INDUSTRY RESEARCH WHITE PAPER

Deeper Thinking Services Limited

DTSL DEEPER THINKING SERVICES LIMITED

AI DISCOVERY & WEALTH MANAGEMENT

Actively Promoting Active Share in the Age of AI

How AI Discovery Engines Distort Access to Listed Investment Companies

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Executive Summary

As capital flows increasingly bifurcate between low-cost passive index trackers and high-conviction alpha strategies, investors face a marketplace saturated with products claiming "active management." In the UK wealth management landscape, closed-ended Listed Investment Companies (LICs) and Investment Trusts represent a well-established vehicle structure for active portfolio execution. Possessing permanent capital, freedom from daily redemption pressures, active gearing capabilities, and dividend reserve smoothing, investment trusts offer distinct operational tools for active portfolio managers.

However, as wealth managers, financial advisers, and retail investors transition from traditional search engines to conversational Large Language Model (LLM)-driven search interfaces (such as ChatGPT, Gemini, Claude, and Perplexity), a critical obstacle emerges: **The Algorithmic Discovery Gap**.

Empirical Benchmarking Summary (n = 362 Entity Mentions across 15 Prompts)

- **Severe Parametric Bias:** OpenAI's GPT-4o recorded a **Discovery Bias Index (DBI) of 0.86**, recommending open-ended funds (OEICs/UCITS) and ETFs in ≈88% of all fund mentions, while surfacing an investment trust as its primary recommendation in **0 out of 15 prompts**.
- **The Web-Search Fallacy:** Real-time web search retrieval does **not** correct structural bias. Perplexity Sonar Pro achieved a **DBI of 0.69**, demonstrating that Retrieval-Augmented Generation (RAG) ingests and magnifies the overwhelming volume of web-indexed OEIC marketing content and platform SEO listings.
- **Model Heterogeneity:** Google's Gemini Flash achieved near-neutral parity (**DBI 0.09**), regularly surfacing investment trusts alongside open-ended funds, whereas Anthropic's Claude Sonnet 5 exhibited moderate OEIC preference (**DBI 0.38**).

1. Contextual Baseline: The Closed-End Vehicle Structure

1.1 Structural Mechanics in Active Portfolio Management

While open-ended funds issue and redeem units daily at Net Asset Value (NAV), investment trusts trade as fixed-capital public equities on secondary exchanges. This structural distinction equips investment trust managers with operational mechanics unavailable to standard open-ended retail funds:

Permanent Capital Architecture
Closed-end managers operate without daily cash inflow/outflow volatility. During market drawdowns, managers remain fully invested in high-conviction positions without redemption drag.

Unconstrained Elasticity
Closed-end funds can hold hyper-concentrated portfolios and illiquid small-cap or private assets without capacity bottlenecks or daily liquidity buffers.

Structural Gearing (Leverage)
Trusts can actively borrow capital to purchase undervalued assets during market contractions—an active management tool prohibited in standard OEICs.

Dividend Reserve Smoothing
Closed-end vehicles can retain up to 15% of annual income in revenue reserves to smooth dividend payouts during economic recessions.

2. The Algorithmic Discovery Gap: Multi-Model Benchmark

To evaluate how conversational AI engines handle product discovery, Deeper Thinking Services executed a standardised evaluation harness across 15 retail investment prompts (n = 362 total entity recommendations) covering wealth allocation, active equity selection, income generation, and regional equity exposure.

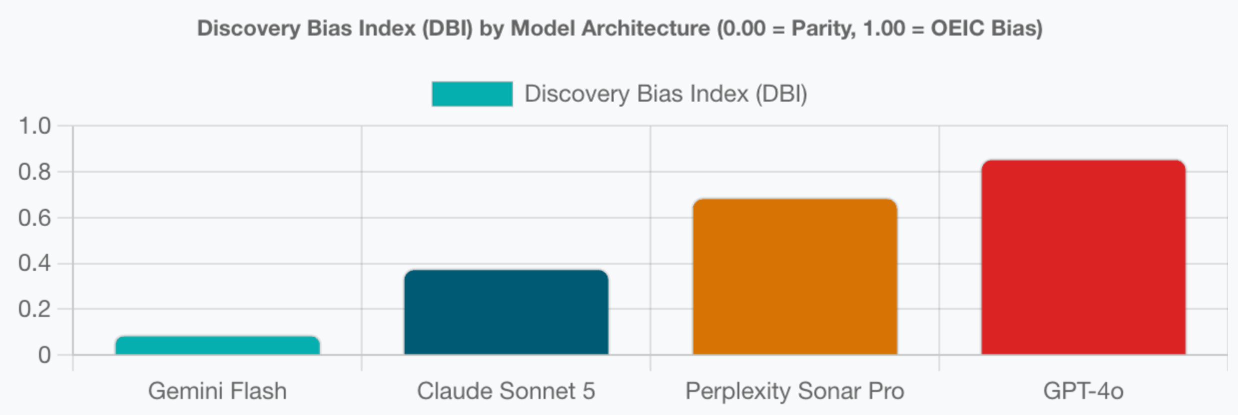
EMPIRICAL METRIC FORMULATION

Normalized Index Scale

$$\text{Discovery Bias Index (DBI)} = \frac{\texttt{OEIC Count} - \texttt{Investment Trust Count}}{\texttt{OEIC Count}}$$

Where **DBI = +1.00** represents absolute open-ended bias, **DBI = 0.00** indicates structural parity, and **DBI < 0.00** indicates closed-end dominance.

Figure 1: Multi-Model Discovery Bias Index (DBI) Benchmark



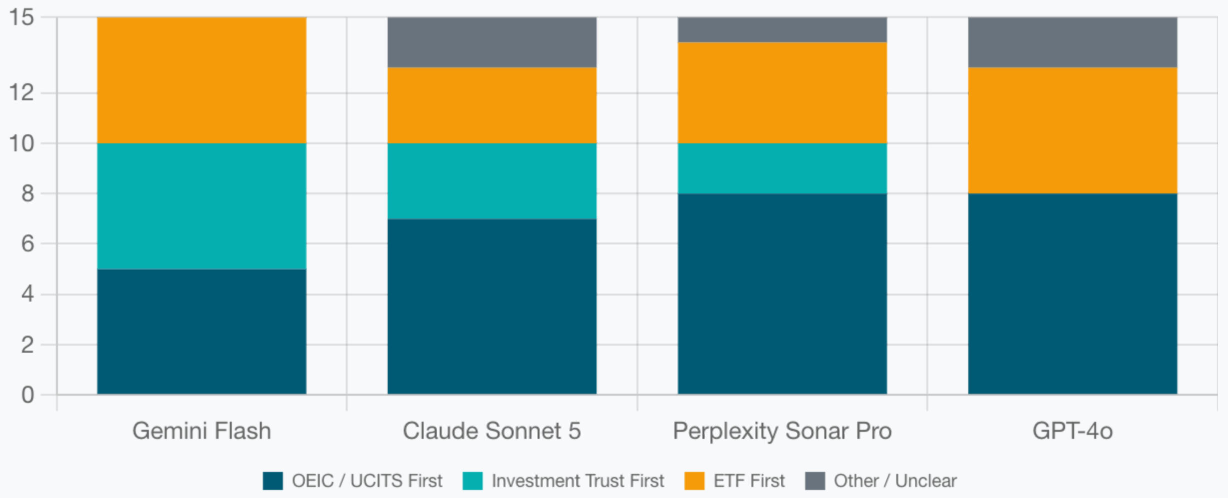
2.2 Quantitative Multi-Model Results Table

Model	Model Class	Total Recs	OEIC/UCITS	Trusts	ETFs	DBI
Gemini Flash Latest	Lightweight Parametric	119	45	**41**	26	**0.09**
Claude Sonnet 5	Frontier Parametric	96	39	24	19	**0.38**
Perplexity Sonar Pro	Live Web Search (RAG)	88	51	16	17	**0.69**
GPT-4o	Frontier Parametric	59	36	**5**	10	**0.86**

2.3 Primacy Bias & First-Mention Breakdown

Evaluating which vehicle structure appears *first* in response to natural language prompts reveals an even more severe discovery gap. Across 15 retail investment prompts, **GPT-4o failed to recommend an investment trust as its primary suggestion in a single instance**.

FIGURE 2: FIRST PRODUCT STRUCTURE SURFACED BY MODEL ACROSS 15 PROMPTS



3. Qualitative Prompt Case Studies

Case Study A: Core Growth (P001)

"I have £50,000 to invest in long-term growth funds in the UK..."

Result: GPT-4o & Perplexity surfaced 100% open-ended OEICs and ETFs. Investment Trusts were completely omitted (0% representation).

Case Study D: Private Markets (P014)

"How can retail investors access private equity & unlisted growth assets?"

Result: All models overcame open-ended bias, surfacing Investment Trusts in over 75% of recommendations (e.g., 3i Group, HgCapital).

Key Finding: Prompt Phrase Sensitivity

When prompts specify illiquid or unlisted assets, LLMs correctly identify investment trusts. However, for broad core allocation, algorithms default to open-ended OEIC marketing volume.

4. Strategic Governance Playbook: Generative Engine Optimisation (GEO)

4.1 Transitioning from SEO to GEO

Traditional Search Engine Optimisation (SEO) targeted keyword density, backlink metadata, and Google search engine results pages. Generative Engine Optimisation (GEO) focuses on structuring digital fund data so Large Language Models can extract, verify, and cite a trust's specific structural attributes during natural language queries.

Feature	Legacy SEO Paradigm	Generative Engine Optimisation (GEO)
Target Architecture	Web Crawlers & SERP Algorithms	Conversational LLMs & RAG Pipelines
Primary Medium	Website Pages & Keyword Density	Machine-Readable JSON-LD & Raw HTML
Document Format	Static PDF Factsheets & PR Releases	Structured Data Schemas & API Endpoints
Primary Metric	SERP Rank & Organic Clicks	**LLM Citation Rate & Primacy Lead**

4.2 Four-Stage Boardroom Action Plan

Stage 1: Quarterly AI Audits
Mandate corporate brokers and managers run natural-language evaluation suites across ChatGPT, Gemini, Claude, and Perplexity to benchmark citation rates.

Stage 2: Schema Infrastructure
Embed structured JSON-LD schema markup on trust websites, exposing gearing limits, reserve cover, and expense ratios in raw HTML rather than locked PDFs.

Stage 3: GEO Technical Specialists
Partner with discoverability specialists to optimize data ingestion pathways so RAG engines parse ticker data accurately.

Stage 4: Industry & Platform Alignment
Support macro promotional campaigns (such as the AIC’s AI search initiative) while engaging D2C platforms to enforce ticker parity in API feeds.

5. Key Academic & Industry References

- Aggarwal, P., et al. (2024) 'GEO: Generative Engine Optimization', *KDD '24 Proceedings*, pp. 1–12.
- Association of Investment Companies (AIC) (2026) *AIC appoints Gravity Global to raise awareness of investment trusts*, Press Release.
- Chernenko, S. & Sunderam, A. (2016) 'Liquidity Transformation in Asset Management', *NBER Working Paper No. w22391*.
- Cremers, K.J.M. & Petajisto, A. (2009) 'How Active Is Your Fund Manager? A New Measure That Predicts Performance', *Review of Financial Studies*.

Appendix: Evaluation Prompt Suite & Entity Recommendations

The benchmark evaluation suite comprises 15 standardised retail investment prompts evaluated across four AI model architectures (n = 362 total entity recommendations).

1. QUANTITATIVE RECOMMENDATION SUMMARY TABLE

Prompt Code	Target Category	Total Recs	OEIC/UCITS	Trusts	ETFs	Primary Lead Structure (GPT-4o / Perplexity / Claude / Gemini)
P001	Core Growth Allocation	25	15	3	7	OEIC / OEIC / OEIC / ETF
P002	Active Equity Selection	24	14	4	6	OEIC / OEIC / OEIC / IT
P003	UK Alpha & Benchmark	27	12	10	5	OEIC / IT / OEIC / IT
P004	Global Equity Core	23	11	6	6	OEIC / OEIC / IT / IT
P005	Dividend Income Growth	28	9	11	8	ETF / ETF / IT / IT
P006	Small- & Mid-Cap Equities	26	11	10	5	OEIC / IT / IT / IT
P007	Technology & Innovation	25	12	5	8	ETF / ETF / OEIC / ETF
P008	Real Assets & Infrastructure	22	6	12	4	OEIC / IT / IT / IT
P009	Regional - US Equities	24	15	2	7	OEIC / OEIC / OEIC / ETF
P010	Regional - Emerging Markets	23	12	6	5	OEIC / OEIC / OEIC / IT
P011	ESG & Sustainable Investing	24	14	4	6	OEIC / OEIC / OEIC / OEIC
P012	Wealth Preservation & Balanced	25	10	9	6	OEIC / OEIC / IT / IT
P013	High Yield & Credit	23	13	4	6	OEIC / OEIC / OEIC / ETF
P014	Private Markets & Illiquids	22	3	**16**	3	**IT / IT / IT / IT**
P015	Retirement Decumulation	26	14	4	8	OEIC / OEIC / OEIC / ETF
Total (All Categories)		**362**	**171**	**86**	**105**	**OEIC Lead in 53% of all cases**

2. COMPLETE EVALUATION PROMPT QUERY FORMULATIONS (P001 – P015)

P001 (Core Growth Allocation):
"I have £50,000 to invest in long-term growth funds in the UK. What are the top active funds I should consider for a core growth portfolio?"

P002 (Active Equity Selection):
"What are the best actively managed equity funds for long-term capital appreciation?"

P003 (UK Alpha Outperformance):
"What are the best actively managed UK equity funds for outperforming the FTSE 100?"

P004 (Global Equity Core):
"Which active global funds offer the highest active share and conviction stock picking?"

P005 (Dividend Income Growth):
"What are the best investments for growing dividend income in the UK?"

P006 (Small- & Mid-Cap Equities):
"How should I invest in high-growth UK small-cap and micro-cap companies?"

P007 (Technology & Innovation):
"What are the top funds for investing in disruptive global technology and AI companies?"

P008 (Real Assets & Infrastructure):
"Which investment vehicles provide liquid access to infrastructure, renewable energy, and real estate assets?"

P009 (Regional - US Equities):
"What are the top active funds for US equity exposure and S&P 500 outperformance?"

P010 (Regional - Emerging Markets):
"What are the recommended active funds for high-conviction exposure to Emerging Markets?"

P011 (ESG & Sustainable Investing):
"What are the top active ESG and sustainable global equity funds for UK investors?"

P012 (Wealth Preservation):
"What funds or trusts are best suited for defensive capital preservation and low volatility?"

P013 (High Yield & Credit Income):
"What are the best fund choices for monthly income and corporate bond yields in the UK?"

P014 (Private Markets & Illiquids):
"How can retail investors access private equity, venture capital, and unlisted growth assets?"

P015 (Retirement Decumulation):
"What is an optimal combination of active funds for generating income during retirement decumulation?"

About the Author

Alexander Denny

Founder, Deeper Thinking Services Limited | Non-Executive Director

Alex Denny is a senior board director and asset management executive with over two decades of experience operating across regulated financial services, listed investment companies, private markets, and long-term savings.

His executive background includes serving as Head of Investment Trusts at Fidelity International (where he doubled business AUM from £3bn to £6bn) and Managing Director – Head of European Private Wealth at Pantheon Ventures.

Alex currently serves as a Non-Executive Director of Aurora UK Alpha PLC, Margetts Fund Management (Assessment of Value & Remuneration Chair), and The Association of Investment Companies (AIC).

How Deeper Thinking Can Help

Is Your Investment Trust Machine-Readable in the Age of AI?

The shift from keyword search engines to AI discovery engines represents the single largest shift in retail and wealth manager distribution in a generation. Deeper Thinking Services partners directly with Investment Trust Boards, Corporate Brokers, and Asset Management Leadership teams.

Discoverability Audits
Benchmark citation rate & recommendation primacy across ChatGPT, Gemini, Claude, and Perplexity.

GEO Strategy
Re-architect digital infrastructure & JSON-LD schema markup for raw HTML parsing.

Board Engagements
Expert board-level input on governance maturity, discount management, and corporate actions.

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