Hong Kong Regulator reminds industry to ensure Generative AI is used responsibly

June 2023

Recently there have been significant developments in Generative AI – artificial intelligence models which use neural networks to identify the patterns and structures within existing data to generate new and original content. These models have the potential to revolutionise many existing areas of business including financial services. It is important, however, for regulated entities to ensure that any use of such models is conducted in accordance with regulators' expectations and existing rules on the use of AI and machine learning.

Julia Leung, CEO of the Securities and Futures Commission (SFC), recently reminded licensed corporations that they will ultimately be held responsible for any issues which arise from the use of generative AI models. She made the comments during her keynote speech[1] at the Hong Kong Investment Funds Association (HKIFA) Annual Conference on 5 June 2023.

> "I believe generative AI can be used responsibly to augment, rather than replace, asset managers in strategic decision making … However, at this stage, firms must take its output with a grain of salt, stay alert to AI-related risks and make sure clients are treated fairly … For any conduct breaches, the SFC would look to hold the licensed firm responsible — not the AI."
>
> ***Julia Leung, CEO, SFC, speaking on the use of Generative AI by SFC licensed corporations.***

SFC's stance regarding use of AI by fund managers:

AI and machine learning are **nothing new** in the financial services space, and can help to improve understanding and provide insight.

Every one of us **must learn how to work and live with AI**.

Technology and digital tools must be leveraged further to improve the clearing and settlement processes for funds as well as investor experience.

Generative AI can be used responsibly to augment, rather than replace, asset managers in strategic decision making.

SFC promotes the responsible deployment of technology as long as it enhances market efficacy and transparency, cost savings and investor experience.

Regulators' requirements for Licensed Corporations and Authorised Institutions using AI:

SFC expectations for Licensed Corporations[1]

Firms must stay alert to **AI-related risks** and make sure clients are treated fairly.

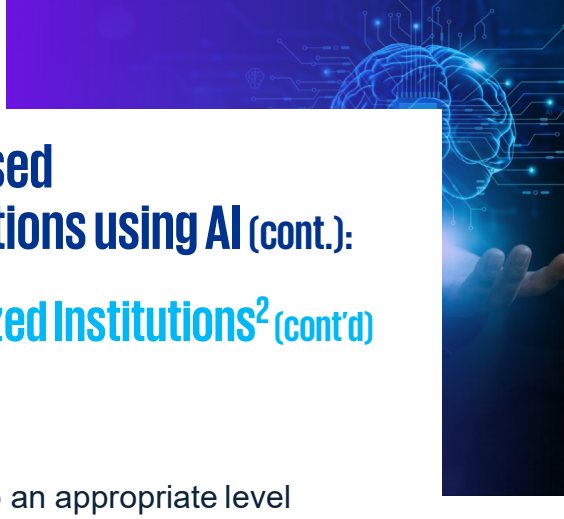
Licensed corporations must **thoroughly test AI** to address any potential issues before deployment, and pay attention to the **quality of data** used.

Firms should have **qualified staff managing the AI tools**, and senior **management oversight and robust governance framework** for AI applications.

For conduct breaches, SFC will hold the **licensed firm** responsible.

HKMA high-level principles for Authorized Institutions[2]

Governance: Board and senior management are accountable for the outcome of AI applications.



Regulators' requirements on Licensed Corporation and Authorised Institutions using AI (cont.):

HKMA high-level principles for Authorized Institutions[2] (cont'd)

Application design and development

- Possessing sufficient expertise
- Ensuring AI applications can be explained to an appropriate level
- Using data of good quality
- Conducting rigorous model validation
- Ensuring AI applications can be audited
- Implementing effective oversight of third-party vendors
- Being ethical, fair and transparent

Ongoing monitoring and maintenance

- Conducting periodic reviews and ongoing monitoring
- Complying with data protection requirements
- Implementing effective cybersecurity measures
- Risk mitigation and contingency plans

HKMA guiding principles on consumer protection aspects of use of Big Data Analytics and Artificial Intelligence (BDAI) by Authorized Institutions[3]

Governance and accountability: The board and senior management of authorised institutions should remain accountable for all BDAI-driven decisions and processes, while ensuring no black-box excuse in BDAI applications.

Fairness: Authorised institutions should ensure that BDAI models produce objective, consistent, ethical and fair outcomes to customers.

Transparency and disclosure: Authorised institutions should provide appropriate level of transparency to customers regarding their BDAI applications through proper, accurate and understandable disclosures.

Data privacy and protection: Authorised institutions should implement effective protection measures to safeguard customer data.

Critical Factors for Successful AI Development[4]:

Provide a good user experience

- The AI should not feel too smart or bossy, and user should be able to ask their own questions, rather than being told what to ask

Maintain good fail states

- Good fail states vary between applications
- A good fail state may mean for AI to ask for more information, or allow users to refine the output via a conversation

Stay within ethical boundaries

- The use of AI is fraught with ethical complications
- It is difficult to get AI not to learn certain things, and this may cause issues related to intellectual property rights
- Organisations need to obtain proper consent prior to providing AI service.

Possible Use Cases for Generative AI[5]:

IT operations

- **LMM-based knowledge management systems:** Gathering information from various data source formats. This information can then be queried to search for specific items.
- **Self-serve IT support:** Helping employees address IT system errors through support instructions generated by conversational AI chatbots.
- **Coding or testing code:** Converting code from one function to another, for instance from SQL to Python, or testing code to ensure it works.

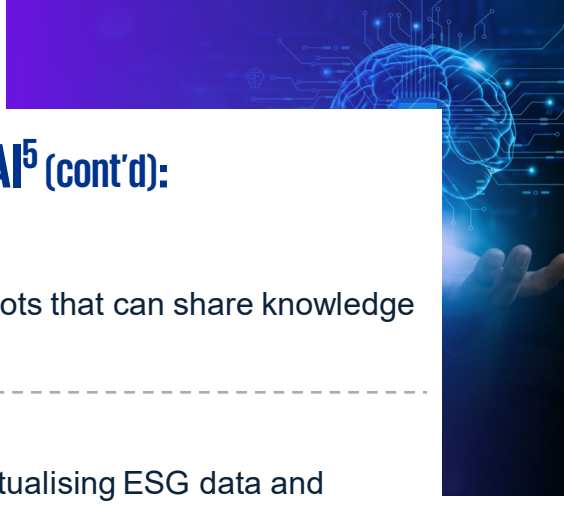
Audit and compliance

- **Automating audit review:** Automating audit submission fact-finding and detailed audit reviews based on query formats.
- **Evaluating independence requirements:** Evaluating audit engagement independence requirements to help simplify the approvals process for certifying independence.

Human resources

- **Candidate selection:** Training generative AI models on job description and relevant skills data to help identify suitable job candidates.

Possible Use Cases for Generative AI[5] (cont'd):



- **Self-service applications:** Deploying chatbots that can share knowledge in a human way and resolve HR queries.

Operations

- **Sustainability and ESG reporting:** Contextualising ESG data and supporting reporting operations, including creating plain-language statements that outline ESG initiatives.
- **Virtual event management:** Coordinating event management through drafting invitations, scheduling sessions and answering attendee questions.
- **Simplifying business operations:** A wide range of uses including drafting emails, preparing requests for proposal, running competitive analyses and market research.

Finance and logistics

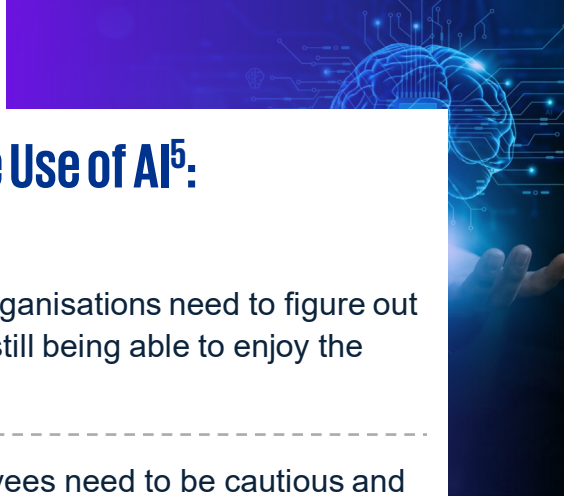
- **Categorising and validating payments:** Helping organisations make tax contributions publicly available by sorting through massive volumes of data.
- **Drafting and reviewing contract terms:** Reviewing contracts and highlighting potential conflict of interest clauses, and drafting clauses and terms to hasten the contracts process.

Legal and organisational governance

- **Making personalised independence recommendations for investments:** Enabling organisations to use chatbots to provide personalised responses to independence-related queries.
- **Surfacing legal citations and source links:** Searching for relevant legal citations and case examples, helping to identify reputable sources.

Marketing

- **Simplifying campaign language:** Finding word choices that translate well across a variety of languages.
- **Localising marketing communications at scale:** Helping localise global campaigns by sharing local conversation data with the model.
- **Distilling complex information:** Learning the basics of, for example, financial due diligence, to digest and structure content to help build a strong marketing campaign.



Key Considerations and Risks in the Use of AI[5]:

Confidentiality and intellectual property: Organisations need to figure out how to protect their intellectual property while still being able to enjoy the benefits of generative AI applications.

Employee misuse and inaccuracies: Employees need to be cautious and review AI-generated content with a critical eye and emphasis on quality assurance.

Continuing evolution of Generative AI: Organisations will need to stay abreast of global regulations around AI implementation, and not use AI in a way that contravenes applicable laws (including privacy laws), client agreements or professional standards.

Talent implications: Companies will need to upskill their workforce and retain proprietary knowledge to be able to contextualise queries and provide the right prompts.

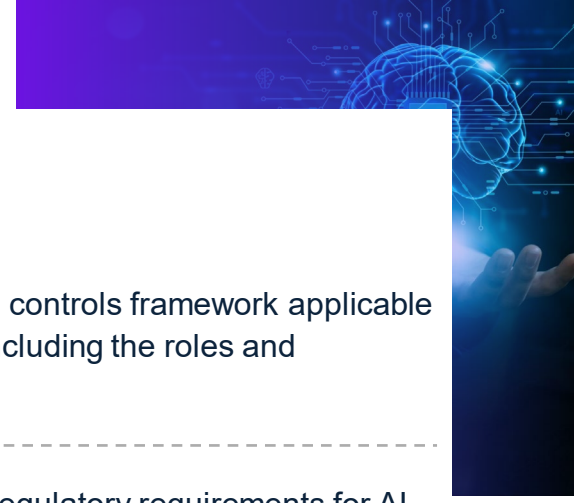
Misinformation, bias and discrimination: Organisations must be aware that generative AI can and has been used to create deepfake images and videos.

Copyright: Organisations need to clearly define the ownership of the content that is run through any generative AI tool.

Financial, brand and reputational risk: Leaks of sensitive client information, copyright and other intellectual property infringement issues could lead to legal and reputational harm.

Cybersecurity: Cyber and risk teams need to implement cybersecurity controls by setting secure implementation guidelines and regulations.

Adversarial attacks: Generative AI models have proven to be vulnerable to deliberate manipulation by sophisticated external users. Companies must be aware of such risks and prepare for potential attacks.



Where We Can Support You:

Review of appropriateness of governance and controls framework applicable to internally developed AI and third-party AI, including the roles and responsibilities for the three lines of defense.

Support periodic independent review against regulatory requirements for AI applications.

Gap analysis and readiness assessment regarding data protection measures, governance framework, operations, systems and controls, staffing (including management oversight of third-party vendors), risk mitigations and contingency plans.

Perform AI ethics assessment using statistical analysis and modeling to assess fairness and bias in data and models.

Perform data quality checks and model sensitivity analysis to evaluate the robustness of the AI models.

Review the explainability of outputs from AI models and provide insights into key factors influencing predictions using quantitative and qualitative methods.

References

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