POWERHOUSE

THE POWER OF PRICE PROTECTION

How Technical Analysis Can Empower Fuel Marketers

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What is Technical Analysis?

- “Technical analysis is the study of market action, primarily through the use of charts, for the purpose of forecasting future price trends.” – John J. Murphy

- Money is either made or lost in the price movement and therefore efforts should be concentrated on the study of price movement

- Technicians believe that price action tends to repeat itself because market participants collectively tend toward patterned behavior – thus the focus on identifiable trends and conditions

- Technical analysis is compliment to fundamental analysis

Can’t Get There From Here

Using All the Tools in the Toolbox

Useful Information is A.R.T.

- **A**ccurate
- **R**elevant
- **T**imely

Accurate and Relevant, but not Timely

Transparency | International | Con

U.S. COMMODITY FUTURES TRADING COMMISSION

Ensuring the Integrity of the Futures & Swaps Markets

Industry Oversight | Law & Regulation | Market Data & Analysis | Forms & Submissions | Learn & Protect | About the CFTC | News, Events & Podcasts

Market Data & Analysis

- Commitments of Traders
- Weekly Swaps Report
- Bank Participation Reports
- Cotton On-Call
- Financial Data for FCMS
- Net Position Changes Data
- Staff Reports
- Cleared Margin Reports

Commitments of Traders

- Historical Viewable

Commitments of Traders

Commitments of Traders (COT) Reports Descriptions

Introduction and Classification Methodology

The Commodity Futures Trading Commission (Commission or CFTC) publishes the Commitments of Traders (COT) reports to help the public understand market dynamics. Specifically, the COT reports provide a breakdown of each Tuesday's open interest for futures and options on futures markets in which 20 or more traders hold positions equal to or above the reporting levels established by the CFTC.

The COT reports are based on position data supplied by reporting firms (FCMs, clearing members, foreign brokers and exchanges). While the position data is supplied by reporting firms, the actual trader category or classification is based on the predominant business purpose self-reported by traders on the CFTC Form 40[1] and is subject to review by CFTC staff for reasonableness.[2] CFTC staff does not know specific reasons for traders' positions and hence this information does not factor in determining trader classifications. In practice this means, for example, that the position data for a trader classified in the "producer/merchant/processor/user" category for a particular commodity will include all of its positions in that commodity, regardless of whether the position is for hedging or speculation. Note that traders are able to report business purpose by commodity and, therefore, can have different classifications in the COT reports for different commodities. For one of the reports, Traders in Financial Futures, traders are classified in the same category for all commodities.

Relevant & Timely, but maybe not so Accurate

Accurate. Relevant. Timely.

Source: LSEG

Characteristics of the Energy Futures Market

- An Auction Process to Match Buyers & Sellers
- An Intensity Gauge
- Sustained Intensity Generates Trend
- Have Markets Been Changed by Technology?

Fear Meets Greed in Public

…And in Private

Practical Reasons to Use Technicals

04/15/09 09:51AM

OIL FUTURES: Nymex Oil Up As Market Eyes Likely Inventory Build

By Hyun Young Lee
Of DOW JONES NEWSWIRES

OTTAWA (Dow Jones)--Crude oil futures were trading higher Wednesday, even as U.S. oil inventories seemed poised to soar to the highest levels in nearly two decades.

Light, sweet crude for May delivery was up 29 cents, or 0.6%, at $49.70 a barrel on the New York Mercantile Exchange. May Brent crude on the ICE futures exchange was 11 cents lower at $51.85 a barrel.

Crude prices have held up relatively well in recent weeks, hovering around the $50 a barrel mark despite a series of massive inventory builds and a poor outlook for demand.

"The market seems to be showing an unwillingness to pay any heed to the fundamental picture - there's a building sentiment that demand is going to get better as the year goes on," said an analyst at Tradition Energy.

Why Fuel Marketers Use Technical Analysis

Most marketers don't have a trading desk as a profit center in their business

But…

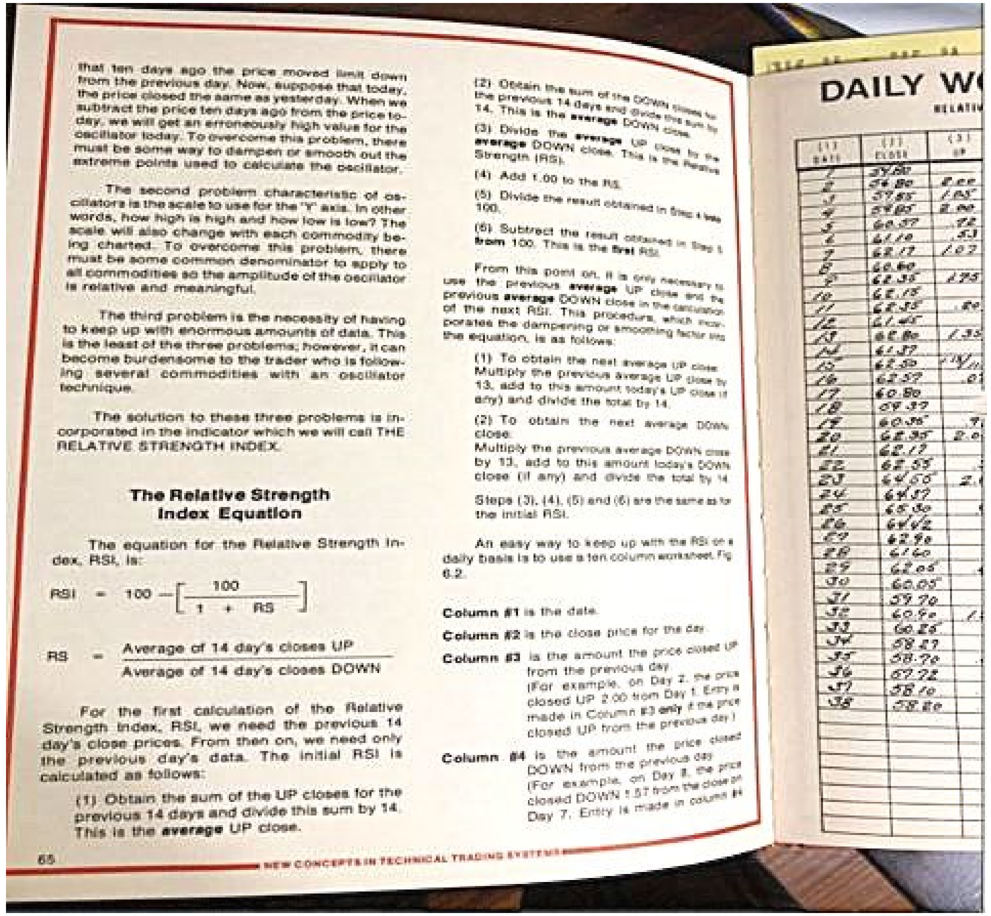
- Jobbers do have to make decisions on when to acquire inventory
- Heating oil distributors must decide when to launch their seasonal cap price programs
- Gasoline retailers need to determine when to establish protective hedges for their margins

Each of these decisions involves an element of timing. Technical analysis gives decision makers more information to support this process.

Relative Strength Index (RSI)

- Developed by J. Welles Wilder, Jr. in 1978
- The Relative Strength Index (RSI) is an extremely useful and popular momentum oscillator
- The RSI compares the magnitude of recent gains to the magnitude of recent losses and turns that information into a number that ranges from 0 to 100
- The look-back parameter is the number of time periods to use in the calculation. For an RSI with a 14-day period, the calculation is
- RSI = 100 – (100/1 + RS)
- RS = Average Gain / Average Loss
- Average Gain = [(previous Average Gain) x 13 + current Gain] / 14
- Average Loss = [(previous Average Loss) x 13 + current Loss] / 14
- Note: "Losses" are reported as positive values

Technical Analysis: pre-supercomputers



that ten days ago the price moved limit down from the previous day. Now, suppose that today, the price closed the same as yesterday. When we subtract the price ten days ago from the price today, we will get an erroneously high value for the oscillator today. To overcome this problem, there must be some way to dampen or smooth out the extreme points used to calculate the oscillator.

The second problem characteristic of oscillators is the scale to use for the "Y" axis. In other words, how high is high and how low is low? The scale will also change with each commodity being charted. To overcome this problem, there must be some common denominator to apply to all commodities so the amplitude of the oscillator is relative and meaningful.

The third problem is the necessity of having to keep up with enormous amounts of data. This is the least of the three problems; however, it can become burdensome to the trader who is following several commodities with an oscillator technique.

The solution to these three problems is incorporated in the indicator which we will call THE RELATIVE STRENGTH INDEX.

The Relative Strength Index Equation

The equation for the Relative Strength Index, RSI, is:

$$RSI = 100 - \left[\frac{100}{1 + RS}\right]$$

$$RS = \frac{\text{Average of 14 day's closes UP}}{\text{Average of 14 day's closes DOWN}}$$

For the first calculation of the Relative Strength Index, RSI, we need the previous 14 day's close prices. From then on, we need only the previous day's data. The initial RSI is calculated as follows:

(1) Obtain the sum of the UP closes for the previous 14 days and divide this sum by 14. This is the **average** UP close.

(2) Obtain the sum of the DOWN closes for the previous 14 days and divide this sum by 14. This is the **average** DOWN close.

(3) Divide the **average** UP close by the **average** DOWN close. This is the Relative Strength (RS).

(4) Add 1.00 to the RS.

(5) Divide the result obtained in Step 4 into 100.

(6) Subtract the result obtained in Step 5 **from** 100. This is the **first** RSI.

From this point on, it is only necessary to use the previous **average** UP close and the previous **average** DOWN close in the calculation of the next RSI. This procedure, which incorporates the dampening or smoothing factor into the equation, is as follows:

(1) To obtain the next average UP close: Multiply the previous average UP close by 13, add to this amount today's UP close (if any) and divide the total by 14.

(2) To obtain the next average DOWN close: Multiply the previous average DOWN close by 13, add to this amount today's DOWN close (if any) and divide the total by 14.

Steps (3), (4), (5) and (6) are the same as for the initial RSI.

An easy way to keep up with the RSI on a daily basis is to use a ten column worksheet, Fig 6.2.

Column #1 is the date.

Column #2 is the close price for the day.

Column #3 is the amount the price closed UP from the previous day. (For example, on Day 2, the price closed UP 2.00 from Day 1. Entry is made in Column #3 **only** if the price closed UP from the previous day.)

Column #4 is the amount the price closed DOWN from the previous day. (For example, on Day 8, the price closed DOWN 1.57 from the close on Day 7. Entry is made in column #4

65 NEW CONCEPTS IN TECHNICAL TRADING SYSTEMS

DAILY W

RELATIV

(1) DATE	(2) CLOSE	(3) UP
1	57.80	
2	59.80	2.00
3	57.85	1.05
4	59.85	2.00
5	60.57	.72
6	61.10	.53
7	62.17	1.07
8	60.60	
9	62.35	1.75
10	62.15	
11	62.35	.20
12	61.45	
13	62.80	1.35
14	61.37	
15	62.50	[illegible]
16	62.57	.07
17	60.80	
18	59.37	
19	60.35	[illegible]
20	62.35	[illegible]
21	62.17	
22	62.55	[illegible]
23	64.60	[illegible]
24	64.37	
25	65.30	[illegible]
26	64.42	
27	62.90	
28	61.60	
29	62.05	[illegible]
30	60.05	
31	59.70	
32	60.90	[illegible]
33	60.25	
34	58.27	
35	58.70	[illegible]
36	57.72	
37	58.10	[illegible]
38	58.20	

Interpreting RSI

- Default settings are typically set at 70 (overbought) and 30 (oversold) respectively

- Generally, if the RSI rises above 30 it is considered bullish for the underlying commodity, conversely, if the RSI falls below 70, it is a bearish signal

- The look-back parameter is affected by the underlying commodity's volatility and a shorter look-back period results in a more sensitive RSI

- Overbought/oversold levels can also be adjusted

- It is important to calibrate overbought/oversold and the look-back period with the particular commodity being traded

RSI: Oversold & Overbought in Action

Source: LSEG

Bollinger Bands

- Bollinger Bands are a technical trading tool created by John Bollinger in the early 1980s and arose from the need for adaptive trading bands and the observation that volatility was dynamic, not static as was widely believed at the time

- They consist of bands placed above and below a moving average. Volatility is based on the standard deviation, which changes as volatility increases and decreases

- The bands automatically widen when volatility increases and narrow when volatility decreases

- Bollinger Bands try to answer the question as to whether prices are high or low on a relative basis

The Squeeze

- Bollinger BandWidth is best known for identifying The Squeeze
- This occurs when volatility falls to a very low level, as evidenced by the narrowing bands
- The upper and lower bands are based on the standard deviation, which is a measure of volatility.
- The bands narrow as price flattens or moves within a relatively narrow range
- The theory is that periods of low volatility are followed by periods of high volatility. Relatively narrow BandWidth (a.k.a. the Squeeze) can foreshadow a significant advance or decline

Volatility Pulses

Source: LSEG

Seasonality

- Seasonality is the tendency for a commodity to perform bullishly during some periods and bearishly during others
- It is based on prior trading history and there is no guarantee that past performance will equal future performance
- Clearly defined seasonal patterns may offer guideposts to assist in decision-making
- Seasonality can be analyzed for specific futures contract months

NYMEX June RBOB Futures Average Seasonality

Patterns, Price and Decisions

- No pattern or signal is valid until price actions confirms
- Price is the ULTIMATE indicator
- Technical analysis is always available to assist in decision making even when fundamental news is lacking

Questions or Comments?

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