DIFFERENTIATION THROUGH DATA

HARNESSING THE POWER AND POTENTIAL OF DATA

The Bright Alternative

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Foreword

Insights from data are a game changer for private markets, but firms are moving at dramatically different speeds when it comes to technology uptake.

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These are turbulent times for dealmakers. Even as the pandemic recedes, fresh headwinds are brewing, including growing geopolitical uncertainty, rising inflation and higher borrowing costs.

Finding ways to boost resilience and enhance performance during all this disruption is a priority. Better use of data—and data tools—can make all the difference. How are private markets tapping into the data opportunity? Which technologies are proving to be most valuable and where are they being used? And what obstacles must be overcome?

The purpose of this study is to answer those questions. In the first section, we consider the current state of play in private markets. While there is no shortage of ambition, there remains a vast gap between the largest and smallest firms when it comes to adopting digital capabilities. Meanwhile, settling on a data strategy is proving to be a challenge for firms of all sizes.

The second section delves into data analytics, a subject of increasing interest for private markets. Respondents are looking to technologies including machine learning and predictive analytics as they race to build a competitive edge. There is also the recognition that technology alone is not enough—which is why many respondents are devoting resources to boosting data literacy.

The thorny question of how best to manage ESG data is examined in the third section. As our study shows, the lack of standardised reporting frameworks and inconsistent data means that satisfying the ever-growing demand for ESG reporting is a challenge for firms across the spectrum. This is a problem that is likely to get worse before it gets better.

We conclude this study by highlighting some of the steps that private market participants can consider as they weigh up their data and technology options.

Methodology
In Q3 2022, Mergermarket surveyed 300 senior executives working in alternative investment management firms to gain insights into how they use, interact with, and analyse data in private markets. Firms were headquartered in either Europe (150) or North America (150) and were distributed equally among average target fund size (under €250 million, between €250 million-€500 million, between €500 million-€1 billion, and exceeding €1 billion). All responses are anonymous, and results are presented in aggregate.

Key findings

What is driving the collection, analysis and application of data in private markets? Our in-depth survey of senior executives working in alternative investment management firms offers some revealing insights.

1 **Size matters when it comes to data strategies:** 89% of firms with the largest average target fund sizes (€1 billion or more) say they use technology to support workflow and back-office processes and manage their investment portfolios as well as having an established data strategy that drives their dealmaking. Just 3% of firms with the smallest average target fund sizes (less than €250 million) can say the same.

2 **The human factor is an essential ingredient:** Respondents at both the smallest and largest ends of the fund spectrum are the most likely to have a dedicated senior resource for their existing data strategy, with every firm in the sub-€250 million category and 91% in those in the €1 billion-plus group saying they have such a resource already in place.

3 **Confidence levels in data sources depend on the size of the firms involved:** Third-party data sources are used by 44% of respondents representing smaller average target fund sizes (less than €250 million), versus 83% among those with the largest average target fund sizes (more than €1 billion). Just 19% of firms targeting smaller funds are likely to be very confident in the accuracy and/or quality of that data, versus 44% of those at the larger end of the fund scale.

4 **Used effectively, data can drive deals:** 66% of firms overall say that they consider measuring portfolio and/or project performance to be one of the most critical outcomes of a data strategy. Drilling down into the data, 70% of private debt and multi-asset fund management firms agree with this sentiment, followed by 66% of private equity firms.

5 Analytics can have a positive impact on the relationship between general and limited partners (but size is a factor): 35% of all respondents agree that advancements in data analytics can transform the GP and LP relationship by increasing transparency, improving communication and providing better insights to support LP decision-making. But drill down into the data, and this falls to just 16% of those with an average fund size below €250 million. Almost a third think the benefits are outweighed by the implications.

6 While data has value, many remain suspicious about sources: 60% of all investment firms say that the reliability, completeness and freshness of data and its sources is a fundamental challenge. Just over half also argue that technological limitations in holding and extracting data are cause for concern, while the same proportion cites difficulty in aggregating data from fragmented infrastructure to create a single, centralised data source.

7 Innovation costs: Many respondents are seizing the opportunities offered by data analytics, but they are conscious of one significant challenge—the need for continuous investment in next-generation technology. This is one of the top-three issues for 83% of respondents, with 39% citing it as the single most challenging aspect.

8 Analytics may become even more important to firms in the future—if they can afford it: 52% of respondents representing larger fund sizes expect analytics to be much more important to their firm in the next three years. This compares to 29% of firms with an average target fund size of €250 million-€500 million and just 25% of firms with a target fund size of less than €250 million.

9 Environmental, social and governance (ESG)'s impact on dealmaking may depend on fund size: Firms targeting the largest funds (€1 billion and above) are two-and-a-half times more likely to cite a lack of ESG data as a major dealmaking deterrent than those with an average target fund size of less than €250 million.

10 Larger funds are using external validation in ESG reporting, which may help minimise accusations of "greenwashing": 56% of respondents representing average target fund sizes above €1 billion say they lean on both internal management and third-party support to collect and report on ESG data. For the smallest funds, this drops to just 23%. Having a combination of internal and external expertise may become essential when validating any ESG-related claims and dealing with complex regulatory compliance.

PART 1

State of play: current data practices in private markets, key focus areas and strategic priorities

How do private markets perceive their use of technology and data right now?

Data can be a game changer for private markets. From portfolio management to deal sourcing, investment managers in firms of all sizes are snapping up new digital capabilities as they race to transform their operations and get ahead of the competition.

As the CFO of a multi-asset fund management firm in the US with an average target fund size of €250 million-€500 million says, "The financial data of a company can provide insights into the profitability and future capabilities of a target company. Before investing, knowing the financial background and strength of a target company is vital."

It's not just about targets: "The process of monitoring financial and operational data is critical for our company's development and market presence improvement," says the managing director of a German private debt firm with an average target fund size of €500 million-€1 billion. "We know where we stand compared to other companies in the same sector."

Mind the gap

Despite this, our recent survey reveals a digital divide between firms with larger and smaller average target fund sizes.

Specifically, 89% of the firms with the largest average target fund size (€1 billion or more) say they use technology to support workflow and back-office processes and manage their investment portfolios, as well as having an established data strategy that drives their dealmaking. By contrast, just 3% of those with the smallest average target fund size (less than €250 million) can say the same.

Firms in the middle of the pack (with average target fund sizes ranging from €250 million to €1 billion) are most likely to say that, while they do not have a data strategy in place, they do make extensive use of tech in areas including workflow, back-office processes and portfolio management—they are all extensive tech users but have no data strategy steering the ship.

In short, in almost all cases, the likelihood that a firm is making extensive use of technology and backing this up with an established data strategy is directly proportional to the firm's target fund size.

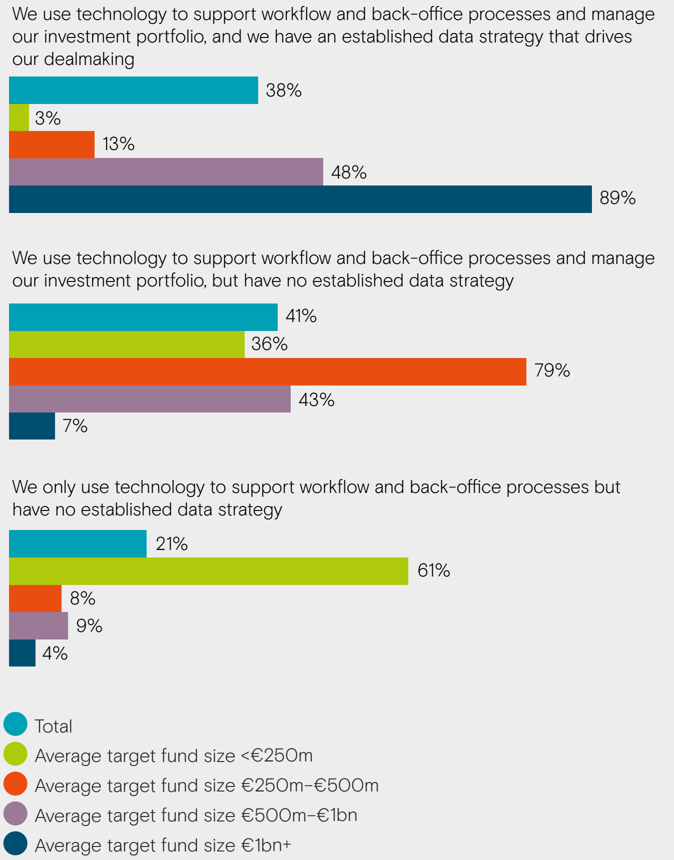
Everyone agrees: a data strategy could make a difference

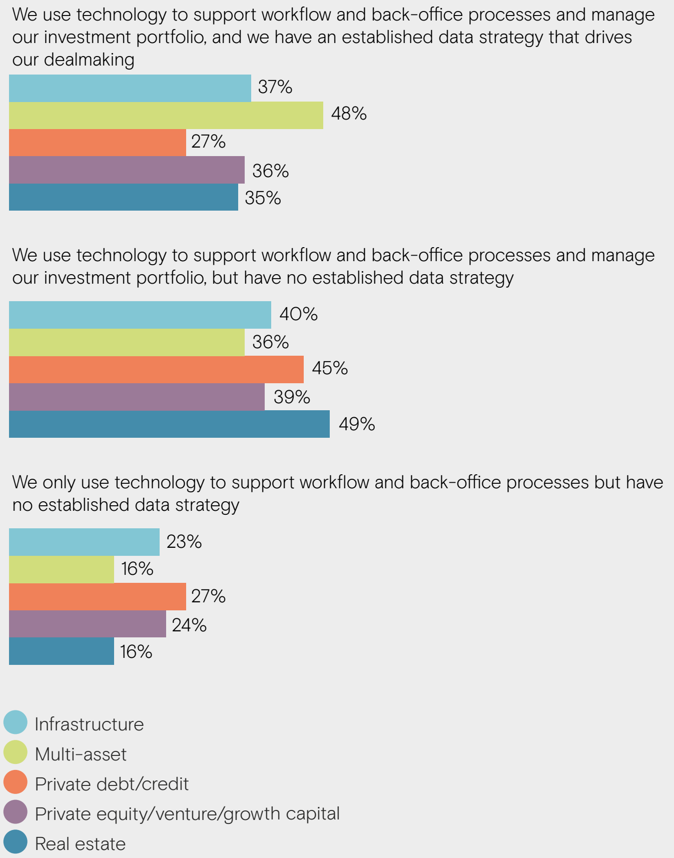
What's more, among those firms that lack a data strategy, a majority (76%) agree that their organisation would benefit from establishing one.

"We have an overall data strategy and it's a developing one," says Linus Lund, director – fund controller of Nordic Capital Advisors. "We are working on centralising storage and access to data. It's easy to think you need to collect data just because that's a good thing to do. But it raises several questions. Why do you need it? What's its purpose? You can collect data and then work out what to do with it. Or you can look at the data you already have and work out how to make it accessible. I think the answer lies somewhere between the two."

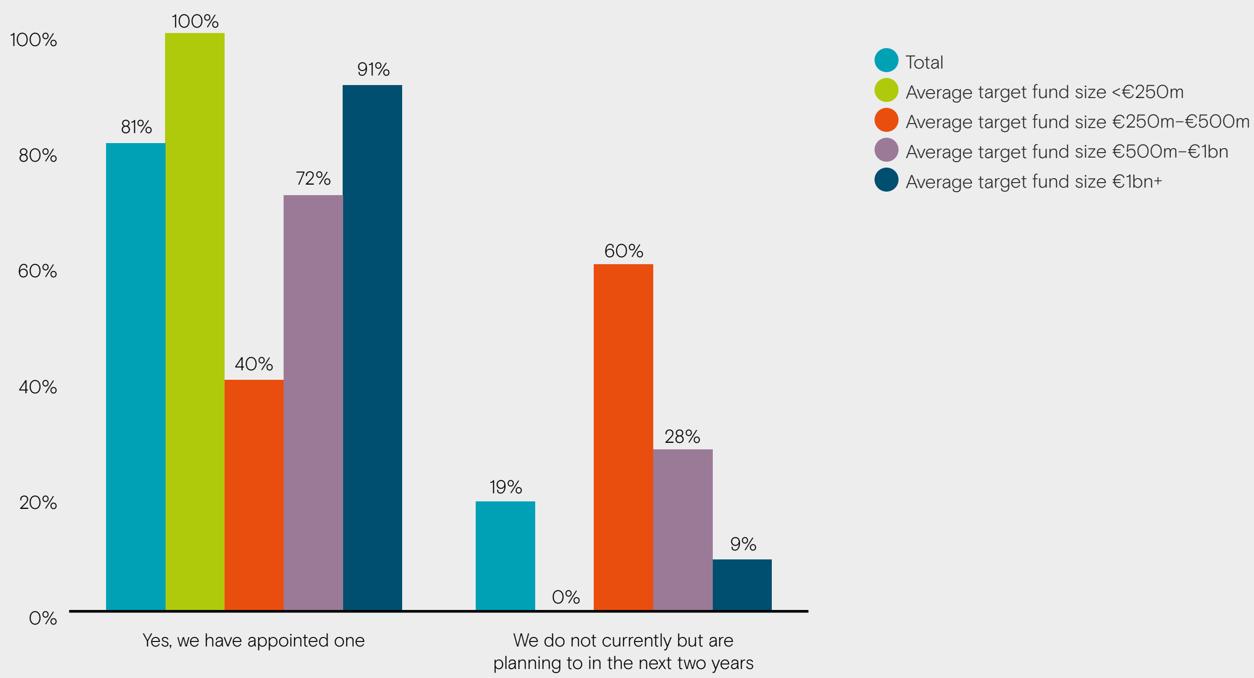
Breaking down the survey findings by respondent group, multi-asset investment firms are most likely to say they use technology extensively and have an established data strategy that drives dealmaking. This may be down to the complex nature of their investments—having a data strategy in place allows them to manage a wide-ranging portfolio as well as identify new opportunities in an extensive potential investment pool. By contrast, approximately the same percentage of real estate fund managers say, while they employ technology extensively, they do not have a data strategy in place.

Which of the following best describes your organisation? (Select one)





If your organisation has an established data strategy, do you currently or are you planning to have a dedicated senior resource assigned to its development and ongoing management?



Bridging the strategy gap

While almost two-thirds of respondents overall do not have a formal data strategy, most of those with one in place also have a senior resource assigned to the development and ongoing management of that strategy.

The fact that such a large proportion of respondents (81%) has committed resources to their existing data strategy hints at the complexity of integrating technology into existing processes. It's not simply a matter of bringing in technology, stepping back and letting it run. People remain an essential ingredient.

As the CEO of an Italian firm with an average target fund size of less than €250 million puts it: "Removal of instinct is not good for the business. Although technology is helpful for decision-making, we cannot rely on it completely without having any humans around to implement these decisions."

Notably, respondents at both the smallest and largest ends of the fund spectrum are the most likely to have a dedicated senior resource for their existing data strategy, with every firm in the sub-€250 million category and 91% in those in the €1 billion-plus group saying they have such a resource already in place.

Among firms in the middle of the pack, 60% of those with average target fund sizes of €250 million–€500 million are more likely to say they do not have a dedicated senior resource, but plan to establish one in the next two years.

Removal of instinct is not good for the business. Although technology is helpful for decision-making, we cannot rely on it completely without having any humans around to implement these decisions."

CEO, Italy-based firm

Data sources: risks and rewards
Reliable investment- and deal-related data is the bedrock of successful decision-making. Almost all respondents in our survey have an in-house team to help them gather data for this purpose. In addition, many acquire data from both third parties and deal sourcing platforms.

Third-party data sources are used by nearly two-thirds of respondents overall and by 44% of respondents representing smaller average target fund sizes (less than €250 million). This proportion nearly doubles to 83% among firms with the largest average target fund sizes (more than €1 billion).

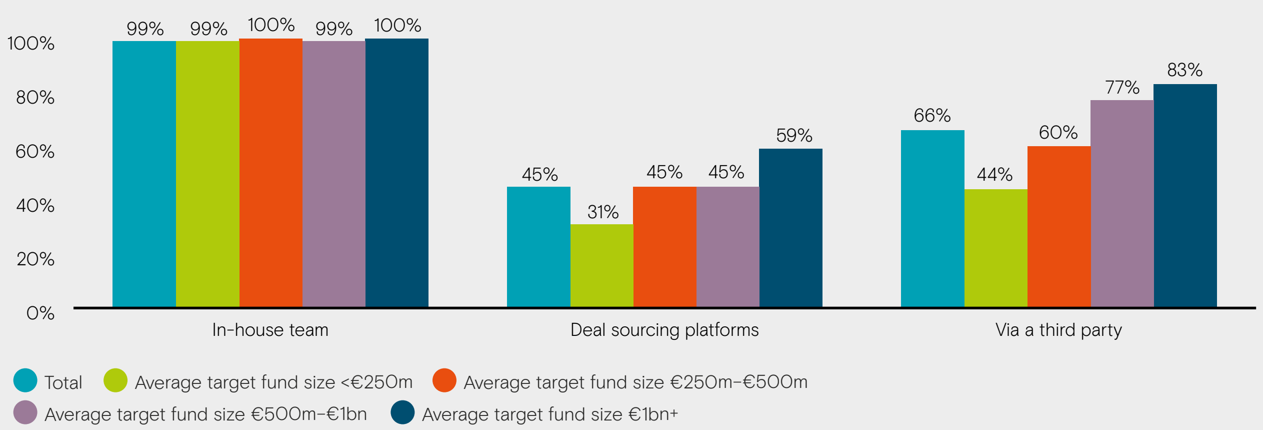
Breaking this down to the asset level, multi-asset funds are more likely to use third-party sources, while real estate funds are least likely to go this route (76% versus 55%, respectively. While the gap between the two is not massive, this may reflect where each fund finds itself on its data journey.

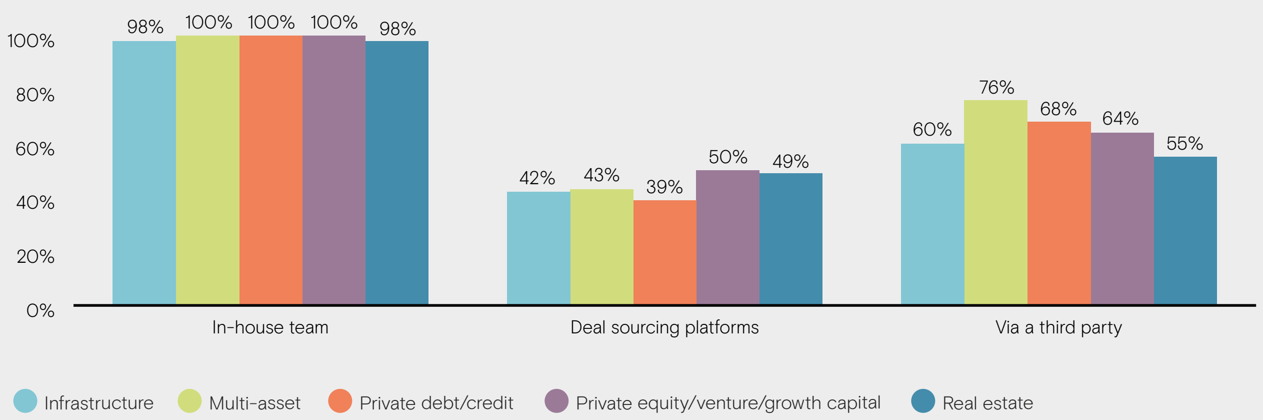
Proprietary deal sourcing platforms, meanwhile, are used by 45% of respondents overall. The largest firms are the most likely to use these (59%), with smaller firms the least likely (31%).

> The lack of transparency regarding data sources and the reliability of these sources is a challenge. We do not want to take on any liabilities or breach data protection norms.”

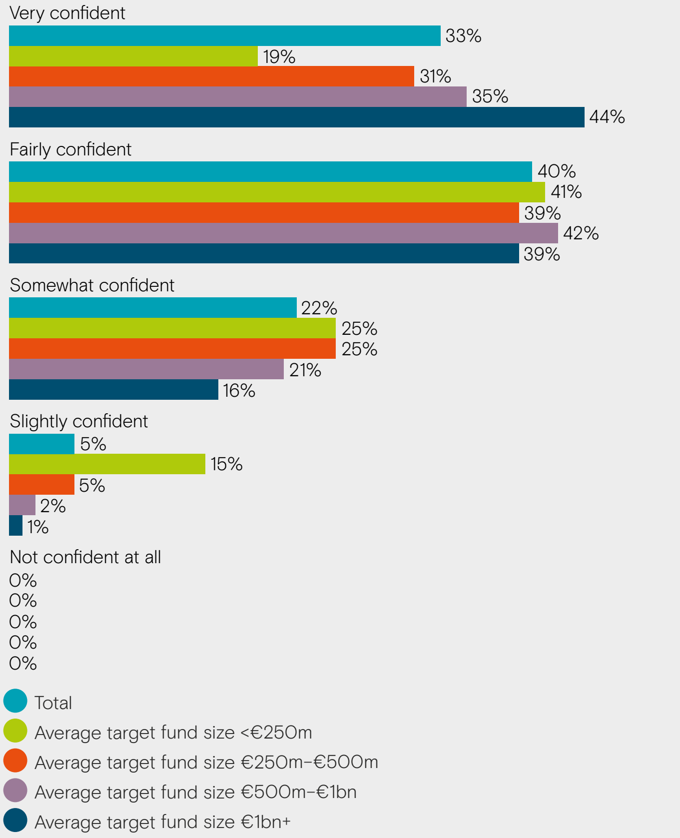
Partner, US-based private equity firm

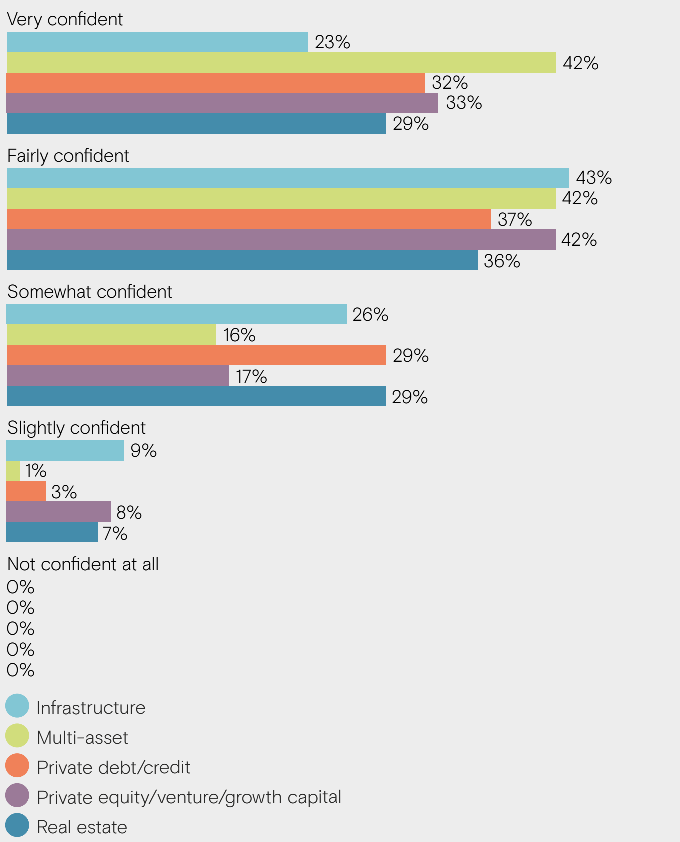
How does your company gather investment/deal-related data to support decision-making? (Select all that apply)





If your company gathers investment/deal-related data via a deal sourcing platform or a third party to support your decision-making, how confident are you in that data's accuracy/quality?





Is data confidence a concern?

Respondents who use third-party data and deal sourcing platforms are broadly confident about the accuracy and quality of the data they get. Among firms that gather data in this way, 44% of those representing larger average fund sizes (€1 billion or more) are likely to be very confident in the accuracy and/or quality of that data—again, likely a reflection of the money they can invest in that data.

By comparison, only 19% of firms targeting smaller funds (less than €250 million) describe themselves as very confident about the accuracy/quality of third-party market data or deal sourcing platforms. This group is typically more cautious about their external data sources—these respondents are most likely to say they are only slightly confident about data quality.

At an asset level, multi-asset firms are the most confident in the accuracy and/or quality of the data received from third-party suppliers or deal sourcing platforms.

As the partner of a private equity firm based in the US with a target fund size of less than €250 million says: "The lack of transparency regarding data sources and the reliability of these sources is a challenge. We do not want to take on any liabilities or breach data protection norms."

Strategic data priorities offer both risks and rewards

From improving operations to unearthing new deals, investment firms are creating data strategies designed with efficiency and accuracy in mind.

What is driving data strategies in investment firms? For most, it is a way to optimise operational processes.

“Measuring the success of our operations is critical,” says the partner in a US-based PE firm with an average target fund size exceeding €1 billion. “We cannot continue with operations unless we know the actual capabilities and introduce methods to increase efficiencies.”

The managing director of another PE firm in the US with an average target fund size of €500 million-€1 billion agrees: “Investment performance can be improved by focusing on operational efficiencies. There may be issues like lack of innovation or lack of emphasis on cash management. These issues are resolved when we adopt a data-driven approach.”

Data priorities run the gamut

Risk management and compliance is the area of fund management that is most widely prioritised, as highlighted by 55% of respondents with an established data strategy, with 29% singling this out as their top choice.

“Data can be used for improving compliance management,” says the managing director of a PE firm based in Germany with an average target fund size under €250 million. “This is essential because there are so many new regulations to consider, and the complexities of these regulations have increased. We need the support of data and technology to maintain compliance.”

Portfolio/project management is another popular choice, selected by 48% of respondents with an established data strategy as one of their top-three choices (with 21% citing this as their main priority). This is followed by back-office management and fund operations (43%) and deal due diligence (41%).

In some cases, respondents point out that more efficient portfolio/project management translates into faster deal processes. As the managing director of a real estate investment firm based in Switzerland says, "Usually, due diligence takes up to six months when we use manual procedures, but a data-driven process is quicker and teams can move on to subsequent activities faster."

Technology has huge potential to streamline and accelerate internal processes, particularly in areas linked to collaboration and due diligence. It is therefore not surprising that respondents are prioritising internal processes in terms of their data strategy.

"Some of the pressure for change is coming from investors," says Ahmed Khamassi, chief digitalisation officer at Stirling Square Capital Partners. "In our current fund raise, one of the things we noticed is that operational due diligence is taking centre stage. Investors are interested in our processes, in cybersecurity, and how we use and share data. Interest is ballooning on the investor side and there is market pressure to move."

On top of this, technology platforms for deal administration are a known quantity and readily available in the market. Moreover, they are supported by datasets over which respondents are likely to have control.

Deal origination through data

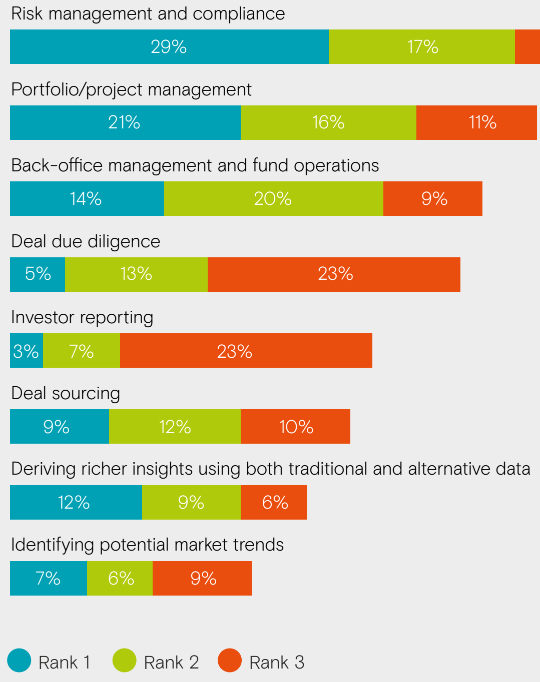
The picture is more complex when it comes to data strategies around deal origination. This is a much tougher call, because technology in this arena is still evolving. It also involves acquiring new skills, plus the ability to get hold of and process new types of data.

These challenges could account for the somewhat lower levels of interest in strategic objectives linked to deal origination. For example, deal sourcing is cited by less than a third (31%) of respondents. The picture is similar when seeking to derive insights from traditional and alternative data (27%) or identifying potential market trends (22%).

Despite this, respondents using tech to support deal origination are clear about the benefits: "We can use predictive information to assess the quality of targets," says the chief strategy officer of a multi-asset fund based in the US, with an average target fund size exceeding €1 billion. "Comparing the data extensively provides relevant information and we can assess which targets can provide the best investment performance."

The value of data in sourcing deals can also depend on where a firm sits in the investment chain, as Ross Waide,

If your organisation has an established data strategy, what areas of fund management does it prioritise? (Select top three and rank 1-3, where 1=most important)



finance and operations partner at venture capital (VC) firm Stride, explains: "One of the big things a VC firm needs to do is source investment deals. But when you think about where Stride is focused—on pre-seed, seed and early-stage investment—there isn't much relevant or consistent data to go on.

"There are a lot of data sources and automated tools that exist already. You can aggregate and collect information relatively quickly from multiple data sources and we use this for targeted deal sourcing, investment information, market mapping and comparisons. It's highly directional, relatively high-quality information that guides decision-making.

"You can get market information quite quickly but, ultimately, you have to piece a lot of things together to make an investment decision. Given the nature of early-stage investing, it's difficult to be data driven in decision-making, you need to use data to guide intuition."

The challenge: how could data improve dealmaking?

The fact that most firms tend to prioritise internal processes over deal origination when it comes to their data strategies is mirrored by respondent views on how data can be used to enhance organisational and investment performance.

"One area where data is being applied in our organisation is back-office processes," says Lund at Nordic Capital. "The focus is on sharing data effectively between source systems—like our accounting and fund operation systems—and getting data to the people who need it, in terms of controlling and reporting.

"We also use data in front office applications, including investor relations and dealmaking. We do a lot with it in our customer relationship management efforts, tracking relationships with both Nordic Capital's investors and targets. In addition, we conduct internal tracking on the progress of projects, staffing and portfolio company work, particularly with regard to ESG."

An interesting point here is that ESG data is increasingly used as a tool to actively improve the performance of portfolio companies during the holding period. In many cases, this goes beyond basic monitoring.

"We have three main use cases for ESG data," explains Caroline Löfgren, chief sustainability officer at private equity firm Hg. "The first is your own public reporting. The second is providing data for LPs and being able to respond to the questionnaires that we receive from them. But the most important one is to improve our portfolio companies—this is the biggest part of my work.

"Once you get the data, you look at all the gaps and help them to prioritise. For example, portfolio companies need to have an anti-bribery and corruption policy. This is vital to us, so we need to ensure one is in place. There could be less critical things too: do you donate laptops to charities? Portfolio companies prioritise what they think is most important for the business to focus on during the year and then we support them with those changes. ESG data is at the heart of this."

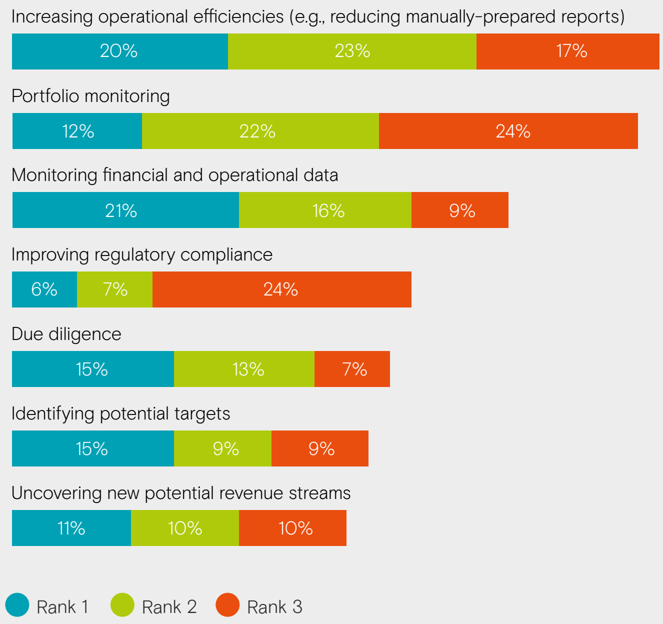
Can more data sources make a difference?
The ability to increase operational efficiencies and monitor portfolios are both ranked by almost 60% of respondents as one of the top-three areas where data can be used to enhance organisational and investment performance. The ability to monitor financial and operational data is most commonly ranked as the single most important (21%).

What these applications have in common is that they typically rely on data that is already held by the organisation or can be acquired from portfolio companies relatively easily. By contrast, applications that require access to external data sources are less likely to be prioritised. These include identifying potential targets (33%) and uncovering new potential revenue streams (31%).

External data has always played a fundamental role in target selection. The issue facing investment managers now is deciding whether to broaden their range of data sources, and whether to use new data tools to help them make sense of it all.

As the managing director of a US-based real estate firm with an average target fund size of €250 million-€500 million puts it: "Asset quality and management capabilities can be understood when data is used.

How could data be used to enhance organisational and investment performance? (Select top three and rank 1-3, where 1=most important)



Big data may be available, but we have to spend more time on sorting, preparing and processing data accurately."

Christopher Conradi, chief digital officer of FSN Capital, adds that, handled well, data offers unique insights in potential deals that might not be extracted any other way: "We have every company in our target geography in our database, and we have a few thousand data points per company: financial, LinkedIn, website data, Glassdoor data. We pull data from any source we can.

"Company data is valuable, but data about subsectors is even more valuable because it is one of the biggest predictors of a successful deal. We pick out subsector trends in terms of recruitment, factory building and product launches. That is very important to us.

"It starts with taxonomy. We have about 20 industries defined. That breaks down into about 200 sectors with a further 500 subsectors. That taxonomy is not great. To fix that, we're downloading the websites of all the companies in our target geography—about two million. Then we do some heavy text analytics to auto-classify industries. When you do that, you identify clusters of companies and then you can start to see trends across those clusters."

Data endgame: from improved performance to better deals

Firms are building data strategies with specific targets in mind, whether cleaning up their data, cutting costs, or measuring portfolio performance, but improved valuations are also on the table.

What is the most critical outcome of a data strategy from a back-office/operational perspective? For 73% of respondents, performance optimisation—such as accuracy/removal of human error—is one of their top-three outcomes. This is followed closely by better data quality and integrity (69%), regulatory compliance (62%) and cost reductions (56%).

Notably, improving the investor experience is seen as far less critical—only 12% cite this as a top priority. This suggests that firms may be missing out on an opportunity to engage with investors. That said, the subject of investor engagement through data is mentioned frequently by survey respondents, no matter the size of their firm.

"Investors want to receive data in a seamless manner," says the managing director of a US-based private debt firm with an average fund size less than €250 million. "In addition, they want us to provide more digital services where they can compare the performance of holding companies."

Aside from improving the investor experience, some firms are looking to trade on tech credentials to boost their profile: "Technology investments have become a way to attract stakeholders," says the partner of a similarly sized US-based private debt firm that is looking to deploy predictive analytics. "Even if the investment may be unnecessary, it is still carried out in an attempt to improve the company's image."

Used effectively, data can drive deals

From an investment/deal standpoint, two-thirds of firms say that they consider measuring portfolio and/or project performance to be one of the most critical outcomes of a data strategy. Drilling down into the data, 70% of private debt and multi-asset fund management firms agree with this sentiment, followed by two-thirds of private equity firms.

"Data helps in getting a proper view about a company's performance," says the CEO of a multi-asset firm based in the US, with an average target fund size between €250 million and €500 million. "It is crucial to streamline the portfolio from time to time, and data strategies can ensure many positive changes."

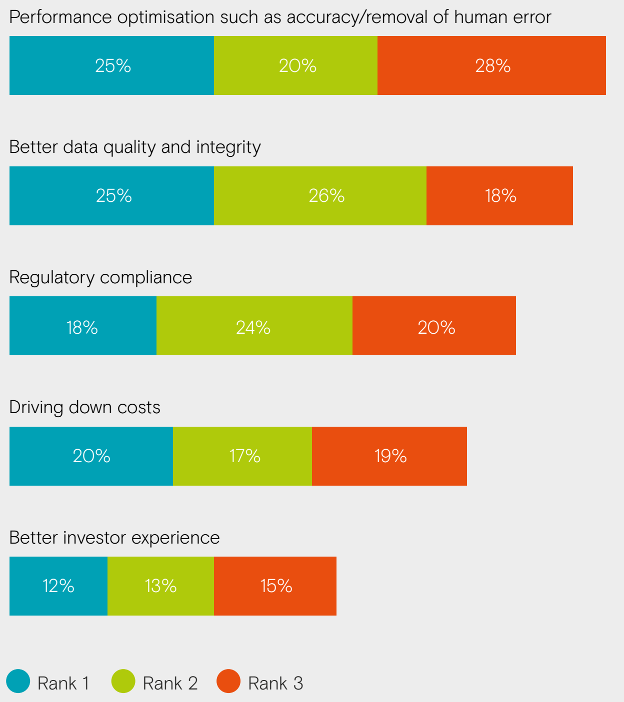
The potential for more accurate valuations is another critical outcome, according to 52% of respondents, rising to 65% among real estate funds. This topic generated a significant amount of comments from respondents, including this remark from the CFO of a France-based multi-asset fund, with an average target fund size exceeding €1 billion: "We cannot move ahead without a data strategy because it helps establish accurate valuations. We sort data effectively and use datasets that are most relevant."

Enhanced collaboration is also considered critical in the context of data strategies, with 51% of respondents selecting this option. As the partner of a US-based multi-asset fund with an average target fund size between €500 million and €1 billion puts it, "With a data strategy, there is less ambiguity about the role of team members during a deal. They know what data they must manage and the protocols that need to be followed to manage that data."

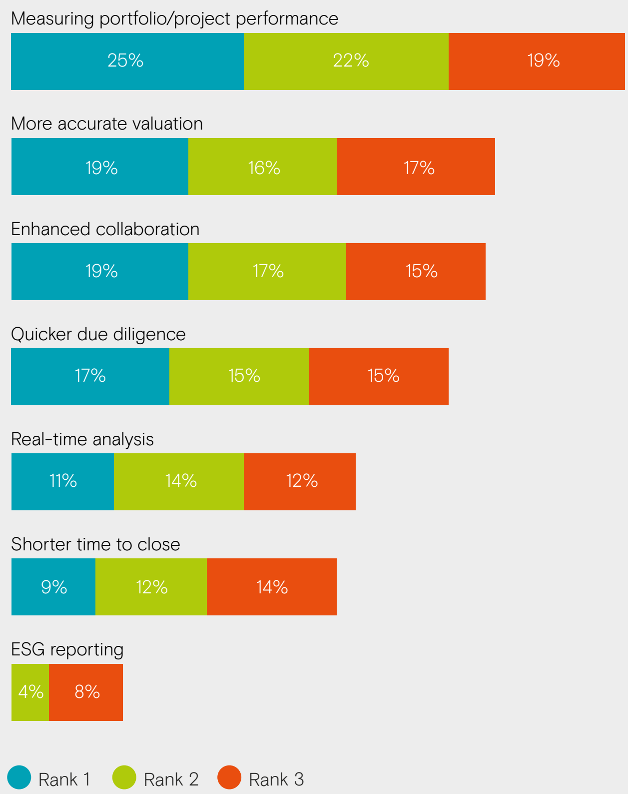
"It is crucial to streamline the portfolio from time to time, and data strategies can ensure many positive changes."

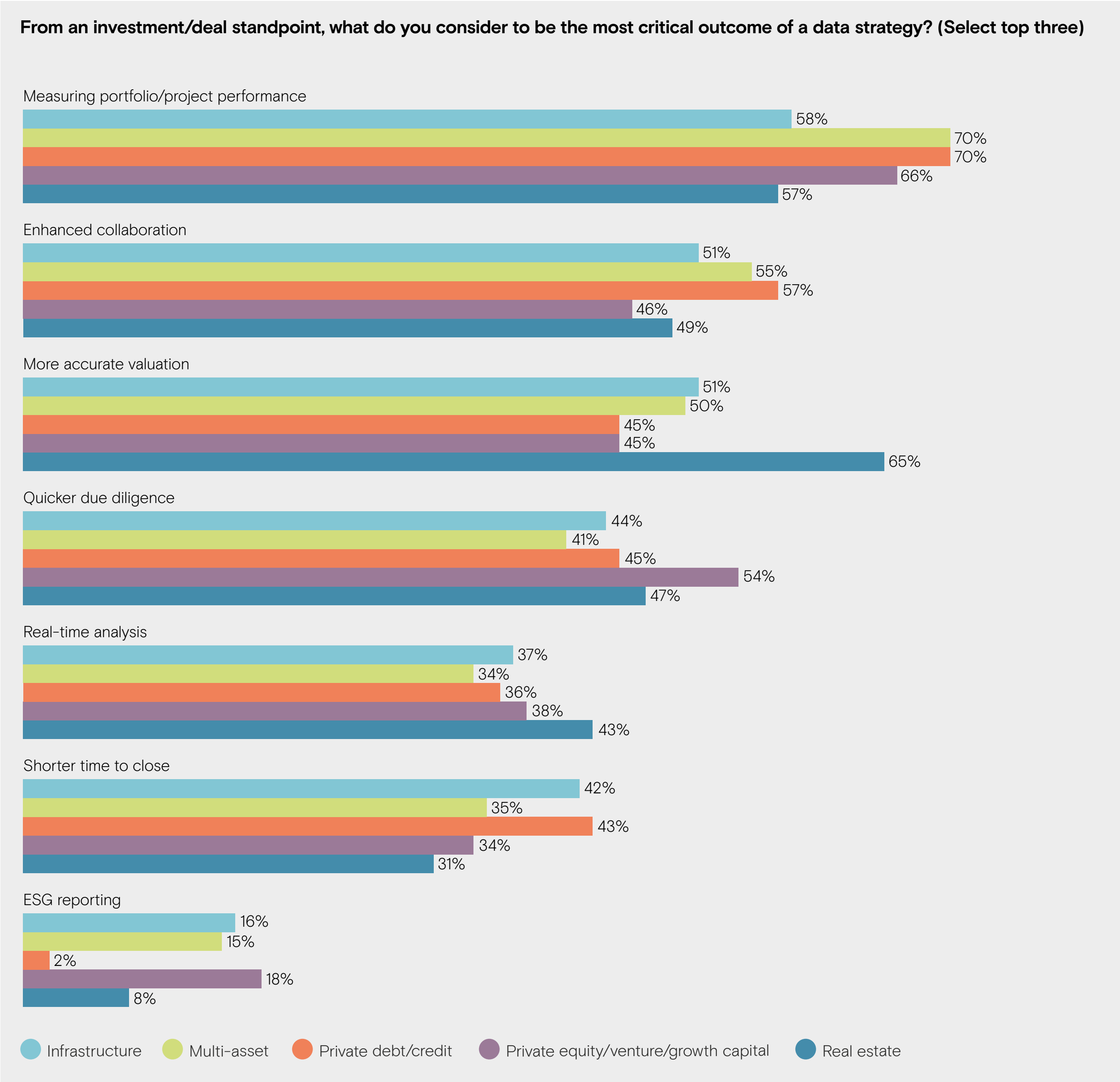
CEO, US-based multi-asset firm

From a back-office/operational perspective, what do you consider to be the most critical outcome of a data strategy? (Select top three and rank 1-3, where 1=most important)



From an investment/deal standpoint, what do you consider to be the most critical outcome of a data strategy? (Select top three and rank 1-3, where 1=most important)





Reporting on ESG data remains an issue

ESG reporting scores relatively poorly—in large part because consistent metrics, reliable data and standardised reporting frameworks remain elusive.

"Most ESG information is quite vague," confirms the chief strategy officer of a US-based multi-asset fund with an average target fund size between €500 million and €1 billion. "This does not help in creating proper reporting systems. Evaluating existing or future reporting measures is tough."

For some firms, poor ESG reporting is forcing them to become increasingly innovative in how they source the data itself: "ESG data is horrible, but we have come up with a solution that may fix things," explains Conradi at FSN Capital. "We are investigating going into the finance system and looking at invoices to see what lines are in them. Looking at both incoming and outgoing invoices, we can see what companies are buying and selling. You get a good sense of environmental ESG factors in this way."

For more on ESG, see "Part 3—ESG data: extracting diamonds from the rough".

PART 2

Analytics: the role and future of data analytics in dealmaking and decision-making

Data analytics: do the opportunities outweigh the challenges?

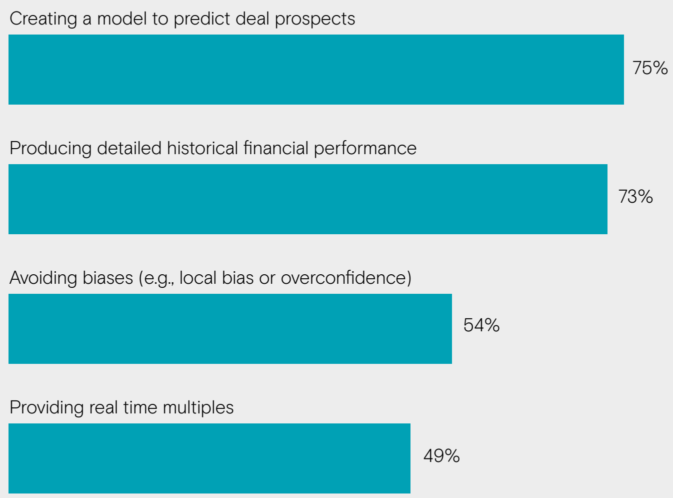
Analytics—which already plays a role in dealmaking in private markets—looks set to become an increasingly important ingredient, especially among managers of larger funds.

Data analytics is the science of interrogating data to gain insights. At one level, this can be as simple as using visualisations to bring raw data to life. But sophisticated data analytics goes further, revealing why things have happened, predicting what might happen next and even suggesting a course of action.

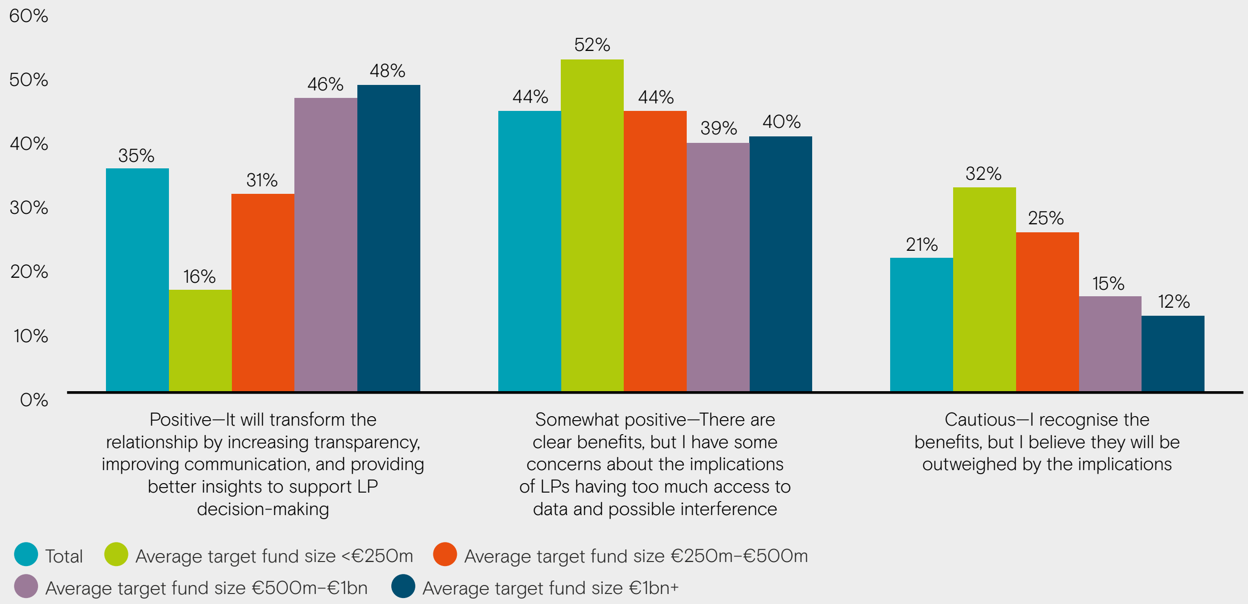
Not surprisingly, the predictive aspects of data analytics are of particular interest to participants in private markets. Our survey shows that three-quarters of firms agree that data analytics can help to create a model to predict deal prospects. A similar proportion says that data analytics can produce detailed historical financial performance.

“Potential revenue streams are uncovered when we use advanced analytics,” says the CEO of a US-based multi-asset firm with an average target fund size between €250 million and €500 million. “We know the company’s operations and productivities. Ascertaining the best revenue streams depends on data to a great extent.”

From an investment/deal standpoint, how do you think data analytics can support valuation efforts? (Select all that apply)



Which statement best describes your attitude towards advancements in data analytics and the impact on the GP & LP relationship?



Better relationships through analytics

It is reasonable to assume that insights derived from data analytics can help firms to make more informed investment decisions. They can also be transformative in a wider sense—particularly when it comes to attracting and retaining investors. Sharing insights and data improves transparency and helps to satisfy investors' growing demands for information.

This is reflected in our survey: 79% of respondents describe their attitude towards advances in data analytics and its impact on the relationship between general partners and limited partners as positive or somewhat positive. For firms with average target fund sizes of more than €1 billion, this rises to 88%.

But there is a flip side. Respondents representing smaller average fund sizes are not quite as convinced, with 52% commonly saying that they are "somewhat positive" regarding advances in data analytics. Among the different sized firms in our survey, they are the most cautious (32%), citing concerns around things like keeping up with investor demands for data.

This point is taken up by the CFO of a US-based firm with an average target fund size of less than €250 million: "The main challenge is dealing with investor expectations. They want more transparency in financial reporting, even though we already provide them with comprehensive reports."

Data is only useful if sources are trustworthy

While some firms are making advances in their use of data, they are also conscious of the risks involved in finding trustworthy data, especially from outside sources.

"When sourcing data, the most important challenge is the lack of reliable information," says the partner of a firm with an average target fund size of less than €250 million based in Germany. "Although providers claim that the data has been verified, we often find that it is unreliable."

Indeed, 60% of all investment firms say that the reliability, completeness and freshness of data and its sources is a top challenge.

Data handling is also highlighted as a challenge. Just over half of respondents argue that technological limitations in holding and extracting data are a challenge, while the same proportion points to difficulty in aggregating data from fragmented infrastructure to create a single, centralised data source.

As the partner of one UK-based private equity firm with an average target fund size of less than €250 million points out, there are limitations when using technology to extract data: "When it is unstructured, we cannot use it without further sorting and aligning the information."

Inaccurate and incomplete data are a major obstacle

Respondents are mixed on what they consider to be the main barriers to extracting meaningful insight from their data. The top concern (according to 55%) is the issue of inaccurate and/or incomplete data.

"The quality of data in the market is not always top-notch," observes the senior managing director of a private debt firm based in the US with an average target fund size between €500 million and €1 billion. "We have to analyse the quality of data once we receive it. We need to check if the format and the records match our expectations."

> When sourcing data, the most important challenge is the lack of reliable information. Although providers claim that the data has been verified, we often find that it is unreliable."

Partner, Germany-based firm

Data complexity is also highlighted as a barrier, per 47% of respondents. The challenge is managing often disparate sources of data. As the partner of a private equity firm based in Sweden with an average target fund size between €250 million and €500 million points out, given the amount of unstructured data that comes through, the firm must spend time sorting through it all for it to be practically applicable—"Otherwise, the information will be stored without any use."

Effective analytics comes with a cost

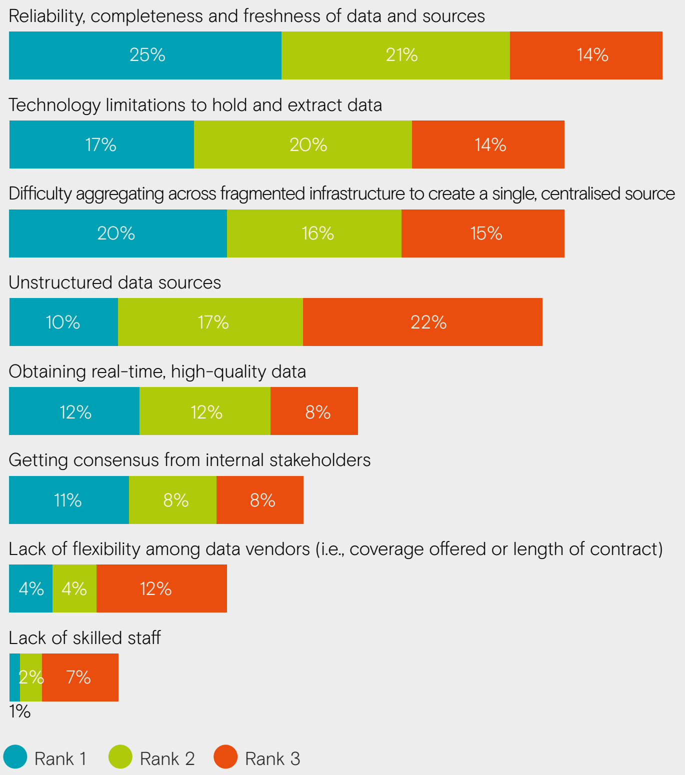
While data quality is a cause for concern among many fund managers, others are equally worried about the size of the task involved in building advanced analytics into their firm—and the consequences if they fail to do so.

"For us, one issue is scale," says Waide at VC firm Stride. "Our portfolio includes an e-commerce/delivery company and I receive a board information pack once every two months from them. But a company like this handles ten million data points via machine learning and AI in the background, which most people won't fully understand. How am I going to best capture and enrich all that information? The key is to use the company's narrative plus data and most systems don't capture both very well. In some cases, you might be better just to read the information pack again because, without it, you lose the history."

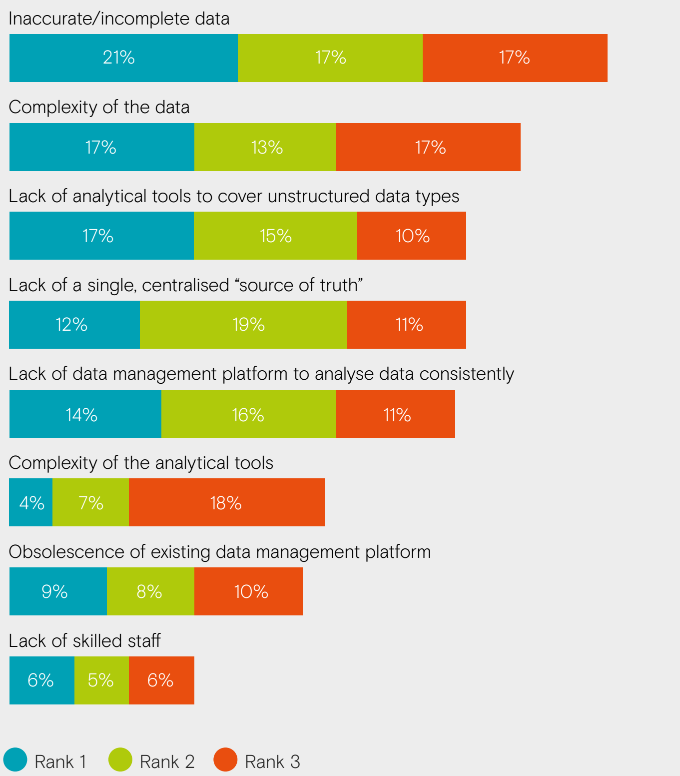
The main challenge is seen as the need for continuous investment in next-generation technology. This is cited by 83% of respondents, with 39% citing it as the single most challenging aspect.

On a related note, respondents also have strong views on the costs associated with upskilling: "It is not only the technology on which we will spend our dollars," notes the managing director of a US-based multi-asset fund with an average target fund size exceeding €1 billion. "We have to think about training our employees so that they can use the new systems in a favourable manner."

What challenges do you face when sourcing data? (Select top three and rank 1-3, where 1=most important)



What are the main barriers to extracting meaningful insight from your data? (Select top three and rank 1-3, where 1=most important)



Investors, cybersecurity and human error pile on the pressure
The second most selected challenge with being a data-driven organisation is that of satisfying increasing investor demand for data, cited by 74% as a top-three challenge. As noted earlier, matching investor expectations is easier said than done.

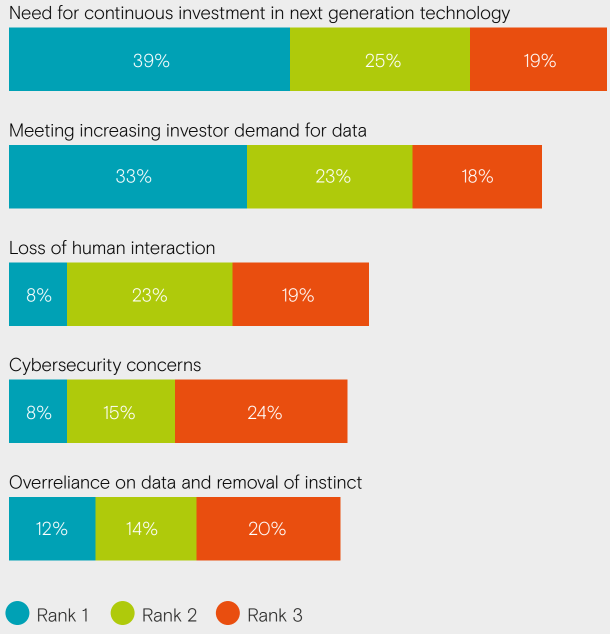
"Meeting investor demand for data is tough," confirms the CFO of a private debt firm based in France with an average target fund size between €500 million and €1 billion. "Investors ask for information across the value chain and also specific information about third-party providers and associates."

Cybersecurity is recognised as a challenge, but only 8% rank this as a number-one concern. This suggests that cybersecurity is not getting the attention it deserves. The fact is that sharing data with third parties, such as investors, is a risk multiplier and requires careful management—a point emphasised by the managing director of a private debt firm based in the US with an average target fund size between €250 million and €500 million: "If investors are not careful, we could be dealing with cybersecurity challenges, and this will affect our reputation."

Human factors are another area of concern. Half of respondents say the loss of human interaction is a challenge in a data-driven organisation, while 46% think overreliance on data and removal of instinct is a drawback.

"Machines cannot read minds," says the CFO of a multi-asset fund based in the US, with an average target fund size exceeding €1 billion. "People can identify whether someone is not being honest or forthcoming. This instinct is lost when we become a completely data-driven unit."

What are the main challenges in being a data/analytics-driven organisation? (Select top three and rank 1-3, where 1=most important)



"Meeting investor demand for data is tough. Investors ask for information across the value chain and also specific information about third-party providers and associates."

CFO, France-based private debt firm

Improving analytics: these things take time (and investment)

Despite the challenges associated with managing data, almost all respondents point to improvements in their use of analytics over the past 12 months—with more to come.

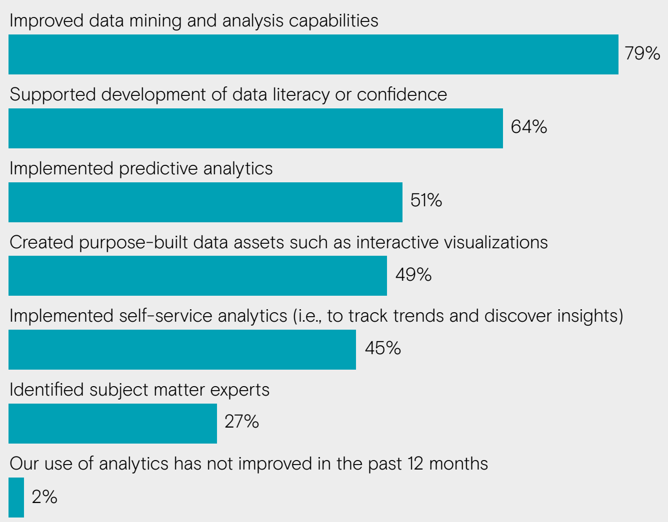
Looking at where the improvements have taken place, 79% point to better data mining and analysis capabilities. Meanwhile, 64% have supported the development of data literacy and/or confidence in their organisation—underlining the fact that adopting analytics is as much about education and cultural change as it is about technology.

“Data literacy facilitates more confidence in teams,” confirms the managing director of a US-based firm with an average fund size less than €250 million. “There is an incredible amount of data that can be analysed, so we can make the most of available information.”

Improved data literacy paves the way for further deployment of data analytics. It could even act as an accelerator, making it progressively easier to add new and more sophisticated analytics functions.

“Visualising data is key in data literacy,” says Khamassi at Stirling Square Capital Partners. “For example, we have built a data platform for portfolio reviews—rather

How has your firm’s use of analytics been improved in the past 12 months, if at all? (Select all that apply)



than PDFs and spreadsheet printouts, we now look at proper graphs. People can understand the data and ask questions about trends and distributions. It's a change in the way they think. The next step is forecasting. For users, adapting takes time but we're getting there.

"People can interact easily with our new system and, once they do, they want to go further. We've given them tools to do their own analysis. It shows that people are willing to interact with the data—that's already progress. People need to experience things before they know how to use them and get value from them."

Around half of the respondents in our survey say they have added new capabilities over the past year. These include the implementation of predictive analytics (mentioned by 51% of respondents), the creation of purpose-built data assets (49%) and the deployment of self-service analytics (45%).

Creating portfolio value through analytics

For some, improving analytics is also about working with their portfolio companies to increase value: "We're actively engaged in our portfolio companies, and we partner with their management teams to help them grow," says John Marsh, finance partner at Growth Capital Partners. "We share best practice and encourage the company to invest in its own systems. A lot of that is real-time reporting and getting actionable intelligence mid-month—seeing how trading is looking and whether you are on track for budget, and then making that information available to all the managers in the company.

"Most of the companies we invest in began in quite an entrepreneurial way. They haven't always invested in systems before we came along. But that is often part of the value we can add. Improving the finance function, reporting and management information are an important part of professionalising the business—it helps growth and increases value.

"When it comes to data and analytics, it's one-way traffic towards more tools and better information. The tools probably already exist, it's just a question of adoption. The strongest-performing companies we've worked with have been ones that have better tools and a better view of the pipeline. These help them manage teams more efficiently and make sure that people are well utilised."

The future of analytics in dealmaking

Firms with the largest target fund sizes seem better prepared than smaller funds to race ahead—more than half (52%) of respondents with a target fund size above €1 billion expect analytics to be much more important to their firm in the next three years. This compares to 29% of firms with an average target fund size of €250 million-€500 million and just 25% of firms with a target fund size of less than €250 million.

Which analytics-driven investments will be a priority in the next three years? Two-thirds say machine learning/ AI will be a top-three priority. Predictive analytics, meanwhile, is highlighted by half of respondents (although only 9% see this as their number-one priority).

Interestingly, our survey shows that data is seen as every bit as important as acquiring new technology when it comes to prioritising analytics investments. To put this in context, respondents most commonly point to quality of data (26%) as their number-one priority for analytics-driven investment.

"Quality of data will determine our progress in the next three years," says the senior managing director and CFO of a US-based firm with an average target fund size between €250 million and €500 million. The firm also plans to invest in AI and predictive analytics.

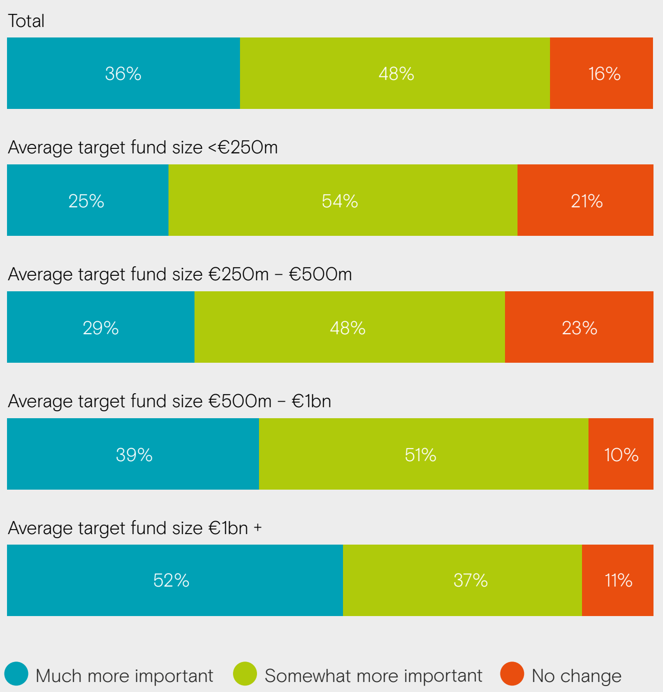
Investing in data literacy is also seen as a priority in the coming three years, according to 41% of respondents, including 18% who give it top ranking.

As the CFO of a multi-asset US-based firm with an average target fund size of €250 million-€500 million points out, "We want to invest in talent training and management. Analytics results will be better when employees are aware of how to use data optimally."

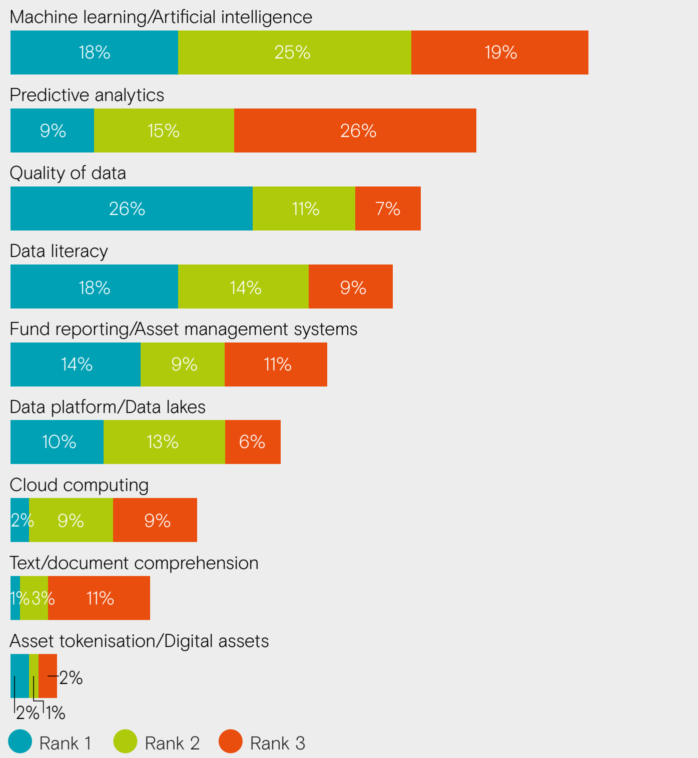
In most cases, respondents are looking to mix and match a range of different analytics-related capabilities.

Data lakes are among the analytics-related technologies that garner a relatively low score, cited by only 29% of respondents. This is somewhat surprising

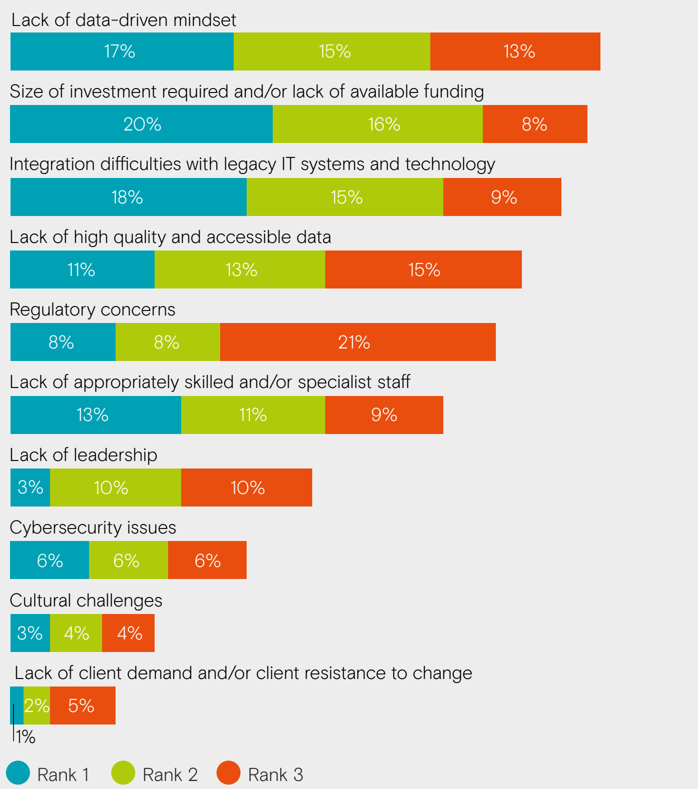
How important will analytics be to your firm in the next three years? (Select one)



Which of the following analytics-driven investments will your firm be prioritising in the next three years? (Select top three and rank 1-3, where 1=most important)



What obstacles need to be addressed to implement an effective analytics-driven strategy? (Select top three and rank 1-3, where 1=most important)



given concerns many respondents express about managing unstructured data—one of the main benefits of using data lakes is the ability to streamline the management of large and often chaotic datasets. Asset tokenisation also receives a low score and is cited by only 5% of respondents overall. This suggests that blockchain-based technologies have still to prove their worth, at least in the context of private markets.

"Our analytics-driven investments include data platforms, AI and asset management solutions because of the practical value-add to our business," says a Czech Republic-based respondent from a PE firm with an average target fund size of less than €250 million. "We also need data lakes because of the large amount of data that comes through our systems."

Build a data-driven mindset

Turning to the obstacles that need to be addressed in implementing an analytics-driven strategy, lack of a data-driven mindset tops the list for 45% of respondents.

On a more positive note, a much smaller proportion (11%) points to cultural challenges as a blocker, suggesting that most respondents are open to change. This extends to clients, with only 8% of respondents citing lack of client demand/client resistance as an obstacle to implementing an effective analytics-driven strategy.

Perhaps predictably, lack of funding is seen as an obstacle by a significant proportion of respondents (44%), followed by integration difficulties with legacy IT (42%) and a lack of high-quality and accessible data (39%).

In line with our earlier findings, cybersecurity attracts a relatively low ranking as an obstacle in general (according to 18% of respondents overall and only 6% ranking it as their main obstacle). Those that do mention cyber frequently point to the reputational impacts of things like data breaches.

As the partner of a US-based infrastructure fund with an average target fund size exceeding €1 billion points out, "In the case of a data breach, stakeholders will not trust the organisation."

PART 3

ESG data: extracting diamonds from the rough

Is ESG data becoming a dealmaking deal breaker?

Private markets take ESG seriously but must overcome difficult issues with the data surrounding this vital issue.

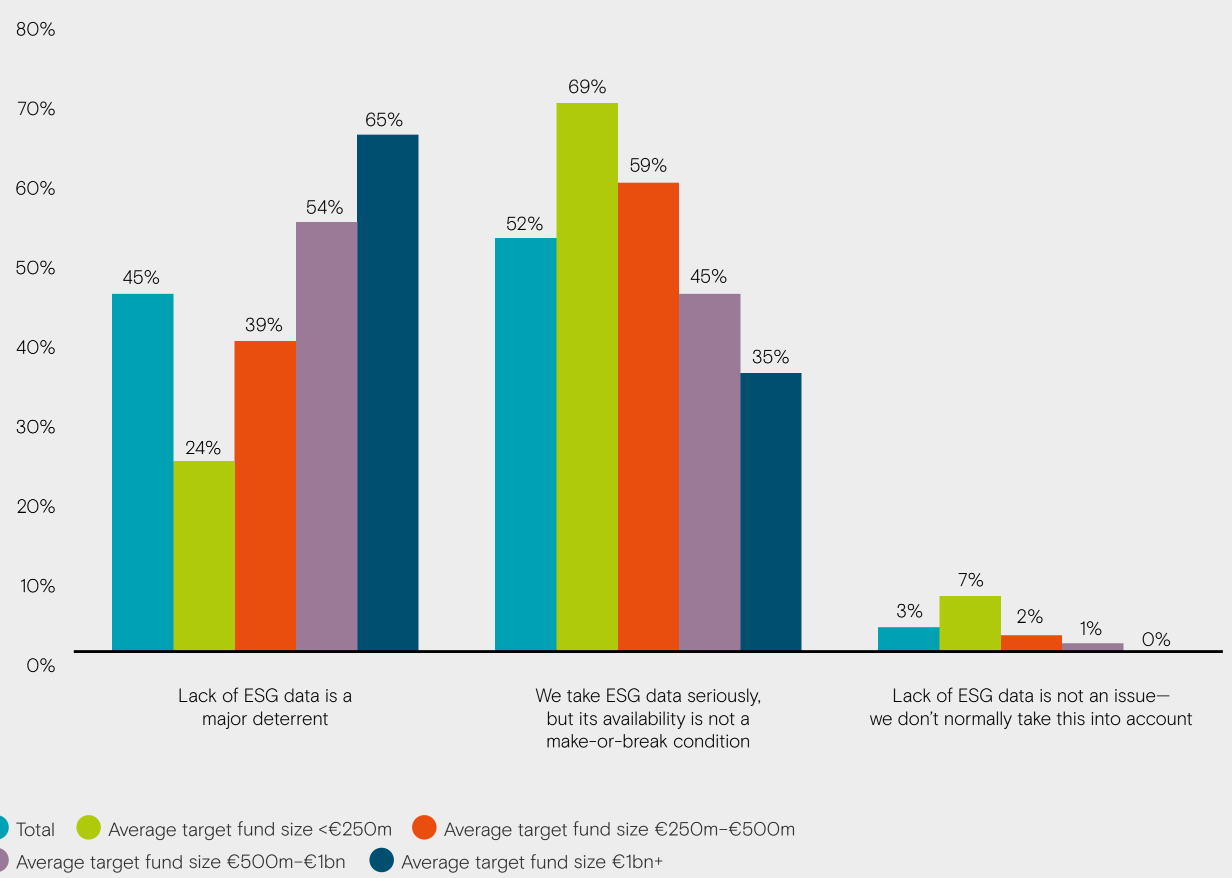
Managing ESG data is a major factor for almost all dealmakers in this survey—only 3% of respondents say that they do not normally take it into account.

"ESG is a core element of our investment strategy, and our approach is data driven," says Lund at Nordic Capital. "With better data, we empower our portfolio companies to enhance their sustainability performance. Since 2014, they have been required to perform an annual sustainability data review and we use a specialist software platform to systemise the reporting processes. This allows both Nordic Capital and portfolio companies to collect, aggregate and analyse data in different areas of sustainability and, in total, we analyse around 50 different data points.

"The data is used in different ways, including monitoring performance and progress, linking to Global Reporting Initiative Standards and the UN's Sustainable Development Goals, as well as meeting the increasing regulatory requirements on non-financial reporting.

"To spearhead transparency and streamline ESG data in the private equity industry, Nordic Capital is proud to be part of the sector's first-ever global ESG data convergence project, the ESG Data Convergence Initiative, endorsed by the Institutional Limited Partners Association."

To what extent does ESG data availability affect your investment decisions?



Is bigger better for ESG deals?
The extent to which ESG impacts on dealmaking is directly proportional to the target fund size. To put this in context, firms targeting the largest funds (those of €1 billion and above) are two-and-a-half times more likely to cite a lack of ESG data as a major dealmaking deterrent than the smallest funds (those with an average target fund size of less than €250 million).

Delving into the detail, 69% of firms with a fund size of less than €250 million say that they take ESG data seriously, but its availability is not make-or-break for them. By contrast, 65% of firms with an average fund size of more than €1 billion cite a lack of ESG data as a major deterrent.

Very few firms say that they do not normally take ESG data into account and none of the largest firms say they normally overlook ESG. However, 7% of respondents of firms with an average target fund size of less than €250 million say the opposite—they do not normally take ESG into account. This is likely to reflect the fact that firms working in this part of the market are often investing in startups and other early-stage businesses for which little or no reliable ESG data is available.

With better data, we empower our portfolio companies to enhance their sustainability performance."

Linus Lund, director—fund controller of Nordic Capital Advisors

Connecting the ESG data dots

Assessing the link between ESG and financial performance is of significant concern for 79% of respondents, with 26% selecting it as the number-one concern. Clearly, this is a vital ingredient when evaluating deal targets.

However—as with internal and portfolio company ESG data, discussed above—it is the lack of a standardised reporting framework for target company data that stands out as the number-one challenge for almost a third of respondents.

"ESG reporting has become stricter and more transparent in some regions. In some emerging markets, the rules are not as strict. With these different standards and frameworks, ESG data collection is impacted because we do not know if the data is incomplete," says the managing director of a multi-asset fund based in the US, with an average target fund size exceeding €1 billion.

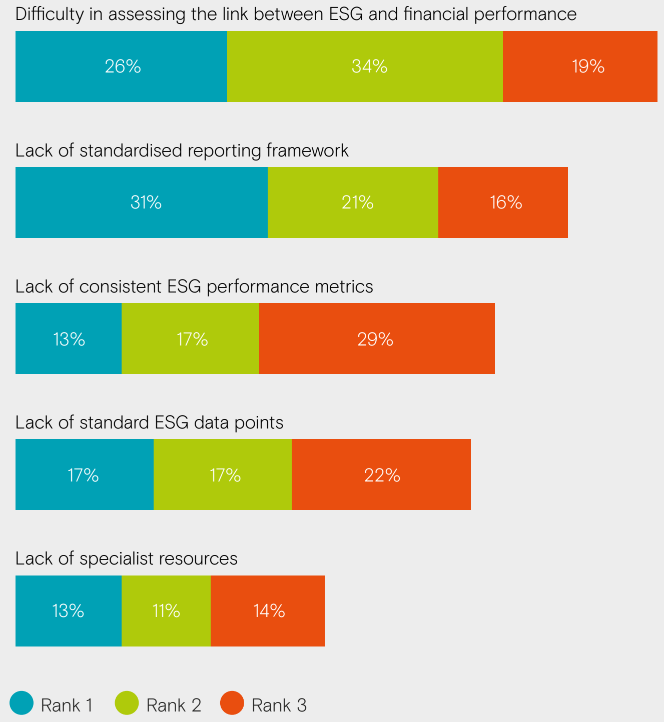
In a similar vein, respondents point to both a lack of consistent metrics and a lack of standard ESG data points as being blockers when weighing-up targets. As the CFO of a multi-asset firm based in the US with an average target fund size between €250 million and €500 million explains, different reporting structures mean the firm cannot gauge accurately the capabilities of a target company.

"We may have different standards from these companies, and we cannot make extensive comparisons," he says.

While there is no silver bullet solution as far as managing ESG requirements is concerned, some respondents point to the increased use of technology—and the implementation of a data strategy—as having the potential to ease the burden.

As the partner of a US-based multi-asset firm with an average target fund size above €1 billion puts it: "A data strategy prepares the team for analysing information across different categories. ESG reporting is a big part of our responsibility today and we can focus on this factor precisely."

What are the major challenges when evaluating a target's ESG data? (Select top three and rank 1-3, where 1 = most important)



> A data strategy prepares the team for analysing information across different categories. ESG reporting is a big part of our responsibility today and we can focus on this factor precisely."

Partner, US-based multi-asset firm

Uncovering the essentials in ESG data

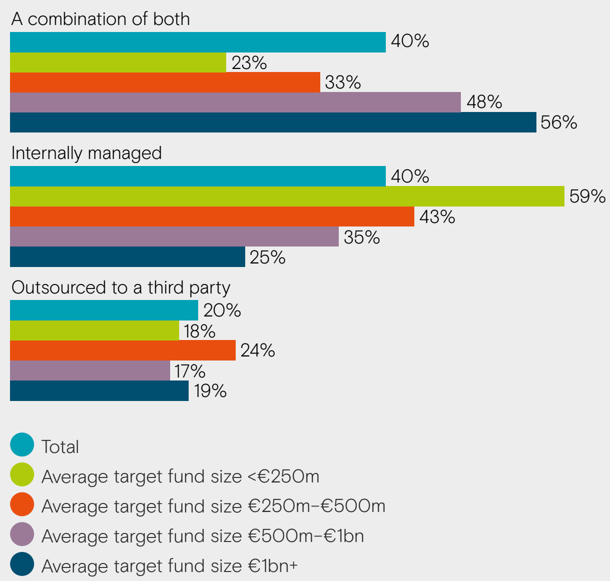
Many firms are still working their way through the weeds when gathering ESG data on deal targets or improving ESG reporting in their portfolio, but it will be worth the effort.

When it comes to who is responsible for ESG data collection and reporting, 59% of those from relatively smaller average fund sizes say their ESG data is managed in-house, without any third-party support. By contrast, respondents representing larger fund sizes in our survey more commonly lean on both internal management and third-party support (56%).

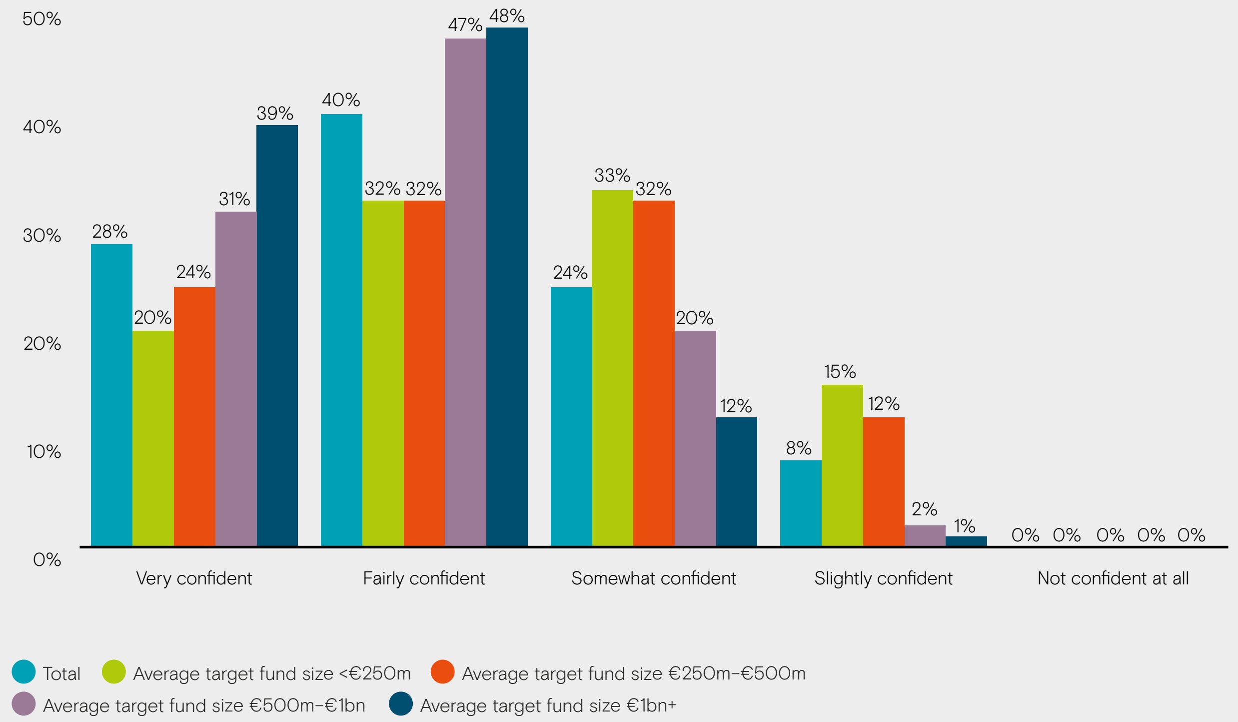
This is somewhat surprising—you might expect larger funds to have their own in-house team and therefore rely less on external providers. But external validation is becoming increasingly important when it comes to ESG reporting, in terms of credibility and to avoid any claims of “greenwashing”. Having a combination of internal and external teams looking after ESG data collection and reporting is helpful when validating any ESG-related claims and in dealing with regulatory compliance.

Interestingly, firms with an average target fund size of €250 million-€500 million are the most likely to have all their ESG data collection and reporting outsourced entirely to a third party, with close to a quarter (24%) of these firms citing this.

Who undertakes your ESG data collection reporting?



How confident are you in your organisation's ability to meet ESG data collection and reporting requirements?



Firms lack confidence in their ESG reporting
Turning to the question of how confident firms feel about their ability to meet ESG data collection and reporting requirements, only a minority say that they are very confident. Firms representing larger average target fund sizes (€1 billion or more) fare better than smaller ones (less than €250 million): 39% of larger fund size managers say they are very confident, versus just 20% of those at the smaller end of the spectrum.

"ESG is one of our transformational levers and we monitor it closely in our portfolio companies," says Khamassi at Stirling Square Capital Partners. "The challenge with ESG is differentiating the good data from the bad because there isn't an agreed standard against which we can benchmark the results. If you don't ask tough questions, you won't know whether you have something worthwhile or not."

ESG data offers obstacles and opportunities
Looking at the factors that drive respondents to collect, evaluate and report ESG data across their own portfolios and projects, 60% single out the need to comply with regulations. This is not surprising given the huge rise in non-financial reporting requirements over recent years. Regulation may have been brought in to appease investors, but it now seems to set the tone for how managers are approaching ESG.

The challenge is that reporting requirements are not consistent and have yet to stabilise. The situation is further complicated by the rapid rise of voluntary ESG reporting frameworks.

The challenge with ESG is differentiating the good data from the bad because there isn't an agreed standard against which we can benchmark the results. If you don't ask tough questions, you won't know whether you have something worthwhile or not."

Ahmed Khamassi, chief digitalisation officer, Stirling Square Capital Partners

Although the need to satisfy investor questions/expectations is generally not seen as a top driver for ESG reporting, this subject nevertheless prompts a great deal of commentary from respondents managing funds of all sizes. Respondents also report that the scope of investor requests for information is growing wider all the time.

"Investors are demanding updated information, which we provide, but they want the information to be highly comprehensive and their main demand is ESG data," says the partner of an infrastructure fund based in Sweden with an average target fund size between €250 million and €500 million.

The managing director of a German private debt firm with an average target fund size of €500 million-€1 billion adds: "Investors learn about the different ESG metrics and request information about each of these metrics separately. Given the lack of ESG data, we find it difficult to meet their requests."

Consistency is key for ESG data

Focusing on the specific challenges that respondents face with ESG data collection and reporting within their own portfolios and projects, 42% say that a lack of uniformity in the current reporting framework is the greatest challenge. This is the most common concern and is considered to be the number-one challenge by 30% of respondents.

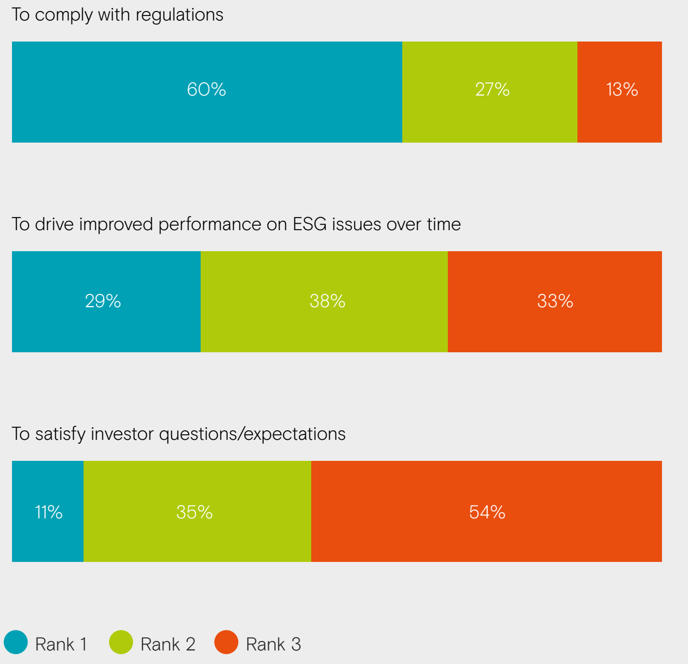
Poor-quality data (39%), lack of technology to monitor ESG performance (37%) and regional differences in ESG approaches (35%) are also widely cited as ESG data challenges when collecting and reporting on assets in which respondents already have an interest.

While the challenges of acquiring ESG data about portfolio companies are significant, they are by no means insurmountable.

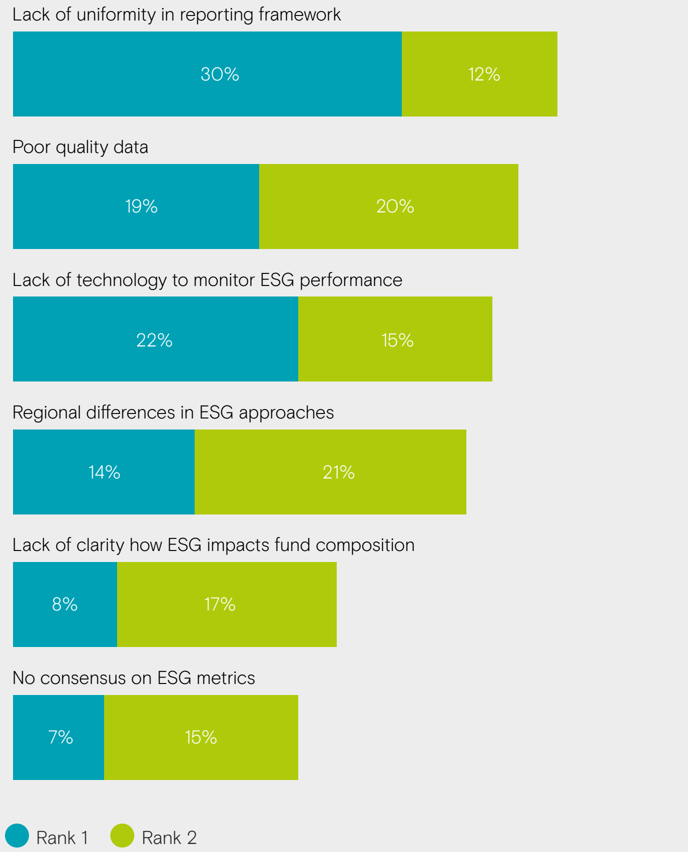
"There is some standardisation of ESG data, but not enough. As a consequence, we still have to do our own thing," explains Löfgren at Hg.

"This starts when we onboard portfolio companies and it continues annually throughout the holding period. This is mandatory. We ask about 170 questions across three areas—essentials, employees and society. Essentials covers governance, data privacy and cybersecurity. Employees includes diversity and inclusion, employee engagement, culture, mission, vision and talent management. Society encompasses environmental impact, customer relations, transparency, and community engagement. We have a scoring methodology and we provide feedback through a board report. It's about asking the right questions, using the right tools, and having the right commitments from the portfolio company."

What are the key drivers behind your collection, evaluation and reporting of ESG data within your portfolio/projects? (Select top three and rank 1-3, where 1=most important)



What are the major challenges in ESG data collection and reporting within your portfolio/projects? (Select top two and rank 1-2, where 1=most important)



Conclusion

Private markets have a reputation for being conservative. Yet our study confirms that most firms are eagerly embracing the opportunities offered by data and technology. Indeed, nearly two-thirds of respondents are prioritising investments in advanced technologies such as machine learning and/or artificial intelligence.

Stumbling blocks remain, particularly when it comes to managing variable data quality and extending the use of data tools into new areas, such as deal sourcing. What steps can firms consider as they look to acquire new data-driven capabilities?

1 **Data literacy is a gamechanger:** The managing partner of a UK-based firm in our survey makes this point clear—"We need to make sure that teams can read and connect with data to use it in the most successful manner." Getting buy-in for new technology within an organisation can be a real struggle. Data literacy can help and strategies such as providing easy data exploration tools can help to drive adoption.

2 **Use data to drive value:** Collecting data about portfolio companies during the holding period yields valuable insights, but this is just the start. The real value comes from actively using data insights to bring about change. "The most important thing is that when you get data, you absolutely have to analyse it and provide outputs for your portfolio companies. You then need to help them take actions to improve," says Caroline Löfgren of Hg. "Otherwise, it's just a data-gathering exercise."

3 **Close the strategy gap:** Most firms in this survey do not yet have an established data strategy, despite already making extensive use of technology. Those that do have a strategy are clear about the benefits. These include faster due diligence, more accurate portfolio reviews and valuations, improved collaboration, better target evaluation and enhanced returns.

4 **Recognise that data has limits:** Data quality remains a blocker for many, and our study shows that firms are prioritising this area as they plan their technology investments. Rather than trying to improve data quality, there are strong arguments for developing smarter models instead. "We accept that data quality is often rubbish and that's how life is," says Conradi at FSN Capital, which successfully uses big data tools to extract insights. "But if you take this into account when you build your models, that's fine."

5 **Cascade tech into portfolio companies:** Successful PE players are learning from their own experiences and injecting tech into their portfolio companies—boosting their performance and readying them for a successful exit. As Khamassi at Stirling Square Capital Partners points out, "It's about equipping our companies to be marketable—this is something that typically gets missed."

6 **Stay safe:** This study suggests that cybersecurity ranks low on the agenda for most respondents. But the dangers are real, particularly as more information is shared and the threats become more sophisticated. As the managing director of a US-based firm in our survey says, "Cybersecurity becomes more relevant when you are a data-driven organisation. We have to be prepared to mitigate these risks, otherwise the company's reputation will be at stake."

7 **Use data to drive your ESG agenda:** Regulatory pressure around ESG is mounting and investors are demanding more transparent ESG information. Firms seeking to get ahead of the curve should aim to improve the quality of the data underpinning ESG reporting both in their own organisation and in their portfolio. "Investors want more ESG-related data, not only relating to our operations but also those of our portfolio companies," says the managing director of a US-based private debt firm with an average target fund size of €500 million-€1 billion. "Since there are challenges in measuring and reporting, we cannot always meet their expected standards."

As Lund at Nordic Capital concludes, "I believe there will be a bigger role for data and analytics in the future, especially if we can get detailed and more granular data from our portfolio companies. It can help us to identify risks and opportunities better and react faster. That probably holds for deal sourcing as well. I don't think we will have robots bringing us investment opportunities, but you can augment your own thinking and maybe reach conclusions faster than the competition."

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About the Aztec Group

Established in 2001, the Aztec Group is an award-winning independent provider of fund, corporate and depositary services, employing over 1,400 people across Guernsey, Jersey, Luxembourg, the UK and the US. Owner-managed, the Group specialises in alternative investments, administering more than €440 billion in assets, 450 funds and 4,500 entities for a range of clients spanning the major asset classes, including private equity, real estate, venture capital, private debt and infrastructure.

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