Trading the Markets
DON’T ASSUME ANYTHING

TEST EVERYTHING
Analyzing the Markets

• Numerous factors affect the prices of commodities
• Determining which factors have the greatest value when trading a market requires testing.
• How do you begin?
• Research the fundamental factors affecting supply and demand.
• Evaluate historical or current market price data to determine possible patterns.
Fundamental Factors affecting prices

What are some of the typical fundamental factors affecting commodities?

- **Financial** - Fixed income, currency and Stock Index futures
  - Inflation expectations, level interest rates and expectations of future interest rate levels, central bank policy, trade flows, economic indicators etc

- **Metals** – e.g. Gold, silver, platinum, palladium
  - Central bank polices, inflation/deflation expectations, political risks etc

- **Agricultural Products** - e.g. Soybeans, Corn, Orange Juice, Coffee, Sugar
  - Weather, natural disasters, government programs etc

- **Livestock** - Live Cattle, Pork Bellies,
  - Government programs, feed supplies, food scares (mad cow disease, listeria)
Fundamental Analysis

• Concerned with determining how the changes in supply and demand factors influence the long term price of the futures contract being traded.

• Need to isolate, quantify and then evaluate the effects of supply and demand factors on the future price of a commodity.
Using Fundamental Analysis

• Difficult to determine which factors will have the greatest net effect on prices.
• Difficult to know in advance the extent to which fundamental factors have already been expected and thus discounted into current prices.
Fundamental Analysis

• Markets sometimes traded higher following the release of seemingly negative news.
• In other cases have traded lower after the release of seemingly positive news.
• Developing a fundamental model that explains the current prices of a commodity may not be able to explain:
  • which factors may change over time or;
  • The magnitude of any change and/or what the resulting effects on prices might be.
Technical Analysis

• Technical Analysis is the study of the markets for the purpose of forecasting future price trends.
• The market discounts everything including fundamental, political and psychological factors and thus any shifts in supply or demand are reflected in the price of the commodity.
• Charts are created from market data, which includes prices, volume and open interest.
Technical Analysis

Common types of charts

• Line Chart
• Bar Chart
• Candlestick Chart
Line Graph
Bar chart
Common Chart Patterns

- Trendlines
- Support/Resistance
- Chart patterns - Head and Shoulders
- How can technical patterns can be used in trading?
- Can their effectiveness be tested?
Trend Lines
Support/Resistance levels
Head and shoulders pattern
Oscillators

• Slow Stochastic
• RSI
• MACD
• Williams %R
• How effective are oscillators in trading?
Slow Stochastic
Moving Average Convergence Divergence (MACD)
Williams %R
What doesn’t work and what will lose you money

- http://www.youtube.com/watch?v=NX_1UmRVKZ8&feature=related

- Download this video and Cut it off at 5 minutes and 41 seconds (rest is useless)
Trading Success
10 Basic Rules for Successful Trading

• Utilize a systematic trading methodology.
• You should be able to be right less than half of the time and still be profitable.
• In most cases it is better to trade with the trend.
• Don't attempt to pick market tops or bottoms.
• Every trade should be validated by historical testing.
10 Basic Rules for Successful Trading

• Only trade with money you can afford to lose and only risk a small percentage of your trading capital on each trade.
• It is dangerous to trade markets with low volume.
• Don’t be stubborn in trading; if you are losing money get out of the trade
• Don’t make a trade unless it is validated by a proven trading strategy.
• Don’t risk your capital all on one trade
Futures Trading- Who wins? Who Loses?

• All traders have access to the same sources of information, but it is one’s personality and how they perceive and respond to this information that either increases their ability to generate profits or helps to accelerate the string of losses.

• A long term successful trader is one who has developed and tested many trading and money management strategies to see which are consistently profitable over time.
Futures Trading- Who wins? Who Loses?

• The vast majority of futures speculators lose money even with all the tools available to all traders
• A number of studies conducted over the years show that between 80% and 95% of traders lose money.
• A small fraction of traders can consistently make money over the long run. What separates this group from the majority?
Keys to Trading Success

• The most important factor is you
• Wining and losing are part of trading - learn to accept both otherwise you will never succeed.
• Don’t follow other people’s trading advice, develop your own system and follow it.
• Be flexible in your trading but inflexible in with your risk management.
Keys to Trading Success

- Risk control requires a lot of internal mental control.
- Successful traders have trading success rates of 35% to 50%. The small losses are outweighed by the size of the profitable trades.
- Successful investors tend to be contrarians… they do what everyone else is afraid to do.
Keys to Trading Success

• Learn how great traders and trade and conduct their research

• Money management is the key part of a trading system that determines position sizing throughout the trade.

• Avoid applying internal biases to the markets

• Try to find faults in your trading methodology
Developing a Trading System
Steps to developing a trading system

• Determine your objectives and your time frame (intraday, daily, weekly etc.) for trading
• Factor in stop orders and transaction costs
• Determine position sizing
• Develop an entry and exit strategy
• Develop worst case scenarios
• Objectively test your trading method
• The system should generate highly profitable trades
TradeStation strategy testing

http://www.tradestation.com/strategy_testing/st_creation.shtm
Types of Trading Strategies

**Counter Trend**

- Attempts to buy at the lowest low and short at the highest high

**Trend following**

- Is the most common type of strategy that buys or sells after significant price movements anticipating that the trend will continue
Counter Trend Strategies

- Try to buy or sell when the momentum in the prevailing trend begins to fade
- Some systems depend on generating signals when oscillators high or low readings to determine entry or exit points
- Subjective decision making is required
- Extreme volatility that may occur often tests the trader’s ability to continue trading the system.
Trend Following Strategies

• **Advantages**
  • Will almost never miss a major move in a market
  • If the move is substantial one trade can make “the whole year”
  • Reliability of strategy can be below 50%
Trend Following Strategies

• Disadvantages
  • Difficult to detect a major profitable move from a short lived unprofitable move
  • In non trending periods trend followers will take frequent losses
  • Markets spend only 15% to 25% of the time in trending periods
Types of Trading Systems

- Moving Average
- Moving Average Crossover
- High-Low
Moving Averages

• The moving average is the most commonly used as it is easy to quantify and test for use in trend following systems
• Used to identify trends and to determine entry and exit strategies
• Can be calculated using opening, high, low or closing prices
• To calculate a data point for a 20 day average of closing prices simply add the last 20 days prices and divide by 20
• The term moving is used because in this example only the latest 20 day’s prices are used
• The 20 day period of data used to calculate the average moves forward with each trading day
Moving Average systems

Simple Moving Average system

• A single close or multiple closes above or below a moving average can be used for entry and exit signals

• Traders using this methodology believe a new trend may be establishing when prices close above or below a selected average
Simple Moving Average Average
Moving Average Crossover systems

• The most common way of generating entry and exit signals for a trend following system
• Buy and sell signals are generated when a shorter term moving average crosses the longer term moving average
• For example, when the 10 day moving average crosses up through the 50 day average would get a buy signal and when it crosses below would get a sell signal
Moving Average Crossover system
High –Low systems

• Look for price movements above or below recent price ranges to determine entry and exit points
• For example a trader can enter a long position in a market when prices trade or close above the high of the past 10 days
• If the market subsequently trades lower and makes a 10 day low the trader would exit the position and or would go short
Breakout systems

• Are Sudden dramatic price movements that occur in a particular direction
• A breakout occurs when prices move by a defined amount beyond the average true range
What internal biases affects the development of a trading system?

• Representation bias – assuming for example that a chart pattern or an indicator means something

• Reliability – the believe that the data that the trader is working or has generated is correct

• Lottery Bias– having increased confidence in their system and a sense of control over the markets by manipulating market data in some way

• Small Sample– using small amounts of data to jump to a conclusion
Key Variables in a successful system

• The amount of profits generated per dollar risked (without taking into account the effects of time and position sizing)
• Percentage of time the system makes money
• Systems parameters must be stable and feasible
• Profits should be relatively larger versus losses
• Transaction costs—brokerage commissions
• Amount of trading capital available
• Position sizing
• Opportunity factor
• The time period to be used (daily, weekly etc)
How do you test a trading system?

• Backtesting is the process used to evaluate trading strategies using historical data
• Software programs such as TradeStation and others can generate reports on performance using hundreds of performance metrics.
System Testing

Optimization

• Process of finding the best set of parameters for a given market
• Does not improve performance by a meaningful degree
• Often overstates results
Trade Station strategy testing

- [http://www.tradestation.com/strategy_testing/st_evaluation.shtm](http://www.tradestation.com/strategy_testing/st_evaluation.shtm)
# Sample Trader Report

<table>
<thead>
<tr>
<th>TradeStation Performance Summary</th>
<th>All Trades</th>
<th>Long Trades</th>
<th>Short Trades</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Net Profit</td>
<td>$16,862.50</td>
<td>$5,212.50</td>
<td>$11,650.00</td>
</tr>
<tr>
<td>Gross Profit</td>
<td>$80,237.50</td>
<td>$39,612.50</td>
<td>$40,625.00</td>
</tr>
<tr>
<td>Gross Loss</td>
<td>($63,375.00)</td>
<td>($34,400.00)</td>
<td>($28,975.00)</td>
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<tr>
<td>Profit Factor</td>
<td>1.27</td>
<td>1.15</td>
<td>1.40</td>
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<tr>
<td>Roll Over Credit</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
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<tr>
<td>Open Position P/L</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Select Total Net Profit</td>
<td>$19,150.00</td>
<td>$11,025.00</td>
<td>$8,125.00</td>
</tr>
<tr>
<td>Select Gross Profit</td>
<td>$76,712.50</td>
<td>$39,612.50</td>
<td>$37,100.00</td>
</tr>
<tr>
<td>Select Gross Loss</td>
<td>($57,562.50)</td>
<td>($28,587.50)</td>
<td>($28,975.00)</td>
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<tr>
<td>Select Profit Factor</td>
<td>1.33</td>
<td>1.39</td>
<td>1.28</td>
</tr>
<tr>
<td>Adjusted Total Net Profit</td>
<td>$50.22</td>
<td>($7,008.85)</td>
<td>$17.74</td>
</tr>
<tr>
<td>Adjusted Gross Profit</td>
<td>$72,213.75</td>
<td>$34,271.15</td>
<td>$34,565.98</td>
</tr>
<tr>
<td>Adjusted Gross Loss</td>
<td>($72,163.55)</td>
<td>($41,280.00)</td>
<td>($34,551.24)</td>
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<tr>
<td>Adjusted Profit Factor</td>
<td>1.00</td>
<td>0.03</td>
<td>1.00</td>
</tr>
<tr>
<td>Total Number of Trades</td>
<td>152</td>
<td>80</td>
<td>72</td>
</tr>
<tr>
<td>Percent Profitable</td>
<td>65.79%</td>
<td>68.75%</td>
<td>62.50%</td>
</tr>
<tr>
<td>Winning Trades</td>
<td>100</td>
<td>55</td>
<td>45</td>
</tr>
<tr>
<td>Losing Trades</td>
<td>52</td>
<td>25</td>
<td>27</td>
</tr>
<tr>
<td>Even Trades</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Avg. Trade Net Profit</td>
<td>$110.94</td>
<td>$65.16</td>
<td>$161.81</td>
</tr>
<tr>
<td>Avg. Winning Trade</td>
<td>$802.38</td>
<td>$720.23</td>
<td>$902.78</td>
</tr>
<tr>
<td>Avg. Losing Trade</td>
<td>($1,218.75)</td>
<td>($1,376.00)</td>
<td>($1,073.15)</td>
</tr>
<tr>
<td>Ratio Avg. Win:Avg. Loss</td>
<td>0.66</td>
<td>0.52</td>
<td>0.84</td>
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<tr>
<td>Largest Winning Trade</td>
<td>$3,525.00</td>
<td>$2,175.00</td>
<td>$3,525.00</td>
</tr>
<tr>
<td>Largest Losing Trade</td>
<td>($5,812.50)</td>
<td>($5,812.50)</td>
<td>($4,362.50)</td>
</tr>
<tr>
<td>Largest Winner as % of Gross Profit</td>
<td>4.39%</td>
<td>5.46%</td>
<td>8.68%</td>
</tr>
<tr>
<td>Largest Loser as % of Gross Profit</td>
<td>9.17%</td>
<td>16.90%</td>
<td>15.06%</td>
</tr>
<tr>
<td>Net Profit as % of Largest Loss</td>
<td>290.11%</td>
<td>89.66%</td>
<td>267.05%</td>
</tr>
<tr>
<td>Select Net Profit as % of Largest Loss</td>
<td>329.46%</td>
<td>189.68%</td>
<td>186.25%</td>
</tr>
<tr>
<td>Adjusted Net Profit as % of Largest Loss</td>
<td>0.06%</td>
<td>(120.58%)</td>
<td>0.41%</td>
</tr>
<tr>
<td>Max. Consecutive Winning Trades</td>
<td>9</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>Max. Consecutive Losing Trades</td>
<td>4</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Avg. Bars in Total Trades</td>
<td>6.23</td>
<td>6.25</td>
<td>6.42</td>
</tr>
<tr>
<td>Avg. Bars in Winning Trades</td>
<td>4.53</td>
<td>4.71</td>
<td>4.31</td>
</tr>
<tr>
<td>Avg. Bars in Losing Trades</td>
<td>9.79</td>
<td>9.64</td>
<td>9.93</td>
</tr>
<tr>
<td>Avg. Bars in Even Trades</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Max. Shares/Contracts Held</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total Shares/Contracts Held</td>
<td>153</td>
<td>81</td>
<td>72</td>
</tr>
<tr>
<td>Account Size Required</td>
<td>$17,062.50</td>
<td>$9,062.50</td>
<td>$13,612.50</td>
</tr>
<tr>
<td>Total Slippage</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Total Commission</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
</tbody>
</table>
Analyzing Trading Activity

- Total Net profit, Gross Loss/profit, profit factor
- Average trade net profit, average winning/losing trades
- Ratio of average wins/losses
- Slippage
- Standard deviation of monthly return
- Return on initial capital
- Average monthly return
- Sharpe ratio
- Percent of time in the Market
- Drawdown/Run-up
Sharpe Ratio

• Indicates whether the performance of a trader is due to smart investment decisions or as a result of excess risk. The higher the Sharpe ratio the better.

• Characterizes the returns based on the level of risk taken.

• Is calculated by subtracting the risk free interest rate from the return of the performance figures and then dividing by the trader’s standard deviation.
Drawdowns

- **The peak-to-trough decline**
- A drawdown is the percentage difference between the peak and the trough
Biases that can affect the trading of a system

• Maximum performance – people are sometimes tempted to override a system when it doesn’t work perfectly

• Gamblers Fallacy—the belief that a loss is due after a string of winners and/or a gain is due after a string of losses

• Traders sometimes have a bias against cutting losses short and letting profits run

• The need to be right with every trade
Psychology of Trading
Investing and the Irrational Mind


- Run time (22 minutes)