Trade Tool

# Document History

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| --- | --- | --- | --- |
| Cheng Yi | 2011/05/09 | Add “Over Sell” Strategy | V0.1 |
| Cheng Yi | 2011/05/16 | Add “Rush In” Strategy | V0.2 |
| Cheng Yi | 2011/05/20 | Add “Price & Volume Up” Strategy | V0.3 |
| Cheng Yi | 2011/05/21 | 1. Add “Erection” Strategy 2. Update “Rush In” Strategy 3. Categorize “Over Sell”, “Rush In” and “Erection” into “Short Term Price based” strategy group. | V0.4 |
| Cheng Yi | 2011/05/22 | 1. Add Validate logic | V0.5 |
| Cheng Yi | 2011/05/27 | 1. Add UI design | V0.6 |
| Cheng Yi | 2011/06/03 | 1. Updated the to-do list | V0.7 |
| Cheng Yi | 2011/06/04 | 1. Extract Sell Strategy | V0.8 |
| Cheng Yi | 2011/06/11 | 1. List all the version 1 to-do. | V0.9 |

# Data

## TradableEntity

ID

Name

## DailyData

Date

OpeningPrice

ClosingPrice

HighPrice

LowPrice

TradeVolume

TradeAmount

# Strategy

## Strategy based on Trend

### Buy Opportunity

#### Short Term Price based

##### Over Sell



Figure Over Sell Strategy

Condition: Down Range followed by an Up Range

##### Rush In



Figure Rush In Strategy

Condition: Up Range followed by an Up Range

##### Erection



Figure Erection

#### Price & Volume Up



Figure Price & Volume Up

### Sell Opportunity

#### FixedDayRate1

##### Stop Win

##### Stop Loss

##### Max Holding Day

# Architecture

## Data Loading

## Lookup

For a given day, use the strategy to check whether this is an opportunity.

## Validate

After an opportunity appears, validate using the historical data.

The real buy day is the next day to the opportunity found day.

The buy price is the opening price of the buy day

The sell price is the closing price of the selling day

Selling strategy:

1. Sell it when the closing price reached STOP\_WIN\_RATE within MAX\_HOLD\_DAYS
2. Sell it when the closing price reached STOP\_LOSS\_RATE within MA\_HOLD\_DAYS
3. Sell it at the closing price at MAX\_HOLD\_DAYS

# Algorithm

Class TEDD:

findPreviousDownRange (Start, DR, DD)

findPreviousUpRange(Start, UR, UD)

findPreviousFlatRange(Start, FR, FD)



Figure Down/Up Range Lookup

# Tools

## Generate Market Section

## Parse Base Info

# UI

## Zoom and Pan

The Y axis should display the range between the min and max of visible data.

# To Do

## Implementation improvement

1. Optimize getNextDD and getPreviousDD using fetching by index

## Strategy

### Version 1

1. For Rush In, follow the cash flow.
2. For Over sell, check whether the volume goes up as well.
3. For Sell Strategy, sell immediately when drops appear.
4. For Sell Strategy, try not selling at the closing, sell at a given price.

## Engine to-do

### Version 1

1. Standard deviation
2. List all the current opportunities
3. Add Market Section concept.
4. Add Cache capability to market data.
5. Simulation.
6. Plugin Loader. (Prevent system restart while doing the plugin upgrade.)
7. Unified BuyOpportunity and StrategyConfig. (Simplify plugin developing)
8. Using No Adjustment Data (不复权数据), taking following pricing adjusting events (要求股价修正的事件) into consideration
   1. 分红
   2. 配股
   3. 股改
9. ST treatment
10. Can’t buy at raise limit and can’t sell at drop limit
11. Store NewsEvents in the database

### Version 2

1. Current opportunities are defined as
   1. Time overlapped opportunities for a stock are removed
   2. Time overlapped opportunities from different stocks are kept.

After having the “opportunity to time distribution” (机会对于时间的分布), the opportunity weight into the overall earning rate estimation can be more accurate. Each time period should have the same weight.

1. Optimize the algorithm to see how to add missing opportunities and how to avoid false opportunities.
2. Besides technical analysis, adding basic info as well.
3. Strategy Editor. (Now we can edit strategy outside of the system using the favorite editor and load it as plugin to prevent system restart.)
4. Transaction fee (交易费=给券商手续费+印花税) is fixed in current version. Make it reflect the real data.

## UI to-do

### Version 1

1. File Chooser for Market Data Repository
2. Simulation UI
3. Transaction Record table should be able to order by ER.
4. StrategyConfig fill default value.
5. Display the corresponding chart for the selected opportunity. (adding some days before and after the effective data.)
6. Mark the x-event on the chart.
7. Add Yearly Rate and Loose Probability in the Market Result panel.
8. Remove non-trading day from the UI.
9. Mark special day on the chart.

For example: for over-sell-buy-strategy: mark opportunity up range start and end, down range start and end)

### Version 2

1. Market Section Editor
2. Progress Bar for Analyzing Data
3. Using session to save/restore customized values, like column width, strategy configures values, etc.