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The author may hold positions in the instruments discussed or may apply a similar approach in practice. The information contained in the reports may change without prior notice.

Methodology

TradingEdge.Pro's methodology describes a multi-step process for building and validating trading strategies, structured into two parts: strategy development and testing, and practical use. In the testing phase, a strategy is defined as a set of objective rules, validated through initial tests, optimised, and assessed for stability (robustness), and then evaluated using Walk-Forward Analysis. The detailed testing assumptions (including the instrument universe, in-sample/out-of-sample periods, data sources, transaction costs, and execution rules) are described in the "Testing Specification" document. The full methodology and metric definitions are available on the TradingEdge.Pro "Methodology" page.

V-Thrusts v.2

Investment Strategy Testing Summary

The V-Thrusts v.2 strategy is a swing trading technique based on Jeff Cooper's classic V-Thrusts. In its long version, it combines **a Donchian channel-based trend filter** with **an impulse to a new multi-week high,** followed by **a multi-session correction** of **significant amplitude** (a decline from the peak by several times **the ATR; Average True Range)**. After such a correction, a position is opened with **a buy stop** tick above the previous day's high. Risk is defined by a fixed stop below **the correction's lows,** and the position is closed **after several sessions** (time-exit) or when **the price reaches the high formed before the correction began.** The strategy has a mirror variant for short selling.

Compared to V-Thrusts v.1, this strategy has **removed the requirement for a Reversal Day pattern** to end a correction, which is intended to improve the number of test trades received. **A take profit has also been added, set at the level of the high formed before the correction began** (or the bottom for a short position).

While the strategy's logic seems sound, **it has failed even preliminary testing, as its results do not indicate a market advantage. Therefore, it is not recommended for use in real-world trading.**

Our goal is to have a strategy that remains **profitable and effective across a wide range of parameters,** because the market is a volatile organism, and optimal parameters can change over time. **I can't** emphasize enough that for **a strategy to work** in real-world conditions, it must also perform under **suboptimal parameters** and **conditions.** In short, **it must be stable** to changing market conditions.

I don't know who said these words, but they perfectly capture the problem of many optimizations:

"I've never seen a strategy that didn't work in backtests."

We don't know the future, we don't know future market conditions, but if we know that our strategy **has historically generated acceptable results** in various market conditions and across various parameter ranges, then we are **one step ahead of other** market participants.

Contents

Step 1: Formulate an investment strategy

V-Thrusts v.2 strategy joins **the ongoing trend** after a strong price impulse and **a deep, short-term correction. The trend context** is confirmed by the price's position within **the upper band of the Donchian channel** (for longs) and the establishment of **a new multi-week high.** The market then performs **a multi-session correction** with a range several times **the ATR** (**Average True Range)** calculated from the high to the low of this sequence. We enter **with a buy stop order 1 tick** above the previous day's high, and set **a stop loss at the low of the entire correction.** We close the position **several sessions** after entry, unless a stop or take profit triggered earlier. **Profit is realized when the price reaches the high formed before the correction began.**

short version is analogous: downtrend (lower Donchian band), **new multi-week low,** several times **ATR** upward correction lasting several sessions, sell stop 1 tick below the last day's low, stop above the correction high, time-exit several sessions or take profit.

The strategy uses:

- **Trend filter (Donchian channel)** – price in the upper (long) or lower (short) band of the channel;
- **Momentum Impulse** – new multi-week high/low;
- **"V" correction** – a correction lasting several sessions with a total range of several times the ATR relative to the high/low;
- **Trigger T+1** – buy/sell stop 1 tick above/below the high/low of the reversal day;
- **Constant risk management** – stop loss at the extreme of the entire correction;
- **Take profit** – when the price returns to new highs (for a long position) or lows (for a short position) it means closing the position.
- **Timed exit** – closing a position after several sessions.

Characteristics of the strategy and its strengths and weaknesses:

- **Minimalistic, easy to program** – a few simple rules ensure transparency and low computational costs;
- **Natural mean-reversion environment** – large instruments often rebound after a sharp decline within a trend;
- **Entry after a confirmed reversal following a significant correction** – often a favorable reward/risk ratio;
- **Fewer transactions in sideways trends** – in the absence of clear multi-day extremes, the system remains out of position for a long time;
- **High correction amplitude increases nominal stop distances** – strict control of position size is necessary.

V-Thrusts v.2 strategy, while simple, provides **a solid foundation for building algorithmic portfolios.** However, it requires **discipline and strict adherence to risk management methods.**

Step 2: Determine investment principles

Below is **the pseudocode** for the **V-Thrusts v.2 strategy** on daily data:

1. **Calculating Indicators:**
    a. **XXX-Donchian** – Donchian channel with XXX session window.
    b. **ATR(40)** – Average True Range over 40 sessions, used to measure correction amplitude.
    c. **Y-DayLowestLow** – the lowest price from the last Y sessions (including the current one).
    d. **Y-DayHighestHigh** – the highest price from the last Y sessions (including the current one).
2. **Generating Entry Signals – Long Position:**
    a. **Trend:** Y days ago the maximum price of the instrument formed a XXX-day high (XXX-day Donchian channel).
    b. **Correction:** This high was followed by a downward correction, the low of which is the lowest price of the last Y sessions (Y-DayLowestLow), and its amplitude is at least Z × ATR(40) (where Z is the ATR multiplier).
    c. **Entry:** Set a buy stop order 1 tick above yesterday's high; the order is only active for the next session.
3. **Generating Entry Signals – Short Position:**
    a. **Trend:** Y days ago the minimum price of the instrument formed a XXX-day low (XXX-day Donchian channel).
    b. **Correction:** After this bottom, there was an upward correction whose high is the highest price in the last Y sessions (Y-DayHighestHigh) and its amplitude is at least Z × ATR(40) (where Z is the ATR multiplier).
    c. **Entry:** Set a sell stop order 1 tick below yesterday's candle low; the order is active only in the next session.
4. **Stop Loss Management:**
    a. **Long position:** stop loss set 1 tick below the low of yesterday's candle;
    b. **Short position:** set stop loss 1 tick above the high of yesterday's candle;
5. **Generating Output Signals:**
    a. **Timed exit:** if the stop loss has not been activated earlier, close the position after the WW sessions from the entry date (closing the position at the opening price of the next day after the WW session has expired).
    b. **Take Profit:** Take profits when price returns to the pre-correction high/bottom (XXX-day Donchian channel).
6. **Daily Monitoring:**
    a. Each day, calculate the values: XXX-Donchian, ATR(40), Y-DayLowestLow, and Y-DayHighestHigh.
    b. The system verifies entry/exit conditions and sets appropriate buy stop/sell stop orders for the following day; keeps a day counter to the WW session for active positions.

The above rules are described in a way that allows them to be directly converted into a script in the chosen testing platform, which ensures the accuracy of the historical simulation and the reliability of the test results.

Tests are performed assuming that the risk of one position is **1.0% of total capital.**

Step 3: Pre-test your investment strategy

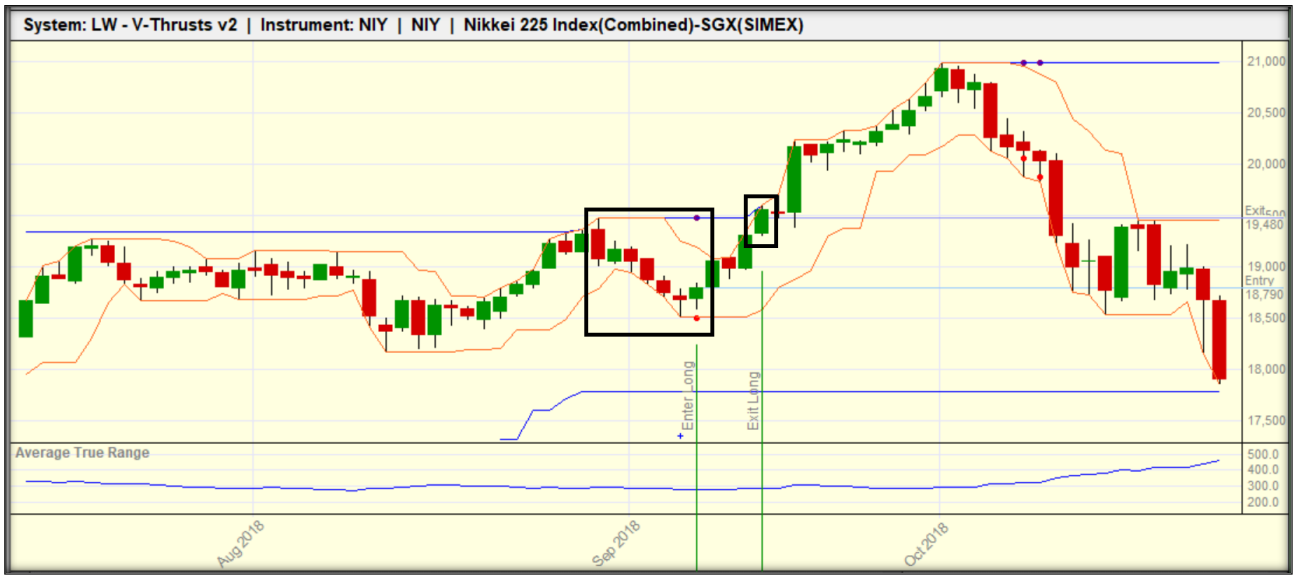
Below are some purchase and sale transactions that allow you to verify the following aspects:

- **Correctness of generated signals;**
- **Direction of opening a position;**
- **Moment of opening the position;**
- **The opening price of the position;**
- **Moment of closing the position;**
- **Closing price of the position;**
- **Compliance of the transaction with the theoretical assumptions of the investment strategy.**

At this stage, **it doesn't matter** whether the trades are **profitable,** what **instrument was used,** or whether they occurred **recently** or **in the distant past.** The key is **to verify that the trades are generated correctly** and in line with the assumptions described in the previous step.

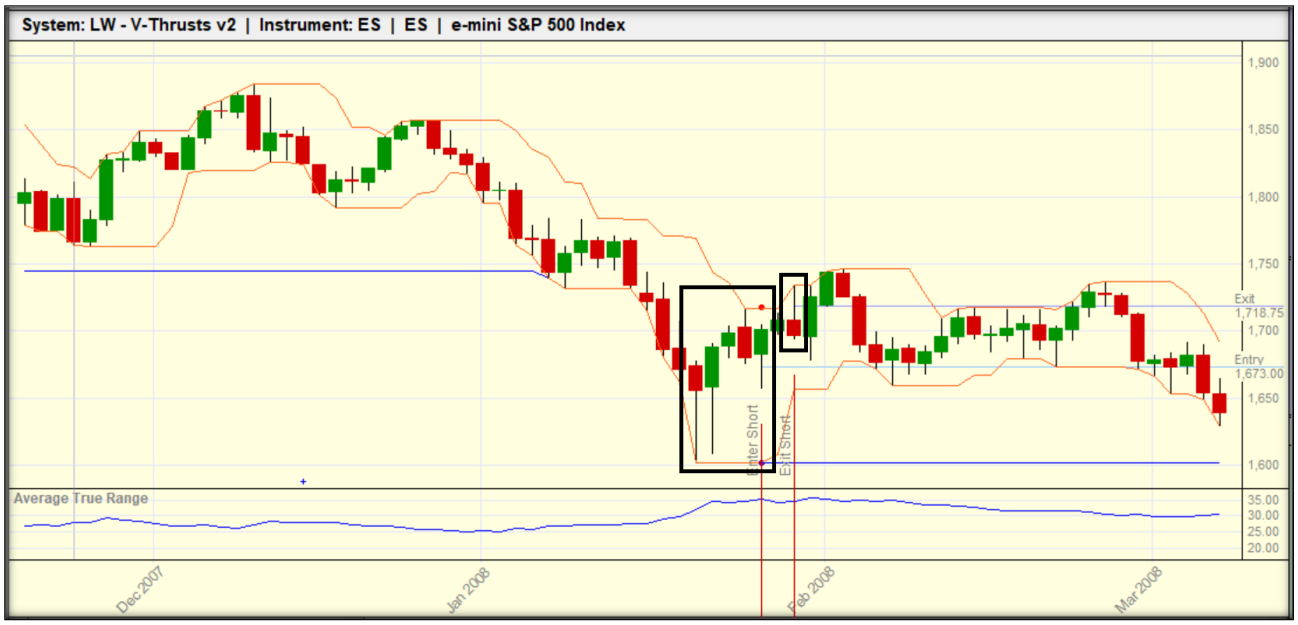
The first transaction was conducted on a futures contract for the Nikkei 225 index. At the end of August 2018, prices formed **a new 100-day high** (the first candle in the left-hand rectangle), after which prices entered a multi-day correction. **For a buy signal to be generated,** the minimum correction must be a 5-day low (orange line on the chart) and must be within 3x the ATR (the ATR value is shown below the price chart). **These conditions were met five days after the formation of a new 100-day high** (the sixth candle in the left-hand rectangle), which generated a signal to open a long position. The next day, we placed a buy stop order one tick above yesterday's high and a stop loss order one tick below that candle's low. **The position was opened the following day** (the seventh candle in the left-hand rectangle). **The take profit was set at the high preceding the correction** (the blue dot on the chart). **The system worked correctly.**

The strategy assumes **closing the position after 5 days, either when a defensive order is triggered or when a take profit order is executed.** In the example above, on the fifth day, the price reached the take profit level and the position was closed. **The system worked correctly.**



The second transaction was executed on an S&P 500 index futures contract (e-mini). At the end of January 2008, prices formed **a new 100-day low** (the first candle in the left-hand rectangle), after which prices entered a multi-day correction. **For a sell signal to be generated,** the correction's maximum must be a five-day high (orange line on the chart) and must have a range of 3 x ATR (the ATR value is shown below the price chart). **These conditions were met three days after the formation of a new 100-day low** (the fourth candle in the left-hand rectangle), which generated a signal to open a short position. The following day, we placed a sell stop order one tick below the previous day's low and a stop loss order one tick above the previous day's high. **The position was opened the following day** (the fifth candle in the left-hand rectangle). **The take profit was set for the day preceding the correction** (the blue dot on the chart). **The system worked properly.**

The strategy assumes **closing the position after 5 days, either when a defense order is activated or when a take profit order is executed.** On the third day after opening the position, the defense order was activated (the candle in the right-hand rectangle). **The system worked correctly.**



Once we are sure that the trades are generated correctly, **we can move on to the first test of the strategy on the full in-sample dataset**. These tests are conducted on **baseline parameters** that, in my opinion, should align with the strategy's stated goals.

First, **we reject strategies that linearly lose capital.** If a strategy exhibits this pattern, it's a clear signal that any parameter optimization is pointless.

Our basic expectation is that the strategy generates **positive results,** even if they are at a low level.

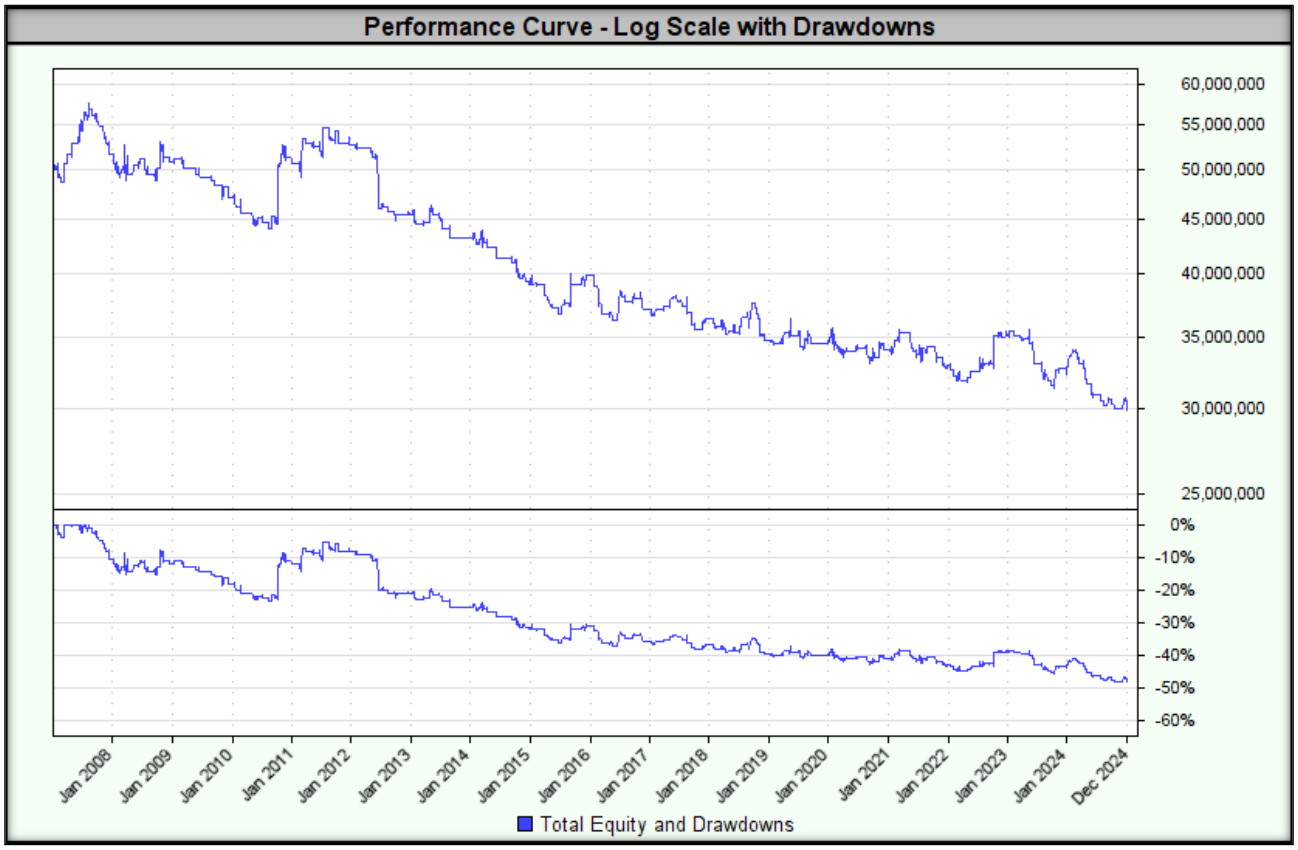
Tested base parameters:

- **Donchian Canal:** 100 days;
- **Y-DayLowestLow/Y-DayHighestHigh:** lowest/highest price of the last 5 sessions;
- **Correction range:** 3 x ATR(40);
- **Position opening method:** buy/sell stop one tick above/below the high/low of the previous day's candle (for long/short position respectively);

- **Order validity:** the order remains active only during the next session;
- **Stop loss:** one tick below/above the low/high of the previous day's candle (for long/short position respectively);
- **Take profit:** profit is realized when the price reaches the top/bottom formed before the correction began (for a long/short position, respectively);
- **Closing the position:** 5 days after opening (6 days for opening);
- **Position direction:** long and short;
- **Position sizes:** corresponding to a risk of 1.0% of total capital.

The test result is shown below.

Historical or simulated results do not guarantee that similar outcomes will be achieved in the future.



Historical or simulated results do not guarantee that similar outcomes will be achieved in the future.

Indicators/Measures	Concluding a transaction at the opening price
CAGR%	-2.82%
MAR Ratio	-0.06
RAR%	-3.18%
R-Cubed	-0.08
Robust Sharpe Ratio	-0.42
Max Drawdown	48.1%
Wins	41.8%

Losses	58.2%
Average Win%	1.11%
Average Loss%	0.97%
Win/Loss Ratio	1.15
Average Trade Duration (days)	5
Percent Profit Factor	0.83
SQN	-0.42
Number of transactions	479

In summary, the system worked properly and generated signals as expected. **However, the strategy has been losing capital linearly and has been in drawdown for over a decade. This means that the reliability of this strategy leaves much to be desired, and at this stage we are ending testing and abandoning further development of the strategy.**

Step 4: Optimizing and assessing the stability of the investment strategy

1. **Stability across a wide range of optimized parameters**

The step was skipped due to **failure of the preliminary tests.**

2. **Monte Carlo simulation**

The step was skipped due to **failure of the preliminary tests.**

3. **Stability over a moving time window**

The step was skipped due to **failure of the preliminary tests.**

4. **Long/short stability**

The step was skipped due to **failure of the preliminary tests.**

5. **Stability in the portfolio of financial instruments**

The step was skipped due to **failure of the preliminary tests.**

6. **Money Management (Position Sizing)**

The step was skipped due to **failure of the preliminary tests.**

7. **Strategy Risk Management**

The step was skipped due to **failure of the preliminary tests.**

Step 5: Walk-Forward Analysis

The step was skipped due to **failure of the preliminary tests.**

Step 6: Using the strategy in real time

The step was skipped due to **failure of the preliminary tests.**