


AI-detectie in de controlepraktijk

Robin Litjens

Overzicht

- AI-detectie
- AI-detectie in financiële verslaggeving
- AI-detectie in de controleverklaring

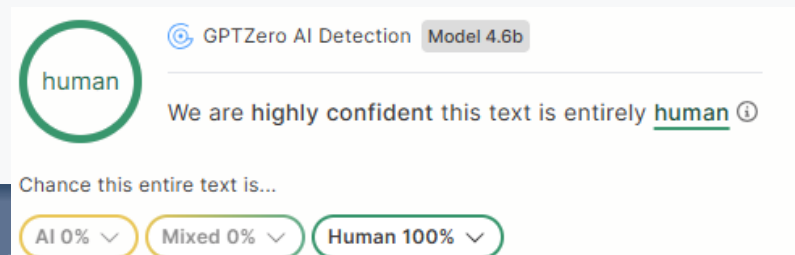
AI washing: Strategic disclosure and backlash

Xiapeng Song , Wenxuan Hou, Zizhou Ouyang, Fangmin Hao

As firms increasingly exaggerate artificial intelligence (AI) adoption in disclosures, we analyze market responses to unsubstantiated AI claims. Using BERT-based text classification and AI patent data for U.S. firms (2018–2023), we find that such narratives initially attract investors but ultimately yield negative market reactions and sustained underperformance. Results demonstrate

1984 - Orwell

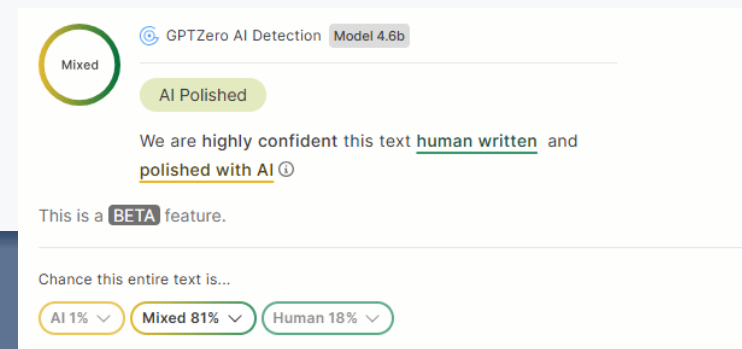
It could not have been ten seconds, and yet it seemed a long time that their hands were clasped together. He had time to learn every detail of her hand. He explored the long fingers, the shapely nails, the work-hardened palm with its row of callouses, the smooth flesh under the wrist. Merely from feeling it he would have known it by sight. In the same instant it occurred to him that he did not know what colour the girl's eyes were. They were probably brown, but people with dark hair sometimes had blue eyes. To turn his head and look at her would have been inconceivable folly. With hands locked together, invisible among the press of bodies, they stared steadily in front of them, and instead of the eyes of the girl, the eyes of the aged prisoner gazed mournfully at Winston out of nests of hair.



The screenshot shows the GPTZero AI Detection interface. At the top, it says 'GPTZero AI Detection Model 4.6b'. A green circle with the word 'human' inside is displayed. Below it, the text reads: 'We are highly confident this text is entirely human'. At the bottom, there are three buttons: 'AI 0%', 'Mixed 0%', and 'Human 100%'. The 'Human 100%' button is highlighted with a green border.

1984 – ChatGPT

Their hands were only touching for a few seconds, but to him it felt much longer. During that brief moment, he noticed every detail of her hand — the length of her fingers, the shape of her nails, the roughness of her palm from physical work, and the softness near her wrist. The feeling was so distinct that he believed he could recognize her hand anywhere. At the same time, he realized he had never actually looked into her eyes or noticed their color. They were likely brown, although dark-haired people could sometimes have blue eyes. Turning to look at her directly would have been far too dangerous. Surrounded by the crowd, they kept their eyes forward, pretending not to notice each other, while the tired eyes of the old prisoner stared sadly toward Winston through tangled hair.



The screenshot shows the GPTZero AI Detection interface. At the top, it says 'GPTZero AI Detection Model 4.6b'. A green circle with the word 'Mixed' inside is displayed. Below it, the text reads: 'We are highly confident this text human written and polished with AI'. At the bottom, there are three buttons: 'AI 1%', 'Mixed 81%', and 'Human 18%'. The 'Mixed 81%' button is highlighted with a green border.

1984 - Orwell

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AI-detectie (LLM)

- Een LLM berekent continue: $P(\omega_t | \omega_1, \omega_2, \dots, \omega_{t-1})$
- Hoe waarschijnlijk is het volgende woord gegeven alle vorige woorden
- “The auditor issued an unqualified ...”

<u>Woord</u>	<u>Kans</u>
opinion	0.72
report	0.12
statement	0.05
elephant	0.000001

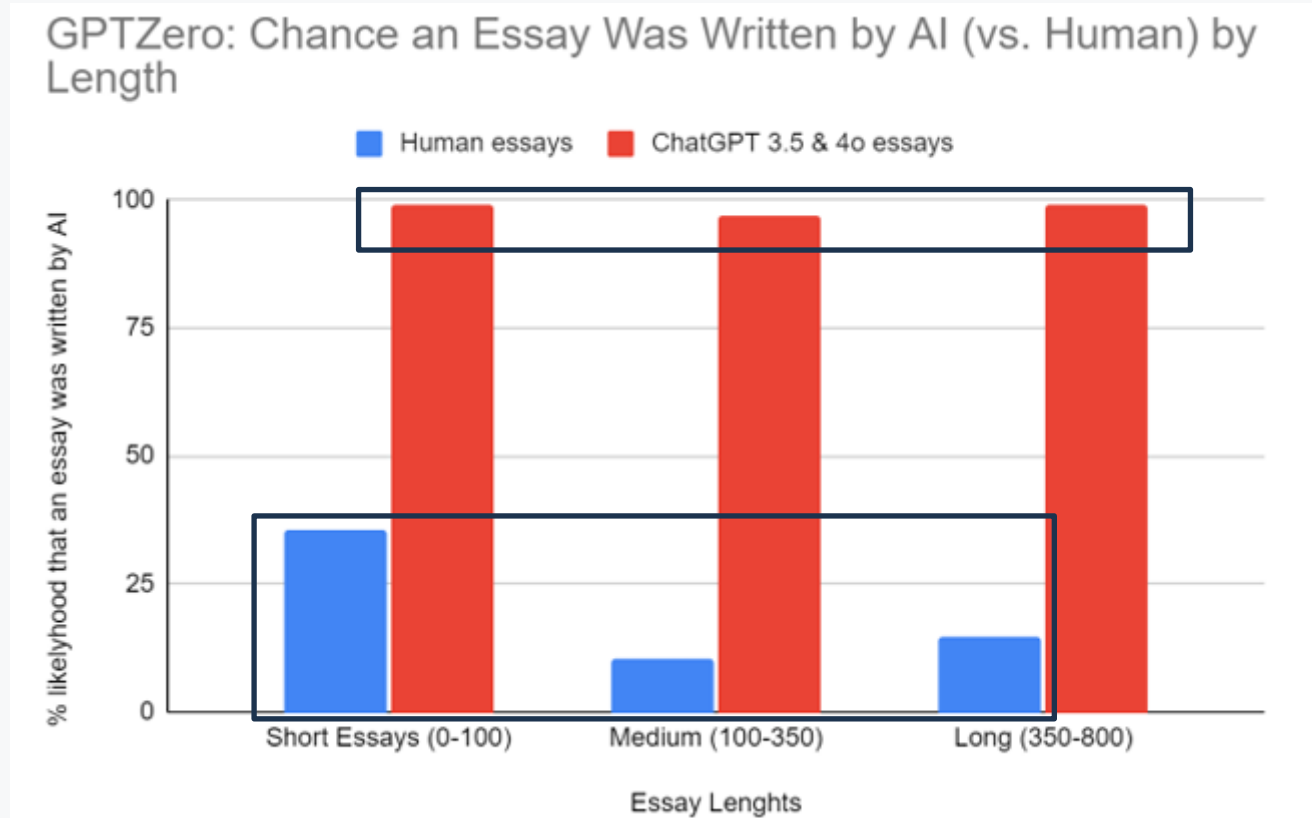
AI-detectie (GPT-zero)

- Perplexity → Hoe voorspelbaar is de tekst?
 - Hoe verrast een model is door de tekst
 - Mensen → rare sprongen, inconsistenties, onverwachte formuleringen.
 - $PP(W) = \exp(-\frac{1}{N} \sum_{t=1}^N \log P(\omega_t | \omega_{<t}))$
 - N (=het aantal woorden); ω_t (=het huidige woord); $\omega < t$ (=alle vorige woorden); $P(\omega_t | \omega < t)$ is de kans op het volgende woord gegeven de vorige woorden;
- Burstiness → Wat is de variatie in schrijfstijl?
 - Mensen wisselen korte en lange zinnen meer af en hebben meer fouten en herhalingen.
 - $B = \frac{\sigma_L}{\mu_L}$
 - L_i is de lengte van een zin
- Classifier
 - $x \rightarrow f(x) \rightarrow \hat{y}$
 - x = feature vector; f = classifier; \hat{y} = AI probability
 - Classifier: logistic regression, random forest, neural network

AI-detectie (ontwikkelingen)

- AI-detectie is fundamenteel onzeker!
 - Statistische waarschijnlijkheidsinschatting
 - Kat en muis-spel
- Vergelijking met bekende AI-patronen
 - Vergelijkbaar aan spam-detectie in mailbox (typische AI-overgang, overmatig neutrale toon, generieke formuleringen, te perfecte structuur)
- Focus nu op provenance
 - In plaats van detectie – bewijs waar content vandaan komt, welk model het maakte (via standaarden als C2PA en content credentials)

AI-detectie (GPTZERO.COM performance)



% chance that a given essay was written by AI	Short Essays (0-100)	Medium (100-350)	Long (350-800)
Human	35.56	10.29	14.75
ChatGPT 3.5 & 4o	99.17	97.00	98.83

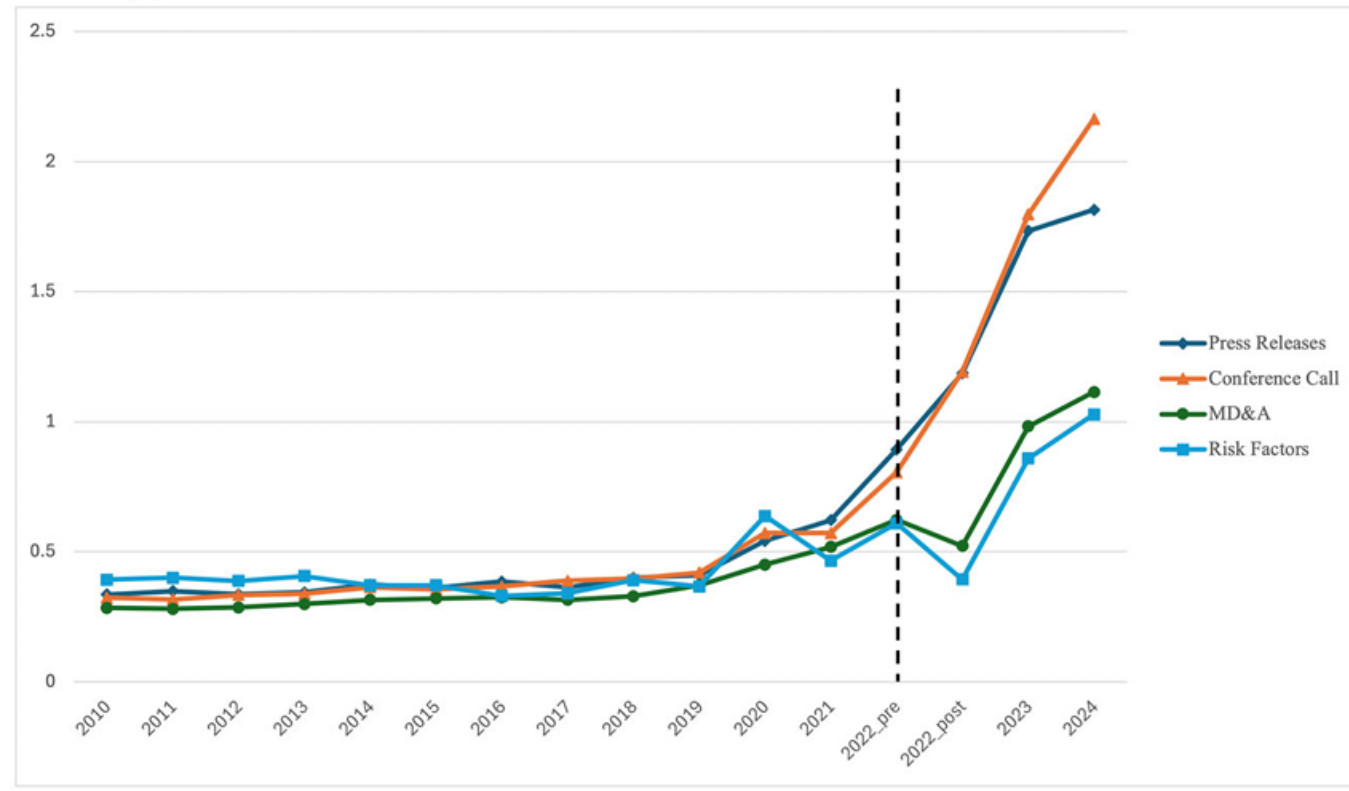
	Predicted as Human	Predicted as AI
Actually Human	42	8
Actually AI	0	28

Blauw: False Positives

Dik & Erdem (2025)

AI-detectie in financiële verslaggeving

Panel (a) Raw GenScore over time



Blankespoor, Dehaan & Li (2026)

AI-detectie in financiële verslaggeving

TABLE 4
GAI Usage Tests

Panel A: Pre/post-tests of GenScore (model 1)

Disclosure	(i) RF	(ii) MD&A	(iii) CC	(iv) PR
Post	0.318 [5.08]***	0.599 [12.26]***	1.167 [11.16]***	1.086 [19.21]***
Size	-0.013 [-1.22]	0.044 [4.65]***	-0.073 [-2.18]**	0.020 [1.19]
Book-to-market	0.016 [1.15]	0.016 [1.44]	0.013 [0.48]	0.091 [6.01]***
Analysts	0.037 [2.37]**	-0.023 [-2.38]**	-0.016 [-0.81]	-0.000 [-0.02]
Institutional ownership	0.102 [2.30]**	0.040 [3.20]***	0.116 [3.67]***	0.058 [2.01]**
Leverage	0.119 [2.48]**	0.161 [5.48]***	0.239 [3.81]***	0.216 [4.09]***
Segments	-0.012 [-0.78]	-0.004 [-1.04]	0.003 [0.38]	-0.009 [-1.46]
M&A	-0.026 [-1.53]	-0.011 [-1.59]	-0.008 [-0.47]	0.022 [1.39]
Loss	0.010 [0.48]	0.023 [2.93]***	-0.021 [-1.21]	-0.015 [-1.33]
Controls & Firm-FQ FE	Yes	Yes	Yes	Yes
Observations	100,070	196,548	147,431	186,726
Adjusted R-squared	0.183	0.179	0.198	0.182

Linguistic Property	Replacement Method	(i) RF	(ii) MD&A	(iii) CC	(iv) PR
Length	Document	-0.628***	-0.207***	-0.174***	-0.280***
	Sentence	0.186***	0.241***	0.355***	0.225***
Fog	Document	0.068**	0.619***	1.819***	0.588***
	Sentence	2.125***	1.855***	4.091***	1.129***
Tone	Document	-0.235***	0.057***	0.152***	0.183***
	Sentence	-0.020***	0.069***	0.141***	0.085***
Specificity	Document	-5.896***	-2.047***	-4.838***	-0.784***
	Sentence	-2.320***	-9.717***	-13.587***	-9.265***

Blankespoor, Dehaan & Li (2026)

AI-detectie in controleverklaringen



March 2026

Generative and Agentic AI Guidance



SPOTLIGHT

Staff Update on Outreach Activities Related to the Integration of Generative Artificial Intelligence in Audits and Financial Reporting

- **Other Risks Related to the Use of GenAI:** Some firms indicated that the use of GenAI by preparers could amplify certain existing information technology risks (e.g., risks related to the segregation of duties), or potentially create new risks that previously did not exist. Firms indicated that identifying and assessing new and emerging risks

Consistency of GenAI Created Content: Preparers noted certain challenges in the broader use of GenAI within the financial reporting process. They include the “black-box” nature of some GenAI tools and the lack of consistent output produced by

Current Use of GenAI: Some firms stated that their staff can use GenAI when preparing certain administrative documents or initial drafts of memos and presentations related to the audit. Some firms also

AI-detectie in controleverklaringen

KPMG LLP's independent auditor's report to the members of 3i Group plc

1. Our opinion is unmodified

In our opinion:

- the financial statements of 3i Group plc give a true and fair view of the state of the Group's and of the Parent Company's affairs as at 31 March 2024, and of the Group's profit for the year then ended;
- the Group financial statements have been properly prepared in accordance with UK-adopted international accounting standards;
- the Parent Company financial statements have been properly prepared in accordance with UK-adopted international accounting standards as applied in accordance with the provisions of the Companies Act 2006; and
- the Group and Parent Company financial statements have been prepared in accordance with the requirements of the Companies Act 2006.

What our opinion covers

We have audited the Group and Parent Company financial statements of 3i Group plc ("the Group") for the year ended 31 March 2024 (FY2024) included in the Annual Report and Accounts, which comprise:

Group (3i Group plc and its subsidiaries)	Parent Company (3i Group plc)
Consolidated statement of comprehensive income	Company statement of financial position
Consolidated statement of financial position	Company statement of changes in equity
Consolidated statement of financial performance	Company cash flow statement
Consolidated cash flow statement	Notes to the accounts, including the summary of material accounting policies
Notes to the accounts, including the summary of material accounting policies	

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) ("ISAs (UK)") and applicable law. Our responsibilities are described below. We believe that the audit evidence we have obtained is a sufficient and appropriate basis for our opinion. Our audit opinion and matters included in this report are consistent with those discussed and included in our reporting to the Audit and Compliance Committee ("ACC").

We have fulfilled our ethical responsibilities under, and we remain independent of the Group in accordance with UK ethical requirements, including the FRC Ethical Standard as applied to listed public interest entities.

2. Overview of our audit

Factors driving our view of risks

The year ended 31 March 2024 is our fourth year as the Group's auditor. Much of the uncertainty in the macro-economic environment that existed at the end of FY23 remains.

Due to the continued geopolitical tension and global macroeconomic downturn, several portfolio companies experienced difficult trading conditions, although the Company's largest investment, Action, has demonstrated resilience. In comparison, some portfolio companies experienced company-specific issues including lower demand level for products and services and higher cost base. Hence, the level of judgement required to be exercised by the Group and Parent Company in valuations of unquoted investments, in particular as a result of volatility in earnings (including earnings adjustments), comparable company multiples, and cash flows continued to be a focus area.

During the year, the private asset market continues to experience challenges and a low level of market activity. This is primarily driven by the persistent high interest rate environment and low investor confidence during a period of geopolitical and macro-economic uncertainty. As a result, we have increased our focus on the level of judgement required for some key assumptions, namely valuations earnings adjustments and multiples (for assets valued using earnings multiple approach) and discount rates (for assets valued using the discounted cash flow approach).

Carried Interest payable in investment entity subsidiaries has been similarly impacted, as its calculation is primarily driven by the valuation of the investment portfolio as at the year end.

Investment entity subsidiaries composed mainly of unquoted investments and carried interest liabilities. Unquoted investments are considered in 4.1 below with directly held unquoted investments. Whilst the carried interest liability is included in 4.2 below.

As part of our risk assessment, we have maintained our focus on the valuation of the unquoted investment portfolio held directly and by investment entity subsidiaries, and on the accuracy of the carried interest payable included in the valuation of investment entities. We have designed our audit procedures accordingly. This has included specific focus on key assumptions adopted by management. We have considered management's evaluation of the impact of the current geopolitical uncertainty and macro-economic downturn on the portfolio companies. We have also designed additional procedures over the largest asset in the portfolio, Action.

Key Audit Matters (Group and Parent Company)	Vs FY23	Items
Valuation of Unquoted Investments (Group and Parent Company)	⬆️	4.1
Carried interest payable included in investments in investment entity subsidiaries (Group) and interests in group entities (Parent Company)	⬇️	4.2

- ➕ Newly identified risk
- ➔ Increase in risk since FY2023
- ⊖ Similar risk to FY2023
- ⬇️ Decrease in risk since FY2023

Audit and compliance committee interaction

During the year, the ACC met 6 times. KPMG are invited to attend all ACC meetings and are provided with an opportunity to meet with the ACC in private sessions without the Executive Director's being present. For each Key Audit Matter, we have set out communications with the ACC in section 4.

Our independence

We have fulfilled our ethical responsibilities and remain independent of the Group in accordance with UK ethical requirements, including the FRC Ethical Standard as applied to listed public interest entities.

We have not performed any non-audit services during the year ended 31 March 2024 or subsequently which are prohibited by the FRC Ethical Standard.

We were first appointed as auditor by the shareholders for the year ended 31 March 2021. The period of total uninterrupted engagement is for the four financial years ended 31 March 2024.

The Group engagement partner is required to rotate every 5 years. As these are the fourth set of the Group's financial statements signed by Jonathan Mills, he will be required to rotate off after the FY2025 audit.

including matters that required particular judgement for each. The matters included in the Audit and Compliance Committee Chair's report on page 122 are materially consistent with our observations of those meetings.

Total audit fee	£3m (FY2023: £2.7m)
Audit related fees (including interim review)	£0.3m (FY2023: £0.3m)
Non-audit fee as a % of total audit and audit related fee %	10% (FY2023: 11%)
Date first appointed	25 June 2020
Uninterrupted audit tenure	4 years
Next financial period which requires a tender	31 March 2031
Tenure of Group engagement partner	4 years

Materiality (item 6 below)

The scope of our work is influenced by our view of materiality and our assessed risk of material misstatement.

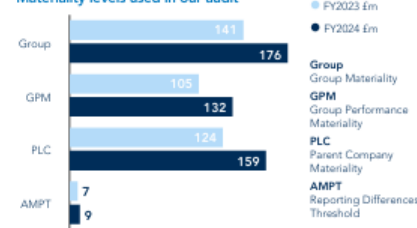
We have determined overall materiality for the Group financial statements as a whole at £176m (FY2023: £141m) and for the Parent Company financial statements as a whole at £159m (FY2023: £124m).

A key judgement in determining materiality was the most relevant metric to select as the benchmark, by considering which metrics have the greatest bearing on shareholder decisions.

Consistent with FY2023, we determined that Total Assets remains the benchmark for the Group as the valuation of the investment portfolio remains the key financial measure. As such, we based our Group materiality on Total Assets, of which it represents 0.8% (FY2023: 0.79%).

Materiality for the Parent Company financial statements was determined with reference to a benchmark of Parent Company Total Assets of which it represents 0.75% (FY2023: 0.7%).

Materiality levels used in our audit



3. Going concern, viability and principal risks and uncertainties

The Directors have prepared the financial statements on the going concern basis as they do not intend to liquidate the Group or the Parent Company or to cease their operations, and they have concluded that the Group's and the Parent Company's financial position means that this is realistic. They have also concluded that there are no material uncertainties that could have cast significant doubt over their ability to continue as a going concern for at least a year from the date of approval of the financial statements ("the going concern period").

Going concern

We used our knowledge of the Group and Parent Company, their industry, and the general economic environment to identify the inherent risks to its business model and analysed how those risks might affect the Group's and Parent Company's financial resources or ability to continue operations over the going concern period. The risks that management considered most likely to adversely affect the Group's and Parent Company's available financial resources over this period are:

- Continued geopolitical tension and macro-economic downturn, including persistent inflation, high interest rates and weak consumer demand impacting the performance of portfolio companies, including their liquidity (which may require 3i to provide further liquidity support to portfolio companies);
- A material downturn in performance of the Group's largest portfolio company, Action; and
- A combination of the two scenarios.

We considered whether these risks could plausibly affect the liquidity of the Group and the Parent in the going concern period by comparing severe, but plausible downside scenarios that could arise from these risks individually and collectively against the level of available financial resources indicated by the Group's and Parent Company's financial forecasts. Our procedures also included an assessment of whether the going concern disclosure in Accounting Policy A to the financial statements gives a complete and accurate description of the Directors' assessment of going concern.

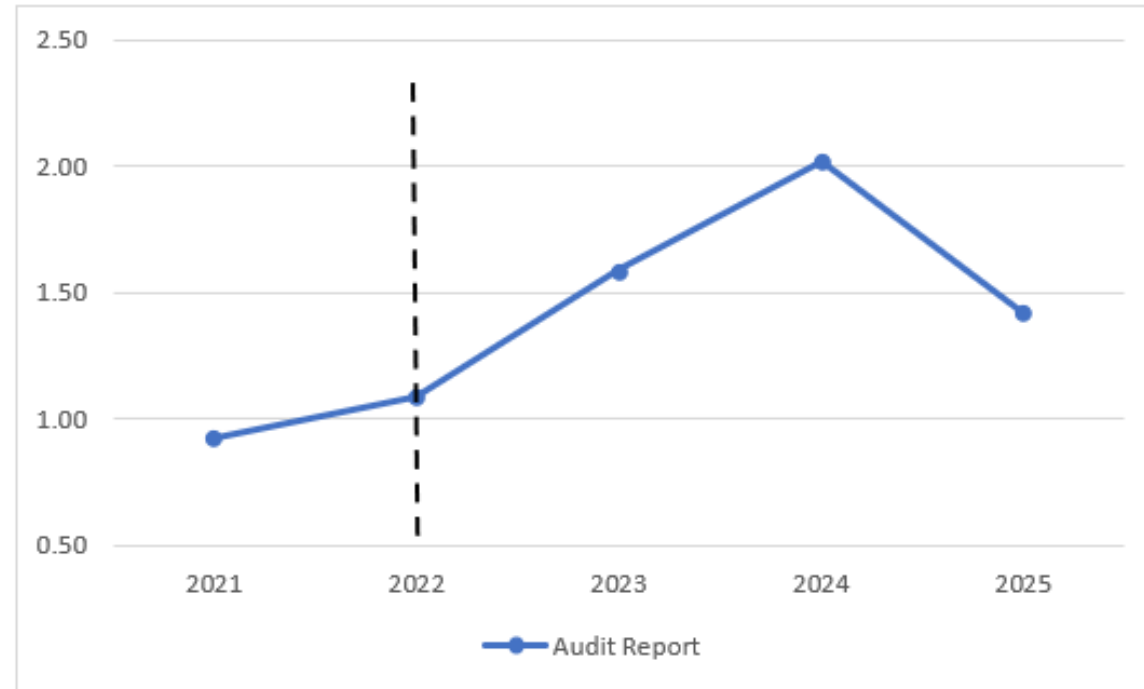
Accordingly, based on those procedures, we found the Directors' use of the going concern basis of accounting without any material uncertainty for the Group and Parent Company to be acceptable. However, as we cannot predict all future events or conditions and as subsequent events may result in outcomes that are inconsistent with judgements that were reasonable at the time they were made, the above conclusions are not a guarantee that the Group or the Parent Company will continue in operation.

Our conclusions

- We consider that the Directors' use of the going concern basis of accounting in the preparation of the financial statements is appropriate;
- We have not identified, and concur with the Directors' assessment that there is not, a material uncertainty related to events or conditions that, individually or collectively, may cast significant doubt on the Group's or Parent Company's ability to continue as a going concern for the going concern period;
- We have nothing material to add or draw attention to in relation to the Directors' statement in Accounting Policy A to the financial statements on the use of the going concern basis of accounting with no material uncertainties that may cast significant doubt over the Group and Parent Company's use of that basis for the going concern period, and we found the going concern disclosure in Accounting Policy A to be acceptable; and
- The related statement under the Listing Rules set out on page 129-130 is materially consistent with the financial statements and our audit knowledge.

AI-detectie in controleverklaringen

Panel A: Raw GenScore over time



Boilerplate

→ Boilerplate (no change)

Client-specific

→ changes

Van Buuren and Litjens (2026)

AI-detectie in controleverklaringen

Table 2. Time-trends in Gen-AI usage in Auditor Reports

Table 2 presents the results of regressions estimating the time trends in gen-AI usage in auditor reports of FTSE 100 firms in the United Kingdom for the fiscal years 2021 to 2024. Variable definitions are included in Appendix A. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	<i>Exp.</i>	(1) <i>GenScore</i>	(2) <i>GenScore</i>	(3) <i>GenScore</i>	(4) <i>HighGen</i>	(5) <i>HighGen</i>	(6) <i>HighGen</i>
<i>Post</i>	+	0.84*** (3.93)			0.18*** (4.50)		
<i>Time Trend</i>	+		0.29*** (3.36)			0.07*** (4.14)	
<i>Year 2022</i>	0			0.23 (0.52)			0.08 (0.96)
<i>Year 2023</i>	+			0.83* (1.91)			0.21*** (2.63)
<i>Year 2024</i>	+			1.27*** (2.93)			0.26*** (3.23)
<i>Year 2025</i>	+			0.82* (1.69)			0.25*** (2.73)
<i>Constant</i>		0.93*** (5.40)	0.56* (1.89)	0.77** (1.99)	0.15*** (4.65)	0.06 (1.00)	0.09 (1.24)
N		500	500	500	500	500	500
R-Squared		0.376	0.370	0.381	0.386	0.381	0.388
Firm FE		YES	YES	YES	YES	YES	YES

Van Buuren and Litjens (2026)

AI-detectie in controleverklaringen

Auditor characteristics

Variable	Exp.	(1) Gen-AI Available	
		GenScore	HighGen
<i>Female Partner</i>	-	-1.73* (-1.81)	-0.44*** (-2.82)
<i>Non-Native</i>	+	1.89 (1.23)	0.42* (1.67)
<i>Partner Change</i>	+/-	-0.00 (-0.00)	-0.05 (-0.69)
<i>Firm Change</i>	+/-	-0.93# (-1.30)	0.14 (1.17)
<i>Constant</i>		2.01*** (7.58)	0.38*** (8.62)
N		500	500
R-Squared		0.455	0.518
Firm FE		YES	YES

Auditee risk

Variable	(1) GenScore	(2) GenScore	(5) GenScore
Post	4.23** (2.44)	3.89** (2.24)	3.19* (1.81)
Litigation	0.76** (2.42)		
Post x Litigation	-1.12*** (-3.00)		
Loss		-0.36 (-1.03)	
Post x Loss		-0.09 (-0.20)	
Total Accruals			-1.19** (-2.50)
Post x Accruals			1.16** (2.03)
Fixed Effects	Firm	Firm	Firm
Controls	Yes	Yes	Yes
Observations	500	500	500
(Pseudo) R2	0.074	0.062	0.089

Van Buuren and Litjens (2026)

Afsluitend

- Ontbrekende jurisprudentie, uitspraken toezichthouders
- Hoe meer een controleverklaring door een LLM wordt gegenereerd, hoe moeilijker het wordt om te verdedigen dat deze volledig het resultaat is van professioneel oordeel.
- Efficiëntiewinst door AI kan omslaan in verhoogd toezicht-, aansprakelijkheids- en reputatierisico.
- Wanneer controleverklaringen steeds meer probabilistisch gegenereerde tekst worden, rijst de vraag hoe dit zich verhoudt tot de leer van het gewekte vertrouwen.

Literature

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