

The Frontier Line

The rise of the machines 2.0

Who is governing who?

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About us

Frontier Advisors has been at the forefront of institutional investment advice in Australia for thirty years and provides advice on around \$700 billion of assets across the superannuation, charity, public sector, insurance and university sectors.

Our purpose is to empower our clients to advance prosperity for their beneficiaries through knowledge sharing, customisation, technology solutions and an alignment and focus unconstrained by product or manager conflict.



Ida How

Consultant

Ida joined Frontier Advisors as a Consultant in May 2024, and is a member of the Investment Governance Team. Prior to joining Frontier, Ida worked in the Compliance function in Cooper Investors (CI). Ida has contributed to the development, implementation and maintenance of the effective compliance, risk and regulatory framework in CI, as well as assisting with the investment compliance monitoring for funds and portfolios held by CI. Prior to this, Ida has worked as a Legal and Compliance Counsel within the Legal team with an Islamic financial services firm. In Ida's role at the Islamic financial services firm, she provided legal advice on commercial contracts, Shariah-compliant financing and investments to external clients on the implementation of various regulatory reforms. Ida is currently a practicing solicitor and holds a double degree of Bachelor of Commerce and Bachelor of Law.



Paul Newfield

Director of Research
and Specialist Services

Paul Newfield is Director of Research and Specialist Services, having joined the firm in July 2019. Paul's primary focus is driving innovation and client alignment in our research program and works closely with our Global Investment Research Alliance (GIRA) partners. Paul joined Frontier from Willis Towers Watson where he held the role of Senior Consultant for over eight years and was involved in several governance and strategy areas, including liability driven clients and retirement incomes. Prior to that, Paul spent twelve years at Mercer where he held a variety of senior roles in both Australia and New Zealand, including leading Mercer's retirement business in New Zealand and was Board Chair of their trustee company. Paul is a Fellow of the Institute of Actuaries and holds a CIMA certification as well as a Bachelor of Economic Science.

Background

In this paper, we take the opportunity to delve into how we can manage the usage of artificial intelligence (AI) across the financial sectors.

When AI and governance are mentioned together, there can often be confusion about whether we are discussing the use of AI for governance tasks or how we govern AI when it's used for investment purposes. This paper has a singular focus on the latter - how asset owners can govern the use of AI in their processes.

AI is rapidly being deployed across many commercial, technology and educational sectors due to its perceived benefits. Rapid adoption of AI, without appropriate checks and balances poses significant risks akin to trusting a computer to complete your homework by itself without relying on human inputs or review.

In this paper, we will be exploring how we can manage the key risks arising from misapplication of AI such as:

- Adoption of AI generated policies and procedures without sufficient testing and verification processes.
- Acceptance of governance AI outputs without consideration for the organisation's values and stakeholders.
- Lack of AI crisis management arising internal or external sources.

Frontier can provide guidance on managing the implementation of AI for investment decisions within an organisation by:



Creating policies and procedures with respect to the use of AI having regard to an organisation's governance ethos.



Providing training and education to Board and senior management on areas that AI can assist them the most.



Developing AI risk management and governance frameworks.



How is AI currently used in organisations?

AI refers to the simulation of human intelligence or the performance of ‘humanlike’ tasks by a system or a machine.¹

The objective of AI is to create machine learning, functions or actions that mimic key human behaviours such as perceiving, reasoning, learning, planning, predicting, and many more.

While useful (and all the potential uses and benefits present an interesting journey of discovery in the decade ahead) – there are already some limitations which include:

- In many cases AI outcomes are formed based on the collective views, opinions, data and assertions of participants in the network as opposed to objective facts.
- AI itself relies on data (either collected across systems or ingested) but the data in some cases has not been checked for accuracy or can be subject to populism risks.
- AI, by virtue of this data analysis, cannot easily fathom regime jumps if there is scant data on new or emerging technologies, theories and so on.

The integration of AI for all institutions opens a world of opportunities in their operations. These opportunities may not only place all institutions on a level playing field but also enable them to carve out unique competitive advantages.² This includes improving efficiency in operations and production to tailoring marketing strategies with pinpoint precision, such as document information extraction; data mapping; excel formula generation; code generation; market research; and text summarisation. AI can potentially equip all institutions to navigate the complexities of global markets more effectively.

The application of AI in key activities across all institutions involved in the investment decision process and in generating data or insights has great potential to maximise benefits and accelerate productivity. This is reflected in the substantial rise in AI-related company share prices over the past 12 to 18 months. Despite these perceived benefits from AI, the dangers associated with overreliance or ‘blind faith’ in AI contain dangers not known to all. This is where good governance principles come in. Unchecked over reliance or inappropriate use of AI can lead to unmitigated risks to organisations who do not have sufficient policies and procedures with respect to AI. The Australian Prudential Regulatory Authority (APRA) published member Therese McCarthy Hockey’s speech on 22 May 2024 to the AFIA Risk Summit in Melbourne, Australia. In her speech she commented that “... there are realisation of tangible improvements through innovation, but in yielding these benefits, we want to make sure there are adequate guardrails in place to ensure the benefits of AI don’t come at an unacceptable cost to the community.”³

It is important for all institutions to find the right balance on leveraging AI in investment decision-making and eliciting benefits balanced with the appropriate governance controls for its use. This is crucial for all asset owners and serves as the focus of this paper, which we believe may be the first in a series on investment governance AI (or IGAI) in the coming years.



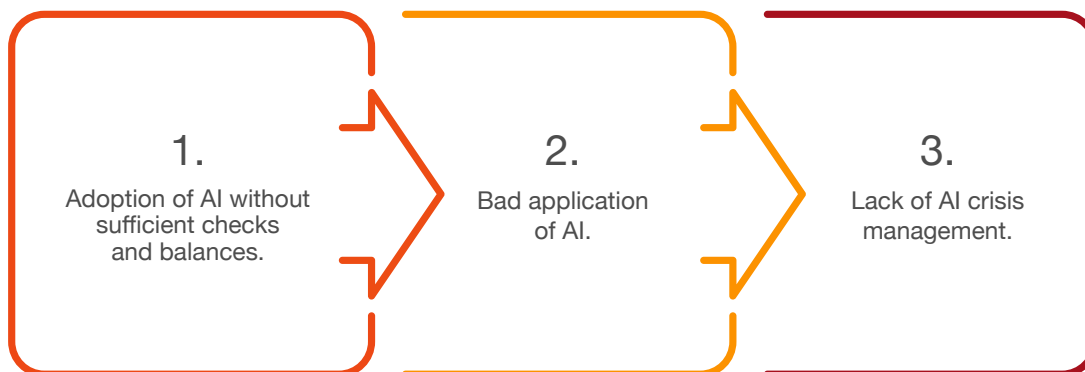
¹ Xu, Y, Lu, X, Cao, X, et al. (2021) “Artificial intelligence: A powerful paradigm for scientific research”, ScienceDirect.

² Congressional Research Service (2024), “Artificial Intelligence and Machine Learning in Financial Services”, Members and Committees of Congress.

³ Australian Prudential Regulatory Authority (2024) “Member Therese McCarthy Hockey’s remarks to AFIA Risk Summit 2024”, APRA, [Member Therese McCarthy Hockey’s remarks to AFIA Risk Summit 2024 | APRA](#).

Risky business

The use of AI in the financial space attracts risks on various aspects, which include:

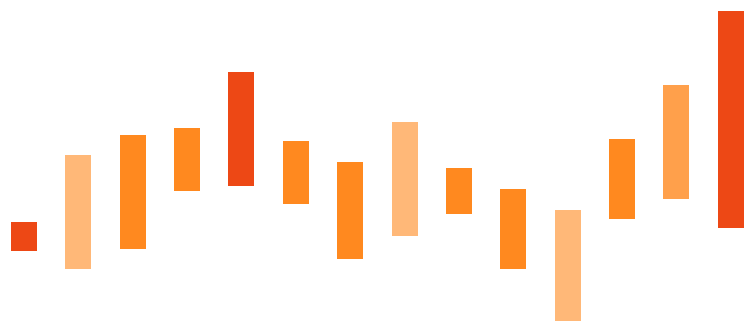


These risks can potentially affect organisations financially and non-financially, leading to reputational issues or financial losses. In order to address these risk categories, AI needs to be integrated and managed properly by integrating a framework with respect to policies, key procedures, controls and minimum enterprise requirements.

Adoption of AI without sufficient checks and balances

Organisations may adopt AI without verifying or testing the outcomes (or the data on which the outcome is based) and whether they are suitable to the organisation. AI's performance in generating responses to questions or an organisation's documents may not be accurate as the output may be erratic and biased. AI can generate outcomes embedded with biases that are not readily known. Given AI is based on human coding, its output is dependent on the quality of the underlying code (and data – some of which is licensed and needs to be injected into the AI environment for use). This could result in AI generating outcomes that may be illogical, biased or miss the point altogether with respect to the task assigned to it. These outcomes may cause organisations to have to manually correct, redo or outright scrap work that has been generated by the AI. It also poses the risk of incorrect conclusions being drawn and actions taken as a result of these conclusions, which also poses legal and compliance risks to organisations as a result.

It is also imperative to consider ethical AI that is reflective of social standards and norms, while enabling accountability for organisations. Responsible use of AI facilitates ethical AI systems and solutions from design to deployment. AI has incredible potential for all future generations. However, these advancements have also raised multiple challenges. The use of responsible AI calls for the creation of awareness about AI. This means it is important to communicate clearly the benefits and challenges of AI. Even though AI can be a great tool for global digitalisation and development, it can be used for the wrong reasons. Therefore, it is critical to keep AI within ethical boundaries. Being transparent and honest on how AI is being incorporated is also important. This allows organisations to communicate with their relevant stakeholders on how AI is being used, the purpose, factors that affect the outcome and finally how the mistakes, if any, can be corrected.



In mitigating such risks, companies must consider adopting or expanding their risk framework associated with AI. These frameworks should include the implementation of robust methods to detect and mitigate biases in training data and AI algorithms. This can involve regular audits and the inclusion of diverse data sets to train AI systems. Moreover, implementing the necessary measures to ensure benefits of AI are distributed fairly across all stakeholders with transparency and explainability.

Bad application of AI

Many organisations may not understand that they could be applying AI badly. They might lack governance oversight or be unaware of what effective AI governance entails. This is especially true as AI is often used before clear regulatory standards are established, leaving organisations to navigate the application of existing investment governance standards in the context of AI on their own. This is the key point we raise in this paper. This is where any outputs generated wholly or largely by AI may not conform with organisational values, goals, objectives, or even worse, regulatory or legislated requirements (in Australia or overseas). Ms McCarthy Hockey warned regulated industries during her speech at the Australian Financial Industry Association Risk Summit that “artificial intelligence can be a valuable co-pilot – but it should never be your autopilot”.⁴ Frontier is supportive on considering this a key mantra in the investment governance of AI.

The outcomes of bad application of AI will typically cause organisations to potentially jeopardise their reputation, customers, clients, stakeholders and profits. These outcomes should not be taken lightly as once they are lost, they could be gone forever or take years to recover. Hence, despite not being specified in regulation, there are risks of falling foul of other regulations (particularly those which have a fiduciary setting and where prudent trustee tests may apply).

Lack of AI crisis management

AI has significant potential in revolutionising organisational processes and performance. Despite its great potential, we wonder whether Boards have thought about what they would do when good AI goes bad. In an age of ‘deepfake’ technology, a Board can face a situation where the realisation of an adverse event happens too quickly for them to adequately manage without sufficient preparation and planning beforehand.

A Board can actively manage AI adoption and risks through:

- having responsibility to consider having AI as a periodic agenda item
- ensuring directors are aware of the most critical AI systems the company employs, the nature of the data used to train and operate those systems and associated risks to the company, as well as any steps to mitigate those risks
- understanding the resource allocation needed to oversee AI
- assigning senior management responsibility over AI risks and regulatory compliance
- having consideration on compliance structures and how these are applied to AI to facilitate the board oversight
- integrating board briefings on material AI incidents and related impacts
- recording board minutes and materials on the company’s AI oversight activities.

The organisation should also consider building into the crisis management plans on AI risks. For example, whether the organisation has a plan to quickly manage and address any weaknesses in its AI systems once they are identified.

⁴ Eyers, J (2024), “APRA warms to AI, tells banks they can adopt it”, Financial Review, [APRA gives a green light to banks wanting to use AI \(afr.com\)](https://www.afr.com).

Current developments in AI and associated risks

APRA has allowed banks to experiment with and adopt advanced AI technology to reduce costs, improve customer service and boost shareholder returns across the sector.⁵

The chief executives of the big banks have followed the pace of AI development and recently attended an AI event for global CEOs hosted by Microsoft chief, Satya Nadella.⁶ There were tangible improvements with the implementation of AI. The big banks have been using generative AI to improve customer service, marketing, fraud detection and regulatory compliance.⁷ The implementation of ChatGPT in organisational processes has become a driver of transformational productivity in the economy. CBA said it was using AI to help staff review

documents against bank policies.⁸ This is to ensure they could answer customer questions more efficiently. Banks' IT teams are also using generative AI-powered code-authoring software to assist developers write better computer code to power their customer applications and fraud systems.

APRA was keen to support the tangible improvements through innovative AI, provided there are adequate guardrails in place. However, there are numerous risks on banks implementing AI. For instance, the use of deepfake videos to spread disinformation both externally and internally, which would result in the sector becoming more vulnerable and which could destabilise the financial system or participants in the system. Poor management of the application of AI may result in poor decision-making. The absence of good governance and oversight may expose the fund, the investments or the trustees to risks (including losses, regulatory, legal or reputational).



⁵ Evers, J (2024), "APRA warms to AI, tells banks they can adopt it", Financial Review, [APRA gives a green light to banks wanting to use AI \(afr.com\)](#).

⁶ Letzing, J (2024), "Microsoft's CEO on AI and limiting 'unintended consequences'", World Economic Forum, [Microsoft's CEO, Satya Nadella, on AI and limiting 'unintended consequences' | World Economic Forum \(weforum.org\)](#).

⁷ Evers, J (2024), "APRA warms to AI, tells banks they can adopt it", Australian Financial Review, [APRA gives a green light to banks wanting to use AI \(afr.com\)](#).

⁸ Evers, J (2023), "CBA goes all in on generative AI", Australian Financial Review, [CBA: How Matt Comyn has made CBA Australia's biggest corporate user of AI \(afr.com\)](#).

Investment governance of AI

Taking into account the investment governance regulatory landscape and the application of established principles during AI implementation can help organisations mitigate potential risks.

The landscape is constantly changing from region to region, with AI being implemented across all aspects of businesses at an unprecedented rate. The highly disruptive nature of AI, as well as APRA comments in recent times, highlight the need for a solid governance ecosystem. This helps ensure it can be deployed in a beneficial and responsible manner.

The Australian Government has recently published a series of proposals which foreshadow the principles likely to be adopted in mandatory AI legislation once introduced.⁹ These papers highlight the importance of governance in the use of AI, to both deliver benefits and mitigate risks. The paper says “effective regulation, uplift of governance skills and capabilities, promotion of best practice and education on how to use AI responsibly are essential to securing the benefits of AI for the Australian community”. Our paper looks at the themes emerging from the Voluntary Standard and the Proposals Paper and the direction the Government is taking to establish a framework for safe and responsible use of AI in Australia.

On the regulatory side, APRA has no plans as yet for any regulatory requirements on the implementation of AI. Nevertheless, APRA has expressed its support to entities with robust technology platforms and a strong track record of risk management to experiment with AI and should feel confident proceeding. Alternatively, entities that are weak in these areas should proceed with caution and care.

At the Australian Finance Industry Association Risk Summit on May 2024, Ms McCarthy Hockey said that APRA had no plans for any new regulatory requirements for AI.¹⁰ It would use its existing policies and supervision procedures to ensure boards and management teams had proper oversight procedures in place. This is because APRA believes its prudential framework already has adequate regulations in place to deal with AI for the time being, to preserve financial safety and protect the community.¹¹ This is a critical point to consider: asset owners must integrate the use and oversight of AI when applying current regulations, APRA standards and other requirements imposed on them by these regulations and standards.

There are some existing international AI governance and management standards that may be applicable for the implementation of AI.¹² These include:

- AS ISO/IEC 42001:2023 Information technology - Artificial intelligence - Management system.
- AS ISO/IEC 23894:2023 Information technology - Artificial intelligence - Guidance on risk management.
- AS ISO/IEC 38507:2022 Information technology - Governance of IT - Governance implications of the use of artificial intelligence by organisations.

While APRA has not yet implemented defining regulation on the application of AI, other governments and legislative bodies across the globe are increasingly seeking to pass laws to provide funding for AI development and innovation, while promoting the integration of human-centred values and oversight of how AI is used.

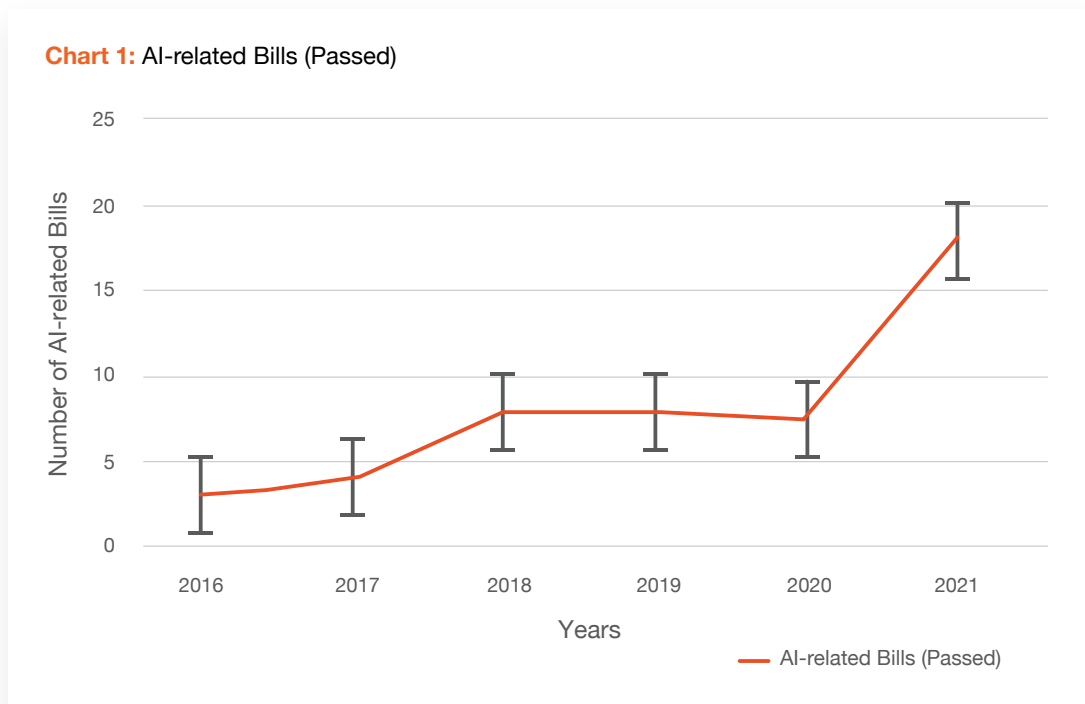
⁹ Australian Government, Department of Industry, Science and Resources (2024), “Safe and responsible AI in Australia”, Australian Government, [proposals_paper_for_introducing_mandatory_guardrails_for_ai_in_high_risk_settings.pdf\(storage.googleapis.com\)](#).

¹⁰ Eyers, J (2024), “APRA warms to AI, tells banks they can adopt it”, Financial Review, <APRA gives a green light to banks wanting to use AI (afr.com)>.⁷ Eyers, J (2024), “APRA warms to AI, tells banks they an adopt it”, Australian Financial Review, [APRA gives a green light to banks wanting to use AI \(afr.com\)](#).

¹¹ Australian Prudential Regulation Authority (2024), “Member Therese McCarthy Hockey’s remarks to AFIA Risk Summit 2024”, [Member Therese McCarthy Hockey’s remarks to AFIA Risk Summit 2024 | APRA](#).

¹² The Australian, state and territory governments (2024), “National framework for the assurance of artificial intelligence in government”, [National framework for the assurance of artificial intelligence in government \(finance.gov.au\)](#).

Twenty-five countries have passed a total of fifty-five AI-related bills from 2016 to 2021. Chart 1 from the AI index report shows in the past six years there has been a sharp increase in the total number of AI-related bills passed into law.¹³



Source: AI Index, 2021 | Chart: 2022 AI Index Report

Over the past years, AI has been a topic that has increased in interest around the world. As AI continues to evolve at an exponential rate, several countries are considering different AI governance frameworks to provide high level guidance for the implementation of AI. For instance, on 6 February 2024, the UK Government unveiled its long-awaited response to last year’s white paper consultation on regulating AI. This is intended to establish the UK as an ‘AI superpower’. The strategy provides a framework for identifying and addressing risks presented by AI while taking a ‘proportionate’ and ‘pro-innovation’ approach.¹⁴ The Financial Conduct Authority has also recently published an update on April 2024 on its approach to AI and its regulation and supervision.¹⁵

In Europe, the introduction of the EU Artificial Intelligence Act (AI Act) is to build on the already comprehensive data privacy legislation set out in the General Data Protection Regulation.¹⁶ The EU AI Act categorises AI models and their use cases by the risk they pose to society.¹⁷ It imposes significant penalties for companies that leverage ‘high-risk’ AI systems and fail to comply with mandatory safety checks like regular self-reporting.

The Act also introduced across-the-board prohibitions, including the use of AI for monitoring employees’ emotions and certain biometric data processing.¹⁷

¹³ Artificial Intelligence Index Report 2022, Stanford University, https://aiindex.stanford.edu/wp-content/uploads/2022/03/2022-AI-Index-Report_Master.pdf.

Note that the analysis only includes laws passed by national legislative bodies (e.g. congress, parliament) with the keyword “artificial intelligence” in various languages in the title or body of the bill text.

¹⁴ GOV.UK (2024), “A pro-innovation approach to AI regulation: government response”, [A pro-innovation approach to AI regulation: government response - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/consultations/a-pro-innovation-approach-to-ai-regulation).

¹⁵ Rusu, J (2024), “AI Update”, Financial Conduct Authority.

¹⁶ Intersoft consulting (2024), “General Data Protection Regulation”, [General Data Protection Regulation \(GDPR\) – Legal Text \(gdpr-info.eu\)](https://www.intersoftconsulting.com/gdpr-legal-text/).

¹⁷ European Parliament (2023), “EU AI Act: first regulation on artificial intelligence”, [EU AI Act: first regulation on artificial intelligence | Topics | European Parliament \(europa.eu\)](https://www.europarl.europa.eu/press-room/en/infographic-eu-ai-act).

Since the EU has finalised their AI Act, it may set a global standard for AI regulation. For all institutions, it would be simpler to adhere to and adopt these more stringent regulations in the EU across all the regions in which these businesses operate, including Australia. It remains to be seen how this could affect the Australian Government's lighter touch approach to AI regulation in Australia, and which approach will be followed by other countries.

Australia's approach to the regulation of AI will initially be limited to addressing uses of AI in still-to-be-defined 'high risk' areas. With a federal election to occur by no later than May 2025, time is quickly running out for the Australian Government to finish consultations on, draft and pass any AI-related legislation before the end of the current Parliament.

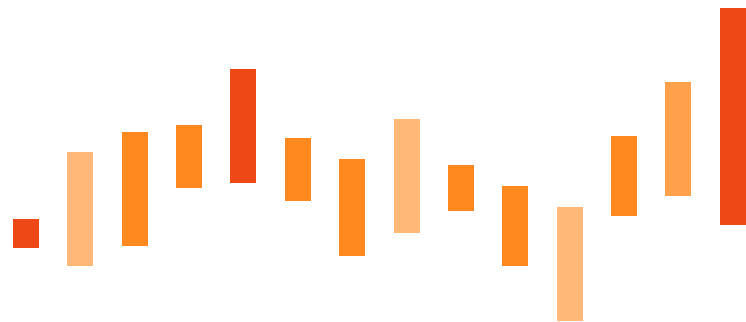
What this means for you as an asset owner

The discussion of AI and the application to investment governance is just beginning with our existing AI working group.

The narrative on AI will be a long journey, with different applications and different permutations in the years ahead. Investors and boards need to start now to consider how to safely manage this journey, elicit dividends or benefits from the implementation of AI and ameliorate the associated risks. This can only come from good governance.

Some high level principles for organisations to follow when considering implementing AI (in addition to or following policy development):

- Be a learning organisation as a whole and consider how AI can assist with various processes.
- Test or experiment on systems or applications, refine, learn and re-do.
- Engage with experts to assist with the implementation of AI.
- Articulate the relevant policies that apply to the implementation of AI and particularly when AI applications move from sandbox/testing phase to actual utilisation phase.
- Identify the most accountable person or authority to oversee this implementation (similar to the Financial Accountability Regime concept in identifying the most appropriate accountable persons).
- Identify who is responsible for vetting data being used to ensure implementation is properly conducted.
- Using external providers on vetting models (as expressed in our previous [Frontier Line](#), this is important for asset owners to ensure good investment governance).



Frontier can assist maintain good governance while leveraging AI

While all institutions wait for more details of any proposed regulatory reforms, there are some important steps organisations can action now to prepare for any future legislative amendments:

Investigate and document any existing uses of AI and automated decision making in your organisation.	Focus on the uses of AI that involve the handling of personal information about customers, employees and other stakeholders or which have significant legal or financial consequences for individuals.	Establishing internal governance frameworks for evaluating potential uses of AI.
<p>This may include undertaking an AI audit across your business units and supply chain to understand how and where AI systems are being used.</p> <p>The results of this audit should be documented and kept up to date (including as new uses of AI are implemented across the organisation).</p>	<p>It is possible these AI use cases will be caught by upcoming reforms to the Privacy Act relating to automated decision making or by more target reforms relating to high-risk AI use cases.</p>	<p>An example includes an AI governance committee that must be consulted on, or even approve, any new AI use cases. The AI governance committee should be charged with ensuring the organisation's use of AI is fair, transparent, explainable, free from bias or discrimination and reflects your organisation's values and community and stakeholder expectations.</p>

Frontier has experts that can assist with:

- Creating policies and procedures with respect to the use of AI having regard to an organisation's governance ethos and the application of investment governance in the area of AI.¹⁹
- Providing training and education to Board and senior management on areas that AI can be utilised and how policy or oversight frameworks can cater for the AI adoption.
- Developing AI risk management and governance frameworks.
- Developing and implementing a future looking roadmap for AI assisted governance.

¹⁹ [Policy for ChatGPT - The Corporate Governance Institute](#)

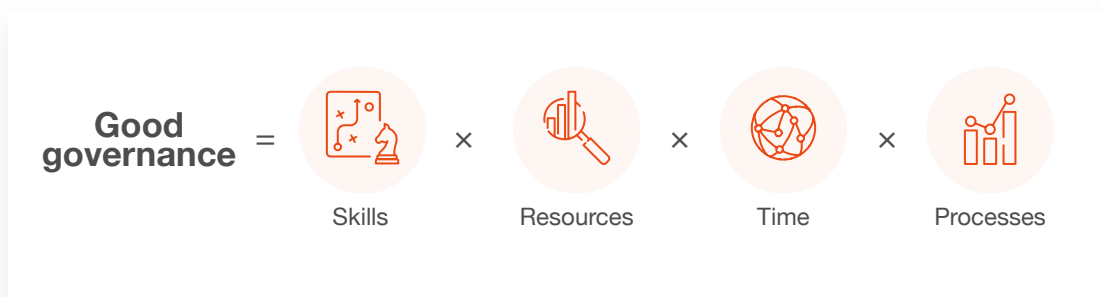
The final word



The implementation of AI in investments is not without significant risks and costs if not done properly.

Through good governance principles asset owners can derive benefits and mitigate risks. The benefits can include:

- Increasing efficiency
- Enhancing processes
- Achieving big results with reasonable budgets

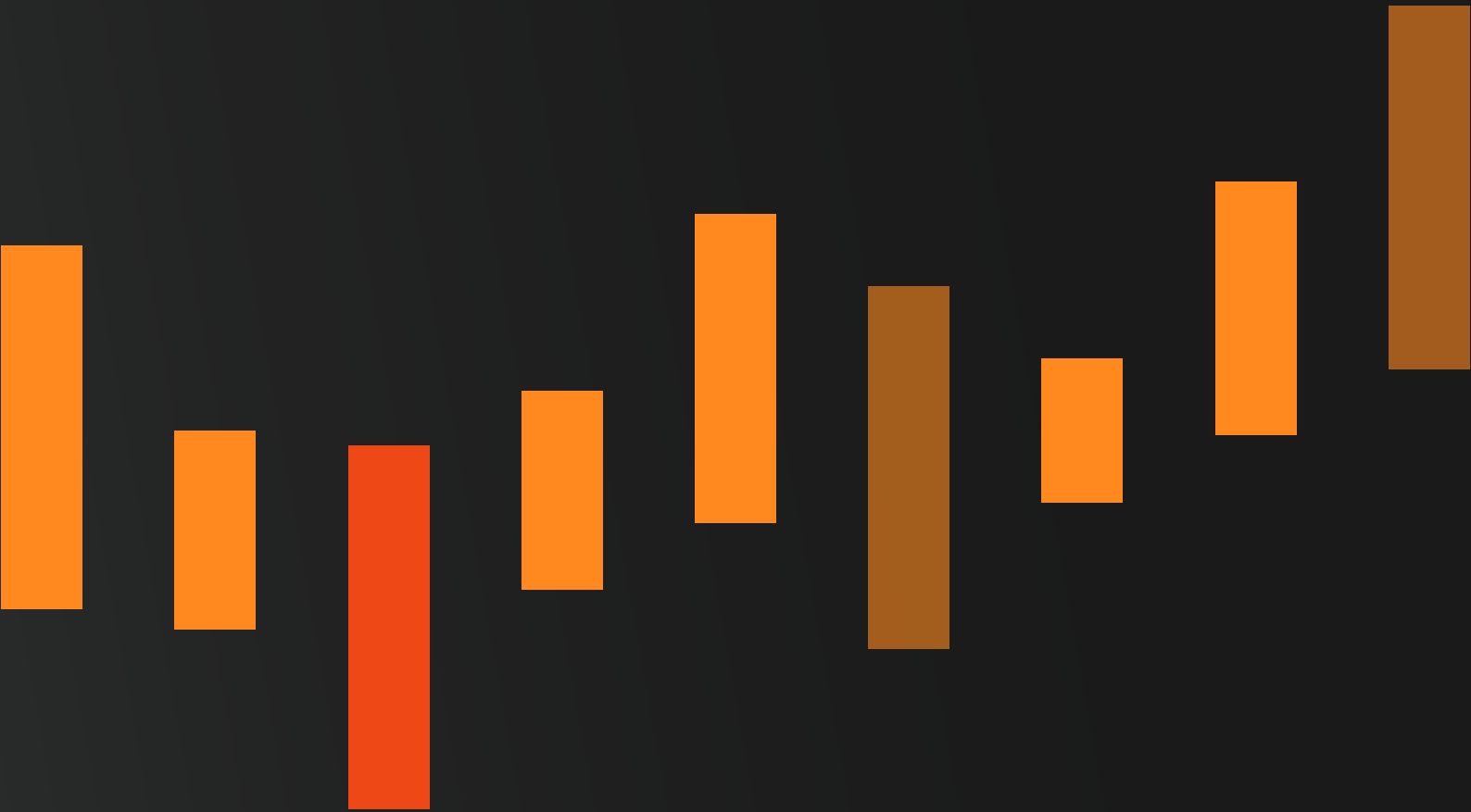


All of this can lift the governance capacity if done well. Please see the [Frontier/KPMG paper](#) on governance to understand more.



Learn more

If you want to discuss this paper in more detail or learn more about how we can help, please get in touch with our Investment Governance Team or your consultant.



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