

Gen Al for Investment Management Research

Summary

- 5 Five Areas to leverage Gen Al for Investments Management Research
- 7 C Future Gen Al Trends to Watch

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Introduction

During a panel discussion at **Salesforce's** World Tour Essentials event in Singapore, Laurence Liew, director for Al Innovation at Al Singapore, recently stated: "Al is not going to replace you. You're going to be replaced by someone who uses Al to outperform you". These words are prophetic and evoke the question of when and how this will happen to each of us. With the release of Generative Al technology, the stakes just became higher.

After years of chasing AI solutions, companies are racing to understand the potential benefits and uses of Gen AI. The fear is missing out on its potential competitive advantage. Gen AI reimagines the approach and usage of AI. Its roll out is like that of the internet that went from a file sharing system for scientists, academics, and the military, to running practically every government, business, and household. The internet was decades in the making before it attained critical mass. However, it was throttled by a lack of user accessibility and hardware, along with a lack of understanding of its potential. AI has also been around for decades and has just attained critical mass mainly due to Gen AI. In this case user accessibility and hardware are no longer issues. Those that understand the potential and proper uses of Gen AI will dominate the future just as the early adopters of the internet.

Until now, only the most advanced, tech-focused professionals were able to grasp the deep technical concepts of Al. Not only did they have the know-how, but they had access to expensive software and hardware to create and run their unique Al programs. And just like the rollout of the internet, major technology firms are propagating Gen Al for widespread use by removing gatekeepers and placing the power in the hands of everyone.

For those of us in the asset management business, the war between active and passive investment strategies wages on. According to a January 2024 report by Morningstar "After steadily encroaching on active funds' turf for years, passive funds closed 2023 with more assets. While U.S. equity flows have long favored passive products, international-equity and bond-fund flows have followed suit, helping to get passive funds over the hump". Passive strategies have significantly lower operating costs than actively managed strategies. To justify their higher fees, active managers must outperform the competition while continuously lowering operating costs. Gen Al has the potential to help with both.

In this paper we will focus specifically on one area of Gen AI in asset management. We will address the benefits of Gen AI in the investment research process, which is critical to generating alpha. Creating alpha requires analyzing large amounts of written and numerical information to find hidden insights, understand the markets, and screen the investment universe for new securities to cover. After analysts complete their research, they must "sell" their investment recommendations to portfolio managers who may or may not accept their ideas. An analyst's recommendations need to be compelling, insightful, thorough, and backed by a proven track record. Here we analyze whether Gen AI can help the average research analyst to outperform their peers.

Gen AI for Asset Management Investment Research

Research analysts have excellent reading, writing, and numerical skills, which sets the stage for Gen AI to mimic these skills so that it can assist with processing greater amounts of information at a faster pace. In addition, a great research analyst has good judgment, deep experience, and an insatiable curiosity. Analysts can see patterns in the information that others miss, and are on the frontline as industries grow, flatten and fail. Allowing Gen AI to assist with basic reading, writing, and financial

analysis tasks frees up more time for the analyst to use their higher-value skills to set them apart from the pack. Gen Al can read large data sets in any language and summarize information in seconds. It accepts any set of data with little or no labeling thus eliminating the time consuming and costly process of defining and mapping data elements. Gen Al learns from evolving data sets to keep itself current and creates scenarios based on what it has learned. It automates certain tasks and keeps a

watchful eye on select topics.

The adoption of Gen AI in corporate finance is making tremendous strides. For example, GPT-4 is being used to analyze, understand, and extract data from financial statements. It then drafts summaries and provides insights into financial performance. As the many financial reporting use cases are developed and refined by CFOs, they will be carried forward to the investment research analyst role as consumers of this information.



Five Areas to leverage Gen AI for Investment Management Research

We have identified five main tasks where research analysts can leverage Gen Al:

- 1. Asking questions about the information gathered and challenging Gen Al's responses.
- 2. Serving as a process accelerator to produce first draft artifacts.
- 3. Monitoring public information sources.
- 4. Back testing decisions and assisting with scenario analysis.
- 5. Surfacing key information via intelligent Gen Al dashboards.

5 Areas to use GenAl for Investment Management Research





Accelerate first draft artifacts.



Monitor public information sources.



Back test decisions & assist with scenario analysis.



Surfacing key information via dashboards.

#1. Asking questions about the information gathered and challenging Gen Al's responses.

This process begins by asking effective prompt questions in the Gen Al tool and then challenging its responses. Below are tips on how to write better Gen Al prompts to retrieve more productive responses:

- Be specific by asking detailed questions to guide the tool's attention more carefully.
- 2. Take a conversational tone and avoid jargon or complexphrases that the tool may not understand.
- 3. Ask open-ended questions and avoid yes or no questions.
- 4. Ask the question though the perspective of a persona, such as an investor or CEO.
- 5. Ask follow-up questions known as "prompt chaining,"

where you break up your prompts to get more concrete and customized answers and use answers from one prompt to elicit the next.

Next, challenge the Gen Al responses by checking the references the tool cited to see if they are reliable and cross-reference the results with other sources where necessary. Determine if the assumptions made were reasonable and compare them to alternative scenarios. The key to challenging a Gen Al response is to use your own judgment and experience, as this is where the benefit of Gen Al ends and your ownership of the final answer begins.

#2. Serving as a process accelerator to produce first draft artifacts

Due to Gen Al's strong knowledge of human languages, it researches companies by reading and summarizing information across public and private sources. Gen Al can read and summarize data sources such earnings call transcripts, public interviews of key executives, news reports, sell side research

reports and annual reports. It can follow macroeconomic trends, industry dynamics, and market conditions. Research analysts ask the Gen Al tool questions and use this information to gain greater insights into the companies they cover. The analyst selects the responses they feel are most relevant, challenges those responses and then performs further research on their own.

The ability to gain insights across extremely large volumes of information increases the knowledge base of the research analyst. Automating simple tasks such as first draft company overviews and summaries of specific call transcripts makes an analyst more productive. This frees up the time to dig deeper into the gray areas of the company research and work on the financial analysis. Gen Al can pull together the first draft of research reports for the analyst to challenge, refine and complete. It can also take meeting notes, provide summaries of those meetings, and capture the next steps.

When an analyst picks up a new company there is a tremendous amount of reading involved. Using Gen AI as an accelerator allows them to load every single annual report, earnings call transcripts, sell side research papers and press releases a company has ever issued into the tool. Analysts can then ask questions of the information to understand the business, its history, and ultimately to gain valuable insights.

#3. Monitoring Public Information

Analysts need to stay abreast of information that affects the companies they cover. This includes news about the company itself, its competition, regulations, legal actions, and sustainability considerations. Gen AI can read and summarize this public information and provide concise insights to analysts, without them having to sift through a wide array of news. Furthermore, news aggregators are pursuing Gen Al addons to help their clients get the most out of their subscriptions. Gen Al helps analysts dive into specific topics and trends to surface relevant points that are used for proprietary analysis.

Research analysts are looking at the ways the industries and companies they follow are adopting Gen Al and the impact on the stocks they cover. What better way to understand the potential impact of Gen Al than to use Gen Al oneself? Hands-on experience reveals the strengths and weaknesses of Gen Al and places the analyst at the forefront of the latest innovations released by Gen Al providers.

#4. Back Testing and Scenario Analysis

Back testing investment recommendations may be one of the hidden uses of Gen Al. Imagine loading every single sell side and internally generated research report into the tool and then asking Gen Al for insights. Analysts make bold predictions on security prices based on certain assumptions. Being able look back, with the aid of Gen AI, at this information can reveal which assumptions held true, which did not, and why. Gen Al can return this information in the form of written summaries, charts, and tables. However, one must analyze the Gen Al responses for accuracy.

Gen AI is creative by design. While the numerical predictive capabilities of Gen Al remain a work in progress, it can provide insights on scenarios for further analysis. It can reveal the potential impact of different policies on climate change, changes in interest rates, follow sentiment analysis, and identify potential market trends. Scenario modelling takes time to develop and test. Following the information that the company's stock price is most sensitive to is critical to scenario modeling. Savvy research analysts can ask intriguing questions of the Gen Al tool along the lines of various scenarios and risks based on their own experience and judgement to understand any potential tailwinds or headwinds impacting the companies they cover.

#5. Surfacing Key Information via Intelligent Gen AI Dashboards

Imagine a Gen Al tool that is autonomously monitoring and surfacing

key information to an analyst through dashboards and alerts. The Gen Al tool would periodically run preset prompts monitoring for evolving threats, trends and/or benefits that may impact a company's stock price. The result would appear automatically on the dashboard in the form of concise written summaries, tables, and charts, each with a drill down capability into the source information. Based on the large amounts of information the tool can process, it will be able to provide insights that may otherwise go unnoticed.

This capability can be extended to include ad hoc reporting requests to produce visual outputs of data without the need for a developer. For example, you can simply ask the tool to produce a table of the average stock price per year and it will produce it within seconds. Keep in mind that the data used by Gen AI is primarily trained using unlabeled data, thus it is imperative to check any numerical results.



Future **Gen Al Trends** to Watch

We began this paper with the rapid evolution of Gen Al. This topic will require close monitoring of ongoing technical advancements. GPT-4 is an evolution of GPT-3 and further advancements will happen quickly. There are a few key items to watch for in Gen Al for investment management research.

amounts of market data, and it is this information that is critical to drive an effective investment research process. Market data includes information such as news feeds, company information, security level data etc. Getting the most of this data is crucial.

Moving from scenario analysis to predictive outcomes.

Shifting from identifying issues to actual problem solving.

Performing routine tasks more autonomously.

Debugging quant code, writing code,

Data privacy is critical to protecting an asset manager's competitive advantage. It is important to find a Gen Al tool that does not leak information to the public domain so that it does not train LLMs that can in turn be used by competitors. Keeping a closed lid on data and LLMs is critical to maintaining competitive advantage. Privacy within the firm is also important, only the right internal people should have access to the proper information.

The adage of "garbage in = garbage out" still applies to managing data quality for Gen Al tools and minimizing data hallucinations. Asset Management firms need to curate their data by carefully including reputable information sources and equally so, removing outdated information that can mislead the Gen Al tool. There is a discipline to proper data management which needs to be defined, implemented, and monitored prior to using Gen Al for any critical function.

Gen Al tools must be managed to ensure they behave ethically and in an unbiased manner. Regular audits of the data for fairness and equitable representation across different groups is required. Finally, Gen Al users need to test the tool before using the outputs in production. Testing processes are to be defined. Decomposing failed use cases is necessary to identify the source of the failure to ensure better results and user adoption. Best practices include using validation datasets to assess Gen Al model performance during training and testing.

Starting the Gen Al journey can be daunting. Many firms are deploying Gen Al in a disorganized manner. Instead, they need to provide governance, training, and support to ensure measurable ROIs are achieved, as well as widespread adoption.

Key Data Considerations

Gen Al tools can accept a wide range of information sources. This opens a large universe of data to not only train LLMs but also process Gen Al prompt requests. The ease and flexibility of ingesting data is what brings Gen Al to the public so quickly. This includes research analysis of the most widely used tool – Excel.

and writing SQL DB queries.

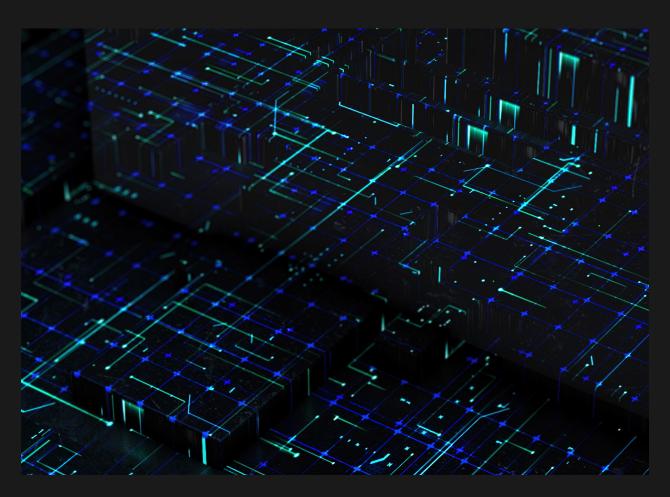
Gen Al tools can ingest the following formats:

- Text, HTML, and CSV and XML files
- Word, Power Point, and Excel files
- Scanned documents such as PDFs
- Images (JPEG, PNG, TIFF, BMP, GIF)

The asset management industry still needs to pay for large

Below are 12 key considerations when starting your Gen Al journey:

- 1. Understand what Generative Al is good at and what it is not good at "i.e. fit for purpose".
- 2. **Understand how** Generative Al is **different** from traditional ML Al and when to use each.
- 3. Select your Gen Al tool and look for advanced features such as the ability to produce charts and tables.
- 4. Over time, various software vendors and data providers will embed Gen Al in their own applications and subscriptions. Analysts will need to work with multiple Gen Al tools and be able to move data across tools.
- 5. **Address** upfront data security, privacy and permissions. **Keep** your proprietary data away from Gen Al providers that may leak your data and/or use it to train their LLMs and, therefore, aid your competitors.
- 6. Have a data quality plan established for both source data and testing/monitoring response quality.
- 7. **Identify Use Cases** covering a wide range of analyst functions and applications. Each Use Case should have clearly stated outcomes.
- 8. Rank each Use Case by **priority** and **complexity** and **calculate** the respective ROI.
- 9. Start the implementation with simpler Use Cases before moving onto more complex ones and make sure to test thoroughly.
- 10. Prepare for change by anticipating the impact on the firm's workforce and reskilling efforts.
- 11. Train users on how to best work with the Gen AI prompt and output and provide ongoing support.
- 12. **Promote Gen AI** success stories to encourage wider adoption.



Conclusion

The roll out of the internet stirred an immeasurable amount of publicity with many of us not knowing if this would stand the test of time. Similarly, with the rise of new technologies, Generative Al's vast potential is here to stay. Both technologies were decades in the making until the barriers of entry were lowered, viable use cases were identified, and widespread access was achieved. We must now understand where to best utilize Gen Al and quickly implement it as industry competitors are doing the same.

How Sia Partners can help:

Strategy

- Identifying and defining Gen Al goals.
- Finding the best Gen Al software based on company goals.
- Evaluating current-state capabilities and implementation efforts.
- Defining a Target Operating Model and Roadmap to reach the desired maturity level on the Gen Al journey.
- Defining key Gen Al roles and responsibilities.

Use Cases

- Identifying and prioritizing the right use cases for the initial Go Live and beyond.
- Testing use cases and challenging Gen Al outputs.
- Developing metrics to calculate ROI on the Gen AI roll out.
- Creating dashboard reporting for end users.

Risk & Controls

- Establishing risk governance framework over the Gen Al solutions.
- Creating data governance policies, procedures and ethics.
- Addressing data privacy considerations.

Data

- Identifying data sets for each use case.
- Enhancing data collection process infrastructure.
- Testing and maintaining data quality.

Automation

- Exploring key automation opportunities.
- Designing, testing and implementing new automations.

Gen Al Roll Out

- Preparing program governance and project management.
- Coordinating the implementation with internal stakeholders.
- Serve as subject matter experts when defining and testing use cases.
- Drafting procedures and training materials.
- Training new users on how to best use Gen Al.
- Testing use cases.
- Defining and executing change management.
- Planning, preparing, and supporting the Gen Al Go Live.
- Post Go Live support and stabilization.

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