

VecViz VIX & Rates 5d Fwd Signal Report — Expanded Universe



2026-10-23

NOT INVESTMENT ADVICE OR RECOMMENDATIONS. SEE VECVIZ'S TERMS AND CONDITIONS FOR DETAIL AND RELATED DISCLOSURES.

We present current 5d directional signals for the VIX and select treasury yields, and their associated out-of-sample performance, below. The signals are based on Random Forest machine learning models of VecViz model inputs and outputs since 2/1/2022. An All-Tickers RF is fit on the 2022-01-31 → 2024-04-30 in-sample window and the top 16 features are selected from a 168-column universe (per-day mean, cross-ticker dispersion, and the 3-day MA / 10-day MA ratio of each base column compete on equal footing). The **All-Tickers walk-forward** refits a Random Forest every 6 months on the entire expanded VecViz ticker universe (~790 tickers; per-day means and cross-ticker dispersion); the **Winner-Sector walk-forward**, at each 6-month boundary, runs a tournament across the Sector (S:) groups from the VecViz ticker_industry classification and trains its next-window model on the winner group's tickers only. Both walk-forwards are locked to the 16 selected features (the per-target list is in the appendix). See the target detail sections for the exact numeric definitions of “Flat”, etc. Note that “Flat” for yields is typically a +/- 5 to 10bp range.

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Current 5d Forward Forecasts

Target	Latest Date	Level	All-Tickers	Winner Sector	Winner Pred.	Combined
VIX	2026-10-23	19.45	Flat	S: Industrials	Lower	Lower
USTY_2yr	2026-10-23	4.69	Lower	S: Industrials	Lower	Lower
USTY_10yr	2026-10-23	4.99	Lower	S: Real Estate	Lower	Lower

Performance Since Start of Test Period on 4/30/2024

Target	All-Tick Acc	Winner Acc	Combined Acc	All-Tick DirAcc	Winner DirAcc	Combined DirAcc
VIX	45.95%	38.35%	41.10%	65.04%	58.26%	65.41%
USTY_2yr	40.13%	36.57%	34.79%	52.38%	67.84%	62.34%
USTY_10yr	38.15%	47.73%	41.72%	52.98%	65.96%	62.50%



VIX

Tercile Bands for VIX (fold trained through 2026-10-15)

Tercile	5-Day Forward Change (Δ)
Lower (T0)	$-22.2100 < \Delta < -0.9700$
Flat (T1)	$-0.9700 < \Delta < +0.6600$
Higher (T2)	$+0.6600 < \Delta < +30.5600$

Latest Signals

- Most recent ModelDate: 2026-10-23
- VIX level on that date: 19.4500
- All-Ticker prediction: Flat (T1)
- Current Winner Sector: S: Industrials
- Winner-Sector prediction: Lower (T0)
- Combined (All x Winner) prediction: Lower (T0)

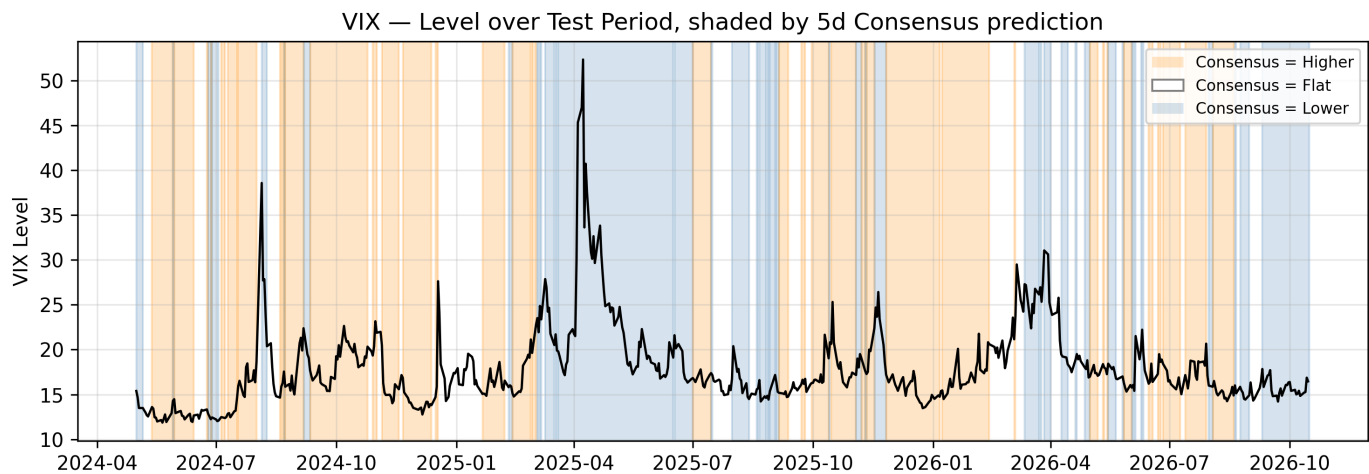


Figure 1: VIX — daily level over the test period; shading reflects each ModelDate's Combined consensus prediction (orange = Higher, no shade = Flat, blue = Lower).

Winner-Sector History (per 6-month walk-forward window)

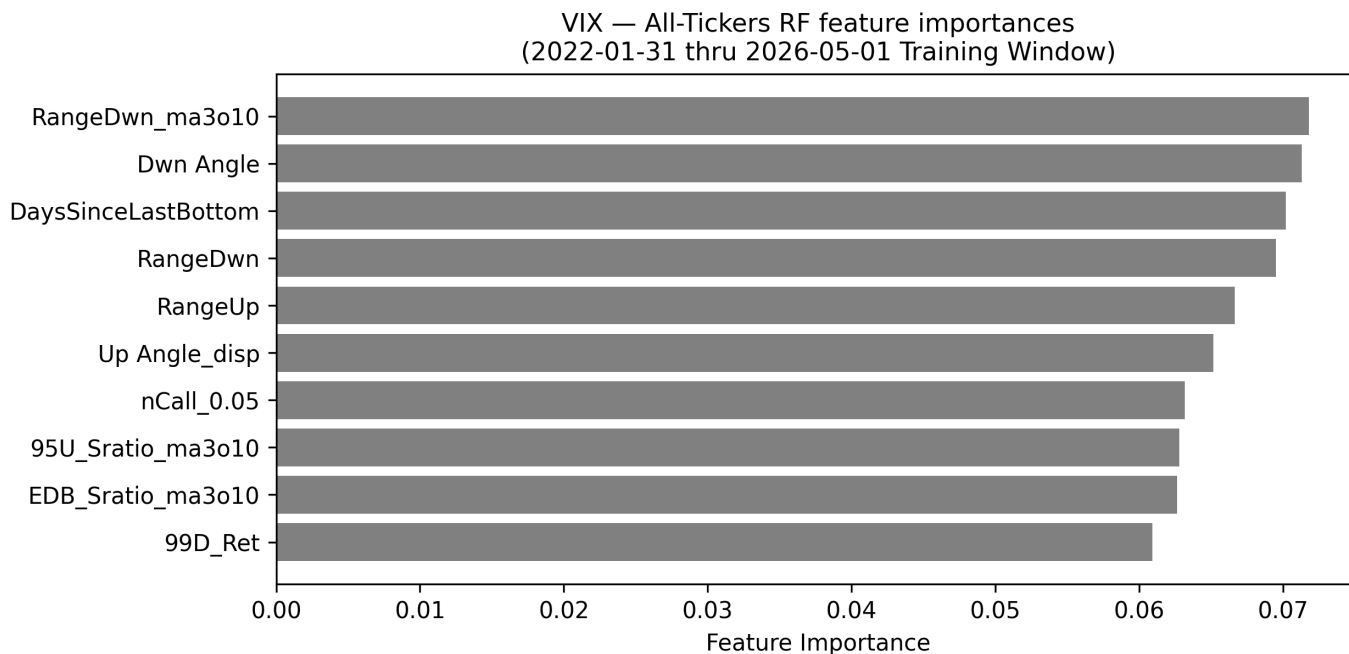
	Window Start	Window End	Winner Sector	Pool Size
0	2024-05-01	2024-10-31	S: Health Care	392109
1	2024-11-01	2025-04-30	S: Health Care	483764
2	2025-05-01	2025-10-31	S: Health Care	573164
3	2025-11-01	2026-04-30	S: Real Estate	666927
4	2026-05-01	2026-10-23	S: Industrials	757457

Winner-Sector Tickers — S: Industrials (82 tickers)

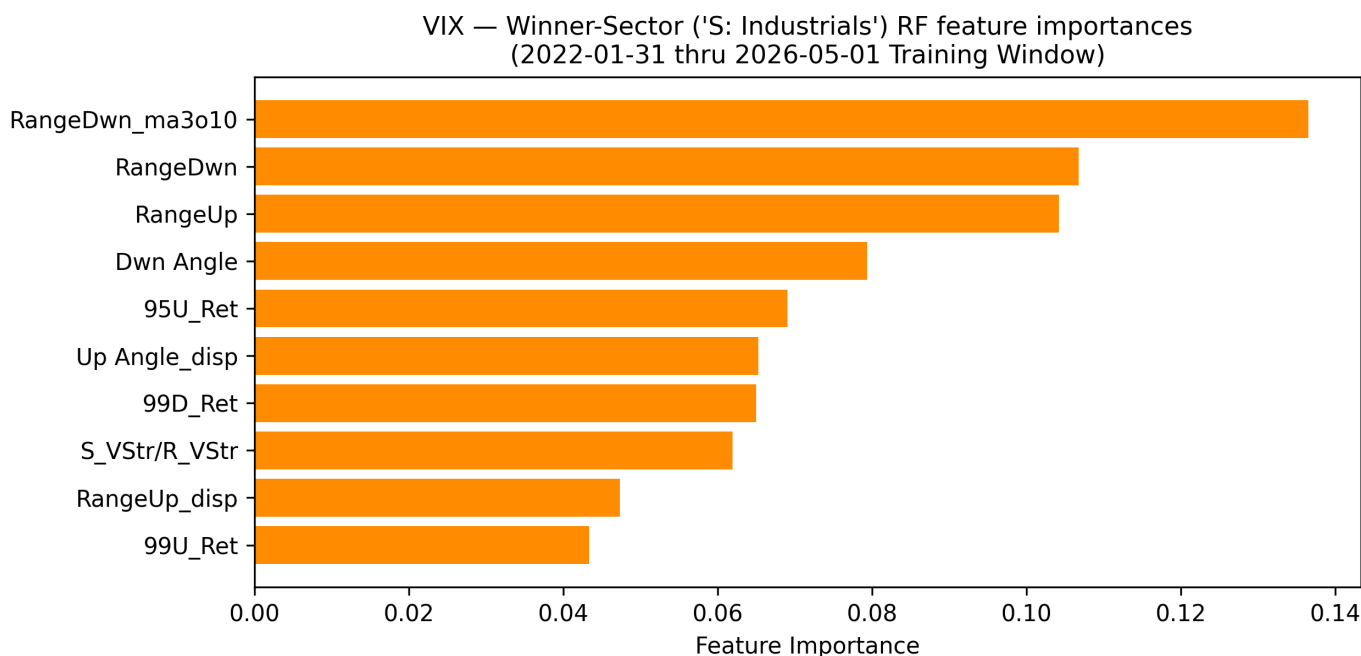
ACHR, ADP, ALLE, AME, AOS, AXON, B, BA, BLDR, BRK.B, BWXT, CARR, CAT, CHRW, CMI, CODI, CPRT, CSX, CTAS, DAL, DE, DOV, EME, EMR, ETN, EXPD, FAST, FDX, FIX, FTV, GD, GE, GHC, GNRC, GWW, HII, HON, HUBB, HWM, IEP, IEX, IR, ITW, J, JBHT, JCI, KTOS, LDOS, LHX, LII, LMT, LUV, MAS, MMM, NDSN, NOC, NSC, ODFL, OTIS, PAYX, PCAR, PH, PNR, PWR, ROK, ROL, ROP, RSG, RTX, SNA, SWK, TDG, TT, TXT, UAL, UNP, UPS, URI, VRT, WAB, WM, XYL

Top Features — models used for prediction on 2026-10-23

All-Tickers model



Winner-Sector model — S: Industrials



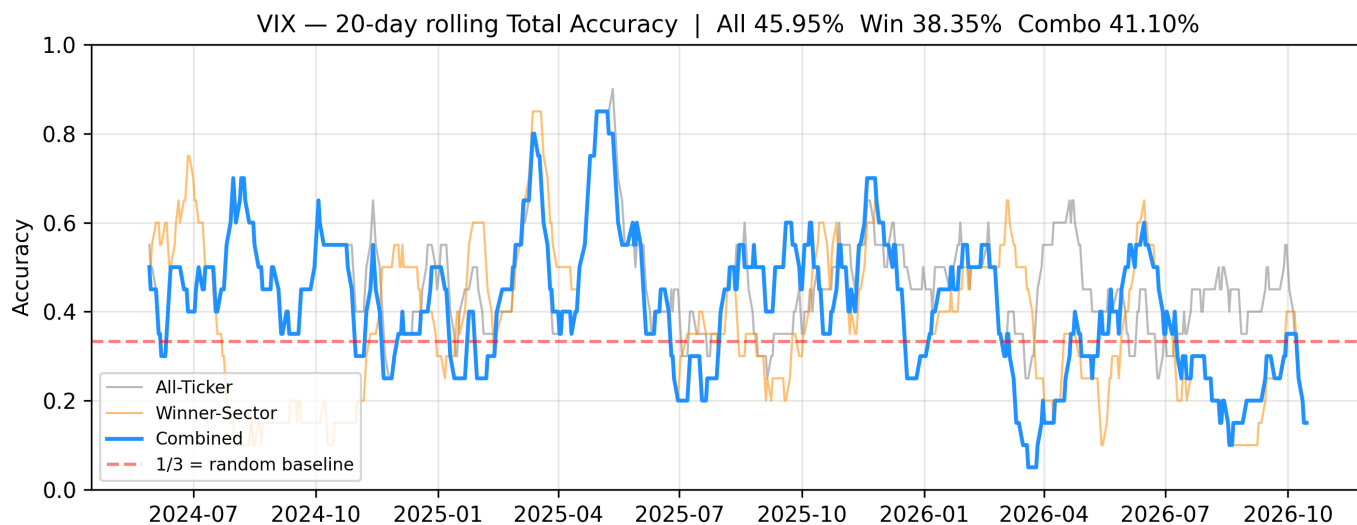


Figure 2: 20-day rolling 5d Forward Total Accuracy (exact Higher / Flat / Lower tercile match) for All-Ticker, Winner-Sector, and Combined classifiers.

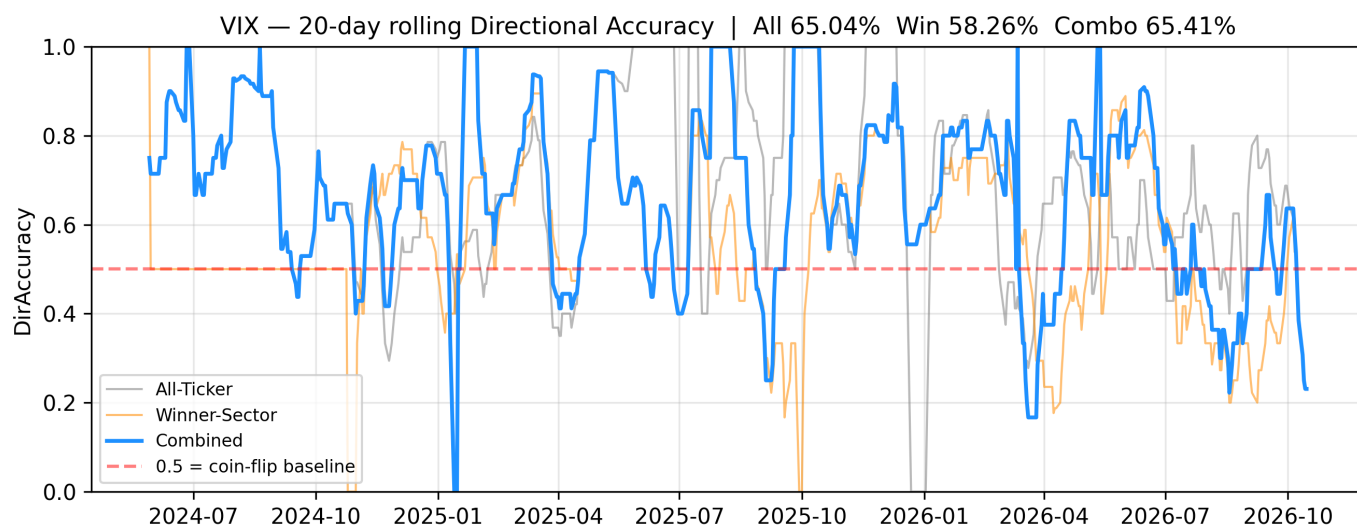


Figure 3: 20-day rolling 5d Forward Directional Accuracy (non-Flat predictions and outcomes) for All-Ticker, Winner-Sector, and Combined classifiers.

USTY_2yr

Tercile Bands for USTY_2yr (fold trained through 2026-10-15)

Tercile	5-Day Forward Change (Δ)
Lower (T0)	$-1.1200 < \Delta < -0.0400$
Flat (T1)	$-0.0400 < \Delta < +0.0700$
Higher (T2)	$+0.0700 < \Delta < +0.7000$

Latest Signals

- Most recent ModelDate: 2026-10-23
- USTY_2yr level on that date: 4.6900
- All-Ticker prediction: Lower (T0)
- Current Winner Sector: S: Industrials
- Winner-Sector prediction: Lower (T0)
- Combined (All x Winner) prediction: Lower (T0)

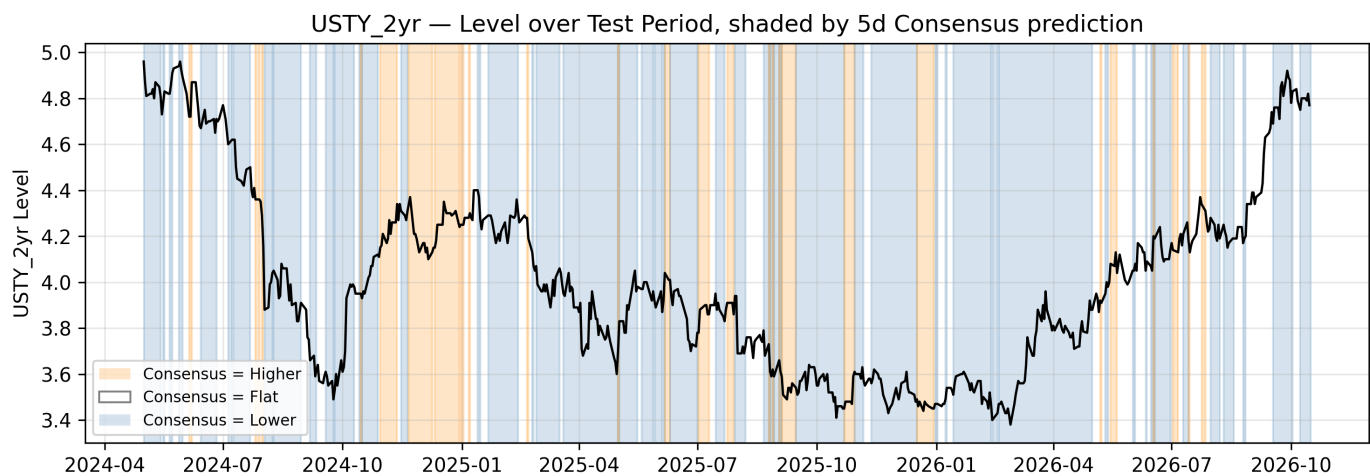


Figure 4: USTY_2yr — daily level over the test period; shading reflects each ModelDate's Combined consensus prediction (orange = Higher, no shade = Flat, blue = Lower).

Winner-Sector History (per 6-month walk-forward window)

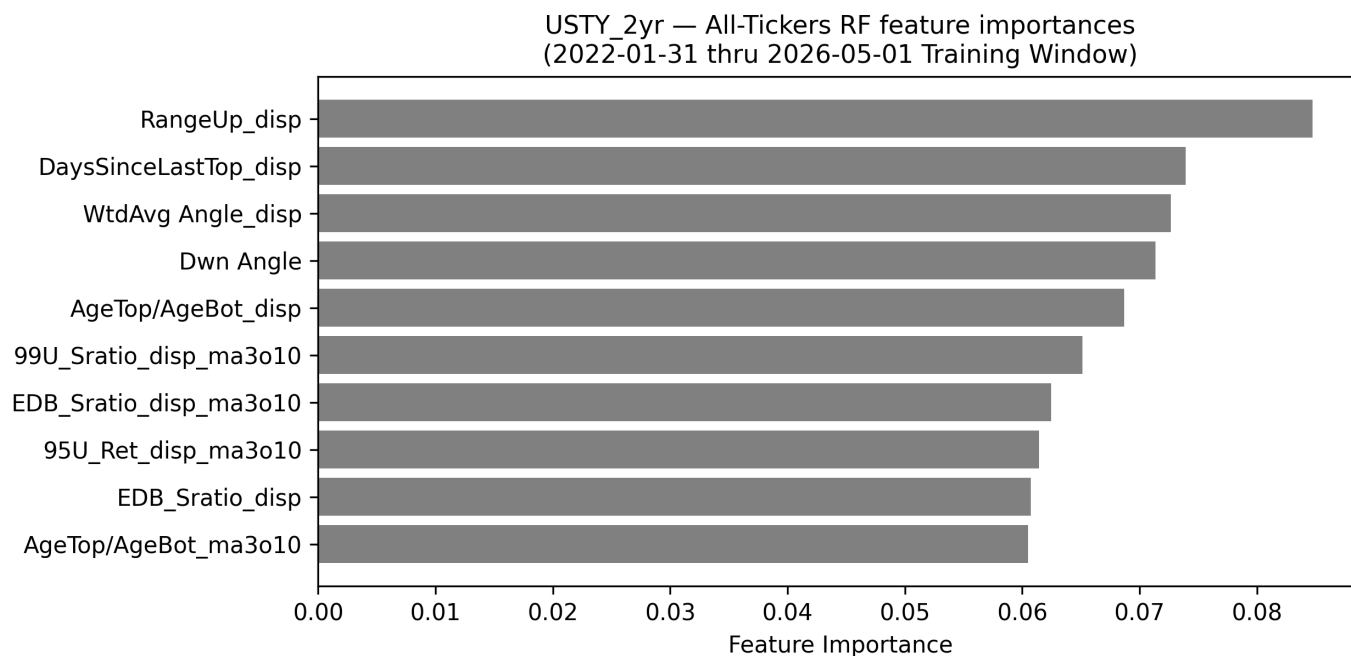
	Window Start	Window End	Winner Sector	Pool Size
0	2024-05-01	2024-10-31	S: Consumer Discretionary	392109
1	2024-11-01	2025-04-30	S: Energy	483764
2	2025-05-01	2025-10-31	S: Materials	573164
3	2025-11-01	2026-04-30	S: Materials	666927
4	2026-05-01	2026-10-23	S: Industrials	757457

Winner-Sector Tickers — S: Industrials (82 tickers)

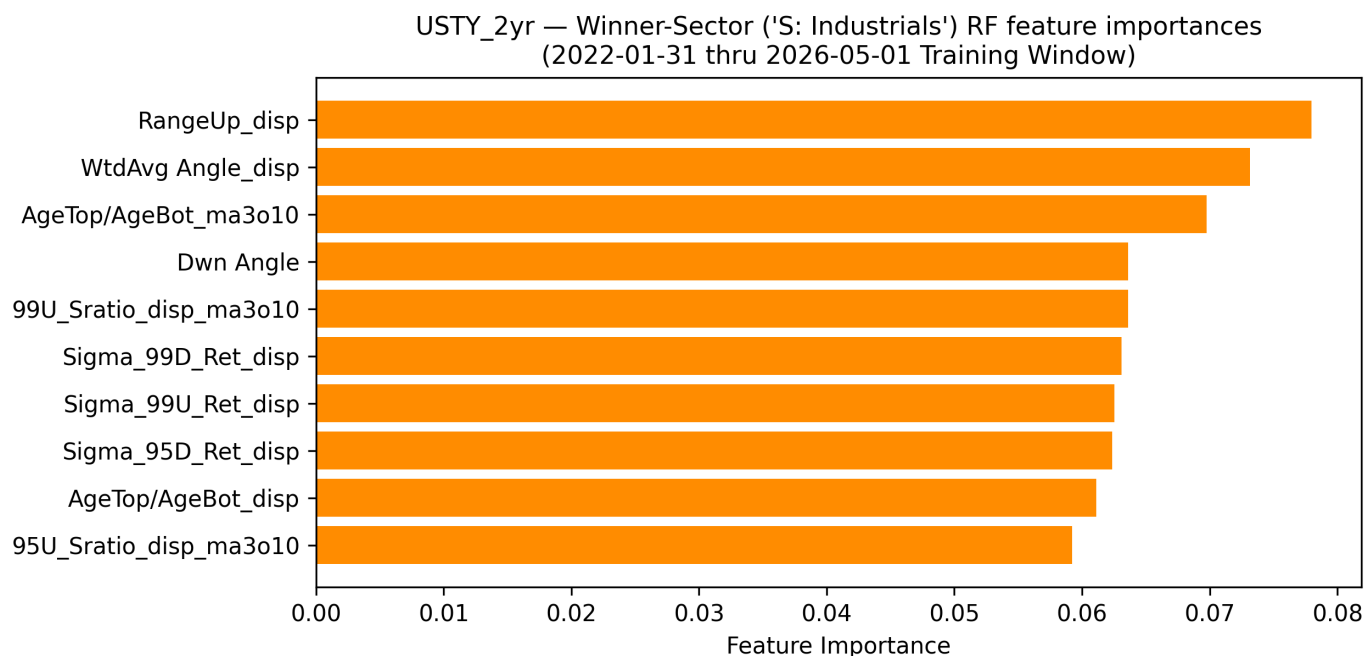
ACHR, ADP, ALLE, AME, AOS, AXON, B, BA, BLDR, BRK.B, BWXT, CARR, CAT, CHRW, CMI, CODI, CPRT, CSX, CTAS, DAL, DE, DOV, EME, EMR, ETN, EXPD, FAST, FDX, FIX, FTV, GD, GE, GHC, GNRC, GWW, HII, HON, HUBB, HWM, IEP, IEX, IR, ITW, J, JBHT, JCI, KTOS, LDOS, LHX, LII, LMT, LUV, MAS, MMM, NDSN, NOC, NSC, ODFL, OTIS, PAYX, PCAR, PH, PNR, PWR, ROK, ROL, ROP, RSG, RTX, SNA, SWK, TDG, TT, TXT, UAL, UNP, UPS, URI, VRT, WAB, WM, XYL

Top Features — models used for prediction on 2026-10-23

All-Tickers model



Winner-Sector model — S: Industrials



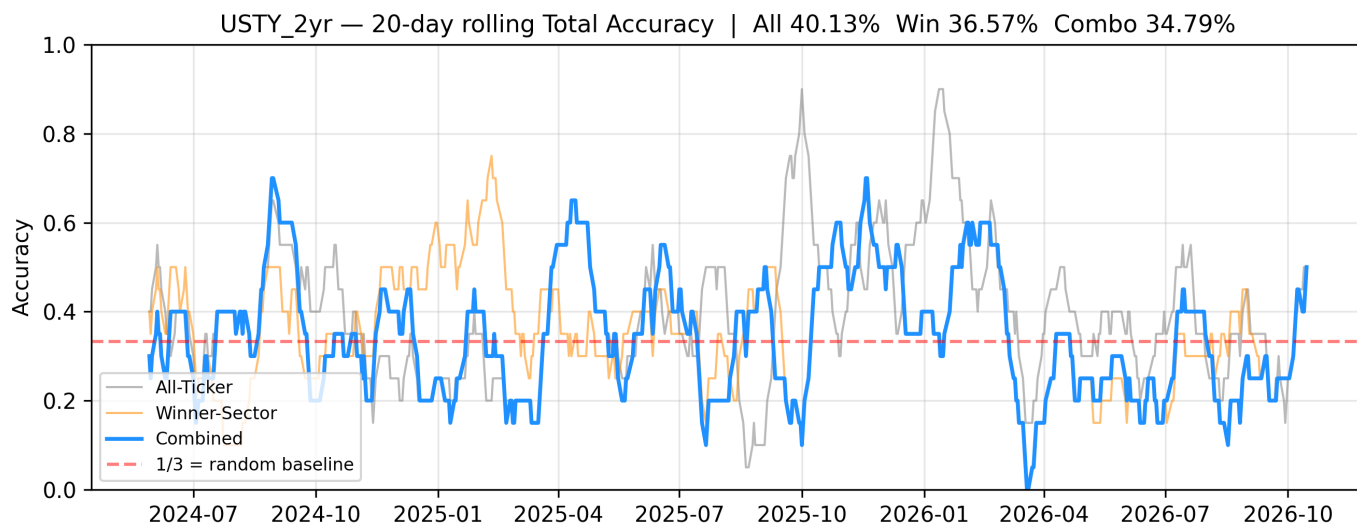


Figure 5: 20-day rolling 5d Forward Total Accuracy (exact Higher / Flat / Lower tercile match) for All-Ticker, Winner-Sector, and Combined classifiers.

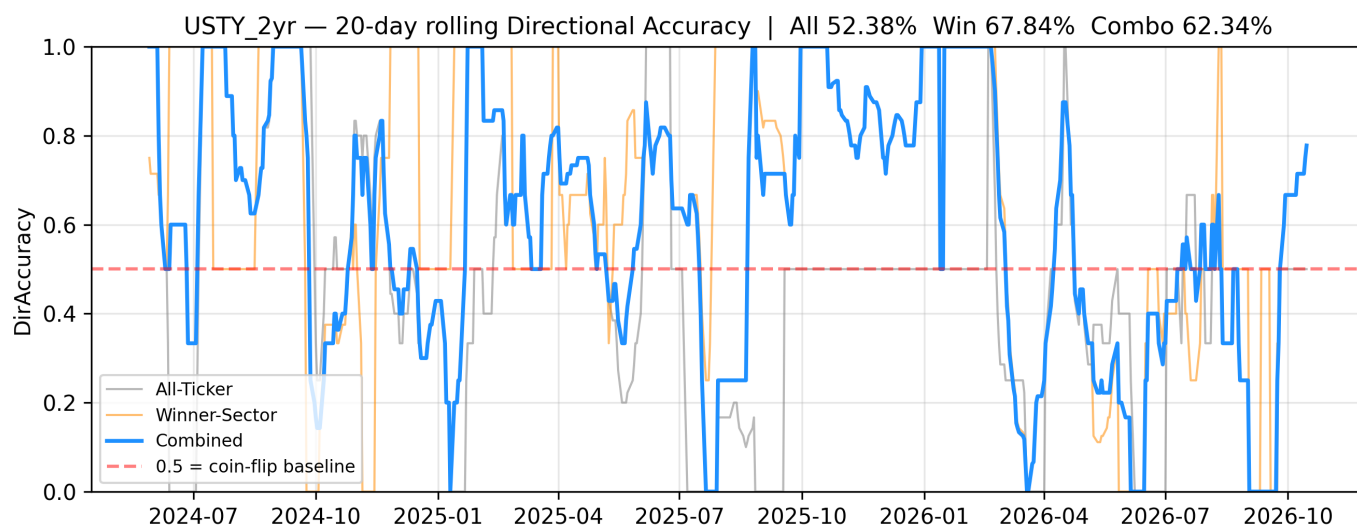


Figure 6: 20-day rolling 5d Forward Directional Accuracy (non-Flat predictions and outcomes) for All-Ticker, Winner-Sector, and Combined classifiers.

USTY_10yr

Tercile Bands for USTY_10yr (fold trained through 2026-10-15)

Tercile	5-Day Forward Change (Δ)
Lower (T0)	$-0.4700 < \Delta < -0.0400$
Flat (T1)	$-0.0400 < \Delta < +0.0700$
Higher (T2)	$+0.0700 < \Delta < +0.5100$

Latest Signals

- Most recent ModelDate: 2026-10-23
- USTY_10yr level on that date: 4.9900
- All-Ticker prediction: Lower (T0)
- Current Winner Sector: S: Real Estate
- Winner-Sector prediction: Lower (T0)
- Combined (All x Winner) prediction: Lower (T0)

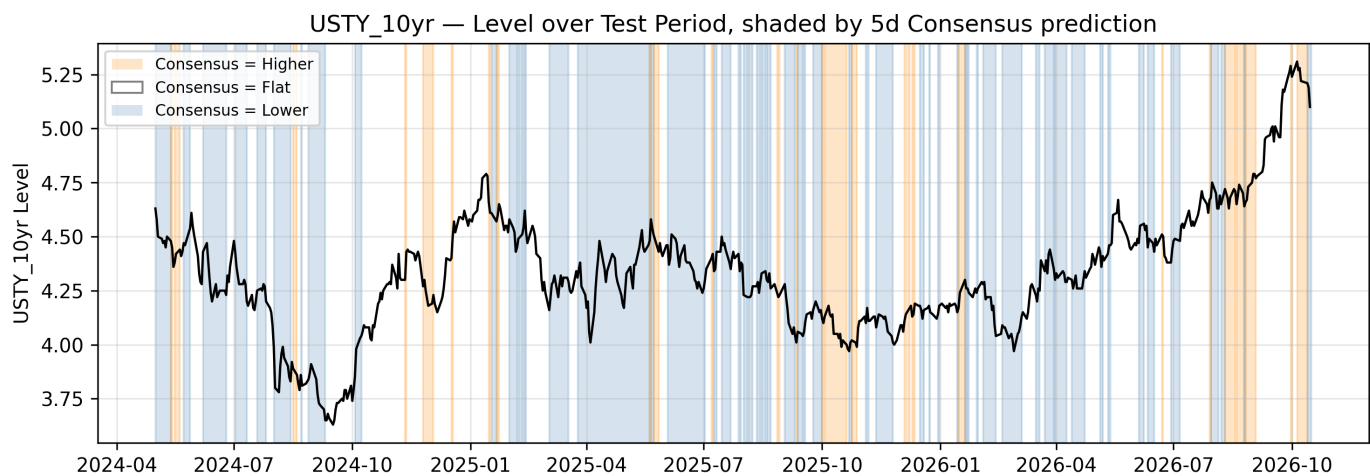


Figure 7: USTY_10yr — daily level over the test period; shading reflects each ModelDate's Combined consensus prediction (orange = Higher, no shade = Flat, blue = Lower).

Winner-Sector History (per 6-month walk-forward window)

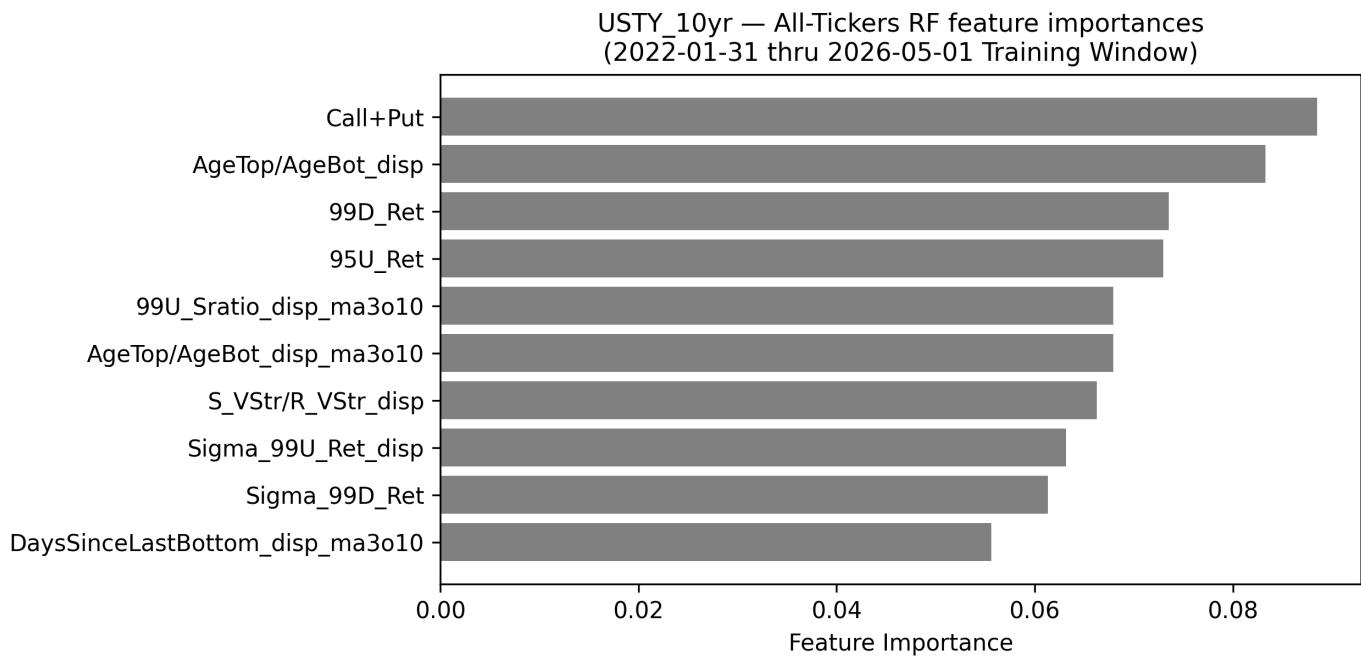
	Window Start	Window End	Winner Sector	Pool Size
0	2024-05-01	2024-10-31	S: Health Care	392109
1	2024-11-01	2025-04-30	S: Energy	483764
2	2025-05-01	2025-10-31	S: Materials	573164
3	2025-11-01	2026-04-30	S: Consumer Staples	666927
4	2026-05-01	2026-10-23	S: Real Estate	757457

Winner-Sector Tickers — S: Real Estate (89 tickers)

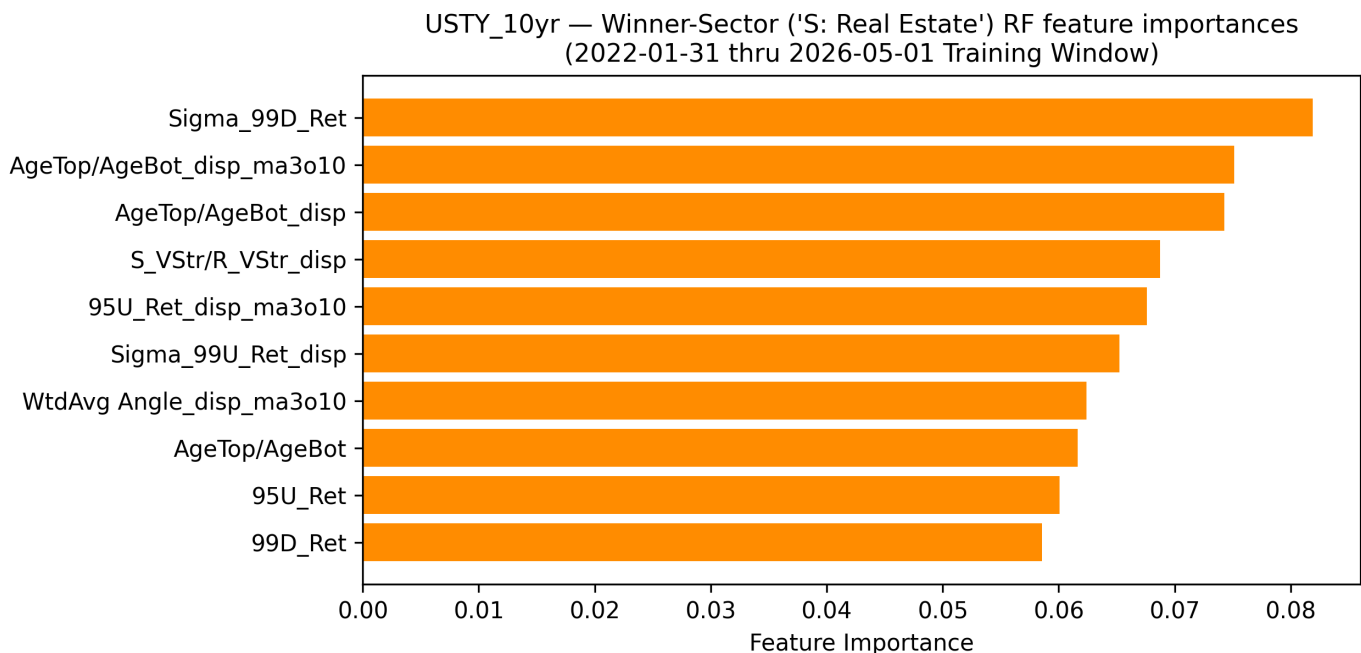
ABR, ACR, ACRE, ADC, AGNC, AMH, AMT, AOMR, ARE, ARI, ARR, AVB, BRSP, BRX, BXMT, BXP, CBRE, CCI, CIM, CMTG, COLD, CPT, CSGP, CSR, CUBE, CUZ, DLR, DOC, DX, EFC, EGP, ELS, EQIX, EQR, ESS, EXR, FBRT, FR, FRT, GLPI, HR, HST, INVH, IRM, IVR, JLL, KIM, KRC, KREF, LADR, LAMR, MAA, MFA, MITT, NLY, NNN, NREF, O, OHI, ORC, PLD, PMT, PSA, RC, REFI, REG, REXR, RITM, RWT, SBAC, SBRA, SEVN, SPG, STAG, STWD, SUI, TRTX, TWO, UDR, UMH, VICI, VMRK, VNO, VTR, WELL, WPC, WY, Z, ZG

Top Features — models used for prediction on 2026-10-23

All-Tickers model



Winner-Sector model — S: Real Estate



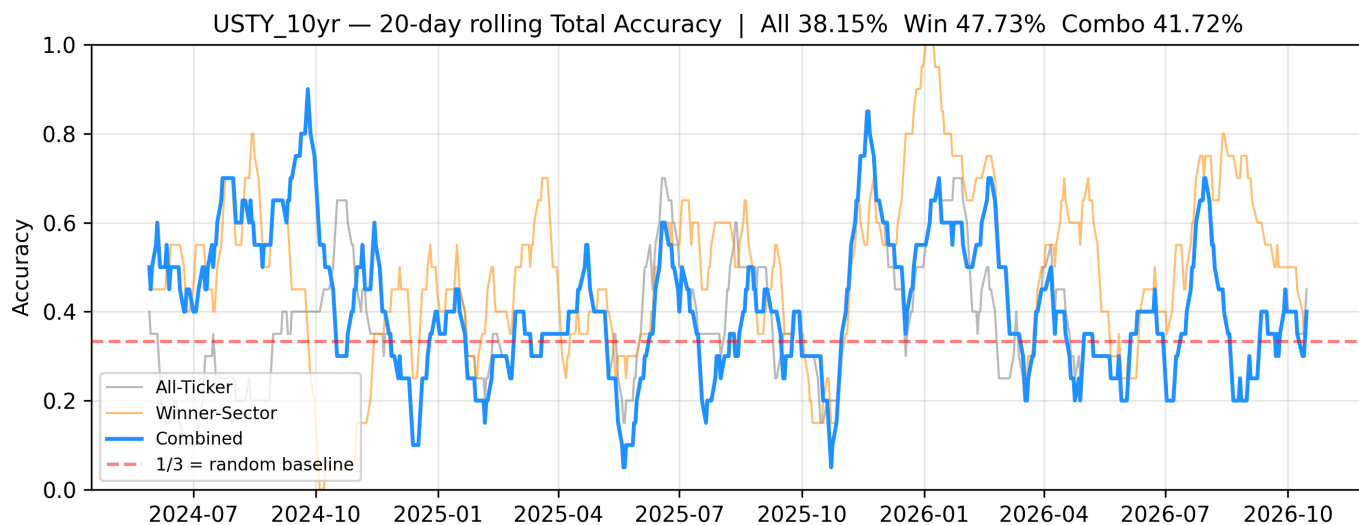


Figure 8: 20-day rolling 5d Forward Total Accuracy (exact Higher / Flat / Lower tercile match) for All-Ticker, Winner-Sector, and Combined classifiers.

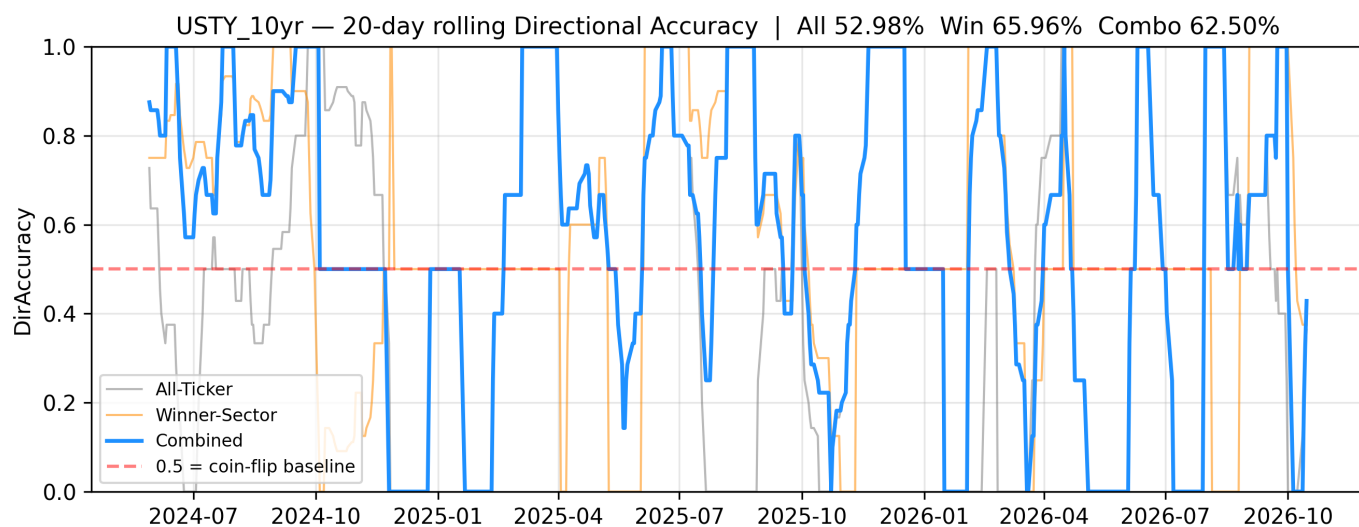


Figure 9: 20-day rolling 5d Forward Directional Accuracy (non-Flat predictions and outcomes) for All-Ticker, Winner-Sector, and Combined classifiers.

Methodology Notes

- **Target:** 5-day forward change in each macro variable, bucketed into terciles (T0 lowest / T1 middle / T2 highest). Quintile boundaries are refit per fold on the training slice only — no test-period leakage.
- **All-Ticker model:** Random Forest Classifier on per-date mean and per-date cross-ticker standard deviation (`_disp`) of every Vecviz feature.
- **Winner-Sector model:** same RF Classifier but trained on the Sector (`S:`) group from `ticker_industry.csv` that wins a fresh 80/20-split tournament at each 6-month walk-forward boundary, so the winner can change over time.
- **Combined classifier:** deterministic 3×3 lookup combining the All-Ticker prediction (rows) and the Winner-Sector prediction (cols):

	Win = T0	Win = T1	Win = T2
All = T0	T0	T0	T1
All = T1	T0	T1	T2
All = T2	T1	T2	T2

- **Accuracy:** exact tercile match; random baseline = 33.3%.
- **DirAccuracy** (“Directional Accuracy”): standard accuracy computed AFTER excluding rows whose prediction OR actual = T1 (middle). 20-day rolling windows default to 0.5 when no non-middle predictions are present.
- **Latest-date predictions:** emitted past the last day where a realized 5-day target is computable, by re-running the final-fold model on the most recent `ModelDate`’s features.
- **Feature selection (top-16, with 3dma/10dma momentum):** an All-Tickers Random Forest (`n_estimators=500`, `max_depth=10`, `min_samples_leaf=5`, `max_features='sqrt'`, `random_state=42`) is fit on the full 2022-01-31 → 2024-04-30 in-sample window across a 168-column universe (per-day mean, per-day cross-ticker dispersion, and the 3-day MA / 10-day MA ratio of each base column — `_ma3o10`); the 16 columns with the highest `feature_importances_` are selected and used by every downstream model.

Selected Features — Per Target

Top 16 features — VIX

Rank	Feature	Importance	Type
1	RangeDwn	0.0145	mean
2	RangeUp_disp	0.0131	disp
3	RangeUp	0.0123	mean
4	99D_Ret	0.0118	mean
5	RangeDwn_ma3o10	0.0109	mean
6	Up Angle_disp	0.0107	disp
7	S_VStr/R_VStr_ma3o10	0.0104	mean
8	Dwn Angle	0.0104	mean
9	95U_Ret	0.0102	mean
10	nCall_0.05	0.0101	mean
11	S_VStr/R_VStr	0.01	mean
12	95U_Sratio_ma3o10	0.0099	mean
13	99U_Ret	0.0097	mean
14	DaysSinceLastBottom	0.0092	mean
15	S_VStr/R_VStr_disp_ma3o10	0.0092	mean
16	EDB_Sratio_ma3o10	0.0088	mean

Top 16 features — USTY_2yr

Rank	Feature	Importance	Type
1	EDB_Sratio_disp	0.0147	disp
2	95U_Ret_disp_ma3o10	0.013	mean
3	AgeTop/AgeBot_ma3o10	0.0128	mean
4	DaysSinceLastTop_disp	0.0126	disp
5	DaysSinceLastBottom_ma3o10	0.0123	mean
6	RangeUp_disp	0.0118	disp
7	Sigma_99D_Ret_disp	0.0112	disp
8	99D_Ret_disp_ma3o10	0.0111	mean
9	99U_Sratio_disp_ma3o10	0.0107	mean
10	AgeTop/AgeBot_disp	0.0105	disp
11	EDB_Sratio_disp_ma3o10	0.0103	mean
12	Sigma_99U_Ret_disp	0.0098	disp
13	Sigma_95D_Ret_disp	0.0097	disp
14	95U_Sratio_disp_ma3o10	0.0097	mean
15	Dwn Angle	0.0093	mean
16	WtdAvg Angle_disp	0.0091	disp

Top 16 features — USTY_10yr

Rank	Feature	Importance	Type
1	DaysSinceLastBottom_ma3o10	0.0209	mean
2	AgeTop/AgeBot_disp_ma3o10	0.0168	mean
3	nPut_-0.005	0.0118	mean
4	DaysSinceLastBottom_disp_ma3o10	0.0115	mean
5	95U_Ret	0.0112	mean
6	99U_Sratio_disp_ma3o10	0.0104	mean
7	Call+Put	0.0103	mean
8	S_VStr/R_VStr_disp	0.0102	disp
9	AgeTop/AgeBot_disp	0.0101	disp

Rank	Feature	Importance	Type
10	95U_Ret_disp_ma3o10	0.01	mean
11	AgeTop/AgeBot	0.0098	mean
12	WtdAvg Angle_disp_ma3o10	0.0095	mean
13	99D_Ret	0.0092	mean
14	Sigma_99U_Ret_disp	0.0088	disp
15	95D_Ret_disp	0.0085	disp
16	Sigma_99D_Ret	0.0085	mean