ALGORITHMIC GUIDED TRADE DECISIONING

MvM

Machines vs. Machines

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FOCUS

- ▶ MvM Algo Trading system is a guided decisioning system
  - ▶ There is no magic in MvM, just math and statistics guided by data
  - ▶ Helps user to buy and sell equity with math, and some luck
  - ▶ Helps user to determine when to sell or buy
- ▶ This week, we'll talk about decisioning stacking
  - ▶ Combining multiple algo indicators and stats indicators
  - ▶ To improve the odds of buying and selling at the right time!

AGENDA

- A little background of platform intro

- Demo of real trading system

MvM MACHINES VS MACHINES INTRO

- MvM is
  - A professional Algorithmic R&D services focused on small to mid-size institution based on B2B model
  - Machine generation of trading plan for stock, bonds, futures, fx etc.
  - Parallel algorithms analysis to improve the odds of winning trades
  - Algorithms are based on professional, ex-floor traders
  - Designed to mimic large professional trading institutions
  - Real-time analytics and decisioning* vs. back testing approach
  - Built using NinjaTrader Platform, C#, and real-time Kinetik data feeds
- MvM Objectives
  - Provides methods and tools to compete with institutional pros
  - Replaces many human's emotional trading down falls
  - Tools for long-term wealth building (IRA, 401K) and day-trading
  - Portfolio management guidance
  - Level the playing field against the professional institutions

WHY MVM?

- There are two classification of players in the market
  - Non-professionals – The <u>Retail</u> traders
  - Professionals – The <u>Institutions</u> (Banks, Large Funds, Trading Firms etc.)
- Most retailers will lose on a trade
  - Institutions have the information, knowledge, researchers, resources and <u>high end algos and computing</u> networks at disposal and kept as trade secrets
  - Retail trader have analysis tools <u>built by Institutions</u> and own's emotions to manage
  - Many public trade methods built by institutions – institution knows retailers every move
- MvM acts as the pros on behalf of retailers / small traders

WHY MACHINE DECISIONING?

- ▶ Fast – crunching through massive and critical data quickly
- ▶ Cold – no stress and emotions – removing the emotional decisions
- ▶ Accurate – machines don't make mistakes, people do
- ▶ Efficient – machine thinks 24x7
- ▶ Utilize professional proven trading techniques

MvM ALGORITHMIC

▶ MvM Algorithmic Version 1 – Paralleling, correlating and stacking 8 algorithms via processing large amount of stocks and chart data

▶ The 8 algorithms (each is optimized separately but decisioning are additive)

1. Evaluates hundreds of stocks and determine highest probability of <u>actionable</u> stocks using price movements, hi/lo prices, range, beta, ATR, volume, clean buy/sell zones, price strength etc.

2. Buy and Sell analytics*

3. Determines probability of the highest <u>profit</u> potential range via nested range and supply differentials

4. Determines "real-time" probability of <u>directional</u> alignment based on broad market, industry, sector, equity type etc.

5. Determines short or long algorithm using outputs from other algorithms

6. Determine rate of profit probability

7. Probabilistically determine reward vs. <u>risk</u> ratio (<u>r/r</u> ratio) targeting

8. <u>Correlation</u> algorithms balancing tradeoffs of the contributing algorithms for max probability of winning and profit amount

MᴠM ALGORITHMIC OUTPUT

▶ MvM does all heavy processing of algorithms, leaving trade plan assembly and trade execution to operator (this will be automated later)

▶ This allows user to choose risk approach, for now

▶ A trade plan includes

  ▶ Each trade has a targeted trade timeframe (day, week, or month)

  ▶ Each trade has an Entry price, a Stop Loss price, and one or more Profit taking price(s)

  ▶ Automated trade plan generation will be implemented later

MvM ALGORITHMIC SOLUTION

▶ MvM Algorithmic Version 2

1. Time of day optimization
2. Sentiment algorithm
3. Volume optimization on buy and sell zones
4. Optimization on different entry strategies
5. Institutions meddling odd enhancer
6. Automated trade account management
7. Trade plan automation
8. Trade and risk management automation

THE COMPETITIONS

Overall, the true competitions are few due to the barrier of entry background: Knowledge of mathematics, analytics, software development, trading skills, and inquisitive

▶ AlgorithmicTrading.net – Algorithmic trading Futures

▶ Fortex (AlgoX) – Algo trading engine; write own algo

▶ Quantcon – Write your own algo for trading platform

▶ Interactive Broker Group – Services supporting your algos

▶ Lexalytics – Sentiment analytics focusing on texts

From this list, AlgorithmicTrading.net is a competitor

MVM SYSTEM
ALGO STACKING
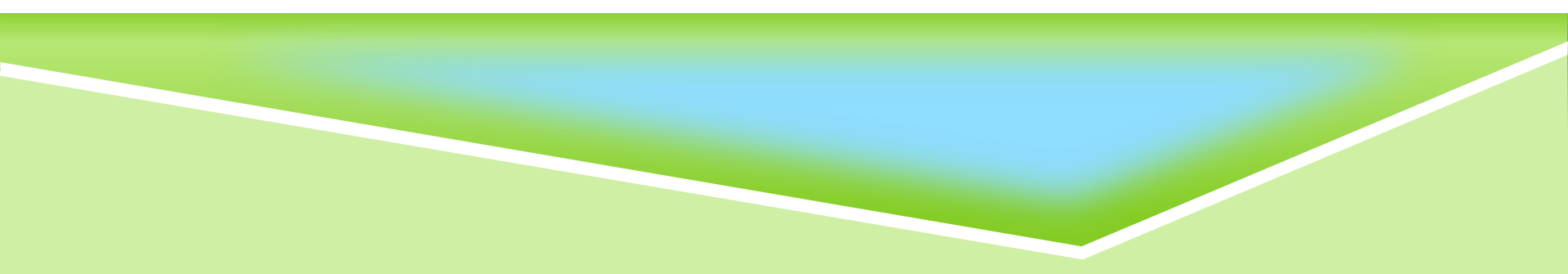
BASIC CHART FOR AMAZON (AMZN) ON NINJATRADER WITH NO ANALYSIS

SAME AMAZON CHART WITH ALGO BUY AND SELL AREAS

Sell levels are indicated by red price ranges

Buy levels are indicated by green price ranges

SAME AMAZON CHART WITH SUPPLY DEMAND + RELATIVE STRENGTH INDEX (RSI)

RSI Chart added at bottom. RSI helps to decide when to buy or sell. In MvM it is also used to determine "Divergence"

QUICK REVIEW OF DIVERGENCE DEFINITION

Divergence in technical analysis may signal a major positive or negative price move. Positive divergence occurs when the price of a security makes a new low while a key indicator such as money flow or volume or RSI starts to climb. Conversely, negative divergence is seen when the price makes a new high but the indicator being followed closes lower.

Source: Investopedia, edited.

AMAZON CHART WITH SUPPLY DEMAND + RSI + DIVERGENCE STACKING

Removed - confidential

PUT IT ALL TOGETHER TO FOR A WINNING TRADE: SUPPLY DEMAND + RSI + DIVERGENCE STACKING

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