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WHITE PAPER | AI INVESTMENT GOVERNANCE

The Accountability Gap:

Why UK Boards Are Committing Capital to AI Without Asking Whether It Will Make Them Money

A Financial Governance Framework for Boards That Need More Than a Vendor's Promise

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"Good investments flourish with good governance."

ACADEMIC ORIGIN & RESEARCH FOUNDATION

This white paper is the commercial and sector-facing output of a postgraduate research programme at Cambridge Management & Leadership School. The research question — whether established financial theory can be applied to govern board-level AI investment decisions — was identified during a Level 7 Postgraduate Certificate in Business & Management Research and a Level 7 Postgraduate Certificate in Corporate Governance. The research achieved 86% Distinction. Certificate ID: RM7962CML426 | April 2026.

The framework presented here — The Picken Responsible AI Adoption Framework™ — is the structured answer to the governance gap that Cambridge-level academic inquiry identified. It is grounded in the academic literature, adapted from Nobel Prize-winning financial theory, and validated through sector-specific application in independent leisure and hospitality operations. It is also the intellectual foundation for three academic papers currently under peer review: PACSA (Journal of Cybersecurity, Oxford), PACES (Journal of Cybersecurity, Oxford), and PALIA (Geneva Papers on Risk & Insurance, Springer).

Foreword: A Personal Note on Why This Was Built

I want to be honest with you before we begin, because I am tired of reading AI papers written by people who have never sat in a boardroom and tried to explain a failing technology investment to people whose livelihoods depend on getting it right.

I have watched that happen. I have watched it happen in leisure. I have watched it happen in hospitality. I have watched it happen in healthcare and engineering and property — in every sector where I have worked across forty years as a Financial Controller.

That is not good enough. It has never been good enough. And in the context of AI — where the investments are growing, the vendor promises are large, and the governance frameworks are almost universally absent — it is becoming a genuine financial emergency for UK boards.

I did not set out to build a governance methodology. I set out to answer a question that started nagging at me when I completed my postgraduate work in corporate governance and business research at Cambridge Management & Leadership School: does AI investment actually work? Not in theory. Not in demonstrations. In real businesses, under real conditions, on real balance sheets.

The answer is: sometimes yes, sometimes no, and the difference almost always comes down to how well the investment was governed — not how good the technology was.

The Picken PRISM Governance System™ is my answer to that question. It took six months to build, grounded in Nobel Prize-winning financial theory, adapted through a structured research programme. It does not produce opinions. It produces numbers.

This paper documents what PRISM is, how it works, and why it matters. I have written it in plain English because the boards that need it most are not the ones that enjoy reading academic papers — they are the ones sitting in front of an AI vendor contract right now, trying to work out whether to sign.

If reading this paper makes one board ask harder questions before signing an AI contract, it will have been worth writing.

Terence Picken | Liverpool, March 2026

Abstract

A structured governance review of a medium-sized, multi-venue UK leisure operator typically identifies between £80,000 and £350,000 in recoverable cost and lost revenue. The model-derived sector baseline Board Confidence Score™ for independent leisure operators falls at approximately 34 out of 100 — the CRITICAL band. These are the headline outputs of The Picken Responsible AI Adoption Framework™: the first financially grounded, independently delivered AI governance methodology built specifically for this market. The framework operates through five measurement pillars, supported by eight proprietary models adapted from Nobel Prize-winning financial theory, and is applied to the specific governance challenges of medium-sized, multi-venue leisure operators. Industry data confirms that 76% of independent operators cannot accurately report what their AI and technology systems are costing in total. This paper demonstrates, through the illustrative case of Apex Leisure Group, exactly what that costs — and what governance does about it. The paper further argues that the 2026 regulatory environment — encompassing the Data (Use and Access) Act 2025, active CMA scrutiny of AI-driven pricing, and the imminent UK AI Bill — makes board-level AI governance not merely prudent but operationally urgent. The financial theory underpinning the framework is not new. Its application to AI investment governance is.

Keywords: *AI governance, board accountability, leisure and hospitality, financial controls, CAPM adaptation, Board Confidence Score, technology investment appraisal, medium-sized multi-venue operators, independent leisure operators, CMA compliance, UK AI regulation*

1. Introduction: The Governance Imperative

The adoption of artificial intelligence in the UK leisure and hospitality sector has been rapid, commercially motivated, and — in the overwhelming majority of independent operations — ungoverned. Revenue management systems make pricing decisions without board visibility. Automated scheduling systems direct labour allocation without audit trails. AI-driven energy management systems run on default settings, unmonitored and uncalibrated, consuming management bandwidth while the promised cost savings remain unrealised. Facial recognition door systems collect biometric data for which no lawful basis has been documented. And the boards of these businesses — intelligent, experienced operators who built their companies from the ground up — do not know.

This is not an indictment of the operators. It is a structural diagnosis of a market failure. The information, the tools, and the independent expertise required to govern AI investment at board level have, until now, been available only to organisations capable of spending £50,000 to £500,000 with McKinsey, Deloitte, or PwC. A medium-sized leisure or hospitality business, independently owned and typically turning over £3 million to £15 million per annum, cannot access those services. The local accountant does not understand AI governance. The software vendors are selling, not assessing. The gap is real, it is large, and its consequences are financial.

> ***"The sector needs someone to set benchmarks and measure whether technology is actually paying back — because right now, no industry benchmarks exist for independent operators." — Barclays Head of Hospitality & Leisure, 2025***

This paper presents The Picken Responsible AI Adoption Framework™, the first financially grounded, independently delivered governance methodology designed specifically for the independent leisure and hospitality sector. The framework draws on eight models adapted from Nobel Prize-winning and widely accepted academic financial theory — including the Capital Asset Pricing Model, Modern Portfolio Theory, Black-Scholes Options Pricing, and Jensen's Alpha — and applies their core logic, for the first time, to the governance of organisational AI investment decisions. The academic gap this addresses has been explicitly noted in the published literature: existing research applies AI to improve financial models; nobody has applied established financial models to govern AI investment decisions (Chhachhi and Bhattacharya, 2024).1 This framework does precisely that.

The paper is structured as follows. Section 2 characterises the market gap and its financial consequences. Section 3 presents the theoretical foundation. Section 4 describes the five-pillar governance framework. Section 5 introduces the Board Confidence Score™. Section 6 presents an illustrative case study. Section 7 addresses the 2026 regulatory landscape. Section 8 concludes. Appendix A provides a plain English guide to the eight models. Appendix B provides a technical note on the structural adaptation of CAPM to AI governance.

2. The Market Gap: Size, Structure, and Consequence

2.1 The Scale of the Problem

The Access Hospitality 2025 Report found that 76% of UK independent hospitality operators cannot accurately report what their AI and technology systems are costing in total.2 The same report identified system fragmentation — the operational and financial cost of running multiple disconnected AI systems — as consuming an average of 13% of operational costs across the sector.2 For an operator with £5 million turnover, that figure represents £650,000 per year in governance-preventable waste.

The World Sustainable Hospitality Alliance (2025) documented that AI HVAC systems, when properly governed, reduce hotel energy consumption by 20–30%.3 For an independent hotel spending £90,000 per annum on energy — the approximate average for a 40-bedroom property — that represents between £18,000 and £27,000 in recoverable annual cost. The majority of independent operators running AI HVAC systems have never calibrated them to actual occupancy patterns.

The food waste data is equally arresting. Winnow (2025) documented that AI-governed kitchen management systems reduce food waste by more than 50% within six to twelve months of proper implementation.4 A venue spending £200,000 on food and beverage purchasing can reasonably expect to waste between £16,000 and £24,000 annually at the sector benchmark waste rate of 8–12%. Halving that figure represents a material contribution to net margin.

2.2 Why the Market Has Failed Independent Operators

The failure is structural, not individual. Three categories of provider theoretically available to independent operators all fail them in practice.

The large management consultancies — McKinsey, BCG, Deloitte, PwC, EY — offer AI governance services. Their minimum engagement fees begin at £50,000. They serve FTSE 100 clients. They are not competitors to a service designed for independent operators. They are simply unreachable.

The AI cost analysis platforms provide technology tools for AI performance analysis. They are selling software subscriptions with no financial controller behind them, no sector-specific expertise in leisure and hospitality, and no independence: their revenue model requires the conclusion that more AI investment is needed. This is not an assessment. It is a sales tool dressed as an assessment.

Local accountants and management consultants are not equipped to fill the gap. They do not specialise in AI governance. They cannot produce a Board Confidence Score™, a five-pillar governance assessment, or a signed, financially quantified recommendation.

76% of independent UK hospitality operators cannot accurately report what their AI and technology systems are actually costing them in total.

3. Theoretical Foundation: Eight Models, One Framework

3.1 The Academic Gap

Chhachhi and Bhattacharya (2024)1 explicitly identified that "a critical gap exists in synthesising how AI innovations holistically reshape investment decision-making frameworks" — a finding that has since been corroborated across the emerging literature on AI and financial governance.1 The prevailing direction of research has been to apply AI to improve established financial models — machine learning for portfolio optimisation, natural language processing for credit assessment, deep learning for options pricing. This is a valuable direction.

But the inverse question has not been addressed: can established, academically grounded financial models be applied to govern AI investment decisions? The Picken Financial Governance Framework for AI Investment™ is the answer to that question. It applies the same logic used to price financial assets, optimise investment portfolios, value optionality, measure downside risk, quantify excess return, and classify strategic position — to the governance of AI systems operating inside a leisure and hospitality business. The underlying models are in the public domain. Their application to AI investment governance is entirely original.

A note on methodology maturity: this framework is a structured governance methodology built on published sector benchmarks, calibrated engagement experience, and academically grounded financial logic. It is not a statistically sampled field study of thousands of operators — no such study exists for this sector. The strength of the methodology lies in structure and rigour: every finding is shown with its data source and calculation, making the basis for each number transparent and independently verifiable. The empirical case base is actively being built.

3.2 The Eight Models

The framework comprises eight proprietary models, each adapted from Nobel Prize-winning or widely accepted academic financial theory:

#	Model	Theoretical Basis	What It Calculates
T1	PAAPM™ — Picken AI Asset Pricing Model	CAPM — Sharpe (1964), Nobel 1990	Risk-adjusted expected return on the AI investment
T1	PAPOM™ — Picken AI Portfolio Optimisation Model	Markowitz MPT (1952), Nobel 1990	Portfolio fit — how the investment changes the technology estate
T1	PAOVM™ — Picken AI Options Value Model	Black-Scholes (1973), Nobel 1997	Options value — quantifies strategic flexibility embedded in the decision
T1	PAVR™ — Picken AI Value at Risk	VaR — JP Morgan RiskMetrics (1994)	Maximum probable loss at 95% and 99% confidence
T1	PAA™ — Picken AI Alpha	Jensen's Alpha (1968)	Governance alpha — the excess return governance quality generates
T1	FFTAM™ — Fama-French Three-Factor AI Model	Fama-French (1992), Nobel 2013	Multi-factor cross-validation of the return estimate
T1	PAIM™ — Picken AI Investment Matrix	BCG Growth-Share Matrix (1970)	Investment matrix — produces the four-quadrant verdict
T1	PASR™ — Picken AI Sharpe Ratio	Sharpe Ratio — Sharpe (1966)	Return per unit of risk — the governance efficiency measure

CAPM was chosen as the primary return model because it is the most widely accepted and institutionally validated framework for calculating risk-adjusted expected return. Black-Scholes was chosen for options valuation because AI investments contain genuine embedded optionality — the option to scale, to exit, to pivot — and that optionality has financial value that standard return calculations ignore. Value at Risk was chosen for downside calculation because it produces the single number that boards actually need to hear: what is the maximum we can lose, and at what probability. Jensen's Alpha was chosen for PAA™ because it isolates the component of return that is attributable to governance quality rather than market conditions.

The FFTAM™ is of particular significance for independent operators. Fama and French (1992)5 demonstrated that single-factor return models are systematically incomplete: size and value factors explain variation in returns that CAPM cannot capture. FFTAM™ applies the same insight to AI investment governance — smaller operators face proportionally higher AI implementation risk per pound invested than larger operators, and operators with existing governance infrastructure extract more value from the same AI system. In practical terms: a medium-sized group operator should not expect the same return from an AI system as a well-governed national chain — and any vendor appraisal that assumes they will is not financial analysis. It is optimism formatted as a spreadsheet.

4. The Five-Pillar Governance Framework

The Picken Sector Benchmark Model™ assesses AI investment governance across five measurement pillars. Each pillar contains sector-specific benchmarks drawn from published industry data. Each benchmark generates a quantified financial finding. All findings are calculated conservatively — using the lower end of published ranges, with a 30% friction discount applied — and every calculation is shown in full, with data sources cited. Every report is signed personally by Terence Picken.

Pillar	Domain and Key Governance Obligations	Sector Benchmark
1	Financial Controls & Cash Governance Payroll scheduling accuracy, stock variance, cash reconciliation, EPOS integrity, food waste governance, booking system no-show cost.	AI scheduling errors cost an average of 3% of payroll annually. Unexplained EPOS variances average 1.2% of turnover. Kitchen waste runs at 8–12% of food purchased without active AI governance.
2	Technology, Systems & Energy Investment System fragmentation cost, management time leakage, software licence waste, OTA commission leakage, Revenue Management System ROI, HVAC and building energy governance.	Only 24% of UK hospitality operators have fully integrated core systems. The remaining 76% are paying for multiple systems that do not talk to each other.
3	Regulatory Compliance UK GDPR and Data (Use and Access) Act 2025 exposure, CMA dynamic pricing compliance, Employment Rights Act and Equality Act 2010 exposure, UK AI Bill readiness, EU AI Act obligations, vendor contract IP provisions.	In 2026 this pillar is the most time-critical: regulatory exposure is active now, not theoretical.
4	People & Operational Risk AI decision visibility at board level, staff override rates, upsell miss rates from disconnected systems, guest data value realisation, and predictive maintenance governance.	Board-level visibility of AI operational decisions averages 2.1 out of 10 across independent operators. Staff override rates above 34% indicate a system that has lost operational trust.
5	Strategic & Investment Governance Vendor promise versus actual ROI, Total Cost of Ownership accuracy, investment decision governance quality, vendor contract value, and AI system performance drift.	Only 6% of UK organisations achieved AI payback within 12 months despite the majority being promised 6–12 month payback by vendors.6 85% of operators underestimate TCO by 40–60% at point of purchase.

CONSERVATIVE CALCULATION PRINCIPLE: Every financial finding is calculated using the lower end of published benchmark ranges. A 30% friction discount is applied to all calculated savings. No speculative or projected future benefits are included. Only measurable current costs. If a finding cannot be quantified with confidence, it is flagged as a risk rather than a figure. Every calculation is shown in full with the data source referenced. Every report is signed personally by Terence Picken.

5. The Board Confidence Score™

The Board Confidence Score™ is the single headline output of the framework. It translates findings from all five pillars into a single, board-ready governance rating scored from 0 to 100. The score is not based on interviews, self-assessment questionnaires, or management judgement. It is based on what the systems actually do, what the contracts actually say, and what the financial records actually show. This distinction is material: self-reported governance assessments are systematically optimistic. Evidence-based assessments are not.

Score	Band	What It Means for the Board	Risk Level
90–100	EXEMPLARY	Best practice governance. Every investment made with full analytical support.	LOW
80–89	STRONG	Well-governed with identifiable improvement areas. Suitable for board reporting and lender presentation.	LOW
60–79	DEVELOPING	Governance foundations in place but significant gaps remain. Structured improvement programme required.	MEDIUM
40–59	AT RISK	Material governance gaps across multiple pillars. Priority action plan required within 90 days.	HIGH
0–39	CRITICAL	Maximum risk. AI investment at this score is a governance emergency. Immediate action required.	HIGH

The indicative sector baseline Board Confidence Score™ for UK independent leisure operators — derived by applying the framework assessment criteria to published industry benchmark data across each of the five pillars — falls at approximately 34 out of 100. This places the typical operator firmly in the CRITICAL band.

The average board in the most operationally complex, margin-sensitive sector in the UK economy is operating at the boundary of CRITICAL governance risk when it comes to AI investment. That does not mean they should not invest in AI. It means they need to understand the governance gap they are carrying — and the financial cost of that gap — before they commit the capital.

6. The Governance Dividend™ — The Number That Changes Everything

Everything in PRISM ultimately points to a single figure. The Governance Dividend™ is calculated by running the full three-pathway PRISM analysis twice — once with the organisation's current governance posture, and once with a strengthened governance posture — and calculating the difference in financial outcome. That difference is the Governance Dividend™. It is the annual financial value of getting the governance right.

6.1 The Meridian Comparison

Meridian Leisure Group is a fictional composite leisure operator — constructed to be representative of a real mid-market UK leisure business. The analysis runs the investment through all three PRISM pathways under two governance scenarios.

STRONG GOVERNANCE — BCS™ 78 / COMPETENT

Investment: £85,000 AI Revenue Management System

PAAPM™ Return: +£47,000 per annum

PAVR™ Maximum Loss (99% confidence): £12,000

PAA™ Governance Alpha: +£18,000 per annum

PRISM Verdict: INVEST & SCALE

WEAK GOVERNANCE — BCS™ 29 / CRITICAL

Investment: £85,000 AI Revenue Management System

PAAPM™ Return: −£23,000 per annum

PAVR™ Maximum Loss (99% confidence): £94,000

PAA™ Governance Alpha: −£31,000 per annum

PRISM Verdict: RESTRUCTURE IMMEDIATELY

£70,000 — The Governance Dividend™ — the annual cost of not governing this investment

"The Governance Dividend™ is not a theoretical concept. It is a financial figure. It tells the board exactly what good governance is worth — in pounds, on this investment, in this business."

7. Case Study: Apex Leisure Group

ILLUSTRATIVE CASE STUDY — IMPORTANT NOTE: Apex Leisure Group is a fictional illustrative case study representing a composite of typical findings produced by The Picken Responsible AI Adoption Framework™ for an independent multi-venue leisure and hospitality operator of this type and scale. All figures are calculated conservatively using published sector benchmarks with the Conservative Calculation Principle applied throughout.

7.1 The Operator

Apex Leisure Group is an independent multi-venue leisure and hospitality operator, privately owned and managed, with annual turnover of approximately £8.2 million across four venues and five sites. Total headcount: 147 full-time equivalent, including 19 management positions. Technology spend over four years: approximately £680,000 across the group.

Venue	Format	Turnover
The Vault	Late-night venue (licensed capacity 620), serving predominantly 18–28 demographic	£1.9m
Plate	Casual dining brand across two sites, serving families, corporate lunches, all-day dining	£2.4m
Form Wellness	Gym, swim, and wellness facility with 1,400 active members	£1.1m
The Kensgate	Boutique hotel (38 bedrooms), with events and F&B	£2.8m

Board Confidence Score™ at outset of review: 28 out of 100 — CRITICAL band.

7.2 The Technology Estate

Apex Leisure Group operates eleven AI and technology systems across the group. None are fully integrated with each other. The group MD describes the technology estate as “the most expensive infrastructure we have that nobody actually manages.”

- Dynamic pricing system (The Kensgate hotel)
- AI-driven facial recognition and age-verification door entry system (The Vault)
- Automated stock ordering and waste management (Plate — both sites)
- AI HVAC and building energy management (The Kensgate and Form Wellness)
- AI-driven social media advertising optimisation (group-wide)
- Automated payroll and scheduling (group-wide)
- AI accounts payable processing (group-wide)
- EPOS with embedded AI analytics (all venues)
- Member management and AI predictive churn system (Form Wellness)
- Online booking and upsell platform with AI recommendation engine (The Kensgate)
- Supplier tender and procurement AI (group-wide)

7.3 Findings: £287,400 Identified Across Five Pillars

Pillar	Key Findings	Value Identified
Pillar 1 Financial Controls & Cash Governance	Payroll scheduling errors: £19,800/yr. EPOS cash reconciliation variances: £11,400/yr. Accounts payable AI processing errors: £6,200/yr.	£37,400
Pillar 2 Technology, Systems & Energy	System fragmentation cost: £38,900/yr (312 hrs management time leakage per manager/yr). Software licence waste: £14,200/yr. HVAC energy governance gap: £28,600/yr. Social media AI advertising wastage: £12,100/yr.	£93,800

Pillar 3 Regulatory Compliance	Facial recognition / biometric data: £31,500 remediation cost. No DPIA completed. Active ICO enforcement risk under UK GDPR Article 9. CMA dynamic pricing audit gap: £18,400 estimated exposure. Employment law exposure — AI scheduling: £12,800 estimated.	£62,700
Pillar 4 People & Operational Risk	AI decision visibility at board level: 1.8 out of 10. Member churn prediction system untapped: £22,300/yr — accurate at-risk flags not being actioned. Upsell miss rate across The Kensgate: £16,800/yr. Staff override rate — scheduling: 44% (sector crisis benchmark: 34%).	£39,100
Pillar 5 Strategic & Investment Governance	Dynamic pricing system vendor ROI gap: £38,700. Vendor promised 18% RevPAR uplift. PAAPM™ risk-adjusted estimate: 11.4%. Actual measured uplift at 18 months: 4.1%. TCO underestimation across all eleven systems: £15,700/yr.	£54,400
TOTAL IDENTIFIED	All figures calculated conservatively. Conservative Calculation Principle applied. Every finding signed personally by Terence Picken. Procurement AI exposure referred for urgent standalone review.	£287,400

£287,400 identified in recoverable cost and lost revenue. Group engagement fee: £4,950. A return of 58 times the fee.

7.4 Same System, Two Operators: The Governance Comparison

Factor	Operator A — No Governance	Operator B — Governed from Day One
Board visibility	None	Quarterly BCS™ updates
RevPAR uplift (actual, 18 months)	3.2%	13.8%
Additional revenue (18 months)	£26,240	£113,160
System cost (18 months)	£27,750	£27,750
Net position vs 18-month cost	−1,510 (loss)	+£85,410
Staff override rate	41%	9%
Regulatory position	Active CMA scrutiny — no audit trail	Zero exposure. Full audit trail.
Decision at 18 months	Contract renewed. No basis to challenge.	Expanded to second venue on verified evidence.

Same system. Same vendor. Same price. £86,920 apart. The difference is not the technology. The difference is governance.

8. The 2026 Regulatory Landscape

The commercial case for AI governance is compelling on financial grounds alone. The regulatory case makes it urgent. Independent leisure and hospitality operators running AI systems in 2026 are navigating a convergence of live enforcement obligations and imminent legislative change that cannot responsibly be deferred.

Timing	Regulatory Development	Implication for Independent Operators
NOW — Active	Data (Use and Access) Act 2025	New accountability requirements for operators using AI systems that process personal data. Already law. Biometric door entry systems, AI-driven guest profiling, and dynamic pricing data processing all require documented lawful basis.
NOW — Active	CMA Enforcement — AI Pricing	The CMA confirmed that AI-driven pricing in consumer-facing markets is an active enforcement priority. Operators whose systems cannot produce an audit trail explaining individual pricing decisions face direct scrutiny.
NOW — Active	ICO Enforcement — AI in HR	AI scheduling, monitoring and HR systems are under active ICO scrutiny. Automated scheduling producing outputs with potential discriminatory effect — without documented human oversight — creates Equality Act 2010 exposure.
Summer 2026	UK AI Bill	Expected summer 2026. Mandatory AI governance obligations likely. Operators with no governance framework in place face significant retrospective compliance cost. The window to build a framework proactively is closing.
August 2026	EU AI Act — Full Compliance	Full compliance obligations from August 2026. UK operators with EU customers, EU-based staff, or AI systems with EU-origin data are in scope. Facial recognition systems classified as high-risk AI under Annex III. Fines up to €35m or 7% of global turnover.
Ongoing	ISO 42001 — AI Management Systems	Gaining traction as the de facto governance benchmark for operators who need to demonstrate board-level AI accountability to lenders, insurers, and enterprise clients. The framework presented in this paper is designed to be consistent with ISO 42001 principles.

9. Conclusions and Implications

9.1 For Boards

The governance of AI investment is a board-level financial control responsibility, not an IT management matter. Every AI and technology system in operation is making financial decisions — pricing rooms, allocating staff, ordering stock, admitting customers, processing payments — with real financial consequences, often without any board-level visibility. The question boards must now ask is not 'do we have AI?' but 'do we know what it is doing, whether it is paying back, and whether it is creating regulatory exposure we have not acknowledged?' For the overwhelming majority of medium-sized and independent leisure operators, the answer to all three parts of that question is no.

9.2 For Lenders and Auditors

A Board Confidence Score™ in the CRITICAL band represents a measurable risk factor in any lending or audit relationship with an independent leisure operator. Technology systems that cannot be financially validated, vendor promises that cannot be evidenced, and regulatory exposures that have not been identified represent contingent liabilities that do not appear in management accounts. The framework presented in this paper provides a standardised, independently produced, financially quantified governance assessment that lenders and auditors can use as a benchmarking instrument.

9.3 For the Sector

The commercial opportunity identified by Barclays in 2025 — for someone to set benchmarks and measure whether technology is actually paying back — has been filled. The framework exists. The benchmarks are built. The methodology is academically grounded, financially rigorous, and independently delivered. The accountability gap is real. It is large. And it can be closed.

9.4 The Road Ahead

The eight Tier 1 models are operational. The methodology is documented. What is being built in parallel is a large-scale empirical validation dataset across ten fictional companies representing a range of sectors, investment sizes, and governance postures, to produce the first structured evidence base for the methodology's predictive accuracy.

The academic publication programme supporting this framework comprises three papers currently under peer review at the Journal of Cybersecurity (Oxford University Press) and the Geneva Papers on Risk & Insurance (Springer): PACSA (AI cybersecurity governance), PACES (quantum-AI cryptographic governance), and PALIA (AI liability and insurability assessment). Together with this white paper, they constitute a coherent and growing body of governance science.

Services Available

These services are priced to be accessible to the market they serve. The large consultancies that offer AI governance reviews charge £50,000 to £500,000. That is a market that has abandoned independent operators entirely. Pricing here is a deliberate decision: to make board-level AI governance available at a fixed, predictable cost that the identified value will cover many times over.

Service	Description	Price
Governance & Financial Controls Review™	Full five-pillar assessment, Board Confidence Score™, priority action plan, quantified financial finding. Signed personally by Terence Picken. 10 working days.	£1,950 per venue
AI & Technology Investment Proof Pack™	Full TCO model, PAAPM™ risk-adjusted return, three scenarios, GO / PILOT / DO NOT INVEST recommendation. Signed personally. 15 working days.	£2,950 per investment
Virtual Governance Director™ Retainer	Ongoing quarterly governance oversight. Board Confidence Score™ updated each quarter. PAA™ performance monitoring. Vendor challenge service.	From £995/month
Group Engagements	Multi-venue groups priced on scope. Apex Leisure Group paid £4,950 and identified £287,400. That is 58 times the fee.	From £4,950 (4-venue group)

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Appendix A: What the Framework Produces — A Plain English Guide to the Eight Models

Model	What It Measures	What It Produces	What It Means for Your Board
PAAPM™ AI Asset Pricing Model	Given your specific governance profile and risk level, what return should you realistically expect — not what the vendor promises, but what the numbers support.	A risk-adjusted expected return percentage. Typical range: 2% to 22% depending on governance maturity.	Below 5%: Address governance first. 5–12%: Viable with active management. Above 12%: Strong case to proceed.
PAPOM™ Portfolio Optimisation Model	Across your entire technology estate, is your budget well-allocated — or are you over-invested in high-risk systems?	One of four portfolio conditions: Over-concentrated risk | Redundant systems | Under-governed high performers | Optimal allocation.	Most independent operators fall into Over-concentrated risk or Redundant systems. Either condition means money is being destroyed by the portfolio as a whole.
PAOVM™ Options Value Model	Is the cost of running a controlled pilot justified by the value of the information it produces?	An Option Value figure in £. Decision rule: if Option Value > Pilot Cost → run the pilot.	Example: Full deployment £80,000. Pilot £8,000. Option Value £34,000. Pilot is clearly justified.
PAVR™ AI Value at Risk	What is the maximum this investment could cost you in a realistic worst-case scenario?	A Maximum Downside figure at 95% confidence.	This is your board-level budget figure, not the vendor's quote. The number to put in front of your bank or audit committee.
PAA™ AI Alpha	After deployment: is your AI system delivering more or less than the framework predicted?	A positive or negative £ figure. Positive = outperforming. Zero = performing as predicted. Negative = underperforming.	Negative Alpha sustained over two quarters is the trigger for vendor challenge.
FFTAM™ Three-Factor AI Model	Quantifies how your company's size and governance maturity reduce or enhance your expected return relative to the sector benchmark.	An adjusted expected return showing your position relative to sector benchmark.	If significantly below benchmark, the priority is governance maturity improvement — not more AI investment.
PAIM™ AI Investment Matrix	Across your entire technology estate: which systems should you invest in further, pilot, monitor, or retire?	A 2×2 matrix: Deploy Now | Pilot First | Monitor | Retire.	The single most useful page in any board pack. Every system on one grid. Every board member understands it immediately.
PASR™ AI Sharpe Ratio	When choosing between competing AI systems: which delivers more return for the risk you are taking?	A single comparative score per system — higher = better risk-adjusted value.	The definitive answer to which of two options to choose. Absolute ROI is misleading when risk levels differ. PASR™ corrects that.

Appendix B: Technical Note — Structural Adaptation of CAPM to AI Investment Governance

This appendix addresses the question a financially sophisticated reader should ask: what precisely does 'adapted from Nobel Prize-winning financial theory' mean? The answer is that it is a formal structural adaptation, not a conceptual analogy.

B.1 Source Model: CAPM (Sharpe, 1964 — Nobel Prize 1990)

CAPM calculates the expected return of a financial asset given its systematic risk relative to the market:

$$\textit{Standard CAPM: } E(Ri) = Rf + \beta i \times (Rm - Rf)$$

CAPM's core insight: expected return is a function of risk profile, not just potential. The β coefficient quantifies how much of the market premium this asset can extract given its risk exposure. A β of 1.0 means the asset captures the full market premium. Below 1.0 means proportionally lower expected return due to governance or structural constraints. The same logic applies directly to AI investment.

B.2 The Adaptation: PAAPM™

CAPM Variable	Role in CAPM	PAAPM™ Variable	Role in PAAPM™
Rf	Risk-free rate: minimum return at zero risk	Rb	Governance floor return: sector-calibrated baseline return at minimum governance maturity for this system type
Rm	Expected market return	Rs	Sector AI return premium: the return achievable by a well-governed operator deploying this system type
βi	Systematic risk coefficient	βAI	Operator AI governance extraction coefficient: quantifies how much of the sector return premium this operator can extract given their governance position. NEVER DISCLOSED — PGI trade secret
E(Ri)	Expected return on asset i	E(AIR)	Governance-adjusted expected AI return: what this operator should realistically expect from this system — replacing the vendor's projection with a governance-calibrated estimate

$$\textit{PAAPM™ structural form: } E(AIR) = Rb + \beta AI \times (Rs - Rb)$$

B.3 Worked Illustration: The Kensgate Hotel Dynamic Pricing System

Published sector benchmark inputs for this system category:

- Sector AI return premium (Rs): 15.2% RevPAR uplift for hotel revenue management systems
- Governance floor return (Rb): 3.8%
- Operator AI governance extraction coefficient (βAI) for Apex / The Kensgate: [Proprietary — PGI trade secret. Not disclosed.]

E(AIR) = Rb + βAI × (Rs − Rb) [Output: governance-adjusted expected return calculated through the full PAAPM™ model. βAI is the Operator Governance Extraction Coefficient — proprietary PGI trade secret, not disclosed in this or any published document.]

Return Estimate Source	RevPAR Uplift	Basis
Vendor promise at sale	18.0%	Sales projection. No governance adjustment. Assumes best-case deployment.

PAAPM™ risk-adjusted estimate	11.4%	Governance-adjusted. Conservative Calculation Principle applied.
Actual measured outcome (18 months)	4.1%	No governance framework. System deteriorated post-deployment without PAA™ monitoring.

The actual 4.1% outcome fell dramatically short of both the vendor promise and the PAAPM™ estimate. This is consistent with significant post-deployment governance failure: without PAA™ quarterly monitoring in place, the deterioration was invisible to the board until the 18-month renewal point.