Supplementary Material

Adaptive Neural Threshold Networks for SEC Accounting Enforcement Triage

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S1. Issuer-link adjudication

Table S1: AAER issuer-link review flow.

Stage	Count
AAER index rows processed	3,339
Preliminary candidate links	1,050
Pre-2009 candidates outside filing panel	555
In-window candidates adjudicated	495
Accepted issuer links	104
Rejected mismatches	391
Unresolved or invalid	0

Candidates were accepted only when release evidence supported the issuer or a documented predecessor-successor relationship. Person-name collisions, auditor-only matters, generic substring matches, incidental company mentions, and incompatible identifiers were rejected.

S2. FY2023 incomplete-follow-up cohort

Table S2: Descriptive FY2023 results under incomplete three-year follow-up.

Model	ROC-AUC	PR-AUC	Recall@5%	Recall@10%
Logistic regression	0.6955	0.00443	0.114	0.182
Random forest	0.6531	0.00429	0.114	0.159
Extra trees	0.5935	0.00651	0.250	0.318
Gradient boosting	0.6596	0.00314	0.091	0.227
HistGradientBoosting	0.6373	0.00288	0.114	0.205
Adaptive thresholds	0.7522	0.00520	0.159	0.409

These statistics are not used for primary inference because later releases can still alter the outcome.

S3. Architectural ablation and seed stability

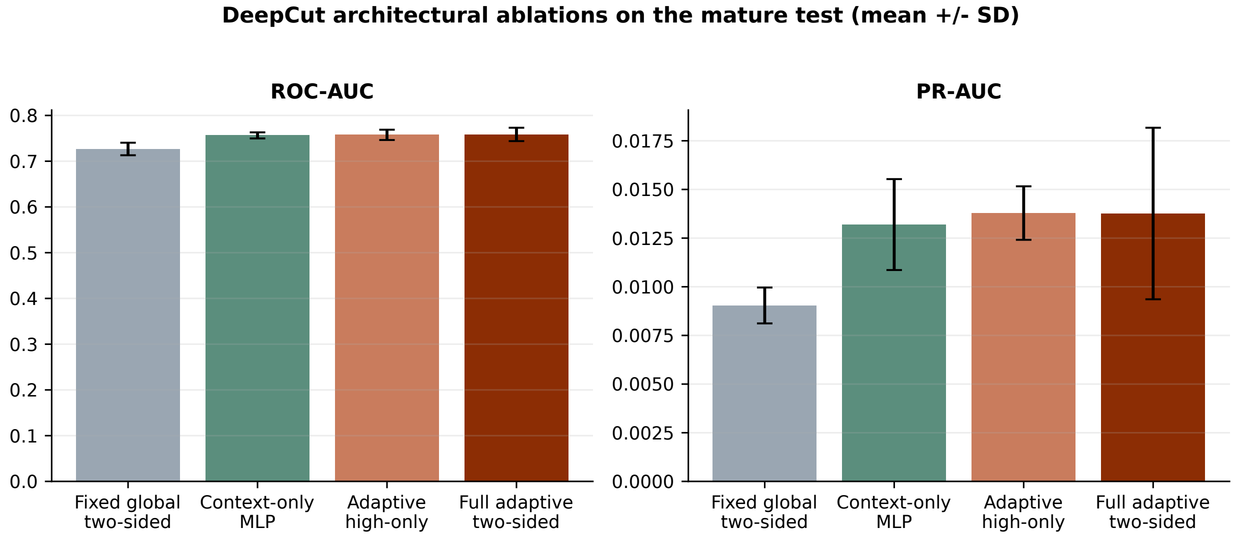

Figure S1: Mature-cohort ablation and seed stability. Similar performance of context-only and one-sided variants limits claims about the uniqueness of two-sided thresholds.

S4. Firm-disjoint and annual-filing robustness

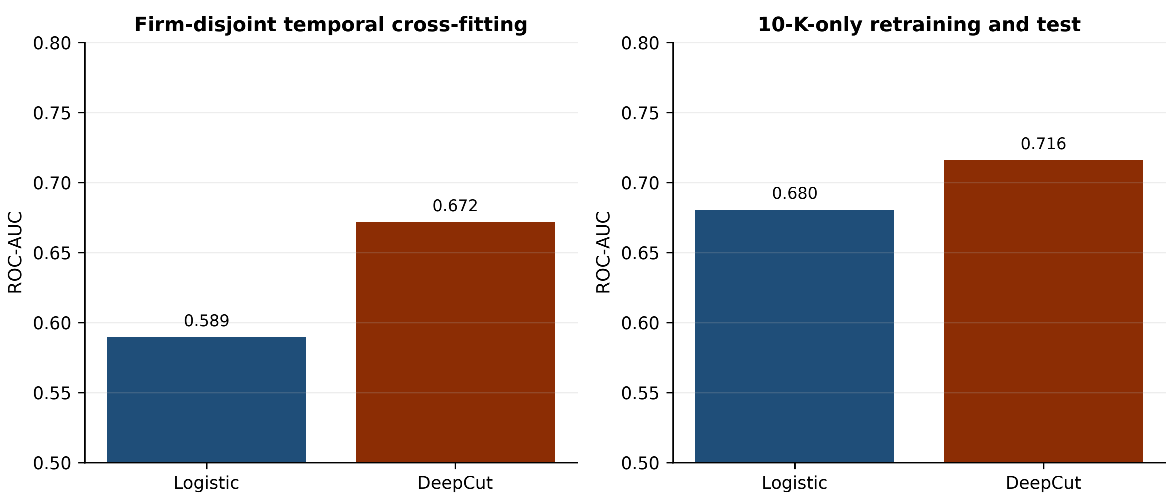

Figure S2: Cold-start firm-disjoint and 10-K-only robustness.

S5. Threshold summaries

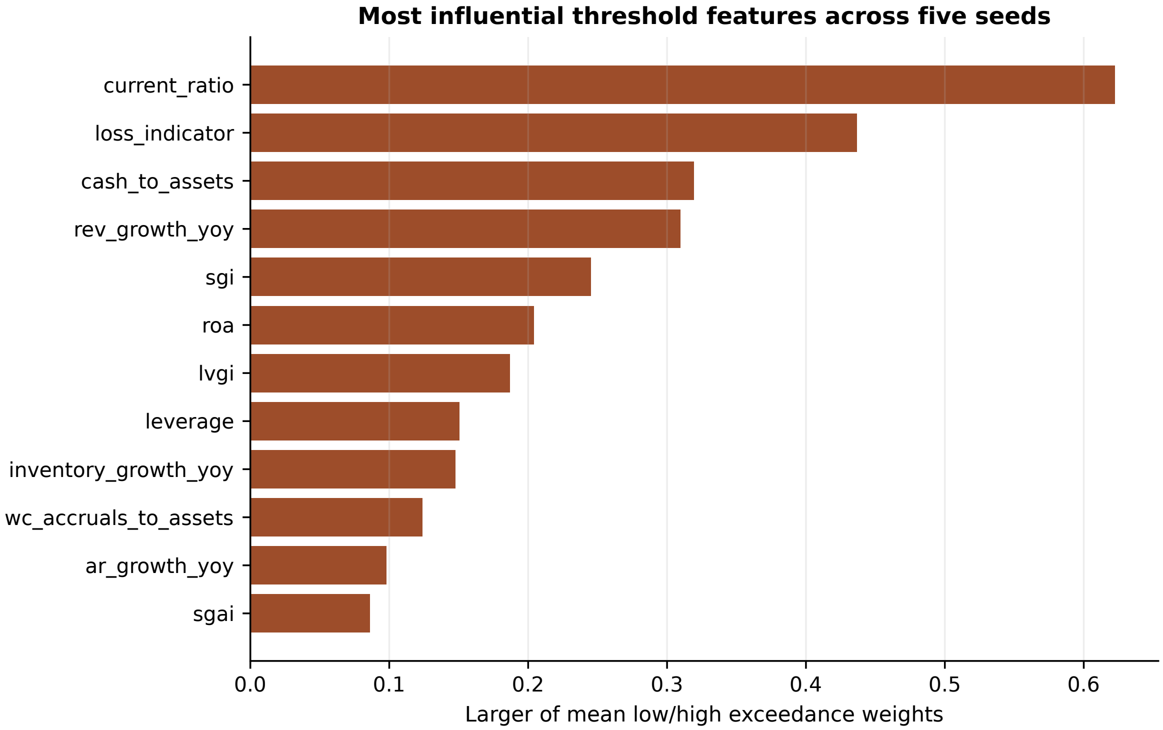

Figure S3: Average low- and high-side exceedance weights. These fitted associations are neither causal nor legal thresholds.

Table S3: Highest-weight threshold features across five seeds.

Feature	Low cut mean	Low cut SD	High cut mean	High cut SD	Low weight	High weight
current_ratio	6.293	3.248	23.276	8.958	0.623	0.038
loss_indicator	0.015	0.236	0.934	0.431	0.437	0.321
cash_to_assets	-1.257	0.406	-0.208	0.349	0.290	0.319
rev_growth_yoy	-36.040	33.559	31.116	81.588	0.309	0.015
sgi	-18.114	32.123	31.784	48.572	0.245	0.019
roa	-28.164	6.630	2.595	8.093	0.204	0.069
lvgi	-8.833	7.502	38.233	24.754	0.187	0.084
leverage	-25.354	36.300	103.360	98.686	0.139	0.150
inventory_growth_yoy	-0.907	0.536	0.425	1.043	0.148	0.012
wc_accruals_to_assets	-34.079	43.398	14.995	28.230	0.041	0.124
ar_growth_yoy	1.611	1.953	7.312	1.444	0.098	0.007
sgai	-34.775	20.033	38.235	34.131	0.086	0.009

S6. Machine-readable results

The `results_data` folder contains the numerical summaries used in the manuscript and supplement. Raw SEC archives and the generated panel are excluded because of size; the reproducibility repository documents reconstruction.