...er TIME, lookback=10) — Random Search (Refit by ROC-AUC) — VLO ...

Generated: 2026-02-11 16:23:30
TRAIN period: ≤ 2022-12-31 | TEST period: ≥ 2023-01-01
TRAIN size (rows): 2,672 | TEST size (rows): 776
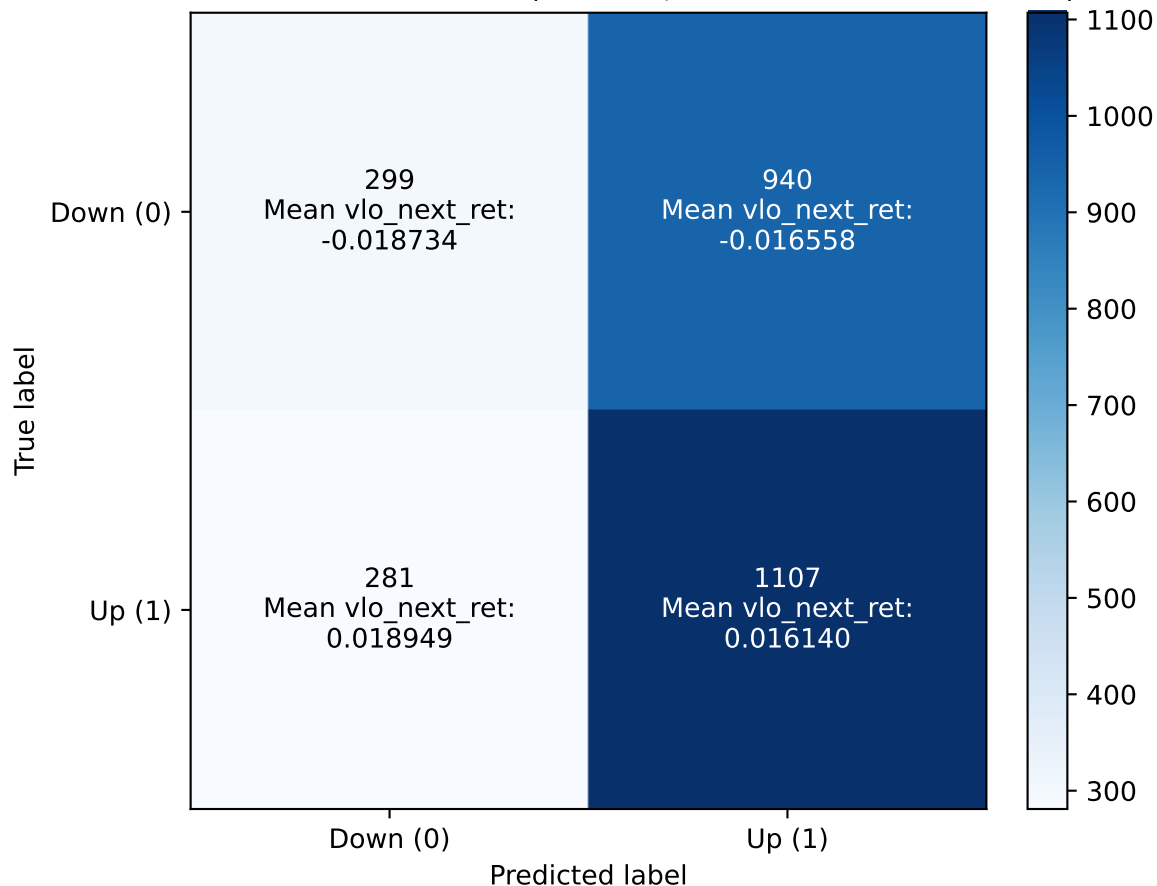Note: windowing reduces effective samples by 9 per split segment.
Features — scaled (float + VOL_*): 72 | passthrough: 5
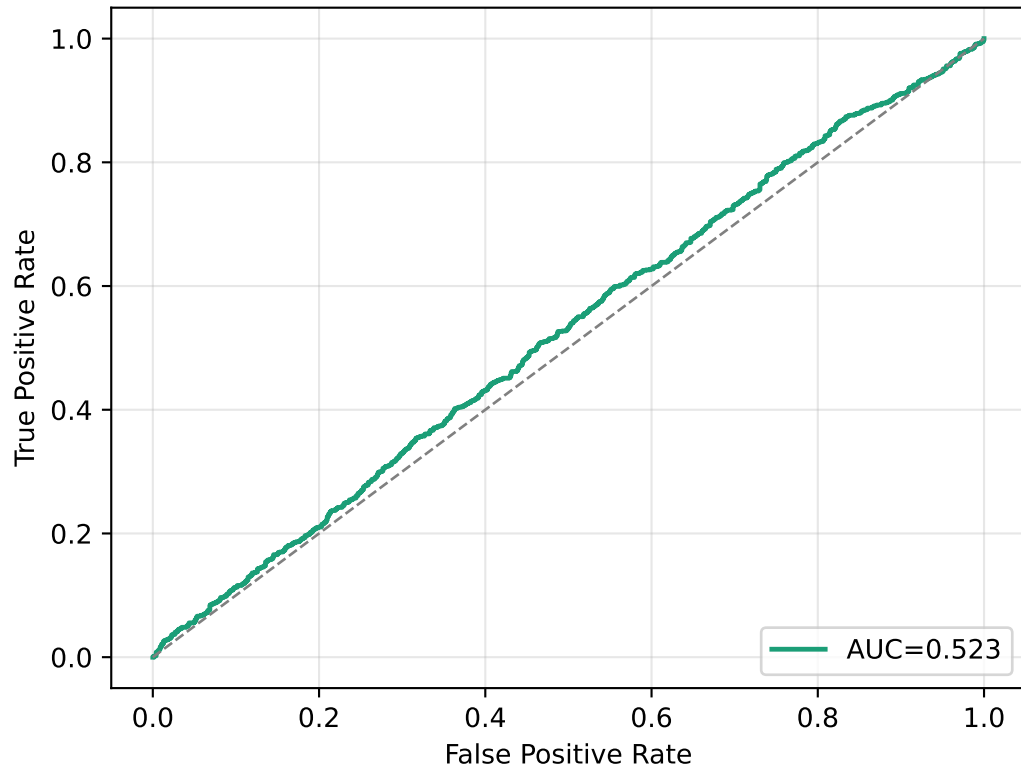Random Search: n_iter=50, refit='roc_auc'
...2': 0.001, 'kernel_size': 2, 'filters2': 32, 'filters1': 64, 'epochs': 120, 'dropout': 0.0, 'dense_units': 128, 'batch_siz...
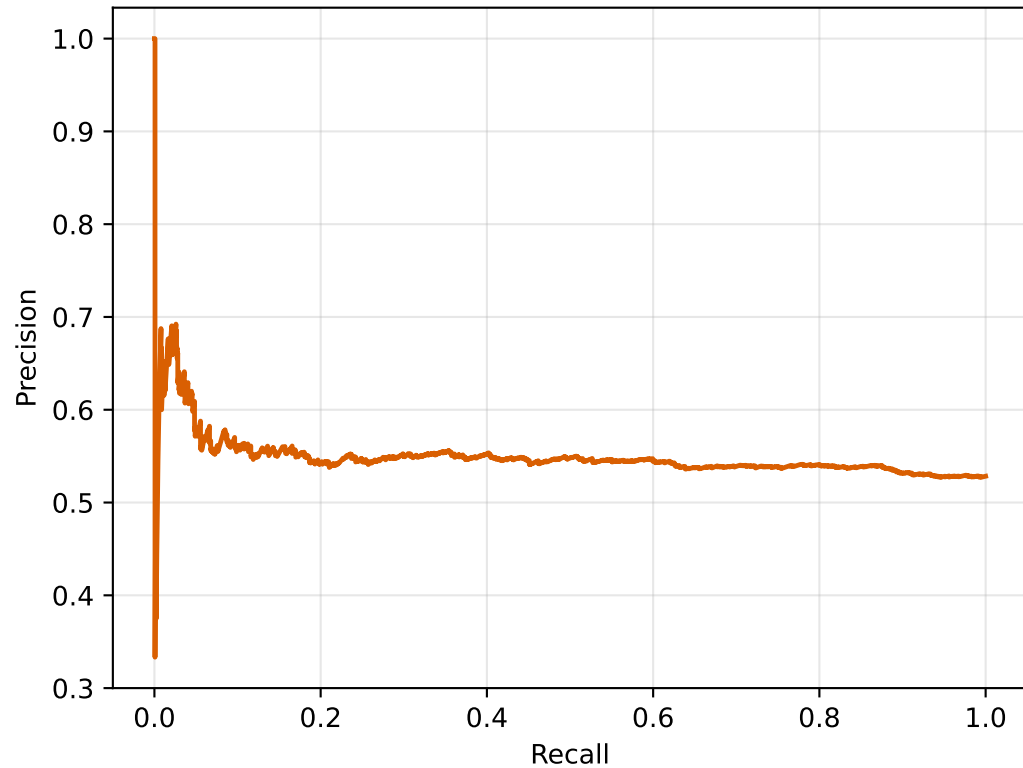Best CV ROC-AUC: 0.5474

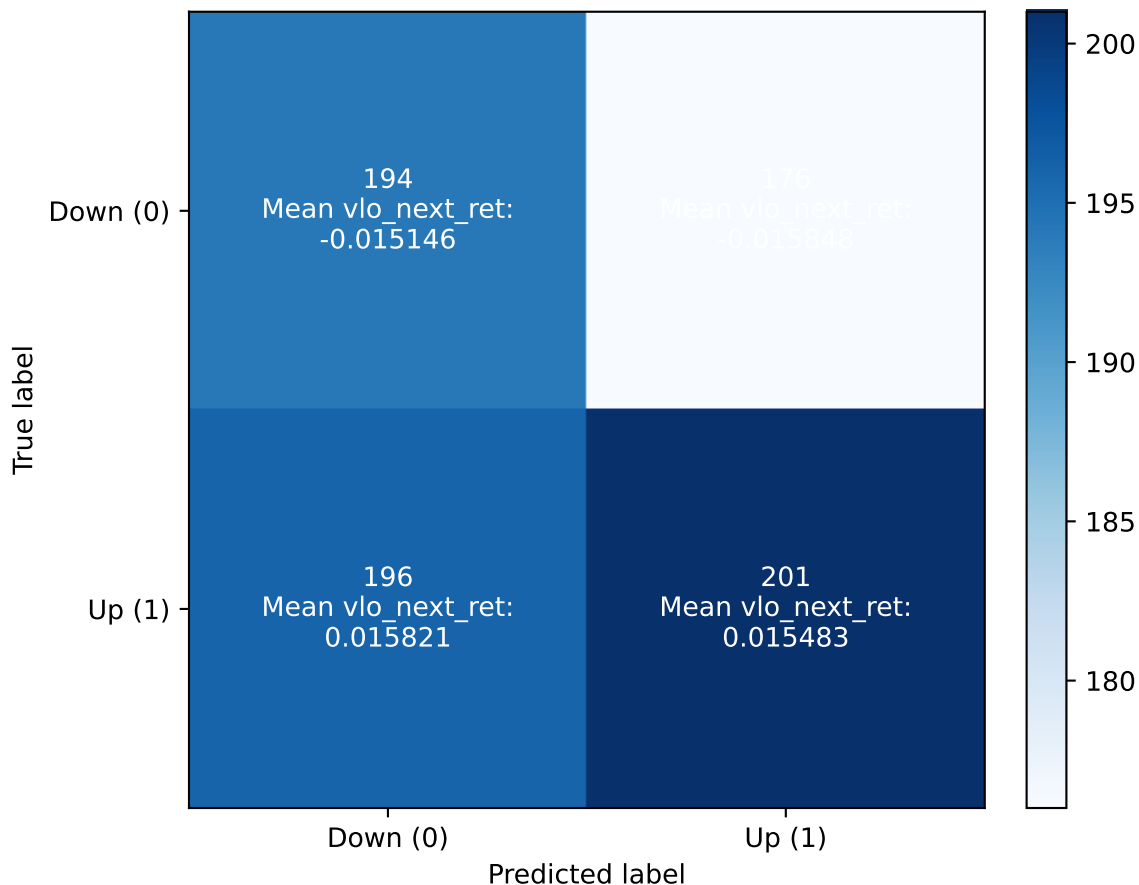Confusion Matrix — TRAIN (CV OOF, windowed lookback=10)

	Down (0)	Up (1)
Down (0)	299 Mean vlo_next_ret: -0.018734	940 Mean vlo_next_ret: -0.016558
Up (1)	281 Mean vlo_next_ret: 0.018949	1107 Mean vlo_next_ret: 0.016140

ROC Curve — TRAIN (CV pooled, windowed) · Precision-Recall — TRAIN (CV pooled, windowed)

AUC=0.523

Confusion Matrix — TEST (2023+, windowed lookback=10)

	Down (0)	Up (1)
Down (0)	194 Mean vlo_next_ret: -0.015146	176 Mean vlo_next_ret: -0.015848
Up (1)	196 Mean vlo_next_ret: 0.015821	201 Mean vlo_next_ret: 0.015483

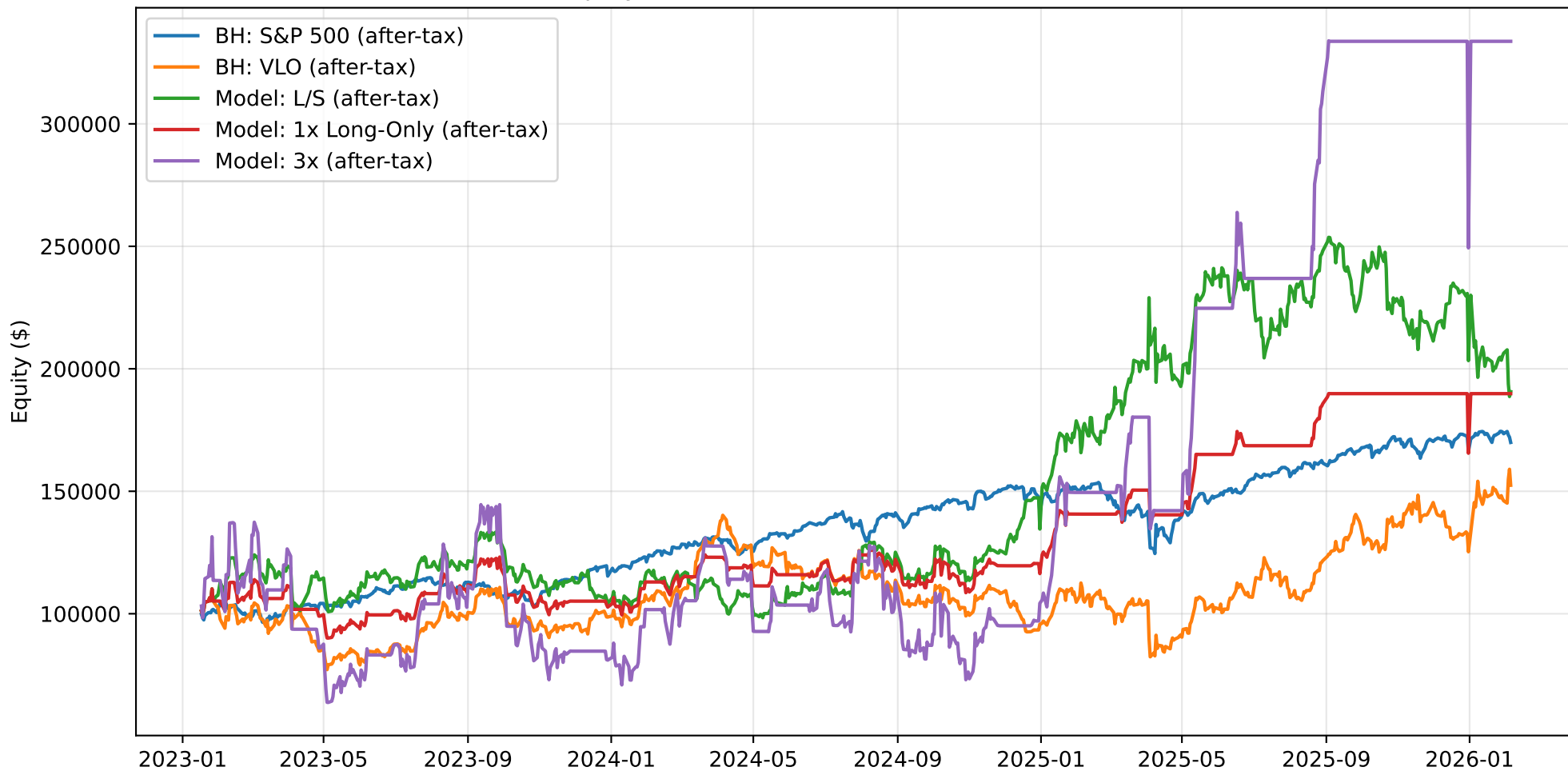**ROC Curve — TEST (2023+, windowed)** and **Precision-Recall — TEST (2023+, windowed)**
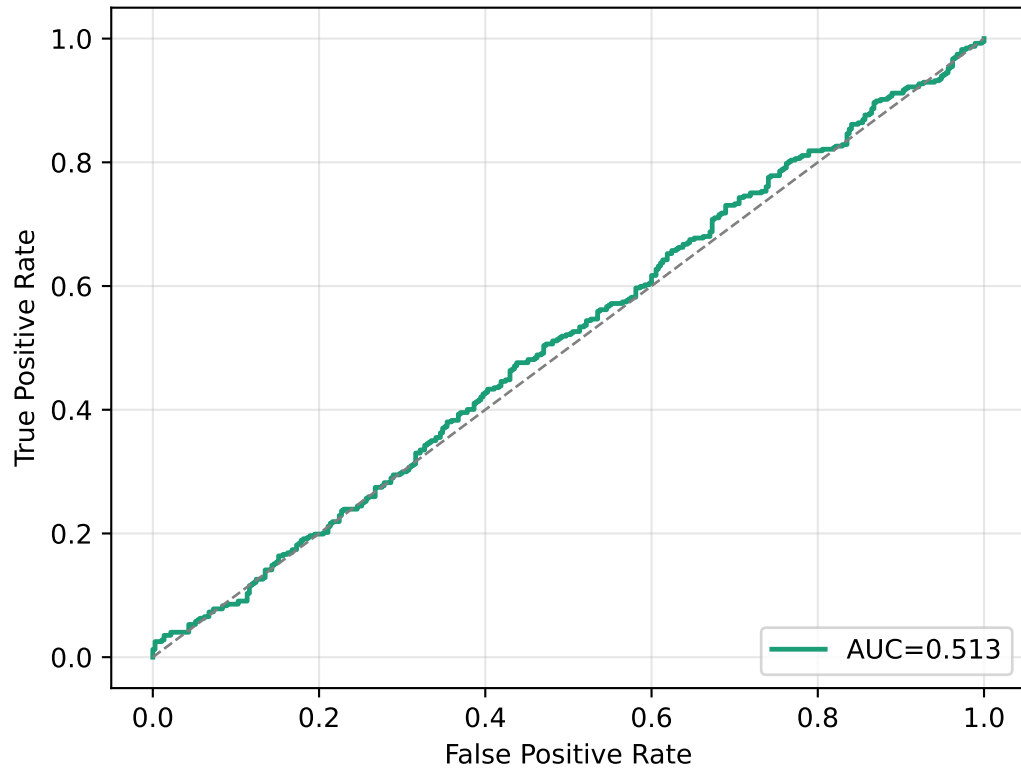
AUC=0.513
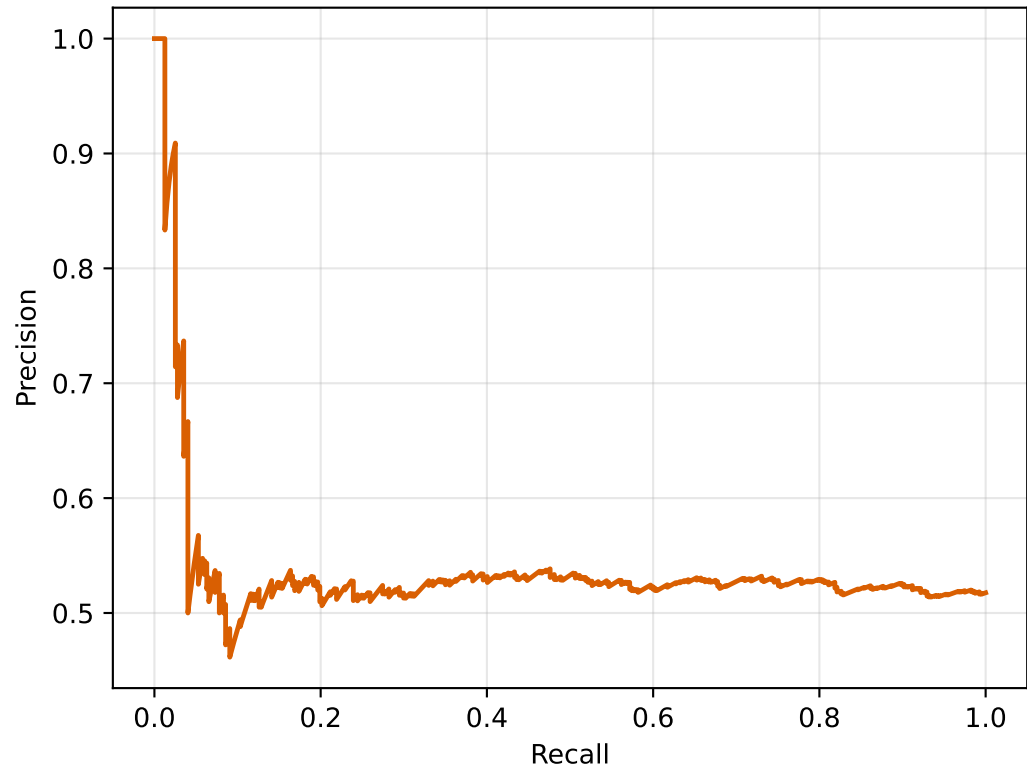
Classification Report — TEST (2023+, windowed)

	precision	recall	f1-score	support
0	0.497	0.524	0.511	370
1	0.533	0.506	0.519	397
accuracy			0.515	767
macro avg	0.515	0.515	0.515	767
weighted avg	0.516	0.515	0.515	767

After-Tax Equity Curves — TEST: 2023 to most recent (windowed)

Legend:
- BH: S&P 500 (after-tax)
- BH: VLO (after-tax)
- Model: L/S (after-tax)
- Model: 1x Long-Only (after-tax)
- Model: 3x (after-tax)

Annual After-Tax Performance (2023+), incl. Average

	BH: S&P 500 (after-tax)	BH: VLO (after-tax)	Model: L/S (after-tax)	Model: 1x Long-Only (after-tax)	Model: 3x (after-tax)
2023	15.61%	-2.41%	3.08%	1.62%	-21.41%
2024	19.21%	-3.45%	26.29%	11.69%	26.79%
2025	13.32%	30.30%	34.03%	33.38%	135.99%
2026	-0.90%	14.51%	-17.12%	0.00%	0.00%
Average	11.81%	9.74%	11.57%	11.67%	35.34%

Run Metadata & Time-Split Summary

Report saved: /mnt/batch/tasks/shared/LS_root/mounts/clusters/dvandyk1/code/Users/dva
Scaler/Normalizer saved: /mnt/batch/tasks/shared/LS_root/mounts/clusters/dvandyk1/cod
Preprocessor saved: /mnt/batch/tasks/shared/LS_root/mounts/clusters/dvandyk1/code/Use
Model saved: /mnt/batch/tasks/shared/LS_root/mounts/clusters/dvandyk1/code/Users/dvan

LOOKBACK: 10
TRAIN rows: 2,672 | TEST rows: 776
Effective TRAIN windowed samples: 2,663 (within whole TRAIN; folds differ)
Effective TEST windowed samples: 767
Best params: {'use_batchnorm': True, 'pool_type': 'avg', 'patience': 12, 'normalizer'
Best CV ROC-AUC: 0.5474
TEST ROC-AUC: 0.5129 | TEST Acc: 0.5150

Backtest assumptions: tx cost 2.00 bps/side, taxes LT 0.20, ST 0.37