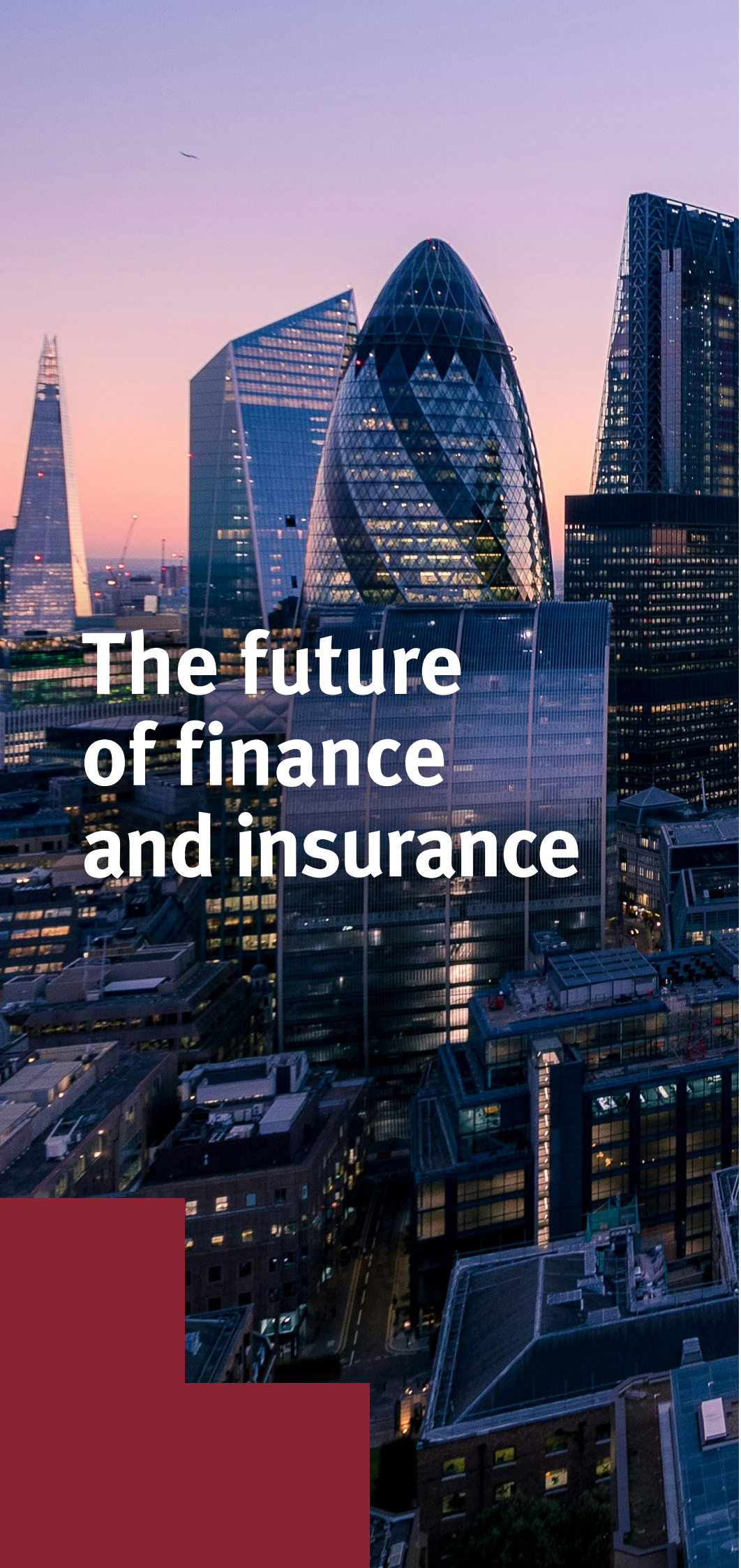

The future of finance and insurance

BAYES
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WHITE PAPER SERIES
NO.2 (2026)

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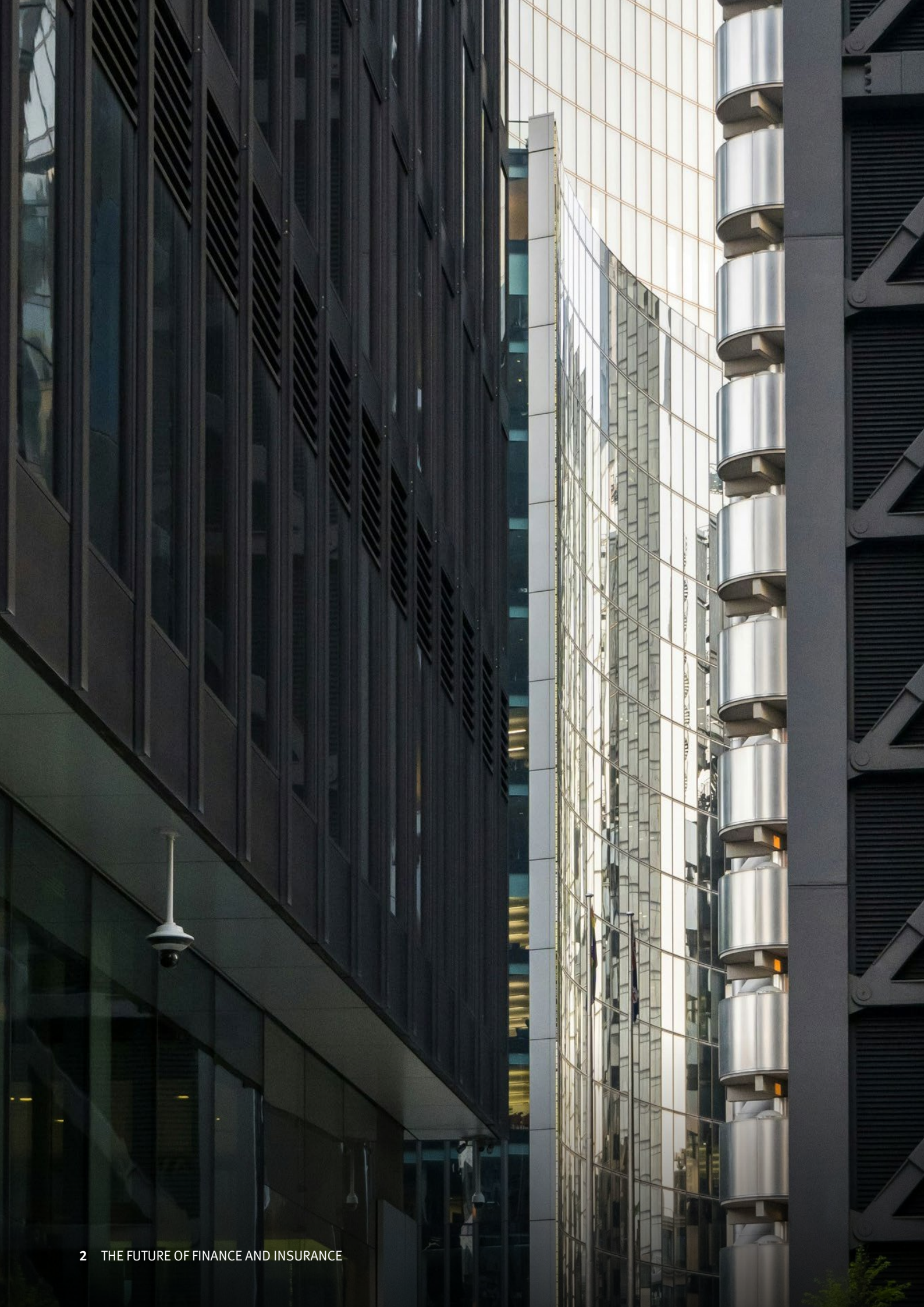


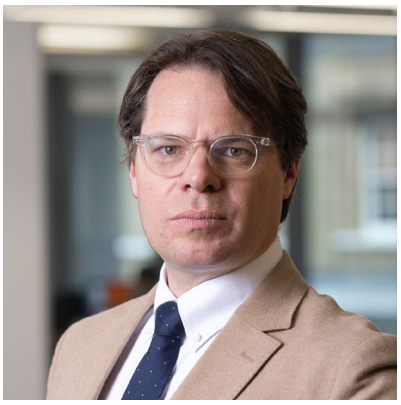
Contents

Key messages

- Finance and insurance are entering a period of accelerated transformation in which AI, digital platforms, climate risk, cyber risk and geopolitical uncertainty are reshaping how risk is assessed, priced, transferred and governed.
- AI will not simply make finance and insurance faster or more efficient; its greatest value will come from helping professionals interpret complex data, improve decision-making and strengthen trust, while remaining subject to human judgement, ethical oversight and robust governance.
- Insurance faces a growing protection gap as climate change, cyber threats, supply-chain disruption and emerging liabilities create risks that are increasingly interconnected, difficult to model and, in some cases, harder for private markets to insure alone.
- Banks are evolving from traditional financial intermediaries into data-, technology- and service-based platforms, but this transformation also exposes them to faster-moving risks, including digital bank runs, cyber contagion and new forms of systemic fragility.
- Accounting and corporate finance will be reshaped by digital reporting, AI-enabled analysis and new asset classes such as crypto, creating opportunities for faster insight and better transparency while raising new challenges around reliability, explainability, professional training and accountability.
- AI is expanding the scope of financial analysis beyond traditional structured data, enabling finance professionals to extract insights from narrative disclosures, images, audio, video, virtual data rooms, corporate communications and crypto-related digital signals; however, its use in M&A, misconduct detection, financial statement analysis and digital asset valuation must be supported by reliable models, explainability, strong data governance and clear accountability.
- The future of finance will depend not only on technological adoption, but on whether financial institutions can remain resilient, trusted and socially useful in a world where uncertainty is more systemic, data-intensive and interconnected.

Foreword

Professor André Spicer
Executive Dean



The City of London has been at the forefront of industrial, financial and professional innovation for centuries. That tradition continues today. The financial institutions, insurance companies and professional service firms around us continue to shape the global economy, while the technology and creative firms around Shoreditch are helping to build the companies and industries of the future.

Bayes Business School sits within this long history of innovation. Over our sixty-year history, we have focused on developing professionals and leaders for the City of London and beyond. We have also produced research and insight that inform the businesses, institutions and policymakers with whom we work in London, nationally and around the world.

As a leading global business school, Bayes continues to produce work of the highest scientific merit. We are home to nearly 180 faculty members, many of whom are internationally recognised scholars in their fields. We also house more than a dozen research centres, through which our researchers work with governments, businesses and non-profit organisations to address practical problems with rigorous evidence and analysis.

Over the years, our research has helped to advance the actuarial profession, support central banks in regulating the financial sector, improve the financing of the shipping industry, inform the allocation of hospital beds, identify ways to debias decision-making, help businesses rethink their models and support professionals as they move into leadership roles. These examples represent only a small part of the work undertaken across Bayes.

At Bayes, we believe in curiosity. We support a wide ecology of curiosity-driven research, from misogyny at work, the workings of the art market and copula functions in mathematical models, to forecasting techniques, business jargon, protest movements and curiosity itself.

We also believe that research should create change. This requires us to connect ideas, disciplines and expertise in ways that help address some of the largest challenges facing business and society.

That is why we have organised our work around four major research themes: AI and the Future of Business; the Future of Finance and Insurance; Tackling Societal Challenges; and Adapting to a Transforming World.

Under each of these themes, we bring together experts working on some of the most pressing questions of the day. Our researchers are examining the implications of an ageing society, how to decarbonise shipping, how to harness AI to support creativity and how traditional financial institutions and regulators can respond to innovation in FinTech.

This white paper series is an invitation to engage with our work. In the coming years, we look forward to working with partners to apply high-quality research insight to the issues affecting their organisations, sectors and communities. In doing so, we hope to provide ideas and evidence that help the City of London and the wider economy and society it serves, continue to innovate and thrive in the decades ahead.

Preface

Professor Feng Li
Associate Dean for Research and Innovation

For much of the post-Cold War period, business strategy was shaped by a set of assumptions that appeared broadly stable. Markets were expected to deepen, supply chains to remain open, technological progress to diffuse through existing institutions and major disruptions to be episodic rather than systemic. Competition could be intense, but the overall direction of travel seemed relatively clear.

Many of these assumptions no longer hold. Geopolitical rivalry now permeates trade, technology, capital, energy and industrial policy. Economic openness can no longer be treated as a neutral background condition. Institutional resilience can no longer be assumed. At the same time, technological change is advancing in ways that do not simply create new opportunities, but unsettle established assumptions about governance, expertise, trust, accountability and control. Leaders are not just managing change within stable systems. They are increasingly operating amid fundamental shifts in the systems themselves.

This is the context in which Bayes Business School has identified and articulated four Strategic Research Themes: Tackling Societal Challenges, AI and the Future of Business, The Future of Finance and Insurance and Adapting to a Transforming World. These are not separate agendas assembled for convenience. They are different ways of approaching the same underlying challenges around how organisations create value, manage risk and sustain legitimacy when the conditions that once underpinned strategy and operations are becoming unreliable.

The purpose of this white paper series is not to offer slogans, reassurance or fashionable language dressed up as insight. It is to bring serious research to bear on the practical and institutional questions now confronting business and society. This means looking beyond surface disruption to the deeper shifts underneath it, questioning inherited frameworks where necessary and engaging with firms, policymakers and other partners who recognise that older playbooks are losing their grip. The unifying conviction behind this series is that rigour matters most when the world becomes harder to read.

Finance and insurance sit close to the centre of these wider shifts. They are among the core institutions through which modern economies assess, price, absorb and transfer risk, allocate capital, intermediate between savers and borrowers and sustain confidence across households, firms and markets. Climate change is increasing the scale, frequency and interdependence of losses. Cyber risk is creating new forms of disruption that are hard to model and harder still to contain. Artificial intelligence, digital platforms and new data infrastructures are reshaping how judgement is exercised, how services are delivered and how responsibility is allocated. These pressures extend across banking, corporate finance, insurance and accounting, where new asset classes, digital reporting and more demanding expectations of transparency are unsettling long-established practices.

The deeper issue is not simply whether these sectors can become faster, smarter or more efficient.

It is whether the institutions that insure risk, channel capital, support households and businesses and underpin market confidence can adapt

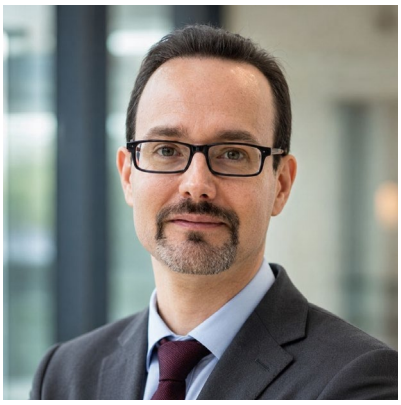
to conditions in which uncertainty is becoming more interconnected, more data-intensive and, in some respects, less insurable. As the gap widens between the risks modern economies generate and the risks financial systems can credibly absorb, questions once treated as technical begin to look more institutional and more political.

Bayes is well placed to contribute to this agenda. Located in the City of London, with long-standing ties to the institutions, professions and policy networks that shape finance and insurance, the School is part of the ecosystem it studies. Our work spans banking, finance, accounting, actuarial science, insurance, analytics, risk and regulation. It addresses the future of insurability, the resilience of banking systems under digital and geopolitical strain and the changing role of accounting and corporate finance in an economy shaped by AI, new asset classes and more demanding expectations of transparency and judgement.

This white paper examines the strategic and institutional choices that will shape the future of finance and insurance and identifies where Bayes research can contribute most directly. The question is no longer simply how these sectors respond to new technologies or adopt new tools, but whether they can remain resilient, trusted and socially useful under more demanding conditions.

Introduction

Professor Pawel Bilinski
Theme Lead



What does the future hold for finance and insurance? This is a question anyone who works in finance and insurance should be asking. Over the past few decades, the sector has been transformed by technology. Now, AI means that this transformation is likely to speed up radically, rather than slow down – and we are likely to see AI not just providing information, but increasingly, making decisions and taking action.

Finance and insurance are among the fields most suited to the application of AI and those in the sector need to be aware of the challenges and opportunities it poses.

The last few decades have seen successive waves of often highly disruptive technologies. First, in the 1990s, there were digital banking and payment systems, then online banking. Next, in the 2000s, we had mobile banking, peer-to-peer lending, blockchain, crypto and the cloud. Over the last few years, big data, machine learning, analytics, open APIs and more have emerged.

Nowadays, AI appears to have taken centre-stage, although it has been and will continue to be building on and interacting with many of the technologies that preceded it. For example, AI can be useful in valuing assets (whether companies, portfolios or virtual assets such as crypto) and much of what AI does is enabled by big data and machine learning. Thus, it makes sense to see AI (and its companion, Agentic AI) not just as the next big thing that will usher in a new era, but also as another component in an extremely complex ecosystem that has been changing at breakneck speed since the 1990s.

It's also worth remembering that finance has very fuzzy edges. It extends all the way from basic consumer banking apps to insurance underwriting models to the valuation of trillion-dollar multinational companies – and it is at the heart of an ultra-complex, ultra-connected ecosystem which affects not only every other sector of business, but also most parts of everyday life. The rapid technological changes in finance and insurance can often seem overwhelming and even frightening. Memories of the dotcom (exuberant valuations) and 2008 (financial services meltdown) crashes linger.

One great hope for AI is that it will make bafflingly complicated systems safer and easier to understand, not just more complex and riskier.

In a way, this points to the future of finance and insurance. Although these ongoing changes pose enormous, complex challenges, they also offer significant opportunities. And these aren't just headline items – often they sound almost dull and pedestrian. One example from insurance is a system in which small claims are paid automatically. This is game-changing for both insurance companies and consumers.

Organisations operating in these sectors (and those working for them) need to stay abreast of the latest developments to thrive in a rapidly changing world. At Bayes, we look at these developments across four major areas: insurance, banking, accounting and AI. All overlap with each other, the wider economy and the world at large. The future of finance and insurance affects us all.

Key themes

Insurance

Insurance is facing an expanding risk landscape, with evolving and emerging risks from diverse sources such as climate change or cyber-attacks. As a result, the protection gap – the difference between economic and insured losses – is growing. Markets alone may be unable to address these challenges effectively and, therefore, government intervention may be required. At the same time, technologies such as artificial intelligence have the potential to improve risk modelling and enhance operational efficiency.

Banking

Banks are evolving into platforms for data, technology and services and they operate within increasingly complex ecosystems. They also face an environment of heightened uncertainty. Digital transformation is key to the future of banking – and digital threats are growing. Banks also need to build sustainability into their operations and ensure they fulfil their societal role.

Accounting

Accounting is an area that is likely to be rapidly transformed by AI – as "delegated intelligence" starts making decisions and taking actions. Ensuring the responsible, inclusive, equitable use of AI is imperative. Accounting also has to deal with an increasingly broad range of non-traditional assets such as crypto.

AI

AI holds out enormous promise to improve areas such as M&A – often by processing and making sense of far more information (including "unstructured" information such as audio and video) than humans can. However, there are limits to tech-enabled decision-making and our research suggests that AI would not have prevented many past bad deals. So, while AI is a powerful tool, it must be used ethically and with humility.

Insurance

The insurance industry is entering a period of accelerated transformation, shaped by technology, shifting customer expectations and the increasing complexity of global risks.

At the forefront of this transformation is climate change, which is redefining the risk landscape through more frequent, severe and systemic events. Rising sea levels, extreme weather events (including droughts, floods, hail and hurricanes) and cascading environmental shocks are increasing the frequency, severity and interconnectedness of risks, acting as a risk multiplier and a fundamental challenge to the traditional paradigm of insurability.

These evolving risks have the potential to widen the protection gap – the difference between economic losses and insured losses – on a global scale.

Over the past decade, the global protection gap for natural catastrophes has remained persistently high, averaging roughly 60–63% of total losses. Although insured losses have risen in absolute terms, there is no evidence of a structural narrowing in the gap, as growing exposure to floods, wildfires and severe convective storms has continued to outpace coverage expansion (Munich Re, 2026; Swiss Re, 2025; Aon, 2026). Notably, this gap is not confined to developing and emerging economies, it is increasingly also affecting countries with mature insurance sectors.

For example, in Europe, insured losses from floods in 2024 exceeded USD 10 billion, yet still represented only a fraction of total economic damage (Swiss Re Institute, 2024). In the UK, flood risk demonstrates both the potential and limits of schemes such as Flood Re (a joint initiative between the government and insurers) as rising exposure threatens long-term affordability of protection. Similarly, heatwaves are emerging as the fastest-growing climate peril. In 2024, Europe recorded more than 62,000 heat-related deaths, with measurable impacts on labour productivity, infrastructure and GDP (Reuters, 2025; Allianz Research, 2025; European Environment Agency/ Climate-ADAPT, 2025).

Simone Krummaker

Associate Professor of Insurance and Head of the Faculty of Actuarial Science and Insurance

Her work includes topics such as corporate insurance demand, export credit and political risk and sustainability in insurance, with a growing focus on how data, analytics and emerging technologies are reshaping insurance value chains.

A growing threat surface

While climate risks grab headlines, other emerging risks also challenge insurability because they are uncertain, slow to reveal their impacts and difficult to insure. One example is PFAS (perfluoroalkyl and polyfluoroalkyl substances) contamination. These are so-called “forever chemicals” which are widely used in consumer and commercial applications requiring water, oil, stain, heat and chemical resistance. Their persistence in the environment and links to several adverse health issues (such as cancer and immune system damage) make them a significant emerging hazard, which gives rise to complex liability and environmental risks.

The digital transformation of economies also introduces a new class of systemic risk. As societies increasingly depend on interconnected cloud-based infrastructures, supply chains and AI-driven systems, cyber risk has become one of the most serious and high-profile global hazards. A single attack or systemic outage can cascade across finance, energy, health and logistics. Cyber-attacks can cost billions, cripple infrastructure and claim lives.

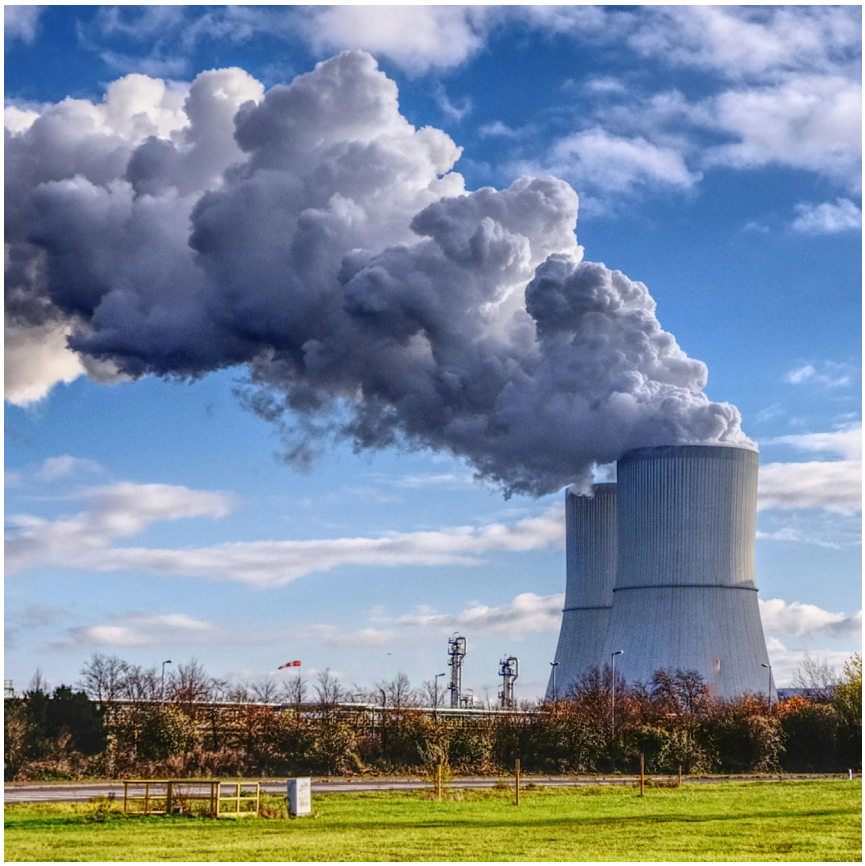
They have also become increasingly frequent. According to GCHQ’s National Cyber Security Centre, the UK experienced 204 nationally significant cyber-attacks in the 12 months to August 2025, a sharp rise from 89 in the previous year.

Because of the complexity and non-physicality of modern digital systems, insurers face difficulties in modelling cyber losses and some markets have begun to restrict coverage for state-sponsored or catastrophic cyber events (Lloyd’s Market Bulletin, 2022–2024).

The current global geopolitical context compounds these pressures.

A more multipolar geopolitical environment, marked by rising tensions, tariffs, sanctions and energy insecurity, has exposed vulnerabilities in cross-border trade and supply chains.

For insurers, these disruptions create accumulation risk across maritime trade, logistics and global infrastructure. Climate instability, digital fragility and geopolitical fragmentation are all increasingly interlinked and are reshaping the boundaries of insurability.



Limitations of insurability

In the face of these challenges, the insurance industry needs to think about new and creative approaches to insurability. Areas of innovation include the use of AI and data science to refine pricing, simulate scenarios and design adaptive products. Alongside technological approaches, other solutions include parametric insurance, which pays an agreed fixed amount automatically when a specific, measurable event occurs (e.g., wind above a certain speed or an earthquake above a defined magnitude). Approaches like this can offer transparent, rapid payouts and significantly reduce administrative burden for insurance companies and policyholders.

Insurers have a vital role in enabling a just and fair transition to a low-carbon economy. Due to their role in the risk management systems of companies, households and governments, they are in a unique position to incentivise, encourage and support adaptation through climate-resilient infrastructure, pricing incentives and risk-sharing mechanisms.

However, private markets cannot carry this burden alone.

The importance of public–private partnerships (PPPs) is growing, as governments and insurers co-design mechanisms to ensure coverage remains accessible, affordable and sustainable.

This requires regulatory innovation, shared risk pools and the mobilisation of reinsurance and capital markets to close the protection gap.

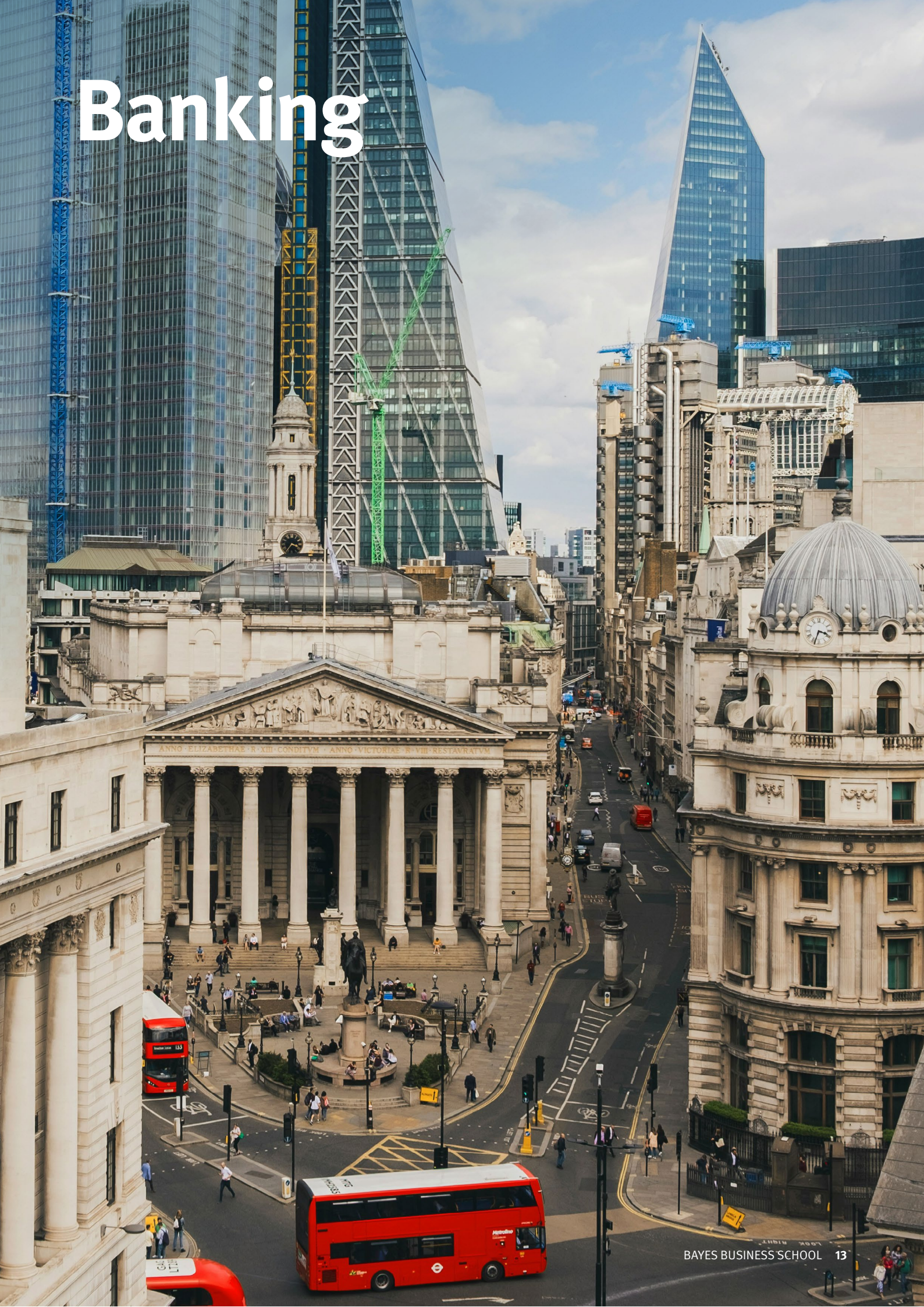
Insurance is by nature an interdisciplinary subject and sits at the crossroads of finance, actuarial science, management and the wider social sciences. At Bayes Business School, insurance, risk and actuarial expertise as well as modelling, analytics and machine learning are embedded in the Faculty of Actuarial Science and Insurance. Beyond the core faculty, there are natural overlaps with other subject groups across Bayes, including finance (e.g. sustainable finance, trade finance), Operations Research (e.g. supply chain risk and modelling), management (e.g. governance, organisational resilience and sustainability), shipping/energy (maritime risk and decarbonisation) and real estate (e.g. the impact of climate change on asset markets). Insurance research at Bayes also connects to other strategic research themes.

Cormac Bryce

Reader in Risk Management

Cormac's work ranges from human behaviour in financial organisations to the effect of regulation, incentive structures and employee benchmarking on organisational behaviour within the aviation and financial services industries. His research focuses on the error-reporting climate and on the effects of risk events on market sentiment in financial services.

Banking



The global banking industry is undergoing a profound, disruptive transformation. Drivers of this include technological innovation, regulatory change, transition to a green economy and shifting customer expectations. Banks are no longer just financial intermediaries. They are evolving into platforms for data, technology and services and they operate within increasingly complex ecosystems.

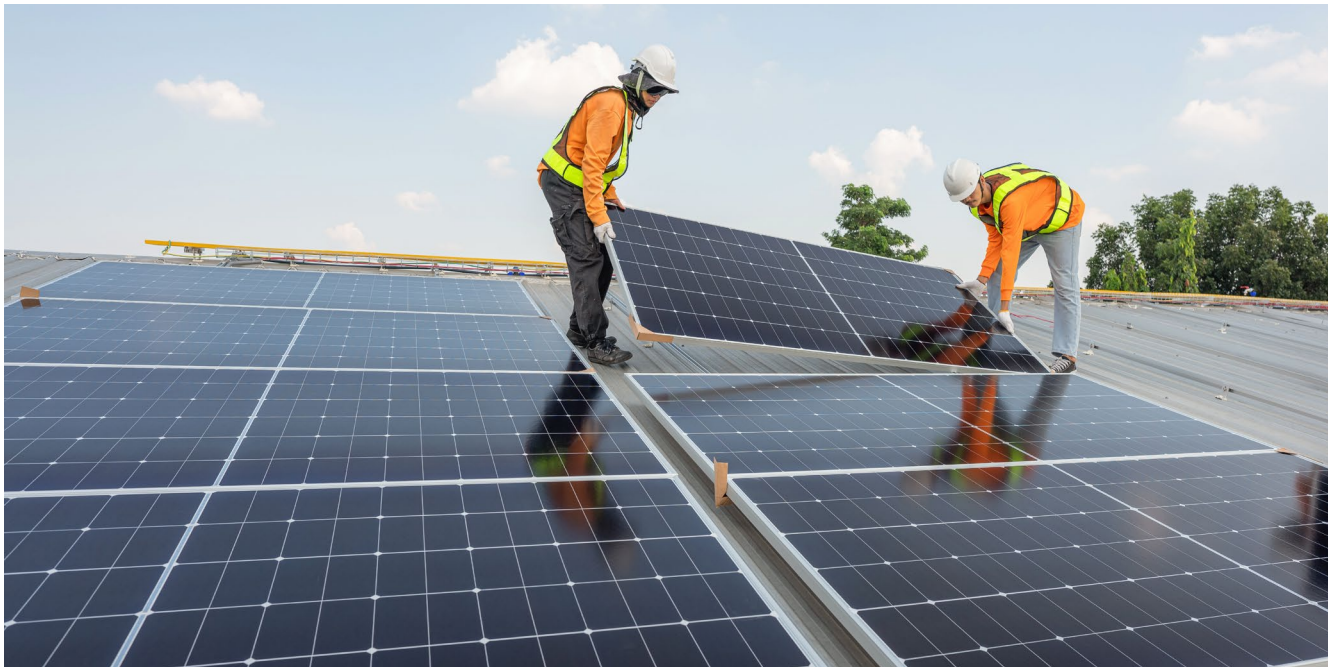
Banks also face heightened uncertainty. Geopolitical tensions, macroeconomic volatility, cyber threats, climate risks and global market fragmentation are reshaping the financial landscape. These developments present both opportunities and systemic challenges. For banks to continue fulfilling their fundamental role (including channelling funds to productive firms, delivering robust and cost-effective financial services to households and supporting inclusive and sustainable growth) they must remain resilient, adaptive and forward-looking.

At Bayes, we are at the forefront of these shifts and we offer evidence-based insights and innovative practical solutions to the complex challenges shaping the future of banking.

Our researchers' work informs policy debates, regulatory frameworks and industry practices. We are a part of a future that is digital, data-driven, green, inclusive and resilient.

The Future of Banking research agenda at Bayes is led by a diverse and accomplished team of scholars whose work addresses the critical challenges facing today's financial system.

From digital transformation and financial stability to climate risk and systemic resilience, our faculty produces rigorous independent research that informs regulators, industry leaders and policymakers worldwide.



The banking agenda

Below is a more detailed look at five areas we have identified as the most significant drivers of change in banking going forward.

Digital Transformation and the New Frontiers of Banking

AI (including Agentic AI), blockchain, tokenisation and platform-based models are already transforming how financial services are designed and delivered and will continue to do so. The challenge is not adoption alone, but ensuring these technologies are used responsibly, ethically and to enhance stability, inclusion and trust. Bayes research explores the rise of stablecoins and DeFi and the role of digital infrastructures, from factoring platforms for SMEs to bank–nonbank lending platforms, in expanding access to liquidity. These projects highlight the opportunities of a more digital, platform-based financial system.

Barbara Casu

Professor of Banking and Finance

Barbara is the Director of the Centre for Banking Research at Bayes Business School. She is also the Deputy Dean (Faculty and Research) at Bayes. Her research interests include empirical banking, financial regulation, structured finance and corporate governance.

Angela Gallo

Senior Lecturer in Finance

Angela's research examines how banks, nonbank finance, stablecoins, and DeFi shape credit, liquidity, and financial stability.

Digitalisation, Runs and Cyber Resilience

Digitalisation is transforming not only how banks operate but also how crises unfold. Social media enables rumours, misinformation and information shocks to spread extremely rapidly, fuelling faster and more severe depositor runs than in the past. Meanwhile, banks' reliance on digital infrastructure exposes them to cyberattacks that can propagate through networks of clients, counterparties and service providers, threatening systemic stability. Bayes research investigates these emerging vulnerabilities and highlights how digital tools can both amplify fragility and reshape the speed and scale of financial contagions. This work underscores the need for regulation and supervision that keep pace with technological change, ensuring that innovation enhances financial resilience rather than undermines it.

Monetary Policy, Financial Institutions and the Real Economy

Monetary policy remains one of the most influential forces shaping financial institutions, household decisions and the broader economy. However, the channels via which it operates are complex and evolving fast. Ongoing research at Bayes investigates these transmission mechanisms across banks, insurers and households as well as corporate pension plans. This work provides new insights around the overall effects of monetary policy on financial markets and its distributional effects in the mortgage and corporate markets.

Francesc Rodriguez Tous

Senior Lecturer in Banking

Francesc's area of expertise is banking, with a particular focus on regulation and systemic risk.

Sustainable and inclusive banking: financing the green transition

Banks are central to financing the low-carbon transition. They also play an important role in supporting SMEs, households and underserved communities, particularly in developing countries. Bayes research looks at how climate and environmental engagement shape bank risk-taking and credit quality. It also shows that voluntary disclosure can serve as a credible signal of prudent risk management in environments with soft regulatory requirements.

The societal role of banks: trust, resilience and public purpose

Banks remain vital institutions for economic and social stability, but their societal role is under increasing scrutiny. Questions of trust, fairness and responsibility have become as important as profitability. Bayes research investigates how banks balance commercial objectives with public purpose, from understanding the long-run impact of misconduct costs to assessing how new forms of intermediation, such as bank–non-bank lending platforms, affect systemic risk and customer outcomes. These projects underscore the need for banks to combine resilience and innovation with a renewed commitment to societal impact.

Vasso Ioannidou

Professor of Finance

Vasso is a Professor of Finance at Bayes and a research fellow of the Centre for Economic Policy Research (CEPR). Her research is in the intersection of banking, corporate finance and monetary economics.

COMPLETED PROJECTS

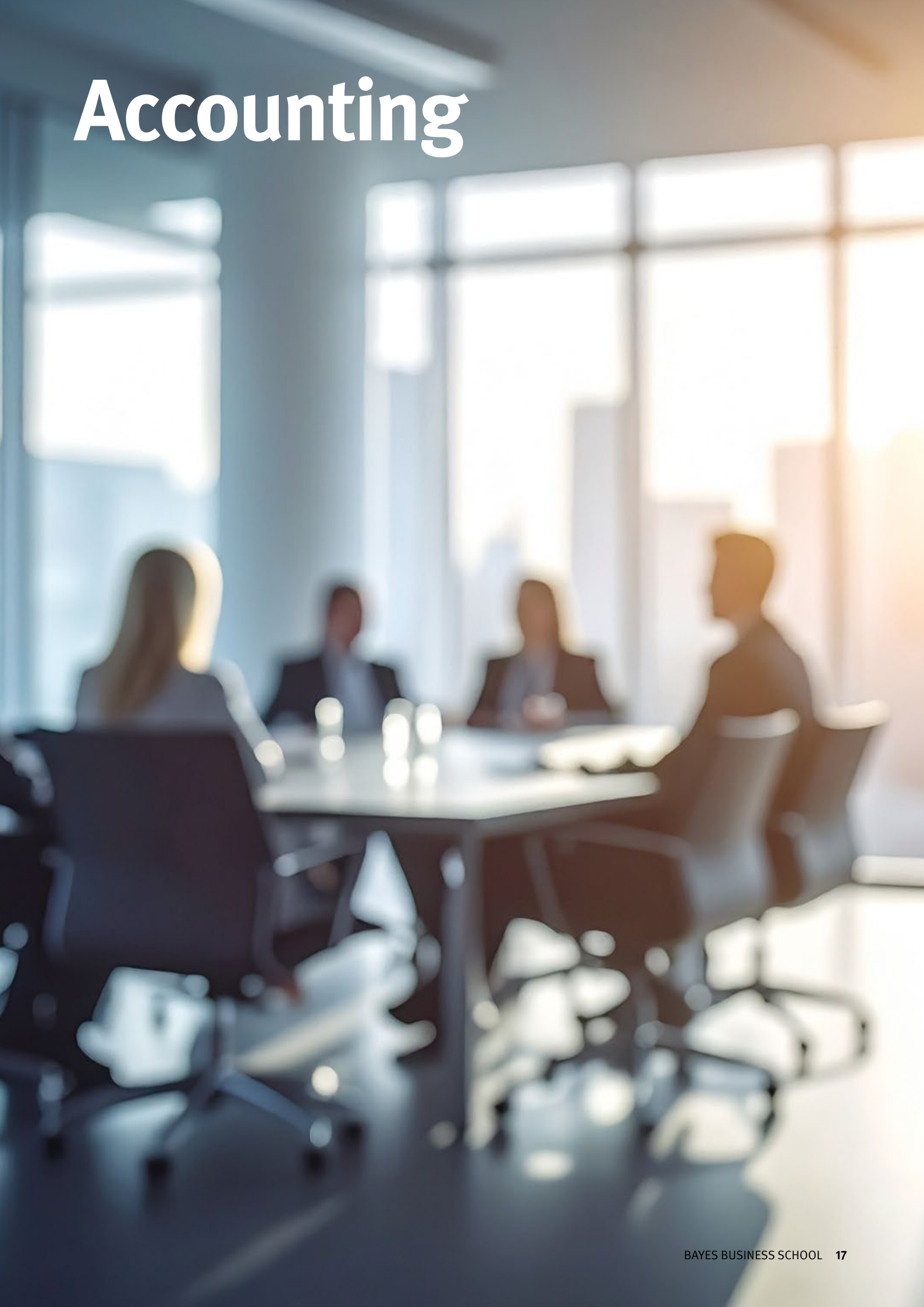
Measuring the cost of bank misconduct

The Conduct Costs Project systematically tracks the financial consequences of misconduct for 20 of the world's largest banks, covering the period 2008–2018. By quantifying penalties, redress payments and related costs, the project benchmarks banks' culture, conduct, competence and exposure to regulatory risk. The dataset provides unique, publicly available metrics that enhance transparency and allow stakeholders to assess banks' non-financial performance. The findings have been widely cited by regulators, policymakers and the media and have shaped debates on governance and accountability in the post-crisis era and throughout the Covid-19 period.

Revisiting banks' vulnerability to deposit runs

The 2024 European Systemic Risk Board (ESRB) Advisory Scientific Committee (ASC) report *Addressing Banks' Vulnerability to Deposit Runs* delivered a comprehensive analysis of bank funding fragility. It highlights risks associated with over-reliance on uninsured, undiversified deposit bases and unrealised losses triggered by rapid interest rate shifts. It also brought fresh policy insight into modern dynamics of bank runs, exacerbated by digital banking and social media and reviews both incremental regulatory adjustments and deeper structural reforms to bolster resilience.

Accounting



Accounting sits at the centre of how modern economies report performance, disclose information, assure its reliability and value assets. Each of these functions has been reshaped by decades of digitalisation — from the spread of electronic filing and structured data formats to the impact of fintech (regtech, insurtech, etc) on traditional practices. More recently, AI has begun to transform all four at once: automating the preparation and analysis of reports, expanding what counts as disclosure, shifting assurance from periodic sampling toward continuous verification and opening up the valuation of assets — including new classes such as crypto — that traditional frameworks struggle to capture.

Although this transformation may feel relatively mature, it is ongoing with new challenges and promises abounding.

It is essential for accounting and corporate finance professionals to stay abreast of tech-related developments relevant to the fields, such as digital reporting and AI.

At Bayes, we believe that AI will enhance digital reporting, increasing accessibility to financial information, speeding up decision-making and financial statement analysis. At the same time, AI will also improve the extraction and dissemination of information in the context of critical issues, such as mergers and acquisitions (M&A) deal processes and initial public offerings. It will also help organisations deal with the challenges and problems ranging from insider trading and corporate misconduct detection to shareholder activism and emerging digital assets, including crypto projects.

Pawel Bilinski

Professor of Accounting

Pawel is the Director of the Centre for Financial Analysis and Reporting Research and the Research Director for the Faculty of Finance. His research interests are in the area of accounting and finance and include firm disclosure policies, the properties of analyst research outputs, investment banking relations and empirical corporate finance.

Digital reporting: enhancing accessibility and decision making

Digital financial reporting has emerged as a critical component of modern corporate disclosure practices. This uses data tagging and structured formats (e.g., XBRL, iXBRL) to make each financial figure and disclosure machine-readable. In turn, this enables automated data analysis, faster regulatory filings and easier comparisons across companies and periods.

By allowing investors and other stakeholders to efficiently search, extract and compare companies' accounting disclosures, digital reporting facilitates more informed decision-making. Accessing financial information more easily offers numerous benefits, from easier financial analysis to improved risk assessment. The sort of research-heavy information that could once have taken months to assemble at high cost is now available very quickly, more cheaply and much more widely.

Moreover, AI can spot patterns and insights in this information that may be invisible to humans and can pull in related information and cross-reference it.

Recent fintech research at Bayes demonstrates that improvements in digital reporting must go beyond accessibility and speed to address a more fundamental issue: the reliability and integrity of financial information itself. Evidence from historical financial scandals shows that many value-destroying failures were not caused by a lack of disclosure, but by the mutability, manipulability and delayed verification of accounting data.

Research on fintech applications in financial reporting and audit highlights how technologies such as blockchain, internet of things (IoT), smart contracts and machine learning can materially strengthen the credibility of reported information. Blockchain-based ledgers introduce immutability, traceability and continuous audit trails, reducing the scope for ex-post manipulation of accounting records. IoT-enabled automation allows physical assets and operational activities to be recorded directly and in real time, reducing reliance on manual data entry and the risk of misstatement. Smart contracts can encode accounting and control rules ex ante, enforcing consistent application of revenue recognition, expense matching and contractual obligations.

From an investor perspective, these technologies shift assurance upstream—from periodic, sample-based verification toward continuous, technology-enabled validation of financial data at source. This approach enhances trust in reported figures, strengthens equity investment protection and reduces tail risk associated with sudden disclosure of accumulated bad news. Importantly, this stream of research emphasises technological solutions to reporting failures rather than additional regulation, offering a complementary path to improving transparency and market confidence.

Paulina Roszkowska

Lecturer in Finance

Paulina is a Director of the Executive MBA programme at Bayes Business School. Paulina's research spans corporate finance, fintech, capital markets and business ethics, grounded in peer-reviewed publications, two books and hands-on experience across investor relations, corporate finance and board roles.

Challenges and opportunities

In recent years, numerous new challenges and opportunities have emerged in the accounting and corporate finance landscape. One of these is the rise of new asset classes such as crypto. This poses valuation challenges. Traditional frameworks and financial ratios are often inadequate for evaluating these assets, underscoring the need for new, innovative valuation methodologies.

Another pressing concern is the transformation of professional roles. AI and other forms of data crunching are rapidly usurping human processing power. The received wisdom here is that this frees up humans from drudge work and allows them to move on to higher-level work, prioritising analytical expertise over manual processing. Yet this also creates challenges for the accounting and corporate finance industries that have relied on the apprenticeship model of training junior staff in their rise through their career to partner or managing director positions. The work that once enabled junior staff to acquire analytical expertise is now done by machines.

There are other issues, too.

Work-life balance is seen as increasingly important (perhaps more so by staff), but smartphones can result in an always-on mindset, which increases stress levels and damages productivity and the ability to do deep work.

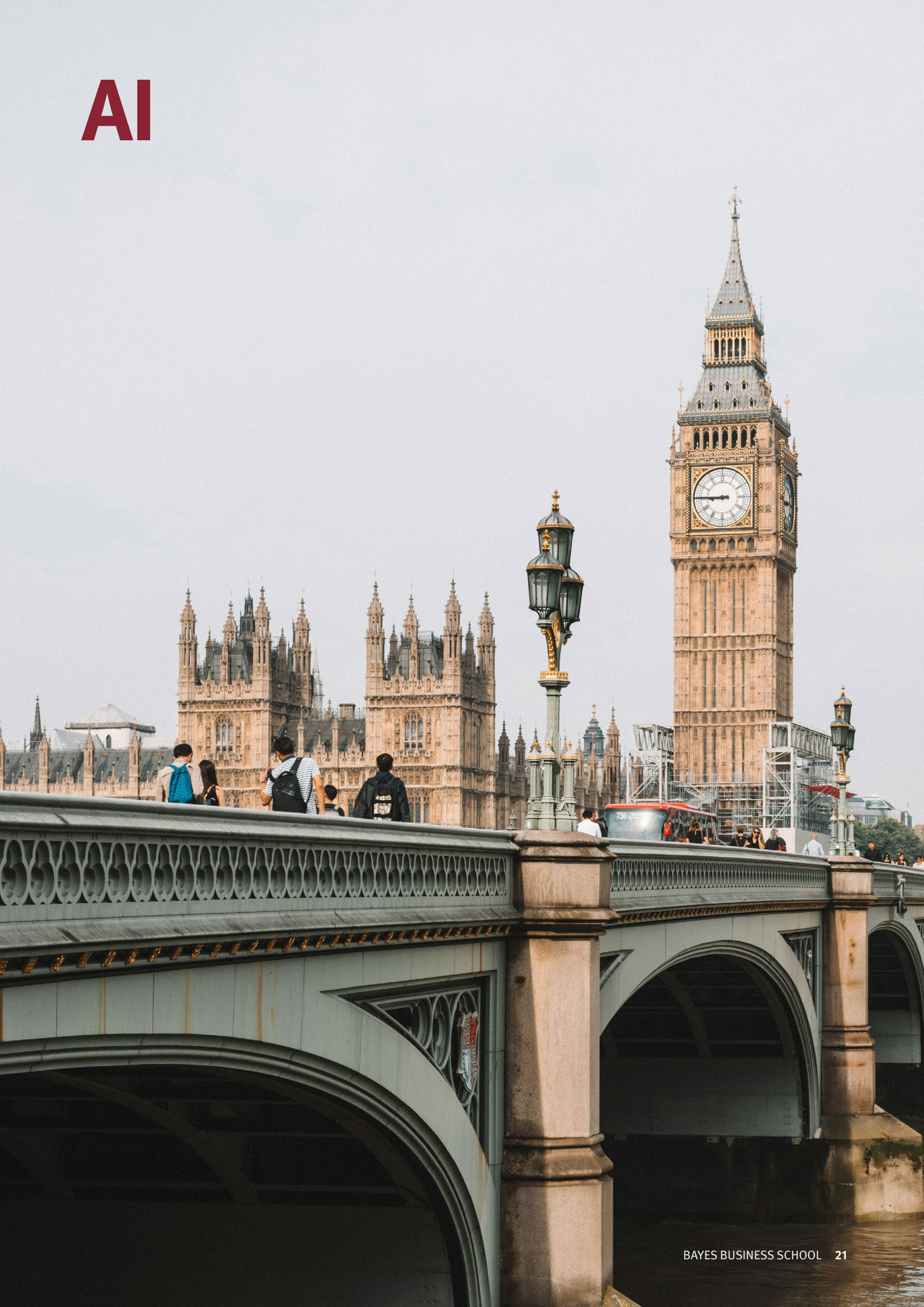
Working from home is another change. On one hand, Covid-19 made working from home an integral part of how many people work and a lot of employees like it. But, on the other hand, there is value (especially for younger people) in working in the same room with more experienced experts and many companies are now rolling back or even eliminating working from home policies. Challenges exist in other fields too. Regulatory requirements are changing, data security is a perennial concern and, increasingly, ensuring the responsible use of AI in decision-making is a business imperative.

Andrew Yim

Senior Lecturer in Accounting

Andrew has interests in research related to profitability forecasting, firm valuation, crypto assets and crypto projects, segment reporting, corporate diversification, internal capital market, capital budgeting, fraud and auditing.

AI



Artificial Intelligence: unlocking insights and expanding digital disclosure

The rise of AI is transforming the accounting and corporate finance landscape. With digitally reported information, AI can automate the analysis of financial data, delivering actionable insights that inform strategic decision-making. Moreover, AI's capabilities extend far beyond structured financial data, as it can extract useful signals from narrative disclosures using techniques such as natural language processing (NLP). The latest advances in AI have also enabled the analysis of non-textual data. This includes images, audio and video that can be fed through multimodal AI models and sourced by a variety of tools. One of the more common examples of this is the use of drones to assess the condition of assets, from buildings to woodlands, during due diligence.

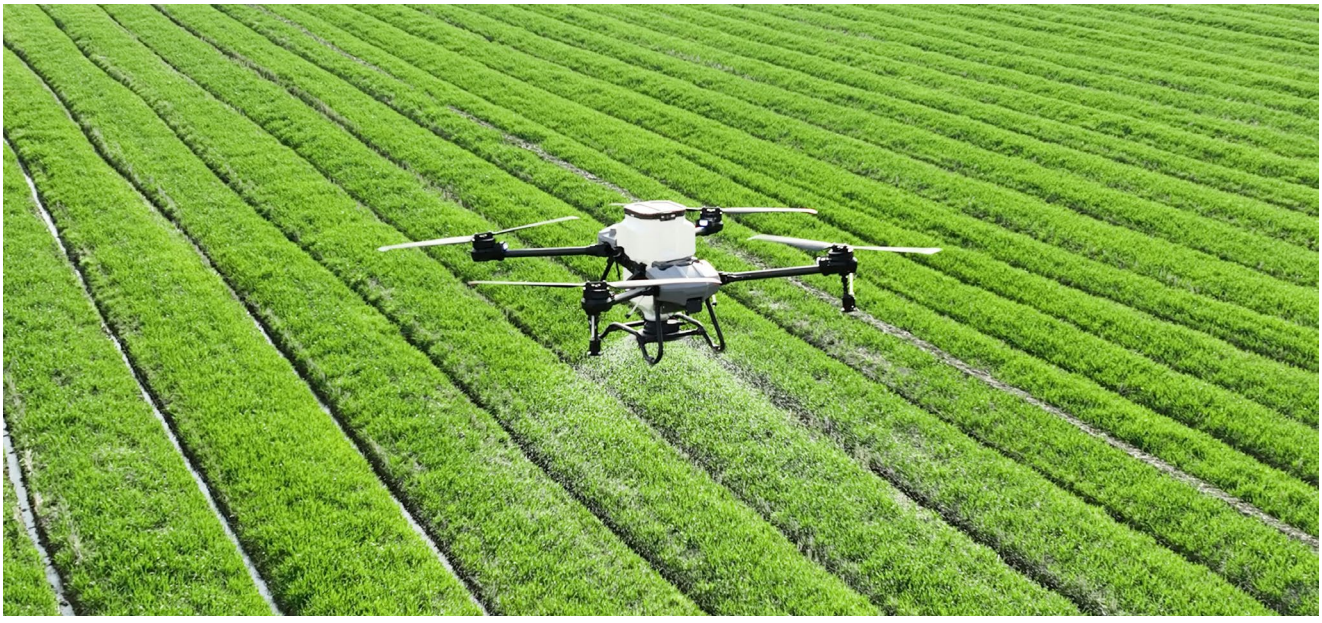
This development broadens the concept of digital reporting and allows a range of digital disclosures beyond merely eXtensible Business Reporting Language (XBRL)-tagged financial information. In this way, a company's digital disclosure footprint can now include a broad range of data, such as executive social media posts, images used in annual reports and multimedia content featuring corporate leaders.

As a result, we are now seeing extensive use of virtual data rooms (VDRs) in corporate finance activities, such as initial public offerings (IPOs) and venture capital deals.

VDRs are a digital analogue or extension of the physical rooms in which high-stakes deals were discussed and done.

They are a secure, online repository for storing and sharing confidential documents. Moreover, whereas these were, until recently, mere repositories of massive amounts of data, the major providers of VDRs now all offer both large language model (LLM) search capabilities and AI-generated summary results.

This is a highly strategic theme and it takes in a group of scholars across a range of disciplines. Their expertise includes digital transformation, M&A, dividend policy, capital structure, corporate governance, corporate disclosure, analyst research and digital reporting. They hold leadership roles in key academic associations and editorial boards, have strong publication records and comment regularly in leading media such as Financial Times, Bloomberg, BBC, CNN and CNBC. Our researchers are shaping global academic and professional discourse in this area.



AI, hyper-automation and the limits of technology in M&A

Recent research at Bayes highlights how AI, advanced data analytics and hyper-automation are reshaping the mergers and acquisitions (M&A) lifecycle. But it also demonstrates the limits of technology-driven decision-making. M&A provides a particularly powerful lens through which to study digital transformation in finance, as it brings issues of valuation, disclosure, risk assessment, governance and post-transaction integration into a single, high-stakes process.

Evidence from recent transactions shows that AI-enabled tools can materially improve multiple stages of the deal process. In deal sourcing, data-driven screening and predictive analytics expand the search space beyond traditional networks, allowing firms to identify targets more efficiently.

During due diligence, AI-based anomaly detection, natural language processing and robotic process automation (RPA) can significantly reduce information asymmetry by processing large volumes of structured and unstructured data more rapidly and consistently than manual methods. In valuation, predictive models and real-time data integration can enhance the assessment of growth prospects, intangible assets and downside risks, particularly in technology-intensive sectors.

However, detailed case-based analysis of high-profile transactions—including HP–Autonomy and Farfetch–Violet Grey—demonstrates that advanced analytics alone cannot prevent value-destroying deals. In these cases, failures were driven not by a lack of data or computational power, but by strategic misalignment, unrealistic growth assumptions, cultural incompatibilities and weaknesses in post-merger integration planning. Over-reliance on quantitative outputs can also amplify model risk, obscure qualitative red flags and create a false sense of precision in valuation.

This research, therefore, argues for a hybrid decision-making model in which AI and automation augment, rather than replace, human judgement. While technology delivers speed, scale and analytical depth, experienced professionals remain essential for interpreting results, stress-testing assumptions, assessing organisational fit and exercising governance oversight.

From a policy and practice perspective, the findings underscore that responsible adoption of AI in corporate finance requires strong data governance, model transparency and clearly defined accountability structures alongside technological innovation.

Scott Moeller

Professor in the Practice of Finance, Founder of the M&A Research Centre

Scott is the founder and former Director of the M&A Research Centre and the former CEO and Director of Executive Education at Bayes. His experience includes 24 years in banking and consulting in New York, Tokyo, Frankfurt and London.

Michel Driessen

Professor in the Practice of Finance and the Director of the M&A Research Centre

He has more than 18 years' experience in banking and consulting, working in Amsterdam, London, New York and Sydney.

Examples of projects

AI for better deals

This project uses AI to extract information to improve the M&A and private equity deal process. Areas it benefits include M&A target selection, due diligence and post-deal integration.

Bayes' M&A Research Centre (MARC) has produced several studies that look at the use of AI in M&A. These build on the 2023 book *The Deal Paradox*, by Anna Faelten, Michel Driessen and Scott Moeller, which examines how AI, big data and machine learning are changing deal sourcing, due diligence, valuation and post-merger integration.

In early 2024, MARC published a white paper that looked more deeply at the technology side of this transition: *AI in M&A: How technology is changing how deals get done*, which was based on analyses done with the world's largest VDR firm, SS&C Intralinks.

Identifying shareholder activism targets with textual data

Every year, in conjunction with SS&C Intralinks, MARC produces the only global comparative analysis of the level of leaks in public M&A deals at the country level. These have been used by regulators throughout the world (including the UK, Canada and Australia), to inform regulatory changes in their markets. In addition, the annual report is picked up in both the international and country-level press when there are interesting changes in the international ranking of the most leaky countries.

This has recently been expanded through our research on shareholder activism. Here Bayes is one of the world's leading research centres and is looking at the ways that shareholder activists identify target companies and how they pressure companies to change. We have married these two areas of research to identify whether the use of AI (and specifically textual analysis) can predict the value of deals that are more likely to be leaked. Deals that are leaked are likely to come under further regulatory scrutiny and there could be possible implications related to the deal pricing and likelihood of closing. This analysis is ongoing.

Using AI to identify insider trades

This project area has identified insider trading activity at firms whose supply chain companies are subject to takeover bids. Insiders are prohibited from using non-public information such as when their own company is subject to a takeover bid. The hypothesis tested in this research is that they will circumvent this regulatory constraint by trading in shares of their firm's supply chain companies.

This is sometimes called "shadow trading" and does involve inside information. The fact that a customer is subject to a takeover bid may mean increased (or reduced) demand, which the market as a whole and even the firms themselves do not know yet. This could have implications for the future profitability of supply chain firms and even the probability of them being taken over themselves. Thus, these trades might be expected to generate positive returns as the market may not reflect fully the impact of the takeovers of their supply chain firms. This research requires large quantities of data to train AI to predict future events where insiders are likely to trade, but the models need to be proven (and therefore, trained) first using historical data. This research is also of keen interest to the national regulators globally, as they seek to eliminate insider trading.

Valeriya Vitkova

Associate Professor of Finance at Bayes Business School

Valeriya specialises in Corporate Finance with a particular focus on Mergers and Acquisitions.

Meziane Lasfer

Professor of Finance

Meziane's teaching and research interests include applied corporate finance, capital markets and corporate governance.

Using AI to improve corporate misconduct detection

This research uses AI to detect misconduct by insiders and assess how the market reacts to such behaviour. The misconduct can include falsifying financial statements to hide debt, manipulating accounting loopholes, pressuring auditors to approve misleading accounts, misleading investors, employees and the public and insider trading by top executives before the information about the misconduct is released. The project may be extended to assess how companies respond to such misconduct by their insiders.

This project uses multimodal forms of data. Machine learning (ML) has been applied to analyse the narrative disclosures in regulatory filings and assess the likelihood of financial misreporting. Separately, photos of male CEOs have been used to measure their facial masculinity and connect this characteristic to financial misreporting. Multimodal AI has the potential to enhance corporate misconduct detection by analysing a company's digital disclosure footprint holistically across multiple data sources, such as videos of its annual general meeting, the transcript of its earnings conference call and the audio of a podcast interview with its CEO.

AI for enhancing financial statement analysis

Human-powered analysis of financial statements from businesses cannot keep up with the growing volume and complexity of disclosure. This can lead to investors missing or misinterpreting the information that businesses put out. AI can boost the accuracy and speed of analysing financial statements and reduce the cost, which can help investors make better and quicker decisions. Moreover, AI can process disclosures systematically and at scale, although its outputs still require careful validation.

AI-aided analysis has the potential to make financial information analysis more accessible to retail investors. They frequently do not have the resources to keep up with the information, which places them at a considerable disadvantage to many other entities.

One such tool developed by the Centre for Financial Analysis and Reporting Research at Bayes is Annual Report Analysis with AI (www.arawai.uk). It uses AI and the DuPont framework (a tool used in finance, where return on equity (ROE) is separated into its component parts) to analyse financial statements for FTSE 100 companies.

AI-enabled valuation of crypto projects: improving insight into emerging digital assets

AI is poised to transform how analysts, investors and regulators understand and value emerging crypto projects, such as decentralised applications (dApps) and Layer-2 blockchains. These decentralised ecosystems generate numerous digital signals—from transactional data and smart contract activity to community sentiment and governance participation. Yet they remain notoriously difficult to assess using traditional financial tools.

The application of AI offers the potential to extract structured insights from this multidimensional, complex and often confusing data, enabling better-informed risk assessment and asset valuation. However, several challenges remain, such as designing reliable AI models, handling unstructured and high-volume data and aligning valuation approaches with the unique dynamics of decentralised networks. The future of digital asset valuation may depend on how effectively AI integrates these data sources while meeting the expectations of investors, regulators and the broader financial system.

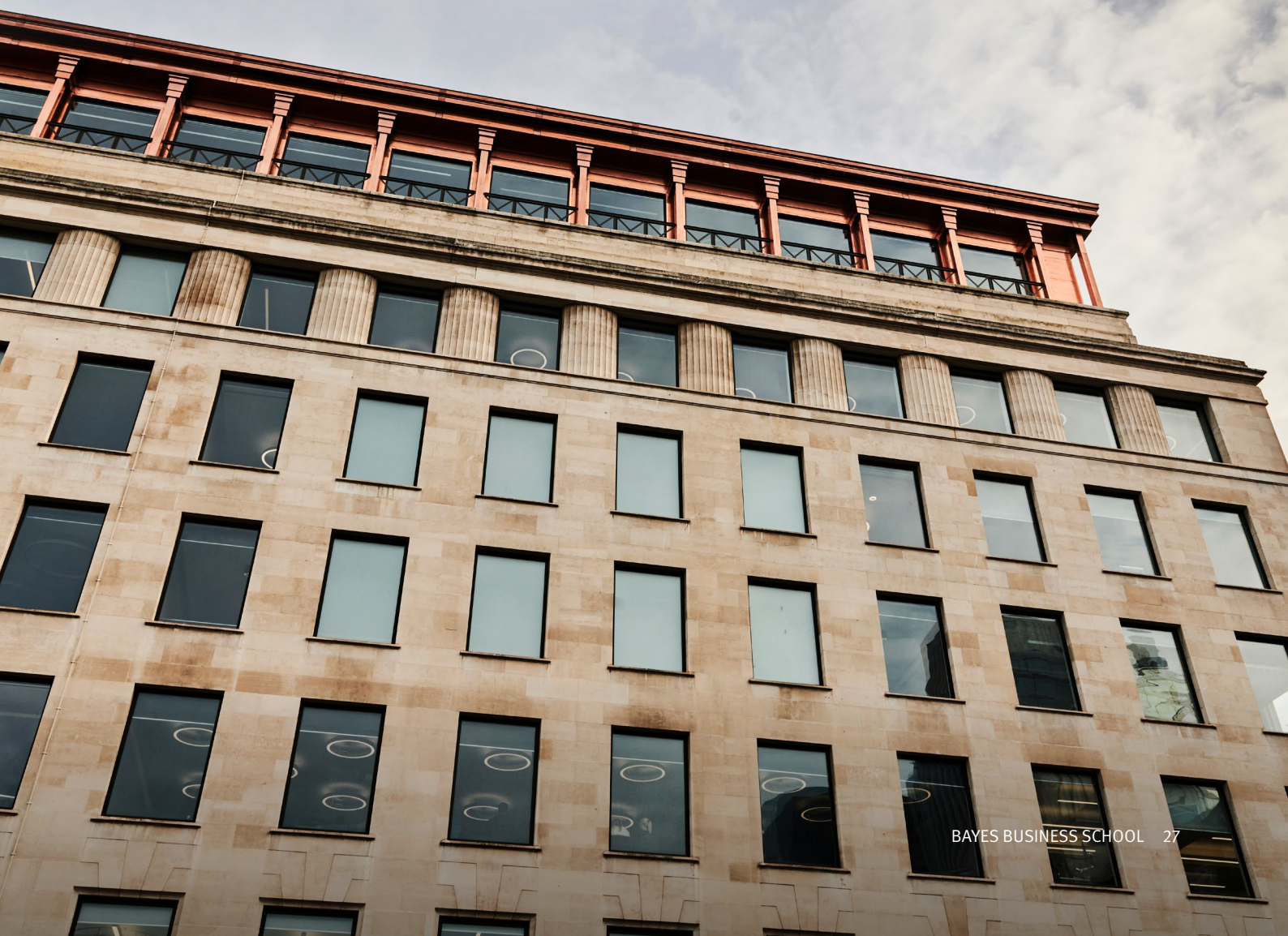
This project will examine a variety of issues. These include:

- How can AI be used to systematically analyse on-chain activity, governance participation and user engagement to inform valuations of crypto projects?
- How can narrative and multimedia disclosures (e.g., whitepapers, community updates, social media) be incorporated into valuation models using NLP and multimodal AI techniques?
- What are the risks and limitations of using AI-driven models for digital asset valuation, particularly in terms of reliability, bias and explainability?
- How can financial professionals and regulators build frameworks to ensure responsible and explainable AI use in the valuation and disclosure of crypto assets?

Research centres and research groups

Several Bayes research centres, groups and faculty members contributed to this work, including:

- Faculty of Actuarial Science and Insurance
- Faculty of Finance
- Centre for Banking Research
- Mergers and Acquisitions Research Centre
- Centre for Financial Analysis and Reporting Research



Conclusion

In this document, we focused on the question of "What does the future of finance and insurance hold?"

The simple answer is that the technologically enabled transformation that has taken place over the past few decades will continue and indeed accelerate. But perhaps its effects will be uneven. Not every process and financial instrument will experience the same degree of change and certainly not at the same time.

Across banking, insurance and accounting, research at Bayes shows that while artificial intelligence and automation are transforming financial decision-making, their greatest value lies in complementing strategic clarity, institutional judgement and robust governance, particularly in complex, high-risk settings such as M&A.

Those who work in finance need to be aware of the challenges and opportunities all this poses. They need to understand what it means for their sector, but also for other sectors. The interconnectedness of the global financial system was thrown into stark relief by the Financial Crisis of 2008. It has become orders of magnitude more complex and connected in the nearly 20 years since then.

But while this is a challenge, there are also enormous opportunities in finance, as far apart as insurance and disclosure. In the former, this could mean policies that automatically pay out when certain metrics are met. This could change lives, especially in developing countries. In the latter, this could mean clamping down on insider trading and giving small investors access to much richer information. Both would leverage AI. Other possibilities include valuing crypto assets far more robustly and accurately and mapping the effects of activist shareholders.

Although AI is currently at the forefront of change, it is certainly not the only change underway. In insurance, climate change is likely the biggest change. The way we use technology will have huge effects. Moreover, the complexity of systems, ranging from digital banking to global supply chains, is growing and interacting with an increasingly geopolitically unstable world.

Anyone working in finance needs to have at least an overview of these changes and their likely implications. But it's not just for anyone in finance, but for anyone in business. Or indeed anyone at all. A healthy, usable, robust, ethically sound financial system that serves society should concern everyone.

This thinking sits at the heart of what we do at Bayes. We have one of the largest and most diverse finance departments in Europe, bringing together some of the world's leading academics, industry experts and thought leaders, along with the brightest young minds. But our ambition is not simply to track change — it is to help answer the institutional questions that change poses: how the financial system stays resilient as risks grow more interconnected, how trust is sustained as decisions are delegated to machines, how insurability is preserved as the protection gap widens and how governance and the responsible use of AI keep pace with innovation. We work on these problems because we believe passionately in a financial sector that is resilient, trusted, well governed — and that works for everyone.

Working with us

This white paper is written to be useful to several audiences: business leaders in finance and insurance trying to understand how AI, digitalisation, climate risk, cyber risk and new asset classes will reshape their organisations; regulators and policymakers developing supervisory and policy frameworks for more resilient and trusted financial systems; professional bodies and practitioners seeking evidence-based insight into the future of banking, insurance, accounting and corporate finance; and researchers working on the theoretical and empirical questions these changes now raise.

The harder questions are best worked out with partners. We are particularly interested in working with organisations grappling with the strategic, governance and operational implications of technological change; with insurers, banks and professional service firms responding to new forms of risk and uncertainty; with regulators and policy bodies looking for independent research on market resilience, accountability and responsible innovation; and with research groups whose work complements ours.

At Bayes, our research brings together expertise in insurance, banking, accounting, corporate finance, AI, analytics, risk, governance and regulation. We are especially interested in collaborations around insurability and protection gaps, climate and cyber risk, digital banking, financial stability, AI-enabled disclosure, assurance and compliance, M&A decision-making, corporate misconduct detection, crypto valuation and the responsible use of automation in financial decision-making.

Those who would like to engage on specific areas of our research are welcome to contact the relevant theme leads and research centres named in this paper. Enquiries of a broader nature can be directed to the Associate Dean for Research and Innovation.

The future of finance and insurance is still being shaped. We would like to work on it with you.

bayes.citystgeorges.ac.uk/faculties-and-research/research

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