BZProject — Algorithmic Trading Report

Bithumb KRW · Coinbase USD · Paper Trading Performance

Bosun Park · BPPv1 / BZPv3 · 2026-05-24

KRW (Bithumb)

-6.63% total return

Start Feb 15 → End Mar 07 (20 days)

Max DD -13.10% Sharpe -2.61

USD (Coinbase)

-15.94% total return

Start Feb 14 → End Apr 12 (58 days)

Max DD -16.73% Sharpe -6.87

Performance Summary — All Systems

System	Period	Start	End	Return	Max DD	Sharpe
KRW (Bithumb)	Feb 15–Mar 07, 2026	1,000,000	933,672	-6.63%	-13.10%	-2.61
USD (Coinbase)	Feb 14–Apr 12, 2026	1,000.00	840.55	-15.94%	-16.73%	-6.87
KRW Shadow	Feb 22–Mar 07, 2026	1,000,000	986,861	-1.31%	-1.45%	-6.87
Upbit KRW	Mar 28–Mar 31, 2026	1,000,000	1,015,348	+1.53%	-0.84%	26.82

System Architecture

```
BPPv1 / BZPv3   (7 engines + adaptive weights)
Exchanges:  Bithumb KRW  ·  Coinbase USD  ·  Upbit KRW
Loop:  run_paper_loop_v2  (event-driven, setup-gated)
Engines:  MeanReversion · RSI · Momentum · DonbeeFourier
          BTCBetaFilter · DonchianBreakout · VolRegime
Learning:  online weight adaptation (realized outcomes)
RiskMgr:  per-symbol position limits · drawdown kill-switch
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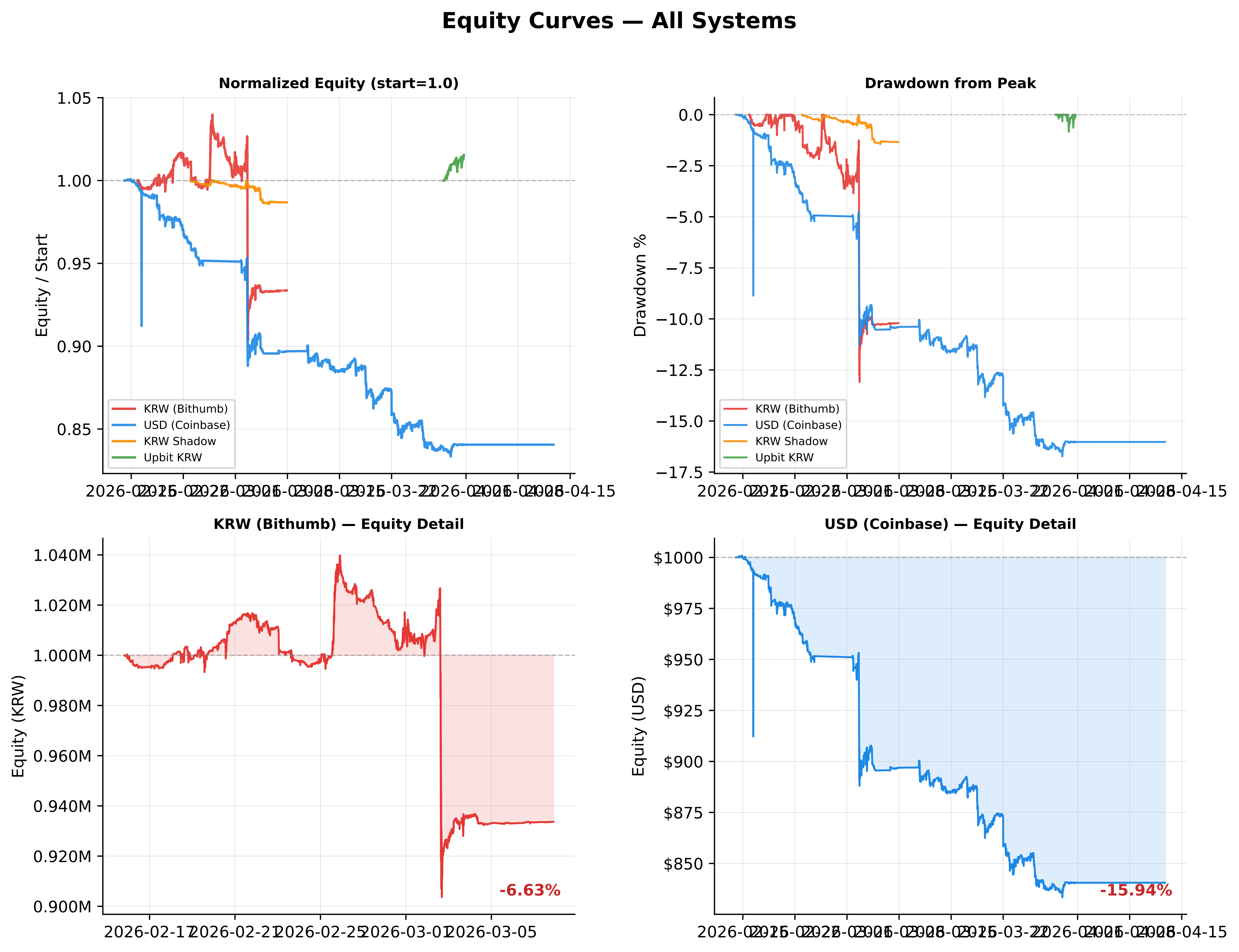
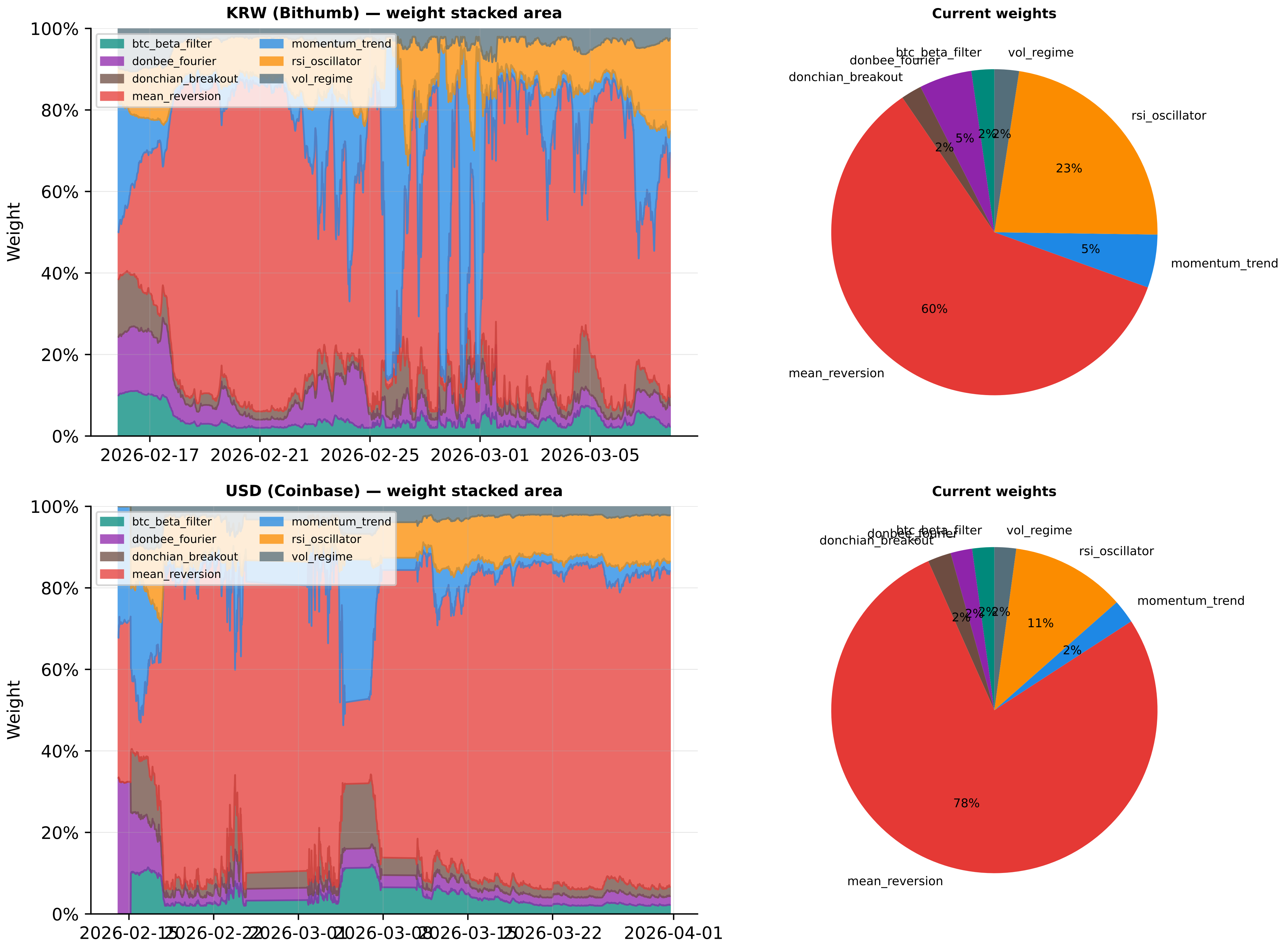
MASTER_PLAN Status (as of report date)

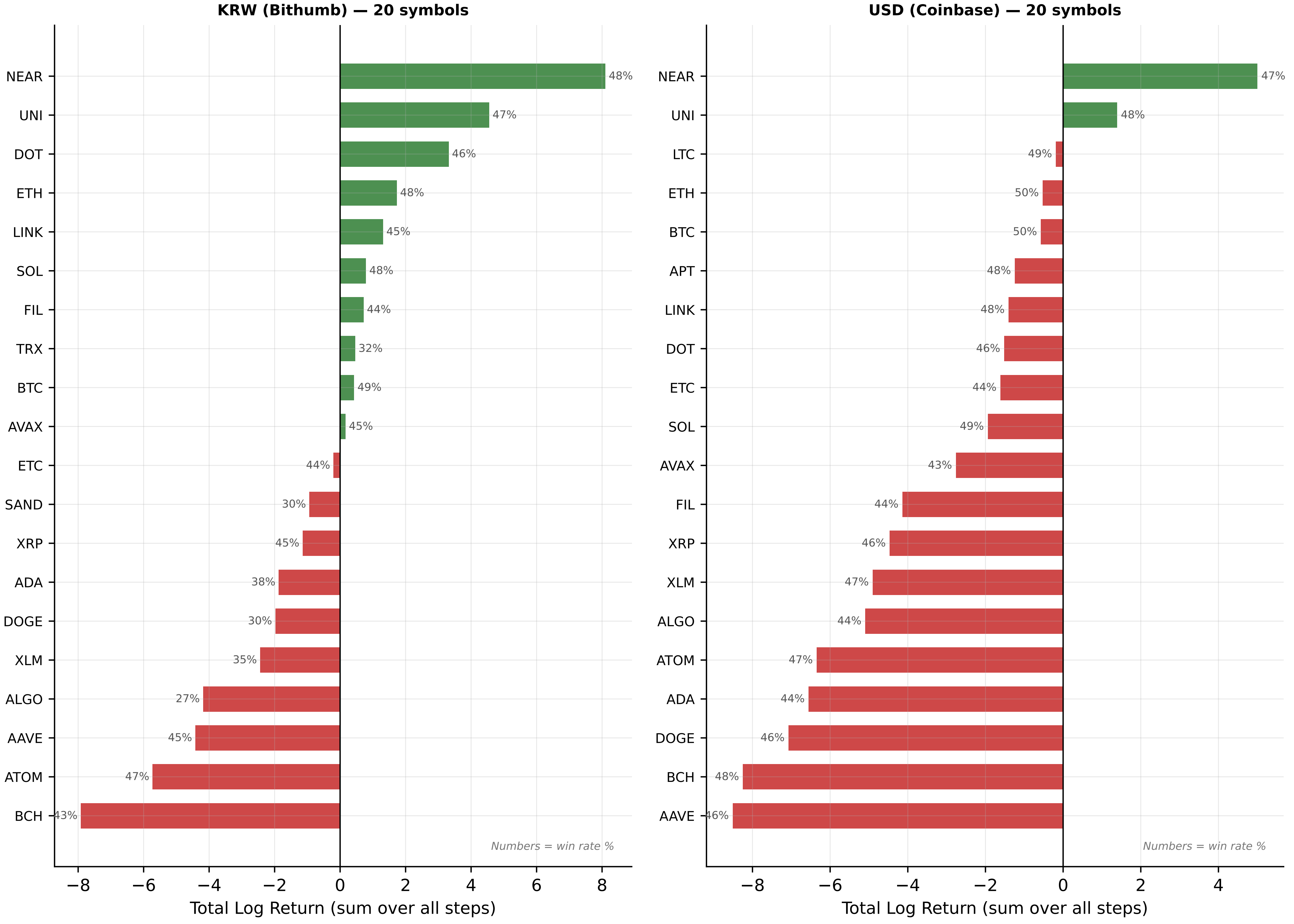
- [DONE] Phase 0: Stabilize (reset weights, fix crashes)
- [DONE] Phase 1: DipReboundDetector + BreakoutDetector
- [DONE] Phase 1: Backtest both detectors on candle history
- [DONE] Phase 2: Event-driven loop v2 (run_paper_step_v2)
- [DONE] Phase 2: Shadow parallel deploy (v1 + v2 together)
- [DONE] Phase 3: setup_trades table + outcome labeling
- [DONE] Phase 3: SetupScorer (logistic, filters low-conviction)


Equity Curves — All Systems
Normalized Equity (start=1.0)
Equity / Start
1.05
1.00
0.95
0.90
0.85
KRW (Bithumb)
USD (Coinbase)
KRW Shadow
Upbit KRW
Drawdown from Peak
Drawdown %
0.0
−2.5
−5.0
−7.5
−10.0
−12.5
−15.0
−17.5
KRW (Bithumb)
USD (Coinbase)
KRW Shadow
Upbit KRW
KRW (Bithumb) — Equity Detail
Equity (KRW)
1.040M
1.020M
1.000M
0.980M
0.960M
0.940M
0.920M
0.900M
2026-02-17
2026-02-21
2026-02-25
2026-03-01
2026-03-05
-6.63%
USD (Coinbase) — Equity Detail
Equity (USD)
$1000
$975
$950
$925
$900
$875
$850
-15.94%

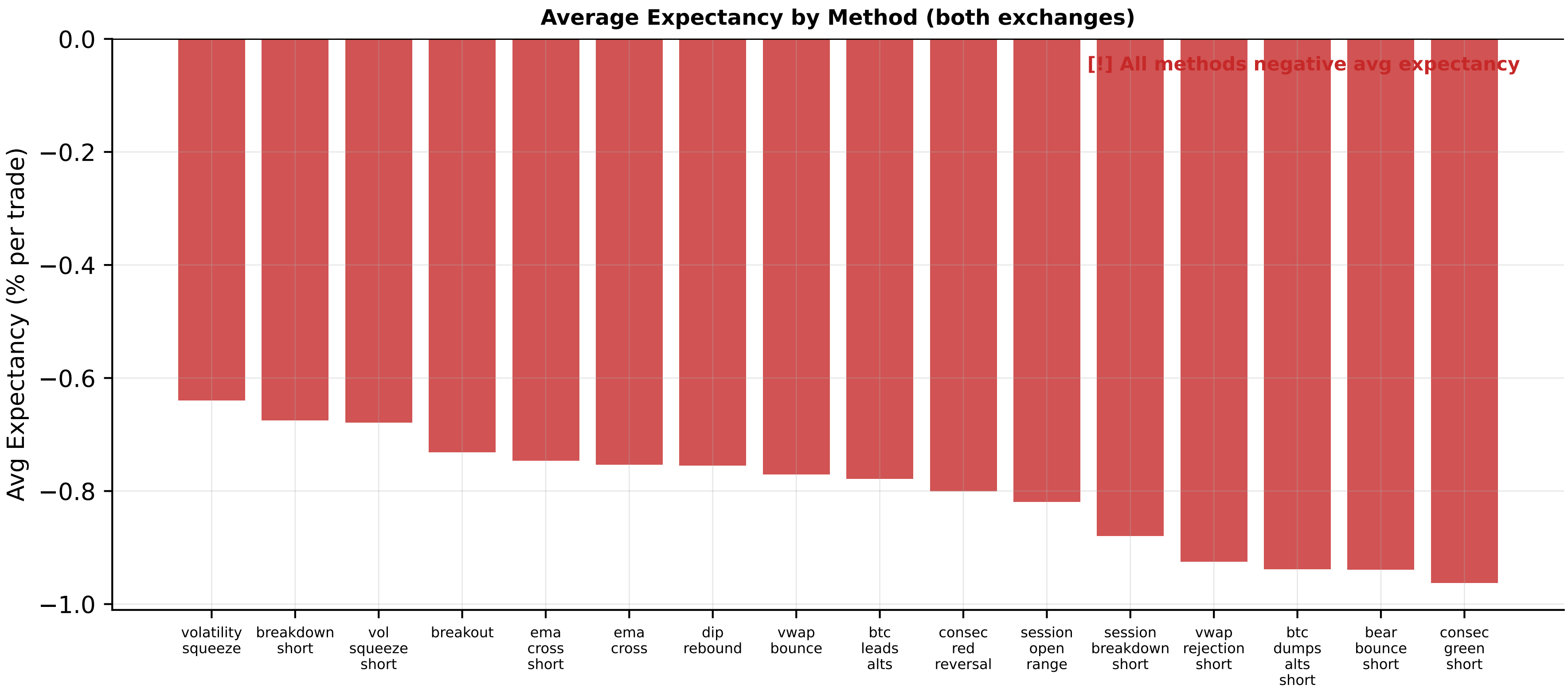
Engine Weight Evolution



Per-Symbol Performance (Total Log Return)



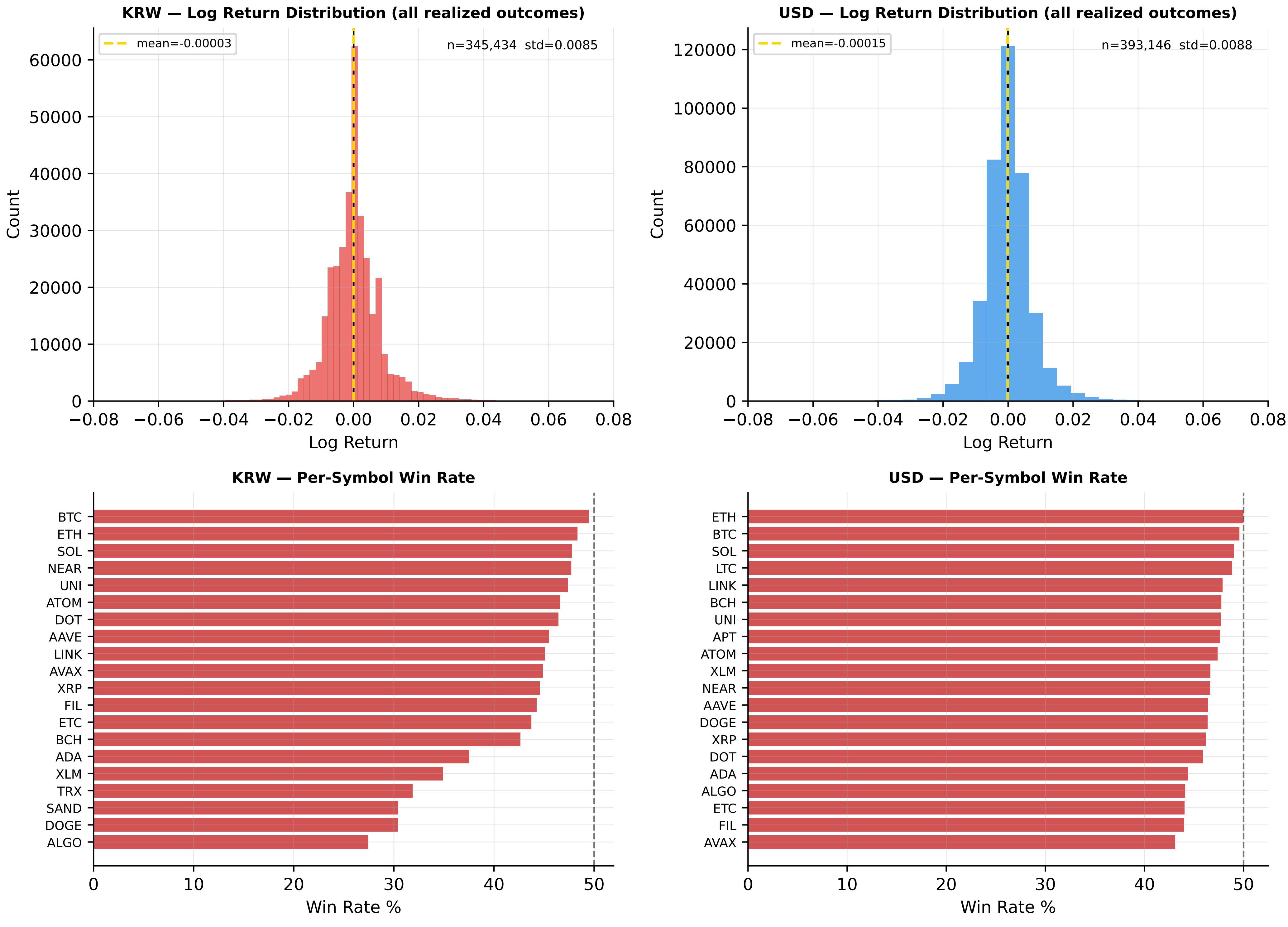
Backtest Results — Setup Detector Methods



Top 15 Best Parameter Combos (n_trades ≥ 20)

Method	Exchange	Symbol	Tgt%	Stop%	Hold	n	WR%	Exp%
breakout	coinbase	UNI/USD	15.0	5.0	168	20	40.0%	**+2.218%**
btc leads alts	upbit	NEAR/KRW	8.0	3.0	72	20	40.0%	**+1.220%**
ema cross short	coinbase	AVAX/USD	8.0	3.0	72	25	44.0%	**+1.197%**
vwap rejection short	upbit	ADA/KRW	3.0	1.5	24	33	60.6%	**+1.047%**
btc leads alts	upbit	LINK/KRW	3.0	1.5	24	28	57.1%	**+0.931%**
consec red reversal	coinbase	UNI/USD	8.0	3.0	72	44	38.6%	**+0.819%**
breakdown short	coinbase	AAVE/USD	8.0	3.0	72	21	38.1%	**+0.794%**
vwap rejection short	upbit	ALGO/KRW	5.0	2.0	48	34	41.2%	**+0.702%**
bear bounce short	upbit	NEAR/KRW	5.0	2.0	48	22	40.9%	**+0.684%**
ema cross short	coinbase	AVAX/USD	5.0	2.0	48	26	38.5%	**+0.549%**
bear bounce short	coinbase	FIL/USD	5.0	2.0	48	39	38.5%	**+0.539%**
ema cross short	coinbase	AVAX/USD	3.0	1.5	24	26	50.0%	**+0.498%**
btc leads alts	upbit	NEAR/KRW	5.0	2.0	48	21	38.1%	**+0.482%**
breakout	coinbase	ADA/USD	3.0	1.5	24	25	48.0%	**+0.480%**
consec red reversal	coinbase	UNI/USD	5.0	2.0	48	49	38.8%	**+0.476%**

Realized Outcome Distributions



Diagnosis & Recommendations

What went wrong and what to try next

[!] Identified Problems

- **1. Mean reversion dominance**
  Online learning pushed mean_reversion weight to 60–78%.
  When markets trend (crypto bear 2026), mean-rev loses badly.
  → Needs weight caps per engine (max 40%).
- **2. All backtest methods negative**
  All 32 method/exchange combos have negative avg expectancy
  in the stored backtest results. Even the best combo
  (breakout + UNI +2.22%) had only n=20 trades.
  → Better filtering needed before live deploy.
- **3. Bithumb API crash**
  bpp_krw.log shows repeated ExchangeError:
  'ipryeokgabs-eul hwaginhae-juseo (invalid input)' on every step.
  Bithumb changed API format. KRW loop is dead.
  → Update ccxt or switch to Upbit.
- **4. Win rates below 50%**
  Most symbols: KRW 27–50%, USD 43–50%.
  Even if avg win > avg loss, below-50% WR + small edge
  means long streaks of losses under adverse conditions.
  → Filter for high-conviction setups only (SetupScorer).
- **5. Trading too frequently**
  346K analysis steps for 8K trades in 20 days (KRW).
  High turnover magnifies transaction costs and slippage.
  → Event-driven v2 architecture (already built) is the fix.
- **6. Upbit short run only 3 days**
  Upbit system shows +1.53% but only 3 days of data.
  Not statistically meaningful. Needs 60+ day track record.
  → Deploy Upbit KRW as primary (Bithumb API broken).

[OK] Next Steps (Priority Order)

- **P1 · Fix Bithumb API or switch to Upbit**
  Bithumb's API is broken (ccxt incompatibility).
  Switch primary KRW loop to Upbit which works.
  Target: KRW system live again within 1 day.
- **P1 · Add engine weight caps**
  Hard cap: no single engine > 40% weight.
  Prevents mean_reversion monopoly in trending markets.
  Implement in weight_updater.py.
- **P2 · Deploy event-driven v2 as primary**
  run_paper_loop_v2 is built but shadow-only.
  72h parallel comparison passed — promote to primary.
  Silence = safety: only enter on SetupScorer > 0.55.
- **P2 · Dip rebound only on best symbols**
  KRW: NEAR, UNI, DOT have positive total log return.
  USD: NEAR, UNI stand out. Focus DipRebound on these.
  Drop BCH, ATOM, AAVE, ALGO from the symbol list.
- **P3 · Collect 60+ days on Upbit for track record**
  Need statistically robust sample before real money.
  Target: ≥ 200 setup-gated trades on Upbit.
  Then compute Sharpe on setup trades only.
- **P3 · Real money threshold**
  MASTER_PLAN rule: 2 weeks profitable paper v2.
  Win rate on setup trades > 55% (after SetupScorer).
  Current status: NOT YET — still building track record.