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Executive summary

Since Chat GPT was unleashed to the world in November 2022, the radical capabilities of generative Artificial Intelligence have been quickly adopted for a huge range of applications. But to what extent is AI now being used to make investment decisions?

XPS has surveyed the UK investment management market to assess the extent it has been adopted within decision making and other aspects of asset management. The scope for cost saving and streamlined decision making are significant but with it also comes scope for new cyber related risks and systematic vulnerabilities.

Key findings:

XPS received responses from **76 investment managers** with assets under management totalling **£34trn** globally, covering a range of asset classes from listed equities and fixed income, to private assets and hedge funds.

% using some form of AI

81%	of fund management businesses are using some form of AI to improve efficiency	50%	using generative AI
69%	are using AI to assist with investment research	34%	using generative AI
44%	are using AI in investment decision making	9%	using generative AI
36%	are using some sort of AI within client communications	20%	using generative AI
19%	are using AI to understand their own business performance	7%	using generative AI



We are just at the infancy of generative Al within asset management, but already half of respondents are using generative Al in at least one area of their business.

Simeon Willis
Chief Investment Officer



1. Different types of Al

The first stage in establishing the degree that Artificial Intelligence is being used within investment management business is to establish some common definitions.

There are various types of AI that are either already in use today, under development or currently merely concepts of what might be possible in the future. There is no set number of classifications of AI. Often the categorisations can relate to different aspects of how the model works and are not always easy to compare.

Three big picture types of AI are:

Artificial Narrow intelligence

Also sometimes known as 'weak', and is a specialist model in a narrow area and solves isolated problems. This includes making film recommendations on your streaming platforms, which would be a 'reactive machine', or answering complex questions in a large language model such as ChatGPT, which would be a 'limited memory' model.

Artificial **General** intelligence

Also sometimes known as 'strong', includes wider intelligence that has the ability to solve complex problems, learn, and plan for the future. The AGI would also have the ability to perform any intellectual task that a human can do, rather than being specialized for specific tasks on a level comparable to a human brain. This has not yet become commercially available. In the 1990 film Terminator, Arnold Schwarzeneggar's character could be considered to represent General intelligence

Artificial Super intelligence

Wider intelligence that can think beyond a human brain. This type of AI is conceptual at this point but was represented as 'Skynet' in the Terminator film as it gained its own self-awareness.

Narrow intelligence is the only system that is commercially available currently, and within Narrow intelligence there are many different levels of sophistication.

Artificial intelligence within asset management is not new and for many years quantitative strategies have been used to make allocation decisions within a closely defined remit. Prior to these 'quant' funds, statistical methods using regression analysis have been used to interpret economic data to inform decision making as far back as the mid-twentieth century.

In order to create some clarity in the responses to this survey we have simplified the definitions into two fundamental types which sit within the **Narrow category.**

- **Traditional AI** traditional methods using structured datasets combined with either real time processing or user prompted processing, where all outputs result from specified inputs combined with defined processes or algorithms. An example of this might be an analysis of company factors that have been associated with outperformance historically, then being applied to real time data to adjust a portfolio.
- Generative AI models such as large language models, which are trained on large unstructured datasets
 and can be supplemented with your own supplied data sources. An example of this would be scraping
 company report and accounts for the number and type of references to sustainable practices to provide
 a comparative measure of sustainability across different organisations.

2. Benefits and risks of Al

The advent of generative AI has vastly increased the scope for automation and created opportunity to use a much wider range of unstructured data and information to assist with a whole range of disciplines within investment management. This has moved us on from simply analysing numbers in tables, to interpreting words and visual information at scale.

Whilst recent advances represent a continuation of progress, rather than a binary shift in approach, the advent of generative AI has created scope for a range of additional benefits to the end investor, along with some new risks that need to be navigated.

Potential benefits include:



- reduced costs, through greater efficiency that leads to lower fees
- better informed decision making which would lead to improved returns
- improved risk management leading to clearer understanding of risks and monitoring for exceptions
- increased transparency and disclosure providing more timely information

Risks include scope for:



- Unpredictable behaviour where relying on systems trained on dataset unknown to the user
- System wide failure due to a common flaw, or sequence of flaws
- Hacking to undermine outcomes in a way that's difficult to detect
- **Market instability** arising from common market wide responses to unforeseen events, e.g. systematic stop-loss selling reinforcing market falls



Investors need to ensure that their investment managers are using technology appropriately with adequate safeguards and oversight.

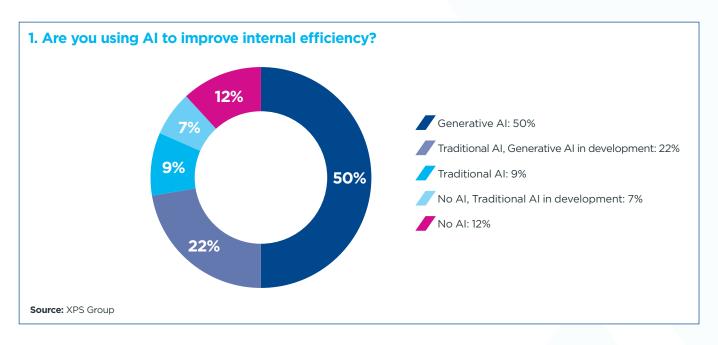


Reliance on models that have large input sources that are beyond the knowledge and control of the user introduces scope for manipulation that is very difficult to detect.

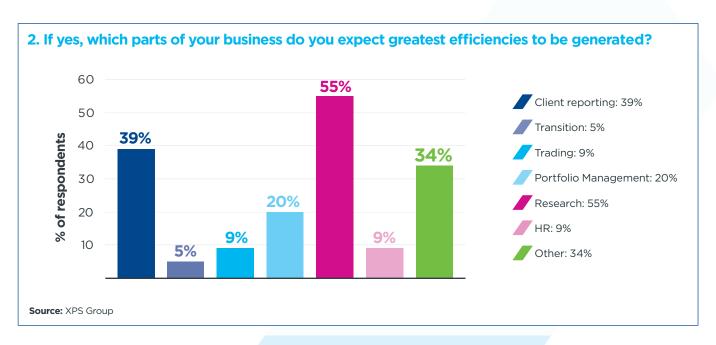
3. The survey results

We show the analysis weighted by number of managers who participated. As part of the analysis we also weighted the results by assets under management and where this revealed interesting findings we have drawn these out in the commentary. However as the survey did not ask managers to comment on the extent of adoption across their business we have not placed undue emphasis on these asset-weighted results.

Investment managers have already adopted AI to a high degree within their general day-to-day work, with 81% using some sort of AI and half already using Generative AI to improve efficiency. When weighted by assets under management the proportion using generative AI increased to 76% with only 3% not using any form of AI.



Research and client reporting were seen to be areas of greatest efficiency from AI. Other areas of focus drawn out from comments included personal productivity enhancement in routine tasks, automated financial analysis reviewing company financial reports, normalisation of data, generating Request for Proposal (RFP) responses and translation of global ESG sustainability reporting.

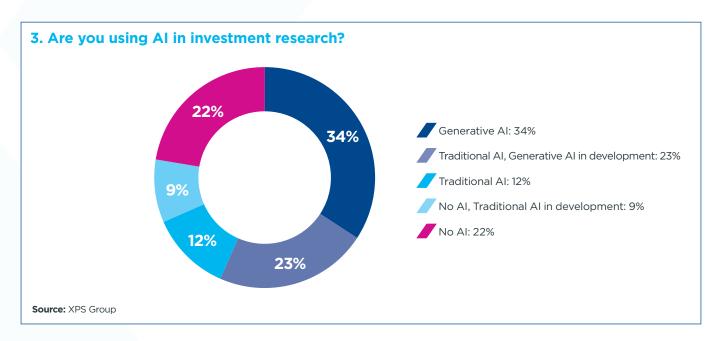


Investment research

This is the most popular area for generative AI, and also the most popular area for any form of AI. 69% using some sort of AI in investment research and around half of those are already using generative AI. Less than a quarter are not using or developing AI at all.

Examples of traditional AI included quantitative tools analysing historical market data to identify patterns for portfolio construction, and generative AI included natural language processing to analyse large data sets.

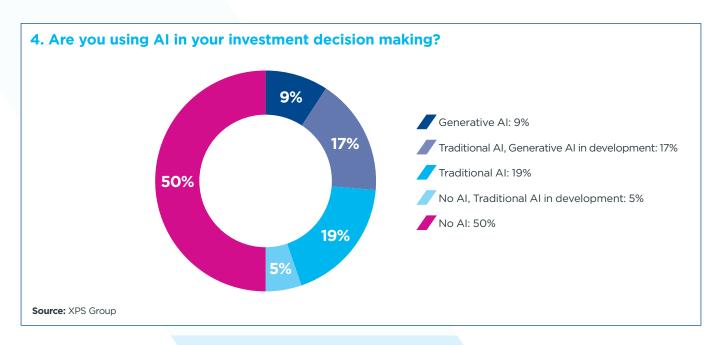
Given the proportion actively developing generative AI, we can expect it to be used by the majority of fund managers for investment research in the near future.



Investment Decision making

Perhaps the most crucial area for investors is where AI is used in investment decision making. In this area half of respondents are not yet using AI, but over a quarter are in the process of developing or are already using some form of generative AI to support investment decision making.

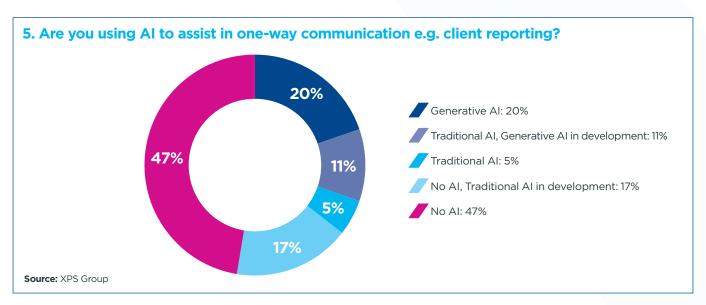
Examples of AI include automated quantitative trading strategies, with generative AI being used to make refinements to quantitative strategies.



Client communication and reporting

Whilst 64% do not currently use AI in their client communications, given the extent of development that is currently underway, we can expect the majority of managers to be using some of AI in the near future.

Traditional AI includes automated generation of client reports, extracting data and producing summaries. Generative AI provides a means to create natural sounding tailored explanations using a greater variety of information sources. Whilst it might seem plausible that investing in communications might lend itself to larger fund managers, the proportion currently using no AI was greater at 73% when weighted by assets, indicating that the larger managers were even less likely than average to use AI in this area.

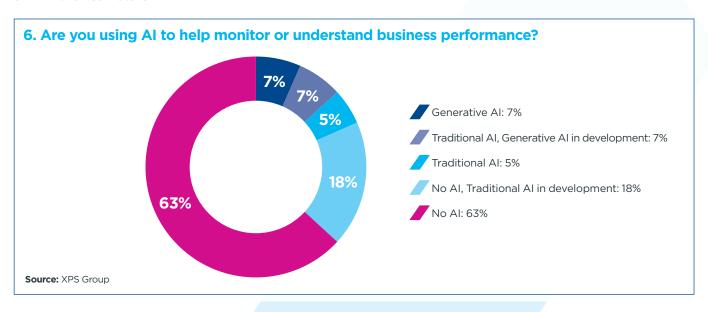


Business performance

Whilst AI is commonly used to assess other companies' performance for the purpose of investment strategies, the area with least adoption was investment managers using AI to monitor and understand their own business's performance. Within this area traditional AI includes automated production of Key Performance Indicators and other management information. Where used, examples of generative AI included drafting reports and written summaries to assist understanding of business performance. 81% of managers were not using any AI in monitoring business performance, although traditional AI was an area of development for a number of respondents.

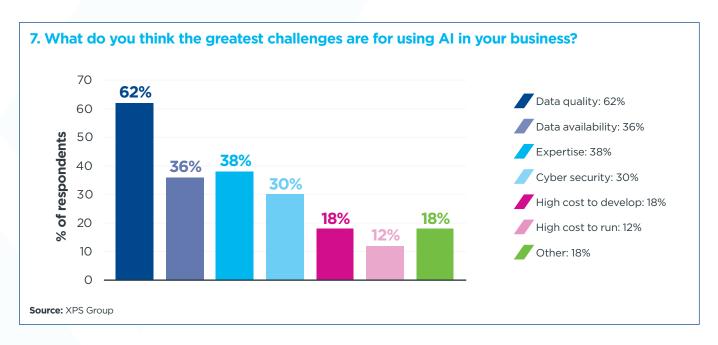
This was an area where adoption of AI was much lower when results were weighted by assets under management, where 93% were not currently using any AI.

Given the modest proportion of respondents with AI in development this is an area least likely to see dominance of AI in the near future.



What are the greatest challenges?

Given the short lead time, generative AI is already heavily adopted within the asset management space. The primary challenge in relation to AI use is now considered to be quality of data. This was followed by data availability expertise and cyber security.





Despite generative AI having obvious application for different forms of communication, it's interesting to see that this was one of the areas of least adoption, particularly for larger fund managers.

Simeon Willis
Chief Investment Officer



4. Conclusion and actions for investors

Given **generative AI** has only been widely available for around two years, the acceleration of adoption has been rapid. But what is clear is that we are at the early stages of this industrial development.

- Across all business areas covered, between 20-30% of respondents indicated active development of AI to move them to the next category of adoption (e.g. from no AI to Traditional AI, or from Traditional AI to Generative AI). Based on this alone, we can expect significant progress to continue in the immediate future.
- 2 Traditional AI has been used within asset management for decades including quantitative strategies and algorithmic trading. However, the advent of generative AI brings with it greater scope for unforeseen issues to arise, particularly where the developer is using a model which has been trained on large datasets which are unverified.
- Where your investment manager is using AI within its decision-making in particular, it is essential that this is taking place with appropriate oversight.
- It is inevitable that issues will arise from this new technology. This has been witnessed with quantitative strategies in the past where there are some notable high profile examples of errors in models that have been subsequently discovered and investor loss associated. However, this needn't be a reason to not embrace change. The benefits will likely far outweigh isolated incidents of failure.
- The scope for AI to reduce costs is considerable, being able to perform some jobs in a fraction of the time it would take a human to do, resulting in fewer investment professionals being required to undertake a given quantity of research. Quantifying the magnitude of potential impact is difficult, however, the FCA found that passive asset management fees fell almost by 50% between 2015 and 2020 and active fees fell by almost 20% over the same time and it is plausible that this rate of reduction could continue as a result of AI.
- 6 Client servicing and reporting represents a cost that isn't particularly sensitive to portfolio size. Where AI is able to reduce this cost by partially substituting for a human relationship manager, the fee differential between smaller and larger clients may also narrow. This could benefit smaller investors such as charities and mutual financial organisations.

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Find out more

If you wish to understand more about how AI and cyber risk affects your investments, please get in touch with **Simeon Willis** or **James Stewart**. Alternatively, please speak to your usual XPS contact.







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