all global regions surveyed said they were experiencing significant challenges in administering ESG investments. Fully 78% of all respondents cite difficulty in achieving a holistic view of ESG and other investments across asset classes as among their greatest challenges. (See Figure 4.)

A majority of respondents also cite completing ESG regulatory reporting and compliance and maintaining effective ESG data management as pressing challenges.

The increasing complexity of data management is a particular challenge for pension funds. They must deal with an exponentially growing and ever more complex data landscape, which requires integrating new data and ESG-metrics from multiple external sources and processing these multiple streams into one unified data layer. Such efforts are costly and can be complicated and time-consuming, but are the only way to ensure front-to-back data consistency and ownership across all assets. For these and other reasons, many funds choose to partner with a technology firm that specializes in data management to perform these functions.

**FIGURE 4. A MAJORITY OF RESPONDENTS WRESTLE WITH ACHIEVING A HOLISTIC VIEW OF ESG INVESTMENTS, MEETING ESG REPORTING AND COMPLIANCE REQUIREMENTS, AND MAINTAINING EFFECTIVE ESG DATA MANAGEMENT.**

**What are your three greatest challenges in administering ESG investments?**



**INVESTORS HAVE AMBITIOUS PLANS AS ESG STRATEGIES MATURE**

Some lessons may be learned from fund executives in Europe, where pension funds have dealt with the challenges, implications and opportunities offered by ESG issues for a longer period of time than funds have in other global regions. A chief investment officer of a \$20 billion pension fund in northern Europe offered this feedback:

“We have been a pioneer in implementing ESG criteria into the investment strategy that started in the mid 1990s. And we have decided to continue and move the ESG strategy towards the next level. We are currently focusing on the climate strategy because of the climate emergency. So our focus now is to manage the carbon emission as well the temperature of the portfolio. Another focus is on engagement, which is one of the most concrete ways to have a positive impact on the environment. Our third project this year is to tackle impact investments. And then the fourth pillar is disclosure and reporting. And by the way, these are the four asks of the European Union.”

“There are many different challenges with ESG data. The first one is, if you use the same provider and you measure carbon emissions of a specific company in different periods during the year, you’ll have a very volatile time frame since there is big seasonality impact. The second constraint is that if you use the same provider in different regions, then you’ll have a lot of volatility. And if you use different providers then you’ll have a lot of differences in the measurements. So I think it’s a big constraint today, and that’s why you have to use several providers and to make sure that you don’t have provider bias.”

Canadian pension fund executives may have similar perspectives. A senior vice president of technology and innovation at a \$180+ billion pension fund in Canada says he and his team seek to overcome the biases inherent in using so much third-party data:

“I think it’s the whole lifecycle. It’s the ease of acquiring the data, the ability to ingest the data and the ability to crush the data, that it doesn’t have any biases in it. And then making it available to be analysed. It’s really the whole data chain.”

The investment chief at one of the APAC region's largest pensions – Sonya Sawtell-Rickson, CIO of HESTA, a \$66 billion pension in Australia – says ESG's maturity drives investors toward a more holistic view of their funds' investments and the impact they have on a broad coalition of stakeholders:

“We believe demand for ESG exposures is likely to continue to rise, as investors seek to move away from the narrow shareholder primacy framework toward a more holistic lens on stakeholders and their social license to operate. We continue to increase our exposure to responsible investments, and also lift our responsible investment ambitions. This has included commitments to Net Zero by 2050, and the launch of our Climate Change Transition Plan.”

Finally, a director of research and senior investment officer at a \$90+ billion pension fund in the U.S. contributed this insight during an interview:

“I think the biggest problem with ESG investing right now, is that people are committing before they're actually doing the analysis to find the right strategies that are impactful, and they're also leaning toward a better risk-adjusted return. Not all of the ESG strategies out there are checking both of those boxes.”

# Growth of ESG Brings Challenges and Opportunities



Hilde Jenssen  
Head of Fundamental Equities,  
Nordea Asset Management

Nearly 60% of pension executives expect to increase their fund's ESG exposure by 20% or more within the next two years, according to survey data. Respondents from North America are especially likely to increase their ESG exposure, as more than 34% of these respondents will increase this exposure by 50% or more within the next two years.

Executives at pensions in all regions surveyed said they face significant challenges in administering ESG investments. More than three out of four respondents worldwide cite difficulty in achieving a holistic view of ESG and other investments across asset classes as among their greatest challenges. A majority of respondents also cite reporting and complying with ESG regulation and maintaining effective ESG data management as pressing challenges.

To gain a more complete view of this survey data, we spoke with Hilde Jenssen, Head of Fundamental Equities at Nordea Asset Management.

**Q: How do you interpret these results on ESG investing trends at pension funds, especially the difference in responses across the three regions?**

**Hilde Jenssen:** The growing focus on ESG for global pension funds is consistent with the megatrend that we are seeing among investors, corporate entities, and governments. We observe that Europe is still leading the way in terms of overall ESG exposure, due in part to a longer history of sustainable investing and to recently introduced EU regulations. However, we note that the US is rapidly catching up, which is also supported by the survey results showing significant ESG exposure increase among US pension funds during the next 12-24 months. Importantly, there are a few examples of US pension funds already at the ESG frontier with sustainable investments across asset classes. Asia is taking a more gradual approach, and here we also note that there are significant differences among Asian countries.

**Q: What lessons can be learned from European pensions, where ESG may be further along?**

**Hilde Jenssen:** Based on input from our pension fund clients in Europe, I have a few observations: First, the trend toward net-zero investments transition will have significant implications for the market in the coming years. With the US re-joining the Paris Agreement this year, we expect a further increase in pension funds committing to net-zero emission targets by 2030 and 2050. There will also be more pressure on countries and companies to set their own targets and to present clear and realistic strategies and investment plans in order to achieve them. Second, while the EU taxonomy attempts to standardize ESG disclosure and prevent greenwashing, many of the data required for taxonomy reporting are currently unavailable in corporate disclosures. As a result, we expect a significant increase in companies disclosing SFDR-required data, including principal adverse impact (PAI) indicators.

**Q: What do you consider to be the greatest challenges in administering ESG investments?**

**Hilde Jenssen:** In the short term, we think the key challenge for investors will be data availability to comply with EU regulatory framework. At the same time, as active fundamental equity investors, we are constantly looking for companies that are mispriced for various reasons. ESG data may be one of these reasons and hence create investment opportunities.

In the long term, scalability of the ESG investment process may be a key challenge. As an example, the initial ESG screening can be quantitatively driven and hence to some extent automated. However, each company engagement is driven by our portfolio managers and engagement specialists. Therefore, having a disciplined engagement selection process is key to ensuring that we channel our resources in the right direction.

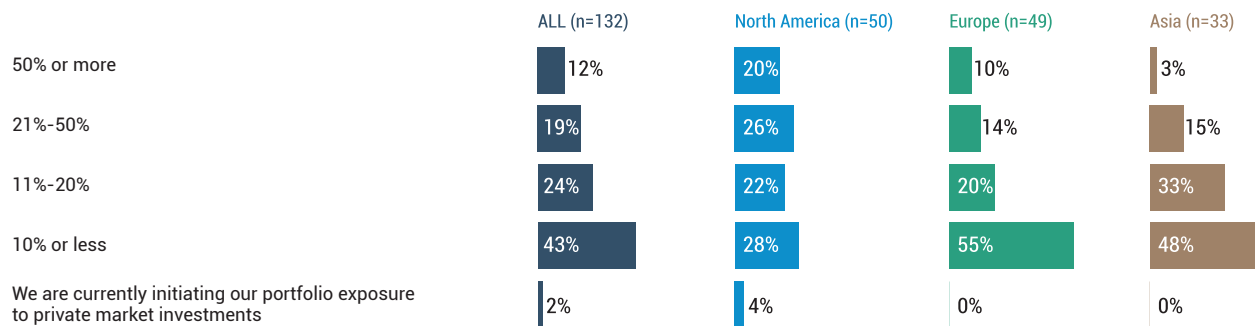
# III. Private Market Investments – Continued Operational Challenges Could Lead to Risks and Missed Opportunities

As with ESG exposure, survey respondents also expect to increase their exposure to private market investments within the next two years, albeit by lower amounts. (See Figure 5.) More than 30% of all respondents expect to increase their private market holdings within the next

two years by 20% or more, and 46% of those from North American pensions anticipate doing so. Less than 20% of those from Asia-Pacific or Europe plan on seeing an increase of 20% or more within a two-year timeframe.

**FIGURE 5. COMPARED WITH INCREASES IN ESG EXPOSURE, SURVEY RESPONDENTS ARE LESS LIKELY TO ENVISION 20%+ INCREASES IN THEIR PRIVATE MARKET INVESTMENTS WITHIN THE NEXT TWO YEARS.**

*In the next 12-24 months, how much do you plan to increase your portfolio exposure to private market investments?*



## CHALLENGES IN ADMINISTERING PRIVATE MARKET INVESTMENTS

While private market investments will not grow as significantly as ESG investments, it still constitutes a significant portion of the current portfolio. Given this, it is perhaps worrying that a majority of respondents say they do not have a holistic overview of private market investments and other investments across their entire portfolio. This presents a significant challenge on affording investment transparency for new reporting requirements; it could also present risks of over-hedging.

Additionally, alternatives are costly, difficult to manage and complex, largely due to the unstructured nature of alternatives data and the absence of regulation.

Accessing digitized and automated processing, with full transparency and auditability, is fundamental to efficient processing and achieving the holistic overview of private market investments.

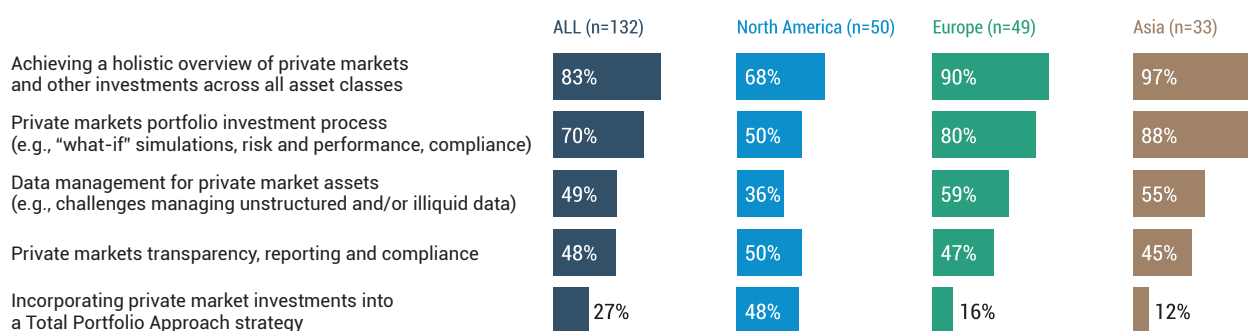
Pension respondents worldwide are most likely to cite the elusive holistic overview of private market investments as one of their top three concerns in administering private market investments (see Figure 6). Technical issues also hold back survey respondents, as 70% cite challenges with the investment process for private market

assets, including “what if” simulations, risk and performance analysis, and compliance as among their top private market challenges.

A near-majority – 49% – identify the broad category of private market data management as one of their top challenges.

**FIGURE 6. AS WITH ESG INVESTMENTS, PENSIONS STRUGGLE TO ACHIEVE A HOLISTIC VIEW OF PRIVATE MARKET INVESTMENTS AND WITH INVESTMENT PROCESS AND DATA MANAGEMENT ISSUES.**

**What are your three greatest challenges in administering private market investments?**



**IMPLICATIONS OF INCREASING EXPOSURE TO ESG AND PRIVATE MARKET INVESTMENTS**

Clearly, pensions worldwide and their internal investment teams expect to expand their exposure to both ESG-oriented assets and assets bought and sold through private markets, in the years ahead. Doing so calls on investment teams to master vast amounts of data from securities issuers, media sources, analysts, and many other sources of information. Amid shifts in asset markets, they also expect to look beyond public markets for sources of income and returns.

These trends are pushing pensions to reassess how to make and manage investments in new ways. That is, the expansion of ESG mandates and private market exposure present pensions with data management challenges – and opportunities – that may well require rethinking how they acquire, analyze, and report the information that underlies their investment choices and performance.

**CAUTIOUS DETERMINATION TO INCREASE PRIVATE MARKET HOLDINGS**

When asked about their interest in increasing private market investments, decision makers in pension funds expressed both openness and caution. Queried on the prospect of expanding allocations to private markets, director of research and senior investment officer at a U.S. pension fund says:

“Yes, this is something that we have been doing in terms of our strategic asset allocation framework. So, strategic asset allocation has been favorable for private assets whether in private equity, private real estate, or elsewhere. As a whole, we have been slowly increasing our exposure. But that’s the key, right? Especially, at our size, we have to do that in a very prudent manner.”

A chief investment officer of a \$20 billion pension fund in northern Europe says his team is likely to expand its private market holdings:

“Yes, definitely. We are currently adopting a liquidity barbell, which means that we're focusing either on very liquid solutions or illiquid solutions. And the space where we intend to expand is impact investing. There are many different sub-strategies that we'll be considering. One is to invest in technology, the second one is to invest in energy transition and the third one is to invest in carbon-negative solutions or climate-positive solutions.”

He went on to explain that ambitions for private markets and impact investing are met with challenges:

“One difficulty is that the impact investing industry is a bit fragmented, and as a result there are currently not too many institutional solutions. We've had some propositions to invest in windfarms and stuff like that, but not with a specific size that would suit our constraints. So this is the biggest constraint that we find. The second constraint is, we have to have a positive impact, but on the other hand, we have to deliver a return to pay pensions. Sometimes it's difficult to deliver those two objectives. We have to take a risk, especially if we invest in technology – and I'm not sure that it is right for the beneficiaries of the pension funds to take big risks. However, if we don't take any risks, then we don't have any positive impact on the environment. So this is an equation that we have to solve.”

## IV. Data Management Challenges and Technology Priorities

Pensions worldwide have difficulty dealing with the complexity, volume, and urgency of changes and updates to investment data. More than 70% cite the “time to market” required to update data or add new data types and sources as among the most formidable challenges in their current data management systems (see Figure 7).

Due to the massive volume of data required, 55% of respondents cite a lack of systems scalability as a challenge. Respondents also voice concern about their ability to create one common view from many data sources, and a lack of trust in the quality and transparency of investment data.

Overall, the survey responses demonstrate that pension funds are struggling with the time required to introduce new data sources, the scalability of systems to support large data sets, and achieving a common view across all systems, data sources, and asset classes.

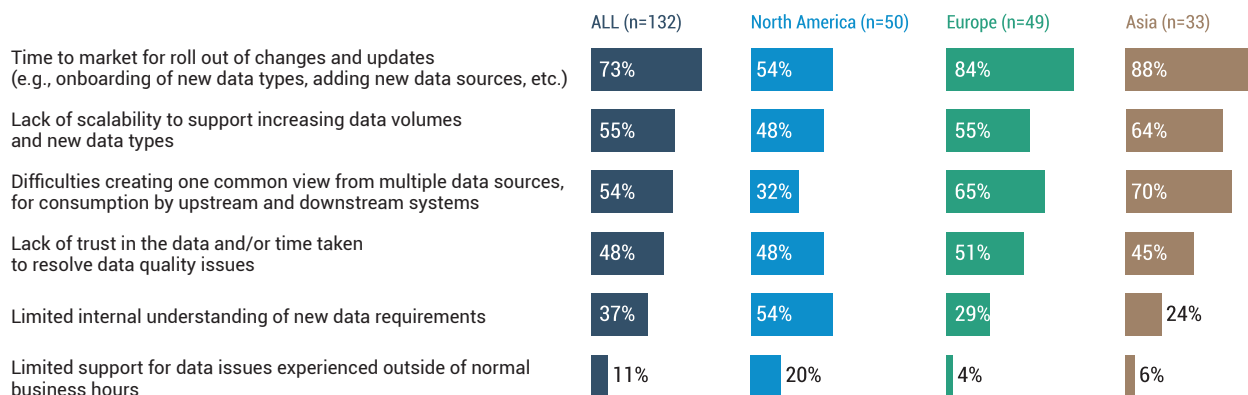
Challenges with time to market for new data types will have a consequential impact on growth of ESG and private market investments. Further, processing unstructured data increases the difficulty for retirement plans to support their investment lifecycle with one “investment truth.”

Simply, data analysts at pension funds are under pressure to understand new data types and garner insights to support investment decision-making. However, they are overwhelmed by the volume and by the speed required to launch new investment strategies.

As a result, the growing volume of data (especially from ESG-related factors), as well as the increasing number of new sources feeding it, are compelling pension funds to engineer scalability into their data operational models – and to acquire new expertise to support the firm’s investment strategies.

**FIGURE 7. SPEED, SCALABILITY, AND INFORMATION QUALITY ARE AMONG PENSIONS’ MOST FORMIDABLE DATA MANAGEMENT PROBLEMS.**

### **What are the three greatest challenges in your existing data management landscape for sourcing and managing reference, market, and ESG data?**





## TECHNOLOGY OFFERS A PATH TO IMPROVEMENT

What is the solution for managing the vast increase in data? Exploring third-party Data as a Service options could augment the pension fund's operating model by extending the firm's data operations capacity with experts transacting in new data sources for multiple firms.

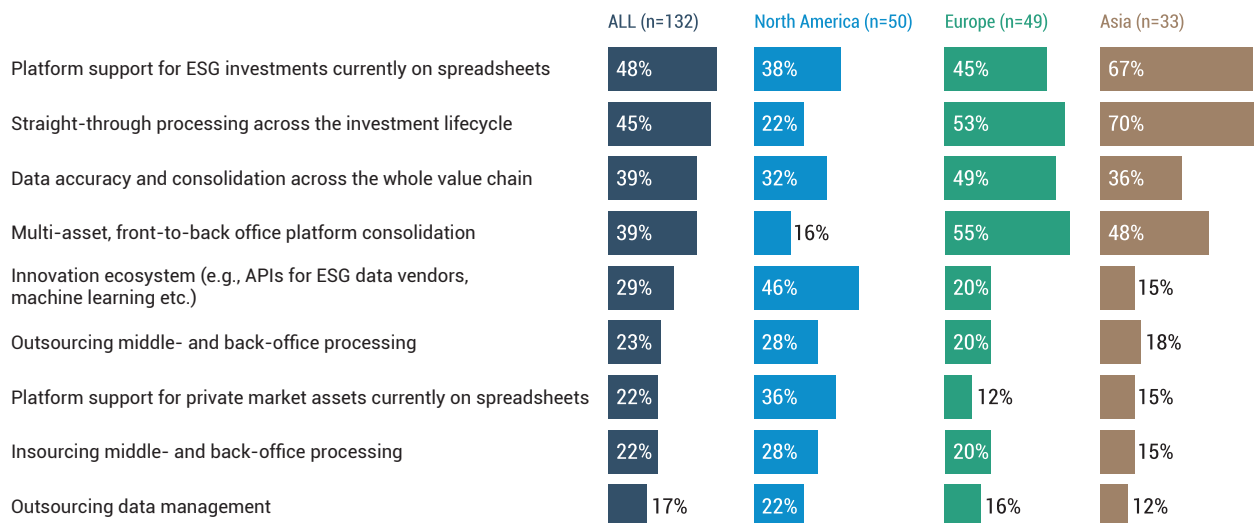
Survey results indicate that pensions have prioritized spending on platform improvements for ESG investments that are currently managed manually (48%), and also technology to manage "straight-through processing across the investment lifecycle" (45%). (See Figure 8.)

Respondents also cite investments in IT initiatives to improve data accuracy and consolidation (39%) and front-to-back office platform consolidation (39%) as high priorities.

It's well known that pension fund executives desire a common platform that supports data operations and offers a holistic view of all asset classes at any given moment. However, the survey results demonstrate that such a platform must be built with standard connectivity to third-party tools and fintech solutions, in order to boost the possibilities for new innovation. This is especially important in North America, where 46% of respondents cited integration with an "innovation ecosystem" as a high-priority technology initiative at their firms.

**FIGURE 8. RESPONDENTS ARE MOST LIKELY TO SEEK TECH PLATFORM SUPPORT FOR ESG INVESTMENTS TRACKED ON SPREADSHEETS AND STRAIGHT-THROUGH PROCESSES THROUGHOUT THE INVESTMENT LIFECYCLE.**

**Which of the following technology initiatives has your firm prioritized to support your investment priorities?**



## HIGHEST QUALITY DATA MANAGEMENT IS A LONG-TERM ISSUE

When asked about their challenges in data management and their priorities in integrating and updating technology solutions, the pension fund decision makers we interviewed

spoke candidly to us about their pain points and areas in need of improvement.

A director of research and senior investment officer at a \$90+ billion pension fund in the U.S. told us that their firm is prioritizing the improvement of data management on a long-term basis:

“Data management is really key, and that’s going to be the focus in the next few years, because you can only do so much with ESG data, or any type of data, whether it’s private or not, if you don’t have a seamless process and lots of validation built into it. I am always slightly disturbed by the level of trust that does exist, in terms of data.”

A senior vice president of technology and innovation at a large pension fund in Canada revealed that their firm is struggling with data management limitations and has made improving this vital area – including integrating software as a service (SaaS) solutions and strengthening capabilities with artificial intelligence – an organization-wide priority:

“Throughout our institution, we are focusing right now on data. It doesn’t matter if it’s private, public, or ESG, we are limited in our data capabilities at this point in time. It’s a very siloed approach, and there’s a lot of work that goes into acquiring the data and validating the data quality. It doesn’t matter if it’s structured or unstructured data. That’s why we launched the data initiative right now to build out a data marketplace so that we can ingest data and make it available to the different asset classes for their assumptions. Do we have challenges and do we find it difficult to get all the data? I would say yes, especially on a timely basis.”

“I would say one of the major technology priorities is really foundational: Ensuring the stability of systems. I know that’s not a strategy, but that is really making sure that our traders can function and provisional [analyses] get performed without interruption.”

“The second priority is around formation, modernization, and then empowerment. [We seek to] transform how the organization functions and how it utilizes technology and to move toward software as a service,

or SaaS, and to move away from custom-built solutions. Really we’re looking at application rationalization, but overlay that in the SaaS world. In short, there’s a lot of focus on simplification, application rationalization, consolidation, and moving everything into the cloud.”

“Without data availability, it’s difficult to really create modeling for AI and cheap machine learning, which includes working with asset processing, provisioning the data, bringing in Artificial Intelligence Markup Language (AIML) to enhance and augment what our asset class investors are doing.

There’s a lot of focus right now on data governance, AI governance, ethical oversight of AI in the industry, especially within our own organization, to make sure that there’s no inner bias or human-out-of-the-loop kind of decisions being made. So we’re actively taking a look at our AIML ethical governance.”

Finally, a chief investment officer of a \$20 billion European pension fund revealed that digital transformation is one of his institution’s major technology priorities. He says, “We are trying to improve the digitalization of the pension fund as a whole,” but he cautions that environmental objectives are adding new layers of complexity:

“Portfolio management is going to be more sophisticated because we have to deliver the objective return within a risk-return framework. But on the top of that, we’ll have to add two additional dimensions, which are the temperature as well as the carbon emissions. So the big question is, What is the top priority? Is it to deliver the risk return objective, or to reduce or manage the carbon emissions of the portfolio? So I think going forward, any portfolio management system will have to deal with those four dimensions.”

# Conclusion

This study has made it clear that large pension funds across the world are encountering a number of challenges and opportunities from mounting ESG pressures, shifting industry standards and stakeholder concerns, and vast increases in data needs.

Managing data is a particularly difficult challenge for pension funds. The volume of data – including unstructured data – that must be collected, processed, and utilized to effectively manage assets and administer investments across the value chain from front to back, is increasing at a faster rate than many large pension funds can accommodate.

Amid this difficulty, many pension funds are opting to outsource their data management functions to business partners with specific technology expertise. Doing so frees them to focus on critical asset management operations that pension funds are increasingly preferring to manage internally.

Creating the needed hybrid approach (which utilizes the expertise of external and internal teams) is a pivotal achievement for pension funds. Choosing the right operating model – and the right business partner – is vital to overcome the challenges discussed in this report and effectively leverage technology without bearing the weight of its implementation and maintenance.

On another front, this survey confirmed that large pension funds plan to increase their exposures to ESG and private market investments within the next two years, often as part of a broader diversification strategy.

As these and other diverse investment holdings grow, pension funds are recognizing the need for their technology platform to give them constant access to “a single source of the truth” – allowing managers to view their full portfolio across all exposures and assets at any given moment. Accordingly, the survey results confirmed that achieving a holistic portfolio overview including ESG, private markets, and other investments across all asset classes, and improving the straight-through processing (STP) rate across all the processes, are priorities for the majority of pensions.

In closing, it's important to note that valuations across assets are high today, and therefore the risk of corrections is high as well. Having a holistic view of the total portfolio – and not being constrained by the need to retrieve data from disparate legacy systems – is a starting point for pension funds to react quickly to market changes to both protect their portfolios and seize opportunities.

# About this research

This research examines the opinions and viewpoints of people in decision-making roles (in either information technology or investment areas) in large pension funds. The questionnaire was fielded in May and June 2021 and included more than 135 executives at public and private pensions with \$10 billion or more in AUM in North America, Europe, and the Asia-Pacific. To supplement the survey findings, interviews were conducted with several decision makers located in these regions.

The tables below give more details about the survey respondents.

What type of organization do you work for? (n=141)		Where is your position located? (n=141)	
Public pension	<b>46%</b>	Europe	<b>38%</b>
Private pension	<b>46%</b>	North America	<b>38%</b>
Multi-employer/Taft-Hartley plan	<b>8%</b>	Asia	<b>24%</b>
What is your title? (n=141)		What are your institution's assets under management in USD? (n=141)	
Head of data management systems	<b>18%</b>	\$50 billion or more	<b>25%</b>
Portfolio manager	<b>18%</b>	\$25 billion to \$50 billion	<b>37%</b>
VP or director of IT systems	<b>18%</b>	\$10 billion to \$25 billion	<b>38%</b>
Chief investment officer	<b>16%</b>	\$10 billion or less	<b>0%</b>
VP or director of investment	<b>13%</b>		
Chief operating officer	<b>8%</b>		
Managing director	<b>7%</b>		
Other	<b>1%</b>		

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