Lecture 11

Technical Analysis

by

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Required Reading:


Introduction

Fundamental analysis:

- Definition: An assessment of _____ based on the underlying _____ and ______ factors and the changes in those relationships

- Goal: Estimate ____________________ and compare to _______________
  - Bullish: Value > Price
  - Bearish: Value < Price

Technical analysis:

- A forecasting method for price movements using ____________________________

- No explicit use of the “fundamentals”

- Typically based on ____________ arguments
Pring (2002, p. 2), a leading technical analyst, provides a more specific definition:

The technical approach to investment is essentially a reflection of the idea that prices move in trends that are determined by the changing attitudes of investors toward a variety of economic, monetary, political, and psychological forces. The art of technical analysis, for it is an art, is to identify a trend reversal at a relatively early stage and ride on that trend until the weight of the evidence shows or proves that the trend has reversed.

Technical analysis includes a variety of forecasting techniques

- _______ analysis
- _______ recognition analysis
- ____________________ indicators
- Seasonal tendencies
- _______ analysis
- Computerized ____________
Numerous surveys indicate that market practitioners attribute a ______________ to technical analysis

Smidt

- Surveyed trading activities of amateur traders in the US commodity futures markets in 1961

- About _____ of respondents claimed that they used _____ either exclusively or moderately in order to identify ________

Group of Thirty

- Surveyed the views of market participants on the functioning of the foreign exchange market in 1985

- Results indicated that _____ of bank respondents and _____ of the securities houses believed that the use of technical analysis had a significant impact on the market
More recent surveys:

- Commodity trading advisors and hedge fund managers rely heavily on computer-guided ________________

- About _______________ of foreign exchange traders around the world believe that technical analysis is the major ___________ determining exchange rates in the short-run up to six months

Technical methods are highly ________________!

- Group of Thirty study conclusion: “Technical trading systems, involving computer models and charts, have become the vogue, so that the market reacts more sharply to short term trends and less attention is given to basic factors”

- In this lecture we will focus only on learning the technical methods

- Assessment of their usefulness is left to the next lecture
Charting

**FIGURE 4.1**
A Typical Bar Chart
Format for a Commodity Futures Contract

FIGURE 4.4
Illustration of Trends and Related Chart Signals in a Selective Hedging Program

During 1997, a major sell signal to place a short hedge prior to planting, a signal to lift the short hedge in July, and a second sell signal in September.

FIGURE 4.8
Demonstration of Possible Market Actions at the Life-of-Contract High Resistance Plane

FIGURE 4.9
Market Action around the Contract High on October 1997 Soybean Meal Futures

FIGURE 4.11
Illustration of a Support Plane at Life-of-Contract Low

FIGURE 4.12
Demonstration of Possible Market Actions at the Life-of-Contract Low Support Plane

FIGURE 4.13
Demonstration of a Price Decline through Support on the February 1998 Pork Belly Futures

A Double Bottom on a Bar Chart at Contract Lows.

The distance "A" is the same as the distance from the top of the head to the neckline and is the price projection after the close below the neckline.

FIGURE 4.25
Demonstration of Bull and Bear Flags on a Bar Chart


FIGURE 4.35
Demonstration of the Price Projection Using a Series of Chart Gaps
Overbought/Oversold Indicators

![Relative Strength Index Chart](chart.png)

**Figure 6.2**
Relative Strength Index on the March 1998 Feeder Cattle Futures Chart

TABLE 4.1
Procedure for Calculating a 14-Day Relative Strength Index

To calculate:

1. Record the last 14 day-to-day price changes based on closing prices.
2. Sum the negative and positive changes and divide each sum by 14 to create a "down average" and "up average," respectively.
3. Define Relative Strength Index as $(U/D)(U + D)$ where $U$ = up average and $D$ = down average.
4. Employ $RSI = (U/D)(U + D) \times 100$ to convert to percentages versus decimals.

<table>
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<tr>
<th>Date</th>
<th>Closing Price</th>
<th>Day</th>
<th>Positive Price Change</th>
<th>Negative Price Change</th>
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<td>784.5</td>
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<td>26.5</td>
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<td>14</td>
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<tr>
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</tbody>
</table>

\[ \text{RSI} = 38 \]
Contrary Opinion Indexes

- Another form of overbought/oversold indicator

- Designed to measure the ____________ of market participants regarding future price trends

- Various _____________ indicators are widely followed in financial markets
  - Bullish Consensus
  - Market Vane

Construction of Consensus Indicators

- A sample of market analysts, traders, or investors is surveyed for their __________ on price trends

- Reading newsletters, conducting mail surveys, or by personal interview

- Each of the individuals surveyed is then placed in a category indicating the __________ ____________ of their market view
• The rating scale can be as simple as either bullish or bearish, or some type of numerical scale of the degree of bullishness

• In the first case, the consensus indicator is simply the ___________ of individuals with a bullish market view

• In the second case, the consensus indicator is the ___________ of the individual ratings.

Use of Contrary Opinion Indicators

• ________________________________

• High percentage of traders ______________

• High percentage of traders ______________
AgMAS Consensus View Indicators

- For about 3 years, each Wednesday, after the close of market trading, each advisory service in the AgMAS study was rated as to the _____ ____________________ for a commodity

- Five categories: 0-bearish, 25-bearish-neutral, 50-neutral, 75-bullish-neutral, and 100-bullish

- Rating is based on _______________ and current recommendations regarding market positions

- Ratings refer to ___________ over a relatively short time-horizon, in the range of two to six weeks into the future.

- Ratings for individual advisory services averaged for a commodity
Example

<table>
<thead>
<tr>
<th>Advisor</th>
<th>Rating</th>
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<td>9</td>
<td>100</td>
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<tr>
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<td>25</td>
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</table>

Average 70
AgMAS Consensus View Indicator for Corn

AgMAS Consensus View Indicator for Soybeans
AgMAS Consensus View Indicator for Wheat

AgMAS Consensus View Indicator for Live Cattle
Trading Systems

A technical trading system consists of a set of _____ that result from parameterizations, and each trading rule generates ____________ (long, short, or out of the market) according to their parameter values.

Popular technical trading systems include:

- Moving averages
- Channels
- Momentum oscillators

<table>
<thead>
<tr>
<th>TABLE 5.1</th>
<th>Demonstration of 3- and 10-Day Moving Averages for Lean Hog Futures: Calculations and Buy-Sell Signals</th>
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</thead>
<tbody>
<tr>
<td>Closing Price</td>
<td>3-Day Moving Total</td>
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<td>56.10</td>
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<td>55.00</td>
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<tr>
<td>55.90</td>
<td>55.43</td>
</tr>
</tbody>
</table>

FIGURE 5.8
Bar Chart and Performance of 9- and 18-Day Moving Averages for December 1996 Corn Futures

FIGURE 5.9
Bar Chart and Performance of 9- and 18-Day Moving Averages for December 1997 Corn Futures

Literally thousands of technical trading systems!