

QUANTLABS.NET

Quant Resources for Traders

TRADING FOUNDATION AND PSYCHOLOGY BLUEPRINT

1. Staying Profitable in the Long Term Trading Game.
2. Address myths why 99% of retail traders will lose with blown out accounts
3. Setting parameters to impose non-risky trading limits
4. How we address non techies through an alert service

- ▶ Your World view over time horizon of 1 – 3 months
- ▶ Trading Idea Generation
- ▶ Screening
- ▶ Risk Management

4 STEPS



- ▶ Very generic with no drill down (as in 35,000 foot view!)
- ▶ Specifics and solutions are addressed at end of presentation
- ▶ This can be automated but will be addressed towards the end

THE CAVEATS OF THIS PRESENTATION

- ▶ Generate trading ideas from top 3 world regions including USA, Euro Zone, and China which can represent 50% of world GDP
- ▶ Future trading ideas can be generated from these
- ▶ All reports include qualitative analysis for each sector but hard to automate

CURRENT WORLD VIEW



- ▶ USA is largest at 18T
- ▶ Use 3 major reports including ISM PMI (for manufacturing) from Institute for Supply Management with durable goods, ESR, etc.
- ▶ Use Consumer Confidence Survey for consumer sentiment and confidence (I.e. Michigan State) with jobless claims
- ▶ Use home building stats as an indicator

CURRENT WORLD VIEW - USA



- ▶ Euro is 2nd largest at 15T approx
- ▶ Use Euro Community manufacturing report
- ▶ Focus on strongest markets by country vs weakest markets
- ▶ Sort company via sectors for strongest (long) vs weakest (short)
- ▶ Do not use any middle country or company as these are considered 'dead money' which will weaken your max profitability opportunity

CURRENT WORLD VIEW - EURO

- ▶ Government PMI reports unreliable
- ▶ Only use HSBC PMI report which also includes smaller non state companies for max profitability opportunity
- ▶ China will be the largest market trading region within 10 years

CURRENT WORLD VIEW - CHINA



- ▶ Understand basic stats principles
- ▶ Retrieve industry (sector) and even stock views with the following slides for econometric indicators
- ▶ Use retail traders market activity for liquidity as they catch up to market conditions 30-90 days out

TRADING IDEA GENERATION



- ▶ All market data is sourced from free Yahoo Finance
- ▶ Use normalize distribution with understanding of basic stats with daily (or any other period) returns of assets
- ▶ Calculate periodic asset returns
- ▶ Use descriptive statistics (mean, std dev, kurtosis, skewness, etc)
- ▶ You should be able to use these methods for stocks, currency, indices, bond rates, commodities, etc.

USE STATISTICS FOR ASSET RETURN CALCULATIONS



- ▶ When selecting assets to filter strongest vs weakest player, only use market cap of at least 1B with a positive beta (for liquidity)
- ▶ Assess positive direction of market with potential bull or bear market condition but can be identified by regions
- ▶ Use Black-Scholes to calculate implied volatility with American or European Call option data on the underlying asset with no dividend
- ▶ Forecast over monthly, quarterly, to yearly
- ▶ Use short term treasury yield rate as a proxy for risk free rate
- ▶ Do not use VIX as that is current as we want to predict direction over a 30-90 day time horizon
- ▶ Use ATR (average true range) of asset to predict direction
- ▶ All trading forecasting frequencies could be used from weekly data

PRIORTIZE MARKET SECTOR AND ASSET

- ▶ Use Yahoo Finance data with OHLC for pair
- ▶ Calculate spread on pair
- ▶ Calculate market and sector risk to hedge out
- ▶ Chart spread over weekly or monthly view for market direction

PAIR TRADING VIA SPREAD CALCULATION



- ▶ Adding a list of trading ideas with potential performance measurement for trading opportunity
- ▶ Divide into asset type including currency, stock, etc
- ▶ Measure long vs short spread calculation with current price and market entry prices.
- ▶ Include current spread with percent and total weeks on list. Spread should be forecasted for up to 8 weeks

CREATE ACTIVE WATCHLIST TO
ADJUST OUR WEEKLY VIEW



- ▶ For each pair on watchlist, calculate daily ATR with prediction for multi years
- ▶ Use spread with chart of trend line with moving average of 20 trading day period to 60 trading day period for trading entry vs exit on cross
- ▶ Use other technical analysis indicators for confirmation on timing of trading opportunity
- ▶ Use pricing action (i.e. TA support resistance, head shoulder, etc.) to constantly adjust rolling stop loss applied on all open trades

SCREENING

- ▶ Use rolling traded asset beta to measure portfolio market asset weight allocation within open positions (long vs short)
- ▶ Measure your exposure rate with potential margin call based on past performance (ie. Multi year if trading performance improves)
- ▶ Use Kelly Criterion for self imposed weight allocation on each position size based on trading performance
- ▶ Could also rely on stop loss to 'automatically trade you out' for potential profit
- ▶ Distinguish between your rolling hard and soft stop loss trading targets

RISK MANAGEMENT

- ▶ 80% of trading type spent as portfolio manager vs short term day trader
- ▶ Day trading alone has proven to be unprofitable over the long run and high risk for lost profit
- ▶ Technical analysis cannot be used alone as a measurement of market condition for profitable trading ideas as is it measured currently

RISK MANAGEMENT – DAY TRADING VS PORTFOLIO MANAGEMENT

- ▶ Use database to track Kelly Criterion data and all other measurements explained
- ▶ Java, Excel, and Matlab best for our automated system of this blueprint
- ▶ Proposed automated trading system will not be released for any type of consumption at all (TO VALUABLE!!)
- ▶ QLN MEMBERS may receive through an alert service: daily watchlist, trading exit/entries, forecast reports with economic metric/indicator calculations as described above
- ▶ More quant forecasting models could be applied to the system but where does this fit in the future
- ▶ This blueprint may prove that evolutionary or machine learning may be dangerous as your model will not be able to adapt to fast market changing conditions (i.e. geo political events that can negatively impact your portfolio)

LESSONS FOR AUTOMATED TRADING