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| **The VERY MEAN approach by range play at leveraged zero-sum markets** |
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| **Graduate Thesis of Psychology of Trading** |
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Table of Contents

[Abstract 4](#_Toc330062657)

[Overview 4](#_Toc330062658)

[Technical Measurements 5](#_Toc330062659)

[Trend 5](#_Toc330062660)

[Correction 6](#_Toc330062661)

[Breakout 6](#_Toc330062662)

[Range 6](#_Toc330062663)

[Timing 7](#_Toc330062664)

[Wave sequence 7](#_Toc330062665)

[Rate of Change (ROC) 7](#_Toc330062666)

[Execution 8](#_Toc330062667)

[Intraday execution 8](#_Toc330062668)

[Rally 9](#_Toc330062669)

[Grinding slow up 9](#_Toc330062670)

[Decline 9](#_Toc330062671)

[Grinding slow down 9](#_Toc330062672)

[Correction 9](#_Toc330062673)

[Pausing 9](#_Toc330062674)

[Very mean entry order 9](#_Toc330062675)

[Adaptive exit order 10](#_Toc330062676)

[Warm-up 10](#_Toc330062677)

[Inter-day execution 10](#_Toc330062678)

[How to avoid being stopped out ? 10](#_Toc330062679)

[How to make the market stop loss meaningful ? 12](#_Toc330062680)

[Hard Stop Loss and Soft Stop Loss 12](#_Toc330062681)

[Breakout or false breakout ? 12](#_Toc330062682)

[Money Management 12](#_Toc330062683)

[The logic behind the scenes 12](#_Toc330062684)

[Where is the source of profits for trading 13](#_Toc330062685)

[Chart Pattern Case studies 13](#_Toc330062686)

[Inter-day patterns 13](#_Toc330062687)

[Range narrow down pattern for time compression (PTER-RNTC) 13](#_Toc330062688)

[Intraday patterns 14](#_Toc330062689)

[First wave setback pattern (PTRA-FWSB) 14](#_Toc330062690)

[Computer-Aided Execution 14](#_Toc330062691)

# Abstract

**In the leveraged zero-sum market, selling short an extreme top and following the downtrend trading is the most profitable approach as I know so far. How to identify when the top is forming; how to dip in the early stage of the topping formation; how to stay in the process and trade with small profits before the market will slump down; and how to catch the last breath of the late buyers. Those issues are interesting and challenging. In this project, I purposed a "VERY MEAN" trading model to trade on the extreme tops at US futures market. It includes the work flow for this kind of market, the "VERY MEAN" entry strategy, the pyramid stop loss strategy, the adaptive exit strategy, and the pattern triggered inter-day entry strategy.**

**Very Mean Approach focus on risk manage to get entry into the market,**

**1) Never attempt to buy an opportunity other than paying commissions. Even if it has the risk to lose opportunities, it's better than that risk to lose money, especially consistently losing money because of attachment of catching opportunities**

**2) Play small intraday trading and play big inter-day trading; intraday trading is working for accumulation small gains to pyramid stop loss level that will use to bid for big moves in inter-day trading with wide stop loss; inter-day moves is the source that major profits comes. Intraday trading is the way to accumulate knowledge and keep good control of the trade for the specific market before risk wide to catch big moves.**

**It's not realistic for a trader only trade on big moves without observation of the intraday moves, especially for the beginners with small size account. It's a winning trader's responsibility to know when to play small and when to play big. It's not necessary to play small intraday to help to catch big swings, but it's better for growth and experience gaining, it will make the development of skills faster than doing less on trading**

**3) Use Very Mean order for intraday trading. The Very Mean order will put on the edge of in range stop loss or slightly out of range stop loss which has higher probability to gain than to lose. The stop loss is tight, and the gain could be small; But the point is, the loss is small, the gain is small, so a) if it makes a break even gain/loss, it's OK. That's a good preparation of inter-day trading, the warm up could give more hints when and where the big moves will happen; b) if it makes a profitable accumulation, it could use for wide stop loss when biding for inter-day moves; c) if it loses in intraday trading consistently, it means I have no clue how this market works, it's better to avoid risk more on inter-day trading because something is WRONG, BE CAREFUL !**

**4) Very Mean approach is based on range patterns identification and intraday, inter-day range evaluation/prediction. The stop loss will be triggered once the range is broken out or is going to be broken out, where is the Very Mean order should stay.**

# Overview

# Technical Measurements

Skill set a trader should have, whatever the trading style he/she has:

* Trend identification
* Breakout identification
* Reversal identification
* Correction identification
* Support/resistance identification
* Range identification
* Time identification

Lack of the abilities could lead higher potential risk to make biased conclusions and decisions about market moves, which will lead to higher risk trading

A good set of technical measurement could help to develop those skills and abilities:

slope = ($ amount per tick)\*(total ticks since acceleration)/(initial margin) or day margin or (initial margin-maintenance margin)

value of the entry = (potential profit)\*(possibility of winning)

value of the stop loss = (amount of stop loss pre-defined)\*(possibility of losing)

Average daily range: 3 day, 5 day, 10 day, 30 day, 90 day

Maximum daily range: past 12, 24, 36, 48, 60, 120 months

Minimum intraday stop loss size

Minimum inter-day stop loss size

Maximum intraday stop loss size

Maximum inter-day stop loss size

## Trend

Trend follow means only long and liquidate in bull market, only sell short and liquidate in bear market, no counter trend entry. The resistance and support will be significant for trend, correction and breakout.

## Correction

Correction for trend;

Correction for intraday moves: pause in intraday move, it should be defined product by product,

## Breakout

Most of the breakouts are false, that's the normally status of the market, so identifying the price level and timing for a breakout is essential. It will decide the stop loss strategy. At the edge of the range, assume the breakout will fail most of the time and counter the breakout most of the time, although it will lose some real opportunities, the winning rate could be high. And use stop order to get in the breakout is better than a limit order.

Inter-day breakout

Intraday breakout

## Range

Range related topics:

Every move is range move, trend is the range extension move; consolidation is the range overlapping move;

1) Daily, weekly, monthly, yearly, and multiple-day, multiple-year ranges (high VS low, open VS close)

2) Range extension and Range shrinkage: range extends to a higher/lower level or narrow down to previous bars ranges; For example, Range Extension from previous bars could be 1/3, 1/2/, 2/3 of the previous bar, it could extend to weekly high, low, support/resistance, previous three days high/low/support/resistance, etc. Fibonacci retracement/extension (50%, 38.2%, 61.8%)

3) Open range and closed range: range extends to a direction with high potential means it's open to that side, otherwise, if the resistance/support is obvious at a certain level that means the range is closed at that level

4) Range overlap: current bar range may have overlap with previous bars range. When the overlap will be more, and when the overlap will be less ? a) When the moves come to a previous consolidation area with high overlapping, it will repeat here again, when the moves are under way in one direction, the overlap is less, normally it means the trend will last. b) When one way moves last for a while and range shrink, the overlap increase, it normally setup a reversal, especially when it comes closely to boundary(resistance/support). c) When the range shrinks but the overlap increase or do not change, it means the underlining trend will continue.

5) Range alternation: wide range and narrow range days happen alternatively and the daily sequence of those two types of ranges

Example: (397, 400 -- 406, 415, 420], "(" or ")" means open range, "[" or "]" means closed range, prices on the left to "--" means downside range, normally it has 1-3 levels; prices on the right to "--" means upside ranges, normally it has 1-3 levels also; To figure out the ranges for next day trading is my daily homework.

## Timing

Tracking daily time points for peak and valley, day high and day low, include price and volume. The time span last for each wave, for example, soybean meal normally starts to rally or decline when the pit session opens at 10:30 AM CDT, and it can last 30-120 mins, often times 60-90 mins. This is the daily homework I should do.

Watch on daily/weekly/monthly/yearly time frame, trade on intraday time frame, from 1min-60min, use technical indicator decide entry price/exit price. because the account size is small, it's suitable for smaller time-frame (small account use small time frame, large account use large time frame).

Some special days for trade: end of month, end of season, have more liquidations; week day specials (Friday has more side way moves, Wednesday and Thursday have more reversals, Tuesday to Thursday have more bigger swings, Monday is the day to give out hinds about the direction for the rest of the week)

## Wave sequence

For a intraday moves, there is usually 1-3 waves for one direction and 2-4 waves for side way direction, if the move go beyond that much waves, it goes beyond my control, stay off without saying. The first move gives no hint for the direction of next move under the same time frame, it can see the hints from large time frame, the second move would give a better hint if it is a one direction move intraday or side way move intraday.

The sequence of the moves has four folds:

1) The price level and time points the turns will happen for the swings

2) The range of each swing

3) The rate of change for each swing

4) The direction of the swings and the sequence of the directions (Up and down sequence). For example, a rising day often times opens at a low swing and then rally sharply at an active time point. The sequence of the directions depends on the previous day and the trend the current day is working under. It should find some patterns to identify some specific cases for profits. For topping market, the up and down sequence for first major correction often times will follow a pattern.

## Rate of Change (ROC)

For the intraday move, if it goes smooth and slow, the slope is moderate, the volume is moderate, that means probably small buys/seller are working, the big buyers/sellers normally will generate a big volume and price change in a sharp slope. Count trend trade small buyers/sellers is good strategy.

For inter-day move, at early stage of the uptrend market, the ROC is smooth; after several months moves with corrections, it will start to speed up ROC, which will attract public to get in, the rally will breakout some important resistance or approaching them, then the top will be formed. So the high ROC is essential for an extreme topping market, the higher ROC the better topping will be formed.

# Execution

Before I put an order, I asked myself two questions:

Question #1: what's the potential risk for this trade?

Question #2: Is this the high probability winning trade?

For question #1: I answer it for intraday execution and inter-day execution respectively below.

For question #2: I only trade the patterns that I have researched and documented.

## Intraday execution

For intraday moves, there are usually 1-3 waves for one direction and 2-4 waves for two way direction, if the moves go beyond that much waves, it goes beyond my control, stay off without saying.

The first move gives no hint for the direction of next move under the same time frame, it can see the hints from larger time frame, the second move would give a better hint to know if it is one direction move intraday or two way move intraday. Two much two way moves means high volatility.

First rally followed by pausing, it means it's in the buying mode, probably it will have the second rally.

Execution time sensitive entry/exit/stop loss

Use time points/span for entry/exit instead of price, Critical Time of Day (CTOD)

Home work before a trade day starts:

1) Trend and volatility expected

2) Range

3) Time points/spans for entry and exit

4) Waves

4) Profits and Stop loss

### Rally

Research each individual product to define the rally for intraday move

### Grinding slow up

Small sellers are working

### Decline

Research each individual product to define the decline for intraday move.

### Grinding slow down

Small sellers are working

### Correction

Counter trend wave at between 1/4 and 1/2 of last major wave, normally 1/3 or 1/2. There are two types of corrections: quick correction and slow correction. The first counter trend wave is correction, after that, it will either breakout previous high or grinding side way, use larger time frame to decide the action for next step;

### Pausing

Tight range move, going flat and last for a while with no direction

### Very mean entry order

* Overnight session always seeking wick/hammer entry: over minimal inter-day stop loss
* Active session seeking VML entry
  + exhaustion entry: fade big move entry or false breakout resistance/support entry
  + trend follow-up entry
* Seeking adding to the winners when the entry starts to work or it's going to work

The level of Very Mean Entry order are defined by the range of the day. Normally it has three levels for each side of up/down, VMEL1, VMEL2, VMEL3.

VMEL depends on the volatility of the day (higher volatility day use higher VMEL), stop loss deposit (less deposit use higher VMEL). VME means it's ready to give up some opportunities because high VMEL will not be easily hit by the market.

Use for non-time-compression period trading, or intraday trading, facing the 2nd or 3rd wave or one-way move, and the stop loss point beyond the range;

In large time frame(yearly, monthly, weekly), trading on extreme overbought market; in intraday time frame, trading on extreme daily range edge or a little bit out of range (avoid the active trading hours, or slightly behind the active trading hours like 1 or 2 hour before the end of the day session, think about where the loser's stop loss at? entry after the loser's stop loss are triggered).

Range, Wave, Time (space , direction, time) need to be considered for an entry/exit.

Use time points/span for entry/exit instead of price will be better for me because I have limited time and resources to watch and analysis the market during the day time.

### Adaptive exit order

Exit by time sensitive point or time lasting

Exit by price resistance/support level

Exit by candlestick pattern

### Warm-up

Warm-up before get into deep trade. If I do not have an accumulative profits for a cost of large out of range stop loss, I am not qualified for putting an out of range stop loss. Have difficulties gain the first buck of gold to risk larger ? Then I am not warm-up yet, I did not understand this product well enough yet, so the attempt I risk more money as stop loss means a HP losing trade, I am not qualified for the formal trade yet. Do more research or practice somewhere else to better warm-up and avoid injury. Normally, I need two weeks warm-up trading when I get into a new product or at least one week warm-up before I can really get into a top forming trading.

Every month allow only once without stop loss deposit, it depends on the market, normally under 10% of account balance;

Friday and Monday only do intraday trading, liquidate at the end of Friday.

## Inter-day execution

## How to avoid being stopped out ?

First assumption before putting the stop loss is: I will be stopped out anyway, how to deal with that ??

Which time frame: intraday, inter-day ? it depends on is it on a time-compression mode ? if it is, go inter-day with wide stop loss. otherwise, go intraday with tight stop loss and trade on the stop loss edge

Range and range extension, 2 and 8 are good numbers for price entry/exit

Identify wide range days and narrow range days

Trend follow, never expect too much at first rising from bottom, often times it needs setback; if the first rally from bottom is a big rocket, it will set back 50% retracement

There is no trend, only ranges, open range and closed range, entry at the edge of closed range, stop loss set out of the closed range and then wait for the open range developed or closed. 48 hours verification or bail out.

Intraday up/down sequence, the slope of each wave and volume of each wave, the slope is high normally the volume is high also, vise versa;

The intraday wave sequence: if it's in buy mode, normally the first wave is down, then up; if it's in sell mode, the first intraday move might be rally, then sell off. The major troop normally wait for the chance before it takes actions;

Intraday active trading intervals, pit session is more active, the open of pit could be the time point big moves start; Figure out the active trading time points for each market, the time for low, high, start to rally, start to decline, end of rally, end of decline.

Inter-day: week days for each market, Tuesday, Wednesday, Thursday

Account size is small which is good for short-term, the larger size account is good for longer term trading, also if the range is closed and it's not in time-compression mode, it's good for short-term dip in/bail out, if the range is opened to one side and it's setting up the time-compression mode, it's good for longer term entry with wide stop loss.

Put the order where the public stop loss is, the right sequence, the right time interval, the right direction(breakout the range or set back into the range)

Trade on edge !!!

Where the stop loss is ? VML2+..... !!!

Daily wick/hammer pattern...., BE CAREFUL!!!

No opportunity losing in this business !!!

Trade in flat day for inter-day, don't follow the rocket or slump, it's too late.... !!!

Stop market ? stop limit ? Event/price trigger stop ?

## How to make the market stop loss meaningful ?

Don't be panic when the stop loss is hit, especially for the inter-day trading. It means I should get out this trade, but it may have better chance to get a better price. The point is, get out, but get out in a better way.

In some cases, I have chance to decide if the market changes when I can get out. For intraday trading with the closed range side, the stop loss could be hit but it does not mean the market changes, so get out with a better price is possible. For closed range, it will be the cases that a false breakout will trigger the stop loss, so don't be panic.

Another point is, don't be too early to put the entry order in case someone will test the market at inactive hours that could generate big wick/hammer.

### Hard Stop Loss and Soft Stop Loss

Hard stop loss is used for avoiding disasters, while soft stop loss is used for scalping profits taking and control.

Be happy to accept a break-even stop loss or exit. It's nothing wrong exit without any loss.

## Breakout or false breakout ?

Range for topping, when to breakout ? before that, just trade on edge, the midway move will lead to touch of the support/resistance, most of the breakout is false? Suppose breakout is false, even if it breaks through the support/resistance, use reversal order, trading on active hours instead of before opening or after closing which could have a gap open the next session or someone test the market leading a big wick/hammer to trigger the stop loss order.

(TODO) Analysis the buyer/seller status for the patterns; Why false breakout happens?

When is good time for testing ? Big wick/hammer is hard to get entry because all of the entry orders are waiting there at the good price.

Add pattern records for weekly performance report;

Name pattern: PTER-FE, PTRA-RBAR

# Money Management

## The logic behind the scenes

### Where is the source of profits for trading

Moves generate difference, difference generates profits and losses. Range overlaps and range extension are the key points to identify the opportunities for making profits and avoiding losses. For small money account, intraday range is more important than inter-day range. For large money account, inter-day range is more important than intraday range unless the trade is working on intraday basis. Range and wave sequence identifications can help with entry and exit, or they are the actual execution road map. Trend or breakout are kinds of range extension. Unfolding the ranges with proper wave sequence identification is the best way to realize profits from the market potential, as well as the best way of avoiding losses. This is the basic skill that needs practice every day while the trading activity is going on.

Trading financial market to make profits is all about the pyramid game, if you do not use it or do not use it properly, the profits is always limited, and the market will provide more risk than profits for those people who don't understand this rule.

# Chart Pattern Case studies

Only work on significant signals, indicators or patterns;

Identify which pattern match which market better to use it more efficiently;

Know when to play big and when to play small;

Know when to use the specific pattern and when NOT to use it;

## Range Patterns

### Trend

Consecutive Wide Range Extension followed by Range Shrinkage

Consecutive Wide Range Extension followed by Wide Range with More Overlap

Consecutive Moderate Range Extension followed by Range Shrinkage

Consecutive Moderate Range Extension followed by Wide Range with More Overlap

### Correction

The trend will resume after correction.

Narrow Range Slightly Counter Trend

Narrow Range Flat

Wide Range Counter Trend

Wide Range Flat

### Consolidation

Narrow Range Consolidation

Wide Range Consolidation with More Overlap

### Reversal

The trend will end up or go the other way after reversal.

Consecutive Narrow Ranges followed by Range Extension

Consecutive Wide Range Extension followed by Wide Range with More Overlap Counter Trend

Consecutive Wide Range Extension followed by Narrow Range Flat or Slightly up/down

Consecutive Moderate Range Extension followed by Wide Range with More Overlap Counter Trend

Consecutive Moderate Range Extension followed by Narrow Range Flat or Slightly up/down

### Breakout

The trend will resume or be enhanced after breakout.

Narrow Range Flat followed by Wide Range Extension along with Trend

Narrow Range slightly Counter Trend followed by Wide Range Extension along with Trend

Moderate Range Flat followed by Wide Range Extension along with Trend

Moderate Range slightly Counter Trend followed by Wide Range Extension along with Trend

## Inter-day patterns

It depends on trend, consolidation, or boundary(resistance/support)

Daily range, weekly range, resistance/support

### Range narrow down pattern for time compression (PTER-RNTC)

When the one-way trend moves come closely to boundary(resistance/support), normally the moves went one direction for several days (3-10 days) with more and more narrow range, volume decreased obviously, it's setting up a time-compression bounce back. Or if it's in a recovery status but grinding slow for several days with more and more narrow range and failed to break out the resistance, the time-compression is setting up.

**When to use**: for a weekly based range move, it's good to have this pattern detected at boundary(resistance/support), entry to wait for a reversal.

for a trend that moves strongly to one direction with the correction, entry to wait for resuming.

**When NOT to use**: when the trend is not clear, or the range for weekly, monthly timeframe is not clear, or the boundary(resistance/support) is not clear, or it does not come close to the boundary(resistance/support), this pattern should not be called.

## Intraday patterns

Candle stick pattern is not good for intraday trading, the Elliot wave patterns are better for intraday moves.

Intraday play is actually the range play most of the time; breakout will fall into inter-day play; don't do breakout play intraday, the assumption for intraday trading is that the breakout is false, otherwise, it should switch to inter-day trading.

Identify the volatility of pre big moves and post big moves, which will help to identify the range of the next day.

Big moves will make the range closed at one side most of the time, and flat moves will make the range open to at least one side, or even two sides; So post big moves is a better time to play intraday trading.

**When to use**:

**When NOT to use**:

### First wave setback pattern (PTRA-FWSB)

The first wave from bottom often times will setback deep, almost down back to the bottom level, like wheat, NG, buy the setback at the close to bottom level when the range is narrow down. Or sell short at the wave stall (five day exhaustion pattern ?)

**When to use**:

**When NOT to use**:

# Computer-Aided Execution

Two purpose:

Research work to verify new ideas with back-testing report

Order execution