



PREQIN SPECIAL REPORT: DIGITIZATION OF PRIVATE CAPITAL OPERATIONS

October 2018

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CEO's FOREWORD

Over the last 20 years, the investment landscape has changed dramatically. The advancement of technology has driven the growth of entirely new industries, multiple financial crises have created a new environment and regulations to abide by and continued globalization has opened up new frontiers and markets.

However, while private capital firms have taken advantage of these trends to enhance portfolio companies and grow the assets of the industry from billions of dollars to trillions, ever greater pressure is placed on the middle- and back-office operations of most managers. The desire to meet new demands and tackle existing challenges is fierce. Here are the top challenges firms are facing:

- **Transparency:** LPs are expecting full transparency, a best-practice process and greater levels of service.
- **Market Context:** LP pressure for more granular data, in-depth market context and more qualitative commentary is intensifying.
- **ESG:** The buzz around environmental, social and governance (ESG) factors is growing.
- **Scale:** The concentration of capital within larger institutions is increasing the need for having an institutional-quality reporting and risk management process.

To that effect, Preqin conducted the *Technology in Private Capital Survey* to understand the evolution of technology in the private capital industry. Historically, change in the industry has been gradual, as private capital firms have been reluctant to emerge from their Excel-heavy landscape. Smaller firms can get by with manual processes or rely on outsourcing, but as AUM grows so does the complexity and volume of data. Firms without robust digital solutions risk losing a competitive edge, as they must spend more time generating analysis, and they may fall behind their clients' expectations.

Given the business costs of relying on outdated technology, why have firms been slow to change? We asked almost 300 private capital managers about their current and future technology use and blockers to adopting new technologies, including data security, cost concerns and awareness.



MARK O'HARE

CEO, Preqin

The report delves into further detail; and I thank my Preqin colleagues and our external contributors from Northern Trust and Environmental Resources Management for sharing their insights with us and with you.

Early adopters will gain the advantage, but the reach of technology is pervasive and will influence the industry and its participants significantly; regardless of whether individual change is coming, firms decide to participate or not. However, it does open up a realm of possibilities, predominantly in managing and maintaining LP relationships and alignment – Preqin is on hand with indispensable data, solutions and insights to help you navigate the changes and leverage technology to your benefit and that of your clients.

Thank you,

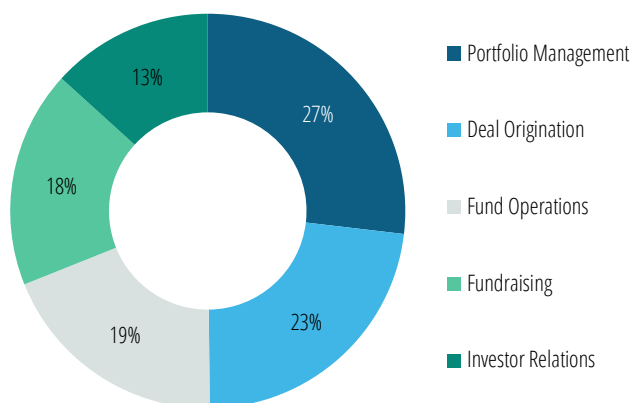
Mark O'Hare

TECHNOLOGY IN PRIVATE CAPITAL SURVEY 2018

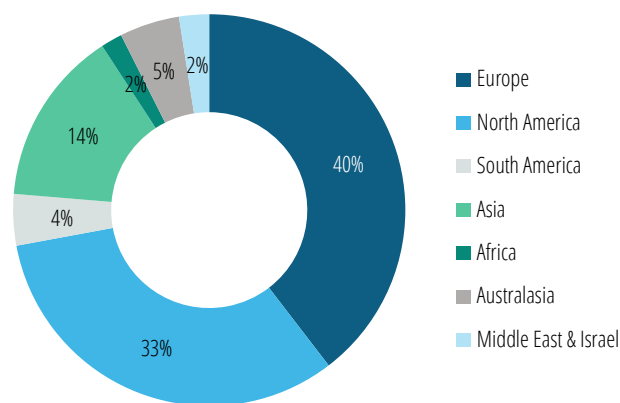
Drawing from the results of our survey of 300 private capital fund managers and the insights from industry experts, this report answers the following questions:

- How is technology disrupting the operational landscape in the private capital industry?
- What factors drive tech spend in private capital firms?
- How are private capital firms using technological solutions?
- What factors are blocking firms from adopting private capital software?
- How satisfied are private capital managers with their technological solutions?
- Can blockchain bring tech disruption to private capital operations?

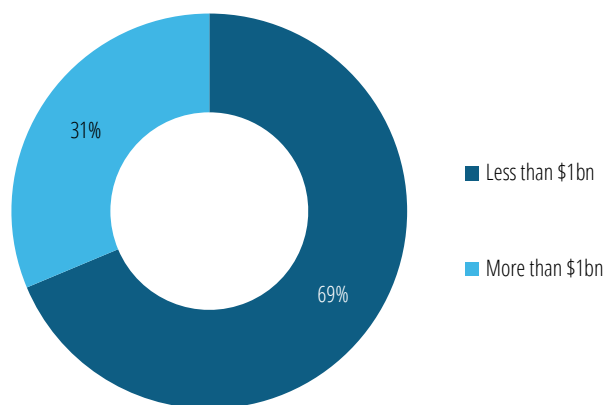
Survey Respondents by Business Area



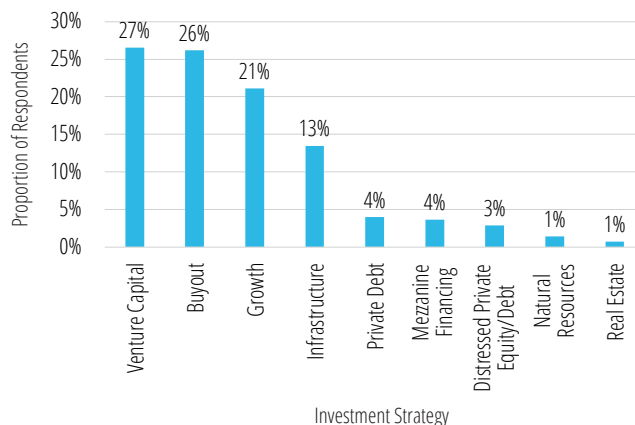
Survey Respondents by Location



Survey Respondents by Assets under Management



Survey Respondents by Investment Strategy



PORTFOLIO MANAGEMENT 2.0

The world of portfolio management is evolving. Private capital fund management is moving towards data-powered decision-making.

Larger bulge bracket firms are the early adopters and have enthusiastically embraced cloud-based platforms for cost efficiency and to enable the analysis of large datasets to drive new insights.

Based on our research, many mid-sized and smaller firms are considering moving away from Excel, but their transition has been sluggish. They should not delay.



The level of adoption of middle-office portfolio management and reporting software has grown to approximately 40% across AUM bands and geographies.

LARGE FIRMS ARE MAKING BIG INVESTMENTS IN DATA

Blackstone recently formed a Data Initiative team focused on data science, big data and advanced analytics. The team partners directly with the firms' investment professionals to improve the investment process, make new investments and optimize existing portfolio company operations. Similarly, Apollo has invested in data warehouses and data scientists to allow its teams to not only collect and analyze information across its portfolio companies and enable value creation within its existing portfolio, but also to assist in decision-making on new deals.

Clearly, those with large-scale portfolios have realized not only the cost savings from automation of data collection and storage, but also the potential value trapped in their portfolio data.

WHAT OUR SURVEY REVEALS

The *Technology in Private Capital Survey 2018* by Preqin shows that the level of adoption of middle-office portfolio management and reporting software has grown to approximately 40% across AUM bands and geographies, while it has increased to 70% among the larger firms.

However, the same survey shows that many mid-market firms continue to rely on their manual use of Excel. Indifferent to the benefits of automation, these firms are content that the current



CHRIS FERGUSON

Preqin Solutions

favourable market conditions do not require a shift in their operations. They risk being left behind.

OTHER TECHNOLOGY DRIVERS

Beyond achieving efficiencies and cost savings, there are additional reasons to move to the cloud.

We already see evidence of the importance of an independent, consistent and verifiable valuations exercise to LPs. With liquidity expected to increase in the asset class, and thus positions traded more frequently, this importance is certain to grow.



Managers should embrace the resulting transparency as an opportunity to better understand the realities of their portfolios and drive more aggressive negotiations on exit.

Further, as more data is stored on the cloud, the possibility increases of aggregating this data to provide comprehensive real-time insight and benchmarking to GPs, LPs and service providers. Managers should embrace the resulting transparency as an opportunity to better understand the realities of their portfolios and drive more aggressive negotiations on exit.

Finally, as the industry grows and organizations seek to standardize the reporting process between manager and asset owner, the industry will see an increase in the sophistication of the analysis LPs perform. Consequently, the granularity and

quality of reported data will come into question, and new higher standards will emerge.

Firms without modern technology will not be able to provide the transparency, timeliness or granularity that their stakeholders demand – leaving them at a disadvantage.

A LOOK INTO THE FUTURE

Today, machine learning and artificial intelligence are inescapable buzz words. The broad applications of these technologies may seem far off within private capital. However, the standard portfolio management systems of tomorrow will deliver analytics based off far more than simple operating metrics.

We are already seeing this today:

- Real-time social and website analytics are driving forward-looking insights.
- ESG metrics are being rolled into financial analysis to derive impact alpha.
- Advanced scenario forecasting is facilitating exit planning and fee & carry trade-off decisions beyond the capabilities of Excel.

We can expect to see these types of leading-edge analytics become standard in the future. Given the growing concentration of capital at larger managers and their investment in data science, it seems prudent for managers of all sizes to define a robust data strategy that can unlock the value in their data if they wish to remain competitive. Getting your data into the cloud is the first step.



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TOMORROW'S WINNERS

Private capital firms need to invest in technology and data initiatives today that prepare them for tomorrow. Many mid-sized and smaller GPs, still reliant on limited tools such as Excel, are falling behind larger firms in their ability to generate unique insights and provide their stakeholders with the levels of service they require.

Given the growing industry competition, only GPs that can harness the value of their data assets are likely to remain top-quartile performers.

PREQIN SOLUTIONS

Preqin Solutions, a subsidiary of Preqin, delivers market-leading cloud collaboration software for monitoring, valuation, benchmarking and reporting on private capital portfolio investments. The software automates the compilation, analysis and exchange of all portfolio information including operating metrics (financial, KPIs, ESG), investment valuations, and ultimately investment and aggregate fund performance. Through the integration of Preqin and other market data sources, this performance can be benchmarked with reference to public or private markets for internal and investor reporting purposes.

www.preqinsolutions.com

PORTFOLIO MANAGEMENT

Two in five fund managers are using portfolio management software led by firms in developed markets.

ADOPTION IS HIGHEST AMONG LARGER FIRMS

GPs must overcome certain hurdles before adopting new technologies. A key barrier is that they want to remain fully focused on generating returns for LPs, and adopting new technologies could be a distraction. However, LPs are pressuring GPs to improve transparency and reporting standards, which is accelerating a change in GP behaviour towards adopting portfolio management software.

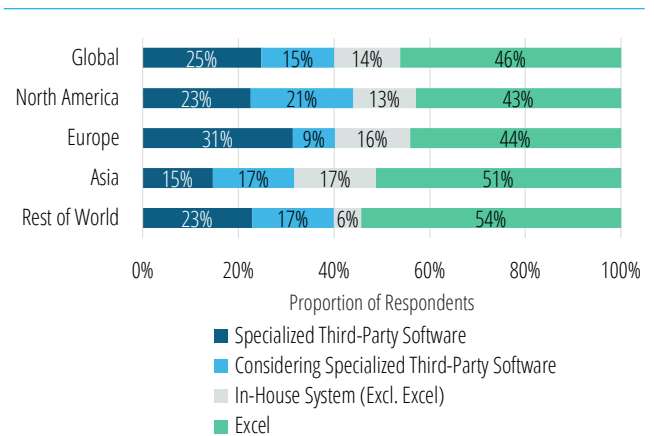
Globally, two in five private capital fund managers use or are considering specialized portfolio management software (Fig. 1). The more developed private capital markets are leading the way, with 31% of Europe-based private capital fund managers currently using third-party software and 23% of managers in North America doing so.

Larger fund managers are more likely to use specialized portfolio management software than smaller managers: 41% of fund managers with \$1bn or more in AUM have adopted such software, up from 27% in 2014, and notably higher than the 17% of managers with less than \$1bn that use portfolio management software (Fig. 2).

WHY AREN'T FIRMS ADOPTING SOFTWARE?

Lack of immediate need is the biggest blocker of adoption (44% of respondents), while 18% cite cost as the key blocker (Fig. 3). Firms that do adopt software likely experience lower total cost of ownership when they consider the time saving and value of increased transparency and scalability. This may be one reason why adoption is set to increase in the private capital industry,

Fig. 1: Portfolio Monitoring Software Adoption among Private Capital Fund Managers by Location



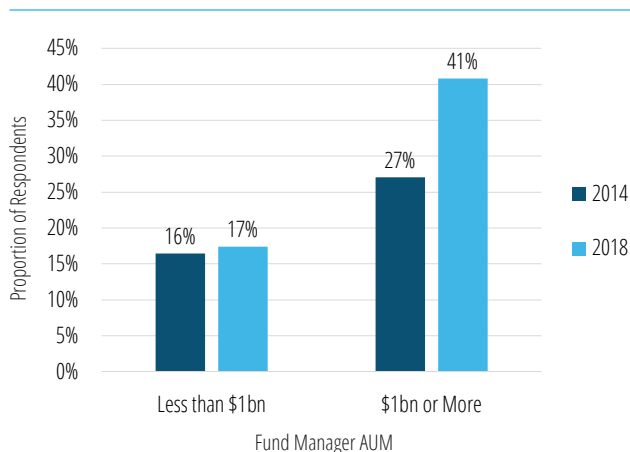
Source: Preqin Technology in Private Capital Survey 2018

with 25% of fund managers reporting they are currently considering implementation.

MANAGERS ARE HAPPY WITH THEIR SOLUTIONS

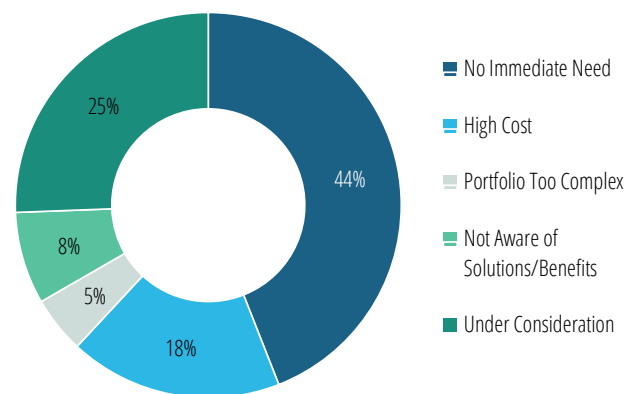
The vast majority (76%) of fund managers using a portfolio management system stated that they are satisfied with their solution, with an additional 5% saying it has exceeded their expectations. This is good news for GPs thinking about implementing portfolio management software.

Fig. 2: Portfolio Monitoring Software Adoption/Consideration among Private Capital Fund Managers by AUM (2014 vs. 2018)



Source: Preqin Technology in Private Capital Survey, 2014 & 2018

Fig. 3: Key Blockers of Portfolio Monitoring Software Adoption among Private Capital Fund Managers without a Current Solution



Source: Preqin Technology in Private Capital Survey 2018

NEW ESG GUIDANCE

An industry standard for monitoring, reporting and dialogue

In partnership with the Principles for Responsible Investment (PRI), the world's leading proponent of responsible investment, ERM has developed 'ESG monitoring, reporting and dialogue in private equity' (the Guidance). Developed in collaboration with a working group of 39 general partners (GPs) and limited partners (LPs), the Guidance creates a standard framework for ESG disclosure during the lifetime of a private equity fund. The Guidance is the final part of a trilogy of tools for both LPs and GPs that support industry-consistent approaches to incorporating ESG considerations across the three stages of a fund: due diligence, commitment and monitoring.



YVONNE HALSEY

Environmental Resources Management



Research confirmed that there is a compelling value proposition for GPs to have a robust ESG portfolio monitoring system in place.

The Guidance:

- Builds the business case and provides context for the increasing requests for ESG disclosure in private equity;
- Gives an overview of how LPs are currently monitoring GPs on ESG integration and how they use the information that they receive;
- Proposes a flexible ESG monitoring and reporting framework that builds on existing information collected during fundraising, streamlines the information exchange and is supported by examples of how GPs might respond to the disclosure requests.

FINDINGS AND THE VALUE PROPOSITION FOR ESG MONITORING AND REPORTING IN PRIVATE EQUITY

The research highlighted a clear alignment of interests between LPs and GPs, as illustrated in the diagram on page 11.

In addition, the research confirmed that there is a compelling value proposition for GPs to have a robust ESG portfolio monitoring system in place, regardless of whether the

information is being reported in detail to LPs or not. The process of portfolio monitoring in itself – applying a systematic approach to the identification of material ESG issues – has resulted in value protection and enhancement.

Setting objectives and regularly tracking progress enables GPs to identify anomalies and achievements, support regular engagement with the portfolio company on these issues and strengthen company reporting practices on issues that could have implications at exit.



Data analysis tools continue to be developed and will increasingly be used to supplement monitoring and reporting efforts in the private equity sector.

Both LPs and GPs will benefit from a 'bottom-up' understanding of the ESG issues that are material to the business model, future proofing and enhancing exit propositions for portfolio companies. GPs play an important role in facilitating LP understanding of these material issues. LPs might require macro reporting on specific ESG issues across the portfolio, which might be supported by an agreed set of key performance indicators (KPIs).

ESG MONITORING, REPORTING AND DIALOGUE IN PRIVATE EQUITY (PRI 2018), <https://www.unpri.org/download?ac=4839>

LPs and GPs recognize that ESG disclosure is about more than agreeing on the number of KPIs to report. It is about achieving a shared understanding of how ESG factors can impact the value of underlying investments through LP-GP dialogue.

EMERGING TRENDS

The following emerging trends could have an impact on the monitoring and reporting practices in the private equity sector in the future.

Automation and technological advances:

Automation and technological advances will enable more effective and efficient processing and analysis of ESG data, thereby providing better and more timely information to guide

decisions on ESG performance and business value. Sample practices highlighted in the Guidance demonstrate the use of some reporting tools that have enabled the automation of data collection and sharing. Data analysis tools continue to be developed and will increasingly be used to supplement monitoring and reporting efforts in the private equity sector.

Quality of data and confidence building measures:

As the quality and abundance of data collected and shared by private equity owners and investors grows, so too will the demands for data assurance, which is already included in the PRI annual reporting framework questions. Assurance of data is a common practice amongst large corporates and is an area to monitor.

Overview of the ESG Monitoring and Reporting Framework



I. POLICY, PEOPLE AND PROCESS

1.1 What updates have been made to your responsible investment policy/guidelines and/or strategy?

CORE

1.2 What changes have you made to how responsible investment is resourced and structured at the firm?

CORE

1.3 How has your responsible investment policy/guidelines and/or strategy been implemented?

CORE & **ADDITIONAL**

1.4 How does your firm manage the ESG aspects of its own operations (corporate responsibility)?

ADDITIONAL



II. PORTFOLIO

2.1 What is the ESG risk and opportunity profile of the portfolio companies in the fund? Have there been any changes to the ESG risk and opportunity profile of the fund in response to emerging ESG issues, and if so, which ones?

CORE

2.2 How are ESG factors managed by the portfolio companies in the fund?

CORE & **ADDITIONAL**

2.3 Report specific ESG indicators for portfolio companies.

ADDITIONAL

2.4 Describe your approach to assessing the risks and opportunities that climate change poses to your company.

ADDITIONAL

2.5 Describe your approach to assessing the environmental and social benefits created by your portfolio companies.

ADDITIONAL



III. MATERIAL ESG INCIDENTS

3.1 Immediate notification of material ESG incidents.

CORE

3.2 Periodic summary of material ESG incidents.

CORE

Source: ESG MONITORING, REPORTING AND DIALOGUE IN PRIVATE EQUITY (PRI 2018), <https://www.unpri.org/download?ac=4839>

Benchmark capability:

As the ‘big data’ technologies improve, LPs and GPs will have more access to databases that allow benchmarking of portfolio company’s ESG performance. Reporting may involve the use of increasingly sophisticated metrics to compare companies.

Risks and opportunities related to ESG factors are continually evolving. With the launch of the Guidance, LPs are already incorporating the framework and guidance into their monitoring processes, a trend that is likely to continue. GPs would be well advised to adopt a proactive approach, and to review this new guidance, and work to develop their monitoring and reporting processes accordingly.

Value Proposition of Reporting



Source: ESG MONITORING, REPORTING AND DIALOGUE IN PRIVATE EQUITY (PRI 2018), <https://www.unpri.org/download?ac=4839>

YVONNE HALSEY, PRINCIPAL CONSULTANT, ENVIRONMENTAL RESOURCES MANAGEMENT

Yvonne is an ESG integration specialist at ERM. Yvonne’s recent work for PE firms, leading infrastructure and credit investors has included developing bespoke ESG pre-investment screening tools and enhanced ESG processes pre and post investment. Yvonne recently supported ERM’s involvement in drafting the ESG Monitoring, Reporting & Dialogue guidance document for PE in conjunction with the PRI.

Prior to ERM, Yvonne worked at a leading PE firm, developed their Board ESG reporting framework for portfolio companies and led ESG communication and reporting internally and externally. Yvonne’s experience also includes ESG analysis of, and engagement with, listed companies.

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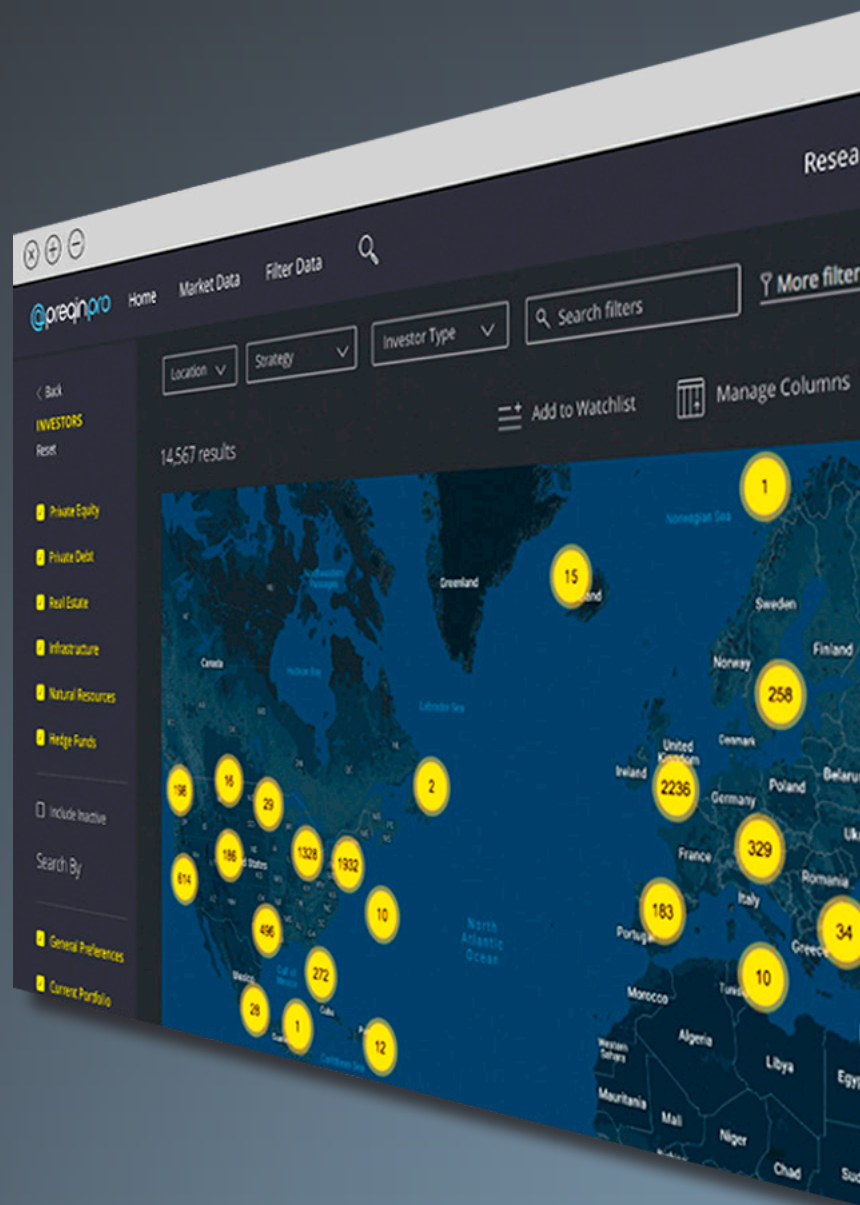
MORE CONNECTED THAN EVER

All asset classes integrated in one place



HARNESS THE DATA

Interactive visual analytics turn data into actionable insight



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ESG

ESG practices are at the tipping point for mainstream adoption, although the adoption of ESG monitoring and reporting tools is some way behind.

ESG MOVES INTO THE MAINSTREAM

The vast majority (70%) of fund managers are now considering environmental, social and governance (ESG) practices when conducting due diligence (Fig. 4). Furthermore, ESG practices are making their way beyond the due diligence stage: nearly half (47%) of respondents require portfolio companies to have ESG policies, 44% document their ESG compliance and 34% receive regular ESG reporting from their portfolio companies. The trend is set to become stronger over the next 12 months: 12% of respondents plan to start monitoring portfolio companies' ESG compliance and 15% plan to regularly receive and publish information on ESG performance.

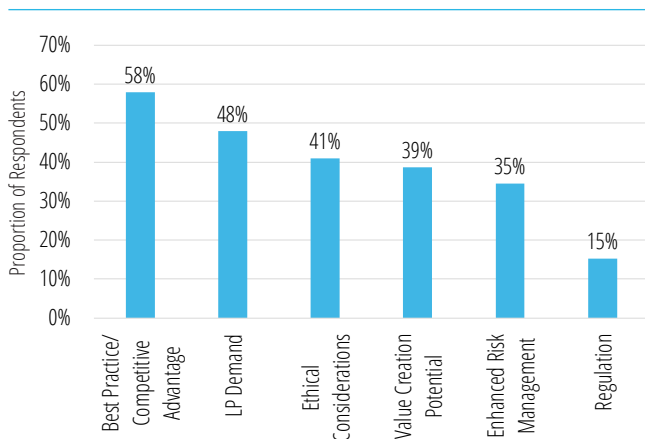
WHAT DRIVES FIRMS TO ADOPT ESG MONITORING AND REPORTING?

The competitive advantage that ESG practices bring is the main reason for 58% of the private capital fund managers adopting ESG monitoring and reporting. Moreover, Fig. 5 illustrates that LPs place high importance on ESG practices as nearly half (48%) of respondents have had LPs request that they monitor and report on ESG factors. Ethical considerations (41%), enhanced risk management (35%) and potential for value creation (39%) are also factors driving ESG adoption.

ARE FIRMS ADOPTING TECHNOLOGY TO MANAGE ESG STRATEGIES?

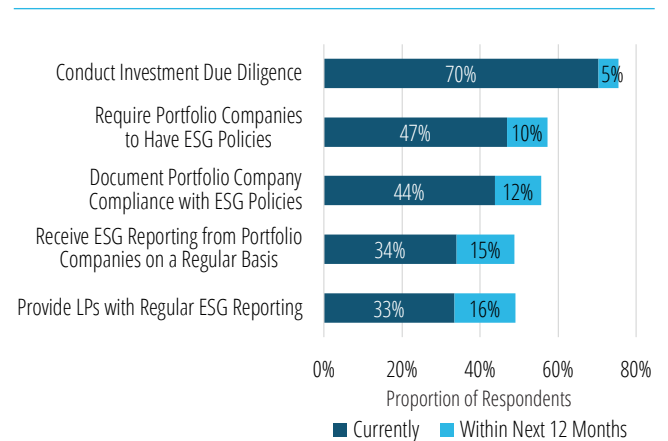
Technology adoption in the ESG space has been slower than the adoption of ESG practices. Globally, 46% of portfolio management companies are not yet aware of the benefits

Fig. 5: Drivers of ESG Monitoring and Reporting Adoption among Private Capital Fund Managers



Source: Preqin Technology in Private Capital Survey 2018

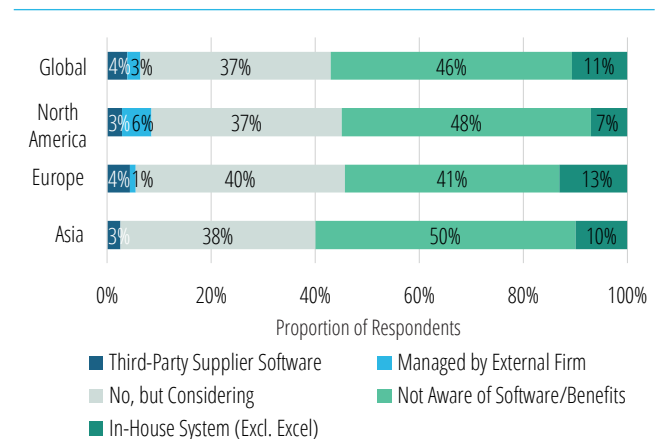
Fig. 4: Ways in which Private Capital Fund Managers Implement ESG Practices



Source: Preqin Technology in Private Capital Survey 2018

of tailored ESG reporting software (Fig. 6), which include streamlined data collection, ease of monitoring and measuring and enhanced operational efficiencies. However, 37% of the global firms are considering using dedicated software for their ESG monitoring and reporting.

Fig. 6: Private Capital Fund Managers that Use a Tailored Package for ESG Reporting by Location



Source: Preqin Technology in Private Capital Survey 2018

BLOCKCHAIN IN PRIVATE EQUITY

A game-changer for funds

The fund administration space, especially for alternative assets, is ripe for change due to the typically manual nature of many processes. Certain types of fast-developing financial technology are being applied to the alternative asset markets. One such example is distributed ledger technology (DLT) or blockchain technology.

The excitement around DLT comes from its seamless, simultaneous integration of transactions, settlements and ledger updates directly between multiple parties. It creates a secure way to share information and conduct transactions without the need for a single, central party to approve them. In a private ledger, only authorized network members have the ability to see details of their own transactions, which provides confidentiality and privacy. All updates to the shared ledger are validated and recorded on all participants' shared ledgers, which drives accuracy and transparency. Because all updates to the ledger are unchangeable and auditable, network members can accurately trace their past activity.

Several firms, including Northern Trust, are actively engaged in DLT projects. In 2017, Northern Trust launched its DLT solution for private equity, which represented the first commercial deployment of blockchain technology for this market.

Northern Trust considered DLT to be the right technology for this development as it brings a range of positive improvements, such as:

- Improved transactional efficiency, reduced reconciliations, shortened settlement cycles and easier management of liquidity requirements;
- Creation of standard business processes, contract execution and electronic documentation when combined with smart contracts (self-executing computer programs that only run if certain conditions have been met);
- Another line of defence to combat fraudulent activity through transaction encryption and improved identity validation (e.g. 'know your customer'/anti-money laundering) on top of the existing security measures;
- More accurate and timely reporting for business and regulatory purposes through a shared ledger containing commonly validated, unalterable records;
- Storing encrypted data securely in the 'cloud', while maintaining the integrity of the host jurisdiction by using locally stored 'keys' required to decrypt the data.

Since its launch, Northern Trust has been enhancing the product to fully automate different private equity lifecycle events.



ANTHONY STEVENS

Northern Trust

The end-to-end automation of capital calls is a good example of the way Northern Trust has put the right information in the hands of the user. As the diagram on the following page shows:

- The investment advisor recommends and issues the call.
- The call is passed to the administrator for checking.
- A set of messages are sent to the general partner (GP) board members and, if required, a board meeting is automatically set up and its outcomes are tracked. Options are available for the GP to approve the call either at the time or at a later date. The approval to allow this to happen is captured on the ledger.
- After board approval, an anti-money-laundering check and other relevant compliance checks are carried out on each limited partner (LP).
- On capturing the correct compliance responses, the call notice is issued to the LP.
- The LP's bank accounts are linked to the application to automate the payment process.

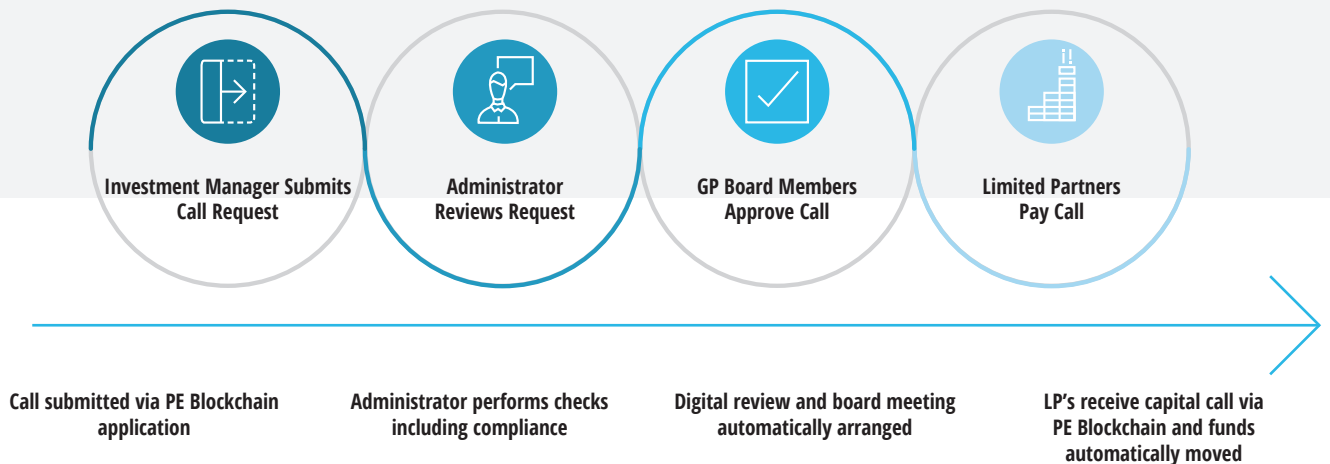
The use of workflow, digitalization and DLT speeds up the call process, provides the investment advisor with full transparency and allows the audit firms to audit in real time, directly from data nodes residing within their own offices.

From an administration perspective this may improve operational efficiency by as much as 50%.¹ Equally important is the clarity that DLT brings at every stage: all the participants that have the permission have a real-time view of the call to see:

- Where it is in the process;
- How long it has been at a particular point;
- Who is required to provide an approval; and
- Which investors have paid the call and which are outstanding.

¹Source: Northern Trust July 2018.

Fully Automated End-to-End Capital Call Lifecycle Management



Many leading financial services firms now recognize that DLT has evolved to the stage where it could help overhaul and reshape traditional industry structures and operating models. The industry sees value in the unique combination of distributed shared ledgers, permissioned trusted networks, immutable encrypted records, data privacy, confidentiality and real-time transaction settlement.

Because many of its benefits and opportunities can only be realized through collaboration, DLT has triggered an unprecedented level of financial services industry cooperation

involving investment banks, global custodians, asset managers, exchanges, clearing houses, central banks and regulators. These institutions – together with industry bodies, consortia and trade associations – are actively studying how to leverage DLT.

Over time, we expect that as a result of these collaborations, blockchain and other technologies will evolve and will lead to increased efficiencies and improvements in the fund's total expense ratios, thereby improving the returns that the investors in this asset class may be able to generate.

ANTHONY STEVENS, HEAD OF ASSET SERVICING PRODUCT INNOVATION, NORTHERN TRUST

Anthony has worked in the financial services industry for 17 years and joined Northern Trust in October 2007. He manages the Product Innovation Group, which is responsible for developing new products, keeping the business up to date with technology changes in both the financial and non-financial markets, as well as looking to access new external technologies and services that will enhance our clients' investment management processes. Anthony is also the product owner for the Private Equity Blockchain product and responsible for the ongoing development of that ecosystem.

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BLOCKCHAIN

Private capital firms may be investors in blockchain companies but lack the awareness or appetite for the practical applications in their own workflows.

CONSIDERATION OF BLOCKCHAIN

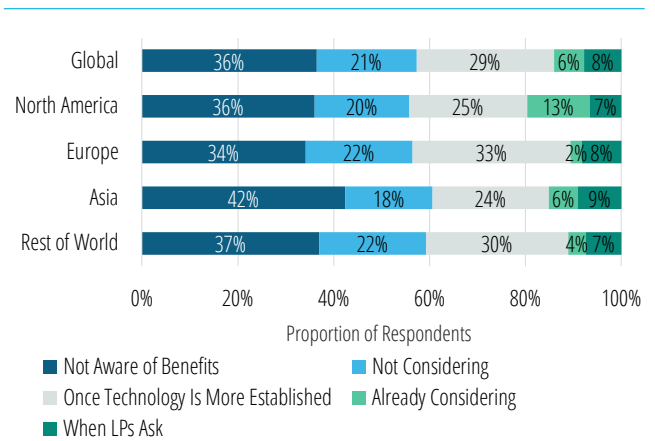
Blockchain and related technology remains in its nascent stages as a potential disruptor within financial and financial services companies. Only 6% of global private capital managers are currently considering using blockchain for fund administration and 36% are unaware of its benefits (Fig. 7). However, these numbers are set to change as 29% of respondents plan to adopt blockchain once the technology is more established. North America-based private capital firms are among the early adopters of this technology: 13% already consider blockchain and a further 7% will consider it when an LP asks. Only 2% of the Europe-based survey respondents are considering blockchain at present, although a third of firms are keen to adopt this technology once it is more established.

In the case of blockchain, smaller firms (AUM of \$100mn or less) are more likely to use the technology: 9% of firms are already considering blockchain for improved fund administration, compared to 3% of the largest firms (Fig. 8). Clearly the industry does not have an established view on the best applications for blockchain, with a split in respondents' opinions.

OPPORTUNITIES FOR BLOCKCHAIN

The function with the greatest potential for blockchain in private capital is fund administration: 36% of the firms surveyed that are considering blockchain expect to use it to help streamline

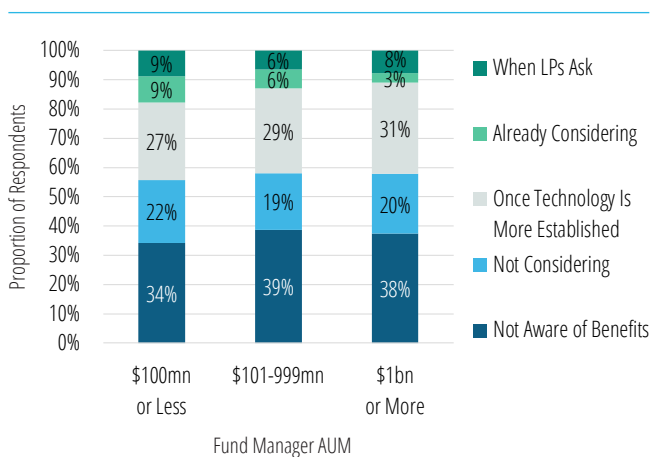
Fig. 7: Private Capital Fund Managers' Consideration of Blockchain in Fund Administration by Location



Source: Preqin Technology in Private Capital Survey 2018

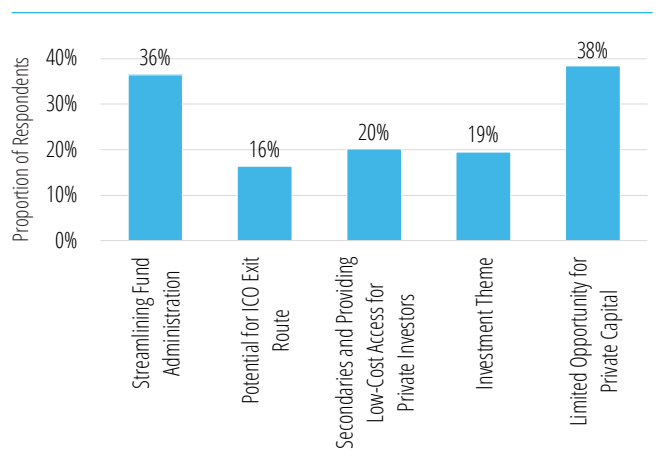
fund administration processes (Fig. 9). Almost equal proportions of fund managers consider blockchain to be suitable as an investment theme or for providing low-cost access for private investors. Contrary to this, 38% of firms see limited opportunities for blockchain in the private capital space. It is still early days in terms of interest and awareness in blockchain in private capital.

Fig. 8: Private Capital Fund Managers' Consideration of Blockchain in Fund Administration by AUM



Source: Preqin Technology in Private Capital Survey 2018

Fig. 9: Private Capital Fund Manager Views on the Greatest Opportunity for Blockchain



Source: Preqin Technology in Private Capital Survey 2018

INVESTOR PORTALS

The importance of maintaining and growing LP relationships is apparent, with investor portals the most widely used and considered software package in private capital.

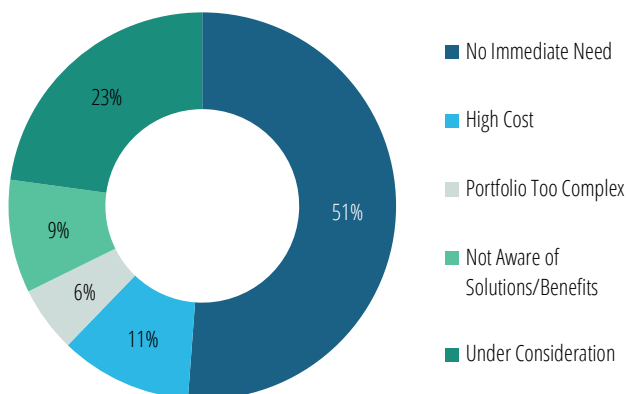
INVESTOR REPORTING SOFTWARE IS INCREASINGLY ADOPTED

While responsibilities vary between private capital firms, the IR department's function has become more diverse over time. IR teams face increased demand for reporting, internal and external communications, PR and other corporate initiatives. Many IR teams have turned to technology to centralize the compilation and dissemination of information. Forty-two percent of private capital managers globally use a tailored investor reporting software package and a further 40% are considering doing so – the highest utilization/consideration rate of all software types covered in this survey (Fig. 10). Similar proportions are considering adopting a tailored investor reporting software package in the near future.

WHY AREN'T FIRMS ADOPTING INVESTOR REPORTING SOFTWARE?

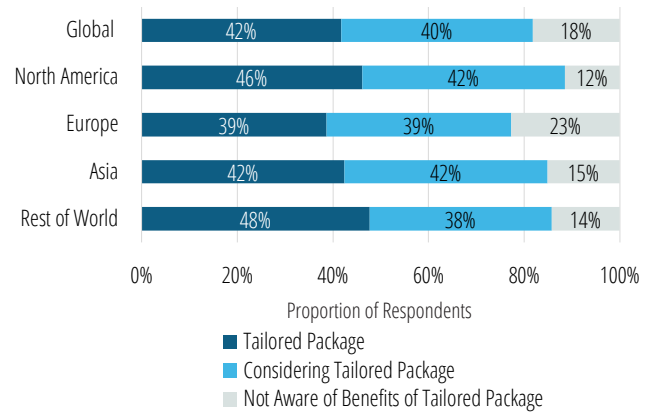
Similar to fund accounting and portfolio management software, a lack of immediate need is the main deterrent for the adoption of investor relations software (cited by 51% of respondents), followed by high cost (11%, Fig. 11). Size is a factor – smaller funds are unlikely to adopt a solution to manage a small pool of institutions. However, as they scale, the burden of managing multiple LPs and pipelines will necessitate a move to a less manual process.

Fig. 11: Key Blockers of Investor Portal Software Adoption among Private Capital Fund Managers without a Current Solution



Source: Preqin Technology in Private Capital Survey 2018

Fig. 10: Investor Reporting Software Adoption among Private Capital Fund Managers by Location

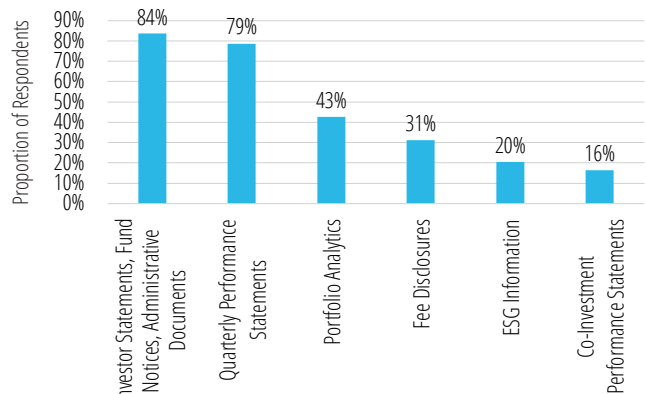


Source: Preqin Technology in Private Capital Survey 2018

HOW ARE FIRMS USING INVESTOR PORTALS?

With regards to the information communicated through their investor relations function, 84% of the private capital fund managers share investor statements, fund notices and administrative documents (Fig. 12). Quarterly performance statements (79%), portfolio analytics (43%) and fee disclosures (31%) are the other most commonly produced reports.

Fig. 12: Information/Functionality Provided in the Investor Portal by Private Capital Fund Managers



Source: Preqin Technology in Private Capital Survey 2018

FUND ACCOUNTING

One of the most commonly outsourced back-office functions is not immune to automation among those firms that do manage their own accounts.

ADOPTION OF FUND ACCOUNTING SOFTWARE

Automation of the back office is increasingly occurring across many industries, including global fund management. Forty-five percent of private capital fund managers surveyed now use a specialized system other than Excel, with 17% managing the system in house. True adoption figures are difficult to quantify as many managers will be unaware of the software applied by their administrators: 45% of managers surveyed mentioned they use an administrator, but only 62% of these firms have committed to using specialized accounting software.

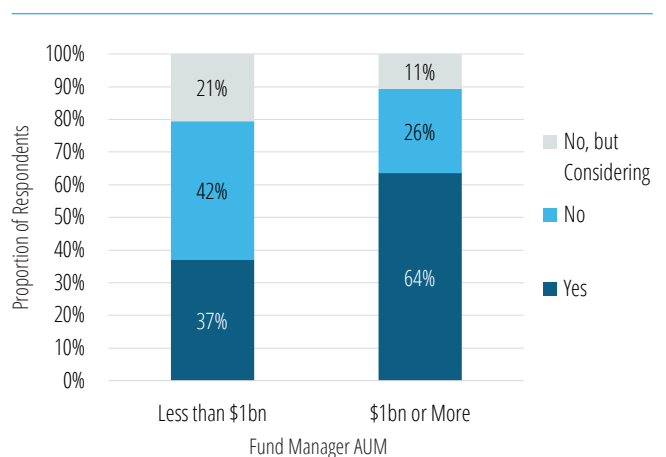
Given their relative size and complexity, the use of technological solutions for fund accounting is more common in larger firms: 64% of firms with \$1bn or more in AUM have adopted such a solution, compared with 37% of firms with less than \$1bn (Fig. 13).

Over half (51%) of Asia-based fund managers use technological solutions for fund accounting, which is higher adoption than among Europe- and North America-based firms (45% and 42% respectively, Fig. 14). This higher adoption rate runs contrary to the trends across other software types, where Asia tends to lag behind. This may be due to the relatively complex fund structures used in Asia.

BLOCKERS OF ADOPTION

The majority (86%) of private capital users of fund accounting software are satisfied with their solution. As with

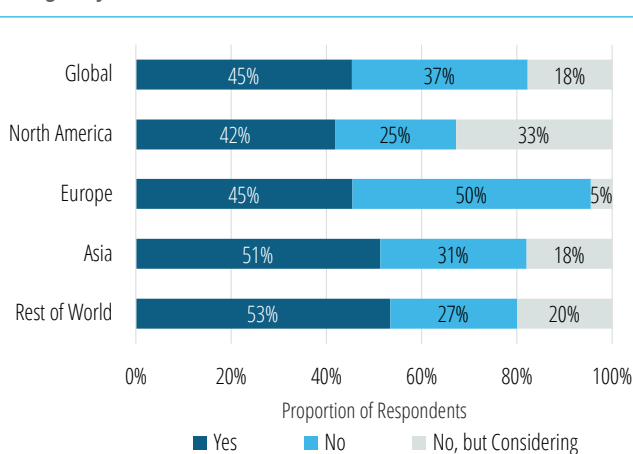
Fig. 13: Fund Accounting Software Adoption among Private Capital Fund Managers by AUM



Source: Preqin Technology in Private Capital Survey 2018

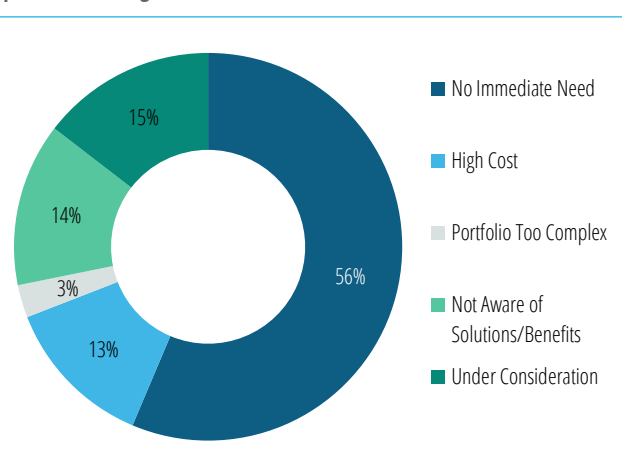
implementation of many products, lack of immediate need is blocking 56% of respondents without a current solution from acquiring one and a further 13% find the cost of the products reviewed to be too high (Fig. 15). However, a surprising 14% of private capital firms are not aware of the benefits and 15% are in the process of considering fund accountancy software. Notably, 33% of North America-based fund managers are currently considering a system.

Fig. 14: Fund Accounting Software Adoption among Private Capital Fund Managers by Location



Source: Preqin Technology in Private Capital Survey 2018

Fig. 15: Key Blockers of Fund Accounting Software Adoption Among Private Capital Fund Managers without a Current Solution



Source: Preqin Technology in Private Capital Survey 2018

CYBERSECURITY

Data breaches and regulatory changes contribute to the increased spend on data security and technology adoption in private capital.

DATA SECURITY AS A FACTOR FOR ALLOCATING IT BUDGETS

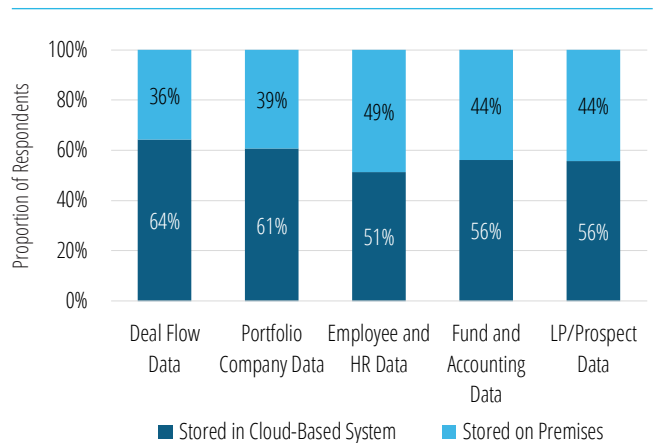
Firms can no longer be passive in cybersecurity obligations and, as such, data security is one of the key factors driving global private capital firms' technology spend. Forty-seven percent of Europe-based firms indicated that data security is a major reason for investing in software technology, compared to 22% and 14% of firms in North America and Asia, respectively (Fig. 12). The higher emphasis on data security in Europe could be attributed to the changing regulatory environment, particularly the reformed data protection regulation.

FIRMS ARE COMFORTABLE WITH THE CLOUD

Firms are confident in storing their data on cloud-based systems, and it is most common for deal flow and portfolio company data, fund accounting and LP data (Fig. 16). However, survey results indicate that private capital firms are more hesitant in storing employee and HR data using cloud-based software compared to other types of data, as nearly equal proportions of firms use cloud (51%) and on-premise (49%) storage.

Across all major regions, cloud storage is most commonly used for deal flow data: four in five firms in North America store their deal flow information in cloud systems, compared with 58% and 45% of firms in Europe and Asia, respectively (Fig. 17). North

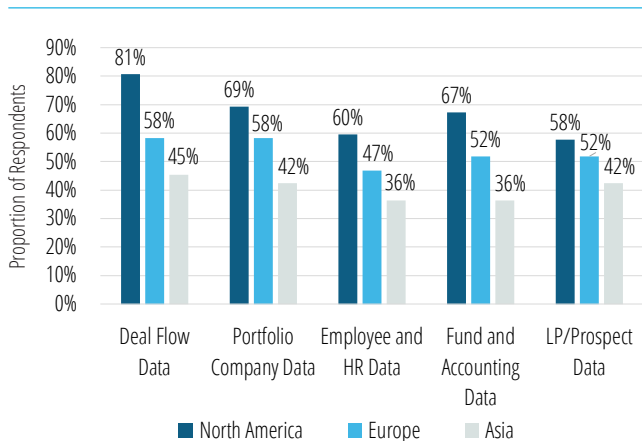
Fig. 16: Data Storage Behaviour among Private Capital Fund Managers by Data Type



Source: Preqin Technology in Private Capital Survey 2018

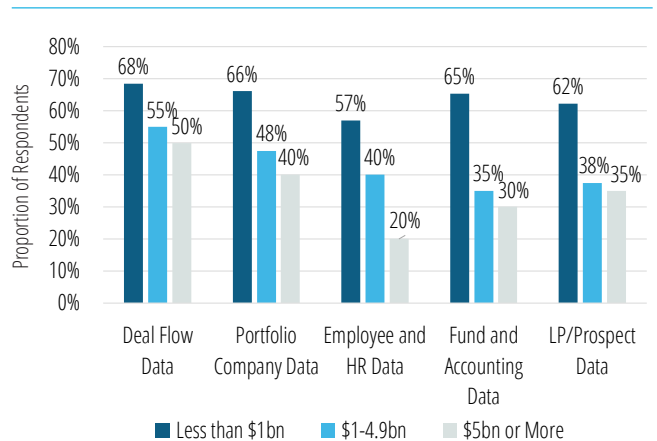
America-based private capital managers are leading the way in using cloud storage for all types of data, followed by Europe, with Asia actually showing a minority of managers using cloud services.

Fig. 17: Cloud Storage Behaviour among Private Capital Fund Managers by Location and Data Type



Source: Preqin Technology in Private Capital Survey 2018

Fig. 18: Cloud Storage Behaviour among Private Capital Fund Managers by AUM and Data Type



Source: Preqin Technology in Private Capital Survey 2018

SOFTWARE INTEGRATION

The majority of firms are adopting software to achieve cost efficiencies in their operations, with pre-fundraise being the best time to implement one.

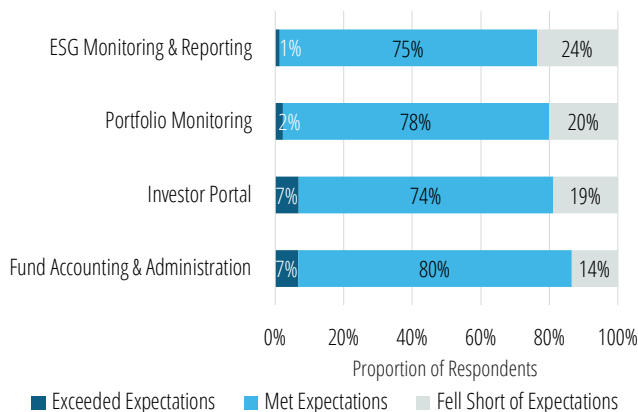
Globally, 3% of the participating private capital firms have software fully integrated with their operational infrastructure. Further, an equal proportion (25%) of private capital firms either use accounting software only or have partial system automation, while 29% still rely on Excel. Full system integration, which can be achieved via APIs, prevents data duplication between systems, leading to improved productivity.

When asked to identify the key drivers of investment in private capital software, cost efficiency (62%), value creation potential (51%) and data security (40%) topped the list (Fig. 19). As the early adopters of technology in the private capital industry continue to realize these benefits, more firms are expected to join the wagon. Firms are also keen to invest in specialist software due to regulatory and investor requirements, as cited by 38% and 30% of respondents, respectively.

SATISFACTION WITH SOFTWARE

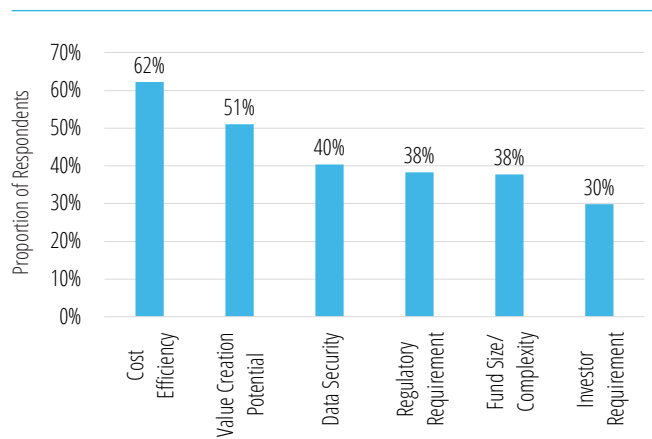
The vast majority of private capital managers have a positive view of private capital software. Among the various operations, respondents were most satisfied with the software used for fund accounting & administration (87% had their expectations met or exceeded, Fig. 20). Software used for ESG monitoring & reporting and cap table management has failed to meet the expectations of 24% and 23% of the survey participants, respectively. With 37% of private capital fund managers considering adopting a tailored ESG monitoring & reporting package, there is a strong proposition for software providers to improve their offerings in this arena.

Fig. 20: Satisfaction with Private Capital Software among Private Capital Fund Managers



Source: Preqin Technology in Private Capital Survey 2018

Fig. 19: Key Drivers of Investment in Software among Private Capital Fund Managers

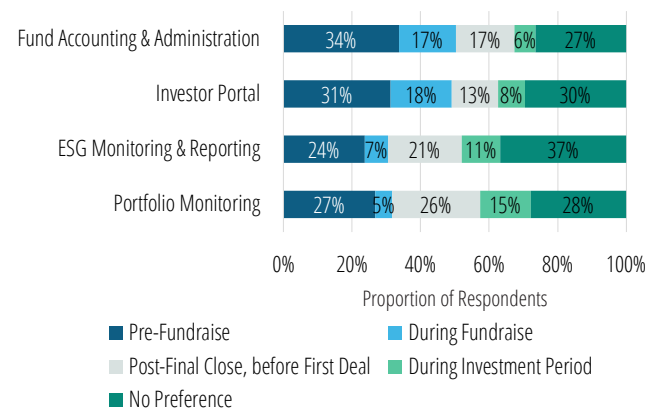


Source: Preqin Technology in Private Capital Survey 2018

WHEN DO FIRMS IMPLEMENT SOFTWARE?

Pre-fundraise clearly seems to be the preferred timeframe for implementing fund accounting & administration software (preferred by 34% of survey respondents) and investor portal software (31%, Fig. 21). This seems logical as pre-fundraise is the stage at which all the planning and infrastructure decisions are made.

Fig. 21: Private Capital Managers' Preferred Stage for Implementing a Software Solution



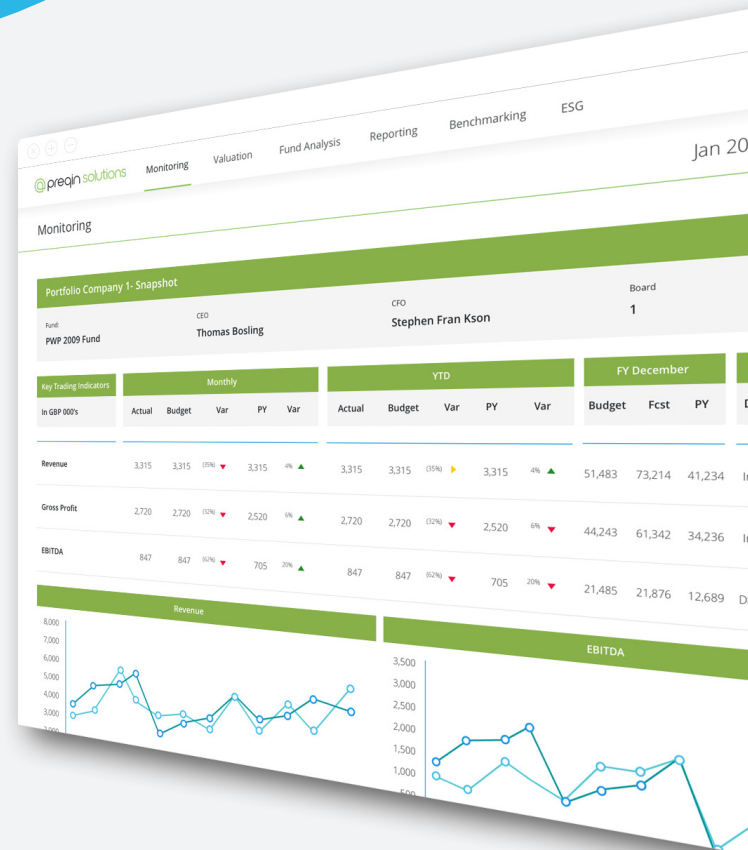
Source: Preqin Technology in Private Capital Survey 2018

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